

PLANNING AND ZONING COMMISSION MEETING
Tuesday, July 22, 2014
6:00 P.M.
COUNCIL CHAMBERS
CITY HALL, 200 NORTH DAVID STREET

Meetings can be viewed online at www.casperwy.gov on the Planning and Zoning Commission web page.

PLANNING AND ZONING POLICY
PUBLIC STATEMENTS

- I. Use of Cellular Telephones is Not Permitted, and Such Telephones Shall Be Turned Off or Otherwise Silenced During the Planning and Zoning Commission Meeting.
- II. Speaking to the Planning and Zoning Commission (These Guidelines Are Also Posted at the Podium in the Council Chambers)
 - Clearly State Your Name and Address.
 - Please Keep Your Remarks Pertinent to the Issue Being Considered by the Planning and Zoning Commission.
 - Please Do Not Repeat the Same Statements that Were Made by a Previous Speaker.
 - Please Speak to the Planning and Zoning Commission as You Would Like to Be Spoken To.
 - Please Do Not Address Applicants or Other Audience Members Directly.
 - Please Make Your Comments at the Podium and Directed to the Planning and Zoning Commission.
- III. The City of Casper Planning and Zoning Commission is a volunteer body composed of members of the Casper Community, and appointed by the Casper City Council. The Commission acts as a quasi-judicial panel, making final decisions on some specific items, and recommendations to the City Council on others as dictated by law. The Commission may only consider evidence about any case as it relates to existing law. The Commission cannot make or change planning or zoning laws, regulations, policies or guidelines.

AGENDA

- I. **CALL TO ORDER.**
- II. **MINUTES:**
- III. **PUBLIC HEARINGS:**
 - A. **PLN-14-032-C – Petition for a Conditional Use Permit for a detached garage, with 18’ walls, in excess of 12’ maximum wall height permitted, and to allow an accessory dwelling unit in an R-2 (One Unit Residential) zoning district;**

**on Lot 228, Fairdale Addition, located at 1545 South Wilson Street.
Applicant: Caleb Middleton.**

IV. COUNCIL ACTIONS:

V. SPECIAL ISSUES:

VI. COMMUNICATIONS:

- A. Commission**
- B. Community Development Director**
- C. Council Liaison**
- D. Other Communications**

VIII. ADJOURNMENT

**PLANNING AND ZONING MEETING
TUESDAY, JUNE 24, 2014
CITY COUNCIL CHAMBERS**

These minutes are a summary of the meeting. For full details view online at www.casperwy.gov on the Planning Commission web page. The Planning and Zoning Commission held a meeting at 6:00 p.m., on Tuesday, June 24, 2014, in the Council Chambers, City Hall, 200 North David Street, Casper, Wyoming.

Members Present: Fred Maguire
James Holloway
Monte Henrie
Ryan Waterbury
Mary England
Don Redder
Gary Richards

Absent Members: None

Others Present: Liz Becher, Community Development Director
Craig Collins, Associate Planner
Constance Lake, GIS Technician
Wallace Trembath, Assistant City Attorney
Andrew Beamer, City Engineer
Jack Jenks, 283 West Front Street, Missoula, MT
Teran Mitchell, 283 West Front Street, Missoula, MT
Thad Hunter, 1120 East C Street
Gail Welsch, 2222 South Fairdale Avenue

II. MINUTES OF THE PREVIOUS MEETING

Chairman Maguire asked if there were additions or corrections to the minutes of the May 27, 2014 Planning & Zoning Commission meeting.

There being none, Chairman Maguire called for a motion to approve the minutes of the May 27, 2014 Planning & Zoning Commission.

Mr. Henrie made a motion to approve the minutes of the May 27, 2014 meeting. The motion was seconded by Mr. Waterbury. All those present voted aye with the exception of Mr. Redder who abstained. Minutes approved.

III. PUBLIC HEARING

Chairman Maguire advised the first case on the agenda was PLN-14-012-S.

Wallace Trembath, Assistance City Attorney, stated the case had been tabled; therefore, a motion to remove it from the table for consideration would be required.

Ms. England made a motion to remove PLN-14-012-S from the table for consideration. The motion was seconded by Mr. Holloway. All those present voted aye. Motion carried.

The Chairman advised the applicants that it takes four (4) affirmative votes to carry any motion not just a majority of those commission members present. Anything less than four (4) votes is a denial. Applicants can postpone their public hearing until next month in anticipation of more Planning Commission members being present, if they so desire.

PLN-14-012-S – *(Tabled on April 22, 2014)* Planned Unit Development (PUD) site plan approval for a three-story, 36-unit apartment building, on Lot 1, Hunt Addition No. 3, generally located at the southeast terminus of East 8th Street, between Beverly Street and Nebraska Avenue. Applicant: Jared Rude and Summit Housing Group.

Constance Lake, GIS Technician, presented the staff report which recommends that the Planning and Zoning Commission approve the site plan for the construction of a thirty-six (36) unit apartment building, and forward a “do-pass” recommendation to the City Council, with the following condition:

1. Prior to the issuance of a Certificate of Occupancy, a City-standard concrete pedestrian pathway/sidewalk shall be designed and constructed by the applicant within the existing public access easement connecting East 8th Street to Nebraska Avenue, in a location and configuration approved by the City Engineer.

Ms. Lake entered six (6) exhibits into the record for this case.

Chairman Maguire opened the public hearing and asked for the person representing the case to come forward and explain the application.

Jack Jenks, 283 West Front Street, Missoula, MT spoke on behalf of this case.

Teran Mitchell, 283 West Front Street, Missoula, MT spoke on behalf of this case and provided the Commission a handout of the project drawings.

Craig Collins, Associate Planner, advised the drawings submit were already a part of the record for this case.

Thad Hunter, 1120 East C Street, spoke on behalf of this case.

Chairman Maguire asked for anyone wishing to comment in favor of or opposition to this case.

There being no one to speak, Chairman Maguire closed the public hearing and entertained a motion to approve and forward to City Council with a “do pass” recommendation, deny, or table case PLN-14-012-S.

Mr. Holloway made a motion to approve case PLN-14-012-S with Condition #1 listed in the staff report and forward a “do pass” recommendation to the City Council. The motion was seconded by Mr. Waterbury. All those present voted aye. Motion carried.

The Chairman advised the next case on the agenda was:

PLN-14-030-C – Petition for a Conditional Use Permit for a “Family Child Care Center-Zoning Review” to allow a home-based, child care and preschool facility for up to 15 children, on Lot 27, Alta Vista (RPLT), located at 2222 South Fairdale Avenue. Applicant: Gail Welsch DBA “Lions and Lambs Christian Childcare and Preschool”

Constance Lake, GIS Technician, presented the staff report which recommended that the Planning and Zoning Commission approve the request for a Conditional Use Permit to operate a “Family Child Care Center-Zoning Review” for up to fifteen (15) children, located at 2222 South Fairdale Avenue, with the following conditions:

1. The applicants shall maintain a minimum of two (2) open, off-street parking spaces for use by daycare customers, during the hours when the child care is in operation.
2. Pursuant to Section 17.12.140(A)(2) of the Casper Municipal Code, signage for all “home occupations” shall be limited to only signage that is non-illuminated, attached flush with the dwelling, and does not exceed one square foot in area.

Ms. Lake entered five (5) exhibits into the record for this case.

Chairman Maguire opened the public hearing and asked for the person representing the case to come forward and explain the application.

Gail Welsch, 2222 South Fairdale Avenue, spoke on behalf of this case.

Chairman Maguire asked for anyone wishing to comment in favor of or opposition to this case.

There being no one to speak, Chairman Maguire closed the public hearing and entertained a motion to approve and forward to City Council with a “do pass” recommendation, deny, or table case PLN-14-030-C.

Ms. England made a motion to approve case PLN-14-030-C for two (2) Reasons, and six (6) Findings with the two (2) Conditions listed in the staff report. The motion was seconded by Mr. Redder. All those present voted aye. Motion carried.

IV. COUNCIL ACTIONS:

There were none.

V. SPECIAL ISSUES:

There were none.

VI. COMMUNICATIONS:

A. Commission:

Chairman Maguire advised the Commission of the training meeting scheduled for July 15, 2014 at 11:30 a.m. to discuss input from the sign community, as well as staff, and to finalize the proposed ordinance amendment regarding digital signage.

B. Community Development Director:

Liz Becher, Community Development Director, advised of Council’s decision, at their work session this evening, to allow the developer to offset the intersection of Red Wolf Drive and Grey Wolf Drive in the Wolf Creek Nine subdivision the Commission had reviewed at the May 27, 2014 and recommended be aligned. Mr. Holloway expressed his personal frustration with Council continuing to override the recommendations forward by the Planning and Zoning Commission regarding planning cases. Ms. Becher stated the Council expressed both the credibility and importance of the Planning and Zoning Commission.

