



DENVER
THE MILE HIGH CITY

Community Planning and Development
Planning Services
Plan Implementation

201 W Colfax Ave, Dept 205
Denver, CO 80202
p: 720-865-2915
f: 720-865-3056
www.denvergov.org/planning

TO: Members of the Denver City Council
FROM: Tina Axelrad, Principal City Planner
DATE: November 19, 2007
RE: **Language Amendment #L-1166: Revisions to Setback, Height, and Bulk Plane Regulations for Residential Evaporative Cooler Units**

Introduction

This memorandum:

- (1) Presents a brief summary of the language amendment contents (the actual draft ordinance is provided in your packet);
- (2) Summarizes the likely effects of the proposed language change; and
- (3) Presents CPD's recommendation.

Summary of Proposed Code Changes

Language Amendment L-1166, initiated by the City Councilman Chris Nevitt, would accomplish the following changes to zoning requirements related to the placement of evaporative coolers (a.k.a. as "swamp coolers") in residential zone districts:

- A.** Revise current zoning allowances for setback encroachments by adding a new permitted side setback encroachment for ground-mounted evaporative cooler units in an RS-4, R-0, R-1, R-2, R-2-A, R-2-B, R-3, R-3-X, R-4, or R-4-X zone district, and in all residential mixed use (R-MU) zone districts. The maximum permitted side setback encroachment will be three (3) feet, subject to the following conditions:
 - (1) The unit must be placed behind the front of the dwelling;
 - (2) The unit must be screened from adjacent properties and public rights-of-way; and
 - (3) The general noise limitations under the city's noise ordinance (D.M.C., Sec. 36-6) will not be exceeded.
- B.** Exempts roof-mounted evaporative coolers from bulk plane and building height restrictions (i.e., roof-mounted evaporative coolers may project through the applicable bulk plane, and may extend a structure's height above the 30 or 35 feet typically allowed).
- C.** Retain the administrative review exception procedure for setback encroachments for ground-mounted air conditioning units, but – because of the allowances given above – specifically exclude evaporative coolers from such process requirements. (Revision to Sec. 59-38(a)(14).)

Impetus for the Proposed Code Amendment and Effects

Impetus for L-1166. As CPD understands, Councilmember Nevitt's impetus for proposing L-1166 is to provide relative advantages in the zoning code for evaporative coolers over air conditioning units to encourage the energy-saving features of the former, and discourage the energy-consuming features of the latter. It is undisputed that evaporative coolers are more energy efficient than air conditioners – generally using significantly less energy to operate and generating less ambient heat than air conditioning units.

Likely Effects of L-1166. CPD staff believes that the effects of the ordinance, on the whole, would be marginally positive by removing potential zoning barriers to the use of evaporative coolers for residential buildings. While uncommon (because few evaporative coolers are ground-mounted), barriers to easy placement of such units within the side yards of new or existing homes are removed or reduced by the ordinance's allowance for an automatic 3-foot side yard encroachment. While also relatively rare (because most roof-top evaporative cooler systems are placed low on the roof and therefore do not pierce the bulk plane or height limit), barriers to roof-top placement on existing or new homes are reduced by the ordinance's exemption of such units from the code's bulk plane and maximum building height requirements. Aesthetic impacts of ground-mounted units in the side yard are adequately mitigated by required screening from public views seen from adjacent streets.

CPD staff notes some concern for potential negative aesthetic impacts associated with greater allowances for roof-mounted evaporative cooler units, although many new single-family developments in Denver's Areas of Change (e.g., Lowry, Stapleton, and Green Valley Ranch) impose private covenants and controls that prohibit roof-top placement of residential HVAC equipment. Such aesthetic protections through private covenants do not exist in most of Denver's older, established neighborhoods.

