

CITY OF ROLLINGWOOD JOINT CITY COUNCIL, PLANNING AND ZONING COMMISSION AND COMPREHENSIVE RESIDENTIAL CODE REVIEW COMMITTEE AGENDA

Wednesday, September 04, 2024

Notice is hereby given that the City Council, Planning and Zoning Commission, and Comprehensive Residential Code Review Committee of the City of Rollingwood, Texas will hold a meeting, open to the public, in the Municipal Building at 403 Nixon Drive in Rollingwood, Texas on September 04, 2024 at 6:00 PM. Members of the public and the City Council, Planning and Zoning Commission, and Comprehensive Residential Code Review Committee may participate in the meeting virtually, as long as a quorum of the City Council, Planning and Zoning Commission, and Comprehensive Residential Code Review Committee and the presiding officer are physically present at the Municipal Building, in accordance with the Texas Open Meetings Act. The public may watch this meeting live and have the opportunity to comment via audio devices at the link below. The public may also participate in this meeting by dialing one of the toll-free numbers below and entering the meeting ID and Passcode.

Link: https://us02web.zoom.us/j/5307372193?pwd=QmNUbmZBQ1IwUINjNmk5RnJrelRFUT09

Toll-Free Numbers: (833) 548-0276 or (833) 548-0282

Meeting ID: 530 737 2193

Password: 9fryms

The public will be permitted to offer public comments via their audio devices when logged in to the meeting or telephonically by calling in as provided by the agenda and as permitted by the presiding officer during the meeting. If a member of the public is having difficulties accessing the public meeting, they can contact the city at mrodriguez@rollingwoodtx.gov. Written questions or comments may be submitted up to two hours before the meeting. A video recording of the meeting will be made and will be posted to the City's website and available to the public in accordance with the Texas Public Information Act upon written request.

CALL JOINT CITY COUNCIL, PLANNING AND ZONING COMMISSION AND COMPREHENSIVE RESIDENTIAL CODE REVIEW COMMITTEE MEETING TO ORDER

1. Roll Call

PUBLIC COMMENTS

Citizens wishing to address City Council, Planning and Zoning Commission, and Comprehensive Residential Code Review Committee for items not on the agenda will be received at this time. Please limit comments to 3 minutes. In accordance with the Open Meetings Act, the City Council, Planning and Zoning Commission, and Comprehensive Residential Code Review Committee are restricted from discussing or taking action on items not listed on the agenda.

Citizens who wish to address the City Council, Planning and Zoning Commission, and Comprehensive Residential Code Review Committee with regard to matters on the agenda will be received at the time the item is considered.

REGULAR AGENDA

- Discussion regarding recommendations from the CRCRC regarding residential landscape and tree canopy management
- 3. Discussion regarding recommendations from the CRCRC regarding residential building height and related provisions
- 4. Discussion regarding recommendations from the CRCRC regarding side yard projections in the Residential Zoning District
- Discussion and possible action on a recommendation from the CRCRC that the City Council and Planning and Zoning Commission hold a workshop regarding the proposed amendments related to residential building height
- Discussion and possible action to schedule future public meetings or hearings, which may be
 joint meetings, or public hearings, regarding topics including but not limited to residential
 building height, side yard projections, and residential landscape and tree canopy management

ADJOURNMENT OF MEETING

CERTIFICATION OF POSTING

I hereby certify that the above Notice of Meeting was posted on the bulletin board at the Rollingwood Municipal Building, in Rollingwood, Texas and to the City website at www.rollingwoodtx.gov on Friday, August 30, 2024 at 5:00 p.m.

Ashley Wayman

Ashley Wayman, City Administrator

NOTICE -

The City of Rollingwood is committed to compliance with the Americans with Disabilities Act. Reasonable modifications and equal access to communications will be provided upon request. Please contact the City Secretary, at (512) 327-1838 for information. Hearing-impaired or speech-disabled persons equipped with telecommunication devices for the deaf may call (512) 272-9116 or may utilize the stateside Relay Texas Program at 1-800-735-2988.

The Planning and Zoning Comission will announce that it will go into executive session, if necessary, to deliberate any matter listed on this agenda for which an exception to open meetings requirements permits such closed deliberation, including but not limited to consultation with the city's attorney(s) pursuant to Texas Government Code section 551.071, as announced at the time of the closed session.

Consultation with legal counsel pursuant to section 551.071 of the Texas Government Code; discussion of personnel matters pursuant to section 551.074 of the Texas Government Code; real estate acquisition pursuant to section 551.072 of the Texas Government Code; prospective gifts pursuant to section 551.073 of the Texas Government Code; security personnel and device pursuant to section 551.076 of the Texas Government Code; and/or economic development pursuant to section 551.087 of the Texas Government Code.

Page 3

Action, if any, will be taken in open session.

Recommended Changes to Rollingwood Tree Maintenance Ordinance from the CRCRC.

These recommended changes are based on the strong support in the survey (question 15) for maintaining the tree canopy in Rollingwood (74% said maintaining the tree canopy had either high or very high priority). When asked whether they thought the current tree ordinance was adequate to this task (question 16), 51% of respondents said "yes". However, in the comments from those "yes" votes, many were either uncertain what the current tree ordinance stated and/or had not any occasion to refer to the ordinance for recent tree work on their property. There was strong support in all the comments for increasing the protection for "heritage trees".

Based on these survey results, the CRCRC has the following recommendations to strengthen the current tree ordinance to make it more effective in protecting and maintaining the current tree canopy.

Exact proposed wording or specific change is in green.

- 1. Change the name of Article II, Division 10, Subdivision 2 to "Residential Landscape and Tree Canopy Management."
- 2. Introduce the concept of xeriscape landscaping into the ordinance, with some suggestions to use native and adapted low water use plants, and drought tolerant turf grasses for lawns. (no regulations, only education) "Landscape: Because the city experiences frequent drought conditions, low water demanding landscapes (Xeriscapes) are encouraged by using native and adapted low water use plants from the Austin Grow Green Guide. (Insert link here) Consideration should also be given to planting turfgrass on less than 50% of the total landscaped areas, with that turf grass preferably having summer dormancy capabilities such as Buffalo grass, Zoysia grass, or non-seeding varieties of Bermuda grass." Section 107-369 (a): Purpose
- 3. Inserted statement that "the site plan and project design will preserve the existing natural character of the landscape and the retention of protective trees as much as possible" This statement to be inserted into Purpose Section of Sec 107-369.
- 4. Insert a definition for a "Heritage Tree" category into ordinance for those trees 24 inches in diameter measured 4 ½ feet above natural grade. "Heritage tree" means a tree of a "protected species" defined as having a diameter of 24 inches or more, measured 4½ feet above natural grade. To determine the diameter of a multi-trunk tree, measure all the trunks; add the total diameter of the largest trunk to ½ the diameter of each additional trunk. A total diameter of 24" or higher for a multi-trunk tree would qualify as a Heritage tree. (Sec 107-371 Subdivision b- 2). (see addendum A- list of protected species)
- 5. Change the criteria for planting alternatives to protected species (from the utility setback tree list) to limit it to only protected trees removed from areas 20 feet from a utility line. In other words, a protected species removed from setbacks, right of way and buildable area must be replaced with a protected species, if not removed from the 20 ft utility setback area." For protected trees removed from within 20 feet of an above-ground power, cable, or telephone line the following species can be used for replacement: These species cannot be used to replace a protected tree removed from areas that are not 20 feet from an above ground power cable, or telephone line." Sec 107-369 (c)-2 (see Addendum B Replacement species list for trees planted 20ft from utility lines.)

- 6. Adding a definition for Critical Root Zone (CRZ), that is area around tree trunk with a radius of one foot for every inch of diameter. "Critical root zone" means the area around and under a tree having a radius of one foot per inch of diameter from the trunk of the tree outwards and twenty-four inches in depth. For example, for a tree having a 10-inch diameter, the critical root zone is 10 feet out from the trunk and twenty-four inches deep. No construction or disturbance shall occur within an area that constitutes more than (50%) of the total critical root zone, and one half the radial distance of the CRZ for each tree being preserved as a protected tree or heritage tree." Sec 107-369 (g).
- 7. Change the term "city arborist" used 13 times in the current ordinance indicated to review, approve, and implement all tree removal permits to "City Development Officer". However, a city arborist will be used in those areas of code where the expertise of an arborist is necessary or desired.
- 8. Remove Sections (d) and (e) of Section 107-372. All protected trees and heritage trees removed from a lot should be replaced on that lot unless a Special Exception is obtained to replant on an adjacent lot with that neighbor's permission. 107-372 (d) and (e).
- 9. Removal of Heritage trees from setback areas would require a separate "Heritage Tree Removal Permit". Removal of a Heritage tree is prohibited unless a Heritage Tree Removal Special Exception is granted by the Board of Adjustment upon a finding that: (i) all reasonable efforts have been made to avoid removing the tree, (ii) the location of the tree precludes all reasonable access to the property or all reasonable use of the property, and (iii) removal of the tree is not based on a condition caused by the method or design chosen by the applicant to develop the property. 107-373 (a).
- **10.** A Heritage Tree Removal Special Exception will <u>not</u> be required for Heritage Trees removed from the proposed building footprint area but would be subject to the normal tree removal permitting and replacement process.
- 11. Protected trees (12–24-inch diameter) removed from the buildable area must be replaced by one protected species tree. Replacement of a Heritage Tree removed from setback areas, (with Heritage Tree Removal Special Exception) and proposed building footprint area (which would not require a Special Exception), must be replaced with one tree 6 inches in diameter, or more, for every 12 inches in diameter of the removed tree. For example: 24 inches = 2 six-inch diameter trees, 36 inches = 3 trees, etc. to be replaced. An exception to these mitigation requirements may be granted by the city development officer, after consulting with the City Arborist, and with the approval of the BOA if the applicant demonstrates: (1) the existing tree canopy would prohibit the growth of these replacement tree(s); or (2) the required replacement trees to be installed would have to be planted under the canopy of an existing tree. See section 107-375 (h).
- 12. If a protected or heritage tree straddles the boundary between setback line and buildable area line, it shall be considered removed from the setback area if 25% or more of the trunk diameter is in the setback area. Sec 107-375 (c).
- 13. An application for a tree removal permit must include a tree survey that shows all trees that are at least 12 inches in diameter 4 ½ feet above natural grade and indicate the Critical Root Zone of these trees as well. Sec 107-376 (a)-1.
- 14. The maximum number of replacement trees required for trees removed from the <u>buildable</u> area will remain capped at seven. Sec 107-375 (h).

- 15. Maintain the replacement ratio of protected trees removed from the setback areas at 3 replacement trees for each removed. Sec 107-375 (a).
- 16. Development application requirements must include a tree survey indicating the location of all protected and heritage trees together with their CRZ. A protection plan must be submitted for these trees to include evidence that sufficient care must be demonstrated to ensure survival of these protected trees, including adequate watering before, during and after construction until an occupancy certificate is granted. Sec 107-376 (a)-1
- 17. All replacement trees must survive for at least three years, and the city development officer shall keep track of these replacements, so that at 3 years post planting, their survival and health can be assessed, consulting with an arborist if necessary. Sec 107-378 (d).

These items would not require code changes:

- 18. Section 107-380 requires all vendors doing tree trimming, removal, or demolition, to have an annual permit to do so from the city secretary. The city website should be amended so that residents can easily access the up-to-date list of approved and permitted tree service venders and how a preferred vendor can obtain a no cost permit from the city. Sec 107-380.
- 19. The CRCRC supports a program to plant "commemorative trees" on city property, especially parks, where the cost would come through citizen donations. This program is under consideration by the Parks Commission.
- 20. The CRCRC also supports a proposal that was very strongly supported in the survey (question 17, 85% said "yes") to consider a plan sponsored by the city, or private donations, to plant additional trees, with owner approval, in public ROW. The CRCRC did not include any proposed changes to the current ordinance, to accommodate this proposal, and may investigate further the practical and legal ramifications of this idea, perhaps presenting it later.

Summary of Recommended Changes to Rollingwood Tree Maintenance Ordinance from CRCRC

These recommendations are based on a careful analysis of the community survey done by the CRCRC in Fall 2023, where 74% of respondents stated that maintaining the current tree canopy was of either high or very high priority.

- Rename ordinance section to "Residential Landscape and Tree Canopy Management"
- Introduce "Heritage Tree" definition
 - One of the protected species and 24 inches or larger in diameter at 4 ½ feet above natural grade
 - May be removed from the building footprint area through normal permitting process.
 - Removal from yard setbacks and unused buildable area is prohibited unless by BOA special exception
 - Ordinance establishes Heritage tree replacement requirements
- Tighten protected tree replacement guidelines
 - Protected trees removed from yard areas (setbacks) must be replaced by protected species trees
 - May be replaced with trees from alternative replacement list if removed from an area 20ft from utility lines.
 - Protected trees removed from a lot must be replaced on that lot unless a special exception is obtained to plant on an adjacent lot with that owner's permission.
 - Protected tree diameters that are 25% or greater in the yard setback but straddling the line between yard setbacks and buildable areas, are considered removed from the yard setbacks
- Introduce Critical Root Zone (CRZ) and identify such on tree removal permits and add specific CRZ protections
- Add building permit application requirements
 - A protection plan to ensure the survival of all protected trees during construction
 - Survival of replaced trees will be assessed at 3 years after OC obtained; nonsurviving trees must be replaced
 - Protection specifics are in the works
- Reassign current code's "city arborist" tasks not requiring certified arborist expertise to a city building official.
- Include a statement encouraging, but not mandating, xeriscape landscapes and drought tolerant grasses be used on 50% or more of landscape area

1	ORDINANCE NO
2 3 4 5 6	AN ORDINANCE AMENDING CHAPTER 107 OF THE CITY OF ROLLINGWOOD'S CODE OF ORDINANCES RELATED TO RESIDENTIAL TREE CANOPY AND LANDSCAPE MANGEMENT, PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.
7 8	WHEREAS, the City of Rollingwood is a General Law Type A City under the statutes of the State of Texas; and
9 10	WHEREAS , the Texas Local Government Code Chapter 211 provides authority to regulate land for residential purposes; and
11 12 13 14	WHEREAS, the City Council of the City of Rollingwood ("City Council") finds that proper landscaping and tree canopies management provide critical environmental benefits, including improved air quality, reduced urban heat island effect, enhanced biodiversity, and stormwater management. The preservation and expansion of tree canopies contribute to the overall health and sustainability of urban ecosystems; and
16 17 18 19 20	WHEREAS, the City Council finds and determines that proper landscaping and trees play a vital role in enhancing public health and well-being by promoting mental health, providing recreational opportunities, and reducing noise pollution. The presence of mature trees and well-maintained green spaces is associated with improved quality of life for residents; and
21 22 23 24	WHEREAS , the City Council finds and declares that heritage trees, which are of significant age, size, or historical importance, represent irreplaceable cultural and historical assets. These trees contribute to the city's identity and historical character, offering aesthetic and educational value to current and future generations; and
25 26 27	WHEREAS, the Comprehensive Residential Code Review Committee (the "CRCRC") was appointed, among other issues, to study the need for amendments to the City's tree canopy and landscape regulations in residential areas; and
28 29	WHEREAS , the CRCRC has made recommendations consistent with the amended regulations herein; and
30 31 32	WHEREAS , the CRCRC, the Planning and Zoning Commission and the City Council have held public meetings and/or hearings and received public input regarding the proposed amendments.
33 34	NOW THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ROLLINGWOOD, TEXAS, THAT:
35 36 37	SECTION 1. All the above premises are hereby found to be true and correct legislative and factual findings of the City Council and are hereby approved and incorporated into the body of this Ordinance as if copied in their entirety.

38 39 40	SECTION 2. Code Amendment. The following sections of the Rollingwood Code of Ordinances are hereby amended as follows with strikethroughs being deletions from the Code and <u>underlines</u> being additions to the Code:
41 42	The title to Chapter 107, Division 10, Subdivision 2 is hereby deleted and amended to read as follows:
43	Subdivision 2. Residential <u>Landscape and Tree Canopy Management</u>
44	Sec. 107-369. Purpose.
45 46 47 48 49	(a) The tree code regulations protect the health, safety, and general welfare of the citizens of the city. In doing so, the appearance of the city is enhanced and important ecological, cultural, and economic resources are protected for the benefit of the city's residents, businesses, and visitors.
50 51 52 53 54 55 56 57	(b) Because the city experiences frequent drought conditions, these regulations are also intended to encourage low water demanding landscapes (Xeriscapes) through the use of native and adapted low water use plants from the Austin Grow Green Guide found on the City of Austin Website. The planting of turfgrass on less than 50% of the total landscaped areas, with that turf grass preferably having summer dormancy capabilities such as Buffalo grass, Zoysia grass, or non-seeding varieties of Bermuda grass is also encouraged.
59 60 61 62	(c) It is the intent of these regulations that site plan and project design will preserve the existing natural character of the landscape and the retention of protective trees as much as possible.
63 64 65 66	(b)(d) The sections within this subdivision address trees in both development and non-development situations and seek to enhance the quality of the tree canopy and optimize the benefits that trees provide.
67 68	(e)(e) For development situations, additional requirements to this subdivision are designated in [section] 107-376.
69	Sec. 107-370. Applicability.
70 71 72	This subdivision applies to property in the residential zoning district and to any other property to which section 107-341 of this Code does not apply.
73	Sec. 107-371. Definitions.
74	In this subdivision:
75	(a) Protected species means:
76	(1) Ash, Texas

77	(2) Cypress, Bald
78	(3) Elm, American
79	(4) Elm, Cedar
80	(5) Madrone, Texas
81	(6) Maple, Bigtooth
82	(7) All Oaks
83	(8) Pecan
84	(9) Walnut, Arizona
85	(10) Walnut, Eastern Black
86 87 88	(b) Protected tree means a tree that has a trunk with a diameter of 12 inches or more, measured four and one-half feet above ground, and is one of the protected species;
89	(c) Replacement species means:
90	(1) For trees planted within 20 feet of an above-ground
91	power, cable, or telephone line:
92	a. Anacacho Orchid Tree
93	b. Common Tree Senna
94 05	c. Crape Myrtle (dwarf) d. Desert Willow
95 96	d. Desert Willow e. Evergreen Sumac
97	f. Evers Necklace
98	g. Flameleaf Sumac
99	h. Goldenball Leadtree
100	i. Mexican Buckeye
101	j. Mexican Plum
102	k. Possumhaw Holly
103	l. Rough Leaf Dogwood
104 105	m. Texas Mountain Laurel n. Texas Persimmon
105	n. Texas Persimmon o. Texas Pistache
107	p. Texas Redbud
108	q. Wax Myrtle
109	r. Yaupon Holly
110	s. Cherry Laurel
111 112	(2) For all other trees planted within a property, a protected species.
113	(d) Replacement tree means:
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114 115 116	(1) For the replacement species listed in subsection (c)(l), a tree at least eight feet high when planted, which shall be maintained in a healthy condition after planting;
117 118 119 120 121 122 123	 (2) For the replacement species listed in subsection (c)(2), a tree with a diameter equal to not less than one-fourth the diameter of the protected tree it replaces up to a maximum diameter of six inches, which shall be maintained in a healthy condition after planting. The diameter of protected and replacement trees shall be measured four and one-half feet above the ground when planted. (e) Heritage tree means a Protected Tree of a protected species,
125	having a diameter of 24 inches or more, measured 4½ feet above
126	natural grade. To determine the diameter of a multi-trunk tree,
127	measure all the trunks; add the total diameter of the largest trunk
128 129	to ½ the diameter of each additional trunk. A total diameter of 24" or higher for a multi-trunk tree is a Heritage tree.
130	(f) Critical root zone ("CRZ") means the area around and under a
131	tree having a radius of one foot per inch of diameter from the
132	trunk of the tree outwards and twenty-four inches in depth. For
133	example, for a tree having a 10-inch diameter, the critical root
134	zone is 10 feet out from the trunk and twenty-four inches deep.
135 136	(e)(g) Removal means an act that causes or may be reasonably expected to cause a tree to die, including:
137	(1) Uprooting;
138	(2) Severing the main trunk;
139	(3) Damaging the root system, including, but not limited to:
140	a. Adjusting the grading of a lot to cover or uncover
141	a tree trunk or root system to the extent that the
142	adjusted grading causes or may be reasonably
143	expected to cause the tree to die; or
144	b. Placing fixtures over the root system to the extent
145	that the placement of the fixtures causes or may be
146	reasonable expected to cause the tree to die.
147	(4) Excessive pruning, including, but not limited to, pruning that
148	exceeds 25 percent of the canopy of the tree.
149	(f)(h) Certified City arborist means an ISA certified arborist.
150	(i) City Development Officer means that individual designated by the
151	City Administrator from time to time.

152	Sec. 107-372. Administration.
153 154 155 156 157	(a) A city arborist shall be appointed by the city council who shall coordinate with the City Development Officer when determined necessary to assist in promulgating forms for use under this subdivision and to decide all applications for removal of a protected tree.
158 159 160 161	(b) If an applicant requests a variance as permitted under this subdivision, the city arborist shall direct the request to the city council and make a recommendation to the city council whether to approve the variance request.
162 163 164 165 166	(c)(b) The list of eligible protected tree species under subsection 107-371(a) and the list of eligible replacement tree species under [subsection] 107-371(c) may be supplemented by approval of the city council, in consultation with the city arborist or as provided by subsection (e).
167 168 169 170 171 172 173 174	(d)(c) All protected trees and heritage trees removed from a lot should be replaced on that lot unless a written permission is submitted to the City from an adjacent lot owner to replant on the adjacent lot. An applicant may satisfy a tree replacement requirement by planting the required replacement tree(s) on the property affected by the protected tree removal, or on one or more other property(s) approved by the arborist or other designated agent of the city if:
175 176 177	(1) The benefit to residents of the city would be as great as replacement on the property affected by the protected tree removal; and
178 179 180 181 182	(2) The owner(s) of such other property(s) agree in writing to maintain the replacement trees in a healthy condition and replace same with like trees, as necessary as a result of a death of such tree(s), for a period of not less than three years.
183 184 185 186 187 188	(e) For purposes of subsections 107-372(c) and (d) the city and the owner may consult with an academic organization, state agency, nonprofit organization, or the city arborist to identify an area for which tree planting will best address the science-based benefits of trees and other reforestation needs of the municipality within and outside of the city limits.
189 190	(f)(d) The city council shall provide for fees payable for review of applications for permits and variances pursuant to this division.

