The following ordinance was introduced by Aldermen _____ and duly seconded by Aldermen _____.

AN ORDINANCE AMENDING THE CARRBORO ZONING MAP TO REZONE APPROXIMATELY .65.85 ACRES OF LAND KNOWN AS THE T.E. HOGAN HEIRS PROPERTY FROM R-20 (RESIDENTIAL, MINIMUM 20,000 SQUARE FEET PER DWELLING UNIT) TO VMU CU (VILLAGE MIXED-USE CONDITIONAL USE)

THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO ORDAINS:

SECTION 1. The Official Zoning Map of the Town of Carrboro is hereby amended as follows:

That property being described on Orange County Tax Maps as:

Lots 11, 11C, 11D, and 15 of Tax Map 109, in the Chapel Hill Township, and being the area that is called out on the accompanying map as "Winmore Property" is hereby rezoned from R-20 (Residential, minimum 20,000 square feet per dwelling unit) to VMU CU (Village Mixed Use Conditional Use).

SECTION 2. All provisions of any Town ordinance in conflict with this ordinance are hereby repealed.

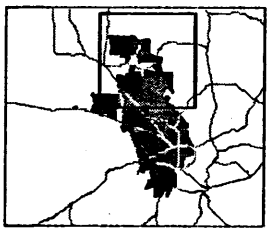
SECTION 3. This ordinance shall become effective upon adoption.

The foregoing ordinance having been submitted to a vote, received the following vote and was duly adopted, this the _____ day of _____ 2003.

AYES:
NOES:
ABSENT OR EXCUSED:

Location of Winmore Property

Collier-Daniel-Yates Property
Planning Jurisdiction Boundary
Creeks/Streams
Town Boundary
Text Road Names (Major)
Parcel83



NC State Plane Coordinate System (NAD83)

TOWN OF CARRBORO
301 W. Main St.
Carrboro, NC 27510

THIS MAP IS NOT A CERTIFIED SURVEY AND IS FOR REFERENCE ONLY

The requestor must be aware of data conditions and ultimately bear responsibility for the appropriate use of the information with respect to possible errors, original map scale, collection methodology, currency of data, and other conditions specific to the data.

TOWN OF CARRBORO

PETITION FOR CHANGE OF ZONING

PETITIONER | **DATE:**

The Petitioner named above respectfully requests the Board of Aldermen of the Town of Carrboro to rezone the below-described property from _____ to _____ zoning classification. The Petitioner furthermore submits the following information in support of this petition.

1. **PETITIONER'S NAME:** WILMORE LAND MANAGEMENT

   ADDRESS: 310 1/2 W. FRANKLIN STREET, CHAPEL HILL

   TELEPHONE #: (919) 929-5244

2. **INTEREST IN PROPERTY(IES):** 9779-39-7553, 9779-49-2200, 9779-48-0734, 9779-29-2154,

3. **BROAD DESCRIPTION OF PROPERTY AREAS SOUGHT TO BE REZONED BY REFERENCE TO ADJOINING STREETS:** WILMORE NEIGHBORHOOD AND HOMESTEAD

4. **DESCRIPTION OF INDIVIDUAL LOTS SOUGHT TO BE REZONED:**

   a. **OWNER:** FAY DANIEL Fay H. Daniel

   TAX MAP: 9779 **BLOCK:** 48 **LOT:** 0734 **ACREAGE:** 26.64 **PARCEL:** _____

   SUBDIVISION NAME: _____ **FRONTAGE:** _____ **DEPTH:** _____

   EXISTING STRUCTURES AND USES: HOUSE, RESIDENCE

   b. **OWNER:** ~~HELEN HOGAN YATES~~ - Helen Hogan Yates 7/22/10

   TAX MAP: 9779 **BLOCK:** 49 **LOT:** 2200 **ACREAGE:** 16.83 **PARCEL:** _____

   SUBDIVISION NAME: _____ **FRONTAGE:** _____ **DEPTH:** _____

2-2

EXISTING STRUCTURES AND USES: _____

_____

c. OWNER: BRYAN R. YATES Bryan R. Yates 7/24/02

TAX MAP: 9779 BLOCK: 39 LOT: 2553 ACREAGE: 12.95 PARCEL: _____

SUBDIVISION NAME: _____ FRONTAGE: _____ DEPTH: _____

EXISTING STRUCTURES AND USES: _____

_____

d. OWNER: ANNLE H. COLLIER Annie H. Collier by Fay Don POA

TAX MAP: _____ BLOCK: _____ LOT: _____ ACREAGE: 10 PARCEL: _____

SUBDIVISION NAME: _____ FRONTAGE: _____ DEPTH: _____

EXISTING STRUCTURES AND USES: _____

_____

5. NAMES AND ADDRESSES OF ALL PERSONS WHOSE PROPERTY OR ANY PART THEREOF IS WITHIN 1000 FEET IN ANY DIRECTION OF THE PROPERTY SOUGHT TO BE REZONED.

NAME	ADDRESS
PLEASE REFER TO SECTION 3 OF THIS PACKAGE	

6. HAS THIS PROPERTY BEEN THE SUBJECT OF A ZONING CHANGE SINCE 1979? YES ___ NO ___
IF "YES", WHEN? _____

7. PLEASE SET OUT AND EXPLAIN THOSE CIRCUMSTANCES PERTINENT TO THE PROPERTY AND THE MANNER IT RELATES TO THE TOWN THAT DEMONSTRATE THAT THE PROPOSED ZONING DISTRICT CLASSIFICATION IS CONSISTENT WITH THE TOWN'S COMPREHENSIVE PLAN. MORE SPECIFICALLY:

(a) How do the potential uses in the new district classification relate to the existing character of the area?

see attached Drawing

(b) In what way is the property proposed for rezoning peculiarly/particularly suited for the potential uses of the new district?

see attached Drawing

(c) How will the proposed rezoning affect the value of nearby buildings?

See attached Drawing

2-4

(d) In what way does the rezoning encourage the most appropriate use of the land in the planning jurisdiction?

_____

_____

_____

_____

_____

_____

_____

WHEREFORE, THE PETITIONER REQUESTS THAT THE OFFICIAL ZONING MAP BE AMENDED AS SET OUT ABOVE. THIS IS THE _____ DAY OF _____, 19____.

PETITIONER'S SIGNATURE: _____

PLEASE NOTE

For all the persons identified under "5", please attach addressed envelopes with the correct postage. Oversight of this requirement could delay processing your rezoning request.

TOWN OF CARRBORO

NORTH CAROLINA

TRANSMITTAL **PLANNING DEPARTMENT**

DELIVERED VIA: ☒ *HAND* ☐ *MAIL* ☐ *FAX* ☐ *EMAIL*

To: **Michael B. Brough, Interim Town Manager**
Mayor and Board of Aldermen

From: **Patricia J. McGuire, Planning Administrator**

Date: **May 22, 2003**

Subject: **Village Mixed Use Conditional Use District Rezoning Request – 1400 Homestead Road**

REQUEST

Winmore Land Management, LLC. has submitted a petition to have the zoning of 65.85 acres of land in four separate tracts changed from R- 20, a low-density residential zoning, to Village Mixed Use, a conditional use district that is established to provide for the development of rural new villages. The tracts are currently addressed as 1318 Homestead Road, 1400 Homestead Road, 1410 Homestead Road, and 700 Lake Hogan Road.

Because this request involves four lots, the total acreage of which exceeds fifty acres, the land use ordinance directs that any amendment to the zoning map for this property shall be referred to as a "major map amendment."

Section 15-141.2 (g) (2) calls for the Planning Board, Northern Transition Area Advisory Committee, Appearance Commission, Environmental Advisory Board, and Transportation Advisory Board (and other boards to which the Board of Aldermen may refer the application) to review the proposed master plan at the same time it considers the applicant's rezoning request. In response to suggestions made by the Planning Board (or other advisory boards), the plans may be revised before they are submitted to the Board of Aldermen. The master plan and rezoning request are submitted for advisory board review.

PETITIONERS

Winmore Land Management, LLC. (Contract Purchasers)

OWNERS

Annie P. Hogan Collier 1318 Homestead Road Chapel Hill, North Carolina 27516	Fay H. Daniel 1318 Homestead Road Chapel Hill, North Carolina 27516
Bryan and Helen Yates 1258 Manns Chapel Road Pittsboro, North Carolina 27312	Helen H. Yates 1258 Manns Chapel Road Pittsboro, North Carolina 27312

DESCRIPTION OF THE AREA

As shown in the attached figure (**Attachment 3-A**), the property is located to the south and east of the Lake Hogan Farms subdivision on the west side Homestead Road, north of the Bolin Creek bridge. The 65.85 acres are identified as tax map 109, lots 11, 11C, 11D, and 15. An existing one-story, residence is located on lot 15. The property is located in the upper reaches of the Bolin Creek drainage area and is roughly bisected by the north-south trending of the creek itself and one associated intermittent stream that flows from west to east into Bolin Creek. The property is mostly wooded in hardwoods and mixed vegetation over a rolling terrain. Steep slopes are found along portions of the intermittent stream.

LAND USES AND ZONING ADJACENT TO 1400 HOMESTEAD ROAD

The existing land uses and zoning adjacent to the subject property are shown in the table below.

Address	**Tax map**	**Zoning**	**Use**
1018 Homestead Road	7.109..16	R-20	Agricultural/Horticulture,14.100
1200 Homestead Road	7.109..14A	R-20	Residential, 1.111
1306 Homestead Road	7.109..14	R-20	" "
1411 Homestead Road	7.109.11A	R-20	" "
1504 Claymore Road	7.109..37	""	" "
200 Redfoot Run Road	7.109F..35	" "	Telecommunications Tower, 18.200
1500 Claymore Road	7.109..8	" "	Vacant, Mostly wooded
-	7.109J..10	" "	Residential, 1.111
8622 Lake Hogan Farm Road	7.109..7	" "	" "
644 Lake Hogan Lane	7.109..23J	" "	" "
818 Homestead Road	7.109..23B	" "	" "
906 Homestead Road	7.109..18A	" "	" "
1018 Homestead Road	7.109..16	" "	" "

Address	Tax map	Zoning	Use
1003 Gloucester Court	7.109E..16	" "	" "
1510 Homestead Road	7.109..36	" "	" "
1415 Homestead Road	7.109..11F	" "	" "

ZONING HISTORY OF 1400 HOMESTEAD ROAD

R-20	1988 to present
Orange County Zoning	Prior to 1988

COMPARISON OF ZONES

R-20 District

The R-20 is a residential zoning district with a minimum lot size and density requirement of 20,000 square feet per dwelling unit. The district is found in the northern half of Carrboro's jurisdiction. Existing neighborhoods within the city limits that are zoned R-20 include Plantation Acres, Barington Hills, Cates Farm, Sunset Creek and adjacent parcels on both sides of Hillsborough Road. Additional areas are those that, as of the 1987 Joint Planning Land Use Plan and Joint Planning Agreement, were designated as Transition Area 1. Neighborhoods that have since been built in R-20 areas include Wexford, Lake Hogan Farms, Cobblestone, Camden, and Highlands locations in Carrboro's jurisdiction. The extra-territorial jurisdiction portion of the Horace Williams tract is also zoned R-20. A map showing the location of the R-20 zones is attached (**Attachment 3-B**).

As illustrated in Table 2., permitted uses in the R-20 include all residential activities except for hotels and motels, overnight shelters for the homeless, and senior citizen residential complexes. Other permitted uses include elementary and secondary schools, churches, synagogues, and temples, libraries, museums, and art galleries, community centers and private and public recreational facilities, emergency services facilities, agricultural operations, reclamation landfill, neighborhood utility facilities, towers and antennas, child and senior citizen day care homes and centers. Commercial greenhouses are also permitted in this zone.

Village Mixed Use Conditional Use (VMU_CU) Zoning District

The Village Mixed Use district is "established to provide for the development of rural new villages at a scale intended to continue Carrboro's small town character as described in its Year 2000 Task Force Report and to promote a traditional concept of villages. The only permissible use, per Section 15-146 Table of Permissible Uses, is a village mixed use development. It is necessary to look to Section 15-176.2 to identify the particular use classifications that may occur in a VMU development. The bulk of the site is to be developed with uses permissible in the R-10 zoning district. Up to ten percent of a new village may include uses permissible in two commercial zoning districts, the B-3T and the OA. Information on the uses permitted in these two zones is provided.

The R-10 is a residential district, with a minimum lot size in standard subdivisions and residential density of 10,000 square feet per dwelling unit. Permissible uses in this zone are nearly identical to those found in the R-20, with several exceptions. Tourist homes are permitted in the R-10, as are Senior Citizen Residential Complexes. Towers and antennas that exceed 50 feet in height and commercial greenhouse operations are not permitted in the R-10.

The B-3-T Transition Area Business district is "designed to accommodate commercial needs arising in the town's more rural neighborhoods" and B-3-T districts are limited to five acres in size and a spacing requirement of on-half mile between any portions of a pre-existing business district. Permitted uses in this district include most residential classes, including temporary homes and shelters for the homeless. Non-residential uses include high- and low-volume retail, wholesale sales and drive-in windows, copy centers/printing operations, banks with drive-in window, churches, libraries and similar art activities, indoor recreation, community center, gas sales and auto repair shops. Emergency services are also permitted, as is a post office, utility and town facilities, dry cleaners, towers and antennas, child and senior day care centers, and temporary parking structures.

The O/A Office/Assembly district is "intended to provide for office, administrative, professional, research, and specialized manufacturing in close proximity to an arterial street...and is intended to provide employment near residential areas." The development is to be designed so that employees may utilize alternative forms of transportation to commute to their place of employment. No less than five contiguous acres may be zoned as an O/A district and all uses are subject to the performance standards included in Article XI, Part I. Specific provisions also note screening, lighting limits, and a square footage limitation of 25 percent for gross floor area to be used for uses in the 2.000 classification (office). The table below presents a comparison of the uses permissible under the current and requested zoning districts.

General Use Category	Number of Uses Permitted in R-20 District	Number of Uses Permitted in VMU District	Change in Uses Permitted
Residential (1.000)	23	24	+1
Sales and Rental of Goods (2.000)	0	6	+6
Office, Clerical, Research (3.000)	0	8	+8
Manufacturing, et cetera (4.000)	0	1	+1
Educational, Cultural, Religious, Philanthropic, Social (5.000)	3	4	+1
Recreation (6.000)	4	5	+1
Restaurant, Bar, Nightclub (8.000)	0	2	+2
Motor Vehicle Related (9.000)	0	2	+2
Storage and Parking (10.000)	0	2	+2
Emergency Services (13.000)	4	4	-
Agricultural, Silvicultural, Mining, Quarrying (14.000)	3	3	-

General Use Category	Number of Uses Permitted in R-20 District	Number of Uses Permitted in VMU District	Change in Uses Permitted
Miscellaneous Public and Semi-Public (15.000)	1	2	+1
Dry Cleaner, Laundromat (16.000)	0	2	+2
Utility Facilities (17.000)	1	3	+2
Towers and Related Structures (18.000)	3	3	-
Open Air Markets, Horticultural Sales (19.000)	0	3	+3
Day Care (22.000)	3	3	-
Temporary Structure or Parking (23.000)	1	1	-
Commercial Greenhouses (25.000)	1	0	-1
Subdivisions (26.000)	2	2	-
Combination Uses (27.000)	1	1	-
Special Events (29.000)	1	1	-

Table 2. Comparison of the Number of Uses, by General Category, in Existing and Proposed Zoning Districts.

As illustrated in Table 2, the VMU is a mixed-use zoning district as additional non-residential uses are permitted. Some of the issues associated with these changes have been considered for uses that are proposed in the Winmore Village Mixed Use development. Further information on this is provided on the permit plans and in the conditional use permit application staff report that will be reviewed concurrently with the rezoning petition.

ANALYSIS

Policy

The *Facilitated Small Area Plan for Carrboro's Northern Study Area* (NSA Plan) sets the policy stage for reviewing VMU rezoning and conditional use district applications. Carrboro Vision2020 builds on the Year 2000 Task Force report and presents the policies that are expected to guide the Town's growth and development through the year 2020. References found in these documents of specific relevance to this rezoning request are noted below.

The NSA Plan (1999) calls for the creation of mixed-use village centers and neighborhood mixed use areas using a floating, or conditional use district, approach. Uses in the village are to include residential neighborhoods, school, commercial, and office and a neo-traditional design is proposed in order to create a pedestrian friendly environment. The VMU zoning district was created based on these parameters. The overall target density in the study area is expected to be about the same as that of the existing town limits, approximately 2.1 units per acre, with 4-5 unit/acre density in the village mixed use areas.

Carrboro Vision 2020 includes a reference to the NSA Plan in its "Development" section. Under "Balanced and Controlled Growth" is stated "The Town should support the implementation of our Small Area Plan.'

Village Concept

The NSA Plan lays out the conceptual framework for a village mixed use development. An excerpt of the NSA Plan is provided here:

> In order to ensure that village-style development is internally consistent, it should be developed as one project, by one developer. Acceptable site plans require integration of neo-traditional design ideas to create a neighborhood-scale, pedestrian friendly development. Park land and open space within the development should be plentiful and readily accessible to all residents without need for vehicle travel. All residential sites should be within one quarter mile of a village center, where commercial and office establishments are located. Streets within the development should be laid out in a pattern that provides for multiple routes for destinations and disperses traffic among many streets. The village should also be served by a network of bicycle and pedestrian paths that connect to pathways along Bolin Creek. An acceptable site design will also include provision for transit facilities and transit access.

Project Density

The Winmore tracts total 65.85 acres. Major development projects within the R-20 zoning district must utilize a density calculation that takes into consideration the presence of certain natural and man-made features. Each feature is assigned a value that establishes the extent to which that area may be included in the tract acreage for the purpose of calculating a site's maximum density. Natural and man-made features on the Winmore tracts result in an adjusted tract acreage of 54.78 acres. Under the current zoning, R-20 (20,000 square feet per dwelling unit), the net density calculation would yield 119 units. A development on this property would be eligible for the residential density bonus for affordable housing provided for in Section 15-182.4 of the Carrboro Land Use Ordinance. Use of the bonus would allow 59 additional units for a total of 178 dwelling units. Thirty of the units would have to meet the definition of "affordable housing."