Relationship of this Amendment to L-1164 – Revisions to Zoning Requirements for Ground-Mounted Air Conditioning Units in Residential Zone Districts

Councilmember Nevitt is proposing that the evaporative cooler ordinance (L-1166) be advanced in place of the air conditioner ordinance (L-1164), so that siting of air conditioning units may become relatively more difficult than siting evaporative coolers, thus advancing Greenprint Denver goals by favoring the more energy-efficient choice in home cooling systems.

CPD is sponsoring the air conditioning ordinance (L-1164) as an effective means to streamline zoning permitting and review procedures in Denver, and to align Denver practices with practices common in every other Front Range community. The primary impetus behind L-1164 is to achieve remove what CPD views as an unnecessary process impediment for Denver residents, and to reduce an unnecessary expenditure of limited CPD zoning review and inspection resources. Secondary benefits include a potential reduction in consumer costs from more flexible air conditioner placement options, and possible energy efficiency gains to the consumer from avoiding over-sized, rear-yard units and from placement in cooler/shaded side yards.

CPD is committed to promoting sustainable practices in every thing the Department does – from planning the city's future around multi-modal transit, to having regulations

that support best practices. However, CPD is also committed to streamlining our permit processes and removing unnecessary impediments/bureaucratic complexity. The proposed air conditioner ordinance (L-1164) is based on the fact that today, CPD almost always approves requests to place air conditioning units in side yard setbacks. The additional administrative review process involved is no longer needed, adds no value, and requires more time.

While keeping the old, unnecessary review process for air conditioning units while exempting evaporative coolers from such process seems to offer an incentive, there appears no rational nexus between retaining an additional review process for air conditioners and creating a real incentive for evaporative coolers. The calculus of consumer choice between air conditioners and evaporative coolers is likely influenced by more significant factors than possible zoning barriers to their placement on a lot. Consumers may choose air conditioners over other cooling options for a wide variety of reasons: because of perceived efficiency differences, desire for filtered interior air, or ignorance about more energy-efficient alternatives. For the most part, CPD believes the consumer's choice is made well *before* zoning enters the calculus. Zoning review for cooling system installation typically occurs after the consumer makes his/her choice and hires an installation contractor. The interface with zoning occurs only afterwards, when the chosen contractor contacts the city for the requisite building approvals. Thus, using zoning process as an incentive probably misses the mark in this specific kind of choice; at the same time, keeping a useless process in place, so the city can say it offers an incentive, is hardly a proactive approach to regulation.

CPD respectfully requests that the fate of the air conditioning ordinance be unbundled from the fate of the subject evaporative cooler ordinance, and be judged on its own merits based on the reasons it is being advanced by CPD.

RNO Notification of Language Amendment and Public Comments

The City Council Office emailed the current version of the ordinance, a summary of its contents, and notice of the October 10, 2007, Blueprint Denver Committee meeting to all Registered Neighborhood Organizations on September 20, 2007. To date, CPD has not received any RNO position statements on this ordinance.

Planning Board Recommendation

Language Amendment L-1166 has not been reviewed by the Planning Board.

CPD Recommendation

CPD staff recommends approval of language amendment # L-1166, subject to the following modifications:

1. Reconcile language amendment L-1166's setback, bulk plane and building height exceptions for evaporative coolers with the similar provisions for air conditioner units in language amendment #L-1164, and combine into a single ordinance that grants the same exceptions for both kinds of cooling systems; and
2. Delete the administrative review process step for *both* air conditioning units and evaporative coolers; instead, as proposed in L-1164, make the side setback placement of such systems contingent on property owners having to meet specific conditions to mitigate possible noise and aesthetic impacts.

BY AUTHORITY

ORDINANCE NO.
SERIES OF 2007

COUNCIL BILL NO. 598
COMMITTEE OF REFERENCE:
BLUEPRINT DENVER

A BILL

For an ordinance relating to Chapter 59 (Zoning), Denver Revised Municipal Code exempting evaporative coolers from the side setback, height and bulk plane regulations in the RS-4, R-0, R-1, R-2, R-2-B, R-2-A, R-3, R-3-X, R-4, R-4-X and residential mixed use districts with certain conditions.