Ms. Becher, also informed the Planning and Zoning Commission of upcoming opportunities, to participate in a visit from a consultant looking at implementing tax-increment financing (TIF) for special projects in Casper. She stated Commissioners would receive an invitation to participant in a lunch meeting and/or the Council work session on July 22, 2014.

C. Other Communications:

D. Council Liaison:

There were none.

VII. ADJOURNMENT

Chairman Maguire called for a motion for the adjournment of the meeting. A motion was made by Mr. Richards and seconded by Mr. Redder to adjourn the June 24, 2014 meeting of the Planning and Zoning Commission. All present voted aye. Motion carried. The meeting was adjourned at 7:47 p.m.

Chairman

Secretary

July 18, 2014

MEMO TO: Fred Maguire, Chairman
Members of the Planning and Zoning Commission

FROM: Liz Becher, Community Development Director
Craig Collins, AICP, Associate Planner

SUBJECT: **PLN-14-032-C** – Petition for a Conditional Use Permit for a detached garage, with eighteen (18) foot walls, in excess of the twelve (12) foot maximum wall height permitted; and to allow an accessory dwelling unit in an R-2 (One Unit Residential) zoning district; on Lot 228, Fairdale Addition, located at 1545 South Wilson Street. Applicant: Caleb Middleton.

Recommendation on the accessory dwelling unit:

In the absence of information that may be presented during the public hearing, staff recommends that the Planning and Zoning Commission approve the request for a Conditional Use Permit for an accessory dwelling unit in an R-2 (One Unit Residential) zoning district, located on the subject property, with the following conditions:

1. Either the principal dwelling unit or the accessory dwelling unit shall be occupied by the owner of the property, or an immediate family member of the property owner.
2. A total of four (4) off-street parking spaces shall be provided to meet the Casper Municipal Code's requirement of two (2) parking spaces per dwelling unit.

Recommendation on accessory building with eighteen (18) foot wall height:

In the absence of information that may be presented at the public hearing, staff recommends that the Planning and Zoning Commission approve the request for a Conditional Use Permit for the construction of a detached accessory building with eighteen (18) foot walls, in excess of the twelve (12) foot maximum wall height permitted under Section 17.12.121(G) of the Casper Municipal Code.

Code Compliance:

Staff has complied with all requirements of Section 17.12.240 of the Casper Municipal Code pertaining to Conditional Use Permits, including notification of property owners within three hundred (300) feet by first class mail, posting of the property, and publishing legal notice in the Casper Star-Tribune. Staff has received two (2) letters of opposition to the Conditional Use Permit citing concerns with the impact of the large building to their properties.

Section 17.12.240(G) of the Casper Municipal Code states that no conditional use permit shall be granted unless the Commission finds the following:

1. The Conditional Use is consistent with the spirit, purpose, and intent of this Title; will not substantially impair the appropriate use of neighboring property; and will serve the public need, convenience, and welfare;
2. The Conditional Use is designed to be compatible with adjacent land uses and the area of its location.

When making the decision for a Conditional Use Permit, the Commission shall consider the scale of the operation and relationship to other similar issues as expressed in the six (6) considerations outlined in Section 17.12.240(H) as listed below.

- a. Area and height to be occupied by buildings or other structures.
- b. Density of the proposed use in terms of units per acre and the number of offices, employees, occupants, or all three.
- c. Volume of business in terms of the number of customers per day.
- d. Increased traffic congestion or hazard caused by the use which may be over and above normal traffic for the area, as determined by the City Engineer and Community Development Director.
- e. Location of use with respect to the same or similar uses within a three hundred foot (300') radius of the perimeter of the described property.
- f. Any other criteria affecting public health, safety, and welfare, as provided for by written rules of the Commission.

Pursuant to Section 17.12.240(I) of the Casper Municipal Code, the Commission may impose reasonable conditions on a Conditional Use Permit, including, but not limited to, time limitations, requirements that one or more things be done before construction is initiated, or conditions of an ongoing nature. By way of illustration, not limitation, the following limitations or modifications can be placed upon a Conditional Use Permit, to the extent that such conditions are necessary to insure compliance with the criteria of Section 17.12.240(G) and (H):

1. Size and location of site;
2. Street and road capacities in the area;
3. Ingress and egress to adjoining public streets;
4. Location and amount of off-street parking;
5. Internal traffic circulation systems;
6. Fencing, screening, and landscaped separations;
7. Building bulk and location;
8. Usable open space;

9. Signs and lighting; and,
10. Noise, vibration, air pollution and other environmental influences.

Summary:

Caleb Middleton has applied for a Conditional Use Permit to allow an accessory dwelling unit in an R-2 (One Unit Residential) zoning district, located at 1545 South Wilson Street. The property consists of a single platted lot, approximately eight thousand five hundred (8,500) square feet in total area. The minimum lot size in the R-2 (One Unit Residential) district is four thousand (4,000) square feet. Land uses in the surrounding area are all single-family residential. Section 17.32.030 of the Casper Municipal Code lists “accessory dwelling unit” as a conditional use in the R-2 (One Unit Residential) zoning district.

According to the definition of an accessory dwelling unit found in Title 17 of the Casper Municipal Code, either the principal dwelling unit, or the accessory dwelling unit must be occupied by the owner of the property, or an immediate family member. The definition also specifies that the accessory dwelling unit cannot be sold or otherwise separated from the principal dwelling unit. The reasoning behind these standards is to prevent the general introduction of multi-family residential development into a single-family residential zoning district. Accessory dwelling units were added to the R-2 (One Unit Residential) zoning district as conditional uses with the intent to address the changing housing needs of our society, such as the needs of young and/or single-parent households, or the needs of an aging population. Staff has included a recommended condition that reiterates the requirement that the owner of the property, or immediate family member, occupy either the principal or the accessory dwelling. The second recommended condition of approval requires that the applicant provide a minimum of four (4) off-street parking spaces. Per Section 17.12.080 of the Casper Municipal Code, a minimum of two (2) parking spaces must be provided, per dwelling unit. Parking spaces located both within a garage, and in a driveway, may be used to satisfy the minimum parking requirement.

The second portion of the Conditional Use Permit request is a request to allow a detached accessory building with an exterior wall height of eighteen (18) feet. Section 17.12.121(G) of the Casper Municipal Code states that a Conditional Use Permit is required for detached accessory buildings that exceed twelve (12) feet in exterior wall height. The proposed structure will have a twenty-five by thirty foot building (25'x30') footprint, or a total area of seven hundred fifty feet (750'). The allowable footprint/size of a detached accessory building is up to fifteen (15) percent of the lot area, or in this case, a maximum of one thousand two hundred seventy five (1,275) square feet. The minimum setback requirements for the structure are three (3) feet in the rear, and five (5) feet on the sides. It is noted that an eighteen (18) foot public alley abuts the property along its rear property line, which will provide additional separation between the accessory building and the residences to the east.

The staff recommendation is to approve both portions of the Conditional Use Permit request, with the two (2) conditions listed. Should the Planning and Zoning Commission desire to approve the request, a recommended motion has been provided below.

Recommended Motion:

Staff has prepared the following motion for the Commission's consideration:

The Planning Commission finds that case number **PLN-14-032-C**, a Conditional Use Permit for a detached garage, with eighteen (18) foot walls, in excess of the twelve (12) foot maximum wall height permitted; and to allow an accessory dwelling unit in an R-2 (One Unit Residential) zoning district; on Lot 228, Fairdale Addition, located at 1545 South Wilson Street, should be granted, with Conditions #1 and #2, listed in the staff report, for the following reasons:

1. The Conditional Use is consistent with the spirit, purpose, and intent of this Title; will not substantially impair the appropriate use of neighboring property; and will serve the public need, convenience, and welfare;
2. The Conditional Use is designed to be compatible with adjacent land uses and the area of its location.

Furthermore, with respect to the necessary findings for the approval of a Conditional Use Permit outlined in Section 17.12.240(H) of the Municipal Code, the Planning and Zoning Commission finds that:

- a. The seven hundred fifty (750) square foot footprint of the proposed accessory building is five hundred twenty five (525) square feet less than the one thousand two hundred seventy five (1,275) square foot building footprint allowed for an accessory building, by right. The eighteen (18) foot high walls are only six (6) feet higher than the twelve (12) foot height permitted by right. The additional height of the structure will be adequately mitigated by the minimum setback requirements of the Casper Municipal Code, and the alley along the rear property line.
- b. The requested Conditional Use Permit is to allow for the addition of a single dwelling unit, for a total of two (2) dwelling units, to be located on the property. The property is approximately eight thousand five hundred (8,500) square feet in size, and the minimum lot size in the R-2 (One Unit Residential) zoning district is four thousand (4,000) square feet. The addition of a dwelling unit to the property would not be of a higher density than would otherwise be allowed if the property were split into two (2) conforming R-2 (One Unit Residential) lots.
- c. The volume of business is not applicable because the property is not being proposed to be used as a business.
- d. There will not be unreasonable congestion or a traffic hazard caused by the proposed accessory dwelling unit, as determined by the City Engineer and the Community Development Director.