In general terms, it is possible to estimate a maximum permitted density in a village-mixed use (VMU) project, but not to do so absolutely. Residential density in a VMU is regulated in the following ways. The italic text illustrates the maximums that would be available on the Winmore site; the bold text illustrates the maximums included in the current CUP application:

1) The adjusted tract acreage is divided by the density allocation for the R-10 zoning district. ***54.78 acres x 43,560 sqft/acre /10,000 =238 units***

2) Areas used for commercial purposes are not subtracted from the adjusted tract acreage. *5 acres x 43,560 sqft/acre = 217,800 sqft.* **.887 acre or 38,672 sqft**

3) Residential units above commercial space are permitted in addition to the number of dwelling units provided under (1). *A hypothetical example of a commercial district measuring 200,000 square feet and bisected by two streets could yield approximately 36, 25-foot wide lots. If each lot contained a building with a commercial use on the first floor, up to two additional floors could be used for residential purposes yielding 72 residential units in addition to those otherwise permitted.* **Twenty units in the Winmore commercial area are designated "live-work".**

4) Accessory detached dwellings, limited to 750 square feet of total area, are permitted on all single-family detached residential lots, in addition to the principal residence. *It is not possible to estimate the number of single-family detached lots that might be included in a village.* **The Winmore project includes 98 single-family detached homes.**

Overall project density is typically determined from the ratio of dwelling units to the tract acreage. The unit breakdown and associated project densities for Winmore are provided in the table below:

Type of unit	**# of units**
Market - rate	
Single-family, detached	98
Townhomes	66
Live-work (discretionary)	20
Accessory Detached Dwellings (discretionary)	98
Total (with/without discretionary units)	282/164
Density Range (with/without discretionary units)	**4.3 – 2.4 units per acre**
Affordable Units	
Apartments and Co-op Units	48
Total	330
Density	**5 units per acre**

The NSA Plan proposes an overall target density for the mixed use area of five dwelling units per acre. Densities for market-rate housing are to be capped at three units per acre so that bonus densities of four to five units per acre can be offered for affordable housing.

The NSA Plan proposes a study area density of 2.1 units per acre, roughly that of the Town as a whole when the plan was developed. The build-out scenarios included in the plan, estimates of the amount of urban development that would be accommodated, were based on these proposals. Infrastructure needs and associated capital improvements have been planned, or developed, in accordance with these expectations.

Since the plan was prepared, several hundred acres have been removed from the pool of land available for development through large-lot subdivisions, conservation easements, and public purchase for a park and schools. As a result, the context for achieving the

goals of the plan has shifted and places greater pressure on remaining parcels, some of which contain sensitive areas.

Permitted Uses

The NSA Plan lists the following proposed uses in a "Village Floating Zone: residential, neighborhood-scale commercial, and neighborhood-scale office." More specificity of uses is included in the ordinance provisions that implement the plan in that those provisions refer back to zoning districts and their permitted uses. Language that allows the Board of Aldermen to place conditions on or otherwise limit the types of uses is also included. The master plan and conditional use permit request the full range of uses, as the applicants believe that flexibility will be critical to the success of the village as a mixed-use development. It should be noted that both the parking calculations and traffic projections do not include information for every possible combination of uses.

Ordinance Provisions Regarding Changes to Zoning Map

General. Section 15-321, "Initiation of Amendments" describes the process by which the Board is to consider text and map amendments to the Carrboro Land Use Ordinance. Subsection (d) specifies that, in the case of petitioners who are other than members of the town staff, administration, or advisory boards, the Board of Aldermen may either deny the petition or set a date for a public hearing on the requested amendment. Should the Board decide to set a date for a public hearing, the Board would direct staff to prepare an appropriate ordinance.

Section 15-322 requires that any proposed amendments shall be referred to the Planning Board. If applicable, the proposed amendment shall also be referred to other advisory boards.

VMU-specific process and provisions. Section 15-141.2 (**Attachment 3-C**) of the Carrboro Land Use Ordinance outlines the purposes, parameters, and process for a Village Mixed Use District. The applicant for rezoning to VMU must demonstrate that its planning, design and development will achieve, but not necessarily be limited to 10 objectives. The applicant has provided a written description of the manner in which the Winmore VMU district will meet these objectives. The applicant's statement is attached (**Attachment 3-D**).

Property may be rezoned to a VMU district only when several initial conditions are met. A limit on the total number of districts and acres that may be rezoned for this purpose is also included in the Land Use Ordinance. The conditions and maximum acreage provision are presented, accompanied by a staff assessment in italic text of the degree to which the requested rezoning meets the threshold conditions.

	Threshold Conditions /Other	Comments
1	The property proposed for the rezoning comprises at least fifty and not more than 200 contiguous acres	*The petition requests rezoning of 65.85 acres, with plans to expand to approximately 150 acres.*
2	The property is located in relationship to existing or proposed public streets that traffic generated by the development can be accommodated without endangering the public health, safety, or welfare	*Traffic analyses provided indicate compliance with this condition. See the conditional use permit staff report for further information.*
3	The property will be served by OWASA water and sewer lines when developed	*The property will be served by these facilities.*
4.	No more than 350 gross acres may be rezoned to the VMU district and no more than three villages may be approved.	*The petition to rezone the Winmore property to VMU is the first one received and processed. If approved, up to 265 acres on other tracts may be approved in up to two additional VMUs.*

In addition to the rezoning petition, an applicant is required to simultaneously submit an application for approval of a master plan, with the understanding that an application for a conditional use permit will be required and approval must be obtained. The master plan is to provide, through graphics and text, a range of project information. Winmore Land Management, LLC has elected to submit a conditional use permit application in conjunction with the master plan (see **Attachment 3-E** for master plan, conditional use permit plans are referenced in Part II of this agenda item). Consequently, the assessment of the completeness of information submitted as a master plan includes the "Master Plan" sheet itself, as well as the remainder of the application materials, including but not limited to the conditional use permit plan, Proposal Narrative, Design Code, and Green Building Book. A summary assessment of the degree to which the Winmore VMU plans provide this information is presented below:

	Master Plan Project Information Requirements	Comments
1.	Plan shows location, type and density of residential uses.	*This information is shown on the Master Plan.*
2.	Plan shows location, types, and maximum floor areas and impervious surface areas for non-residential uses	" "
3.	Plan shows the location and orientation of buildings, parking areas, recreational facilities and open spaces.	" "
4.	Plan shows the access and circulation systems for vehicles and pedestrians	" "

	Master Plan Project Information Requirements	Comments
5.	Plan shows how the development proposes to satisfy the objectives of and comply with the regulations applicable too a village mixed use development (Section 15-176.2).	*See conditional use permit plans, proposal narrative, and Staff Report for assessment and recommended conditions.*
6.	Plan shows how the development proposes to mitigate any adverse impacts on neighboring properties and the environment, including without limitation impacts from traffic and stormwater runoff.	*See conditional use permit plans, proposal narrative, Green Builder Code (**Attachment 3- F**) and Staff Report for assessment and recommended conditions*
7	Plan shows how the development proposes to substantially comply with the town's recommended "Village Mixed Use and Affordable Housing vernacular Architectural Standards."	*See particularly the Design Code (**Attachment 3-G**), Architectural and Detailing Guidelines for Winmore.*

Section 15-325 (**Attachment 3-H**) of the Land Use Ordinance specifies that the principle issue before the Board in making this decision is "whether the proposed amendment advances the public health, safety or welfare." Despite its specificity, nothing in Section 15-141.2 is intended to limit the discretion of the Board of Aldermen to deny an application to rezone property to a VMU district if it determines that the proposed rezoning is not in the public interest.

The petition for rezoning was submitted, with the conditional use permit application, to advisory boards for review. Copies of advisory board recommendations are included in Part II, attachment S of the agenda item.

Findings

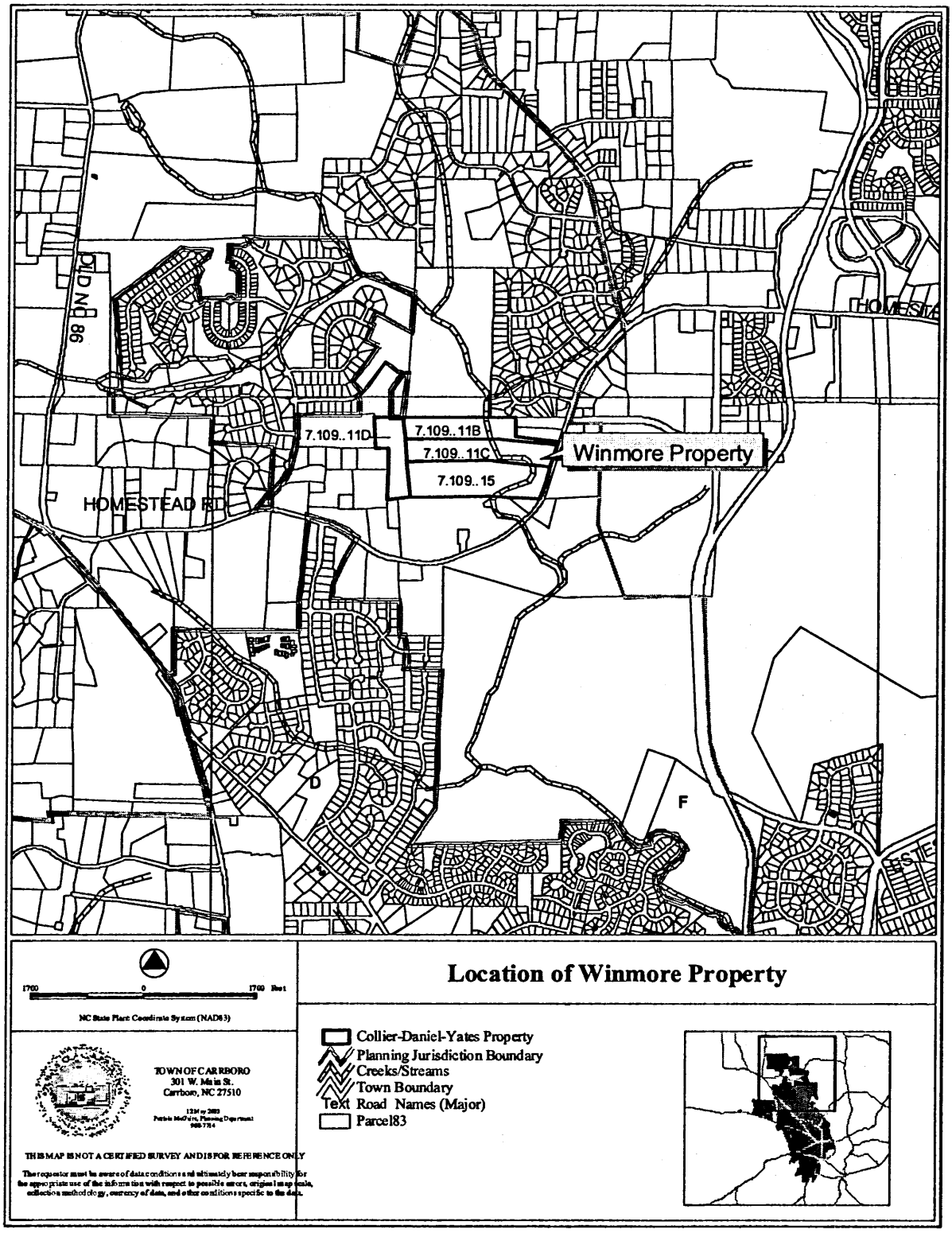
1. Adopted policies support the establishment of village mixed use conditional use districts.
2. A larger number of uses, and more intensive uses, may be permitted under the requested zoning classification.
3. The conditional use district process (combined legislative and quasi-judicial review and action) is designed to mitigate the associated impacts of the additional uses that may otherwise be considered incompatible with the residential character of the surrounding properties and the intent of the residential zoning district.
4. The Winmore property is suited for rezoning to VMU CU with regard to its size, access to arterial streets, and OWASA service provision.
5. The principal impacts of this change involve an increase in density of residential development and intensity of use, as envisioned by the NSA plan to discourage a sprawled pattern of development, preserve Carrboro's unique, small town character,

and allow the creation of new, neighborhood-scale communities which can be connected to existing and new areas in various ways, including a network of open space corridors.

RECOMMENDATION

The administration recommends approval of the requested rezoning and the master plan/conditional use permit of 1400 Homestead Road from R-20 to Village Mixed Use Conditional Use district.

Attachments


OLD NC 86
HOMESTEAD RD
7.109..11D
7.109..11B
7.109..11C
7.109..15
Winmore Property
D
F
1700
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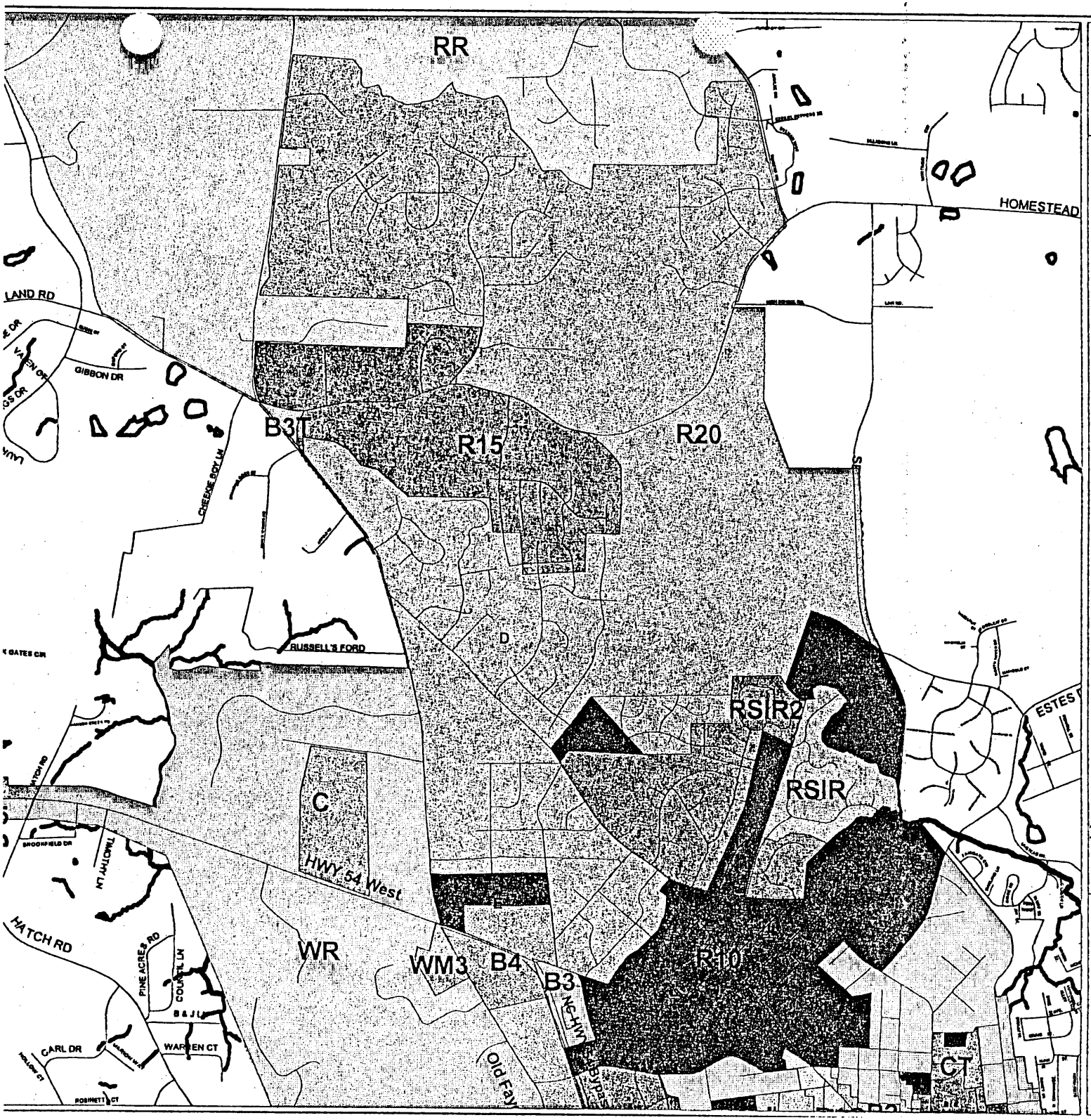
1700 Feet
NC State Plane Coordinate System (NAD83)
TOWN OF CARRBORO
301 W. Main St.
Carrboro, NC 27510
THIS MAP IS NOT A CERTIFIED SURVEY AND IS FOR REFERENCE ONLY
Location of Winmore Property
Collier-Daniel-Yates Property
Planning Jurisdiction Boundary
Creeks/Streams
Town Boundary
Text Road Names (Major)
Parcel83



Location of Existing R-20 Zoning Districts

Streets
Zoning83.shp
- B1C
- B1G
- B2
- B3
- B3T
- B4
- B5
- C
- CT
- M1
- O
- OA
- R10
- R15
- R2
- R20
- R3
- R75
- RR
- RSIR
- RSIR2
- WM3
- WR

Text Road Names (All)
Streams

2200 0 220(

NC State Plane Coordinate System (NAD83)

TOWN OF CARRBO
301 W. Main St.
Carrboro, NC 27511

25 April 2003
P. McGuire, Planning Departm
968-7714

THIS MAP IS NOT A CERTIFIED SURVEY AND IS FOR REI

The requestor must be aware of data conditions and ultimately bear the appropriate use of the information with respect to possible errors, collection methodology, currency of data, and other conditions specific to the data.

ATTACHMENT 3-B

(b) Because the JLWP district is an overlay district, properties within this district are subject to the regulations applicable to the underlying district as well as the requirements of the JLWP district.

Section 15-141.2 Village Mixed Use District Established (AMENDED 05/25/99)

(a) There is hereby established a Village Mixed Use (VMU) district. This district is established to provide for the development of rural new villages at a scale intended to continue Carrboro's small town character as described in its Year 2000 Task Force Report and to promote a traditional concept of villages. The applicant for rezoning to this district must demonstrate that its planning, design and development will achieve, but not necessarily be limited to, all of the following specific objectives:

1. The preservation of open space, scenic vistas, agricultural lands and natural resources within the Town of Carrboro and its planning jurisdiction and to minimize the potential for conflict between such areas and other land uses;

2. The creation of a distinct physical settlement surrounded by a protected landscape of generally open land used for agricultural, forest, recreational and environmental protection purposes.