Sec. 107-373. Removal of protected trees.

- (a) A person may not remove a protected tree without a tree removal permit for the removal and compliance with the terms of this subdivision.
 - (1) During removal of protected trees the tree removal permit shall be displayed on the construction board for the site in present or otherwise displayed on a sign within the first five feet of the front yard setback and if the house is not under construction the permit for tree removal shall be placed on the dashboard of the permitted vendor's vehicle.
 - Tree Removal Special Exception is granted by the Board of Adjustment upon a finding that: (i) all reasonable efforts have been made to avoid removing the tree, (ii) the location of the tree precludes all reasonable access to the property or all reasonable use of the property, and (iii) removal of the tree is not based on a condition caused by the method or design chosen by the applicant to develop the property. A Heritage Tree Removal Special Exception provided for in this code will not be required for Heritage Trees removed from the proposed building footprint area but are subject to the tree removal permitting and replacement regulations provide for in this Code.
- (b) Emergency pruning or removal. Notwithstanding subsection 107-373(a), a person may perform emergency pruning or removal of a protected tree as follows:
 - (1) When the condition or location of a protected tree presents a clear and immediate danger to a structure or to the health and safety of the public, the hazardous portion of the protected tree may be removed without first obtaining a required tree removal permit.
 - (2) In the course of performing emergency repairs to a road or water, wastewater, or drainage facilities, agents or contractors of the city may trim, prune or remove a protected tree as required to perform such work without first obtaining a tree removal permit. If such activities occur during normal business hours, the city shall first attempt to contact the city arborist City Development Officer to determine if the city arborist City Development Officer can provide immediate guidance and assistance. If such assistance is not immediately available, then the pruning or removal may occur in accordance with the requirements under chapter 18, article V of this Code.

234 235 236 237 238 239 240 241 242 243 244 245		(3) Any person who prunes or removes a protected tree under the provisions of this subsection shall, within 14 days of such action or as soon as practicable if there is a coinciding declaration of a state of emergency in the city, apply for a tree removal permit providing for replacement trees as required by this subdivision. The application shall include photographs or other documentation to demonstrate the requisite clear and immediate danger. The eity arborist City Development Officer will evaluate the information to determine whether a clear and immediate danger existed. A failure to submit an application or a failure to submit information demonstrating the clear and immediate danger shall constitute a violation of this subdivision.
247 248 249	(c)	The requirements of this subdivision apply to trees on public and private property. To the extent of conflict with another section of the Code, this subdivision applies.
250	Sec. 107-	374. Application for protected tree removal and tree removal
251		permits.
252	(a)	An applicant may request a tree removal permit application from
253 254		the city through the City's application platform located on the City's website. by phone, U.S. mail, fax, email or in person.
255	(b)	An application for removal of a protected tree located on public
256 257		property, a right-of-way or a public easement may be submitted by:
258		(1) An agent of the city, a public utility, or another political
259 260 261		subdivision with the authority to install the public facilities and perform the work necessitating the removal of the protected tree; or
262 263		(2) The owner of the property adjoining the site of the protected tree.
264 265 266	(c)	An application for removal of a protected tree on private property may be submitted by or on behalf of the owner of the property on which the tree is located.
267	(d)	An application for removal of one or more protected tree(s) must
268		be submitted to the city secretary and approved prior to removal
269 270		of the protected tree. If the application is approved as provided for in this subdivision, a permit shall be issued indicating each
270 271		for in this subdivision, a permit shall be issued indicating each protected tree that is approved for removal and indicating the
272		location(s) and size(s) of any required replacement trees and the
273		dates by which replacement trees must be planted.
274 275	(e)	An application that proposes removal of a protected tree shall include the required permit application fee.

- (f) An application for removal of a protected tree shall include any proposal for type(s) and location(s) of replacement trees on a site plan of affected property(s).
- (g) A permit for removal of a protected tree expires on the earlier of either two years after its effective date, or upon removal of the protected tree except that if any building permit issued for the associated property expires or is revoked for any reason, the permit for removal of a tree shall be revoked as well. Subject to applicable expiration, a permit for removal of tree(s) is transferable to a subsequent owner of the affected property, provided that any obligation in the permit with respect to replacement trees is assumed by the transferee.

Sec. 107-375. Conditions for approval.

- (a) If the protected tree is located within a <u>yard line and property line</u> setback area and the total width of the setback area <u>within the yard line and the property line</u> is greater than ten feet <u>or greater</u> from the edge of a property, the protected tree shall be replaced with a total of three replacement trees that may include a selection of replacement trees under subsections 107-371(d)(l) and (d)(2), and shall include at least one replacement trees under subsection 107-371(d)(2).
- (b) If the protected tree is not located within an area specified in subsection 107-375(a), the protected tree shall be replaced by one replacement tree under either subsection 107-371(d)(l) or subsection 107-371(d)(2).
- (c) If the protected tree trunk straddles an area specified in subsection 107 375(a), the protected tree is deemed to be in the area specified in subsection 107 375(a) if more than half of the diameter of the tree is within the area specified in subsection 107 375(a). If a protected or heritage tree straddles the boundary between the yard and buildable area, it shall be considered removed from the yard area if 25% or more of the trunk diameter is in the yard area.
- (d) If the <u>city arborist City Development Officer</u> determines under subsection 107-373(b)(3) that an emergency existed at the time of removal that necessitated expedited removal or an applicant provides documentation from a <u>certified arborist City Development Officer</u> that a protected tree is diseased, dead, or poses an imminent or immediate threat to persons or property due to natural causes only and the protected tree falls under subsection 107-375(a), the city arborist may reduce the replacement tree requirement to one replacement tree under either subsection 107-371(d)(1) or subsection 107-371(d)(2).

- (e) If the city arborist City Development Officer determines that an applicant provides sufficient documentation from a certified arborist that a protected tree is diseased, dead, or poses an imminent or immediate threat to persons or property due to natural causes only, and also not as a result of intentional bleaching, root cutting, or pruning more than 25 percent of the canopy, and that the certified arborist has documented at least two prior actions performed by the certified arborist within the previous three years to mitigate the condition, the city arborist City Development Officer may reduce or waive the replacement tree requirement for the protected tree and reduce or waive the tree replacement application fee.
- (f) If a protected tree is required to be removed under section 18-209, the <u>city arborist City Development Officer may</u> reduce or waive the replacement tree requirement for the protected tree and reduce or waive the tree replacement application fee.
- (g) The mayor may act to waive the replacement tree requirement under this subsection 107-374(d) for a storm event, wildfire or other calamity that causes widespread or costly damage to multiple protected trees throughout the city.
- (h) For a permit filed with an application for development of any improvements or structures, if the density of protected trees in an area described in subsection 107-375(b) is greater than seven protected trees, the number of replacement trees required under subsection 107-375(b) for a removal from such area is capped at seven replacement trees, at least three of which shall meet the requirements of subsection 107-371(d)(2).
- (i) If a protected tree has a trunk on a first property and <u>CRZ</u> roots and canopy that extend into a second property, the owner of the second property is required to obtain a tree removal permit for removal of the protected tree prior to performing any actions that constitute removal under subsection 107-371(e) on the second property. For purposes of determining removal under this subsection for 107-371(e), damage to the root system is assessed within the area that is a number of feet in diameter from the outer edge of the tree trunk at four and one-half feet from the ground based on a ratio of one foot for each inch of diameter of the tree trunk. If the actions by the owner of the second property as to the protected tree trigger a requirement for the owner of the first property to apply for a tree removal permit for the protected tree, the application review fee as to the protected tree on the first property is waived.
- (j) Replacement of a Heritage Tree removed from a yard area or a proposed a building footprint area must be replaced with one tree

363	6 inches in diameter, or more, for every 12 inches in diameter of
364	the removed tree. For example: 24 inches = 2 six-inch diameter
365	trees, 36 inches = 3 trees, etc. to be replaced. An exception to
366	these mitigation requirements may be granted by the City
367	Development Officer, after consulting with the City Arborist, and
368	with the approval of the Zoning Board of Adjustment if the
369	applicant demonstrates: (1) the existing tree canopy would
370	prohibit the growth of these replacement tree(s); or (2) the
371	required replacement trees to be installed would have to be
372	planted under the canopy of an existing tree.
373	Sec. 107-376. Development application requirements.
374	(a) An application for a building permit must:
375	(1) Include a tree survey and protection plan of all existing
376	trees on the property that are at least 12 inches in diameter
377	measured four and one-half feet above the ground;
378	including an indication of the CRZ of these trees.
379	(2) Include a grading and tree protection plan for protecting
380	all protected trees that are not approved for removal;. The
381	protection plan submitted for these trees to include
382	evidence that sufficient care must be demonstrated to
383	ensure survival of these protected trees, including
384	adequate watering before, during and after construction
385	until a certificate of occupancy is granted.
386	(3) Demonstrate that the design will preserve the existing
387	natural character of the landscape as to any protected trees
388	not approved for removal; and
389	(4) Include a tree removal permit application with required
390	fees for review of each proposed removal of a protected
391	tree.
392	(b) The building official City Development Officer may not release
393	or renew a building permit until the city arborist issues a tree
394	removal permit for each protected tree proposed to be removed
395	has been issued.
396	Sec. 107-377. Administrative variance.
397	(a) The city council may grant an administrative variance from the
398	requirements of this division if the city council determines by a
399	simple majority that owing to special conditions pertaining to the
400	affected property, literal enforcement of the provisions of this
401	division will result in unnecessary hardship, and the granting of
	• • • • • • • • • • • • • • • • • • • •

the variance will not be contrary to the public interest.

444

403 404	(b)	In considering any proposed variance, the following rules shall be observed:
405 406 407	(1)	The applicant for the variance must present to the city council a set of plans prepared by a certified arborist setting out the applicant's proposal and the nature of the proposed variance;
408 409	(2)	The proposed variance may not unreasonably affect any adjoining property or the general welfare of the community; and
410 411	(3)	The city council must find that the applicant did not create the condition necessitating the variance.
412 413 414	(c)	If the city council grants a variance under this subdivision, the city arborist may issue a tree removal permit with terms consistent with any terms and conditions of the granted variance.
415	Sec. 107-	37 <u>7</u> 8. Replacement procedure.
416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431	(a)	Whenever replacement trees are required by the terms of this subdivision, the owner shall submit to the eity arborist City Development Officer for approval a replacement site plan showing the locations, species and sizes of all replacement trees and vegetation for final approval by the eity arborist City Development. If during installation, the owner is unable to conform to the approved replacement site plan because conformance is not feasible due to subsurface conditions that could not reasonably have been foreseen that make the viability of the tree in the planned location unlikely, then the owner must submit an amended site plan to the eity arborist City Development Officer within seven days of the discovery of unforeseen subsurface conditions for approval by the eity arborist City. An amended site plan must provide for no fewer replacement trees or cumulative size of replacement trees than provided in the originally approved replacement plan.
432 433 434 435 436 437	(b)	Installation of the replacement trees must be completed within the time period designated by the <u>eity arborist City Development Officer</u> in the tree removal permit, however, in no event will the time period be longer than one year, however this time period is abated while a property is under construction where replacement trees are required.
438 439 440 441	(c)	The owner shall notify the <u>eity arborist City Development Officer</u> upon completion of the installation. If more than one protected tree has been replaced, the city arborist may then inspect for compliance with the approved replacement plan.
442 443	(d)	All replacement trees must survive at least three years. <u>The City</u> <u>Development Officer shall track all replacement trees, so that at </u>

three years post planting, their survival and health can be

445		assess	sed, consulting with an arborist if necessary. The eity
446			ist City Development Officer may contact the owner during
447			nree year period to arrange for a site visit by the city arborist
448			der to confirm the replacement trees have survived.
449		Repla	cement trees that do not survive for three years must be
450		remov	ved and replaced with similar species and sized trees.
451	(e)	The c	owner of property from which the removal of one or more
452		protec	cted trees was permitted shall arrange for the transferee(s)
453		of suc	ch property to submit to the city secretary a written transfer
454		to an	d assumption by such transferee(s) of the permit and all
455		obliga	ations of such permit with respect to required replacement
456		trees,	if all such obligations have not been satisfied at the time of
457		transf	er of the property.
458	<u>(f)</u>	_	protected trees removed from within 20 feet of an above-
459		_	d power, cable, or telephone line the species selected from
460		Sec 1	07-371 c (1) may be used for replacement.
461	Sec. 107	- <u>3789</u> .	Violations/penalties.
462	(a)	It sha	ll be an offense for a person:
463		(1)	To fail to perform an act required by the provisions of this
464			subdivision;
465		(2)	To fail to timely comply with any term of a permit issued
466			pursuant to this division, including terms regarding the
467			planting and maintenance of required replacement trees;
468		(3)	To hire, engage, or permit any person engaged in the
469			business tree planting, maintenance, or removal to perform
470			such services on property in the city without a permit
471			issued by the city pursuant to section 18-217 of this Code;
472		(4)	Except as expressly allowed pursuant to this subdivision,
473			to remove or to cause the removal of a protected or heritage
474			tree without first obtaining a permit therefor;
475		(5)	To transfer property from which the removal of a protected
476			heritage tree has been permitted if all obligations with
477			respect to replacement trees pursuant to the permit for such
478			removal are not then fulfilled unless the transferee of the
479			property agrees in a writing submitted to the city secretary
480			to assume such permit and all obligations with respect to
481			the planting and maintenance of required replacement
482			trees;
483		(6)	To fail to submit an application for a permit as required
484			pursuant to subsection (b) of this section or pursuant to
485			subsection 107-373(b)(3); or

- (7) To fail to submit photographs or other documentation to demonstrate a requisite clear and immediate danger pursuant to subsection 107-373(b)(3) in connection with an unpermitted removal of a protected or heritage tree.
- (b) An offense shall constitute a Class C misdemeanor punishable by a fine not to exceed \$500.00. An offense committed intentionally, knowingly, recklessly, or with criminal negligence shall be punishable by a fine not to exceed \$2000.00 per offense. Each protected or heritage tree removed in violation of this division shall constitute a separate offense, and a failure to plant and maintain each replacement tree shall constitute a separate offense. Each day a violation continues shall constitute a separate offense.
- (c) The owner of affected property and each person who causes or directs another person to remove a protected <u>or heritage</u> tree without a permit shall immediately submit an application for a permit pursuant to this subdivision, including a proposal for the provision of replacement tree(s) in compliance with this subdivision.
- (d) The building official shall issue a stop work order in connection with any permitted development of the property from which a protected or heritage tree is removed upon the occurrence of a violation of this subdivision or any term of a permit issued pursuant to this subdivision.
- (e) No certificate of occupancy shall be issued for a building or other structure that is not then in compliance with any permit issued pursuant to this subdivision for removal of a protected tree.

SECTION 3. All provisions of the ordinances of the City of Rollingwood in conflict with the provisions of this ordinance are hereby repealed to the extent of such conflict, and all other provisions of the ordinances of the City of Rollingwood not in conflict with the provisions of this ordinance shall remain in full force and effect.

SECTION 4. Should any sentence, paragraph, sub-article, clause, phrase or section of this ordinance be adjudged or held to be unconstitutional, illegal or invalid, the same shall not affect the validity of this ordinance as a whole, or any part or provision thereof other than the part so decided to be invalid, illegal or unconstitutional, and shall not affect the validity of the Code of Ordinances as a whole.

SECTION 5. This ordinance shall take effect immediately from and after its passage and the publication of the caption, as the law and charter in such cases provide.

525 526 527	APPROVED, PASSED AN Rollingwood, Texas, on the		-		Council	of t	the Ci	ity	of
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531								_	
532				Gavin Ma	ssingill, N	A ayor	•		
533	ATTEST:								
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535		_ <							
536	Desiree Adair, City Secretary								
537									

CRCRC BUILDING HEIGHT AND ASSOCIATED RECOMMENDATIONS 8-21-24

RESIDENTIAL BUILDING HEIGHT:

CRCRC Approved 3-18-24

Sec. 107-71. - Maximum permissible height - <u>Unchanged</u> - No portion of any building or structure (except a chimney, attic vent, lightning rod, or any equipment required by the city building code) may exceed 35 feet in height. Except as may be required by applicable codes, no chimney, attic vent, lightning rod or required equipment may extend more than three feet above the highest point of the following: the coping of a flat roof, the deck line of a mansard roof, or the gable of a pitched or hipped roof.

RESIDENTIAL BUILDING HEIGHT MEASUREMENT:

Sec. 107-3. - Definitions

CRCRC Approved 8-13-24:

Building height, residential, means the vertical distance from the original native ground surface or finished grade, whichever is lower, to the highest point directly above.

Original native ground surface is the existing grade on the lot prior to development of the residential building as may be shown on certified topographic survey of the property

Existing grade may be adjusted graphically as a straight line across unusual or minor topographic variations including pools, ponds, existing basements, rock outcroppings depressions and natural drainage ways, with the intent to approximate original grade without penalty for previous construction.

CRCRC Approved 8-20-24

Parallel Plane is an imaginary plane that is 35' above and parallel to the original native ground surface. No part of a building or structure, exclusive of the exceptions outlined below may break this plane.

Building height may be increased below the parallel plane by way of excavation, when starting a minimum of 20ft. horizontal from the side or rear property lines, as follows: a. As to the portion of the building above the excavated area: 40ft. above finished floor for uppermost surface of eave/parapet;

b. As to the portion of the building above the excavated area: 45ft. above finished floor for ridgeline of sloped roof with min. 3/12 pitch

The parallel plane may not be breached. Any exposed foundation resulting from this increase may not exceed 18 inches.

CRCRC Approved 6-25-24

The maximum allowable building height along the building setbacks, when starting from the 10ft. setback is 25ft. as measured from <u>existing or finished grade</u>, whichever is lower, adding one foot of height to every additional foot of setback, up to 35ft., such that the maximum height of 35ft. is at least 20ft. horizontal from the nearest property line.

SPECIAL EXCEPTIONS

CRCRC Approved 7-23-24:

Extremely Sloped Lots

Should the slope of a lot be so severe that the requirements proposed above have extreme adverse impact on the lot, an owner may seek relief from these requirements by special exception granted by the Board of Adjustment. Although not required, letters of agreement from adjoining neighbors will be given due consideration.

CRCRC Approved 8-20-24:

Flood Plain / Drainage Easements

Should some portion of the buildable area reside on or adjacent to a flood plain or drainage easement, and it can be shown that such would have extreme adverse impact on the lot's buildable potential, an owner may seek relief from these requirements by special exception granted by the Board of Adjustment. In such cases the Board may grant an exception for up to 5 additional feet of building height.

FOUNDATION HEIGHT

CRCRC Approved 8-20-24:

Foundation Height

Foundation exposure within public view from the right-of-way cannot exceed 6'

Foundation exposure within public view from the right-of-way must be screened such that viewable portion does not exceed 2.5 feet (30").

36

1	ORDINANCE NO
2 3 4 5 6	AN ORDINANCE AMENDING CHAPTER 107 OF THE CITY OF ROLLINGWOOD'S CODE OF ORDINANCES RELATED TO RESIDENTIAL BUILDING HEIGHTS AND HEIGHT MEASURMENT; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.
7 8	WHEREAS, the City of Rollingwood is a General Law Type A City under the statutes of the State of Texas; and
9 10	WHEREAS, the Texas Local Government Code Chapter 211 provides authority to regulate the height, number of stories, and size of buildings and other structures; and
11 12 13 14	WHEREAS, the City Council of the City of Rollingwood ("City Council") finds that maintaining the existing character and aesthetic appeal of residential neighborhoods is of paramount importance. The introduction of excessively tall residential buildings threatens to alter the visual and cultural fabric of the community; and
15 16 17 18	WHEREAS, the City Council finds and determines that taller buildings can lead to privacy concerns for adjacent properties, as higher floors may overlook yards, gardens, and living spaces and this intrusion into private spaces can affect residents' quality of life and sense of security; and
19 20 21 22	WHEREAS, the City Council finds and determines that the regulation of residential building heights proposed herein is consistent with the goals and policies outlined in the City's Comprehensive Plan and support the Plan's vision for sustainable development, community character preservation, and balanced growth; and
23 24 25	WHEREAS , the Comprehensive Residential Code Review Committee (the "CRCRC") was appointed, among other issues, to study the effect of building heights and building height regulation; and
26 27 28 29 30	WHEREAS, the City Council finds and declares that regulating residential building heights is essential for preserving the community's character, protecting residents' privacy, promoting environmental sustainability, and ensuring equitable and sustainable growth. These findings form the basis for the proposed height regulations, which will be implemented in accordance with applicable laws and community goals.
32 33	NOW THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ROLLINGWOOD, TEXAS, THAT:
34	SECTION 1. All the above premises are hereby found to be true and correct legislative

and factual findings of the City Council and are hereby approved and incorporated into the

body of this Ordinance as if copied in their entirety.