- e. There are no known accessory dwelling units or oversized accessory buildings located within three hundred (300) feet of the subject property.
- f. There are no other criteria, affecting public health, safety, and welfare, as provided for by the written rules of the Commission.

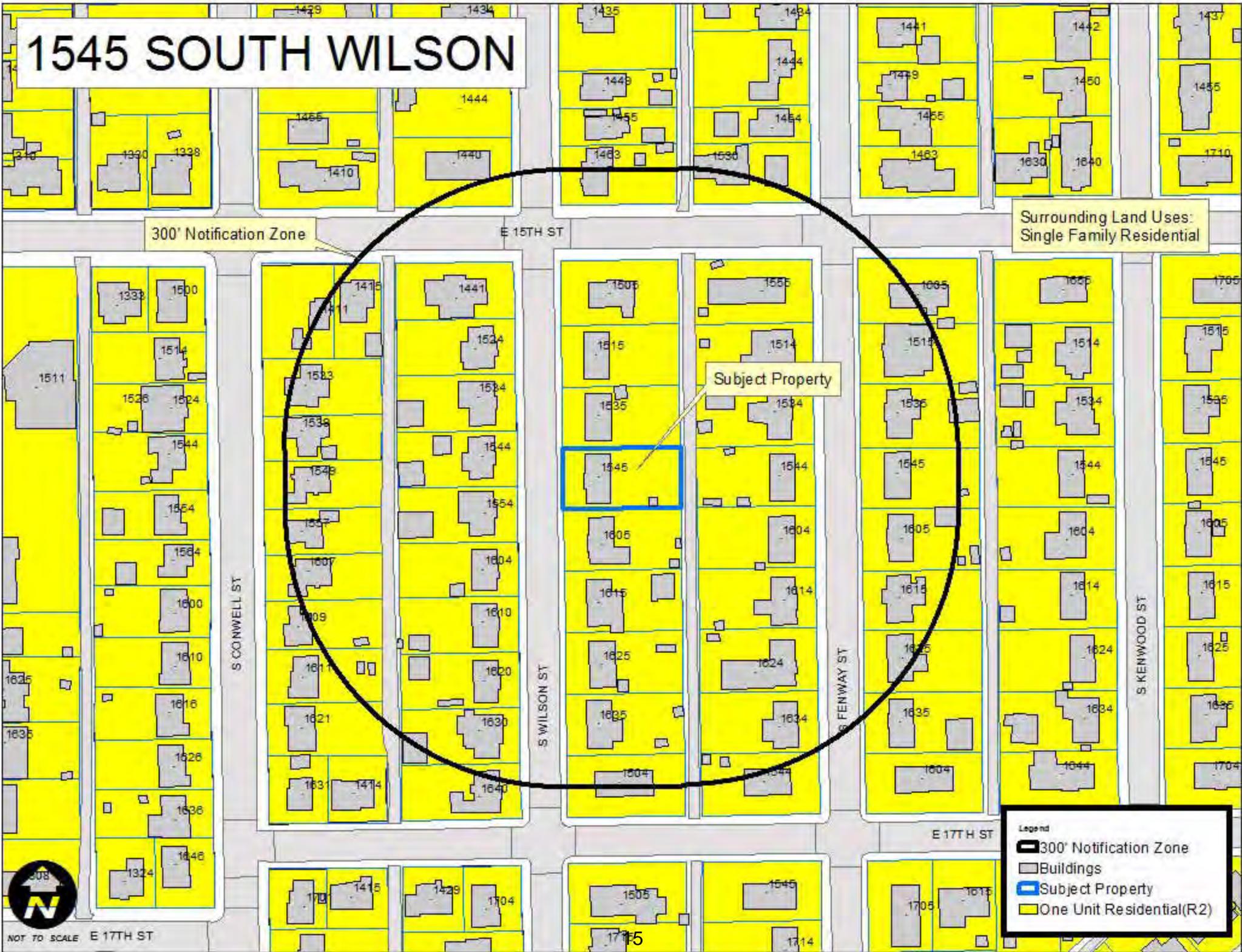
1545 SOUTH WILSON



Legend
Subject Property



1545 SOUTH WILSON



300' Notification Zone

E 15TH ST

Surrounding Land Uses:
Single Family Residential

Subject Property

S CONWELL ST

S WILSON ST

S FENWAY ST

S KENWOOD ST

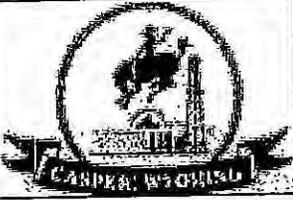
E 17TH ST

Legend

- 300' Notification Zone
- Buildings
- Subject Property
- One Unit Residential(R2)



NOT TO SCALE E 17TH ST



City of Casper Planning Division

Conditional Use Permit Application

OWNER'S INFORMATION:

NAME: Caleb Middleton
ADDRESS: 1545 south Wilson St. Casper, WY 82601
TELEPHONE: 307-254-1585 EMAIL: BigC198387@gmail.com

LOCATION OF REQUEST:

ADDRESS: 1545 south Wilson St. Casper, WY 82601

LEGAL DESCRIPTION:

Number of Lots: 1 Size of Lots: _____

Current Zoning: _____ Current Use: My Residence

Purpose for which the property is proposed to be used: Residence / Garage exterior

wall height is 18'

Prior restrictions placed on the property: _____

Floor area square footage: 750 sq Feet Number of Occupants or Employees: 2

Building Footprint: _____ Number of off-street parking spaces: 3

A PLOT PLAN IS REQUIRED SHOWING:

(WHERE APPROPRIATE)

lot size and dimensions

size and location of buildings

off-street parking spaces

routes for ingress and egress

internal traffic control

fencing, screening, and landscaping

signs and lighting

setback distances

The following owner's signature, or agent, signifies that all information on the application is accurate and correct to the best of the owner's knowledge, and that the owner has thoroughly read and understands all application information and requirements.

SIGNATURE OF PROPERTY OWNER: [Signature]

DATE: 6-5-14

SUBMIT TO:
Community Development Department
Planning Division
200 N David, RM 203
Casper, WY 82601
Phone: 307-235-8241
Fax: 307-235-8362
www.casperwy.gov
E-mail: dhardy@cityofcasperwy.com

COMPLETE SUBMITTAL NEEDS TO INCLUDE:

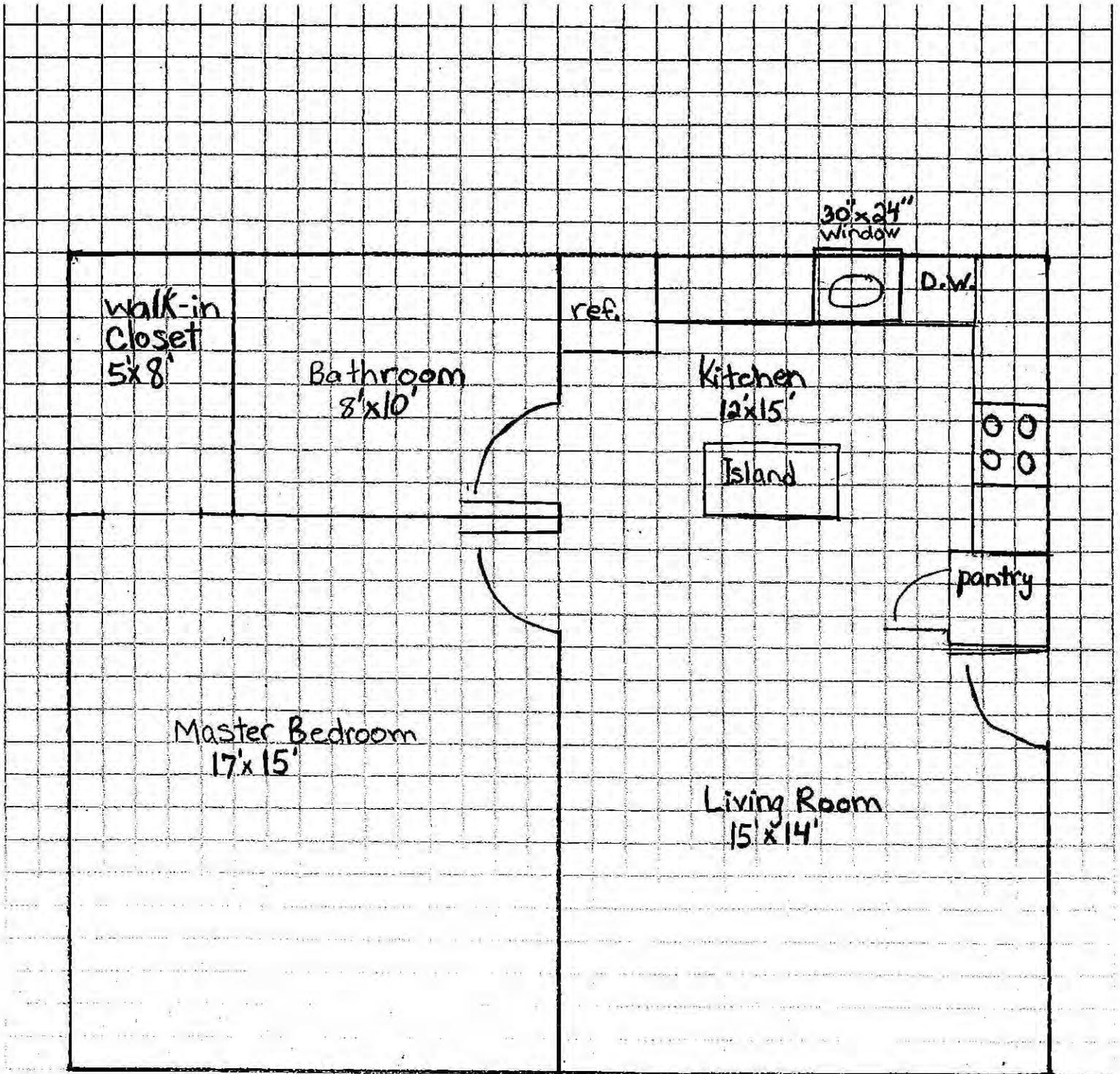
- COMPLETED APPLICATION INCLUDING ORIGINAL SIGNATURES
- PROOF OF OWNERSHIP
- \$275 APPLICATION FEE (NON-REFUNDABLE)
- PLOT PLAN