3. Dwellings, shops, and workplaces generally located in close proximity to each other, the scale of which accommodates and promotes pedestrian travel for trips within the village.

4. Modestly sized buildings fronting on, and aligned with, streets in a disciplined manner.

5. A generally rectilinear pattern of streets, alleys and blocks reflecting the street network in existing small villages which provides for a balanced mix of pedestrians and automobiles.

6. Squares greens, landscaped streets and parks woven into street and block patterns to provide space for social activity, parks and visual enjoyment.

7. Provision of buildings for civic assembly or for other common purposes that act as visual landmarks and symbols of identity within the community.

8. A recognizable, functionally diverse, but visually unified village focused on a village green or square.

9. Development of a size and scale, which accommodates and promotes pedestrian travel rather than motor vehicle trips within the village.

10. Compliance with the policies embodied in this chapter for the development of a village mixed use.

(b) The VMU district shall be a conditional use district authorized under N.C.G.S. 160A-382. As such, property may be placed within this district only in response to a petition by the owners of all the property to be included.

(c) As indicated in the Table of Permissible Uses, the only permissible use within a VMU district is a village mixed use development, and a village mixed use development is only permissible within a VMU district.

(d) Property may be rezoned to the VMU district only when the property proposed for such rezoning:

1. Comprises at least fifty, but not more than two hundred, contiguous acres. For purposes of this subsection, acreage is not "contiguous" to other acreage if separated by a public street or connected only at a point less than one hundred feet in width; and

2. Is so located in relationship to existing or proposed public streets that traffic generated by the development of the tract proposed for rezoning can be accommodated without endangering the public health, safety, or welfare; and

3. Will be served by OWASA water and sewer lines when developed;

(e) No more than 350 gross acres may be rezoned to the VMU district and no more than three villages may be approved.

(f) Nothing in this section is intended to limit the discretion of the Board of Aldermen to deny an application to rezone property to a VMU district if it determines that the proposed rezoning is not in the public interest.

(g) When a VMU rezoning application is submitted (in accordance with Article XX of this ordinance), the applicant shall simultaneously submit an application for approval of a master plan for the proposed village mixed use development, in accordance with the following provisions.

1. The master plan shall show, through a combination of graphic means and text (including without limitation proposed conditions to be included in the conditional use permit for the proposed development):

   a. The location, types, and densities of residential uses;

   b. The location, types, and maximum floor areas and impervious surface areas for non-residential uses;

   c. The location and orientation of buildings, parking areas, recreational facilities, and open spaces;

   d. Access and circulation systems for vehicles and pedestrians;

e. How the development proposes to satisfy the objectives of and comply with the regulations applicable to a village mixed use development as set forth in Section 15-176.2 of this chapter;

f. How the development proposes to minimize or mitigate any adverse impacts on neighboring properties and the environment, including without limitation impacts from traffic and stormwater runoff; and

g. How the development proposes to substantially comply with the town's recommended "Village Mixed Use and Affordable Housing Vernacular Architectural Standards."

2. The planning board, Northern Transition Advisory Committee, Appearance Commission, Environmental Advisory Board, Transportation Advisory Board (and other advisory boards to which the Board of Aldermen may refer the application) shall review the proposed master plan at the same time it considers the applicant's rezoning request. In response to suggestions made by the planning board (or other advisory boards), the applicant may revise the master plan before it is submitted to the Board of Aldermen.

3. If the applicant submits a proposed master plan with a VMU rezoning application, then:

a. Applicants for VMU districts that are located within the Transition Area portion of the Carrboro Joint Development Area as defined within the Joint Planning Agreement should meet with Carrboro Town and Orange County Planning staff prior to the formal submittal of an application to informally discuss the preliminary rezoning development plan.

b. The rezoning application and master plan proposal shall be reviewed concurrently by the Board of Aldermen according to the same procedures and in accordance with the same standards applicable to other zoning amendments; and

c. The Board may not approve the VMU rezoning application unless it simultaneously approves the master plan for the development of the property, subject to such reasonable modifications and conditions as the Board may impose in the exercise of its legislative discretion.

4. Approval of a VMU rezoning application with a master plan under this section does not obviate the need to obtain a conditional use permit for the village mixed use development in accordance with the provisions of Section 15-176.2 of this chapter.

a. With respect to VMU applications involving property that is totally or partly within the Transition Area portion of the Carrboro Joint Development Area as defined within the Joint Planning Agreement, in addition to other grounds for denial of a conditional use permit application under this chapter, a conditional use permit for a village

mixed use development shall be denied if the application is inconsistent with the approved master plan in any substantial way. Without limiting the generality of the foregoing, an application for a conditional use permit is inconsistent in a substantial way with a previously approved master plan if the plan of development proposed under the conditional use permit application increases the residential density or commercial floor area permissible on the property or decreases or alters the location of open space areas.

b. With respect to property that is located totally outside the Transition Area portion of the Carrboro Joint Development Area as defined within the Joint Planning Agreement, in addition to other grounds for denial of a conditional use permit application under this chapter, no conditional use permit for a village mixed use development may be denied on the basis that the application is inconsistent with the approved master plan. However, if the conditional use permit is approved, the Board of Aldermen shall be deemed to have amended the master plan to bring it into conformity with the conditional use permit.

c. No conditional use permit for a village neighborhood mixed use development may be denied for reasons set forth in Subsection 15-54(c)(4) if the basis for such denial involves an element or effect of the development that has previously been specifically addressed and approved in the master plan approval process, unless (i) it can be demonstrated that the information presented to the Board of Aldermen at the master plan approval stage was materially false or misleading, (ii) conditions have changed substantially in a manner that could not reasonably have been anticipated, or (iii) a basis for denial for reasons set forth in Subsection 15-54(c)(4) is demonstrated by clear and convincing evidence.

5. Subject to Subsection 15-141.2(g)(4)b, a master plan approved under this section may only be amended in accordance with the provisions applicable to a rezoning of the property in question.

Winmore

Detailed Project Narrative

To

Demonstrate
How the Project Would Comply
with the Objectives Noted in 15-141.2 (a)

1. **The applicant for rezoning … must demonstrate that its planning, design and development will achieve …**

   The preservation of open space, scenic vistas, agricultural lands and natural resources within the Town of Carrboro and its planning jurisdiction and to minimize the potential for conflict between such areas and other land uses …

   Carrboro Land Use Ordinance, Article IX, Part I, Section 15-141.2 (a), Section 15-141.2 (a) 1.

The site for the first *Winmore* neighborhood is a 30-acre plateau that was farmed by Hogan family descendants from colonial days until the 1960s. The plateau overlooks two scenic valleys and a rolling meadow at the confluence of Bolin Creek and a smaller unnamed branch. A total of thirty-five acres, including the meadow and forest adjoining the creeks will be permanently set aside as a preserve for the enjoyment of residents, neighbors, and the broader community.

Because it will be surrounded by a nature preserve, *Winmore* will not be visible to passersby on Homestead Road or by neighbors in nearby subdivisions.

Those who enter from Homestead Road, either on foot along the greenway trail or by car on the narrow divided lanes of East Winmore Avenue, will pass through mature forest, cross a meadow, cross Bolin Creek and climb 30 feet to find a classic small America village in the woods.

A visitor entering the village will first experience authentically detailed houses with large front porches fronting a paved street or paved greenway trail that forms a clear boundary between the human settlement and the preserve. By orienting the fronts of houses, front porches, and front yards the street or trail bounding the preserve becomes publicly viewable and accessible.

2. **The applicant for rezoning … must demonstrate that its planning, design and development will achieve …**

The creation of a distinct physical settlement surrounded by a protected landscape of generally open land used for agricultural, forest, recreational and environmental protection purposes.

Section 15-141.2 (a), Section 15-141.2 (a) 2.

Winmore will be a small village within a forest preserve.

It will be distinct because of the clear boundary between the area of human settlement and the nature preserve. Typically in conventional suburban development, undeveloped open space begins behind the backyards of houses on the edge of the settlement. This is the case, for example, with almost all of the private houses that adjoin Duke Forest. Without a clear boundary, the private yards seem to encroach naturally into the forest. Clearing takes place, pets roam and forage. And, the forest preserve is directly viewable and accessible only to the residents of an adjoining house. At *Winmore* the fronts of houses, each with a front porch, and a front yard will face a park side street with sidewalk or the wide pedestrian walkway of the greenway trail.

Winmore will also be distinct because the community will be designed to create an internal cohesion. This is achieved by understanding the importance of the public realm, the creation of tight outdoor spaces, the

termination of vistas, the layering of elements in an organic progression from more rural to more urban, from less dense to more dense. Building typologies will follow this progression from the edge at the preserve to the townhouses, live-work units, and commercial buildings enfronting the town square. It will be reinforced by rigorous architectural standards that require each house to be well proportioned and authentically detailed.

3. **The applicant for rezoning … must demonstrate that its planning, design and development will achieve …**

Dwellings, shops, and workplaces generally located in close proximity to each other, the scale of which accommodates and promotes pedestrian travel for trips within the village.

- Section 15-141.2 (a), Section 15-141.2 (a) 3.

Winmore will be a compact, complex, and layered community.

Because it will be compact – it will use land efficiently. There will be four major benefits to *Winmore* residents from efficient land use because:

- less land will be allocated to private yards, more can and will be set-aside for walkable public places and for the accessible trails in the nature preserve;
- space between buildings (the negative space) will be tight and clearly defined, creating a series of interconnected outdoor living rooms that will stimulate social interaction,
- the well defined public realm will invite walking trips as will connectivity with the greenway trail, contributing to health by encouraging exercise,
- there will be worthwhile walking destinations within 1/8 of a mile of every resident: the

post office, the general store and neighborhood commercial establishments

4. **The applicant for rezoning … must demonstrate that its planning, design and development will achieve …**

Modestly sized buildings fronting on, and aligned with, streets in a disciplined manner.

- Section 15-141.2, Section 15-141.2 (a) 4.

Size:

Buildings at *Winmore* will range in size, with the two largest being a civic-use building of approximately 10,000 square feet to occupy a site on the town square and a 24-unit affordable courtyard apartment building that will terminate the vista on a residential street. Several designs are being considered one of which would entail three 5,000 square foot buildings situated around a forecourt. Another alternative may be one "U-shaped" building of approximately 15,000 square feet.

Townhouses will range in sizes from approximately 1,063 square feet to 1,494 square feet. Live-work units will average approximately 2,674 square feet. Single family houses will generally range from between 1,200 and 2,500 square feet. There will a number of even smaller units including co-op apartments and accessory dwelling units (garage apartments).

Fronts and Alignment:

All buildings at *Winmore* will be served from the front by a public street, or in some cases a public greenway, and a public lane (or alley) at the rear. The fronts will be close to the street, separated by a small yard, a minimum 5-foot wide public sidewalk, and an eight foot tree planter strip. Multi-family and commercial buildings at *Winmore* will be required to conform to the following provision of the *Winmore DesignCode*:

> New multi-family and commercial buildings in storefront and townhouse use areas shall be subject to a maximum front setback (the "build-

> to" line) in order to maintain a strong sense of streetscape. Such buildings shall generally be of two-story construction (to the so-called "build-up" line) and shall be designed in accordance with the design standards of this chapter and any other applicable standards. To create a defined edge to the village's public space, new multi-family or commercial buildings should conform to a consistent setback from the street. Porches for multi-family or townhouse construction can extend beyond the build-to line. In addition, building faces, as well as a majority of the roof ridgelines should be parallel to the street. *Winmore DesignCode*, page 31.

For single family houses a similar provision from the Design Code applies:

> All primary residences are to be placed within a specific range of distance from the street curb in front of the house. This build-to range will be specified by lot. In the case of curved or angled front yards, at least one point of the house must be within the range. For all other lots, a minimum of 12 ft. must be within the build-to range, unless a variance is granted for a bay, turret or other feature of architectural merit. Porches and architectural projections may be allowed to be closer to the street. Please note that the build-to lines will referenced from the curb, rather than from the right-of-way line (the lot line). In the event of a discrepancy between the curb and lot line, the lot line shall take precedence. *Winmore DesignCode*, page 18.

The complete *Winmore DesignCode* is attached to this document as Attachment A.

5. **The applicant for rezoning … must demonstrate that its planning, design and development will achieve …**

A generally rectilinear pattern of streets, alleys and blocks reflecting the street network in

existing small villages which provides for a balanced mix of pedestrians and automobiles.

- ***Section 15-141.2, Section 15-141.2 (a) 5.***

There will be no culs-de-sac at *Winmore*. Every street will start or end at another street.

Other than Olmsted Drive, Ruskin Drive, and Atterbury Street, which curve as they follow the slope contours overlooking the natural preserve area, residential streets travel in straight lines.

Winmore is designed to make pedestrians happy, not, in the words of Andres Duany to "make cars happy." Blocks are short and streets are generally narrow. On street parking is permitted throughout. This controls traffic speed and protects the pedestrian.

6. **The applicant for rezoning … must demonstrate that its planning, design and development will achieve …**

Squares, greens, landscaped streets and parks woven into street and block patterns to provide space for social activity, parks and visual enjoyment.

- ***Section 15-141.2, Section 15-141.2 (a) 6.***

The main square at *Winmore*, Philip's Square, is located at the intersection of the two most important streets, Winmore Avenue and Abbey Road. It will be a public place defined by surrounding building frontages. The enclosed area of the square, as defined by the building fronts, is approximately 89,670 square feet, or 2.1 acres. The outer perimeter of the square will be bounded the two streets and a connector street, Philip's Square with diagonal parking along the connector and parallel on-street parking on the other two streets. The streetscape of the 35,485 square foot (.81 acre) core of Philip's Square will consist of a formal landscape of paved sidewalks and paths, lawn, and trees, many preserved from the existing second-growth forest. Two proposed bus stops, one on each side of Winmore Avenue will be located at the square. The square at *Winmore* is a modified turbine square, also called a

pinwheel square, so named because its points of entry are eccentrically placed.

The second square is located between Olmsted Drive and Della Street at Sharp Street. It is an attached square, which, according to the Andres Duany, Patrick Pinnell and Michael Morrissey *Technical Pages* published by New Urban News is defined as "one that shares its urban block with one or more urban buildings. According to William H. Whyte, from his empirical studies on urban behavior, the attached square is more likely to be used than one surrounded by traffic." The enclosed area of the square, as defined by the adjoining building fronts and preserve boundary, is approximately 25,674 square feet. The attached square itself is 7,000 square feet.

A 7,589 square foot neighborhood park is located mid-block between Della Street and Zacman Lane. Within the landscaped park will be a 1,632 square foot public children's play area.

8. **The applicant for rezoning … must demonstrate that its planning, design and development will achieve …**

Provision of buildings for civic assembly or for other common purposes that act as visual landmarks and symbols of identity within the community.

- Section 15-141.2, Section 15-141.2 (a) 7.

Winmore has reserved the largest and most prominent location in the village center at the town square for a civic use building. The building occupying this space may ultimately be a either a church or a charter school. In either case, provision will be made for use of the assembly hall for civic assembly. The building itself provides us with a great opportunity for architectural articulation. It will, therefore have to meet rigorous architectural requirements and review.

9. **The applicant for rezoning … must demonstrate that its planning, design and development will achieve …**

A recognizable, functionally diverse, but visually unified village focused on a village green or square.

- Section 15-141.2, Section 15-141.2 (a) 8.

Winmore will be a small village surrounding a village green (or square). It will be functionally diverse because the *Winmore* development plan follows the principles of Traditional Neighborhood Development. To guide our decision making we adopted fourteen guidelines from the planning firm of Duany Plater-Zyberk & Co. and then we assigned points for adherence to each criterion, with a maximum total score of 100. Our evaluation of *Winmore* follows:

Table 1. Rating the project as a TND. (Self Evaluation)

TND Criterion	Max. Points	Points
1. The neighborhood should have a discernable center—often a plaza, square or green, and sometimes a busy or memorable intersection. A transit stop should be located at this center.	7	7
2. Most homes should be within a five-minute walk (1/4-mile) from the center.	8	8
3. There should be a variety of housing types—so younger and older people, singles and families, the low income and affluent, can find places to live.	7	7
4. There should be a variety of stores to supply the ordinary needs of a household. A grocery store is most important.	7	4
5. A small ancillary building should be allowed in the backyard of each house. It may be used as a rental apartment, or as a place to work.	7	7
6. There should be an elementary school close enough—less than one mile—so that most children can walk from home.	7	5
7. The center of the neighborhood should feel and be more compact than the edge, with homes and buildings closer to each other and closer to the sidewalk.	7	7
8. There should be playgrounds near every home. This distance should not be more than one-eighth of a mile.	7	7
9. Within the neighborhood, roadways should form a continuous network, an interconnected grid, providing a choice of routes while dispersing traffic.	8	8
10. Roadways should be relatively narrow and shaded by rows of trees, to slow traffic and create an environment that is friendly to pedestrians and bicyclists.	7	7
11. Parking lots and garage doors should only rarely face the street. Parking for residents, employees, maintenance, and high volume retail should be amply available at the rear of buildings and usually accessed by alleys and lanes. Curbside parking should be available for guests and for customers of smaller shops.	8	8

12. Certain prominent sites should be reserved for civic buildings. A building should be reserved at the center for neighborhood meetings.	7	7
13. The neighborhood should be self-governing, deciding on matters of maintenance, security, and the physical evolution of the neighborhood itself.	6	6
14. Work opportunities or transit to work should be available within walking distance.	7	6
Total	100	94

Winmore village will be visually unified because it will adhere to rigorous architectural standards, as set forth in the *Winmore DesignCode*.

10. The applicant for rezoning … must demonstrate that its planning, design and development will achieve …

Development of a size and scale, which accommodates and promotes pedestrian travel rather than motor vehicle trips within the village.

- Section 15-141.2, Section 15-141.2 (a) 9.