37 38 39	Ordinances is hereby amended as follows with strikethroughs being deletions from the Code and <u>underlines</u> being additions to the Code:
40	Section 107-3 of Definitions is amended to read as follows:
41 42 43	Building height, residential, means the vertical distance from the Original Native Ground Surface or finished grade, whichever is lower, to the highest point directly above.
44 45 46 47	Building height, residential, means the vertical distance above a reference datum measured to the highest point of the building. The reference datum shall be selected by either of the following, whichever yields a greater height of the building:
48 49 50 51	(1) The elevation of the highest adjoining original native ground surface to the exterior wall of the building when such original native ground surface is not more than ten feet above the lowest adjoining original native ground surface; or
52 53 54 55 56	(2) An elevation of ten feet higher than the lowest adjoining original native ground surface when the highest adjoining original native ground surface described in subsection (1) of this section is more than ten feet above lowest adjoining original native ground surface;
57 58 59 60	(3) The original native ground surface shall be determined as the existing grade on the lot prior to development of the residential building as may be shown on approved building plans or survey of the property.
61 62 63 64	This definition shall apply to all residential buildings or structures within the city including residential buildings constructed in the R — Residential Zoning District (see section 107-71 for Maximum permissible height in R—Residential Zoning District).
65 66 67	Original Native Ground Surface means the existing grade on a lot prior to development of the residential building as may be shown on a certified topographic survey of the property.
68 69 70	Parallel Plane is an imaginary plane that is thirty-five (35) feet above and parallel to the original native ground surface. No part of a building or structure, exclusive of the exceptions outlined in this chapter may break this plane.
71	
72	Section 107-71 is amended to add the following language:
73	Sec. 107-71 Maximum permissible height.

74 75 76 77 78 79 80	(a) No portion of any building or structure (except a chimney, attic vent, lightning rod, or any equipment required by the city building code) may exceed thirty-five (35) feet in height. Except as may be required by applicable codes, no chimney, attic vent, lightning rod or required equipment may extend more than three feet above the highest point of the following: the coping of a flat roof, the deck line of a mansard roof, or the gable of a pitched or hipped roof.
81 82 83 84 85 86 87	(b) The maximum allowable building height is twenty-five (25) feet when the building is placed ten (10) feet from the property line, as measured from the existing or finished grade, whichever is lower. For each additional foot of distance beyond ten (10) feet from the property line, the height may increase by one (1) foot, up to a maximum of thirty-five (35) feet. The maximum height of thirty-five (35) feet must be achieved at a distance of at least twenty (20) feet from the nearest property line.
88 89 90 91	(c) Should a landowner believe the slope of a lot be so severe that the requirements proposed above have extreme adverse impact on the lot, an owner may seek relief from these requirements by special exception granted by the Board of Adjustment.
92 93 94 95 96	(d) Existing grade may be adjusted graphically as a straight line across unusual or minor topographic variations including pools, ponds, existing basements, rock outcroppings depressions and natural drainage ways, with the intent to approximate original grade without penalty for previous construction.
97 98 99	(e) Building height may be increased below the parallel plane by way of excavation, when starting a minimum of twenty (20) feet horizontal from the side or rear property lines, as follows:
100 101	i. As to the portion of the building above the excavated area: forty (40) feet above finished floor for uppermost surface of eave/parapet;
102 103 104	ii. As to the portion of the building above the excavated area: forty-five (45) feet above finished floor for ridgeline of sloped roof with minimum of three over twelve (3/12) roof pitch.
105 106	The Parallel Plane may not be breached. Any exposed foundation resulting from this increase may not exceed eighteen (18) inches.
107 108 109 110	(f) Foundation exposure within public view from the right-of-way cannot exceed six feet. Foundation exposure within public view from the right-of-way must be screened such that the viewable portion does not exceed two and a half (2.5) feet.
l11	Section 107-81 Special Exception.

 $\label{lem:commendation} \textbf{Commented [AW1]:} \ \ \text{Legal recommendation is this be by variance.}$

112 113 114 115 116 117	Should some portion of the buildable area reside on or adjacent to a flood plain or drainage easement, and it can be shown that such would have extreme adverse impact on the lot's buildable potential, an owner may seek relief from these requirements by special exception granted by the Board of Adjustment. In such cases the Board may grant a special exception for up to five (5) additional feet of building height.
118 119 120 121	SECTION 3 . All provisions of the ordinances of the City of Rollingwood in conflict with the provisions of this ordinance are hereby repealed to the extent of such conflict, and all other provisions of the ordinances of the City of Rollingwood not in conflict with the provisions of this ordinance shall remain in full force and effect.
122 123 124 125 126	SECTION 4. Should any sentence, paragraph, sub-article, clause, phrase or section of this ordinance be adjudged or held to be unconstitutional, illegal or invalid, the same shall not affect the validity of this ordinance as a whole, or any part or provision thereof other than the part so decided to be invalid, illegal or unconstitutional, and shall not affect the validity of the Code of Ordinances as a whole.
127 128	SECTION 5 . This ordinance shall take effect immediately from and after its passage and the publication of the caption, as the law and charter in such cases provide.
129 130 131	APPROVED, PASSED AND ADOPTED by the City Council of the City of Rollingwood, Texas, on the day of, 2024
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136	Gavin Massingill, Mayor
137	ATTEST:
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140	, City Secretary
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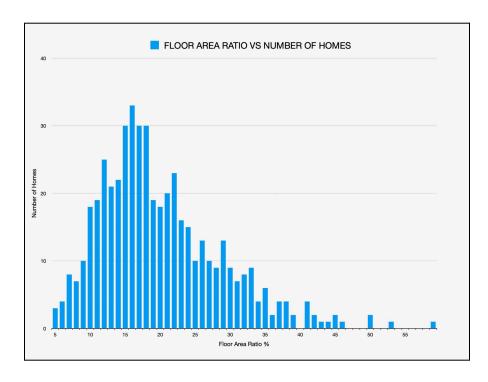
CRCRC SUMMARY OF BUILDING HEIGHT STUDY

Strike Force survey (2021) asked the question, what do you dislike most about RW and what would you like to see for the future. A high percentage of responses indicated a negative view towards some overly large or tall homes, particularly when compared to lot size. (See PDF)

Emails and public comment (2023) accumulated regarding new homes under construction that were maximizing height rules to build taller homes, impacting immediate neighbors' quality of life, and a sense among some that the pleasing character of the neighborhood was starting to change. A number of residents also called for a cautious, conservative approach, including those that said "do nothing".

FAR

We took a data-driven approach initially, looking at TCAD to determine FAR, which was notably imprecise, but gave us a general overview. We recognized that lot size in RW is variable, so choosing a percentage, say 40%, was going to unfairly impact some of the smaller lots on Pickwick and Gentry, for example. In order to keep things simple, we didn't feel that creating different rules for different lot sizes was going to be well-received. We were very cautious about use of FAR, keeping in mind the drainage manual and tree ordinance should mitigate some of the concerns, but were yet to be fully assessed.



The response to CRCRC Survey Q6 regarding use of FAR was evenly split, with many residents preferring to use alternate tools to control building size - like height measurement and tenting.

BUILDING HEIGHT

We took inventory of the existing built context in RW, including homes under construction and in-permitting. A high percentage of older and newer homes are single-story, which feel the most impact of much larger homes built along the setbacks, also taking into consideration upslope and downslope relationships.

We noted a pattern of older homes building with the slope, or "terracing", often locating garages, carports or basements on the lower slope and out of view. More recent homes of varying sizes and styles were also using the slope to build a broad main floor, with a second story above on the upper slope, and a lower story (or third level) on the lower slope. At the same time, there was an uptick in large foundations on sloping lots, up to 10ft., with an additional 35ft. directly above.

The current rules for determining reference datum have caused some confusion, with many residents not realizing that any home can add back the grade change below the highest grade, up to 10ft., yielding a home higher than 35ft. A number of new builds incorrectly used either the entire lot or buildable area to determine grade change, in tandem with the 5ft. radius beyond the building footprint. However, due to the size of many new homes, the building footprint is already starting to match the buildable area.

The objective of the current rules was to provide relief for steeply sloping lots with an additional 10ft. of building height, starting at the lowest grade, when the area under the building footprint has 10ft. grade change. Ideally, this limits the additional height to the lower portion, assuming a lot is uniformly sloping. In the case of lots that may have a small knoll and the rest is gently sloping, the impacts are more notable, thus the "gaming" that many referenced.

In April 2023, we held an early public workshop with 12 posters covering every topic, with graphics, history, options, and feedback to date, hoping to solicit additional feedback and conversations from the public. We presented our findings and analysis graphically in May 2023.

Our interpretation of community input before the survey went out was a reluctance to change the max building height. We also heard before and after the survey to "enforce the rules". Since the rules say building height maximum is 35ft., we first considered how to enforce 35ft. under our current rules, which on a very basic level meant no portion of the building can exceed 35ft., including on steeply sloping lots - which we observed had been the case until very recently. There were a few exceptions of homes built between 1985-1990, that appear to have a 45ft facade when measured to the ridgeline of a sloping roof.

We noted that 35ft. max height cannot be enforced when the reference datum is set by use of average grade or average of major building corners. It is no different from our current rules that allows additional height below the reference datum, yet we still included each of these options in our survey to see how the community felt in October 2023.

SURVEY

In Q4, we asked the community what they thought of three different options for measuring building height. There has been a lot of discussion about the interpretation of these responses with regard to the percentage of people that selected Option 3. We noted in April 2024, that 75 people wrote some version of "Option 3" in their comments, which amounted to 27% of the people that responded "yes" to Q3 (consider alternate building height measurements): 8% choose Option 1; 9% choose Option 2. We didn't parse the comments and make assumptions about what people meant that didn't select an option, yet the comments people included help clarify their answers, or lack of selection. For instance, someone that selected Option 1 commented: *Scenario #1, but step the height with each step in the foundation.* This almost sounds like "terracing", or "parallel plane", or "nothing above 35ft". Based on the comments, it was also clear people did not view this process as "voting", they were participating in a survey of ideas, the sum of which was our job to find consensus.

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Additional comments when "Option 3" was not specifically noted or tallied:

- Simplify forget the slope issues. If someone is going to cut a giant flat lot Max height should be 35 ft from the final buildable surface.
- Any of the three scenarios would be preferred to the current RW code.
- Would think you can use different calc based on the direction of the slope and the impact
 a tall facade has on neighboring lots. Especially if facade faces side or backyard of a
 neighbor.
- I believe if we incorporate a sky plane or step back above the 2nd floor (or when 25' above the average existing grade) we might be less intimidated by a 3rd floor.
- Height limit from natural existing grade
- Whichever forces new houses to more closely "match"
- I think 35 feet is too high. I think the maximum height should be limited to 2 stories. Consider using multiple scenarios, but only allow the final height calculation to be based on the most restrictive scenario.
- I think there should be a maximum wall height of less than 35' regardless of slope which will require people to build homes into the contour of their lot.
- Use the KISS method simple is better. Look at other surrounding communities to see what works.
- Why not do it like the city of austin...the McMansion ordinance... if you wanna go above and beyond you go petition... this is ridiculous. Every builder rolls over RW codes... we have all these problems... put the hammer down
- I suggest the method that produces the shortest overall structure
- Because of the slopes in the neighborhood, I'd go with a standard height above existing grade (and or a maximum height above the highest existing grade. I think the idea is not to have buildings with imposing heights vs. neighbors. If the land is at X height, having a building Y height above that, seems to make sense to me
- I think the option of the parallel lines from existing grade seems most reasonable.
- at no point higher than 35' including the foundation
- This is confusing to my mind. An example is the house on Riley and Rollingwood. It is too tall.

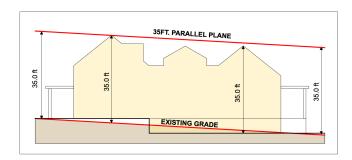
- These examples are confusing and I think difficult for the average lay person to understand. I do agree that building heights should be adjusted within reason on sloped lots.
- It's too easy to build a home that's 45' above existing grade if the grade at a single corner of the home is 10' above the minimum grade.
- Already new builds are too inconsistent with one another in size and style which diminishes the beauty of Rollingwood
- If it were up to me, I would be open to having alternate ways of measuring building height that at its core ensures that the primary intent of why we have a height limit on house builds is achieved (e.g. safety, to not obscure things, minimize impact to surrounding areas, etc.)...
- Foundations should be considered in overall height. A 10ft foundation that looks completely out of context and looms over all neighboring homes.
- When you walk by a house and it feels imposing from the street, it's too tall. Look at the new house on park hills with 3-4 balconies.
- Take foundation height into question as well as the added dirt to raise the yard that increases the height.

PARALLEL PLANE

In our research of other cities of similar size, topography, economics, and adjacency to a larger city, we started to see use of "parallel plane". Even initially we didn't fully understand how it was implemented. Effectively, it puts an air-space cap on the buildable area (using existing grade as the reference datum) so neighbors who are expecting new construction next door would never see anything higher than 35ft. above existing grade.

We started looking at house plans in RW with a 35ft. "pole" that we ran along the perimeter of the home. We found a high percentage of homes, (old/new, small/large, steeply sloping/flat, modern/traditional) were built within this framework. As architects, we immediately recognized this as a standard method of design when respecting context, scale, and topography. It wasn't that "parallel plane" was first created and homes began to conform, but rather homes were built instinctively under that method without complaint, until newer homes began to impact neighbors and views. So by the same process of working backwards, planners found a framework that simply codified existing best practices which did not impact neighbors.

At this point we felt we had a solution that could work for all lots, given that 35ft is a generous umbrella under which to build. Council asked us to define a special exception for any outliers.

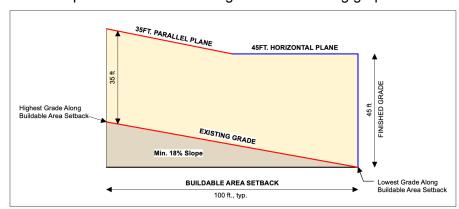


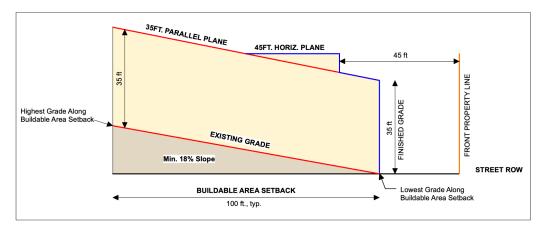
We took the opportunity to again reexamine our current code, as well as dig into our recommendations further. Since current code uses topo height(ft) to determine a reference datum, which doesn't always indicate a steeply sloping lot, we considered using maximum slope(%), measuring rise over run of the entire buildable area, to more accurately represent the true character of the property. From there we looked at other cities to find a % that was often used to distinguish "steeply sloping" in their codes, which we found to be between anywhere from 15-25%.

In order to compare, we made the following assumptions:

- 1. average lots in RW are roughly 100' x 150', assume about 75'-100' of buildable area along the setbacks;
- 2. by observation, a number of RW properties with 10' of slope do not appear "steep", which is roughly 13% slope (10/75).
- 3. 20% was the most common number in use, which is equivalent to about 15' of change. We rounded down to 18% to be more lenient, which is about 13.5'.

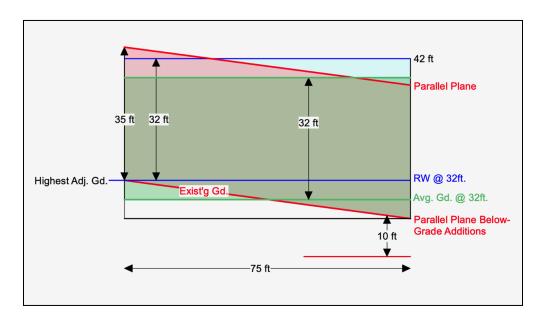
We presented this option in our next meeting with the following graphics:





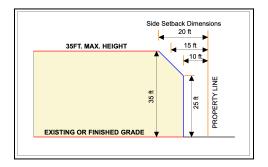
The public response in that meeting was to quickly reject these options entirely.

A few people throughout the process have been very vocal about their concerns for non-conformance and people not being able to build their current homes if the rules were to change. Therefore, lowering the max height was a non-starter, as a very high percentage of RW homes would then be "non-conforming". However, these same few have ironically suggested lowering building height as a solution, using either our current code (RW in blue) or Average Grade (green), rather than Parallel Plane (red). Parallel Plane is the only method that lops off the top of intentionally tall structures, but allows the same amount of height when building below existing grade when not facing the front, and does not create "non-conformance". Parallel Plane also limits flat roof structures from looming, providing more leniency for sloping roofs.



TENTING

The graphic above does not address tenting recommendations, which have not changed since being presented to council in April 2024. The dimensions are consistent with Austin, while attempting to simplify their rules, and are consistent with many new builds in RW. The survey indicated tenting was an acceptable tool to mitigate impacts along the setbacks, without necessarily changing the setback dimensions themselves. Another recommendation from recent public input is to keep 35ft. maximum along the setbacks - we do not recommend this approach.



COMMENTS PERTAINING TO NEW CONSTRUCTION AND CODE-RELATED ISSUES

Q3 What do you dislike the most about Rollingwood? What would you like to see changed as you consider the future of the city?

(One comment per resident response)

All the new big houses that cut down every single tree on the lot

I dislike the McMansion trend occurring

It just seems like the smaller homes are disappearing and the larger lots are getting covered up by the much larger homes that are replacing the homes being torn down.

Nothing needs to change.

Too many homes built too close together (not maintaining large lots)

Development rules that incentivize larger buildings

More house, less green is the way the city is headed.

McMansions with poor aesthetics built by builders who lack aesthetic design.

Would prefer to maintain some of the older character of the city.

More green space in ratio to house footprint

Unanticipated side effects of our building ordinances, enforcement, or lack of ordinances

Houses that are too big for the lot - losing that open, green space

Really dislike all of the McMansions going in -- the huge houses that take up the entire lot with little to no yard. I think the houses are too big for the lots, and they are changing the look and feel of our neighborhood. I saw this happen in my childhood neighborhood in Dallas and the end result is not appealing. It will cause RW to lose it's charm. We will just be one large house after another with no space! I would love to see the rules around building changed to keep this from happening more than it already has.

Influx of gaudy McMansions

Some of the houses - new and old - are ugly. We can't do much about the ones that are there - but someone should keep an eye on the new designs. Intrusive decks / viewing platforms on top of people's houses, huge-looking houses on small plots, ugly houses. I like new architecture, I like old architecture, I don't like 'ugly on purpose' architecture, which is the only word for some of the houses.

I dislike the clear cutting of trees from lots

These huge homes are dwarfing the older original ranch properties. They block natural light to the houses near them and too many outdoor lights interrupt the dark sky and produce illumination pollution.

I would like to see building codes that are enforced and reduced the maximum size of homes on a lot.

I dislike the Huge homes being built. I feel that there should be a Build envelope established for Rollingwood to protect the trees. Tiny Ranch style home are being knocked down and replaced with Huge homes which destroy the canopy of trees, it also destroys the quaintness of the neighborhood. It's getting out of control and if something isn't done now we will destroy what has attracts people to this neighborhood, which are the old established tree lined streets. Some of the homes are extraordinarily large and I don't think this is necessary.

Rampant construction of zero-lot line mega mansions

Homes that look like office buildings. Builders have built really ugly homes in recent years.

Slow down mammoth homes

The over cutting of mature, stunning and shady trees for large homes is sad.

Developers taking over our city

Dislike how the high dollar new builds are affecting the property tax of the older homes

More affordable housing.

I really do not like all of the new "McMansion" building and all of the new rules that are being put in place.

The huge houses that are being built lot line to lot line. The trees are one of our greatest assets but they are not being protected enough.

The increasing move to very large homes where the trees are removed and the lot is somehow flattened at the expense of our drainage, privacy and sense of space. Put limits in place to protect the existing homes from out of control development.

I most dislike that there is no tree ordinance, and developers are allowed to purchase a home and clear-cut the lot, eliminating ALL of the historic oak trees. Trees are an important part of the ecosystem, pulling CO2 out of the air, providing homes to all types of birds and critters. I also dislike that the zoning laws (apparently) have extremely modest set-back requirements.

I dislike most that people are starting to want to change things and make our city more like Northwest Hills in Austin.

Dislike seeing homes built from setback line to setback line with tree removal, but very little tree replacement. Too many folks moving to RW that want variances to build even larger homes that encroach into the setbacks. Dislike the homes that have managed to squeeze in a fourth story. Height restrictions are too generous.

That the new houses take up most of the lots so there is no little impervious cover.

Less tearing down of good houses.

Do not like seeing all of the new construction of homes with no character.

Homes that are too big for the size of the lot

I dislike the outlandish and unfavorable building

Drainage concerns and the cave in to builders of new and larger homes.

So much construction all the time - so much traffic related to construction - trucks flying through and parking every where.

Limit size of new construction relative to lot size

I feel there should be architectural standards for new homes. Two on my street have zero lot lines and one looks like a dental office the other like a bank

Super sized homes and entitled people.

Random growth without consideration for environmental impacts such as storm water management

The amount of ongoing and ever changing construction traffic and noise is a problem.

Radical changes to its character.

Current "extreme gentrification" going on leading to a homogenous very high economic status of residents.

I dislike the new McMansions that clear cut trees.

Current rules and regs that are not enforced.

Rollingwood is amazing.

3.

SURVEY COMMENTS FROM 2021 RESIDENTIAL STRIKE FORCE

Page 36

COMMENTS PERTAINING TO NEW CONSTRUCTION AND CODE-RELATED ISSUES

Q3 What do you dislike the most about Rollingwood? What would you like to see changed as you consider the future of the city? CONT'D

(One comment per resident response)

The building of lot line to lot line white monster houses that are being built on spec as large as possible with no care for their neighbors. Want to make sure we are building community trust and respect.

The idea that a developer appears to have shown little to no respect for the residents of Rollingwood and how their development would impact the lives of the people who live on Timberline.

New houses that are way too big for their lot size. They literally dwarf houses next to them. We are turning this beautiful city into a Mcmansionville - ugly.