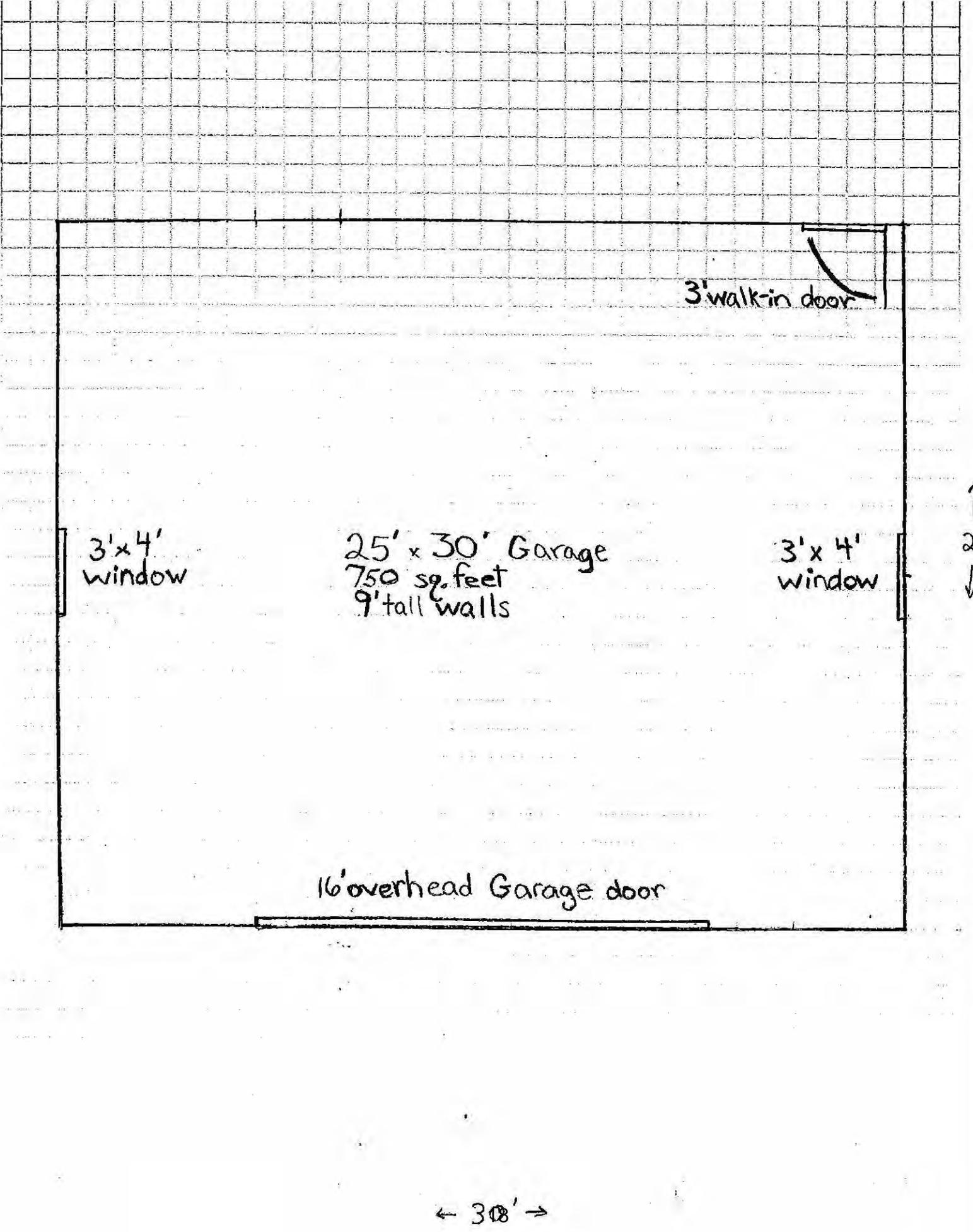
FOR OFFICE USE ONLY:

DATE SUBMITTED:

6/5/14

REC'D BY: [Signature]





3' x 4' window

25' x 30' Garage
750 sq. feet
9' tall walls

3' x 4' window

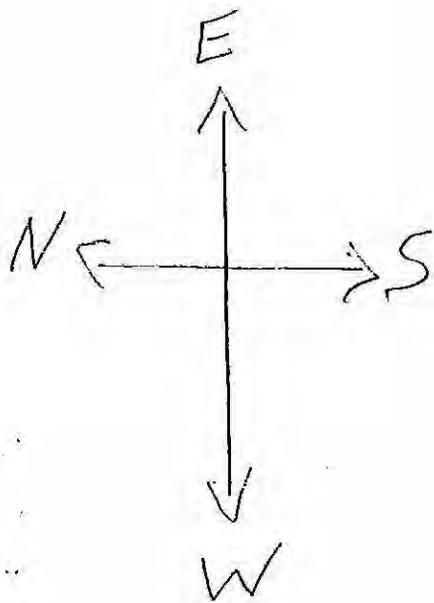
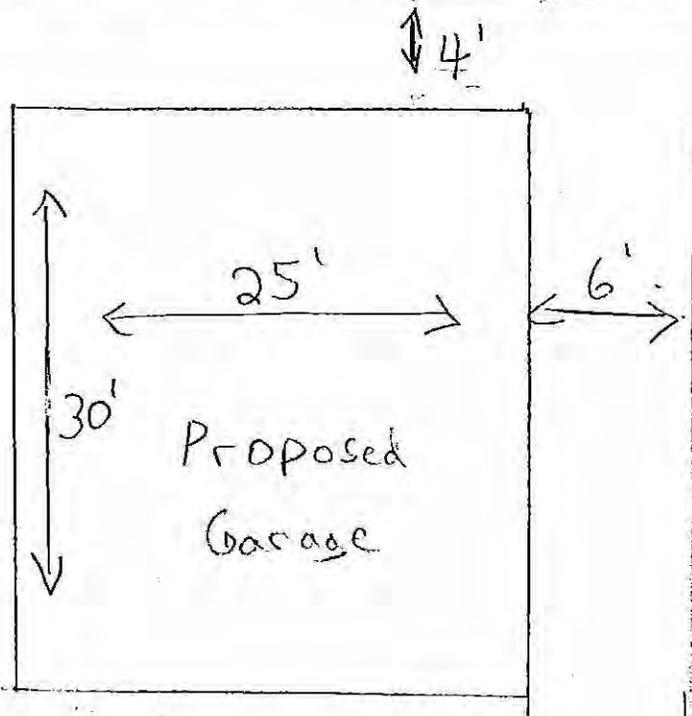
3' walk-in door

16' overhead Garage door

← 30' →

↑ 25' ↓

117'



JUL 15 2014

RE: PETITION FOR A CONDITIONAL USE PERMIT FOR A DETACHED
ACCESSORY DWELLING UNIT AND GARAGE AT 1545 ~~WILSON~~ WILSON
STREET, CASPER SOUTH
APPLICATION NUMBER PLN-14-032-C
APPLICANT: CALEB MIDDLETON

Our names are Edward and Jan Whitney, and we are the property owners of 1544 S. Fenway, which is the residence immediately adjacent to the subject property across the alley to the east. We object to the proposed construction of a separate accessory residence as a conditional use, as contemplated in the application referenced above (hereinafter the "Middleton Application"), on numerous grounds as set forth at length herein.