Winmore, through its design and ongoing management, will encourage and promote walking and biking as modes of choice for travel from one place to another, as well as for recreation, and exercise.

Winmore, in conjunction with Dan Burden's not-for-profit Walkable Communities, Inc. plans to become America's first Full Fitness Community™. Walkable Communities, Inc. is based on the premise that walkability "is the cornerstone and key to an urban area's efficient ground transportation. Every trip begins and ends with walking. Walking remains the cheapest form of transport for all people, and the construction of a walkable community provides the most affordable transportation system any community can plan, design, construct and maintain. Walkable communities put urban environments back on a scale for sustainability of resources (both natural and economic) and lead to more social interaction, physical fitness and diminished crime and other social problems. Walkable communities are more liveable

communities and lead to whole, happy, healthy lives for the people who live in them."

The Full Fitness Community™ program grew out of a November, 2002, Boulder, Colorado, meeting of the Robert Wood Johnson Foundation's *Active Living Network: Building Bridges between Placemaking and Health* attended by Dan and by *Winmore* developer Bob Chapman. Built around actively promoting walking and biking, the *Winmore* Full Fitness Community™ program will have the following performance objectives adapted from material provided by the Active Living Network:

- 60% of residents at *Winmore* accumulate the recommended 30 minutes of exercise most days, an increase from the current national level of less than 40%
- less than 15% of the residents at *Winmore* are obese, vs. 23% nationally
- less than 5% of children and adolescents at *Winmore* are overweight, vs. 11% nationally
- more that 2.5 of every ten trips made (1 mile or less) are by walking, an increase from less than one
- the average *Winmore* resident walks 800 yards a day, a 100% increase over the national average
- 50% of all kids walk or bicycle to school for trips a mile or less; an increase from present numbers for trips of a mile or less of 28% walking and less than 1% biking.

The *Winmore* program will be based on move-in surveys of each resident and family member and voluntary base-line tests followed by regular annual follow-up information gathering and analysis.

A range of active living promotion will be sponsored by *Winmore*. Twice annually "fitness festivals" will invite every resident to learn, compare, compete, and simply enjoy the pleasures and benefits of active living.

Because *Winmore* is located within one mile of three public schools: Seawell Elementary School, Guy B. Phillips Middle School, and a Chapel Hill High School, encouraging a safe and pleasant walking to school routine will be one or our highest priorities.

- To get more children traveling safely to school on foot or bike, with greater frequency, *Winmore* will implement a Walk Safe to School program following the US Department of Transportation's Safe Routes to Schools guidelines.

- We will organize *Winmore* participation in International Walk to School Day every October.

- We will organize "The Walking School Bus" in which a small group of students are accompanied by one or more adults on their walks to and from school.

Walkable communities have people, policies, places, that encourage support safe and pleasant routine walking. *Winmore* will be a walkable community.

11. The applicant for rezoning … must demonstrate that its planning, design and development will achieve …

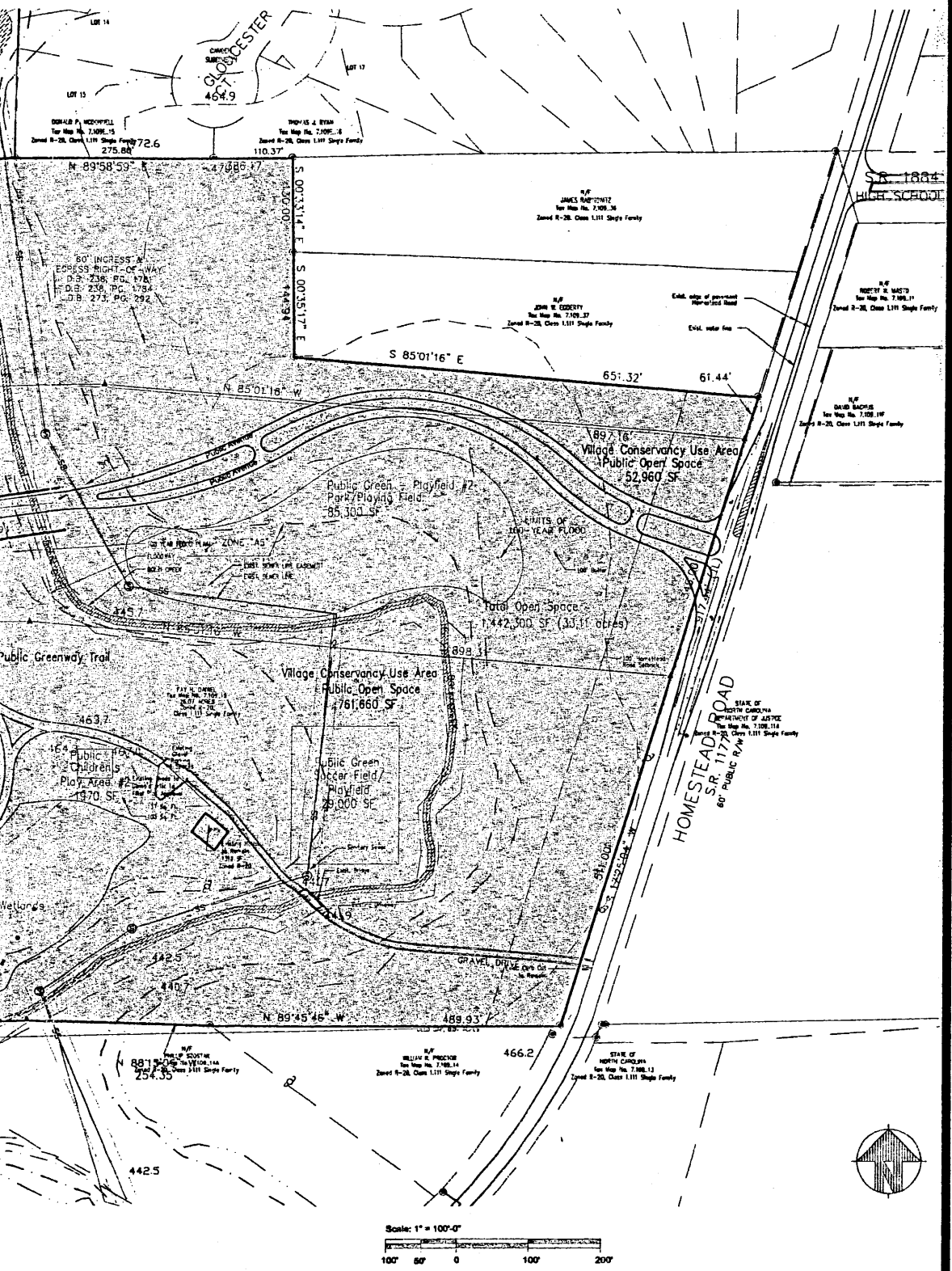
Compliance with the policies embodied in this chapter for the development of a village mixed use.

- Section 15-141.2, Section 15-141.2 (a) 10.

The developers of *Winmore* are fully committed to the policies embodied in Carrboro's VMU ordinance. We are confident that our submittals and presentations demonstrate this commitment. We believe that not only have we fully complied but that we have gone well beyond the minimum requirements. As examples, we point to the *Winmore* Green Building Program (Attachment B), this area's first to implement the Earthcraft standards of the SouthFace Institute, to the *Winmore*'s intention to become America's first Full Fitness Community™, and to the rigorous *Winmore DesignCode*.

The Town of Carrboro deserves to be commended for adopting it's breakthrough Village Mixed Use zoning code. In many, if not most, other jurisdictions the development of mixed-use, mixed-income, walkable and compact communities is either difficult, discouraged or not permitted. Carrboro's Village Mixed Use code is a marvelous breath of fresh air for a New Urbanist developer used to conventional codes that, in the words of Andres Duany "administer only the segregation of land uses and their buffering, the limiting of density, the assurance of sufficient parking, the protection of traffic flow, the provision of quantities of undifferentiated 'open space,' and a ruralized conception of environmental responsibility."

Development of the high order called for by the Carrboro Village Mixed Use Ordinance has a myriad of social and environmental benefits. It also fulfills a largely unmet need. Market studies show that between 30 and 70 percent of Americans, depending on location, would prefer to live in compact, walkable, mixed-use communities — if they had that option. Unfortunately less than 1% of new development in America conforms to, or even aspires to, the principles that are so well articulated in the VMU ordinance.



Scale: 1" = 100'-0"

100' 50' 0 100' 200'

RESIDENTIAL USE DENSITY CALCULATIONS	SYMBOLS & LINETYPE LEGEND
7.4 Units/Acre – 1.111 – Single Family Housing Use 19.0 Units/Acre – 1.321 – Multi-Family Housing Use (Townhouses) 22.8 Units/Acre – 1.331 – Multi-Family Apartments Use includes: 34.3 Units/Acre – Affordable Apartments 28.4 Units/Acre – Cooperative Housing 15.0 Units/Acre – Live/Work Units	SS EXISTING SEWER LINE EXISTING UTILITY EASEMENT EXISTING STREAM BUFFER EXISTING 100 YEAR FLOOD PLAIN EXISTING STREAMBED EXISTING 30' STREAM BUFFER EXISTING STREAM EXISTING BOLIN CREEK EXISTING ROCK OUTCROPPING
USES OTHER THAN RESIDENTIAL	
Proposed Use 32,000 – Village Mixed Use All uses listed under B3-T & O/A in the Table of Permissable Uses (11-11-02) are allowed.	

on by Zone
Acreage 2,386,118.45 Sq. Ft. 54.78 Acres
(Not Required) 48 Apartment Units
ot Required) 20 Live/Work Units
@ R:20 = 119 Units
@ R:10 (VMU) = 238

PSA
Philip Szostak Associates
Philip Szostak Associates
310 1/2 West Franklin Street
Chapel Hill, NC
27514

Tele: 919.929.5244
Fax: 919.960.7967

Winmore
Carrboro, NC

1 Revised 9/20/02
2 Revised 11/25/02
3 Revised 3/14/03

Permit Requested: CUP

Applicant:
Winmore Land Managment
310 1/2 West Franklin Street
Chapel Hill, NC 27514
(919) 929-5244
(919) 960-7967 Fax

Owner:
Annie H. Coffer
405 Smith Level Road
Chapel Hill, NC 27516

Bryan & Helen Yates
1258 Manns Chapel Road
Pittsboro, NC 27312

Fay H. Daniel
1318 Homestead Road
Chapel Hill, NC 27516

Consulting Firm:
John R. McAdams Company
PO Box 14005
Research Triangle Park, NC
27709
(919) 361-5000
(919) 361-2269 Fax

Designed By:
Philip Szostak Associates
310 1/2 West Franklin Street
Chapel Hill, NC 27514
(919) 929-5244
(919) 960-7967 Fax

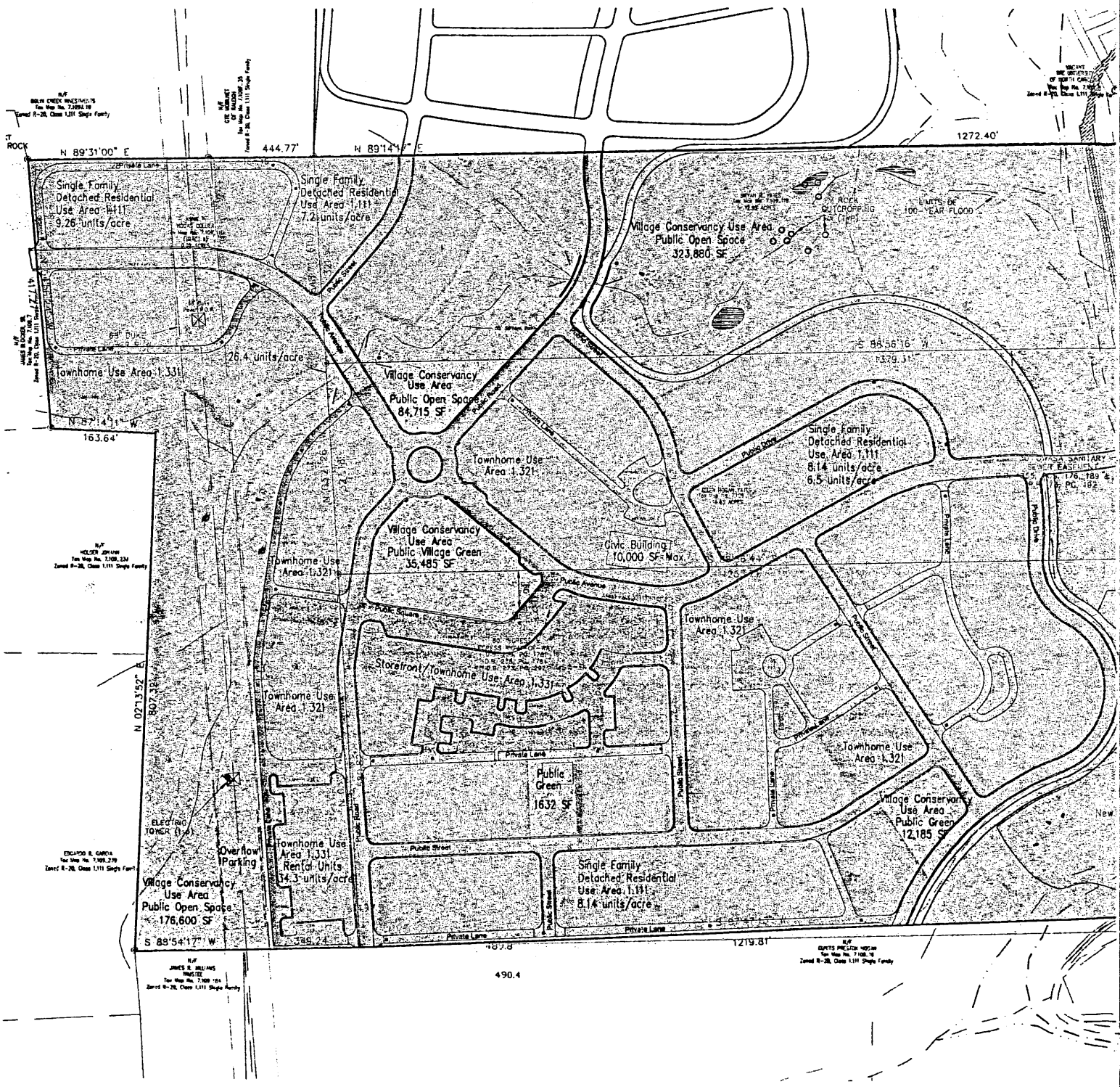
Date: 03.21.03
Proj Manager PLS Proj Architect PLS
Drawn By APS RGF Checked By PLS

If this drawing is not 24" x 36" it is a reduced print - refer to graphic scale

Scale 1" = 100'-0"

Master Plan

Sheet title



Density Calculat
1. Adjusted Trac
2. Density Bonu
3. "Free" Units (
Allowed Density
Allowed Density

ATTACHMENT 3-F

Winmore Land Management, LLC
310 1/2 West Franklin Street
Chapel Hill, NC 27514
(919) 929-0336

Winmore

Green Builder Program Handbook

Winmore Green Builder Guidelines
(Adapted from EarthCraft/Southface Energy Institute Standards)

Table of Contents

Winmore Green Builder Guidelines
(Adapted from EarthCraft/Southface Energy Institute Standards)

Introduction

Winmore will be the first private development project in the Triangle to adopt rigorous sustainable development guidelines. Use of the guidelines will enable builders and subcontractors to build houses that are resource and energy efficient, have lower maintenance requirements, and are healthy to live in. In addition, the guidelines will help to protect natural habitat, streams and other environmental features and to ensure proper disposal or recycling of waste during and after the construction process. We are calling this the *Winmore* Green Builder Program. *Winmore* believes that adherence to these guidelines will provide a benefit to the community and the environment, and will meet an unsatisfied market demand for housing that fits better with and more lightly on the Earth.

The *Winmore* Green Builder Program has been adapted, with permission of the SouthFace Institute, from the EarthCraft House program developed by SouthFace Institute with and for the Atlanta Home Builders Association. We gratefully acknowledge the work of these organizations in creating an excellent program that serves as a model for others.

The *Winmore* Green Building Program works on a point system with a total of 200 points (out of roughly 500 points) required to receive the Green Builder certification. While each house in Winmore will have to receive this certification, the point system allows flexibility in how builders meet this requirement.

***Winmore* Land Management, LLC**

Winmore Green Builder Guidelines
(Adapted from EarthCraft/Southface Energy Institute Standards)

SITE PLAN

Required: comply with all federal, state, & local erosion control and tree protection measures

Required: Site erosion control plan
Builder shall follow guidelines set forth in the NAHB Research Center publication, "Storm Water and Nonpoint Source Pollution Control—Guide for Builders and Developers" and local erosion and sediment control provisions. Builder shall submit documentation of a site plan for erosion and sedimentation control before site is cleared or graded including contours of slopes to be cleared, location and type of erosion c ontrol measures, stormwater and sediment management systems, and a vegetative plan for temporary and permanent stabilization.

NAHB RESEARCH CENTER

National Association of Home Builders Research

Required: Workshop on Winmore Green Builder program
Builder, contractor, and sub-contractors will attend a workshop explaining the Green Builder program and what is required under it.

Excavated topsoil protected from erosion
Builder shall have a site plan that designates topsoil areas to be protected from all construction activities. Protected topsoil areas shall be clearly marked and the builder shall communicate protection measures to all subcontractors. Excavated topsoil shall be protected from erosion with tarps or other suitable material.

Grind stumps and limbs for mulch
Builder shall grind a minimum of 80% of all tree stumps and limbs for mulch. Mulched material cannot be buried in a landfill.

Mill cleared logs
A minimum of 80% of logs that meet commercial sawmill standards shall be taken to a sawmill for processing into lumber, pulp or other use. Logs cannot be buried in a landfill, burned or chipped.

Use of redundant mulch, compost, or straw bales for erosion control
In addition to required silt fencing, builder shall install mulch, compost, or straw bale berms or blankets. These additional measures shall be installed on steep slopes, locations where silt fences do not hold up, and around storm drains.

The National Arbor Day Foundation

Building *With* Trees

Building With Trees program
Builder shall participate in the Building With Trees program developed by the National Arbor Day Foundation in cooperation with NAHB. Builder shall complete the Build With Trees Pledge and comply with Planning and Design, Tree Protection During Construction, and Maintenance/Long-term Care requirements of the program.