The building code is crap. You terrorize residents with last minute bullshit requirements when they are trying to build their homes

The size of the new houses - they are more ridiculous by the day. The envelope Austin uses seems like a good way to manage that

The mega mansions. There should be a limit on size. They ruin the peaceful setting of the neighborhood.

Dislike the 6 million dollar white stucco homes

Too many large homes being built with too much impervious cover

Mega home compounds

I do not like the giant homes and rising taxes.

Vacant and abandoned lots.

I think there are things we can change and make the city better to make the money we're paying for our lots more valuable without there being so much resistance

Now as one of the "older" residents I find myself shaking my finger the new houses that are messing up our drainage and cutting down our trees

Maxed out impervious cover is contributing to loss of the charm

Also, there seems to be a disregard for livability as houses are allowed to max out lot sizes for tax or other reasons. It impacts the character of our community.

The unceasing construction of new mega homes. Particularly those that push their structures to the property limits

New houses are enormous

Some of the new builds are eating up the green spaces and feel like homes that need about a acre more of lot to be proportionate

The emphasis on larger homes, the lack of preservation of trees

I hate the way new buyers are coming in and building something they want, rather than a home hat fits the neighborhood

Huge big box homes and the construction that lingers for an inordinate amount of time.

Houses that are simply oversized - even for these lots. The unnecessary excess is causing awful construction with its traffic. The character of this lovely city is going away with each look-alike mansion so I believe limits on house size and height would be wise.

That most of the homes will be huge without lawns, they appear like blocks without lawns for kids to play on

We really dislike that the city allows 3 story houses. We would love to see the Rollingwood have two story houses only to preserve the architecture quality and design that this neighborhood is known for. Its unattractive to have houses building higher and higher for downtown views.

dislike: the size of the homes being built that cover the largest percentage of the lot and the loss of trees that come with these structures. The residents must have the strongest voice in the decisions made

I would like to see movement regarding land use, specifically regulations on ADUs.

Larger homes are building into setbacks so we have less and less green space

I dislike the trend toward homes which occupy every available inch of their lots, replacing trees with concrete and greatly increasing impervious cover.

Houses taking up most of the lots

The lack of thoughtful development (all of the houses being scraped and replaced with huge houses)

Too much building going on.

Construction. I'm so tired of the construction.

HUGE houses TOO MUCH STUCCO. It's not really masonry.

Overdevelopment of ridiculously large homes.

I wish the new houses would not use up the entire lot with building, so more green space and trees would be present.

6000sq ft white stucco houses with white trim. The repeal or amendment to the masonry ordinance was a mistake.

Bigger houses aren't improving things!

More zoning restrictions - some of the houses are too big for their lots. The houses stretch from one fence to the other

Too large houses being built taking up as much property as possible, ie going to the setback on all property lines, front, back and side and taking down too many trees.

Limit the removal of older heritage homes.

Sometimes it can feel like "us versus them," with a pro-development versus a pro- neighborhood side. I would like to see more effort made to have all decisions made be community focused and citizen centered.

The traffic, noise, and mess that are caused by the nonstop construction of unnecessarily large homes.

Big houses being built with very little yard.

Don't have any notable dislikes

I dislike the anger and bitterness expressed by a minority or residents that are resistant to change.

The noise of all the construction. Hope leaders will consider reducing allowed construction hours and not start before 8 and not on weekends

The amount of ongoing and ever changing construction traffic and noise is a problem.

Permit process, would like for it to be more transparent and fluid.

We are the most highly educated and privileged people on the planet. The fact that we allow 10,000 square foot houses to flood neighbors and threaten the Edwards aquifer(drinking water source for 2million people is selfish. Indefensible. We need impervious cover restrictions.

Height & Imposing Wall Toolkit

A comprehensive review of 118 municipal height-restriction ordinances across the United States demonstrates that there are many options for the City Council to consider when determining whether, and if so how, to alter Rollingwood's height-restriction ordinance. The purpose of this "toolkit" is to provide policymakers on the Planning & Zoning Commission and City Council with the options available to them in taking on this task. Accompanying this toolkit is a spreadsheet providing summaries of the height ordinances of the 118 municipalities.

1. Direct Height Restriction Options

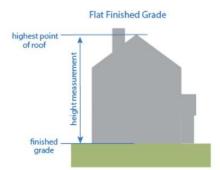
The primary tool for regulating residential building heights are direct height restrictions. The overwhelming majority of cities in the United States set their maximum height at 35'. The question, though, is 35 feet from where? Cities have generally answered that question in three different ways: (1) by defining the measuring point from which height is measured by a single fixed point on a lot; (2) by defining more than one measuring point on a lot; and (3) by defining an infinite set of measuring points on a lot. Option one presents the simplest and easiest to measure and enforce; option two is slightly more complex; option three is the most complex.

A. Fixed Point Options

Fixed-point height ordinances set their reference point as a single point on a lot. This is the easiest to enforce and understand. The location of the fixed point varies depending on a city's particular ordinance.

The overwhelming majority of American cities use a single fixed-point measurement set to the **average** elevation of the building footprint, which takes into account a lot's topography mathematically. Charlottesville, VA, for example, defines "height" as "the vertical distance measured perpendicularly from grade to the highest point on such building or structure. Grade means, with reference to a building or structure: the average level of the ground adjacent to the exterior walls of the building." More examples include Estes Park, CO, Spokane, WA, Sunset Valley and Boerne, TX, Anchorage, AK, Tulsa, OK, Fort Collins, CO, St. Paul, MN, Branson, MO, and Nashville, TN. Bentonville, AR, illustrates its average measurement this way:





- Other options for single fixed-point height ordinances include:
- Setting the reference point to the **highest** or highest average elevation of the building area. Examples include Stowe, VT, Lago Vista, TX, Lakeway, TX, New Braunfels, TX, and Hot Springs, AR.
- Setting the reference point to the elevation at the curb or front wall of the building.
 Examples include Eureka Springs, AR, Knoxville, TN, Louisville, KY, Boston, MA,
 Overland Park, KS, and Fort Worth, TX.
- Setting the reference point to the lowest or lowest average elevation of the building area. Examples include Abilene, TX and Santa Clara, CA.
- Setting the reference point at the center of the building. Examples include Chapel Hill,
 NC and Little Rock, AR.

Rollingwood's height ordinance is currently a single fixed-point measuring system of one of two options: (1) for lots with less than 10' of slope in the building area, the maximum height is measured from the highest point of natural grade within the building area; or (2) for lots with more than 10' of slope in the building area, the maximum height is measured from ten feet above the lowest point of natural grade within the building area. This means that for lots less than 10' in slope, the maximum height will be set at 35' above the **highest** portion of the building area in a horizontal plane across the entirety of the lot. For lots with more than 10' of slope, the maximum height will be set at 45' above the **lowest** portion of the lot.

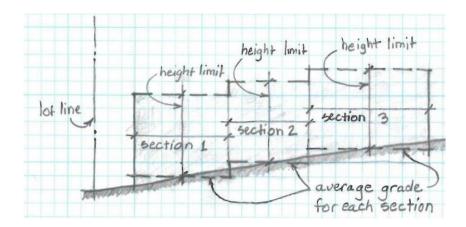
This measuring system does two things. First, it establishes where the base of the house will sit on the lot (assuming the homeowner builds to the 35' height limit). For a lot with a less than 10' slope, the base of the house will roughly sit at the top of the hill. For a lot with more than 10' slope, the base of the house will move downward to roughly sit 10' above the bottom of the hill.

Second, it provides a slope adjustment on a sliding scale. Lots with no change in elevation in the building area do not get any slope adjustment. For lots with 5' of slope in the building area, there is a 5' slope adjustment. For lots with 9' of slope in the building area, there is a 9' slope adjustment. Importantly, this adjustment only permits additional height *beneath* the measuring point. At no point is a home permitted to exceed 35' above the highest natural grade of the building area. (Note: this last fact was not always true. A prior version of the ordinance, recently amended by Council, in some circumstances permitted additional "bonus" height to be added *above* the highest natural grade of the building area.)

The moment the buildable area hits 10' of slope, the sliding scale stops and can produce no additional feet of slope adjustment regardless of how steep a lot's slope is. The measuring point, however, shifts to 10' above the bottom of the hill. Those 10' define the available slope adjustment for steeply sloped lots.

B. Multi-Point Options

A few cities have employed a multi-point method in which a building is divided into **segments**, and each segment has its own height limit—typically based on average elevation of the segment. This creates a "terraced" look while also taking into account topography. Cities that use multi-point methods include Fredericksburg, TX, Albuquerque, NM, Colorado Springs, CO and, for sloped lots, Burlington, VT. Raleigh, NC and Seattle, WA give the homeowner the option to select between using the lot-average method or the segment-average method. In Seattle, if the owner chooses the segment-average method, the "maximum height for each section of the structure is measured from the average grade level for that section of the structure, which is calculated as the average elevation of existing lot grades at the midpoints of the two opposing exterior sides of the rectangle for each section of the structure." Seattle illustrated its method in this diagram:



C. Infinite-Point Option (Parallel Plane)

Another option used by a very small minority of municipalities is an infinite-point height-restriction method, which, as described, independently measures the maximum height at every location within the building area. This method is sometimes called the "**parallel plane**" method because it involves two parallel planes: (1) the natural slope of the lot; and (2) an imaginary plane rising a set number of feet above the natural slope of the lot. The home must be built between the two planes.

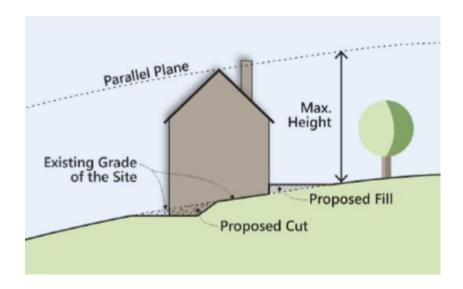
The parallel-plane method has two significant drawbacks. First, the method significantly reduces the buildable area of sloped lots (because one cannot build a sloped floor). As such, it is the most restrictive option for measuring building height. A current member of the CRCRC noted this drawback of the parallel-plane method:

"Just talking to an architect friend of mine [who] was saying that ... I'm not sure people really understood how restrictive that is, and that it would be very difficult to build houses on sloped lots."

Second, the method seems to get very complicated, very quickly—as evidenced by cities that have adopted complex and sometimes confounding parallel-plane ordinances. The language is often dense and difficult to understand, and it seems extremely unlikely to be strictly enforced as that would require a building official to be able to accurately determine, after concrete is poured and a home built, how high every inch of the rooftop is relative to the natural grade immediately beneath it. The question ought to be asked to our building official: how would you determine, once a house is built, whether a particular portion in the middle of a home conforms to the parallel plane?

Because the parallel-plane method mathematically reduces buildable volume on sloped lots, cities that use the method ordinarily include adjustments for sloped lots. Oakland, CA, provides additional height to sloped lots depending on the particular lot's slope. Laguna Beach, CA gives 5 additional feet depending on the lot's slope. Marin County, CA, gives up to 10 additional feet depending on setbacks.

Cities that have adopted the parallel-plane method include West Lake Hills, TX, Laguna Beach, CA, and Oakland, CA. Temple City, CA illustrates the parallel-plane in this diagram:



D. Hybrid/Mixed Options

Unsurprisingly, there are some height-restriction ordinances that do not fall neatly into a single category, but are nonetheless worth understanding and considering.

For example, Honolulu, HI's ordinance incorporates both the high-point method and the parallel-plane method. A high-point horizontal plane is set at an elevation of 25' above at the highest point of a boundary of the buildable area. A second plane, the "parallel plane," is set at 30' above grade at all locations. If the planes ever cross, the parallel plane governs. If not, the high-point plane governs.

Denver, CO has its own approach. Generally speaking, it creates two independent "base" planes—one providing the height limit to the front portion of the lot and a second providing the height limit for the back portion of the lot. Each is, loosely speaking, based on averaging.

Asheville, NC is another unique approach. Generally, Asheville's height limit is set at 40' above the average grade. For sloped lots on mountainsides, however, Asheville lowers the uphill facade to 30'. However, it raises its height limits on sloped lots significantly (in fact, above 40') if the homeowner uses paint with a low light-reflectivity value or grants a vegetative easement on the downhill side.

Some cities differentiate between lots that slope downhill from the street and lots that slope uphill from the street. San Francisco, CA, for example, provides that for lots sloping away from the street, the measuring point is at the curb at the centerline of the house for the first 100' deep. For lots sloping upward away from the street, the measuring point is at the curb at the centerline of the house for 10', but steps upward based on a formula.

2. Additional Height Regulation & Softening Tools

A. Number of Feet

The simplest lever to "pull" when determining height restrictions is the numerical height. The overwhelming majority of communities in the United States use a 35' maximum height. Some cities are more and a few are less. But, **generally speaking**, a 35' maximum height is the standard maximum height across the entirety of the United States. Rollingwood's current code sets the height limit at the standard 35' height limit.

B. Number of Stories

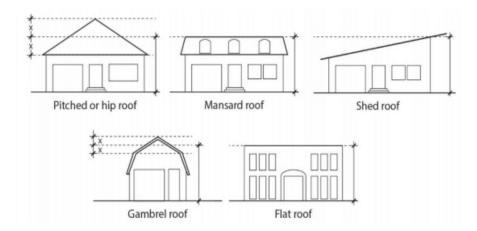
A very large number of cities have a second height limit tied to the maximum number of stories a home can be built. The typical maximum-stories limitation is 2.5 stories. Rollingwood's current code does not include a maximum number of stories.

C. Roof Differentiation

A third easy lever to "pull" is differentiating between types of roofs. Many cities treat all roofing styles the same such that the maximum height is measured from grade level to the top portion of any style roof.

The majority, however, treat pitched roofs more favorably than flat roofs (because homes with flat roofs are far more bulky than homes with pitched roofs). Some provide two different maximum-height numbers—one for pitched roofs and one for flat roofs. Culver City, CA, for example, has a height limit of 26' for flat roofs and 30' for pitched roofs. Most cities that differentiate between roof style provide that the maximum height is measured to either the top of

a flat roof or the midpoint of a pitched roof. Portland, OR, illustrates its differentiation this way:



Rollingwood's ordinance is in the minority in not differentiating based on roof style. Differentiating between pitched and flat roofs would discourage flat roof designs and encourage less "bulky" home designs.

D. Wall Articulation

Another important and likely non-controversial option for reducing the "imposing" and harsh nature of exterior walls is to require that flat walls be broken up architecturally. This can either be done as a requirement for any exterior wall (like Las Vegas, NV) or it can be done in the form of "bonus" height for walls that are articulated (like Sedona, AZ).

Documents from the March 18, 2024 meeting of the CRCRC include a recommendation to implement side-wall articulation requirements:

SIDE-WALL ARTICULATION - FINAL

If a side-wall of a building is more than **15 ft. high**, the sidewall may not extend in an unbroken plane for more than **40 ft. in length** (CoA is 36ft) along a side lot line without a sidewall articulation that meets the requirements of this section. (Or, every 50 ft. of a first floor wall that is 18 ft. tall or greater.)

A. To break the plane, a sidewall articulation must:

- be perpendicular to the side property line, at least 3 ft. deep (CoA is 4ft.), and extend along the side property line for at least 10 ft.; Include graphic
- extend the entire height of the first floor of an addition to, or remodel of, an existing one-story building; flat decks and patios are not permissible;
- extend the entire height of the second story of an addition to, or remodel of, a two or more story building.

B. Alternate means of articulation within the same 15 ft. x 40 ft. plane, may include, but are not limited to:

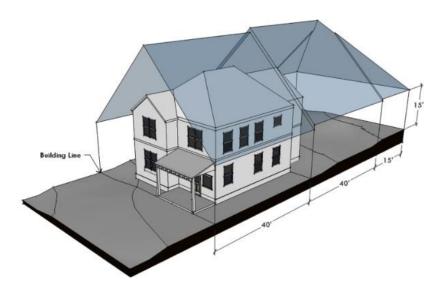
- clear change in building materials for a minimum of 10ft., horizontal and vertical;
- windows that are recessed at least 6 in. as measured from face of veneer to face of glass, and that are a minimum of 30 sq. ft. in area.

Rollingwood's ordinance does not currently impose wall-articulation requirements.

E. Tenting

Although applied significantly less frequently than other height-restriction tools, employing "bulk planes"--sometimes called "setback planes" or "tenting"--is a way to reduce the "bulk" of buildings by cutting out (in three dimensions) the corners of a lot's 3D building "envelope." Cities that have imposed bulk-plane restrictions include Austin, TX, Chapel Hill, NC, and Salt Lake City, UT. Bulk planes, like the parallel-plane method, can get complicated quickly–especially as applied to sloping lots (because the bulk planes too will rise and fall with the slope of the lot).

Austin's ordinance imposes both side and rear bulk planes in Zoning Code Subchapter F, Section 2-6. The bulk planes effectively remove, from the buildable envelope, a "tent" on top of the structure. Austin's ordinance includes a diagram of the 3D bulk-plane regulation:



Rollingwood's code does not currently impose a bulk plane or "tenting" requirement. There is a legal question concerning whether a municipality that is not a home-rule city may impose bulk planes. See Tex. Local Gov't Code Sec. 211.003 (authorizing only home-rule cities to "regulate the bulk of buildings"). Given the complexity of the "parallel plane" method and how it is often prescribed as providing a 3D envelope between two "planes," its legality too might be questioned under the Local Government Code.

F. Grade

A direct height-restriction ordinance such as a fixed-point, multi-point, or "parallel plane" limitation inevitably must provide the point or series of points from which the distance to the top of the structure is measured. Some cities tie the measuring point to a point on the natural ground of the buildable area; others tie the measuring point to the finished grade of a building. Tying the measuring point to the natural ground will typically lower the height of a building, as foundations generally sit on top of the natural ground.

Rollingwood's current code defines the grade to which height is pinned as the "original native ground."

3. Equity and Exceptions

A. Slope Adjustments

The impacts of height restrictions on flat lots are easy to understand. Where ground is flat (or effectively flat), imposing a 35' limit measured by the distance between natural ground and a rooftop is simple and predictable: the homeowner gets 35', no more and no less, and everyone gets to build his or her home within the same buildable envelope. Everything is fair.

The same is not true once slope is factored in. Because one cannot build a slanted floor, a strict 35' limit on a sloped lot measurably reduces the buildable envelope on the lot–leaving portions of the envelope unbuildable. In this way, a height-restriction tool that may work for all flat lots may work poorly, and unfairly, on sloped lots.

No doubt because of this, nearly every municipality in America incorporates some form of adjustment for slope into its height-limit ordinance.

Some height-restriction ordinances adjust for slope automatically. For example, the most typical form of height-restriction ordinance—the single fixed measuring point based on "average" lot elevation—mathematically and automatically provides an adjustment for sloped lots. If a lot slopes an average of 6 feet, for example, the measuring point will be placed at the midpoint of the elevation change, leaving a 3-foot height adjustment. The mathematical calculation of averaging also serves to limit the slope adjustment. A multi-point height-restriction based on the average of each segment would perform the same mathematical calculation for each segment, providing an automatic slope adjustment (and an automatic limitation of the slope adjustment) as to each segment.

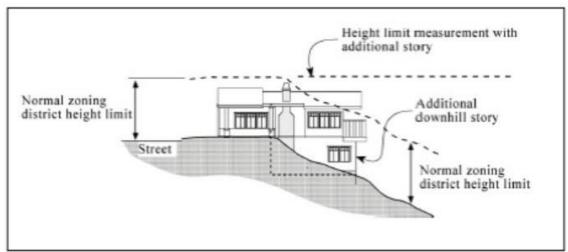
Likewise, a height ordinance that places the measuring point at the highest elevation on a lot automatically provides an adjustment for sloped lots. If a lot slopes 6 feet, the measuring point will be placed at the top of the slope, leaving a 6-foot height adjustment beneath the measuring point. A "highest" elevation measuring point does not automatically limit the slope adjustment. As a result, a large number of communities with "highest" elevation measuring

points also limit the number of stories a building can have—typically 2.5 or 3 stories, maximum. Madison, WI limits the automatic slope adjustment to 15% greater than the defined numeric maximum height. Rollingwood's current ordinance limits the height adjustment to one foot for each foot of lot slope up to 10 feet.

Because the "parallel plane" method significantly reduces the buildable envelope for sloped lots (but has no impact on flat lots), the majority of the relatively small number of American cities that employ the method also incorporate some form of adjustment for sloped lots. For example:

- Laguna Beach, CA imposes a parallel-plane method with up to 5' feet of slope adjustment, excludes full basements from the maximum-height calculation, and incorporates an express special exception;
- Los Angeles, CA imposes a parallel-plane method in some areas of the City but increases the height limit 5 to 6 feet for lots with greater than 25% slope;
- Oakland, CA imposes a parallel-plane method but increases the height for sloped lots by 6, 8, or 10 feet depending on slope;
- Salt Lake City, UT imposes a parallel-plane method with a mathematical formula to calculate the slope adjustment: the downhill exterior wall height may be increased by one-half foot (0.5') for each one foot (1') difference between the elevation of the average grades on the uphill and downhill faces of the building;
- Sedona, AZ imposes a complicated method that includes a parallel plane but adds 5 feet for pitched roofs and adds another 5 feet for wall articulation and light-reflectance mitigation; and
- Tacoma, WA imposes a parallel-plane method on its view-sensitive district but increases the height limit on the downhill side of the slope at the rate of one foot for each 6 percent of slope.

Chico, CA imposes the parallel-plane method but allows for the building of an entire additional story on the downside of a qualifying sloped lot as illustrated in its zoning code in this diagram:



B. Exceptions for Walls Facing Non-Residential Areas

Another potential exception is for those walls that do not face other residential buildings given that height regulations on walls facing non-residential areas do not present the same problems as those facing other homes. Maple Ridge, British Columbia, for example, has a bulk-plane ("tenting") ordinance that excludes from regulation those walls facing dedicated parkland.