THE BUILDING DESCRIBED IN THE MIDDLETON APPLICATION DOES NOT COMPLY WITH EITHER THE LETTER OR THE SPIRIT OF THE ZONING STATUTES OF THE STATE OF WYOMING OR THE ZONING ORDINANCES OF THE CITY OF CASPER

The Middleton Application proposes the construction of a two-story above-ground detached accessory building consisting of a garage on the ground level, and an accessory residence on the second level. This proposal does not meet the requirements of either the Wyoming statutes governing local land use, nor the ordinances adopted by the City of Casper pursuant to said statutes.

Section 15-1-601 of the Wyoming State Statutes deals with local zoning ordinances, and states in pertinent part (emphasis supplied):

- (d) All regulations shall be made:
- (i) In accordance with a comprehensive plan and designed to:
 - (A) Lessen congestion in the streets;
 - (B) Secure safety from fire, panic and other dangers;
 - (C) Promote health and general welfare;
 - (D) Provide adequate light and air;
 - (E) Prevent the overcrowding of land;
 - (F) Avoid undue concentration of population; and
 - (G) Facilitate adequate provisions for transportation, water, sewerage, schools, parks and other public requirements.
 - (ii) With reasonable consideration, among other things, of the character of the district and its peculiar suitability for particular uses;
 - (iii) With a view to conserving the value of buildings and encouraging the most appropriate use of land throughout the city or town * * *.

Casper has in fact adopted such a zoning and planning ordinance as contemplated by Section 15-1-601. The preamble to the zoning ordinance is contained in Section 17.04.010 of the

General Ordinances of the City of Casper (hereinafter the "Casper Ordinances"), entitled "Authority, purpose and title," and states in pertinent part (emphasis supplied):

B. Purpose. The purpose of this title is to lessen congestion in the streets; secure safety from fire and other danger; promote health and general welfare; provide adequate light and air; prevent the overcrowding of land; avoid undue concentration of population; facilitate adequate provisions for transportation, water, sewerage, schools, parks, and other public requirements; and, foster preservation of historical sites.
* * * These regulations have been made with reasonable consideration, among other things, to the character of the district and its particular suitability for particular uses, with a view to conserving and improving the living quality of buildings, and encouraging the most appropriate use of land throughout the city. * * *

Title 17 of the Casper Ordinances continues to set forth zoning requirements for various land uses, including the R-2 zone where both the subject property and our property are located. With regard to the R-2 zone, the Casper Ordinances state in pertinent part:

The purpose of the R-2 district is to establish and maintain a conventional, site-built single-family... residential neighborhood characterized by moderate-sized lots with adequate space provided for openness, landscaping and play. The district shall be free from other uses except those which are compatible with this purpose.

[Casper Ordinances, §17.32.010 (emphasis supplied).]

With regard to accessory buildings such as that in the Middleton Proposal, the Casper Ordinances state in pertinent part:

F. Detached garages and/or accessory buildings shall:

1. Maintain a minimum rear setback of five feet; with the exception of garages and/or accessory buildings abutting alleys, which shall have a three-foot minimum rear setback. * * *

2. Maintain a minimum side yard setback of five feet in all zoning districts...;

* * *

6. Buildings greater than one hundred twenty square feet in area as measured at the maximum exterior wall dimension shall be similar in design, exterior residential materials, and roof pitch to the principal and/or surrounding residential neighborhood buildings. * * *

G. A conditional use permit shall be required for detached garages and/or accessory buildings that exceed twelve feet in an exterior wall building height above the finished floor, measured at the primary access to the building.

[Casper Ordinances, §17.12.121 (**emphasis** supplied).]

It is easily noted from the plain language of these laws that both the statutes and the ordinances recognize that the zoning laws are in place to:

- provide adequate light and air;
- prevent the over-crowding of land;
- avoid undue concentration of population;
- maintain the character of the district;
- conserve and improve the living quality of buildings; and
- conserve the value of buildings.

Because the building and use proposed in the Middleton Application is unlike every single other structure in the neighborhood for a distance of blocks in any direction because of its immense bulk and introduction of rental apartment living to a neighborhood of single family houses occupied by the homeowners, it fails to advance these goals. The statutory points outlined above will be analyzed in turn.

First, the building proposed in the Middleton Application is enormous compared to the other buildings in the neighborhood, and if constructed as proposed, it would tower over the skyline, and would block out the sun and views of the sky on the surrounding properties. This can be nothing but detrimental to the light and air afforded to the nearby properties, including both our property and the applicant's own property.

Although an elevation drawing of the proposed building was not included in the Middleton Application, the materials supplied note that the applicant is proposing a structure with two stories above ground, a wall height of 18 feet for the building, and that the proposed building is 25 feet by 30 feet in exterior dimensions. The proposed wall height is already significantly greater than those of the houses in the neighborhood, which have wall heights of about 10 feet above grade and roof peaks of around 14 to 15 feet. Moreover, all the houses in the neighborhood, including applicant's house, are ranch style homes that have only one story above ground and have peaked roofs. Since the proposed building is greater than 120 square feet in area measured by the exterior wall dimensions, §17.12.121(F)(6) of the Casper Ordinances requires that the proposed accessory residence must be similar in, *inter alia*, roof pitch. By way of reference, our house has a roof pitch such that the peak is 4 feet taller than the edges, and is 25 feet wide in the dimension that the peak is built; all other houses in the neighborhood are of similar design, including applicant's. Therefore, the accessory building must also have a peaked roof, and since the minimum exterior dimension proposed is 25 feet, it stands to reason that the peak of the roof would be at least 22 feet above grade to be similar in roof pitch to the surrounding buildings.

Outline of Objections to Middleton Conditional Use Permit for Accessory Dwelling

Issues

- Accessory dwelling as proposed will impede light and air for adjacent properties
 - Will block Whitney residence view to the west almost completely, and Rogers and _____ substantially
 - Will substantially shade Whitney yard, including rendering garden essentially unusable
- Accessory dwelling will substantially eliminate backyard privacy for Whitney, Rogers, _____
 - Windows in living space are designed to overlook to the east, rather than the west
- Huge departure from bulk of existing buildings in neighborhood
 - Peak of roof of dwellings is around 15 feet, which is 3 feet less than non-peaked wall height of proposed accessory dwelling, and an additional several feet would be added for a peaked roof to conform with the style of the neighborhood as required by ordinance
- Roof runoff from building will increase possibility of ice in alley during winter, especially given shading
- Parking situation will be created in the alley if 3 off street spaces are created, as at least one must be outside the garage
 - They have already created 2 parking spaces in the alley and parked a derelict car in one of them
- Traffic will be increased in the alley from the presumed renters' vehicles
- No idea where the building will be located on the premises

This extraordinary height poses a problem for the maintenance of light and air for the applicant's property and the surrounding properties, including ours. Annexed hereto as Exhibit A is an analysis of the shading of our property that would occur in the afternoon from the proposed structure during the summer. This shading would severely limit the potential of our vegetable garden, which is located along the alley on the west end of our property, i.e. closest to applicant's property. Moreover, this shading would likely contribute to ice formation in the alley in the winter, especially if the accessory residence is equipped with gutters that drain to the alley.

Another potential problem regarding light and air is in the evenings, when light pollution from the accessory building would invade our property. The Middleton Application calls for three windows in the apartment. Light from these windows would stream down largely unhindered into our backyard and onto our house, which could interfere with our ability to use our backyard for stargazing or just enjoyment of the dark. Additionally, if the windows were opened, the noise from the apartment would likewise travel directly into our backyard. As the applicant has proposed placing the family room and kitchen on the east side of the accessory residence, it is likely that all the sounds from the television, stereo, entertaining guests, etc. would be concentrated on the east side of the apartment, and it is our property that would suffer the most from this increase in light and noise.

Second, while it is true that merely having a single rental apartment in the neighborhood would not by itself increase the population density immensely or lead to overcrowding in the zone, it would change the way the population uses the alley. There are several properties along the alley that have detached rear garages that are used by the residents, but that usage is transient. By way of comparison, the apartment dwellers would be in the alley every single time they entered or exited the apartment, which would increase pedestrian traffic in the alley. Moreover, the proposed stairwell descends down the north side of the building right to the alley level, but it is completely obscured by the building from any traffic traveling down the alley from south to north. This creates a hazardous condition for the renters, who are essentially egressing from their dwelling directly into a thoroughfare. Thus, it is not so much the absolute increase in population, but where the additional residents would be located, that creates the issue.

However, it is also worth considering that allowing this conditional use in the neighborhood would cause the other property owners to proceed likewise to set up accessory apartments along the alley, as there would be precedent to allow them to do so. This could result in a condition where a lot of additional residents come into the neighborhood, which could then result in potential overcrowding of land and an undue concentration of residents along the alley.