Individual trees fenced at drip line
No soil from clearing, grading, or construction activity shall be placed on top of any root zone for trees that are designated on a site plan to be preserved. Trees must be fenced around the drip line throughout the construction process. Fences must be firmly set-if wood fence posts are used, they must be a minimum of 2x2 lumber.

Protected tree save area
A minimum of 25% of the lot must be protected from all grading and tree clearing for lots 1 acre or smaller. These points can also be taken if 25% of the land in the community is protected, even if not every lot has 25% of its area protected. Lots larger than 1 acre must protect 75% of their area in order to take these points.

Tree planting
Site plan shall document that a minimum of 12 trees per acre is planted. For example, if the house is built on a 1/2 acre lot, 6 trees must be planted.

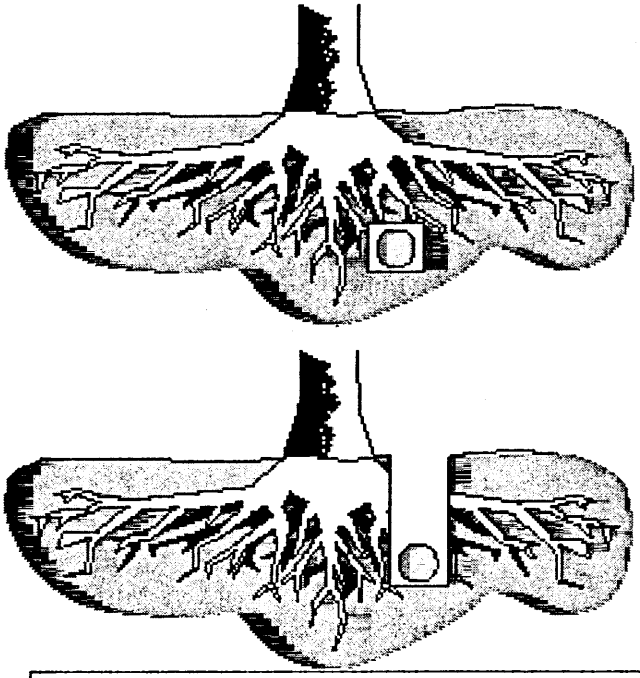
Winmore Green Builder Guidelines
(Adapted from EarthCraft/Southface Energy Institute Standards)

Tree preservation plan

A tree expert (certified arborist, or individual with a professional degree in forestry, landscape architecture or related field) shall develop a site plan prior to clearing, grading, or construction that identifies existing trees with diameter at breast height dimensions exceeding 2 inches and which designates trees to be protected during all construction activities. Tree root zones (area extending in all directions from trunk) must be protected with physical barrier. Tree Preservation Plan shall be reviewed with subcontractors and posted on job site.

Utilities in tree root zones tunneled or hand dug

Trees that are marked to be preserved on a site plan and for which utilities must pass through their root zones shall not have surface-dug trenches. Tunnels shall be dug through the root zone in order to minimize root damage (one point per tree - maximum 5 trees).



Tunnel to minimize root damage (top) as opposed to surface-dug trenches in root zone

Winmore Green Builder Guidelines
(Adapted from EarthCraft/Southface Energy Institute Standards)

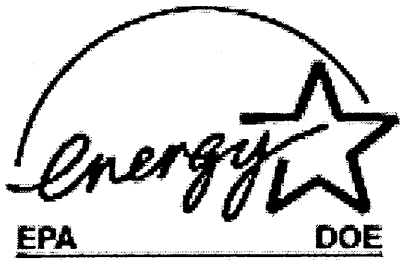
BUILDING ENVELOPE AND SYSTEMS ENERGY EFFICIENCY

The building envelope defines the conditioned and unconditioned spaces in the house. The building envelope consists of two parts: a thermal barrier (insulation) and an air barrier (any number of materials and approaches). For instance, an unfinished basement (without carpet, drywall, etc.) where the exterior walls are insulated and air sealed shall be considered "conditioned space" for the purposes of the Green Builder program. An unfinished basement where the insulation and air barrier are in the ceiling is considered "unconditioned space."

ENERGY STAR

www.energystar.gov

Home must be certified Energy Star in compliance with guidelines set by the U.S. Environmental Protection Agency and U.S. Department of Energy. Builder must provide verification of Energy Star certification upon completion of construction. The house must be rated "5 star" by a certified HERS rater; this evaluation requires a blower door and a duct pressurization test plus a certified software rating. Certified HERS raters can be found on the web at www.natresnet.org.



www.energystar.gov

AIR LEAKAGE TEST

Building envelope air leakage test

Certify that the house has a maximum of 0.35 air changes per hour using standard blower door testing protocol set forth by ASTM for house pressurization testing at 50 Pascals. The builder must submit verification of third party testing upon completion. Certified testers can be found on the web at Residential Energy Services Network, www.natresnet.org.

$$ACH_{natural} = \frac{ACH_{50}}{N}$$

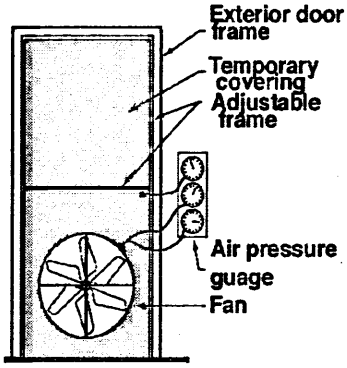
N=CxHxS

C=Climate correction factor

H=Height correction factor

S=wind Shielding factor

see next page for formula breakdown



Blower door diagnostics determine building envelope leakage

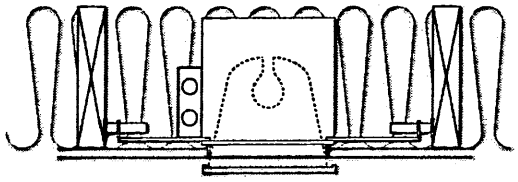
Winmore Green Builder Guidelines
(Adapted from EarthCraft/Southface Energy Institute Standards)

AIR SEALING MEASURES

Required: Houses must meet or exceed the air sealing requirements of the North Carolina Energy Code.

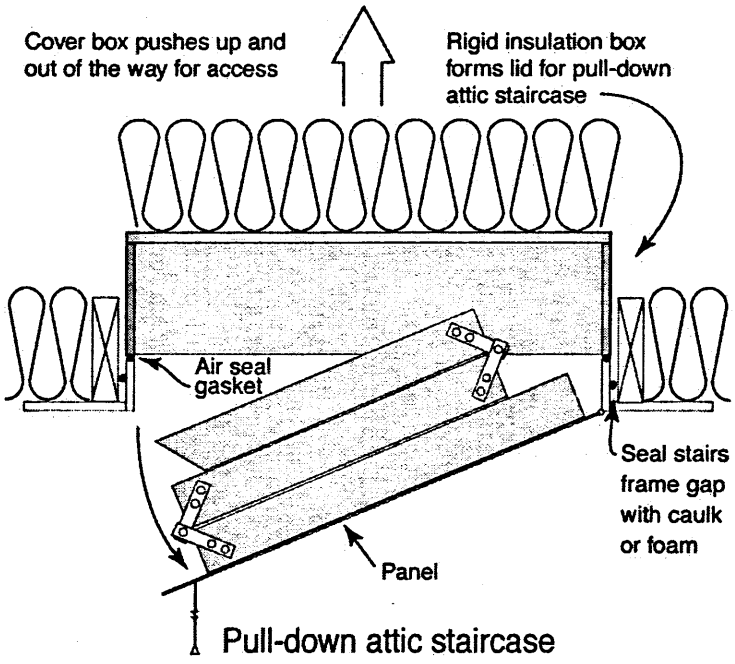
Airtight IC recessed lights or no recessed lights in insulated ceilings

Recessed lights in ceilings with an unconditioned area above must meet the Georgia Energy Code specification (1995 MEC section 502.3.4 section 1 or 3) for air tightness and must be Insulation Contact (IC) rated. These points are available for homes which do not have recessed light fixtures connecting conditioned to unconditioned areas.



Attic access opening (pulldown stairs/ scuttle hole)

Pull-down attic stairs and scuttle holes that are located in conditioned space shall be weatherstripped to provide an airtight seal against the ceiling trim and drywall. These points are available for homes which do not have access openings connecting conditioned space to unconditioned attic areas.

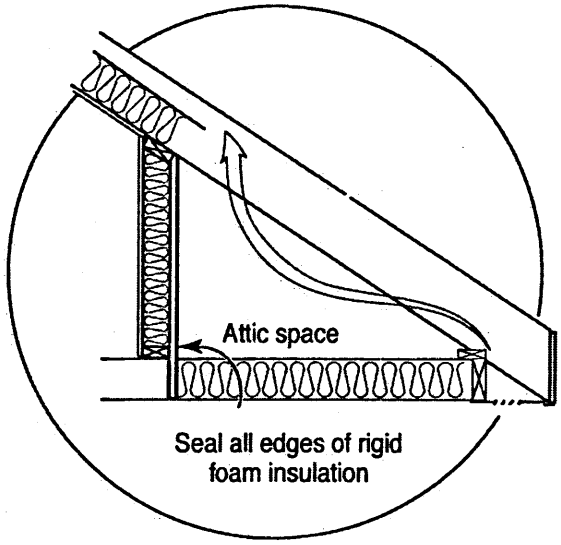


Attic kneewall doors (weatherstripped with latch)

Doors in kneewalls that connect conditioned space to unconditioned attic areas shall be weatherstripped and latched to provide an airtight seal against the door trim and wall drywall

Attic kneewall has sealed exterior sheathing

Sheet material shall be sealed to the kneewall framing on the attic side of the kneewall to create an airtight seal using caulk or housewrap tape. Sheathing or blocking must extend down between the flat ceiling joists to seal the floor joist cavities.



Band joist between conditioned floors sealed

All band joist areas between conditioned floors shall be sealed with gaskets, caulk or spray foam. Band joists shall also be insulated.

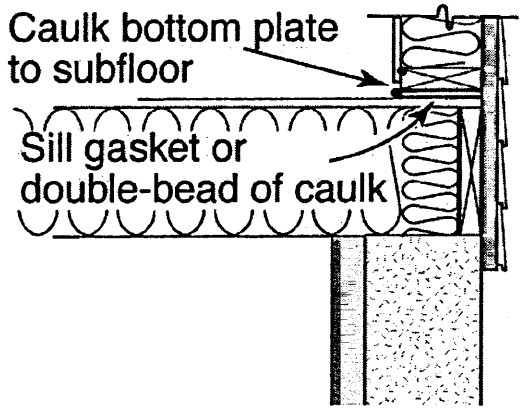
Bath tub or shower drain

The opening in the subfloor between conditioned and unconditioned areas for tub and shower drain lines shall be sealed with sheet material and sealant. If tub or shower is on exterior wall, wall shall be insulated and covered with airtight sheet material such as plastic, drywall, or sheathing.

Bottom plate of exterior walls

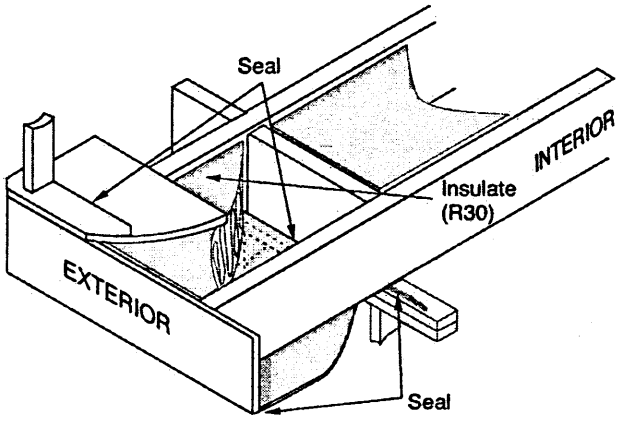
The bottom plate of the entire length of exterior walls plus walls adjacent to unconditioned spaces for all

levels shall be sealed to subfloor with caulk, spray foam, gasket or construction adhesive.



Cantilevered floors sealed above supporting wall

For floors with conditioned area over unconditioned open areas, the floor joist cavity shall be sealed with sheet material or blocking and sealant above the top plate of the supporting wall. These points are available only for homes with cantilevered floors.



Air seal and insulate cantilevered floors

Ceiling drywall sealed to top plate

For all exterior and interior walls, edges of the ceiling drywall between conditioned and unconditioned areas shall be sealed to top plate with gaskets, caulk, spray foam, or other sealant.

Ceiling penetrations sealed between unconditioned and conditioned space

All holes in the ceiling assembly for plumbing, wiring, ductwork, and other purposes connecting conditioned and unconditioned areas shall be sealed. This includes holes made through the ceiling (such as caulking light fixture boxes to the drywall) as well as holes made through all wall top plates. Penetrations for flues and other heat producing items shall be sealed with noncombustible materials and high temperature sealant. Seal every penetration between the conditioned and unconditioned space. For larger holes use sheet materials such as scrap sheathing, drywall or plywood. For smaller holes and gaps use spray foam, caulk or other sealant.

Chases sealed and insulated

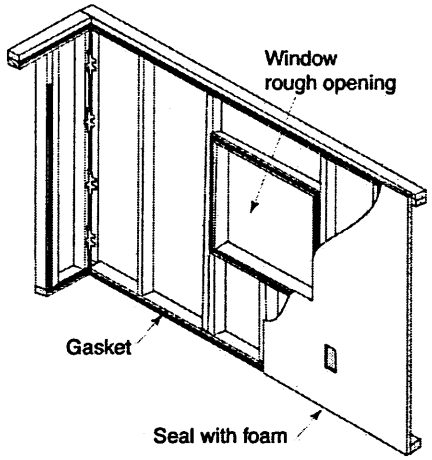
Framed spaces that connect conditioned areas to unconditioned attics, basements or crawl spaces shall be sealed with sheet material and sealant. These areas include chases for plumbing, ductwork, chimneys and flues. For chases with high temperature heat sources, noncombustible sheet materials, such as sheet metal and high temperature caulk, shall be used. Where the code prohibits sealing this gap (such as with fireplace flues) manufacturer-supplied sheet metal shall be used that fits the flue pipe as closely as allowed. Breaks in framing and interior finish materials, such as for dropped soffits and changing ceiling heights, that connect unconditioned and conditioned areas shall be sealed with blocking or sheet material and sealant.

Drywall penetrations in exterior walls

All holes and penetrations (such as those created by electrical fixture boxes and duct boot penetrations) shall be sealed with caulk, gaskets, or other appropriate sealant to create an airtight connection with the drywall.

Drywall sealed to bottom plate of exterior walls

Drywall adhesive, gaskets or other sealant shall be applied to the inner face of bottom plate of exterior walls prior to installation of the drywall. Alternately,



spray foam sealant can be installed after drywall installation to seal the bottom edge of the exterior wall drywall to the subfloor.

Exterior wall sheathing sealed at plates and seams

Caulk, gaskets, tape or other appropriate sealant shall be applied to the exterior wall sheathing to create an airtight connection to the framing. All holes and penetrations (such as those created by subcontractors) shall be sealed.

Fireplace air sealing package

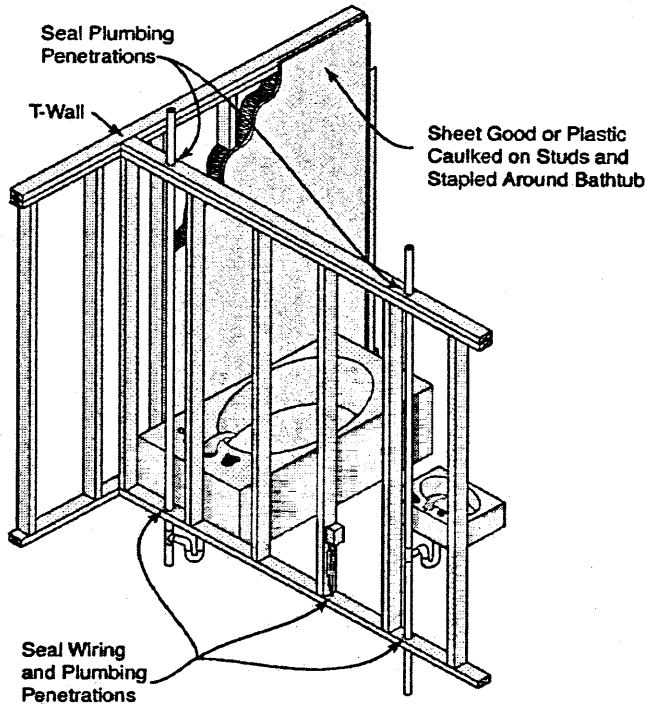
For pre-fab fireplaces on exterior walls, the exterior wall stud cavities shall be covered with OSB, drywall or other acceptable sheet material prior to installation of fireplace unit, or the insert cavity and chase shall be sealed and isolated from the conditioned space. Flue penetrations between conditioned and unconditioned space must be sealed with noncombustible sheet material and high temperature sealant. Fireplace units must have an outside source of combustion air, operable damper and glass doors. Sealed combustion, direct-vent units are eligible for these points in addition to combustion safety points. These points are available for homes which do not have fireplaces.

Floor penetrations between unconditioned and conditioned space

All holes in the floor assembly for plumbing, wiring, ductwork, and other purposes connecting conditioned and unconditioned (and exterior) areas shall be sealed. Penetrations for flues and other heat-producing items shall be sealed with noncombustible sheet materials and high temperature sealant.

Window and door rough openings

The space between the framing for window or door rough openings and the installed units shall be sealed with nonexpanding spray foam sealant, closed cell foam backer rod, spray applied insulation, or other suitable sealant. Fiberglass or rock wool batt insulation is not acceptable as a sealant but can be used as a backing for a sealant (such as caulk). Thresholds for exterior doors shall be sealed to the subfloor.