C. Screening/Greenbelt Easements

Finally, an option for mitigating the impact of residential building walls on downhill neighbors is to require—or reward—vegetative buffers or easements. Asheville, NC's hillside building-height rules provide significant slope adjustments for property owners that grant the City a vegetative easement on the downslope side of a hill.

City & State	Max. Height Primary Type of Height Restriction		Slope Adjustment (If	Sloped Roof Adjustment (If Any)	Sources	Additional Notes/Context
City & State	Max. Height Filliary Type of Height Restriction	Any)	Any)	Arry)	Sources	Additional Notes/Context
	Fixed Point (Lowest): The height shall be measured from the highest parapet or roof ridge to natural grade or finish grade at the lowest point adjacent to the				Measurement: 2.5.1.2	
Abilene, TX	35 building exterior, whichever yields the greatest height.				Height: Table 2-2	
Albuquerque, NM	Fixed (Average) or Multi-Point (Average Terraced): The vertical distance above the average finished grade, unless specified otherwise in this IDO, at each façade of the building, considered separately, to the top of the coping or parapet on a flat roof, whichever is higher; to the deck line of a mansard roof; or to the average height between the plate and the ridge of a hip, gable, shed, or gambrel roof. On a stepped or sloped project site, the maximum height is to be measured above average finished grade of any distinct segment of the building that constitutes at least 10 percent of the gross floor area of the building, unless specified otherwise in this IDO.		Yes. Inherent in height measure.	Yes. Measured to midpoint of highest roof surface.	Height: Part 14-16-2 Measurement: Part 14-16-7	
	Fixed Point (Average w/ downslope adjustment): Building height for most building types shall be measured as the vertical distance from grade plane to the midpoint (median height) of the highest roof surface. The grade plane for determination of structure height shall be the average of existing or finished grade, whichever is lower, abutting the structure at exterior walls. Where the grade slopes away from the exterior walls, the grade plane shall be established by the lowest points within the area between the building and the lot line, or, where the lot line is more than six feet from the building, between		Yes. Inherent in	Yes. Measured to midpoint of highest roof	Height: TABLE 21.06-1 Measurement: 21.06.030 Drawings: https://mcclibrary.blob.core.usgovclo udapi.net/codecontent/12717/45474	
Anchorage, AK	30 the building and a point six feet from the building.		average fixed point.		7/21-06-030GradePlane.png	

	Less than 20% grade: Fixed Point (Average): Structure height shall be measured from the average level of the highest and lowest existing grade elevation points of that portion of the site covered by the building, to the highest portion of the roof. More than 20% grade: Parallel Plane: For lots with an average slope of 20 percent or greater, structure height shall be measured from the adjacent existing grade to the topmost point of the roof. The maximum allowable height shall be measured as the vertical distance from the existing grade of the site to an imaginary plane located the allowed number of feet		Yes for less than 20% slope; no for more than 20%		Height: 30 for Residential; up to 35 for mountain residential (Table 2-2)	
Arcadia, CA 30-35	above and parallel to the grade.	2 Stories	slope.		Measurement: 9103.01.050	Note: Underground portions not counted (9103.01.020).
Asheville, NC 4	Fixed Point (Fire Access Point): Vertical distance between ceiling of highest occupied floor to primary level of fire department access. Steep-slope (Mountain ridge and side) rules: Max. 30' at uphill facade and 40' at downhill facade on 15%+ mountainside slopes. Roof adjustment for sloped vs. flat roofs. Additional 12' uphill side and 20' downhill side if paint with light reflectivity value of 25% or less 0 on downhill side plus 50' vegetation easement.		Yes for lots sloping downward. Also see definition.	Yes. Max height is measured to ceiling (not roof)	Height: 7-8-2 (SF Low Density) Measurement: 7-2-5 ("Building Height") Steep-Slope: 7-12-4	
	General rule: Parallel Plane: vertical distance from top of building to natural grade w/in interior of building and lower of natural or finished grade at perimeter of building. For central business district with slopes 3 feet or less: Fixed Point: maximum height is measured at highest point of lot extended horizontally across entire lot. For lots with 10% or more slope downward from street, maximum height of building's front facade may extend horizontally for the first 10 feet of the building's		Yes. See height	Yes. Measurement height changes based on pitch	Max height: 26.710.080 General rule: 26.104.100 (definitions); 26.575.020(f) ("Measuring Building Heights") Sloped-lot adjustment: 26.575.020(f)	
Aspen, CO 25	5 depth.		rule.	of roof.	Roof: 26.575.020(f)(2)	

	Fixed Point (Average Elevation): Building height: The				
	vertical distance from grade to the mean level				
	between the lowest and highest points of the roof of				
	the highest story. The height of a building shall be the				
	average building height based on the measurement of				
	all elevations. The height of a building on each				
	elevation shall be measured from the point of the				
	average finished grade level of each elevation to the				
	mean level between the lowest point on the edge of				
	the eave of said elevation and the highest point of the				
	roof over the highest story facing that same said				
	elevation without regard to any intervening roof peak.				Measurement: 16.29.001
	Grade: The average level of the finished surface of		Yes. Inherent in		
Atlanta, GA	35 the ground adjacent to the exterior walls of a building.		average.		Height: 16-03.009
	Fixed Point (Front Flourtian), the vertical distance				
	Fixed Point (Front Elevation): the vertical distance measured from the level of the established grade at				
				Vaa	
	the middle of the front of the building, to the highest			Yes.	Management Assaul B. Con C
	point of a flat roof; to the deck line of a mansard roof; and to the mean height level between eaves and ridge		Vac if lat alance	Adjustment	Measurement: Appx. B, Sec. 2
A			Yes if lot slopes	upward for	Height Appy D. Co. 9.C
Augusta, GA	45 for a gable, hip, or gambrel roof. Fixed Point (Average Elevation): Vertical distance	2.5 stories	downward. Yes. Inherent in	pitched roof.	Height: Appx. B, Sec. 8-6 Height: Sec. 2.2
	, ,	Setback	average. Plus 3		Setback Planes: Sec. 2-6
Aughin TV				Vaa	
Austin, TX	and lowest grades adjacent to the building.	Planes	feet for floodplain.	Yes	Roof & Measurement: Sec. 3.4.1
	Fixed Point or Multi-Point: "Building height" is the				
	vertical distance above grade to the highest point of				
	the coping of a flat roof, to the deckline of a mansard				
	roof or to average height of the highest gable of a				Height: Table 17.10-2
	pitched or hipped roof, whichever is applicable. The			Yes.	Total Table Time
	height of a stepped or terraced building is the			Adjustment	Measurement: 17.04.090
	maximum height of any segment of the building.		Yes. Inherent in	upward for	Medadionioni: 17.04.000
Bakersfield, CA	35 Grade is lowest finished adjacent surface.			pitched roof.	
	Fixed Point (Front of Building): Height is measured			Yes.	
	from average elevation of front-facing wall to highest			Adjustment	Measurement: 15-301
	point of flat roof or mean height of pitched roof.		Yes if lot slopes	upward for	
Baltimore, MD	35 Rooftop decks excluded.		downward.	pitched roof.	Height: 8-401
·	Fixed (Average): height is midpoint of highest and				Measurement: 3.4.1(g)
	lowest grade adjacent to building to highest point of		Yes. Inherent in		
Bee Cave, TX	35 building.		average.	No.	Max. height: 3.4.1(g)
	Fixed Point (Average): The vertical distance				
	35 (pitched measured from the average elevation of the existing			Yes. 5 feet	Height: 20.20.010(44)
1			Vac Inharantin	higher for	
	roof) or 30 grade around the building to the highest point of a flat (flat roof) roof, or to the ridge of a pitched roof.		Yes. Inherent in	riigriei ioi	

						Height: 401.07(d)	
		Fired (One de la Arraga es). Buildia a bailabh ab all ba				Height. 401.07(d)	
		Fixed (Grade or Average): Building height shall be					
		measured as the vertical distance from the elevation				Measurement: 401.03(c)	
		of the finished grade level to the highest point of the					
		roof line or parapet wall. For sloped sites, building				Diagram:	
		height is measured as the vertical distance from the				https://bentonville.municipalcodeonli	
		elevation of the average of the highest and lowest				ne.com/book?type=ordinances#nam	
		finished grade level to the highest point of the roof line		Yes. See height		e=Sec 401.03 Calculations And M	
Bentonville, AR	36	or parapet wall.		definition.		easurements	
,		Fixed (Average): The vertical distance from the grade			Yes.	Measurement: Appx. D, Tit. 1, Art. 4,	
		to the highest point of the coping of a flat roof or to the				Sec. 1.	
		deck line of a mansard roof, or to the average height			to average		
		between eaves and ridge for gable, hip and gambrel		Yes. Inherent in		Height: Appx. D, Tit. 2, Art. 1, Sec.	
Birmingham, AL	35	roofs.		average fixed point.	roof.	2	
biiiiiigiiaiii, AL	33	10015.		average lixed politi.	Yes.	J.	
					Measurement	Hoight: 2 5	
						l leight. 3-3	
		First (Arrange), beingt in arrange along time of	0.5 -4	Vaa labaaatia	to average	Management /Danés Amanagement	
D TV			2.5 stories	Yes. Inherent in	_	Measurement/Roof: Appendix A	
Boerne, TX	36		max.	average fixed point.	roof.	(Definitions)	
		Fixed (Average Front): Building Height (or Height of					
		Building) means the vertical distance from grade to a					
		certain point at the top of the building. grade shall be					
		the average elevation of the ground between the					
		building and: (i) the Lot line, or (ii) a line twenty (20)					
		feet from the building, whichever is nearer; but in no			Yes.		
		event shall the average elevation of such ground be			Measurement		
		taken to be more than five (5) feet above or below the		Yes. Inherent in	to average	Height: Article 13, Table B	
		average elevation of the ground immediately		fixed point for lots	height of fixed	_	
Boston, MA	35	contiguous to the building.	2.5 stories	sloping downward	roof.	Measurement/Roof: Art. 2-1	
·		General rule: Fixed Point: 35' maximum distance		. 0		General measurement rule: 9-7-	
		between uppermost point of structure and measuring				5(b)(1)	
		point. Measuring point is lowest natural grade within					
		25' of the lowest portion of the building (lowest point				General max. height: 9-7-1	
		may be off property).					
		ina, so on proporty).				Sloped lots rule: 9-7-5(b)(2).	
		Sloped lots rule: Modified Parallel Plane: for lots				<u> </u>	
	Varios (see	sloped greater than 20 degrees within buildable area,				Drowing	
				Varias dependis -		Drawing:	
	hight	25' maximum above natural grade below, provided		Varies depending		https://boulderrealestatenews.com/w	
	restriction	that no part of building exceed 55 feet above the		on fixed point or		p-content/uploads/2014/05/How-	
Boulder, CO	definitions)	measuring point of the general rule.		parallel plane.		high-can-i-build.jpg	

				I		
		Fired Deint (Arrange and de), Deilding height access				
		Fixed Point (Average grade): Building height means				
		the vertical distance from the grade to the highest				
		point of the roof. For purposes of this definition, grade				
		shall mean the average of the finished ground level at				
		the center of each wall of a building containing ten			Measurement: 94-5	
		percent or more of the combined perimeter length of				
		all walls of the building, measured either ten feet away			Height: 94-38; 94-39	
		from the building, or at the property line if the building	Yes. Inherent in			
Branson, MO	9	35 is less than ten feet from the property line.	average.			
2.4	1	is issee than territory man property mile.	aro.ago.			
		General Rule: Fixed Point (Average): Building Height.				
		The vertical distance of a building as measured from				
		the average elevation of the finished grade within 20				
		feet of the structure to the highest point of the coping				
		or parapet of a flat roof, or to the mean height level				
		between eaves and ridges for gable and hip or				
		gambrel roofs.				
		Olege and Associate and ASOVA lates Described Discus ANGOLA				
		Sloped (greater than 15%) lots: Parallel Plane With				
		Exceptions: No part of any structure shall penetrate an				
		imaginary plane (the "sloping plane of measurement"),				
		the height of which is 30 feet measured vertically from				
		the highest ridge or parapet of the building to the				
		existing natural grade directly beneath that point.	Yes.			
		Minor topographic variations may be excluded from				
		those measurements if those areas are less than 25	Inherent in average			
		feet in width. Exposed building walls measured in a	for less than 15%			
		vertical plane shall not exceed a height of 30 feet	sloped lots.			
		measured from the lowest point of the wall to the top	·			
		of the wall. In addition, the overall projected height will	In addition, for			
		be measured from the lowest wall improvement	sloped lots: (1)			
		attached to the main structure to the highest ridge or	exclude topographic		Height: TABLE 4.1-1	
		parapet, and be limited to 45 feet. Exceptions to the	variations less than		g	
		maximum height requirements are allowed for	25 in width; and (2)	Ves Unwards	Measurement: 10.3	
		architectural features that are less than ten percent of	exception for up to	for pitched	Wedsdreinent. 10.0	
Buckeye, AZ	30 or 35	the entire roof area.	10% of roof area.	roof.	Hillside measurement: 5.2.3.	
buckeye, AZ	30 01 33	Flat Lots: Fixed Point (Street): height is measured	10% 01 1001 area.	1001.	miliside measurement. 5.2.5.	
		from public way where front wall is within 50 feet of				
		·				
		street.				
		Olamad Latar Internal Assessment Building Later Later				
		Sloped Lots: Interval Averages: Building height shall				
		be measured from the average grade along the street-				
		facing façade at intervals of no less than 32-feet or				
1		more than 65-feet along the entire length of the street-	Yes. Inherent in			
Burlington, VT	3	35 facing façade(s).	definition.	Yes.	5.2.6	

			1	1		
Cedar Rapids,	Fixed Point (Average): Height in feet is measured as the vertical distance from the finished grade to the uppermost point of the structure. Finished grade is the final elevation of the average ground level adjoining a 35 building at all exterior walls after development		Yes. Inherent in average fixed point.		Height: 32.02.03 Measurement: 32.04.05	
	Fixed Point (Centerpoint): Maximum Core Height: The core height provides additional allowable height on the interior of a zoning lot based on the horizontal				Height: Table 3.8-1	
	distance measured away from the perimeter setback	for each 2 feet			Measurement: 3.8.2	
	line of the lot. The allowable core height increases	in horizontal	Yes. Inherent in			
Chapel Hill, NC	40 with the distance interior to the lot	distance)	definition.			
	Fired Daint (Orab). The continued distance and					
	Fixed Point (Curb): The vertical distance measured from the curb line to the highest point on the finished					
	roof, including appurtenant parts and mechanical					
	penthouses, of the structure. Elevator shaft					
	penthouses set back from the side lines of the building		Yes. Inherent in		Height: Table 3.1	
	a distance equal to the height of such shafts shall be		fixed point for lots			
Charleston, SC	35 excluded for the purpose of measuring height.	2.5 stories	sloping downward		Sec. 54-120	
	Fixed Daint (Average Front). The vertical distance of a				Measurement: 2-020	
	Fixed Point (Average Front): The vertical distance of a building measured from the average grade level at the				Drawings (p.12):	
	front line of the building to the highest point of the roof				https://www.charlestonwv.gov/sites/d	
	if the roof is flat or mansard, or to the average level		Yes. Inherent in	Yes. Average	efault/files/documents/2022-	
	between the eaves and the highest point of the roof if		fixed point for lots	level of	01/Zoning%20Ordinance%20Amend	
Charleston, WV	35 the roof is of any other type.	2.5 stories	sloping downward	pitched roof.	ed%20to%2012-20-21.pdf	
	Fired Daint (Arranana). The continued distance hat were					
	Fixed Point (Average): The vertical distance between the average grade at the base of a structure and the					
	highest part of the structure. The average grade is					
	calculated by adding the lowest point and highest					
	point along the base of the structure and dividing the					
	total by two. Each building elevation along a building					
	line will have an average grade. The average grade					
	along a building line may also be calculated by adding					
	all points, at five-foot intervals, starting at the corner		V		Measurement: 2.201	
Charlotta NC	along the base of the building and dividing the total by the number of points.		Yes. Inherent in		Height: Table 0.205(1)(i)(A)	
Charlotte, NC	35 or 40 the number of points.		average fixed point.		Height: Table 9.205(1)(j)(A)	

	Fixed Point (Average): The term "height," when applied to a building or structure shall refer to the vertical distance measured perpendicularly from grade to the highest point on such building or structure. Grade means, with reference to a building or			M	
	structure: the average level of the ground adjacent to the exterior walls of the building. In a case where walls		Yes.	Measurement: 34.1100	
	are parallel to and not more than fifteen (15) feet from		Adjustment	Grade: 34.1200	
Charlottesville,	a sidewalk, the grade may be measured at the	Yes. Inherent in	upward for		
VA	35 sidewalk.	average fixed poin	pitched roof.	Height: 34.353	
Chattanooga, TN	Fixed Point (Front): the height shall be measured starting from the average finished grade at the front of the building and measured vertically to the highest point of a roof surface of a flat roof, the deck line of a mansard roof or to a point one-half (½) the height of a gable, hip or gambrel roof. No building shall exceed two and one-half (½) stories or thirty-five (35) feet in height except that a building may exceed these height regulations provided that for every one (1) foot of additional height over thirty-five (35) feet the building shall be set back one (1) additional foot from all property lines.		Yes. Adjustment upward for pitched roof.	Measurement: 38.64 Height: 38.44	
Cincinnati, OH	Fixed Point (Front): Building height is measured from the established grade in the front of the lot or from the average natural grade at the building line, if higher to the top of the cornice of flat roofs, or to the deck line of a mansard roof, or to the mid-height of the highest gable or dormer in a pitched or hipped roof, or, if there are no gables or dormers, to the mid-height of a 35 pitched or hipped roof. Fixed Point (Average): "Building height" means the vertical distance measured from the grade level to the average height of the coping of the street or outside	Yes. Inherent in fixed point for lots sloping downward	Yes. Adjustment upward for pitched roof. Yes.	Measurement: 1400-27-H Height: 1403-07	
	wall for flat roofs, to the deck line of mansard roofs		Adjustment	Measurement: 325.34	
	and to the mean height between eaves and ridge for	Yes. Inherent in	upward for		Height can be increased above 35, with height limit rising one
Cleveland, OH	gable, gambrel or hip roofs.	average fixed poin	. pitched roof.	Height: 353.01, 353.02	foot for each foot away from setbacks, up to 50 feet max.