I Clefton D. Rogers 1534 So. Fenway
Casper way 82601 DISAPPROVE OF THAT KIND
OF STRUCTURAL BUILDING

July 16, 2014

JUL 16 2014

VIA HAND DELIVERY

City of Casper, Wyoming
Planning and Zoning Commission
c/o Community Development Department
200 North David, Room 205
Casper, WY 82601

**RE: PETITION FOR A CONDITIONAL USE PERMIT FOR A DETACHED
ACCESSORY DWELLING UNIT AND GARAGE AT 1545 SOUTH WILSON
STREET, CASPER
APPLICATION NUMBER PLN-14-032-C
APPLICANT: CALEB MIDDLETON**

To Whom It May Concern:

Our names are Edward and Jan Whitney, and we are the property owners of 1544 S. Fenway, which is the residence immediately adjacent across the alley to the east to the property that is the subject of the above referenced application (hereinafter the "Application"). We object to the proposed construction of a separate accessory residence above a backyard garage as a conditional use, as contemplated in the Application, as set forth at length herein. These comments are being submitted without prejudice for us to appear and give further comments at the meeting of the Commission where the Application will be considered, or to submit comments in any other forum or method as may be approved by the Commission.

At the outset, we note that we have spoken to the applicant about the Application, and while we feel that he is sincere in wanting to mitigate the effects of his proposed development, we nonetheless feel that the accessory residence as proposed is inappropriate for this neighborhood. We would not object to the applicant building a garage of normal size and height, of the type located on several of the properties along our alley and throughout the neighborhood. But the much taller proposed building, and its proposed use as an additional residence, is so out of character with the neighborhood that it is inappropriate for construction, and we are asking that the Application be rejected insofar as it proposes any second aboveground story of the outbuilding containing an accessory residence.

*The Building and Use Proposed in the Application Does Not
Comply with the Letter or the Spirit of the Zoning Ordinances
or the State Land Use Laws*

Stated simply, the building and use described in the Application does not comply with either the letter or the spirit of the zoning ordinances of the City of Casper, nor the Wyoming statutes from which they are derived. The Application proposes the construction of a two-story above-ground detached accessory building consisting of a garage on the ground level, and an accessory residence on the second level. This proposal does not meet the requirements of either

the Wyoming statutes governing local land use, nor the ordinances adopted by the City of Casper pursuant to said statutes.

Section 15-1-601 of the Wyoming State Statutes deals with local zoning ordinances, and states in pertinent part (**emphasis** supplied):

- (d) All regulations shall be made:
 - (i) In accordance with a comprehensive plan and **designed to**:
 - (A) **Lessen congestion in the streets;**
* * *
 - (D) **Provide adequate light and air;**
 - (E) **Prevent the overcrowding of land;**
 - (F) **Avoid undue concentration of population;** * * *
 - (ii) **With reasonable consideration, among other things, of the character of the district and its peculiar suitability for particular uses;**
 - (iii) **With a view to conserving the value of buildings** and encouraging the most appropriate use of land throughout the city or town * * *.

Casper has adopted such a zoning and planning ordinance as contemplated by Section 15-1-601, and its purpose statement mimics that of the statute; *see* Section 17.04.010(B) of the Municipal Ordinance of the City of Casper (hereinafter the "Municipal Ordinance").

Title 17 of the Municipal Ordinance continues to set forth zoning requirements for various land uses, including the R-2 zone where both the subject property and our property are located. With regard to the R-2 zone, the Municipal Ordinance states in pertinent part:

The purpose of the R-2 district is to establish and maintain a conventional, site-built single-family... residential neighborhood characterized by moderate-sized lots with adequate space provided for openness, landscaping and play. The district shall be free from other uses except those which are compatible with this purpose.

[Municipal Ordinance, §17.32.010 (**emphasis** supplied).]

With regard to accessory buildings such as that in the Application, the Municipal Ordinance states in pertinent part:

- F. Detached garages and/or accessory buildings shall:
 - 1. Maintain a minimum rear setback of five feet; with the exception of garages and/or accessory buildings abutting alleys, which shall have a three-foot minimum rear setback. * * *
 - * * *
 - 6. **Buildings greater than one hundred twenty square feet in area as measured at the maximum exterior wall dimension**

shall be similar in design, exterior residential materials, and roof pitch to the principal and/or surrounding residential neighborhood buildings. * * *

G. A conditional use permit shall be required for detached garages and/or accessory buildings that exceed twelve feet in an exterior wall building height above the finished floor, measured at the primary access to the building.

[Municipal Ordinance, §17.12.121 (**emphasis** supplied).]

It is easily noted from the plain language of these laws that both the statutes and the ordinances recognize that the zoning laws are in place to:

- provide adequate light and air;
- prevent the over-crowding of land;
- avoid undue concentration of population;
- maintain the character of the neighborhood;
- conserve and improve the living quality of property; and
- conserve the value of property.

Because the building and use proposed in the Application is unlike every single other structure in the neighborhood because of its bulk and introduction of rental apartment living to a neighborhood of single family houses occupied by the homeowners, it fails to advance these goals and comply with the ordinance.

The Proposed Accessory Residence will Negatively Impact Access to Light and Air for Our Property and Others

The building proposed in the Application is enormous compared to the other buildings in the neighborhood, as it would be approximately 35% taller than the surrounding houses, and at 25 feet by 30 feet, it would be almost as large as the surrounding houses. If constructed as proposed, it would tower over the skyline, and would block out the sun and views of the sky on the surrounding properties. This can be nothing but detrimental to the light and air afforded to the nearby properties, including our property.

Although an elevation drawing of the proposed building was not included in the Application, the materials supplied note that the applicant is proposing a structure with two stories above ground, a wall height of 18 feet for the building, and that the proposed building is 25 feet by 30 feet in exterior dimensions. The proposed wall height is already significantly greater than those of the houses in the neighborhood, which have wall heights of around 10 feet above grade, and roof peaks of around 14 to 15 feet.¹ Moreover, all the houses in the neighborhood, including applicant's house, are ranch style homes that have only one story above ground and have peaked roofs. §17.12.121(F)(6) of the Municipal Ordinance requires that the

¹ For reference, our house has an approximate roof height of 122 inches (10 feet 2 inches) above grade at the corners, and 171 inches (14 feet 3 inches) above grade at the peak.

proposed accessory residence must be similar in, *inter alia*, roof pitch. Our house has a roof that peaks at an angle of 4 inches in 12; all other houses in the neighborhood are of similar design, including applicant's. Therefore, the accessory building must also have a peaked roof, and since the minimum exterior dimension proposed is 25 feet, it stands to reason that the peak of the roof would be at least 22 feet above grade to be similar in roof pitch to the surrounding buildings, as a 4 inch in 12 peaked roof would rise a little more than 4 feet above the maximum wall height. If peaked along the opposite dimension, it would rise 5 feet from the wall to the peak.

This extraordinary height poses a problem for the maintenance of light and air for the applicant's property and the surrounding properties, including ours. Annexed hereto as Exhibit A is an analysis of the shading that would occur in the afternoon from the proposed structure during the summer. This shading would severely limit the potential of our vegetable garden, which is located along the alley on the west end of our property, i.e. closest to applicant's property. Moreover, this shading could contribute to ice formation in the alley in the winter, especially if the accessory residence is equipped with gutters that drain to the alley. The Application does not indicate the proposed siting of the accessory building on the lot; while placing it further back from the alley would mitigate some shading issues, its size makes them impossible to eliminate entirely.

Another potential problem regarding light and air is with the use of the second story as a residence. The Application calls for three windows in the apartment on the east-facing wall. Light from these windows would stream down largely unhindered into our backyard and onto our house in the evening, which could interfere with our ability to use our backyard for stargazing or just enjoyment of the dark. Additionally, if the windows were opened, the noise from the apartment would likewise travel directly into our backyard. As the applicant has proposed placing the family room and kitchen on the east side of the accessory residence, it is likely that all the sounds from the television, stereo, entertaining guests, etc. would be concentrated on the east side of the apartment, and it is our property that would suffer the most from this increase in light and noise.² This is in addition to privacy issues that would result from the residents of the apartment being able to peer down into our backyard unhindered. There is no way for us to prevent such problems other than completely enclosing our backyard in walls and trees, and thereby foregoing the benefits of light and air for ourselves as well.

Finally, there is the matter of view. While there are currently large trees on several of the lots surrounding our property, including applicant's, they are not so numerous and bulky so as to prevent us from being able to observe the sky, including appreciation of sunsets, views of approaching weather, and other observations to the west. However, a wide, tall building would substantially obscure our view of the sky to the west. Other properties in the area (including applicant's) will also suffer from similar occlusion in various directions. As with the other light and air issues, siting of the building can only mitigate this problem, not eliminate it.

² We note that in our conversation with the applicant, he indicated that the eastward facing windows might not be built, and that he was conciliatory with regard to eliminating other lights on the exterior of the building such as porch or flood lights. However, this point is at best uncertain at this time, given the Application as submitted.

The Accessory Residence Will Negatively Affect the Character of the Neighborhood, and Will Create Precedent for Further Negative Effects from Overcrowding and Conversion of the Neighborhood Into a Concentration of Short Term Rental Units

While it is true that merely having a single rental apartment in the neighborhood would not by itself increase the population density immensely or lead to overcrowding in the zone, it would create a negative precedent for the character of the neighborhood, allowing it to become a high density area crowded with buildings and populated with numerous short-term renters, rather than the moderate density area it is now, with owner-occupied buildings on large lots. It would also change the way the population uses the alley.