WHEREAS, the city council has determined on the basis of evidence and testimony presented at the public hearing that the amendment set forth herein is in conformance with the comprehensive plan, is justified by changed or changing conditions, and is reasonably necessary to the promotion of the public health, safety and general welfare, and

WHEREAS, the city council has determined that evaporative coolers, particularly in Denver’s semi-arid climate, are less environmentally damaging than air conditioning units, which require more power and generate more heat, and are therefore preferable, and the use of evaporative coolers should therefore be encouraged and accommodated as a matter of public policy.

NOW, THEREFORE, BE IT ENACTED BY THE COUNCIL OF THE CITY AND COUNTY OF DENVER:

Section 1. Section 59-38(a)(14) of Chapter 59 (Zoning) of the Denver Revised Municipal Code (DRMC) shall be amended by adding the language underlined below to read and be read as follows:

Sec. 59-38(a)(14) Review applications for permits related to encroachments of ground mounted air conditioning units or other similar mechanical equipment, excluding ground mounted evaporative coolers, into required building separations, side setback or rear setback spaces not exceeding three (3) feet. Notwithstanding the regulations limiting the placement of ground mounted air conditioning units or other similar mechanical equipment, excluding ground mounted evaporative coolers, established by the zoning ordinance, the zoning administrator may grant a permit for ground mounted air conditioning units or other similar mechanical equipment units, excluding ground mounted evaporative coolers, upon application in specific cases providing the following procedure and the provisions of section 59-41(b) are followed:

1 **Section 2.** Section 59-106(b)(10) of Chapter 59 (Zoning), of the DRMC, shall be added
2 and enacted to read and be read as follows:

3 **Sec. 59-106(b)(10)** Ground mounted evaporative coolers may project three (3) feet into the side
4 setback, provided:

- 5 a. The equipment is located behind the front of the residential structure and screened from
6 adjacent properties and public rights-of-way; and
- 7 b. The noise standards of section 36-6 of the Denver Revised Municipal Code are not
8 exceeded.

9 **Section 3.** Section 59-106(c) of Chapter 59 (Zoning), of the DRMC, shall be amended by
10 adding the language underlined below to read and be read as follows:

11 **Sec. 59-106(c)** *Bulk of structures in the RS-4 district.* No part of any structure (except church
12 spires, church towers, flagpoles, antennas, chimneys, flues, vents, ~~or~~ accessory water tanks or
13 evaporative coolers) shall project up through bulk limits which are defined by planes starting at
14 horizontal lines which are co-directional to the front, rear and side lines of the zone lot and pass
15 through points ten (10) feet above the midpoint of each such front, rear and side line and which
16 planes extend up over the zone lot at an angle of forty-five (45) degrees with respect to the
17 horizontal (a pitch of one (1) foot additional rise for each foot additional setback). In addition to
18 the above limitations, no part of any nonresidential structures, except the bracketed items listed
19 in the first sentence above, shall be constructed higher than thirty-five (35) feet.

20 **Section 4.** Section 59-120(b)(4)k of Chapter 59 (Zoning), of the DRMC, shall be
21 amended by deleting the language shown in strike-out and adding the language underlined
22 below to read and be read as follows:

23 **Sec. 59-120(b)(4)k.** ~~Except in the R-2-A district, g~~Ground mounted air conditioning units or
24 other similar mechanical equipment, except evaporative coolers, may be permitted in a required
25 side or rear setback subject to administrative review and approval by the zoning administrator as
26 provided in subsection 59-38(14).

27 **Section 5.** Section 59-120(b)(4)l of Chapter 59 (Zoning), of the DRMC, shall be added
28 and enacted to read and be read as follows:

29 **Sec. 59-120(b)(4)l.** Ground mounted air conditioning units or other similar mechanical
30 equipment, except ground mounted evaporative coolers, may be permitted in a required side or
31 rear setback subject to administrative review and approval by the zoning administrator as
32 provided in subsection 59-38(14). Ground mounted evaporative coolers may project three (3)
33 feet into side setback space; provided:

- 1 1. The equipment is located behind the front of the residential structure and screened from
2 adjacent properties and public rights-of-way; and
- 3 2. The noise standards of section 36-6 of the Denver Revised Municipal Code are not
4 exceeded.