Floor penetrations sealed between unconditioned and conditioned space

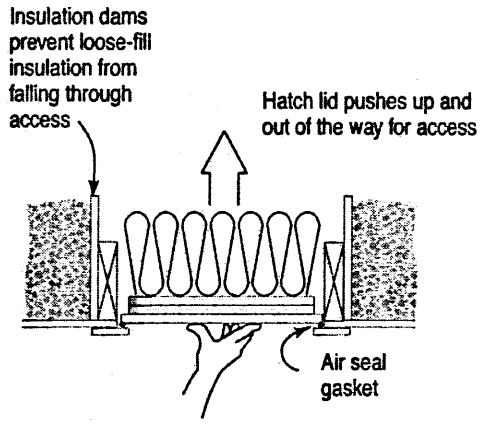
INSULATION

Required: Houses must meet or exceed the insulation of the North Carolina Energy Code

Note: Homes with multiple foundation types must use foundation type of greatest area for points

Attic kneewall doors (R10)

Doors in kneewalls that connect conditioned space to unconditioned attic areas shall be insulated to R10 or greater.



Scuttle hole cover

Winmore Green Builder Guidelines
(Adapted from EarthCraft/Southface Energy Institute Standards)

Attic kneewall doors (R19)
Doors in kneewalls that connect conditioned space to unconditioned attic areas shall be insulated to R19 or greater.

Attic kneewall stud cavities (min R19)
Install R19 or greater insulation inside stud cavities. One additional point is available if kneewall is insulated to R30.

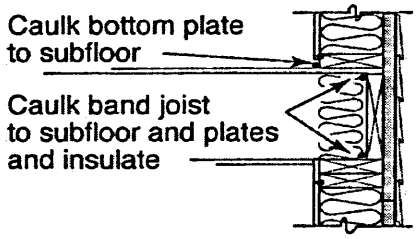
Attic kneewall with insulated sheathing (R2.5)
Insulated sheathing equal to or greater than R2.5 shall be installed to the kneewall framing on the attic side of the kneewall.

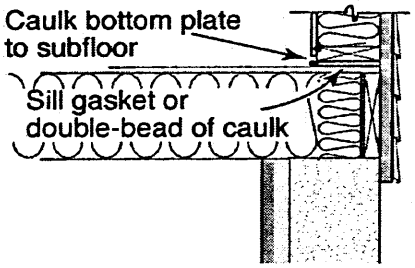
Attic kneewall with insulated sheathing (R5)
Insulated sheathing equal to or greater than R5 shall be installed to the kneewall framing on the attic side of the kneewall.

Attic kneewall with non-insulated sheathing
Rigid sheathing shall be installed to the kneewall framing on the attic side of the kneewall.

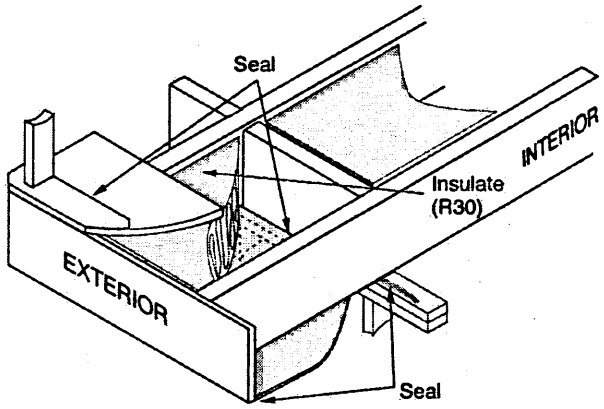
Attic pull-down or scuttle hole (R19)
Pull-down attic stairs located in conditioned space shall have an insulated box equal to or greater than R19. Scuttle holes that are located in conditioned space shall be insulated with batt insulation or rigid foam insulation to R19 or greater.

Band joist insulated (R19)
The band joist connecting two conditioned floors shall be insulated to R19 or greater.



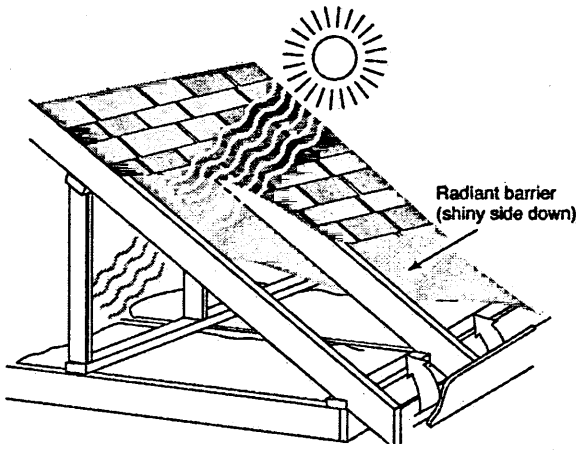


Cantilevered floor (R30)
For floors with conditioned area over unconditioned open areas, the floor joist cavity shall be sealed with sheet material or blocking and sealant above the top plate of the supporting wall and insulated to R30, either with batt insulation between floor joists or with a combination of joist insulation and insulated sheathing on underside of floor joist.



Air seal and insulate cantilevered floors

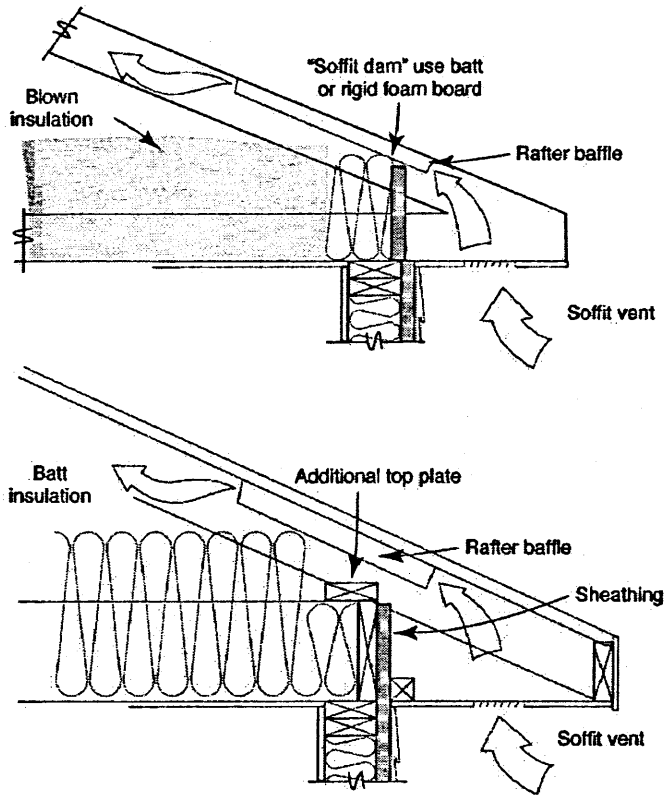
Ceiling radiant heat barrier
A radiant heat barrier must be installed over at least 80% of the vented attic space. The radiant barrier must have a reflective surface facing down towards a minimum 1-inch vented air space and have an emissivity rating of 0.05 or less.



Concrete or Masonry Basement walls
Both masonry and framed basement walls shall have complete insulation coverage from floor to ceiling equal to or greater than R10.

Winmore Green Builder Guidelines
(Adapted from EarthCraft/Southface Energy Institute Standards)

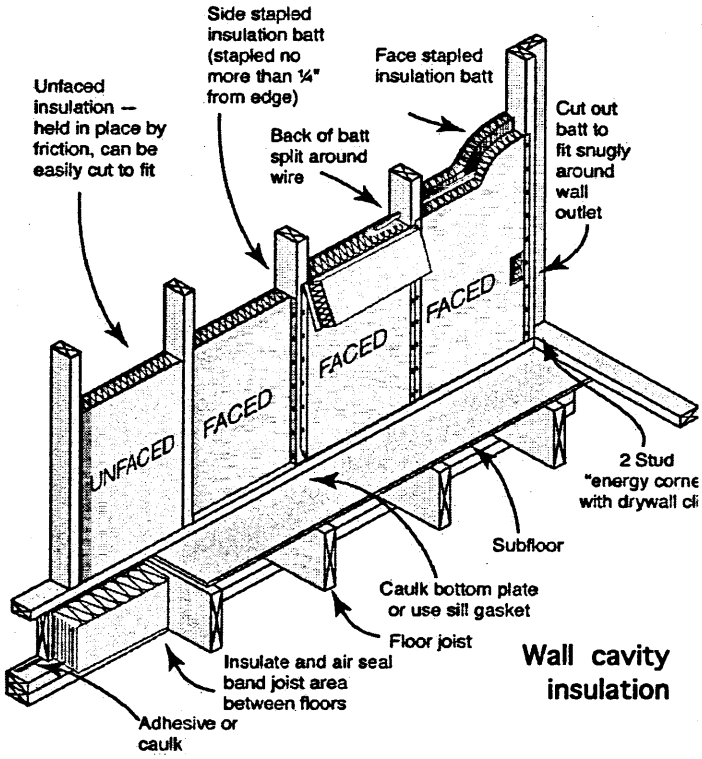
Energy heel trusses or raised top plates
To ensure full depth of attic insulation above exterior wall top plates, energy trusses with raised top chord or raised top plate for joist rafter assemblies shall be used.



Exterior wall stud cavity (R15)
Insulation between stud cavities in exterior walls shall be equal to or greater than R15. Insulation shall be installed according to manufacturer's specifications and provide complete coverage. (See illustration in next column)

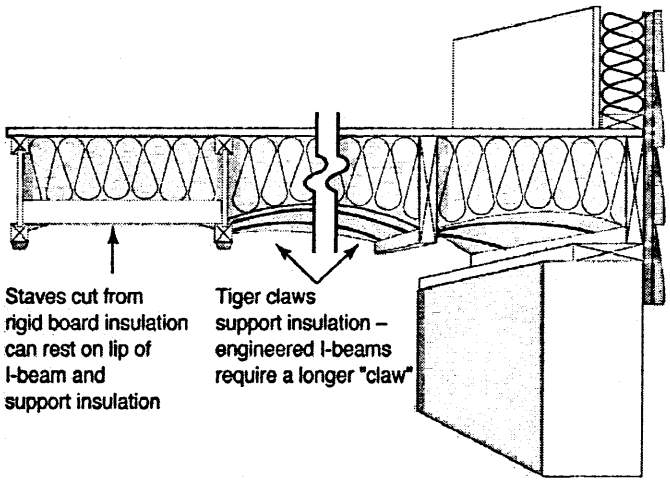
Flat ceilings (R30)
Ceilings with unconditioned attic space above shall have complete coverage of attic insulation equal to or greater than R30. A maximum of 5% of ceiling area shall be R19 or greater to accommodate elevated attic flooring for storage or mechanical equipment.

Flat ceilings (R38)
Ceilings with unconditioned attic space above shall have complete coverage of attic insulation equal to or greater than R38. A maximum of 5% of ceiling area shall be R25 or greater to accommodate elevated attic flooring for storage and mechanical equipment.



Wall cavity insulation

Framed floor over unconditioned space (R19)
Framed floors over unconditioned areas shall have continuous R19, or greater, insulation. Batt insulation shall be in direct contact with subfloor and supported at least every 18 inches. Band joist R-value shall be equal to or greater than R19.

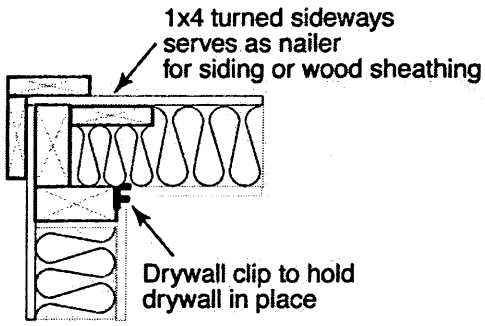


Insulate framed floor

Winmore Green Builder Guidelines
(Adapted from EarthCraft/Southface Energy Institute Standards)

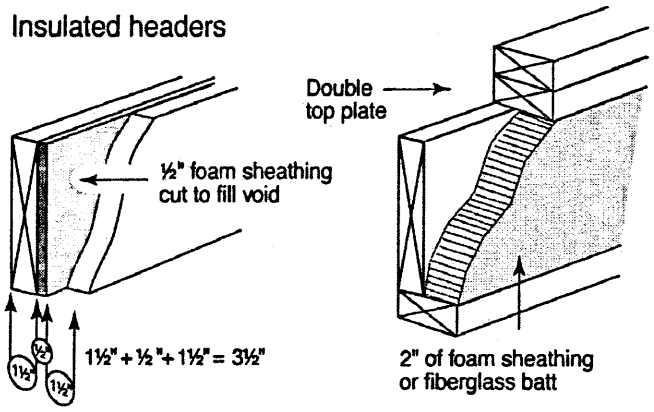
Insulate fireplace chase
Exterior fireplace chase which connects to conditioned space shall be insulated to a minimum of R13. Insulation must be continuous in exterior walls and ceiling above. Insulation shall be located no closer than 1-inch to the flue pipe, or according to local code. These points are available for homes without fireplaces.

Insulated corners
The intersecting corner of two outside walls shall be framed such that insulation is continuous in the external wall (corners with unnecessary 2x4's are not permitted). A "California corner" or two stud corner with drywall clips are methods of achieving this.



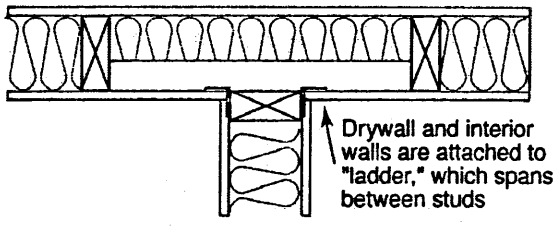
Insulated headers
Exterior walls featuring headers (over windows and door openings) shall be framed with at least 1/2 inch of rigid foam insulation between the 2x members. Other methods of achieving insulated headers, such as boxed headers with insulation batts, are also acceptable.

Insulated headers



Insulated T-walls
The intersection of an interior wall and an outside wall shall be framed such that insulation is continuous in the external wall. A "ladder" type intersection is one method of achieving this.

Advanced ladder T-wall framing



Advanced framing techniques add insulation

Insulated wall sheathing (R2.5 or greater)
The sheathing for exterior walls shall be equal to or greater than R2.5. Sheathing shall be installed with no gaps larger than 0.25 inch and provide complete coverage except for where structural sheathing is required by code (maximum of 25%).

Insulated wall sheathing (R5 or greater)
If the exterior wall sheathing is equal to or greater than R5, one additional point is available.

Loose-fill attic insulation card and rulers
Written documentation (an "attic card") specifying the insulation type, coverage area, and Rvalue shall be provided if loose-fill insulation is installed in the attic. Attic rulers to verify insulation depth must be provided every 300-ft. and facing the attic entrance. Insulation must be installed according to manufacturer's specifications and provide for complete coverage and full R-value including areas under flooring for attic storage and mechanical equipment.

Sealed, insulated crawl space walls (R8)
Crawl space walls shall be airtight and sealed with caulk, foam sealant, or gasket between the foundation stem wall and the sill plate, between the sill plate and the band joist, and between the band joist and subfloor. All penetrations in the crawl space wall shall be sealed and access doors weatherstripped. Walls shall be insulated to R10 or greater. Any vents must be closed and sealed.

Slab insulation
R4 or greater exterior slab insulation, such as for monolithic slabs, may be installed with approved membranes (such as EPDM-type membranes) to protect against termites. Alternatively, nonmonolithic

slabs may use rigid insulation between the stem wall and the poured (floating) slab, using the protective membrane as a termite flashing and as a capillary break.

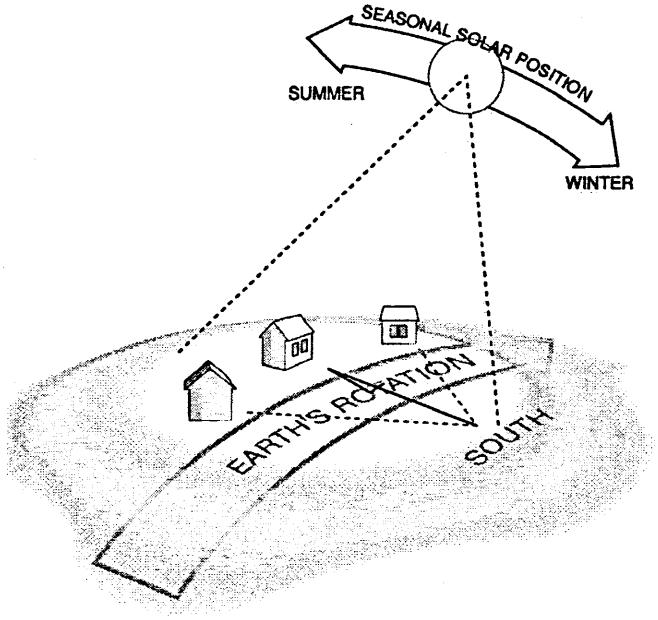
Spray applied wall insulation
Spray applied cellulose insulation shall be applied to a minimum of 80% of exterior wall stud cavities (plus walls adjacent to unconditioned spaces), including band joist areas between floors.

Vaulted and tray ceilings (R25)
Vaulted, tray, or cathedral ceilings shall be insulated to R25 or greater.

Vaulted and tray ceilings (R30)
Vaulted, tray, or cathedral ceilings shall be insulated to R30 or greater.

WINDOWS
Required: Window areas and U-factors or R-values must comply with the North Carolina Energy Code

Certified passive solar design
Builder certifies that passive solar heating contribution shall reduce heating loads by 25% or greater and not increase cooling loads by more than 10%. Certification shall be based on Energy 10 or similar modeling program and included with the scoring worksheet.



East facing glazing less than 3% of floor area
The total window or door glazing area within 25 degrees of due east shall be less than 3% of the total floor area.

Inert gas filled double glazed units
Double paned windows must have an insulating gas, such as argon or krypton, between the two panes.

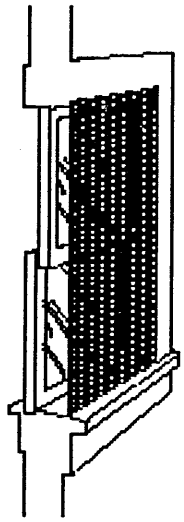
Low emissivity glazing
Windows shall have a minimum of two glazing layers and the inner surface of one layer contain a low emissivity coating.

NFRC rated windows
Windows shall be rated by the National Fenestration Ratings Council and have a U-factor of 0.56 or less (or an R-value of 1.8 or greater).