As it stands now, our neighborhood is well-kept and orderly. With modestly sized homes on relatively spacious lots, nearly all of which are owner-occupied, we enjoy a high standard of living in an affordable and quiet neighborhood, with individual privacy and good relationships among neighbors who typically occupy the residences for many years at a time. There is significant greenery afforded by the large yards, which allows for habitat for birds and small wildlife, as well as for gardening and any other outdoor recreations that homeowners may pursue.

If the Application is approved, it would create precedent for other property owners to obtain approval for their own accessory residences. There are 14 lots on our block alone (including applicant's, and out of 18 total lots on the block) that could accommodate an accessory residence of the type proposed in the Application. Many of the residents in the area are elderly retirees, and several have moved away in recent years to be replaced by younger owners seeking starter homes, as homes in our neighborhood are more modestly priced than those in other areas of town. As this pattern continues, if these younger owners decide to also pursue the erection of rental units on their properties, we will end up with a neighborhood with double the residential density, consisting of numerous short-term renters who all will be crowding into the alley. Given the shortage of housing in Casper and the high value of rental units, this is not a farfetched scenario by any means. Every issue identified in this letter would be compounded each time such an accessory use is approved.

Accessory residences such as that proposed in the Application would also change the use of the alley. There are several properties along the alley that have detached rear garages that are used by the residents, but that usage is transient. By way of comparison, the apartment dwellers would be in the alley every single time they entered or exited the apartment, which would increase pedestrian traffic in the alley. Moreover, the proposed stairwell descends down the north side of the building right to the alley level, but it is completely obscured by the building from any traffic traveling down the alley from south to north. This creates a hazardous condition for the renters, who are essentially egressing from their dwelling directly into a thoroughfare. Thus, it is not so much the absolute increase in population, but where the additional residents would be located, that creates the issue.

In short, these issues are created even if applicant is the only owner who ever decides to construct such an accessory residence in our neighborhood, and would be compounded with each additional approval of such a use. Such uses do nothing to advance the goals of preventing the

over-crowding of land, avoid undue concentration of population, maintaining the character of the neighborhood, conserving and improving the living quality of property, or conserving the value of property. Accessory uses such as that proposed actually work directly against these goals.

In closing, we are not opposed to limited development of accessory buildings in the neighborhood, including garages along the alley. Had applicant only sought to build such a garage, we would have had no objection, provided there were no issues with light or noise pollution or other nuisances that would prevent us from enjoying our own property. But the quality of life possessed by the property owners and residents of this neighborhood should be protected from the construction of large two story buildings and the proliferation of short-term rental units. These are uncharacteristic of, and detrimental to, the neighborhood and its residents. Because the Application advances such uses, it should be rejected by the Planning and Zoning Commission.

Sincerely,

Edward Whitney
Jan Whitney

Owners and Residents, 1544 S. Fenway, Casper

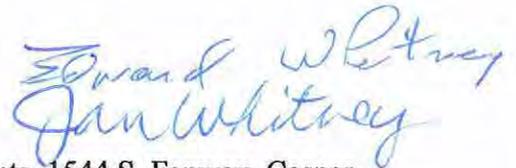


EXHIBIT A – SOLAR SHADING

The attached tables show the following information:

1. The Solar Altitude and Azimuth table shows the altitude (angle above the horizon) and the azimuth (angle from north) (both in degrees) for the Sun on various dates for Casper. The altitude shows the angle that the sun makes with a level horizon at various times of the day. The azimuth shows the direction that the sun is shining from, measured clockwise from due north (so, e.g., an azimuth of 90 degrees would be due east, 180 degrees would be due south, and 270 degrees would be due west).
2. Azimuth was not considered in detail, because the Application does not disclose where on the applicant's property the proposed building would be situated, and therefore what exact portions of our property or the alley would be shaded cannot be determined. However, it is apparent that the direction of a shadow is opposite that of the sun, so by subtracting 180 degrees from the azimuth, the direction of the shadow is obtained. Although there is some arc to the track of the azimuth over the course of the day, it is clear that the shadow is cast largely eastward throughout the entire afternoon, and that it would therefore fall either on, or in the direction of, our property and the alley.
3. The other two tables respectively show the length of the shadow cast on flat ground by an object 18 feet tall (proposed wall height in Application) or 22 feet tall (total height of proposed building assuming roof peaking along 25 foot exterior walls and a roof pitch of 4 inches in 12). This is determined by the trigonometric relationship between the angle of the sun and the height of the object. Briefly, the tangent of the angle of the sun (represented as θ) above the horizon is equal to the height of the object divided by the length of the shadow:

$$\tan \theta = \text{height/length}$$

So by rearranging the equation we get:

$$\text{length} = \text{height}/\tan \theta$$

4. The alley right-of-way is 18 feet wide between the properties on the east and west sides of the alley. In addition, by §17.12.121(F)(1) of the Municipal Ordinances of the City of Casper, detached accessory buildings must be set back at least 3 feet from the alley right-of-way. So subtracting 21 feet from the numbers shown in the lower two tables would give the worst case result as to the number of feet of our property shaded by the proposed building on various summer dates and at various times of the day. Similarly, subtracting just the setback would show how many feet of the alley and beyond would be shaded. **Therefore, this shows that significant portions of our yard could be shaded by the building proposed in the Application.** The shading effects would be even worse in the late and early months, when the sun is lower in the sky, and the shadows cast would therefore be even longer.

Solar Altitude and Azimuth Information for Casper, WY, obtained from United States Naval Observatory <http://aa.usno.navy.mil/data/docs/altaz.php>

May 1			May 15			June 1			June 15			July 1			July 15			August 1			August 15			September 1			September 15					
Time	Altitude (E of N)	Azimuth (E of N)	Time	Altitude (E of N)	Azimuth (E of N)	Time	Altitude (E of N)	Azimuth (E of N)	Time	Altitude (E of N)	Azimuth (E of N)	Time	Altitude (E of N)	Azimuth (E of N)	Time	Altitude (E of N)	Azimuth (E of N)	Time	Altitude (E of N)	Azimuth (E of N)	Time	Altitude (E of N)	Azimuth (E of N)	Time	Altitude (E of N)	Azimuth (E of N)	Time	Altitude (E of N)	Azimuth (E of N)			
13:30	61.8	194.2	13:30	65.4	196.3	13:30	68.5	197.2	13:30	69.9	196.3	13:30	69.8	193.9	13:30	68.2	191.8	13:30	64.7	190.3	13:30	60.7	190.1	13:30	54.8	190.7	13:30	49.5	191.4			
14:00	59.8	208.5	14:00	63.2	211.8	14:00	66.1	214.2	14:00	67.5	214.2	14:00	67.6	216.1	14:00	66.3	209.2	14:00	63.0	206.1	14:00	59.1	204.3	14:00	53.2	203.1	14:00	47.8	202.5			
14:30	56.6	220.9	14:30	59.7	224.9	14:30	62.5	228.0	14:30	63.9	228.4	14:30	64.1	226.6	14:30	63.0	223.7	14:30	60.0	219.7	14:30	56.3	216.9	14:30	50.6	214.3	14:30	45.3	212.7			
15:00	52.7	231.4	15:00	55.5	235.6	15:00	58.1	238.8	15:00	59.4	239.5	15:00	59.4	238.1	15:00	58.8	235.2	15:00	56.1	231.0	15:00	52.6	227.7	15:00	47.1	224.3	15:00	41.9	222.0			
15:30	48.1	240.2	15:30	50.8	244.3	15:30	53.2	247.6	15:30	54.5	248.3	15:30	54.9	247.1	15:30	54.5	244.5	15:30	51.5	239.0	15:30	48.2	235.8	15:30	42.9	233.0	15:30	38.0	230.3			
16:00	43.2	247.8	16:00	45.7	251.7	16:00	48.0	254.8	16:00	49.2	255.6	16:00	49.7	254.5	16:00	49.1	252.1	16:00	46.5	248.2	16:00	43.4	244.7	16:00	38.3	240.7	16:00	33.5	237.7			
16:30	38.0	254.4	16:30	40.4	258.2	16:30	42.6	261.1	16:30	43.9	261.9	16:30	44.3	260.9	16:30	43.6	258.7	16:30	41.4	255.0	16:30	38.3	251.6	16:30	33.4	247.5	16:30	28.7	244.4			
17:00	32.6	260.4	17:00	34.9	264.0	17:00	37.2	266.7	17:00	38.4	267.4	17:00	38.8	266.5	17:00	38.2	264.5	17:00	36.0	261.0	17:00	33.0	257.7	17:00	28.2	253.4	17:00	23.6	250.6			
17:30	27.2	265.9	17:30	29.5	269.3	17:30	31.7	271.8	17:30	32.9	272.5	17:30	33.3	271.7	17:30	32.7	269.8	17:30	30.5	266.5	17:30	27.6	263.3	17:30	22.9	259.4	17:30	18.3	256.3			
18:00	21.7	271.1	18:00	24.0	274.3	18:00	26.2	276.7	18:00	27.4	277.3	18:00	27.9	276.6	18:00	27.2	274.8	18:00	25.0	271.8	18:00	22.1	268.6	18:00	17.4	264.8	18:00	13.0	261.7			
18:30	16.2	276.1	18:30	18.5	279.1	18:30	20.8	281.4	18:30	22.0	282.0	18:30	22.4	281.3	18:30	21.8	279.5	18:30	19.6	276.6	18:30	16.6	273.7	18:30	11.9	270.0	18:30	7.5	266.9			
19:00	10.8	281.0	19:00	13.2	283.9	19:00	15.5	286.1	19:00	16.7	286.6	19:00	17.1	285.9	19:00	16.4	284.3	19:00	14.1	281.4	19:00	11.2	278.6	19:00	6.5	275.0	19:00	2.0	270.0			
19:30	5.6	285.9	19:30	7.9	288.8	19:30	10.3	290.8	19:30	11.5	291.3	19:30	11.9	290.6	19:30	11.2	289.0	19:30	8.8	285.2	19:30	5.8	281.6	19:30	1.1	277.6	19:30	0.0	273.6			
20:00			20:00			20:00	5.3	295.6	20:00	6.5	296.1	20:00	6.9	295.3	20:00	6.1	293.8	20:00			20:00			20:00			20:00			20:00		