5 **Section 6.** Section 59-120(c), of Chapter 59 (Zoning), of the DRMC, shall be amended
6 by adding the language underlined below to read and be read as follows:

7 **Sec. 59-120(c) Bulk of structures.** With the exception of eaves, church spires, church towers,
8 flagpoles, antennas, chimneys, flues, and vents and evaporative coolers, no part of any structure
9 including elevator penthouses, air conditioners, or any other mechanical equipment shall project
10 through bulk planes which shall be applied as follows:

11 **Section 7.** Section 59-120(e), of Chapter 59 (Zoning), of the DRMC, shall be amended
12 by adding the language underlined below to read and be read as follows:

13 **Sec. 59-120(e) Height of structures in the R-0, R-1 and R-2 districts.**

- 14 (1) Area A, no part of any residential structure (except eaves, flagpoles, antennas,
15 chimneys, flues, ~~or~~ vents or evaporative coolers) shall exceed thirty (30) feet in
16 height on zone lots having a width of fifty (50) feet or less. On zone lots wider than
17 fifty (50) feet, the height of the residential structure may exceed thirty (30) feet by
18 one (1) foot for every five foot increase in lot width over fifty (50) feet up to a
19 maximum height of thirty-five (35) feet. For purposes of this section 59-120(e)(1)
20 only, the height of the structure shall be the vertical distance measured from the
21 highest point of the building as described in section 59-2(52) to the average
22 elevation of the corners of the building located in Area A at the finished grade.
- 23 (2) In Area B, no part of any residential structure (except eaves, flagpoles, antennas,
24 chimneys, flues, ~~or~~ vents or evaporative coolers) shall exceed seventeen (17) feet
25 in height; provided, however, that the permitted height shall be increased an
26 additional one foot, to a maximum of nineteen (19) feet, for every additional three
27 (3) feet the residential structure is located away from any side lot line in excess of
28 the standard side setback requirement. For purposes of this section 59-120(e)(1)
29 only, the height of the structure shall be the vertical distance measured from the
30 highest point of the building as described in section 59-2(52) to the average
31 elevation of the corners of the building located in Area B at the finished grade.
32 Within Area B, no residential structure shall exceed one story above ground level
33 and no deck, patio, terrace, porch or balcony shall be located upon any roof.

- 1 (3) No part of any nonresidential structure (except church spires, church towers,
2 flagpoles, chimneys, antennas, flues, ~~or~~ vents or evaporative coolers) shall be
3 constructed higher than thirty-five (35) feet except that no part of any detached
4 garage shall be constructed higher than fifteen (15) feet. The height of a detached
5 garage that is located as close to the rear line of the zone lot as may be permitted
6 by applicable laws or regulations shall be the vertical distance measured from the
7 highest point of the garage as the highest point is described in section 59-2(52), to
8 the average elevation of the alley or, if there is no alley, the rear line of the zone lot
9 immediately adjacent to the garage.

10 **Section 8.** Section 59-120(g), of Chapter 59 (Zoning), of the DRMC, shall be amended
11 by adding the language underlined below to read and be read as follows:

12 **Sec. 59-120(g)** *Height of structures in the R-2-B district.*

- 13 (1) In Area A, no part of any residential structure (except eaves, flagpoles, antennas,
14 chimneys, flues, ~~or~~ vents, or evaporative coolers) shall exceed thirty (30) feet in
15 height on zone lots having a width of fifty (50) feet or less. On zone lots wider than
16 fifty (50) feet, the height of the residential structure may exceed thirty (30) feet by
17 one (1) foot for every five foot increase in lot width over fifty (50) feet up to a
18 maximum height of thirty-five (35) feet. For purposes of this section 59-120(g)(1)
19 only, the height of the structure shall be the vertical distance measured from the
20 highest point of the building as described in section 59-2(52) to the average
21 elevation of the corners of the building located in Area A at the finished grade.
- 22 (2) In Area B, no part of any residential structure (except eaves, flagpoles, antennas,
23 chimneys, flues, ~~or~~ vents, or evaporative coolers) shall exceed seventeen (17) feet
24 in height; provided, however, that the permitted height shall be increased an
25 additional one foot, to a maximum of nineteen (19) feet, for every additional three
26 (3) feet the residential structure is located away from any side lot line in excess of
27 the standard side setback requirement. For purposes of this section 59-120(g)(2)
28 only, the height of the structure shall be the vertical distance measured from the
29 highest point of the building as described in section 59-2(52) to the average
30 elevation of the corners of the building located in Area B at the finished grade. In
31 Area B, no residential structure shall exceed one story above ground level.
- 32 (3) No part of any nonresidential structure (except church spires, church towers,
33 flagpoles, chimneys, antennas, flues, ~~and~~ vents, and evaporative coolers) shall be

constructed higher than thirty-five (35) feet except that no part of any detached garage shall be constructed higher than fifteen (15) feet.

Section 9. Section 59-136(c)(5)I of Chapter 59 (Zoning), of the DRMC, shall be added and enacted to read and be read as follows:

Sec. 59-136(c)(5)I. Ground mounted evaporative coolers may project three (3) feet into side setback space; provided:

1. The equipment is located behind the front of the residential structure and screened from adjacent properties and public rights-of-way; and
2. The noise standards of section 36-6 of the Denver Revised Municipal Code are not exceeded.

Section 10. Section 59-136(c)(6) of Chapter 59 (Zoning), of the DRMC, shall be amended by adding the language underlined below to read and be read as follows:

Sec. 59-136(c)(6) *Permitted encroachments on setback space, R-4-X district:*

Architectural feature	<i>Permitted encroachment into side setback</i>	<i>Permitted encroachment into rear setback</i>
1. Belt courses, sills, lintels, and pilasters	18 inches	18 inches
2. Cornices, eaves and gutters	5 feet	5 feet
3. Outside stairways	5 feet	3 feet
4. Access ramps for the handicapped	May encroach into any required building setback space, providing no alternative location is available and providing the ramp construction is compatible with the character of the structure	May encroach into any required building setback space, providing no alternative location is available and providing the ramp construction is compatible with the character of the structure
5. Unwalled porches, terraces and balconies	5 feet	5 feet
6. Chimneys not to exceed six (6) feet in width	18 inches	18 inches
7. Building accessories designed and intended to control light entering a building and being a permanent part of such building	5 feet	5 feet

8. Building accessories designed and intended to control light entering a building and not being a permanent part of such building, by being removable therefrom and by not being attached to a loadbearing member thereof	May project any distance into any setback space.	May project any distance into any setback space.
9. Any structure or part thereof which is below the grade of any setback space	May project any distance into any setback space.	May project any distance into any setback space.
10. Gas and electric meters if screened on all sides by a masonry wall	3 feet	3 feet
11. Utility pedestals, transformers or other similar equipment providing they do not exceed a height of four (4) feet.	May project any distance into any setback space.	May project any distance into any setback space.
<u>12. Ground mounted evaporative coolers</u>	<u>3 feet provided:</u> <u>1. The equipment is located behind the front of the residential structure and screened from adjacent properties and public rights-of-way</u> <u>2. The noise standards of section 36-6 of the Denver Revised Municipal Code are not exceeded.</u>	

1

2 **Section 11.** Section 59-136(d) of Chapter 59 (Zoning), of the DRMC, shall be amended
3 by deleting the language stricken and adding the language underlined below to read and be read
4 as follows:

5 **Sec. 59-136 (d)** *Maximum bulk of structures.* The R-3, R-3-X and R-4 districts are controlled
6 districts within the meaning of section 59-96, which section must be checked to determine if
7 there are special limitations on bulk planes or building height in addition to those set forth in this
8 section. With the exception of eaves, church spires, church towers, flagpoles, antennas,
9 chimneys, flues, ~~and vents,~~ and evaporative coolers, no part of any structure, including elevator
10 penthouses, air conditioners and any other mechanical equipment, shall project through bulk

1 planes which are located as follows:

2 **Section 12.** Section 59-312(4) (Permitted encroachments into required setback spaces)
 3 (Mixed Use Districts) of Chapter 59 (Zoning), of the DRMC, shall be amended by adding the
 4 language underlined below to read and be read as follows:

5 **Sec. 59-312(4)** *Permitted encroachments into required setback spaces:* The following are
 6 permitted encroachments into required setback spaces:

Architectural Feature	Permitted encroachment into Front Setback	Permitted encroachment into Side Setback	Permitted encroachment into Rear Setback
(a) All Mixed Use Zones			
1. Belt courses, sills, lintels and pilasters.	18 inches	18 inches	18 inches
2. Cornices, eaves and gutters	5 feet	5 feet	5 feet
3. Outside stairways	5 feet	5 feet	3 feet
4. Access ramps for the handicapped.	May encroach into any required building setback space, provided no alternative location is available.	May encroach into any required building setback space, provided no alternative location is available.	May encroach into any required building setback space, provided no alternative location is available.
5. Unwalled porches, terraces and balconies.	5 feet (porch steps may encroach an additional two (2) feet into the setback so long as three (3) feet is retained between the back of the sidewalk and the bottom step)	5 feet	5 feet
6. Chimneys six (6) feet or less in width.	18 inches	18 inches	18 inches
7. Building accessories designed and intended to control light entering a structure and being a permanent part of such structure (excluding projecting windows).	5 feet	5 feet	5 feet

8. Building accessories designed and intended to control light entering a structure, not a permanent part of such structure or attached to a load-bearing member of such structure.	May project any distance into any setback space.	May project any distance into any setback space.	May project any distance into any setback space.
9. Any structure or part thereof which is below the grade of any setback space.	May project any distance into any setback space.	May project any distance into any setback space.	May project any distance into any setback space.
10. Gas and electric meters if screened on all sides by a masonry wall.	3 feet	3 feet	3 feet
11. Utility pedestals, transformers or other similar equipment providing they do not exceed a height of four (4) feet.	May project any distance into any setback space.	May project any distance into any setback space.	May project any distance into any setback space.
(b) Residential Mixed Use Zones Only			
<u>1. Basketball goals on a fixed post</u>	May project any distance into any setback space.	May project any distance into any setback space.	May project any distance into any setback space.
<u>2. Ground mounted evaporative coolers.</u>		<u>May project three (3) feet into side setback space provided:</u> <u>i. The equipment is located behind the front of the residential structure and screened from adjacent properties</u> <u>ii. The noise standards of section 36-6 of the Denver Revised Municipal Code are not exceeded.</u>	

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

COMMITTEE APPROVAL DATE: October 10, 2007.

MAYOR-COUNCIL DATE: October 16, 2007

PASSED BY THE COUNCIL _____ 2007
_____ - PRESIDENT

APPROVED: _____ - MAYOR _____ 2007

ATTEST: _____ - CLERK AND RECORDER,
EX-OFFICIO CLERK OF THE
CITY AND COUNTY OF DENVER

NOTICE PUBLISHED IN THE DAILY JOURNAL _____ 2007; _____ 2007

PREPARED by KAREN A. AVILES, ASSISTANT CITY ATTORNEY; October 18, 2007

Pursuant to section 13-12, D.R.M.C., this proposed ordinance has been reviewed by the office of the City Attorney. We find no irregularity as to form, and have no legal objection to the proposed ordinance. The proposed ordinance is not submitted to the City Council for approval pursuant to § 3.2.6 of the Charter.

Denver City Attorney

BY: _____, Assistant City Attorney Date October 18, 2007