Colorado Springs, CO	Fixed Point (Average or Segment Average): The vertical distance measured from the average finished grade adjoining the building to the highest point of a gable, hipped, or gambrel roof. If a flat roof, height would be measured to the highest point of the building, excluding the parapet. The average elevation of the finished grade adjoining the building shall be the average of the exposed exterior elevations of all major corners of the building. The height of a stepped or terraced building is the average of the highest and lower height of any segment of the building.	Yes. Inherent in average fixed point.	Yes. Adjustment upward for pitched roof.	Measurement: 7.6.204 Height: 7.2.203 Drawings: https://codelibrary.amlegal.com/codes/coloradospringsco/latest/coloradosprings_co/0-0-0-56026	
Columbia, SC	Fixed Point (Average): The height of a building shall be determined by measuring from the average finished ground elevation at the base of the structure to the highest point of the roof of the structure.	Yes. Inherent in average fixed point.		Height: 17-3-2 Measure: 17-9.2	
Columbus, OH	Fixed Point (Higher of Curb or Finished Grade at Center): is the perpendicular distance measured in a straight line from the curb level, or from the finished grade line of the lot where such grade is higher than the curb, to the highest point of the roof beams in the case of flat roofs, and to the mean between the point of the gable and the eaves in the case of high pitched roofs, the measurements in all cases to be taken 35 through the center of the facade of the house.	Yes. Inherent in definition.	Yes. Adjustment upward for pitched roof.	Measure: 3303.08 Height: 3332.29	
	Parallel Plane w/ Average Grade Pad: The maximum allowable height shall be measured as the vertical distance from the existing grade of the site to an imaginary plane located the allowed number of feet above and parallel to the grade. "Existing Grade" shall be established by the Director, consistent with parcels in the immediate vicinity, and shall not be, nor have been, artificially raised to gain additional building height. When a property is located in a residential zone along a sloping street of 5% or greater elevation of the new building pad construction shall be consistent in rise along the street and shall be the average elevation of the adjoining lots calculated as the sum of the adjoining lot elevations divided by two, unless otherwise prescribed by the Building Official.	2 stories	4 feet higher for pitched roof.	Height: 2-3 Measurement: 17.300.025 Grading: 17.300.045	

		Fixed Point (Average Grade): Height is vertical					
		distance from grade to top of structure. Grade					
		"means the average of the finished ground surface				Height: 51A-4.112	
		elevations measured at the highest and lowest		Yes. Inherent in		l leight. 51A-4.112	
Delles TV	20	_				Magazira: 54 A 2 402	
Dallas, TX	30	exterior corners of a structure."	0.01	average fixed point.		Measure: 51A-2.102	
			3 Stories;				
			Maximum 14'				
De Moines, IA	42		per story.			Height: 135-2	
		Fixed Point (Front & Rear Base Planes): Height is					
		measured from two base planes, front and rear		Yes. Inherent in			
		portions of lot, based loosely on average grade for		fixed points loosely			
Denver, CO 30-35	5		Tenting	based on averaging.		Height/Tenting: 3.3.3.3	
		Parallel Plane: height is vertical distance betewen				Height: 3.3.3	
Dripping		highest point of structure and lower of natural or					
Springs, TX	40	finished grade at any point.	2.5 stories			Measurement: 4.3.4.1	
		Fixed Point (Average at Curb): "Height of building"					
		means the vertical distance measured from the mean					
		elevation of the top of the street curb, within the lot					
		limits, to the highest point of the structure, exclusive of					
		chimneys, ventilators, air conditioners and ducts,					
		elevator equipment, flagpoles, communication				Measurement: 20.02.156	
		antennas, church spires, belfries, water towers, or		Yes if downward		Wedstrement. 20.02.100	
El Paso, TX	25	other similar vertical projections.				Height: Table Appendix B.	
ELFASO, IX	30	outlet sittilat vertical projections.		slope.		Height: Table 4-2	
						Height. Table 4-2	
		Fired Deigh (Assesses). Height assesses wentied distance		Vaa inkanatin		Managements 4 O(a) (Dullage of	
F (B) 00	0.0	Fixed Point (Average): Height means vertical distance		Yes, inherent in		Measurement: 1.9(e) (Rules of	
Estes Park, CO	30	from average finished grade to top of building.	0.5 / .	average.		Measurement)	
			2.5 stories				
			visible from	Yes. Inherent in			
Eureka Springs,		, , ,	primary street	fixed point for lots			
AR	35	street frontage.	frontage.	sloping downward.		Height/Measurement: 14.08.010	
Fayetteville, AR			3 Stories			Height: 161.06	
		Fixed Point (Average): building height shall be					
		measured from the average of the finished ground					
		level at the center of all walls of a building or structure		Yes. Inherent in			
Fort Collins, CO	28	to the highest point of the roof surface or structure.		average fixed point.		Height: 4-4	
·		Fixed Point (Curb or Front Average): the height of a					
		building shall be the vertical distance measured from					
		the curb level to the highest point of the roof surface, if				Height: 4-702	
		a flat roof; to the deck line of a mansard roof; and to					
		the mean height level between eaves and ridge for a				Measurement: 6.100	
		gable, hip or gambrel roof; provided, however, that			Yes.	Modest official Control	
		where buildings are set back from the street line, the				Drawing of roof measurement:	
		height of the building may be measured from the		Yes. Inherent in		https://codelibrary.amlegal.com/code	
					to average	s/ftworth/latest/ftworth_tx/0-0-0-	
Cont Month TV	0.5	average elevation of the finished grade along the front		fixed point for lots	-		
Fort Worth, TX	35	of the building.		sloping downward.	roof.	38192#JD_App.A6.100	

	Fixed (Average by Segment): height is measured from					
	average of highest and lowest grade to highest point			Yes.		
	of structure.			Measurement	Height: 3.100 (Single Family	
				to average	Residential)	
Fredericksburg,	Note: Each defined building "segment" gets its own	2.5 stories	Yes. Inherent in	height of fixed		
TX	28 separate average height measurement.	max.	average fixed point.	roof.	Measurement/Roof/Segment: 7.510	
	Fixed Point (Average): Building height is measured					
	from the average level of the highest and lowest					
	points where the vertical plane of the exterior walls				Measurement: 15-305	
	would touch the natural grade level of the site to the		Yes. Inherent in			
Fresno, CA	35 highest point on the roof.		average fixed point.		Height: TABLE 15-903-2	
	Fixed Point (Average at Exterior Walls): When		and any of the particular particu			
	measured in feet, building height shall be measured					
	as the vertical distance from the finished grade					
	adjacent to the structure to the highest point of a flat					
	roof; to the deck line of a mansard roof; and to the					
	average height between the eave and ridge of the					
	highest roof section for a gable, hip or gambrel roof.					
	When the terrain is sloping, the finished grade shall					
	be the average of the elevation of the ground for each				Measurement: Sec. 5.2.06.	
	side of the structure, as measured six (6) feet from the					
	exterior walls of the structure. Where specified in				Height: Table 5.5.07.A.	
	stories, building height shall be measured in the					
	number of stories entirely above the finished grade for				Drawings:	
	any elevation fronting on a public street, including			Yes. Upwards	https://mcclibrary.blob.core.usgovclo	
Grand Rapids,	habitable attics, half-stories, and at-grade structured		Yes. Inherent in	adjustment for		
MI	35 parking.	2.5 stories	average fixed point.	pitched roof.	6/5-2-06.png	
	Fixed Point (High Front). Height = means the vertical					
	distance from the highest point of the property to the					
	highest point of the structure. / No building shall					
	exceed two stories in height, and no building shall					
	exceed a maximum of 35 feet in height measured					
Granite Shoals,	from the highest terrain elevation on the front side of		Yes. Inherent in		https://ecode360.com/40172259#40	
TX	35 the building.	2 stories	high fixed point.		172396	
	Fixed Point (Average): Building height is the vertical		3 1			
	distance measured from the average elevation of the					
	finished grade to the topmost section of the highest				Measurement: 30-7-1.7	
	roof surface of any flat roof or the highest point of the		Yes. Inherent in			
Greensboro, NC	50 highest pitched roof.	3 stories	average fixed point.		Height: Table 7–1, R-3	
	Fixed Point (Average): The vertical distance from the				,	
	grade to the top of the highest roof beams of a flat					
	roof or to the mean level of the highest gable or slope			Yes. Upward	Height: 7-307 Attachment 1	
	of a hip roof. Grade is average of ground adjacent to		Yes. Inherent in	adjustment for	_	
Harrisburg, PA	36 exterior walls.		average fixed point.	,	Measurement: 1-302	

		Hybrid Approach: The maximum height of structures					
		is determined by the building envelope created as the					
		result of the intersection of two planes. The first plane					
		is measured horizontally across the parcel at 25 feet					
		above the high point of the buildable area boundary					
		line. The second plane runs parallel to grade, as					
		described in § 21-4.60(b), measured at a height of 30					
		feet. If the two planes do not intersect, then the					
Honolulu, HI	Varies	building envelope is determined by the first plane.	Tenting.	Varies		Measurement/Height: 21-3.70-1	
		Fixed Point (High Point): Maximum height is 35 feet		Yes. Inherent in			
Hot Springs, AR		35 measured at high side of the lot.	3 stories max.	fixed high point.		Height/Measurement: 16-2-28	
		Fixed Point (Front): the vertical distance from the		Yes. Inherent in		Height: Table 744-201-1	
		grade level abutting the façade measured to the		fixed point for lots			
Indianapolis, IN	35-45	highest point		sloping downward.		Measurement: 740-202; 740-303	
		Fixed Point (Street): The vertical distance measured					
		from the base point of measurement to the highest					
		point of the parapet or coping of a flat roof, or the deck					
		line of a mansard roof, or one-half the distance					
		between the eave and the ridge line of the highest					
		gable of a pitch or hip roof. When the building is within					
		fifty (50) feet of a street right-of-way, base point of					
		measurement shall be defined as the average					
		elevation of the street crown on that of street occurring					
		between the end lines of the building when projected					
		perpendicular to the street right-of-way. When the					
		building is more than fifty (50) feet from a street right-		Yes. Inherent in	Yes. Upward	Measurement: 202.24	
		of-way, base point shall be defined as the verage		fixed point for lots	adjustment for		
Jackson, MS		35 elevation of grade or paving surrounding the building.		sloping downward.	pitched roof.	Height: 602.02.03	
, ,		Height of building or building height means the vertical		3		3	
		distance from the required finished floor to the peak of				Height: 656.305	
		the roof or parapet; provided, however that height may					
		be measured from up to three feet above the required				Measurement: 656.1601	
		finish floor elevation or up to three feet above the					Measuring point at grade or one foot above floodplain,
Jacksonville, FL	35+	existing grade					whichever is higher.
odokoonviilo, i E	001	Choiring grade					Williams of the Higher.
		Fixed Point (Average to Top of Wall): The height of					
		the proposed residential building shall be measured					
		from the average grade at ground level to the top of					
		the main wall below the roofs eave. For buildings with	Stories limited				
		dormers on the front façade, the top of the wall below				Height: Table 110-2	
				Yes. Inherent in		Tieigiii. Table 110-2	
Kanaga City MC	25.		adjacent			00 440 07 D	
Kansas City, MO	აე+	if the dormer exceeds 50% of the width of the façade.	nomes.	average fixed point.		88-110-07-D	1

	Fixed Point (Front): Maximum building height is					
	measured as the vertical distance from grade at the					
	front building line or, when on the Tennessee River,					
	measured from the elevation of 813 feet above sea					
	level to:a.The top of a flat roof, including structures					
	designed with a decorative mansard roof concealing a					
	flat roof.b.The deck line of a mansard or gambrel			Yes. Upwards	Measurement: 2-4	
	roof.c.The midpoint height between the eaves and the		Yes. Inherent in	adjustment for		
Knoxville, TN	35 ridge in the case of a pitched roof.		high fixed point.	pitched roof.	Height: Table 4-2	
	Fixed Point (Average Front): The vertical distance					
	from the mean elevation of the finished grade along					
	the building line at the front of the building to the					
	highest point of a flat roof, or the deck line of a				Measurement: Sec. 115-1	
	mansard roof, or to the highest point of a gable, hip,		Yes. Inherent in			
La Crosse, WI	35 and gambrel roofs.	2.5 stories	average fixed point.		Height: Sec. 115-143	
						Flood plain adjustment: Special consideration may be given to
						the condition encountered when the highest point in elevation of
						the building lot is at or below the federally designated 100-year
	Fixed Point (High): The vertical distance measured					flood level. In an area below the elevation of the 100-year flood
	from the highest undisturbed natural grade of the				https://lagovista.municipalcodeonlin	level, the first floor elevation will be one (1) foot above the
	applicable lot to the highest point of the coping of a				e.com/book?type=ordinances#name	federally designated flood level. In these cases, the maximum
	flat roof or to the deck line of a mansard roof, or to the		Yes. Inherent in		=EXHIBIT A ZONING ORDINANC	roof height of the building may be measured from one (1) foot
Lago Vista, TX	35 height of the highest gable of a pitched or hipped roof.		high point.		<u>E</u>	above the federally designated flood level.

		Infinite (Parallel-Plane-like) with Height Adjustments					
		for Slope and Exception by Design Board: "Height,					
		building" means one or more of the following:					
		(a) The vertical distance from any point on the finished					
		roof surface to the finished floor surface of the lowest					
		floor measured directly below or to the natural or					
		finished grade, whichever is more restrictive or lower.					
		If the entire lowest floor, measured from the finished					
		floor surface of the floor above, is located completely					
		below natural or finished grade, whichever is more				Height and slope adjustment:	
		restrictive, then the building height shall be measured				25.10.008	
		to the top of the finished floor of the next level directly					
		above that subterranean level; (b) For purposes of				Measurement: 25.08.016	
		measuring the height above the front lot line, an					
		applicant may have the option of measuring by one of				Design Board Exception: The above	
		the following two options: (1) The vertical distance				height requirement may be modified	
		from the curb, street centerline or property line to the				by the design review board when it	
		highest point of the roof, whichever is the applicable				is determined that the unique	
		measurement as required under the specific chapters				topography and/or site conditions	
		of this title. The elevation of the curb shall be taken on				make such modifications	
		top of the curb at a point created by the intersection of				unavoidable and when the proposed	
		the curb and a line perpendicular to and intersecting				development preserves and	
		the midpoint of the front lot line. In the event, there is				maintains viewsheds, air, light,	
		no curb, height shall be measured from the centerline				privacy, and neighborhood	
		of the street to the top of the roof. The elevation of the				character, minimizes building mass	
		centerline of the street shall be taken at a point		Up to 5 additional		and bulk and, where applicable, is	
		created by the intersection of the centerline and a line		feet depending on		consistent with the City's Design	
		perpendicular to and intersecting the midpoint of the		slope of lot. Sec.		Guidelines for Hillside Development	
		front lot line; or (2) At every point along the curb or		25.10.008		as adopted by Resolution No. 89-	
		street center line. (c) For purposes of measuring the				104 or as amended thereafter.	
		height above the rear lot line, the elevation of the rear		Full basement is not			
-		lot line shall be taken at every point along the rear		counted.			
		Fixed (High Point): Maximum height is 32 feet above		Yes. Inherent in		Rule: 30.03.002(b) (Maximum	
Lakeway, TX		the highest natural grade under the slab.		high point.		height)	
,		3		3 1 - 1		Measurement: 19.18.020	
		Fixed (Front): Building height refers to the vertical				Height: 19.06.065	
		distance between the average finished grade along					
		the front of a building and either 1) the highest point of			Yes. 35' to top	Drawings:	
		the coping of a flat roof; 2) the deck line of a mansard			of flat roof or	https://online.encodeplus.com/regs/l	
		roof; or 3) the average height level between the eaves		Yes. Inherent if	mid-point of	asvegas-nv/doc-viewer.aspx#secid-	
Las Vegas, NV			2 Stories	sloping downward.	pitched roof.	374	Facade articulation required
Las vegas, 14V	55	and hage into or a gable, hip or gambler 1001.	2 0101103	oloping downward.	Pitorica 1001.	<u>01 -</u>	1 doddo ditiodiation required

				Yes. For flat		
				roof, high		
				point is ceiling		
				of top story.		
				For pitched		
				roof, high		
				point is mean		
				height	Height: 36-253(c)	
		Fixed (Center): Distance in central axis of building		between		
		between elevation of lowest finished floor to high	Yes. Inherent in	eaves and	Measurement/Roof: 36-2 ("Building	
Little Rock, AR	35	point.	fixed point.	ridge.	Height")	
		, points	integ penni		i reigni /	
		General Rule: Fixed (Low Point): Height is the vertical				
		distance above grade measured to the highest point				
		of the roof, structure, or the parapet wall, whichever is				
		highest. Grade is the lowest point of elevation of the				
		finished surface of the ground, paving or sidewalk				
		within the area between the building and the property				
		line, or when the property line is more than 5 feet from				
		the building, between the building and a line 5 feet				
		from the building. Hillside Area Grade shall be				
		defined as the Elevation, at the perimeter of a Building				
		or Structure, of the finished or natural surface of the				
		ground, whichever is lower, or the finished surface of				
			V (12 12 12 12 12 12 12 12 12 12 12 12 12			
		the ground established in conformance with a grading	Yes for limited-rule			
		plan approved pursuant to a recorded tract or parcel	height districts with			
		map action.	parallel plane: for			
			homes with slopes			
		Limited Rule: Some height-limited districts use parallel	of 25% or less,			
		plane: Envelope height (otherwise known as vertical	height is 28 or 30			
1			_			
		height or "plumb line" height) shall be the vertical	(depending on			
1		distance from the Hillside Area Grade to a projected	zone). In those			
		plane at the roof Structure or parapet wall located	same zones, for			
		directly above and parallel to the Grade. Measurement	homes with slopes		Measurement: 12.03	
		of the envelope height shall originate at the adjacent	of greater than 25%,			
		Hillside Area Grade at the exterior walls of a Building	height rises to 33 or		Height: 12.21.1	
		or Structure. At no point shall any given section of any	36, respectively			
	Gen. rule:	part of the proposed Building or Structure exceed the	(depending on		Limited Rule 12.21 (Figure 12.21	
Los Angeles, CA	45	maximum envelope height	zone).		C.10.(d)(1)(i))	
J , -		Fixed Point (Average Front): height of principal	,			
1		structures shall be measured from grade at the front				
1		and street side of the building or structure to the				
1		highest point of the coping of a flat or mansard roof; or				
		to the mean height level between eaves and ridge for				
		gable, hip or gambrel roofs; or to the mean height	Yes. Inherent in	Yes. Upward	Height: Table 5.2.2	
		level between highest and lowest portion of a rooftop	fixed point for lots	adjustment for		
Louisville, KY	35	parapet wall.	sloping downward.	pitched roof.	Measurement: 5.1.7J	
		H F 1	3pg 40arar	11		

Fixed Point (Average Front or High): The height of a					
			Vaa Haward		
·		V 11		-	
			,		
	2 Stories	fixed point.	pitched roof.	Measurement: 40.01.003	
, ,					
		V			
		downwards.	pitched roof.	Height: 9.07	
structure. No individual facade shall be more than		Yes. Inherent in		Height: 28.035	
fifteen percent (15%) higher than the maximum height		average fixed point,			
35 of the zoning district.	2 Stories	up to 15%.		Measurement: 28.134	
·					
height shall be measured as the vertical distance from					
grade to an imaginary plane located the allowed				Measurement: 22.20.060	
number of feet above and parallel to the grade.					
Dwellings may be increased in height without				Height (30): TABLE 2-5	
Variance approval by a maximum of 10 feet when side		See height			
30 to 40 setbacks of 15 feet or greater are provided.		definition.		Extra 10: 22.20.060	
Fixed Point (Average): Building height shall be					
measured from finished grade to the highest point of					
the building. Where a building is located on a sloping					
lot, the building height shall be the average of the					
		Yes. Inherent in			
45 at the mid-point of the elevation.		average fixed point.		Height: 295-205	
-	fifteen percent (15%) higher than the maximum height of the zoning district. Parallel Plane With Up to 10-Feet Bonus: Maximum height shall be measured as the vertical distance from grade to an imaginary plane located the allowed number of feet above and parallel to the grade. Dwellings may be increased in height without Variance approval by a maximum of 10 feet when side setbacks of 15 feet or greater are provided. Fixed Point (Average): Building height shall be measured from finished grade to the highest point of the building. Where a building is located on a sloping lot, the building height shall be the average of the building height on each building elevation, measured	building or portion of a building shall be measured from the average established grade at the street lot line or from the average natural ground level, if higher; or if no street grade has been established, to the highest point of the roof's surface if a flat surface, to the deck line of mansard roofs, and to the mean height level between eaves and ridges for hip or gable 35 roofs. Fixed Point (Average Front): The vertical distance measured from the average elevation of the proposed finished grade at the front of the building to the highest point of the roof for flat roofs, to the mean height level between the eaves and ridge for gable, hip, and gambrel roofs, and to the deck line for a 35 mansard roof. Fixed Point (Average With Limit): For principal buildings and structures, height is the average of the height of all building facades. For each facade, height is measured from the midpoint of the existing grade to the highest point on the roof of the building or structure. No individual facade shall be more than fifteen percent (15%) higher than the maximum height 35 of the zoning district. Parallel Plane With Up to 10-Feet Bonus: Maximum height shall be measured as the vertical distance from grade to an imaginary plane located the allowed number of feet above and parallel to the grade. Dwellings may be increased in height without Variance approval by a maximum of 10 feet when side setbacks of 15 feet or greater are provided. Fixed Point (Average): Building height shall be measured from finished grade to the highest point of the building. Where a building is located on a sloping lot, the building height shall be the average of the building height on each building elevation, measured	building or portion of a building shall be measured from the average established grade at the street lot line or from the average natural ground level, if higher; or if no street grade has been established, to the highest point of the roof's surface if a flat surface, to the deck line of mansard roofs, and to the mean height level between eaves and ridges for hip or gable roofs. Fixed Point (Average Front): The vertical distance measured from the average elevation of the proposed finished grade at the front of the building to the highest point of the roof for flat roofs, to the mean height level between the eaves and ridge for gable, hip, and gambrel roofs, and to the deck line for a gambrel roofs, and to the deck line for a gambrel roofs, and to the deck line for a gambrel roofs, and to the deck line for a gambrel roofs, and to the deck line for a gambrel roof. Fixed Point (Average With Limit): For principal buildings and structures, height is the average of the height of all building facades. For each facade, height is measured from the midpoint of the existing grade to the highest point on the roof of the building or structure. No individual facade shall be more than fifteen percent (15%) higher than the maximum height shall be measured as the vertical distance from grade to an imaginary plane located the allowed number of feet above and parallel to the grade. Dwellings may be increased in height without Variance approval by a maximum of 10 feet when side setbacks of 15 feet or greater are provided. Fixed Point (Average): Building height shall be measured from finished grade to the highest point of the building. Where a building is located on a sloping lot, the building height shall be the average of the building height ton each building elevation, measured	building or portion of a building shall be measured from the average established grade at the street lot line or from the average natural ground level, if higher; or if no street grade has been established, to the highest point of the roof's surface if a flat surface, to the deck line of mansard roofs, and to the mean height level between eaves and ridges for hip or gable 35 roofs. Fixed Point (Average Front): The vertical distance measured from the average elevation of the proposed finished grade at the front of the building to the highest point of the roof for flat roofs, to the mean height level between the eaves and ridge for gable, hip, and gambrel roofs, and to the deck line for a 35 mansard roof. Fixed Point (Average With Limit): For principal buildings and structures, height is the average of the height of all building facades. For each facade, height is measured from the midpoint of the existing grade to the highest point on the roof of the building or structure. No individual facade shall be more than fifteen percent (15%) higher than the maximum height 35 of the zoning district. Parallel Plane With Up to 10-Feet Bonus: Maximum height shall be measured as the vertical distance from grade to an imaginary plane located the allowed number of feet above and parallel to the grade. Dwellings may be increased in height without Variance approval by a maximum of 10 feet when side setbacks of 15 feet or greater are provided. Fixed Point (Average): Building height shall be measured from finished grade to the highest point of the building height on each building elevation, measured building height on each building elevation, measured building height on each building elevation, measured	building or portion of a building shall be measured from the average established grade at the street lot line or from the average natural ground level, if higher; or if no street grade has been established, to the highest point of the roof's surface, to the deck line of mansard roofs, and to the mean height level between eaves and ridges for hip or gable roots. Fixed Point (Average Front): The vertical distance measured from the average elevation of the proposed finished grade at the front of the building to the highest point of the roof for latt roofs, to the mean height level between the eaves and ridge for gable, hip, and gambrel roofs, and to the deck line for a smanard roof. Fixed Point (Average With Limit): For principal buildings and structures, height is it is measured from the midpoint of the existing grade to the highest point on the roof of the building or structure. No individual facade shall be more than fifteen percent (15%) higher than the maximum height shall be measured as the vertical distance from grade to an imaginary plane located the allowed number of feet above and parallel to the grade. Dwellings may be increased in the stardes, to the well of the proposed finished grade to the highest point (Average): Building height shall be the average of the building building feet are provided. Extra 10: 22.20.060 Fixed Point (Average): Building height shall be measured from finished grade to the highest point of the existing height shall be the average of the building height shall be the average of the building height on each building elevation, measured from each building levation, measured from the maximum beight level not an adjustment for pitched roof. Yes. Inherent in average fixed point, average fix