Solar Heat Gain Coefficient
Windows facing east, west, and south shall have a Solar Heat Gain Coefficient of 0.4 or less.

Solar shade screens
At a minimum, windows facing east and west shall have solar shade screening with a shading coefficient of 0.7 or greater. Shade screening shall be installed on exterior of window glazing. Exterior shade screens reduce heat gain through windows by up to 70%.

Exterior shade screens reduce heat gain through windows by up to 70%



2-foot overhangs on all sides
All windows shall have a minimum 2-foot overhang to protect against moisture and solar gain.

West facing glazing less than 2% of floor area
The total window or door glazing area within 25 degrees of due west shall be less than 2% of the total floor area.

HEATING AND COOLING EQUIPMENT

Required: Heating and cooling equipment must meet or exceed the North Carolina Energy Code requirements.

Cooling equipment has non-CFC and non-HCFC refrigerant

All cooling equipment shall be charged with refrigerants not containing CFC's or HCFC's.

Cooling equipment sized within 6,000 btu/h of Manual J

The size of all heat pump equipment shall be within 6,000 btu/h of the cooling load as determined by the Air Conditioning Contractors Association (ACCA) and American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Manual J guidelines. Builder must submit documentation of Manual J sizing with the scoring worksheet.

Geothermal heat pump

All geothermal heat pumps shall have a cooling Energy Efficiency Ratio (EER) of 11.0 or greater and a heating Coefficient of Performance (COP) of 2.5 or greater as determined by the Air Conditioning and Refrigeration Institute (ARI). ARI on the web at www.ari.org.

Heating equipment sized within 25,000 btu/h of Manual J

All furnaces and heat pump equipment shall be within 25,000 btu/h of the heating load as determined by the Air Conditioning Contractors Association (ACCA) and American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Manual J guidelines. Builder must submit documentation of Manual J sizing with the scoring sheet

HSPF 7.8 heat pump

A minimum of 75% of all air source heat pump output shall have a Heating Seasonal Performance Factor of 7.8 or greater.

HSPF 8.0 heat pump

A minimum of 75% of all air source heat pump output shall have a Heating Seasonal Performance Factor of 8.0 or greater.

Measured airflow to within 15% of manufacturer's specifications

Forced-air cooling systems shall have total airflow certified by independent third party inspection to be within 15% of manufacturer's specifications. Builder must submit documentation with the scoring worksheet.

90% AFUE furnaces

A minimum of 75% of all furnace heating system output shall have an Annual Fuel Utilization Efficiency (AFUE) greater than or equal to 90%.

Outdoor thermostat for heat pump

All air source heat pumps shall have an outdoor thermostat installed according to manufacturer's specifications that restricts electric resistance heating when outdoor air temperatures are above 40 degrees Fahrenheit.

Programmable thermostat

All heating and cooling equipment shall have an automatic, programmable indoor thermostat installed according to manufacturer's specifications.

Radiant floor heating

Points are only available for radiant floor heating systems greater than 200 square feet.

SEER 12 cooling equipment

A minimum of 75% of all cooling system output shall have a Seasonal Energy Efficiency Ratio (SEER) of 12 or greater.

SEER 14 cooling equipment

A minimum of 75% of all cooling system output shall have a Seasonal Energy Efficiency Ratio (SEER) of 14 or greater.

Sensible Heat Fraction

All air conditioners and heat pumps shall have a cooling Sensible Heat Fraction of 0.7 or less. Builder must submit documentation of Sensible Heat Fraction with the scoring worksheet. A specification sheet on the installed equipment can be used for documentation.

Zone control

For multi-zoned HVAC systems, each zone must have a separate temperature control.

DUCTWORK / AIR HANDLER

Required: All ductwork musst be installed according to the North Carolina Energy Code

Air handler located within conditioned space

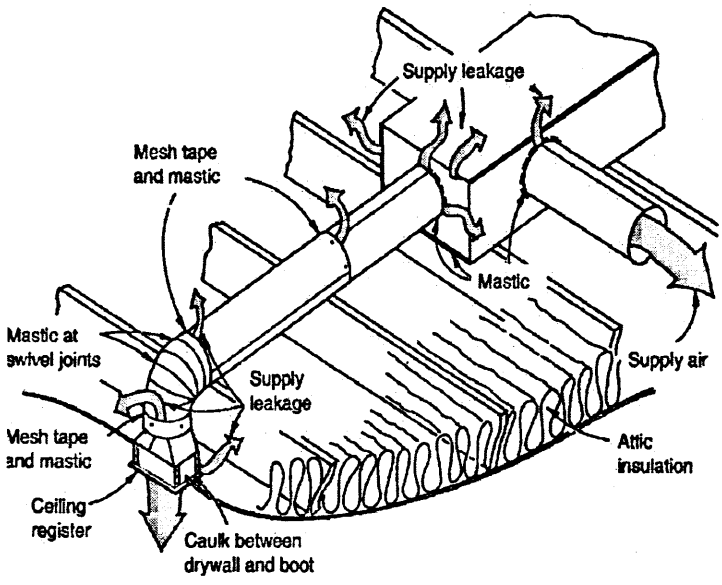
All air handlers are located within conditioned space. Vented combustion closets are not considered conditioned space. Furnaces using room air for combustion (including unfinished basements) are not eligible.

Airflow for each duct run measured and balanced

Airflow for each duct run shall be measured and balanced to comply with Manual D specifications. Builder must submit documentation of airflow measurement by independent third party testing agent.

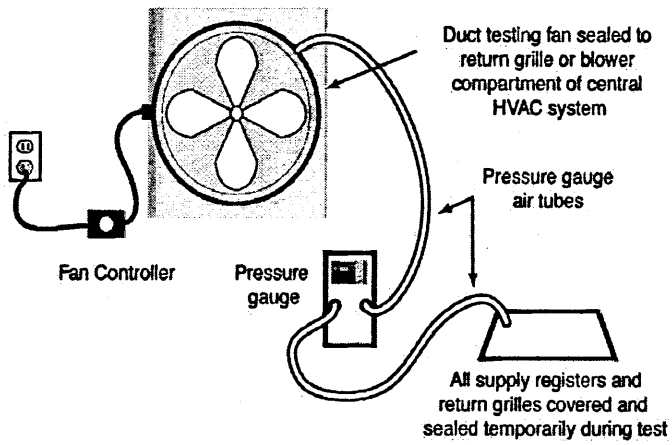
Required: All duct seams and air handler sealed with mastic

All transverse seams in supply and return ducts, including supply and return plenums and leakage sites in the air handler, shall be sealed with duct mastic and fibrous reinforcing mesh according to SMACNA specifications. Duct tape is not a suitable sealant for ducts but may be used for sealing leakage sites at the air handler's removable access panels and at filter access panels.



Certify duct leakage less than 5%

Certify that ducts have a maximum leakage cubic feet per minute (cfm) value of no more than 5% of the total floor area using standard duct testing protocol set forth by ASTM for duct pressurization testing at 25 Pascals. As an example, a 1000 ft² house may have up to 5% or 50 cfm of duct leakage at 25 Pascals. This test measures duct leakage lost to unconditioned spaces and so may be run in conjunction with a blower door fan. Builder must submit verification of third party testing.



Duct design complies with Manual D

Ductwork design shall comply with the ACCA Manual D guidelines. Builder must submit documentation of Manual D design with final scoring worksheet.

Duct trunk lines that are outside conditioned space insulated to R8

All duct trunk lines located outside conditioned space shall be insulated to a minimum of R8.

Ducts located within conditioned space

At least 90% of all supply and return ducts are located within conditioned space.

Interior doors with 1-inch clearance to finished floor

For homes with no return ducts located in bedrooms, all interior bedroom doors shall have a minimum clearance of 1 inch between the bottom of door when closed and the finished floor surface. This clearance is to allow for air to be drawn to the main return grille when the door is closed.

Winmore Green Builder Guidelines
(Adapted from EarthCraft/Southface Energy Institute Standards)

Multiple return ducts
Each bedroom shall have a dedicated return duct.

No ducts in exterior walls or vaulted ceilings
No supply or return ducts, boots or registers shall be located in exterior walls. This includes vaulted ceilings and insulated walls between conditioned and unconditioned space such as the common wall between the garage and the rest of the house.

No ductwork
Ductwork can be dispensed with if passive solar heat gain, radiant floor heating, and wood or gas stoves are used for heating and if passive cooling measures in conjunction with whole house fans, exhaust fans, ceiling fans, and window or wall-mounted air conditioners are utilized.

Rigid supply trunk
All duct systems shall feature at least one long supply trunk with multiple take-offs. An "octopus" system with all duct runs originating at the supply plenum is not acceptable.

Transfer grilles
For homes with no return ducts located in bedrooms, all supply air shall have a direct path back to a return grille even when doors are closed. This path shall be through transfer grilles. Houses with undercut doors do not qualify for these points.

ENERGY EFFICIENT APPLIANCES AND LIGHTING

Lighting installed in an enclosed garage shall be considered interior lighting. Lighting installed in an open-air garage (e.g. carport shall be considered exterior lighting.

Automatic outdoor lighting controls

All exterior lighting shall have automatic photocell, motion or timer controls.

Energy efficient clothes dryer

Builder installed clothes dryer shall be Energy Star rated or be listed as 25% more efficient than standard such as in "The Most Energy Efficient Appliances (1999)," published by the American Council for an Energy Efficient Economy (www.aceee.org).

Energy efficient dishwasher

Builder installed dishwasher shall be Energy Star rated or be listed as 25% more efficient than standard such as in "The Most Energy Efficient Appliances (1999)," published by the American Council for an Energy Efficient Economy (www.aceee.org).

Energy efficient refrigerator

Builder installed refrigerator shall be Energy Star rated or be listed as at least 25% more efficient than standard such as in "The Most Energy Efficient Appliances (1999)" published by the American Council for an Energy Efficient Economy (www.aceee.org).

High efficiency exterior lighting

All exterior lighting shall be high pressure sodium, fluorescent, or equivalent high efficiency. A maximum of 100 watts of outdoor incandescent or halogen lighting shall be permitted.

Indoor fluorescent fixtures

Interior lighting shall include a minimum of 200 watts of fluorescent lighting fixtures. These may include the kitchen overhead fixtures; undercounter fixtures do not qualify. The lighting fixtures must be hard-wired and have the ballast integrated into the fixture to ensure that the fluorescent lighting will remain permanent.

No garbage disposal

Plumbing system shall not include a garbage disposal. Composting of food wastes is recommended in place of a garbage disposal.

Recessed light fixtures are compact fluorescents

At least 80% of all recessed light fixtures shall be compact fluorescent.

Winmore Green Builder Guidelines
(Adapted from EarthCraft/Southface Energy Institute Standards)

RESOURCE EFFICIENT DESIGN

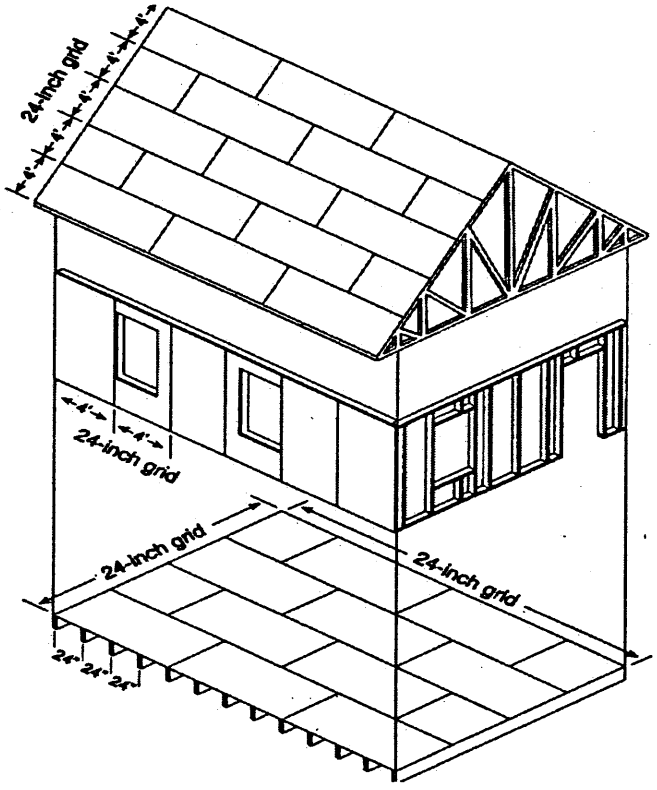
Required: Framing design must comply with local building codes.

All wall studs at 24-inch centers
All non-load and load bearing wall studs shall be spaced at 24 inches on center.

Floor joists at 19.2-inch centers
A minimum of 80% of all floor joists shall be spaced at 19.2 inches on center.

Floor joists at 24-inch centers
A minimum of 80% of all floor joists shall be spaced at 24 inches on center.

Floor plan adheres to 2-ft dimensions
The perimeter of the house shall comply with 2-ft dimensions to minimize material waste.



House smaller than 2100 square feet
Houses with less than 2100 square feet of finished space shall be eligible for these points.

Interior living spaces adhere to 2-ft dimensions
At least 50% of interior rooms and living spaces shall comply with 2-ft dimensions to minimize material waste.

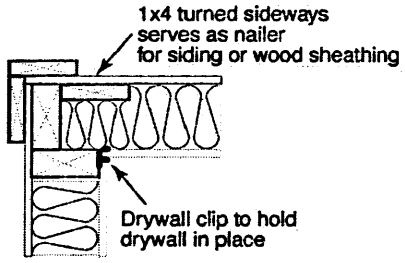
Non-load bearing wall studs at 24-inch centers
Non-load bearing wall studs shall be spaced at 24 inches on center.

Non-structural headers in non-load bearing walls
Non-load bearing walls shall not have structural window and door headers.

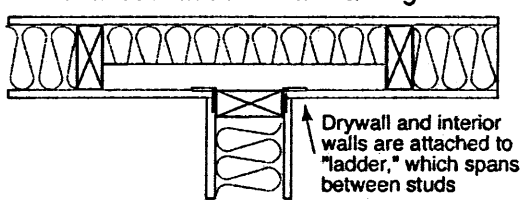
Single top plate with stacked framing
Roof rafters and ceiling joists shall align within 2 inches of exterior wall studs such that a single top plate can transfer loads to the wall framing.

T-walls with drywall clips or alternative framing
The intersection of exterior and interior walls shall eliminate non-structural studs and allow for full exterior wall insulation through the use of advanced ladder T-wall framing or other technique.

Advanced corner



Advanced ladder T-wall framing



Advanced framing techniques add insulation

2-stud corners with drywall clips or alternative framing

Corner framing shall eliminate non-structural studs and allow for full corner insulation through the use of drywall clips, horizontal nailers or other means to support drywall.

Window rough openings eliminate jack stud

Framing shall not include jack studs to support header. Header hangers or other support as required by code shall be used.

RESOURCE EFFICIENT BUILDING MATERIALS

RECYCLED AND NATURAL CONTENT MATERIALS

Required: All materials must be approved by local building code for use in residential construction.

Air conditioner condensing unit pad

The outdoor pad for an air conditioner or heat pump condensing unit shall have a minimum of 50% recycled material content (such as plastic or rubber tires). Recycled content must be verified by third party.

Carpet

All floor carpeting shall have a minimum of 50% recycled material content for face fibers and backing.

Carpet pad

All floor carpet padding shall have a minimum of 50% recycled material content.

Concrete with fly ash

A minimum of 25% of the cement in all concrete used for footings, foundation and basement walls, and slabs shall be replaced with fly ash.

Cork or bamboo flooring

Home shall contain at least 500 square feet of cork or bamboo flooring, rapidly renewable and durable materials.

Insulation

All insulation materials shall have a minimum of 25% recycled material content. Scientific Certification Systems (SCS) or the manufacturer must certify recycled content. SCS is on the web at www.scs1.com

Outdoor decking and porches

A minimum of 80% of outdoor floor decking shall have a minimum of 40% recycled material content. Recycled content must be certified by Scientific Certification Systems.

Reclaimed wood flooring.

A minimum of 50% of wood flooring shall be reused wood.

Recycled concrete used as aggregate

Demolished concrete shall be used as an aggregate in poured concrete structures.

Recycled content tiles

A minimum of 50% of tile floors shall contain a minimum of 30% recycled material content.

ADVANCED PRODUCTS

All beams are steel, engineered wood, or trusses

A minimum of 80% of the total beams shall be manufactured from non-solid sawn wood, such as laminated wood, or steel beams.

All headers are steel or engineered wood

A minimum of 80% of the total headers shall be manufactured from non-solid sawn wood, such as laminated wood, or steel beams.

Engineered exterior trim

A minimum of 80% of exterior trim, including soffit, fascia, and trim, shall be non-solid sawn wood or non-wood material.

Engineered floor framing

A minimum of 80% of floor joist framing shall be non-dimensional (engineered) structural wood, such as trusses or I-beams, or non wood material.

Engineered interior trim

A minimum of 80% of interior wood trim shall be non-solid sawn wood (such as finger-jointed) or non wood material.

Engineered roof framing

A minimum of 80% of roof framing shall be nondimensional (engineered) structural wood, such as trusses or I-beams, or non wood material, such as steel.

Engineered wall framing (25% of studs)

A minimum of 25% of the total wall framing shall be manufactured from non-solid sawn wood, such as laminated or finger-jointed studs. Exterior steel studs are not eligible for this credit unless the entire exterior surface of the studs is covered with a minimum R10 insulated sheathing.

Engineered wall framing (80% of studs)
A minimum of 80% of the total wall framing shall be manufactured from non-solid sawn wood, such as laminated or finger jointed studs. Exterior steel studs are not eligible for this credit unless the entire exterior surface of the studs is covered with a minimum R10 insulated sheathing.

Insulated Concrete Forms
A minimum of 80% of exterior walls shall be insulated concrete forms with a minimum of R14. Walls shall be installed according to manufacturer's specifications and meet termite protection guidelines of State of Georgia for ground contact insulation.

Oriented Strand Board (OSB) roof decking
A minimum of 80% of roof decking shall be OSB.

Precast Autoclaved Aerated Concrete
A minimum of 80% of above grade exterior area shall be precast autoclaved aerated concrete.
Walls must be installed according to manufacturer's specifications.