Shadow Lengths from 18 foot Building Height

May 1			May 15			June 1			June 15			July 1			July 15			August 1			August 15			September 1			September 15					
Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)			
13:30	1.9	9.7	13:30	2.2	8.2	13:30	2.5	7.1	13:30	2.7	6.6	13:30	2.7	6.6	13:30	2.5	7.2	13:30	2.1	8.5	13:30	1.8	10.1	13:30	1.4	12.7	13:30	1.1	15.4			
14:00	1.7	10.5	14:00	2.0	9.1	14:00	2.3	8.0	14:00	2.4	7.5	14:00	2.4	7.4	14:00	2.3	7.9	14:00	2.0	9.2	14:00	1.7	10.4	14:00	1.5	12.0	14:00	1.2	14.8			
14:30	1.5	11.9	14:30	1.7	10.5	14:30	1.9	9.4	14:30	2.0	8.8	14:30	2.1	8.7	14:30	2.0	9.2	14:30	1.7	10.4	14:30	1.5	12.1	14:30	1.3	13.8	14:30	1.1	16.7			
15:00	1.3	13.7	15:00	1.5	12.4	15:00	1.6	11.2	15:00	1.7	10.6	15:00	1.7	10.5	15:00	1.7	10.9	15:00	1.5	12.1	15:00	1.3	14.1	15:00	1.1	16.1	15:00	0.9	19.4			
15:30	1.1	16.2	15:30	1.2	14.7	15:30	1.3	13.5	15:30	1.4	12.8	15:30	1.4	12.7	15:30	1.4	13.0	15:30	1.3	14.3	15:30	1.1	16.1	15:30	0.9	19.4	15:30	0.8	23.0			
16:00	0.9	19.2	16:00	1.0	17.6	16:00	1.1	16.2	16:00	1.2	15.5	16:00	1.2	15.3	16:00	1.2	15.6	16:00	1.1	17.0	16:00	0.9	19.0	16:00	0.8	22.8	16:00	0.7	27.2			
16:30	0.8	23.0	16:30	0.9	21.1	16:30	0.9	19.6	16:30	1.0	18.7	16:30	1.0	18.4	16:30	1.0	18.9	16:30	0.9	20.4	16:30	0.8	22.8	16:30	0.7	27.3	16:30	0.5	32.9			
17:00	0.6	28.1	17:00	0.7	25.8	17:00	0.8	23.7	17:00	0.8	22.7	17:00	0.8	22.4	17:00	0.8	22.9	17:00	0.7	24.8	17:00	0.6	27.7	17:00	0.6	33.6	17:00	0.4	41.2			
17:30	0.5	35.0	17:30	0.6	31.8	17:30	0.6	29.1	17:30	0.6	27.8	17:30	0.7	27.4	17:30	0.6	28.0	17:30	0.6	30.6	17:30	0.5	34.4	17:30	0.4	42.6	17:30	0.3	54.4			
18:00	0.4	45.2	18:00	0.4	40.4	18:00	0.5	36.6	18:00	0.5	34.7	18:00	0.5	34.0	18:00	0.5	35.0	18:00	0.5	38.6	18:00	0.4	44.3	18:00	0.3	57.4	18:00	0.2	78.0			
18:30	0.3	62.0	18:30	0.3	53.8	18:30	0.4	47.4	18:30	0.4	44.6	18:30	0.4	43.7	18:30	0.4	45.0	18:30	0.4	50.5	18:30	0.3	60.4	18:30	0.2	85.4	18:30	0.1	136.7			
19:00	0.2	94.4	19:00	0.2	76.7	19:00	0.3	64.9	19:00	0.3	60.0	19:00	0.3	58.5	19:00	0.3	61.2	19:00	0.3	71.7	19:00	0.2	90.9	19:00	0.1	158.0	19:00	0.0				
19:30	0.1	183.6	19:30	0.1	129.7	19:30	0.2	99.0	19:30	0.2	88.5	19:30	0.2	85.4	19:30	0.2	90.9	19:30	0.2	116.3	19:30	0.2	177.2	19:30	0.1	268.4	19:30	0.0				
20:00			20:00			20:00	0.1	194.0	20:00	0.1	158.0	20:00	0.1	148.7	20:00	0.1	168.4	20:00			20:00			20:00			20:00			20:00		

Shadow Lengths from 22 ft Building Height

May 1			May 15			June 1			June 15			July 1			July 15			August 1			August 15			September 1			September 15		
Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)	Time	tan(Altitude)	Shadow Cast (ft)
13:30	1.9	11.8	13:30	2.2	10.1	13:30	2.5	8.7	13:30	2.7	8.1	13:30	2.7	8.1	13:30	2.5	8.8	13:30	2.1	10.4	13:30	1.8	12.3	13:30	1.4	15.5	13:30	1.1	18.8
14:00	1.7	12.8	14:00	2.0	11.1	14:00	2.3	9.7	14:00	2.4	9.1	14:00	2.4	9.1	14:00	2.3	9.7	14:00	2.0	11.2	14:00	1.7	12.7	14:00	1.5	14.7	14:00	1.2	19.9
14:30	1.5	14.5	14:30	1.7	12.9	14:30	1.9	11.5	14:30	2.0	10.8	14:30	2.1	10.7	14:30	2.0	11.2	14:30	1.7	12.7	14:30	1.5	14.8	14:30	1.3	18.1	14:30	1.0	24.8
15:00	1.3	16.8	15:00	1.5	15.1	15:00	1.6	13.7	15:00	1.7	13.0	15:00	1.7	12.9	15:00	1.7	13.3	15:00	1.5	14.8	15:00	1.3	16.8	15:00	1.1	20.4	15:00	0.9	28.5
15:30	1.1	19.7	15:30	1.2	17.9	15:30	1.3	16.5	15:30	1.4	15.7	15:30	1.4	15.5	15:30	1.4	15.9	15:30	1.3	17.5	15:30	1.1	19.7	15:30	0.9	23.7	15:30	0.8	32.2
16:00	0.9	23.4	16:00	1.0	21.5	16:00	1.1	19.8	16:00	1.2	19.0	16:00	1.2	18.7	16:00	1.2	19.1	16:00	1.1	20.8	16:00	0.9	23.3	16:00	0.8	27.9	16:00	0.7	38.2
16:30	0.8	28.2	16:30	0.9	25.8	16:30	0.9	23.9	16:30	1.0	22.9	16:30	1.0	22.5	16:30	1.0	23.1	16:30	0.9	25.0	16:30	0.8	27.9	16:30	0.7	33.4	16:30	0.5	40.2
17:00	0.6	34.4	17:00	0.7	31.5	17:00	0.8	29.0	17:00	0.8	27.8	17:00	0.8	27.4	17:00	0.8	28.0	17:00	0.7	30.3	17:00	0.6	33.9	17:00	0.5	41.0	17:00	0.4	50.4
17:30	0.5	42.8	17:30	0.6	38.9	17:30	0.6	35.6	17:30	0.6	34.0	17:30	0.7	33.5	17:30	0.6	34.3	17:30	0.6	37.3	17:30	0.5	42.1	17:30	0.4	52.1	17:30	0.3	66.5
18:00	0.4	55.3	18:00	0.4	48.4	18:00	0.5	44.7	18:00	0.5	42.4	18:00	0.5	41.6	18:00	0.5	42.8	18:00	0.5	47.2	18:00	0.4	54.2	18:00	0.3	70.2	18:00	0.2	95.3
18:30	0.3	75.7	18:30	0.3	65																								