			1		T	
	Fixed Point (Front): The vertical distance from the					
	natural grade measured either at the curb level or at a					
	point ten (10) feet away from the front center of the					
	structure or building, whichever is closer, to the top of					
	the highest point of the structure, unless otherwise					
	exempted or defined in this ordinance. Where the roof			V D I :		
	is the highest point of the structure, height is			Yes. Rule is		
	measured to the top of the highest point of the roof on			28 maximum		
	a flat or shed roof, the deck line on a mansard roof, or		Yes. Inherent in	but up to 33	Measurement: 565.90	
	the average distance between the eave edge and the		fixed point for lots	for pitched	l	
Minneapolis, MN		2.5 stories	sloping downward.	roof.	Height: Table 540-7	
	Fixed Point (Low): Building height is measured as the					
	vertical distance from the lowest point where the					
	building line meets existing grade to the highest point					
	of the subject building. The highest point of the					
	building is the coping of a flat roof, the top of a				Height: Table 20.05-3	
	30 (flat) or mansard roof or shed roof, or the peak of the highest			Yes. Inherent		
Missoula, MT	35 (pitched) gable of a gambrel or hip roof.			in height rule.	Measurement: 20.110.060	
Mantanana Al	25	0 -4			A-+:-I \/II - O O	
Montgomery, AL	35 Fixed Point (Average Elevation):	2 stories			Article VII, Sec. 2	
	Distance between average elevation of four exterior					
	corners to eave or roof deck. If exposed basement no		Yes. Inherent in			
Nachvilla TN	more than 7 feet above finished grade, measure from	2 starias masy			Llaight/Mathad. 17.12.000	
Nashville, TN	45 ceiling of basement.	3-stories max	average fixed point.		Height/Method: 17.12.060	
	Fixed Point (Average Elevation): height means vertical					
	distance between average elevation of finished grade	1			Measurement: 144-1.4	
New Braunfels,	surrounding structure to highest point of structure.		Yes. Inherent in		ivieasurement. 144-1.4	
TX	35 Average uses midpoints of exterior walls.		average fixed point.		Height: 144.3.4-2	
1 ^	35 Average uses midpoints of exterior waits.		average fixed point.		Height: 10-10-3	
					116ignt. 10-10-5	
	Fixed Point (High): Maximum height is distance				Measurement: 10-1-25 (includes	
1	between measuring point (foundation of highest				drawing:	
	finished grade) to highest point of building. Buildings		Yes, inherent in		https://codelibrary.amlegal.com/code	
North Salt Lake,	on sloped lots may add a basement of up to 10 feet		fixed point. Max 10		s/northsaltlakeut/latest/northsaltlake	
UT	35 between lowest finished grade and measuring point.		extra feet.		_ut/0-0-0-16717	
01	Jorden lowest lillished grade and measuring point.	1	באוום וככו.	1	_uvo-o-0-10111	

	Parallel Plane: Vertical distance between top of building to horizontal line at finished grade of perimeter.					
	General Rules: 25 max wall height; 30 maximum pitched roof height. For lots with 20-40% slope: 32 wall height; 36 pitched roof. For lots with 40-60% slope: 34 wall height; 38 pitched roof height. For lots with greater than 60% slope: 36 wall height; 40 pitched roof height.		Yes. See height restriction rule. Upward adjustment for sloped homes.	Yes. Significant height adjustment for pitched roof.	Measurement: 17.09.040 ("height") Heights: 17.15.050 (Property development standards)	
Oklahoma City,	Fixed (Center Front): The vertical distance from grade to the highest point of coping of a flat roof or to the deck line of a mansard roof, or to the average height of the highest gable of a pitch or hip roof. When a building faces on more than one street, the height shall be measured from the average of the grades at		Yes. Inherent in fixed point for lots	Yes. Height adjustment for	Measurement: 59-2150	
ОК	35 the center of each street front.	2.5 stories	sloping downward.	pitched roofs.	Height: Table 540-7	
	Fixed (Average Adjacent): The vertical distance from the established grade to the highest point of the coping of a flat roof, to the deck line of a mansard roof, or to the average height between eaves and ridge for a gable, hip, shed or gambrel roof. Where a					
	building is located on a slope, height shall be			Yes.	Measurement: 55-21	
Omaha, NE	measured from the average grade level adjacent to 35 the building.		Yes. Inherent in fixed point.	Adjustment for pitched roof.	Height: Sec. 55-126	
,	Fixed Point (Average Front): the distance shall be from the average ground level at the front of the residence to the highest point of a flat roof, the deck line of a mansard roof, or the average height between			Yes.	Height: 18.180.030	
Overland Park, KS	the plate and ridge of a gable, hip, shed or gambrel		Yes. Inherent in 2.5 fixed point.	Adjustment for pitched roof.	Measurement: 18.110.310	
	Fixed Point (Curb): The vertical distance measured, in the case of flat roofs, from the curb level to the level of the highest point of the roof beams adjacent to the street wall, and in the case of pitched roofs, from the curb level to the mean height level of the gable. Where no roof beams exist or where there are structures wholly or partly above the roof, the height shall be measured from the curb level to the level of		Yes. Inherent in	Yes. Adjustment for	Measurement: 10.3	
Peoria, IL	35 the highest point of the building.		fixed point.	pitched roof.	Height: 4.2.4	

	Fixed Point (Average): the vertical distance from the					
	average ground level at the base of the structure to					
	the top of the structure, provided, that if height is					
				Voc	Height: Table 14-701-1	
	measured on a gable wall of a building, the top of the		Vaa labaaatia		Height. Table 14-701-1	
DUIL LILL DA	building shall be considered to be the midpoint height		Yes. Inherent in	Adjustment for		
Philadelphia, PA 38	between the eaves and the ridge.		fixed point.	pitched roof.	Measurement: 14-202	
	Fired Deigh (Assessment). The constituted distance					
	Fixed Point (Average): The vertical distance					
	measured from the higher of the natural grade level or					
	the finished grade level established by the Planning					
	and Development Department pursuant to the					
	Floodplain or Grading and Drainage Regulations of					
	the City to the highest level of the roof surface of flat					
	roofs; or to the mean height between eaves and ridge			Yes.	Measurement: Sec. 202	
	of gable, gambrel, or hip roofs. Grade is average		Yes. Inherent in	Adjustment for		
Phoenix, AZ 30	1	2 stories	fixed point.	pitched roof.	Height: Sec. 609	
	Fixed Point (Average at Front): When measured in					
	feet, building height refers to the vertical distance					
	between the average finished grade along the wall					
	facing the front street yard at the base of the building					
	and: 1) the highest point of the coping of a flat roof; 2)					
	the deck line of a mansard roof; or 3) the average			Yes.	Height: 903.03.A.2	
	height level between the eaves and ridge line of a		Yes. Inherent in	Adjustment for	9	
Pittsburgh, PA 40	gable, hip or gambrel roof.	3 Stories Max.			Measurement: 925.07.A	
	gasis, implier garmerer reen	0 0101100 1110/11	a. o. ago.	pitorioù roon		
	Fixed Point (high/low): Distance between highest					
	portion of building and reference point. Reference					
	point either (1) lowest grade within 5' of building if					
	lowest grade is not more than 10' below highest grade					
	within 5' of building; or (2) 10' above lowest grade				Fixed point, roofs: 33.930.050	
	within 5' of building if lowest grade within 5' of building				(Measuring Height)	
	is more than 10' below highest grade within 5' of				TWO GOATH OF TOTALLY	
	building.				Sloped Lots Setback Reductions:	
	building.				33.110.220.D.	
	Sloped Lots: If lot slopes downward away from street				<u>33.110.220.D.</u>	
	with 20% or greater slope, height limit is 23' above				Sloped Lot Height Adjustments:	
	average grade of the street or fixed point (high/low),				33.110.215.D. ("Alternative height	
	whichever is greater and front setback is reduced 5-				limits for steeply sloping lots.")	
	10'. If lot slopes upward away from street with 20% or					
	greater slope, front setback is reduced 5-10'. Tenting		Yes. See primary		https://www.portland.gov/ppd/reside	
Portland, OR 30	applies to reduced setback areas.		height restriction.	Yes.	ntial-infill/measuring-height	

	Multi-Point (Segment Average): Building height is the vertical distance measured from the average elevation of the finished grade at an exterior building wall or building segment to the highest point of the building wall or building segment. The overall building height shall be calculated as the average of all building sides. A building segment is when a break in the roof line, change in number of stories, or break in finished	Yes. Inherent in average	Measurement: 18.150.050 (drawing available)	
Poulsbo, WA	35 grade occurs.	measurements.	Height: 18.70.050	
	Fixed or Multi-Point (Average or Segment Average): Building height is measured from average grade to the top of the highest point of a pitched or flat roof, not including a aximum parapet wall encroachment. Building height must be met for the entire building, unless the multiple module height method is used in which case building height must be met for each module. Average grade shall be determined using one of the following methods: a. Single Building Height Method i. Average grade shall be considered to be average post-development grade above sea level along the building elevation most parallel and closest to the primary street setback. b. Multiple Module Height Method i. As an alternative option to the single building height method, measurement of height for a building can be broken down into two or more building modules each with a separate average grade for the purposes of determining the height in feet and number of stories for the individual modules. ii. Average grade for each module shall be considered to be average post-development grade above sea level along the building module elevation most parallel		Measurement: 1.5.7. Averaging method drawings: https://user- 2081353526.cld.bz/UnifiedDevelop	
Raleigh, NC	40 and closest to the primary street setback.	3 stories averaging.	mentOrdinance/28/	

	General Rule: Fixed Point (High/Low)					
	Terraced: Multi-Point (High of Segment)					
	Terraced. Multi-Point (High of Segment)					
	The vertical distance above a reference datum					
	measured to the highest point of the coping of a flat					
	roof or to the deck line of a mansard roof or to the					
	average height of the highest gable of a pitched or					
	hipped roof. The reference datum shall be selected by					
	either of the following, whichever yields a greater					
	height of building:(1)The elevation of the highest					
	adjoining sidewalk or ground surface within a five-foot					
	horizontal distance of the exterior wall of the building					
	when such sidewalk or ground surface is not more					
	than ten feet above lowest grade.(2)An elevation ten					
	feet higher than the lowest grade when the sidewalk or					
	ground surface described in a. is more than ten feet					
	above lowest grade.(3)The height of a stepped or			Yes.	Height: 18-02-203 and 18-02-204	
		2.5 or 3	Yes. Inherent in	Adjustment for		
Reno, NV 35 or 45	segment of the building.	stories	measure.	pitched roof.	Measurement: 18.09.207	
11010, 111	Fixed Point (Average): Building, height of, means the	3101103	measure.	piterica roor.	Wicasurement. 10.00.207	
	vertical distance from mean grade level to the highest					
	point of a flat roof; to the deck line or highest point of					
	the coping of a mansard roof; or to the mean height			Yes.		
	level between the eaves and the ridge of a gable, hip,		Yes. Inherent in	Adjustment for		
	shed or gambrel roof.		average.	pitched roof.	Height: 30-402.7	
Roanoke, VA 35					Height: Sec. 36.2-312	
	Fixed Point (High/Low): Vertical distance between					
	reference datum and highest point of building.					
	Reference datum is (1) elevation of highest adjoining					
	native ground of exterior wall if no more than 10 feet				May beight 107 74 /Marrian	
	above lowest adjoining native ground; or (2) elevation				Max. height: 107-71 (Maximum	
	of 10 feet above lowest adjoining native ground of		Yes. Inherent in		permissible height)	
	exterior wall if elevation of highest point is more than		measurement.			
Rollingwood, TX 35	10 feet above lowest adjoining native ground.		Limited to 10'.	No	Building height: 107-3 (Definitions)	
	Parallel Plane With Height Adjustment: the downhill					
	exterior wall height may be increased by one-half foot					
	(0.5') for each one foot (1') difference between the	Tenting to 20		Yes. 28 for		
Salt Lake City,		on side	Yes: see height	pitched roof.		
UT 20 or 28	downhill faces of the building.	setbacks.	restriction.	20 for flat roof.	21A 24 050	
20 01 20	Fixed Point (Average): The vertical dimension	ootbaoks.	roduloudi.	20 101 Hat 1001.	217.127.000	
	measured from the average elevation of the finished					
	lot grade at the front of the building to the highest					
	point of ceiling of the top story in the case of a flat					
	roof; to the deckline of a mansard roof; and to the			Yes. Upward		
	average height between the plate and ridge of a		Yes. Inherent in	adjustment for		
San Antonio, TX 35	gable, hip or gambrel roof.	2.5	average.	pitched roof.	Measurement: 35-A101	
,	10 . 1 0			1.	I.	I

	T			T		
San Francisco, CA	Varies	Varies. For lots sloping away from street, height is measured above curb at centerline of house for first 100' deep. For lots sloping upward away from street, height is measured above curb at centerline of house for 10 feet, then stepping up based on formula from ground level.	Yes.	Yes. Adjusted upward for pitched roof to average height of pitched roof.	Sec. 260	
		Parallel Plane (Grade at Property Lines): The "height"				
		of a structure at any point is the vertical distance				
		between its top surface and the "grade" immediately				
		below it. For purposes of this section, "grade" shall be				
		determined as follows:A.For any point on the top				
		surface of a structure, "grade" is the intersection of the				
		vertical line, through said point, with a straight line				
		which passes through:1.The vertical line, and2.The				
		nearest point of the property line nearest to the				
		vertical line, and3.A point on a second property line				
		opposite to the first property line.				
		Said property lines shall be property lines of the same				
		lot on which the structure being measured is				
		constructed or installed and said property lines shall			Height: Table 20-60	
		be assumed to lie on the surface of the finished				
San Jose, CA	;	35 ground elevation.	2.5		Measurement: 20.200.510	

		Flat Lots (less than 16% slope): Fixed Point					
		(Average): For flat lots and lots with an average (cross-					
		parcel) slope of less than sixteen percent, the height					
		of a building or structure shall be measured as the					
		vertical distance from the average level of highest and					
		lowest existing grade of that portion of the site					
		covered by the building to the topmost point of the					
		roof, including parapets but excluding features					
		outlined in subsection C of this section. The average					
		level of the ground is determined by adding the					
		elevation of the lowest point of the part of the lot					
		covered by the building to the elevation of the highest					
		point of the part of the lot covered by the building and					
		dividing by two.					
		Sloped Lots (more than 16% slope): Parallel Plane					
		(Adjacent Grade): For lots with an average (cross-					
		parcel) slope of sixteen percent or greater, the height					
		of a building or structure shall be measured as the					
		vertical distance from the adjacent existing grade to					
		the topmost point of the roof, including parapets but					
		excluding features outlined in subsection C of this					
		section. The maximum allowable height shall be					
		measured as the vertical distance from the existing					
		grade of the site to an imaginary plane located at the					
		allowed height above and parallel to the grade.					
		Average Cross-Slope Calculation. Average cross-					
		slope is the ratio, expressed as a percentage of the					
		difference in elevation to the horizontal distance				Height: Table 2-4	
		between two points on the perimeter of the area for				Troight. Tubic 2 4	
	30 plus 30"	which slope is being determined. The line along which				Measurement: 17.70.080	
San Luis	for pitched	the slope is measured shall run essentially				Weddardment. 17.70.000	
Obispo, CA	roof.	perpendicular to the contours. 1. Where a site does				Slopes: 17.70.090	
Colopo, Cr	10011	Fixed Point (Average): Height is vertical distance				0.0000. 17.170.000	
		between average grade to top of building. Average					
		grade is average of highest and lowest pre-					
		development elevation at front setback.				Measurement: 4.3.4.1 (Measuring	
		'				Height)	
		Sloped Lots: Where lot slopes downward from front			Yes.		
		property line, one additional story may be built			Additional	Max height: 4.4.1.3 (Single Family -	
		beneath building.		Yes, inherent in	height	6)	
				average	permitted		
		Basement: A basement with 50% or more of its		measurement, plus	above	https://user-3vpeqil.cld.bz/San-	
		perimeter wall area surrrounded by finished grade is		extra floor for sloped		Marcos-Development-Code-	
San Marcos, TX	35	not counted as a story.	Two Stories	downwards lots.	pitched roof.	Effective-10-17-23/	

		Fixed Point (Lowest finished grade): Height is a					
		vertical distance from the "grade" to the highest point					
		of the coping that defines the volume of the building of					
		a flat roof, or to the deck line of a mansard roof, or to				Height: Table 2-3	
		the highest gable of a pitched or hipped roof. Grade is				l leight. Table 2-3	
						Managements 10 CO 000 (baight)	
		the lowest point of elevation of the finished surface of				Measurement: 18.60.080 (height)	
		the ground between the exterior wall of a structure and	1			40.00.070 ()	
Santa Clara, CA	25 or 32	a point five feet distant from such wall.				18.60.070 (grade)	
		Fixed Point (Average Perimeter): The maximum					
		height of a building and/or structure measured from					
		the average finished grade at perimeter of the base of				Measurement: 2.2	
		the building and/or structure to the highest point of		Yes. Inherent in			
Scranton, PA	35	such building and/or structure		average.		Height: 3.4	
						Height rules:	
						https://www.seattle.gov/dpd/Publicati	
						ons/cam/cam220.pdf	
		Fixed Point (Average): Height is calculated as					
		distance above average grade. Owner has option to			Yes.	Averaging method:	
		calcluate average grade over entire building area or			Additional 5	23.86.006	
		by segments of the building. Averaging by section		Yes. Inherent in	feet for	https://www.seattle.gov/dpd/codes/dr	
Seattle, WA	30	creates a terraced look.		average.	pitched roofs.	/DR2012-4.pdf	
		Three-plane height rules with many exceptions. (1)					
		An overall height limit plane of 40 feet from lowest					
		grade adjacent to building to highest portion of roof;					
		(2) a fixed-point (high) plane of 22 feet above highest					
		natural grade of building area; and (3) a parallel plane					
	It's	of 22 feet above grade at all points plus 5 feet for					
	complicated	pitched roof plus up to 5 more feet for wall articulation		Yes. See height	Yes. See		
Sedona, AZ		and light reflectance.		rules.	height rules.	2.24E	
		Fixed Point (Average Perimeter): Building height is the				Measurement: 17C.111.230	
		vertical distance from the average grade to the		Yes. Inherent in			Note: underground portions are not counted in height
Spokane, WA	40	highest point of the roof or structure		Average.		Height: TABLE 17C.111.205-2	calculations.
		Fixed Point (Street or Average): The vertical distance					
		of a structure measured from the average established					
		grade at the street lot line or from the average natural					
		ground level, if higher; or if no street grade has been					
		established to the highest point of the roof's surface if					
		a flat surface; to the deck line of mansard roofs; and			Yes. Upwards	Measurement: 36-321	
		to the mean height level between eaves and ridge for	2.5 stories or	Yes. Inherent in	adjustment for		
Springfield, MO	35 or 45	hip or gable roofs.	3 stories	Average.		Height: 36-380	

			1		
St Paul, MN	Fixed Point (Average): The vertical distance measured from the established grade to the highest point of the roof surface for flat and shed roofs; to the break line of mansard roofs; and to the average height between eaves and ridge for gable, gambrel, and hip roofs. Where a building is located on sloping terrain, the height may be measured from the average ground 35 level of the grade at the building wall.		adjustment for	Measurement: 60.203 Height: 66.231	
	Fixed Point (Average Front): The vertical distance				
	measured from the curb grade or its equivalent				
	established grade at a point midway between the two				
	side lot lines to the highest point of the roof in the				
	case of a flat roof, to the deck line of a mansard roof,				
	or to the mean height level between the eaves and				
	ridge of a gable, hip or gambrel roof excluding church				
	spires, except that, where buildings are set back from				
	the street line, the height on the building may be		Yes. Upwards	Measurement: 26.08.080	
	measured from the average elevation of the finished	Yes. Inherent in	adjustment for		
St. Louis, MO		3 stories Average.	pitched roof.	Height: 26.20.050	
	Fixed Point (Average or High Side): Vertical distance				
	measured from the average elevation of the proposed				
	finished grade at the front or rear of the building to the				
	highest point of the roof for flat and mansard roofs,				
	and to the average height between the highest ridge				
	and its contiguous eave for other types of roofs. On	Yes. Inherent in		Measurement: 16.23	
Ot \/T	sloping sites the height will be measured on the uphill	Average and hight	adjustment for	Hainba Tabla C C	
Stowe, VT	28 side. Fixed Point (Average): Height shall be measured	point.	pitched roof.	Height: Table 6.2	
	, , , ,				
	vertically from the undisturbed natural grade at the mean elevation of the building pad to the highest point				
	of the building or structure, excluding spires, dish				
	antennas, ventilators, chimneys, or other similar				
	appurtenances. Chimneys, spires, dish antennas,				
	ventilators and other appurtenances shall not extend			https://codelibrary.amlegal.com/code	
Sunset Valley,	over six feet above the building on which they are	Yes. Inherent in		s/sunsetvalley/latest/sunsetvalley_tx/	<i>[</i>
TX	35 located.	average.		0-0-0-14157	Min lot size of 1 acre

	For View-Sensitive Overlay District: Multi-Point			
	(Parallel w/ Grade Adjustments for Each Segment): 1.			
	The height limit shall be the vertical distance between			
	existing grade and a plane essentially parallel to the			
	existing grade. The corners of such plane shall be			
	located above the base points. 2. The base points			
	shall be located at the four corners of the foundation			
	or, if the foundation of the structure does not form a			
	rectangle, at the four corners of the smallest rectangle			
	which surrounds the foundation. 3. The base points			
	shall be located on existing grade, unless determined			
	otherwise by the Director in accordance with the			
	provisions of Section 13.05.010.B. 4. Additional height			
	at the rate of one foot for each 6 percent of the slope			
	shall be allowed. This additional height shall not be			
	allowed on the uphill portion of the structure. For the			
	purpose of this provision, the slope shall be the			
	difference between the elevation of the highest base			
	point and the elevation of the lowest base point		Height: p. 13-195	
	divided by the distance between	Yes. See height		
Tacoma, WA	35 those two base points.	definition.	Measure: 13.01.060.B	Note: Unable to locate general definition.
	Fixed Point (Curb): Building height means the vertical			
	distance measured from grade (as defined herein) to			
	the highest point of the roof, including any parapet.			
	Grade means the top of curb, or top of crown of a			
	street where no curb exists, as established at the		Height: Table 4-202A	
	midpoint of the front of the lot used for establishing	Yes for down-		
Tempe, AZ	30 building heights.	sloping lots.	Measure: 7-108, 7-109	

		Below-grade not			
		counted.			
		9-1N-4. Design			
		board exception:			
		architectural			9-1G-13: Wall articulation required: For any new residential
		elements that are			structure or addition, all sides of the building(s) visible from the
		approved through			street or other public areas and where the space between two
		the Site Plan and			(2) houses or structures is greater than twenty feet (20') should
		Design Review may			be fully articulated and have elements that contribute to visual
		exceed the			interest and neighborhood character. This includes variation in massing, wall planes, and roof forms as well as surface
	Parallel plane to natural grade: The maximum	maximum height limit provided that			articulation such as window and door treatments and windows.
	allowable height will be measured as the vertical	no such structures			articulation such as window and door treatments and windows.
	distance from the existing grade of the site to an	will be for the			No linear wall of a second story may extend more than twenty-
	imaginary plane located the allowed number of feet	purpose of providing	1	Measure: 9-1A-12	four feet (24') without architectural articulation or an offset of at
	above and parallel to the grade not including rooftop	additional living or		111000010. 0 171 12	least two feet (2') for not less than eight feet (8').
Temple City, CA	32 appurtenances.	floor space.		Height: Table 9-1G-3	
1 77	Fixed Point (Average): The vertical distance from the	'			
	grade to the highest point of the coping of a flat roof or			Height: 1106.0101	
	to the deck line of a mansard roof, or to the mean				
	height level between eaves and ridge for gable, hip			Measure: 1106.0206	
	and gambrel roofs. Grade is average elevation at	Yes. Inherent in	adjustment for		
Toledo, OH	35 exterior walls.	averaging.	pitched roof.	Grade: 1116.0138	
	Fixed Point (Average): Building height is measured as				
	the vertical distance from the average ground				
	elevation along the exterior building wall to the highest point of the subject building. For purposes of			Height: 5.030	
	measuring height:a.The average ground elevation is			Height. 5.030	
	the mid-point between the highest and lowest ground			Measure: 90.160	
	elevations along the exterior building wall; andb.The			<u> </u>	
	highest point of the building is the coping of a flat roof,			Drawing:	
	the top of a mansard roof or shed roof, or the peak of			https://library.municode.com/ok/tulsa	
	the highest gable of a gambrel or hip roof. For			/codes/code of ordinances?nodeId	
	buildings without a roof, height is measured to the	Yes. Inherent in		=CD_ORD_TIT42ZOCO_CH90ME	
Tulsa, OK	35 highest point of the structure.	averaging.		S90.160BUHE	
	Building height is the vertical distance measured from				
	the design grade elevation to the highest point of a flat				
	roof; to the deck line of a mansard roof; or to the		Yes. Upwards		
	middle (between the eave and ridge) of the highest		adjustment for		
Tuscon, AZ	25 gable of a pitched or hipped roof.		pitched roof.	Height: TABLE 6.3-2.A	

		1	1	1	ı	1
	Fixed Point (Average): Height of a building shall mean					
	the vertical distance from the grade to: (1)The highest					
	point on a flat roof;(2)The deck line of a mansard roof;					
	or(3)The mean height between eaves and ridge for					
	gable, hip and gambrel roofs. Grade means the				Measure: 28-1	
	average level of the finished surface of the ground		Yes. Inherent in	adjustment for		
Waco, TX	35 adjacent to the building.	2.5 stories	averaging.	pitched roof.	Height: 28-300	
	Parallel Plane: No part of any principal structure shall					
	rise more than the maximum height shown on the					
	schedule of regulations contained in section					
	22.03.281, above natural ground grade or original					
	grade directly below. If the average natural slope in					
	the area directly below the foundation of the principal		Yes. 2 feet			
	30 or 32 structure is 25% or greater, than no part of any		adjustment for		Height: 22.03.281	
West Lake Hills,	depending principal structure shall rise more than 32' above		greater than 25%			
TX	on slope natural ground grade directly below.		slope.		Measurement: 22.03.279	Note: minimum 1 acre lots.
	Fixed Point (Average front): Height, Building means					
	the vertical distance between the average finished					
	grade along the front of a Building and: (1) the highest					
	point of the coping of a flat roof; (2) the deck line of a					
	mansard roof; or (3) the average height level between			Yes. Upwards		
	the eaves and ridge line of a gable, hip or gambrel		Yes. Inherent in	adjustment for		
Wichita, KS	35 roof.		averaging.	pitched roof.	Height: Art. III, Sec. B.3.	
	Height: the vertical distance between the existing or					
	finished grade under the structure, whichever is lower,					
	to the highest point of the structure, including					
	chimneys. For a stepped or terraced building, the			Yes, 28' for		
	35 (pitched) height of each segment of the structure is determined			flat roof, 35'		
Wimberley, TX	or 28 (flat) individually.	Two Stories		for sloped roof	Height: 9.03.073	
	Fixed Point (Average): The vertical distance					
	measured from the average elevation of the finished					
	grade of all sides of a building, measured at the					
	midpoint of each side, to the topmost elevation of the					
Winston-Salem,	roof or to the topmost projection of the building above		Yes. Inherent in			
NC	40 any roof, including parapet walls		averaged point.		Heght: 4.5.5	

Page 74

3.

Building Height Summary

August 30, 2024



Introduction:

The purpose of this presentation is to provide alternative concepts for use in measuring and limiting residential building heights in Rollingwood, in lieu of the CRCRC's parallel plane methodology. The proposed concepts are the best options for the community to achieve the collective goal of limiting overall height and bulk while mitigating unintended consequences. Additionally, these options represent simpler solutions to understand and implement within our current code. These alternative proposals provide sufficient height and bulk limitations to meet the goals of our city residents, but also provide for topographical relief for lots with changes in elevation in the buildable footprint. The CRCRC's proposed parallel plane concept, combined with tenting and no topographical relief for sloped lots, is by far the most stringent policy we could adopt and does not have widespread community support. If passed, Rollingwood would immediately have one of the most, if not the most, restrictive and inflexible building height ordinances in the United States.

Agenda:

- 1. Proposed Concept for Additional Consideration:
 - A. Restrict Number of Stories, Leave Max Height As-Is, Decrease Relief (vs. current code) and Apply Tenting
 - B. Restrict Number of Stories and Measure from Average Elevation to Defined Roof Point and Apply Tenting
 - i. This is the most common solution found within the 118 cities researched by Ryan Clinton

Proposed Concepts for Additional Discussion

Section 1

cept #1: Fixed Point / High Point

Overview:

- Restrict the Number of Stories to 3 Full Levels Stacked
- Leave Max Building Height at 35' (Fixed Point / High Point)
- Reduce the Topographical Relief for lots from 10' to 7'
- · Apply Roof Differentiation and Tenting Concepts
- This is the easiest methodology to restrict building heights and meet the residents goals. There are minimal required changes to our current building code, and, equally important, it will be easy for the city staff to understand and implement

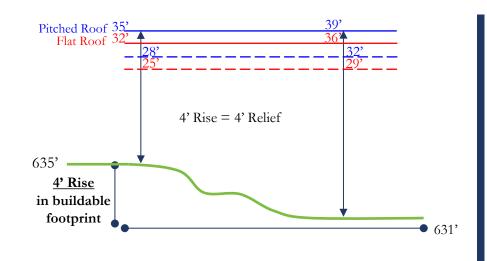
Interpretation and Application:

- Do not allow more than three (3) floors stacked vertically
 - · This would not be intended to limit the number of total combined stories for homes that are split level
- Building Height / Roof Differentiation:
 - Max Building Height is 35', but reduced 3' for flat roof homes. Flat roof homes have a more visually imposing feel than a
 pitched roof home. This principle complements the tenting concept and will bring down the mass across the neighborhood
 without punishing those who prefer a pitched roof home.

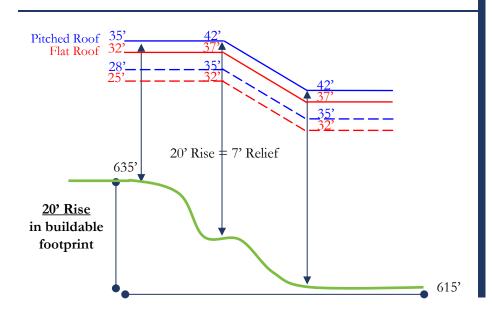
	Pitched Roof	Flat Roof
Max Building Height	35'	32'

- Reduce the Topographical Relief for lots with changes in elevation in the buildable footprint from a maximum relief of 10' to 7'.
 - This would still allow those with topographical hardship in their lots the ability to retain architectural and design flexibility and maintain equity amongst all lots, but also bring down overall height and bulk
- Apply a tenting concept that begins with a 28' limitation (25' for flat roof homes), plus any calculated Topographical Relief (capped at 7'), at the 10' side yard and then increases vertically for each 1' in additional horizontal distance from the property line up the Max Building Height
 - This tenting concept will bring down the side-wall height, depending on the slope and roof type, between 7' 10' from the current allowable heights. This equates to a 16.7% 28.9% reduction in height at the side wall on every lot compared to the current rules.
 - The CRCRC's tenting proposal will result in a 10' 20' (28.6% 44.4%) reduction in height at the side wall on every lot compared to the current rules.

ding Height Diagrams (Concept #1: Fixed Point / High Point)



 Tenting Max Height @ 10' Side Yard
 Tenting Max Height @ 10' Side Yard



Pitched Roof			
Change in Elevation in the Buildable Footprint	Existing Allowable Max Height @ 10' side yard	Max Height w/ Tenting at Existing Grade (@ 10' side yard and w/ relief)	% Reduction from Current Allowable Height @ Sidewall
0.00'	35.00'	28.00'	20.0%
1.00'	36.00'	29.00'	19.4%
2.00'	37.00'	30.00'	18.9%
3.00'	38.00'	31.00'	18.4%
4.00'	39.00'	32.00'	17.9%
5.00'	40.00'	33.00'	17.5%
6.00'	41.00'	34.00'	17.1%
7.00'	42.00'	35.00'	16.7%
8.00'	43.00'	35.00'	18.6%
9.00'	44.00'	35.00'	20.5%
10.00'	45.00'	35.00'	22.2%

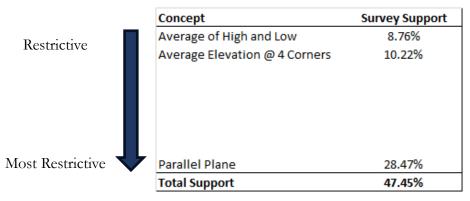
Flat Roof			
Change in Elevation in the Buildable Footprint	Existing Allowable Max Height @ 10' side vard	Max Height w/ Tenting at Existing Grade (@ 10' side yard and w/ relief)	% Reduction from Current Allowable Height @ Sidewall
0.00'	35.00'	25.00'	28.6%
1.00'	36.00'	26.00'	27.8%
2.00'	37.00'	27.00'	27.0%
3.00'	38.00'	28.00'	26.3%
4.00'	39.00'	29.00'	25.6%
5.00'	40.00'	30.00'	25.0%
6.00'	41.00'	31.00'	24.4%
7.00'	42.00'	32.00'	23.8%
8.00'	43.00'	32.00'	25.6%
9.00'	44.00'	32.00'	27.3%
10.00'	45.00'	32.00'	28.9%

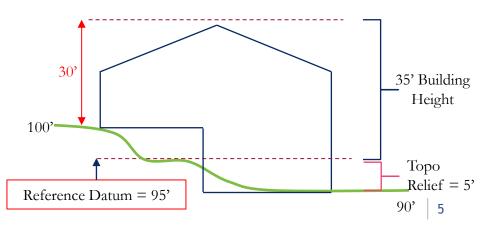
Overview:

- Restrict the Number of Stories to 3 Full Levels Stacked
- Leave Max Building Height at 35', but measure from the Average Elevation of the buildable footprint (Fixed Point / Average Elevation)
- Apply Roof Differentiation and Tenting Concepts
- This concept's implied support from the community is <u>47%+</u> as it is utilizing Option 1 and 2 for measuring max height. Plus, the 28% who supported parallel plane would also prefer something less restrictive vs. no change at all

Interpretation and Application:

- Do not allow more than three (3) floors stacked vertically
 - · This would not be intended to limit the number of total combined stories for homes that are split level
- Three foot (3') reduction in Max Building Height for flat roof homes
- Measure Max Building Height from the Average Elevation (Reference Datum) of the buildable footprint, defined as follows:
 - Average Elevation shall be calculated as the average of 1.) the average elevation of the existing grade at the four corners of the buildable area, or 2.) the average elevation of the existing grade at the high point and low point of the to-be built home's building footprint.
 - Once the Average Elevation is established the homeowner can build up to 35'
- Apply a tenting concept that begins with a 28' limitation (25' for flat roof homes) at the 10' side yard and then increases vertically for each 1' in additional horizontal distance from the property line up the Maximum Building Height



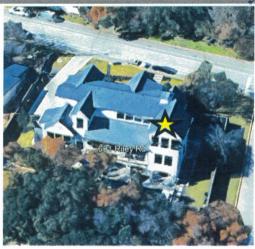


Recommendations for Regulating Building Heights & Reducing the Visual Impact of Tall Homes and Exterior Walls

- Roof differentiation. Because flat-roof homes are more bulky and visually imposing than pitched-roof homes, a large number of cities have adopted a lower maximum height for flat roofs than for pitched roofs. Rollingwood currently treats both roof styles the same way, which incentivizes flat roofs to maximize living space. Rollingwood should lower the maximum height for homes with flat roofs to 32' (from 35').
- <u>Eliminate fourth stories</u>. A large number of cities have limited residential building heights to no more than 2.5 or 3 stories. Rollingwood does not currently limit the number of stories in a home. Rollingwood should limit the number of stories in a home to 3 (subterranean should not count).
- Wall articulation. Some cities limit the visual impact of vertical walls by requiring or encouraging the use of architectural features to visually "break up" flat walls, which can be visually harsh and imposing. Rollingwood does not currently require or encourage wall articulation. Rollingwood should adopt rules to require or encourage articulation of exterior walls to break up "imposing" facades.
- <u>Vegetative barriers</u>. Some cities encourage vegetative barriers between steeply sloped lots to enhance privacy and reduce visual impact. Rollingwood does not currently require or encourage vegetative barriers. Rollingwood should adopt rules to require or encourage vegetative barriers between steeply sloped lots.
- Exterior wall height limits. Some cities impose limits on the heights of exterior walls (where height is most visually imposing) while allowing for height adjustments between exterior walls (where height has less visual impact). Rollingwood does not currently limit exterior wall height. Rollingwood should adopt rules to limit exterior wall height to 35' at any portion of the lot, with "stepped up" heights from the exterior wall to maximum heights adjusted for slope, if any.

Page 81

rrome located near Riley Road & Rollingwood Drive





- 1. The high point of this home is located at the NE corner of the house, which is where the yellow star is located on the picture (top left)
 - The max roof height at this point is 40.46', but the height to the top of the home excluding the roof is 34' 11"
- 2. Graphic (top right) is from a CRCRC member email dated August 9, 2024 to Planning and Zoning:
 - a) The parallel plane "lops off the top of this home in the areas of light blue circles". Lopping off the top does not solve the problem. I believe this example exposes blind spots in their proposal and brings into question how thoroughly they even understand their proposal and the unintended consequences. In fact, due to the parallel plane restrictions, I think two things would have likely occurred:
 - i. That the builder would build the same home, but use a flat roof or a different pitch roof in order to stay beneath the parallel plane, or
 - ii. The builder would have increased the footprint and pushed the home down the lot, which would have brought the home closer to the rear setback and closer to the downhill neighbor.
 - Footprint expansion requires additional impervious cover, could lead to more trees being cut down and further negatively impact the downhill neighbor as the 35' of height at the setback creates less privacy than 40.46' over twenty (20) linear feet from the setback
 - b) Question: Would either of the provided Alternative Proposals fix this problem?

Answer: No, both alternative proposals would yield a similar result to the parallel plane, but unlike the parallel plane, it would allow:

- The homeowner to retain roof type flexibility vs. being incentivized into a certain roof (e.g. flat roof home). This flexibility will maintain and encourage architectural diversity in our neighborhood
- · The homeowner could build up vs out, which could save trees from being cut down and reduce impervious cover
- <u>Most importantly</u>, if the parallel plane cannot solve the problem at the subject property any better than the current code or alternative proposals, than we as a city should not introduce overly restrictive rules that adversely impair our friends and neighbors that own sloped lots. The alternative proposals, which are equally effective and both utilize a tenting concept, provide relief to all sloped lot homeowners in the neighborhood and materially improve privacy for adjacent neighbors.

"You can't go back and change the beginning but you can start where you are and change the ending."

CRCRC SIDE YARD PROJECTIONS RECOMMENDATIONS 8-21-24

CRCRC Approved 8-20-24:

Side Yard Projections

Amend setback rules Sec. 107-76 as follows:

In a side yard of 12.5 feet or greater, other ordinary projections of building features typically used in residential building construction may extend into the required yard a maximum of two feet. Roof overhangs are excluded.

In no event shall any projection extend into a side yard of 10 feet or less excluding roof overhangs.

Page 83

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1	ORDINANCE NO
2 3 4 5	AN ORDINANCE AMENDING CHAPTER 107 OF THE CITY OF ROLLINGWOOD'S CODE OF ORDINANCES RELATED TO RESIDENTIAL SIDE YARD PROJECTIONS; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.
6 7	WHEREAS , the City of Rollingwood is a General Law Type A City under the statutes of the State of Texas; and
8 9	WHEREAS , the Texas Local Government Code Chapter 211 provides authority to regulate the height, number of stories, and size of buildings and other structures; and
10 11 12 13	WHEREAS, the City Council of the City of Rollingwood ("City Council") finds that residential neighborhoods are often characterized by their scale, form, and spacing between structures and that building projections that extend beyond established building envelopes can alter the aesthetic and functional character of these areas.; and
14 15 16	WHEREAS, the City Council finds and determines that building projections such as balconies, decks, and overhangs can impact the privacy of adjacent properties by overlooking private spaces, such as backyards and windows; and
17 18 19	WHEREAS, the City Council finds and determines that unregulated or poorly managed building projections can potentially affect property values by disrupting the visual coherence of a neighborhood or causing disputes between property owners; and
20 21 22	WHEREAS, the Comprehensive Residential Code Review Committee (the "CRCRC") was appointed, among other issues, to study the effect of residential building projections; and
23 24 25 26 27	WHEREAS, the City Council finds and declares that regulating residential building projections is essential for preserving the community's character, protecting residents' privacy, promoting environmental sustainability, and ensuring equitable and sustainable growth. These findings form the basis for the proposed regulations, which will be implemented in accordance with applicable laws and community goals.
28 29	NOW THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY
30	OF ROLLINGWOOD, TEXAS, THAT:
31 32 33	SECTION 1. All the above premises are hereby found to be true and correct legislative and factual findings of the City Council and are hereby approved and incorporated into the body of this Ordinance as if copied in their entirety.
34	SECTION 2. Code Amendment. The following sections of the Rollingwood Code of

Ordinances is hereby amended as follows with strikethroughs being deletions from the

Code and <u>underlines</u> being additions to the Code:

37	Section 107-76 is amended as follows:			
38	Sec. 107-76. – Minimum required depth and width of yards.			
39 40 41 42 43 44	(f) Projections shall not contain habitable space, except for bay windows ten feet wide or less. Except as to roof overhangs, in a side yard of 12.5 feet or greater, other ordinary projections of building features typically used in residential building construction may extend into the required yard a maximum of two feet. In no event shall any projection extend into a side yard of 10 feet or less excluding roof overhangs			
45 46 47 48	SECTION 3 . All provisions of the ordinances of the City of Rollingwood in conflict with the provisions of this ordinance are hereby repealed to the extent of such conflict, and all other provisions of the ordinances of the City of Rollingwood not in conflict with the provisions of this ordinance shall remain in full force and effect.			
49 50 51 52 53	SECTION 4. Should any sentence, paragraph, sub-article, clause, phrase or section of this ordinance be adjudged or held to be unconstitutional, illegal or invalid, the same shall not affect the validity of this ordinance as a whole, or any part or provision thereof other than the part so decided to be invalid, illegal or unconstitutional, and shall not affect the validity of the Code of Ordinances as a whole.			
54 55	SECTION 5 . This ordinance shall take effect immediately from and after its passage and the publication of the caption, as the law and charter in such cases provide.			
56 57 58	APPROVED, PASSED AND ADOPTED by the City Council of the City of Rollingwood, Texas, on the day of, 2024			
59 60				
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63	Gavin Massingill, Mayor			
64	ATTEST:			
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66				
67	, City Secretary			
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