Steel interior wall framing
While exterior steel walls suffer potential thermal bridging, interior walls can be framed using steel studs. Steel studs shall have a 30% recycled content. A minimum of 80% of interior walls is required.

Structural Insulated Panels (exterior walls)
A minimum of 80% of all exterior walls shall be structural insulated panels with a minimum of R15. Structural insulated panels must be installed according to manufacturer's specifications.

Structural Insulated Panels (roof)
A minimum of 80% of all roof area shall be structural insulated panels with a minimum of R30. Structural insulated panels must be installed according to manufacturer's specifications.

DURABILITY

Back-primed siding and trim
All six sides of painted or stained exterior siding and trim shall be primed prior to installation.

Continuous foundation termite shield
A continuous termite shield shall cover 100% of the foundation stem wall, piers, and other potential entry points. The termite shield can be fabricated from metal, rubberized membrane or similar material that forms a physical barrier to termites. All seams and penetrations in the termite shield shall be sealed to prevent termite entry.

Covered entry-ways
Home shall be equipped with covered entryways no less than three feet above every exterior door.

Exterior cladding
A minimum of three sides of exterior wall cladding shall have a 40-year manufacturer's warranty or be a durable natural material such as masonry stucco, stone or brick. Warranty documentation must be provided to the home buyer.

Insulated glazing (10-year warranty)
Insulated glazing units for exterior windows and doors shall have a minimum 10-year manufacturer's warranty against sealed glass failure. Warranty documentation must be provided to the home buyer.

Light roof color (asphalt or fiberglass shingles)
Asphalt or fiberglass shingles shall be lighter in color than standard gray. Points are not available for shingles which are painted white.

Light roof color (tile or metal)
Metal roofing or white tile roofing shall have a solar reflectance of 60% or more.

Roof drip edge
The outer edge of all roof decking shall be protected with a metal or plastic drip edge.

Required: Roof gutters that discharge water 5 feet away from foundation
All rain from the roof shall be collected in a roof gutter system and directed via downspouts such that water is discharged at least 5 feet away from the foundation. Gutters and downspouts that drain water to the base of the foundation are not eligible for these credits.

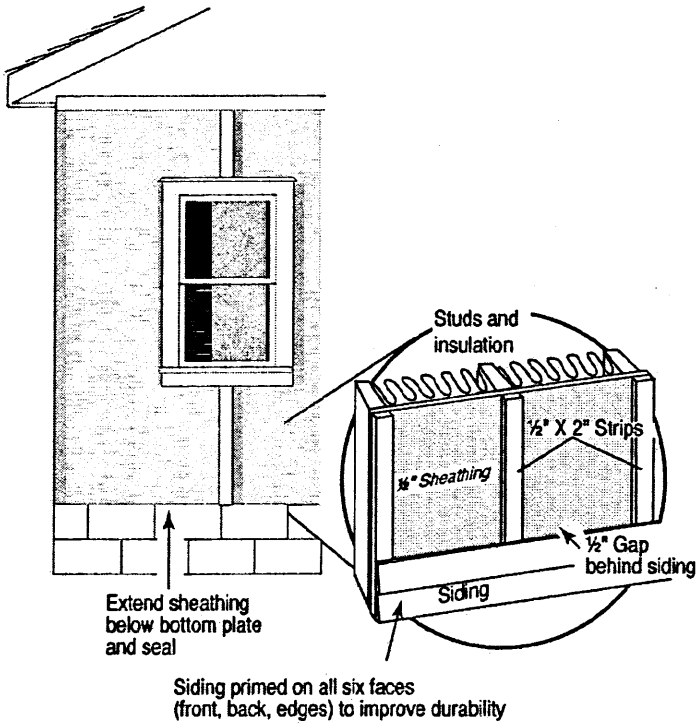
Winmore Green Builder Guidelines
(Adapted from EarthCraft/Southface Energy Institute Standards)

Roofing (25-year warranty)
Shingle or other exterior roofing material shall have a minimum 25-year manufacturer's warranty. Warranty documentation must be provided to the homebuyer.

Roofing (30-year warranty)
Shingle or other exterior roofing material shall have a minimum 30-year manufacturer's warranty. Warranty documentation must be provided to the homebuyer.

Roofing (40-year warranty)
Shingle or other exterior roofing material shall have a minimum 40-year manufacturer's warranty. Warranty documentation must be provided to the homebuyer.

Siding with vented rain screen
A minimum of 80% of exterior wall area shall have building paper, housewrap or similar material designed to protect the wall from water moving past the exterior cladding, and have a minimum of a 1/2 inch air space between the exterior cladding and wall sheathing. The airspace shall be designed to minimize moisture migration between the exterior cladding and the wall sheathing.



Vented rain screen

Walls covered with builder paper or housewrap
A minimum of 80% of exterior wall area shall have a building paper, housewrap or similar material designed to protect the wall from water moving past the exterior cladding.

Window and door head flashing
All windows and exterior doors shall have a metal or plastic flashing installed a maximum of six inches above the top of the window or door.

Window and door pan and sill flashing
All windows and exterior doors shall have a waterresistant flashing installed on the side and base of window and door rough openings to direct water leaks out of the framing.

Winmore Green Builder Guidelines
(Adapted from EarthCraft/Southface Energy Institute Standards)

WASTE MANAGEMENT

Required: No construction materials shall be burned or buried on a job site or other area other than a state approved construction and demolition landfill.

WASTE MANAGEMENT PRACTICES

Central cut area
Framing contractor shall use a central cutting area and store wood end cuts for re-use.

Donation of excess materials or re-use
Builder shall avoid disposal of excess construction materials by donating excess to a nonprofit 501c(3) organization or by re-using the construction materials for another job. The value of donated or re-used materials must be $500 or greater.
**Builder must provide receipt of donation with final worksheet*

Job site framing plan and cut list
A plan shall be submitted that designates all structural framing for two of the following: floors, roof, and walls. The plan shall be reviewed with framing crew to ensure minimization of unnecessary framing.

Job site framing plan with stud locations, joist locations, and roof structure and cut list
A plan that designates all structural framing for the roof, walls, and floors shall be prepared and reviewed with framing crew to ensure minimization of unnecessary framing. Builder must submit documentation of framing plan with the scoring worksheet.

RECYCLE CONSTRUCTION WASTE

Required: The recycling of construction waste must meet the Orange County Regulated Recyclable Material Ordinance.

Required: Cardboard
100% of clean clean corrugated cardboard must be recycled according to the Orange County Regulated Recyclable Material Ordinance.

Required: Metal
Builder shall recycle 100% of scrap metal according to the Orange County Regulated Recyclable Material Ordinance.

Required: Wood
Builder shall recycle 100% of unpainted, untreated wood waste according to the Orange County Regulated Recyclable Material Ordinance. Wood pallets are included in this requirement.

Drywall
Builder shall avoid disposal of a minimum of 75% of drywall through an approved recycling program, or by on-site grinding and application of drywall as soil amendment.

Plastics
Builder shall recycle a minimum of 75% of construction plastic and beverage containers.

Posted job site waste management plan
Job site shall have a construction waste management plan posted and each subcontractor shall be educated on the aspects of the plan that pertains to their work. Waste management plan must either provide for on-site separation of materials to be recycled or provide for separation of recyclable materials by clean-up or waste hauling firms. See NAHB Research Center's "Builder's Field Guide to Residential Construction Waste Management" publication for more information.

The NAHB Research Center is on the web at www.nahbrc.org

Shingles
Builder shall recycle a minimum of 75% of shingle waste.

INDOOR AIR QUALITY

COMBUSTION SAFETY

Required: No unvented combustion fireplaces or space heaters are permitted by the EarthCraft House™ program.

Attached garage—exhaust fan

An attached garage shall have an exhaust fan rated at a minimum of 100 cubic feet per minute of air flow and be controlled by a timer or motion detector if operated intermittently, or the fan shall be rated at a minimum of 25 cubic feet per minute if operated continuously.

Attached garage—air sealing

The bottom plate and all penetrations (such as plumbing or electrical lines) in the connecting wall between an attached garage and house shall be sealed with caulk, spray foam, gasket or construction adhesive to prevent air movement.

Backdraft depressurization test

A "worst case house depressurization test" shall be performed by an independent third party. The test shall verify that house mechanical equipment, including exhaust fans, clothes dryer, power vented water heater, and air handler, does not create negative indoor pressures (with respect to outdoors) of more than 3 Pascals. Differing atmospheric conditions or additional exhaust appliances may alter the results of this test.

Carbon monoxide detector

If the house has an attached garage or combustion appliance, a carbon monoxide detector shall be installed at a minimum of one per floor.

Detached garage

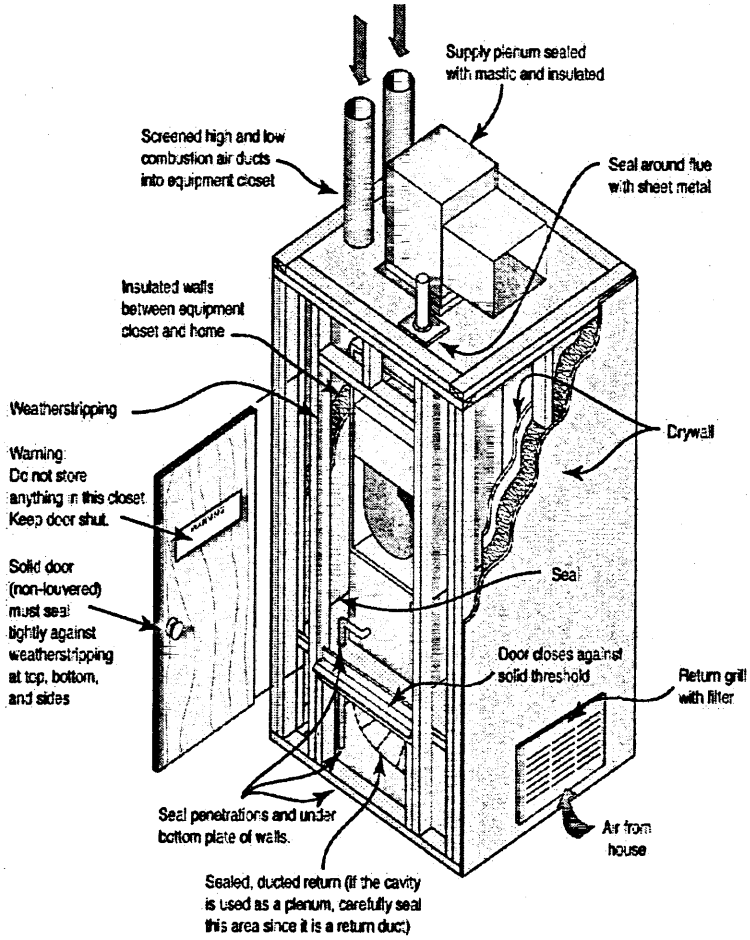
The garage shall be completely isolated by a minimum of 6 inches from the exterior walls or floor of any conditioned area of the house. Any connecting breezeway shall be sealed at both ends to prevent fire-spread. An open carport or no garage is eligible for these points.

Direct vent, sealed combustion fireplace

All fuel-burning fireplaces shall be sealed combustion, direct vent units, as rated by the American Gas Association (AGA), that draw in combustion air from outdoors and vent combustion by-products directly outdoors. AGA is on the web at www.aga.org

Furnace combustion closet isolated from conditioned area

All furnaces shall be installed in isolated contained closets or outside the building envelope. Closets shall be sealed between the bottom plate and subfloor, contain drywall covering the interior walls, and have a solid (non-louvered) access door that has weatherstripping and a threshold. Combustion air for closets shall be provided from outside the house in compliance with the mechanical code.



Water heater combustion closet isolated from conditioned area or power vented

If an atmospheric combustion water heater is located within conditioned space, the water heater shall have power venting or be installed in an isolated, contained closet. The closet shall be sealed between the bottom plate and subfloor, contain drywall covering the interior

walls, and have a solid (non-louvered) access door that has weatherstripping and a threshold. Combustion air for the closet shall be provided from outside the house in compliance with the mechanical code.

MOISTURE CONTROL

Capillary break between foundation and framing

A capillary break shall be installed between a concrete foundation wall and sill plate. A complete framed wall width sill gasket, EPDM-type rubber, or other suitable membrane shall be installed to prevent moisture from wicking through the foundation into the framing.

Drainage board for below grade walls

All below grade walls shall be damp-proofed and feature a drainage plane material that channels water down to the drain tile.

Foundation drain at outside edge of footing

Foundation drain shall be installed flush with the bottom of the footing and covered with silt protection fabric, gravel, or both. All drain lines shall be connected away and downhill from the foundation.

Foundation drain on top of footing

Foundation drain shall be installed around entire foundation and covered with silt protection fabric, gravel, or both. All drain lines shall be connected away and downhill from the foundation.

Required: Gravel bed beneath slab

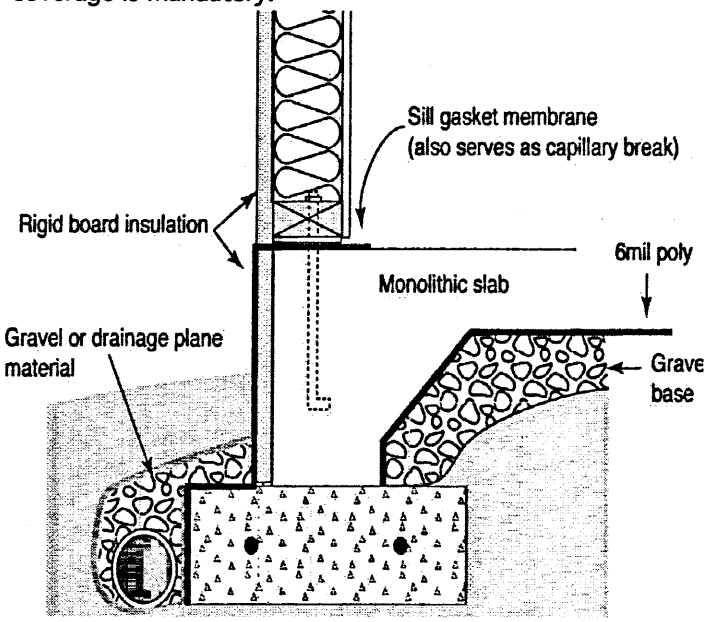
A minimum four-inch deep gravel bed shall be installed beneath all concrete floor slabs. If plastic vapor barrier is installed, plastic must be on top of gravel.

Required: Sealed crawl-space

Crawl space walls shall be airtight and sealed with caulk, foam sealant, or gasket between the foundation stem wall and the sill plate, between the sill plate and the band joist, and between the band joist and subfloor. All penetrations in the crawl space wall shall be sealed and access doors weatherstripped. Walls shall be insulated to R10 or greater. Any vents must be closed and sealed.

Vapor barrier beneath slab (above gravel) and in crawl space

A minimum 6mm polyethylene vapor barrier shall be continuously installed beneath all concrete floor slabs, and over all exposed earth in crawl spaces. 100% coverage is mandatory.



VENTILATION

Required: All exhaust fans vented to exterior

All kitchen range or downdraft hoods shall be vented directly to the outdoors. Intentional make-up air shall be provided for any kitchen vent fan rated at greater than 150 cfm.

Automatic tub/shower room fan controls

All bath fans installed in rooms with tubs or showers shall have timer or humidity controls.

Ceiling fans

A minimum of three (3) ceiling fans shall be installed. Each fan shall be installed in the center of the room with at least 8" fan-to-ceiling clearance and have a minimum diameter of 48".

Controlled house ventilation

A controlled ventilation system shall provide for continuous whole house ventilation of at least 15 cfm per person (# persons = # of bedrooms plus one).

Dehumidification system
A vapor compression, desiccant, or similar system shall be installed to remove moisture from all conditioned areas and be designed to maintain interior relative humidity at or below 50% at 75 degrees Fahrenheit. A low-cost insulated whole house fan cover should be used during the off season.

Energy Star bath fans
All bath fans shall be Energy Star rated. This rating requires that fans 75 cfm or smaller be no louder than 2.0 sones and move a minimum of 1.4 cfm/watt. Fans 76 cfm or larger must be no louder than 1.5 sones and move a minimum of 2.8 cfm/watt.

No power roof vents
No electrically powered roof exhaust vents shall be installed.

Outside air intake with dampers
An outdoor air intake duct shall be connected to the return side of each air handler to bring in fresh outside air for ventilation. The air shall be filtered and a damper (barometric or motorized) should close automatically when the air handler fan is not operating. The intake duct shall be sealed and insulated when run through unconditioned space (such as attic or crawl space). The inlet must have a screen to deter birds, squirrels, etc. Finally, the duct must have a manual damper to control the amount of fresh air.

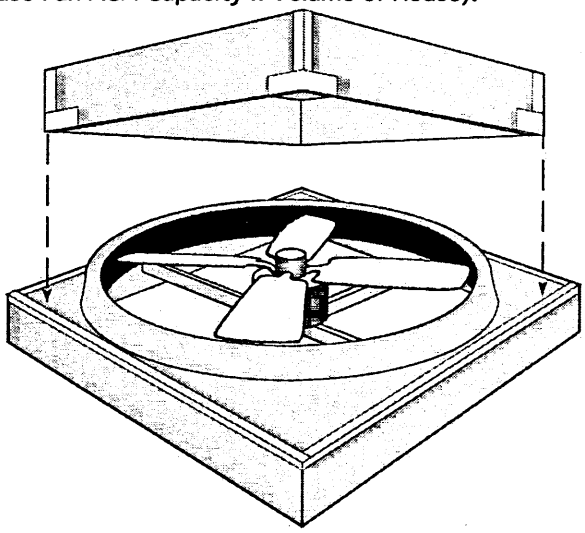
Outside air intake without damper
An outdoor air intake duct shall be connected to the return side of each air handler to bring in fresh outside air for ventilation. The air shall be filtered and the intake duct shall be sealed and insulated when run through unconditioned spaces. The inlet must have a screen to deter birds, squirrels, etc.

Radon test of home prior to occupancy
Builder shall conduct a radon test of house after final construction is complete and provide test results to home buyer. Radon test must comply with EPA guidelines. If test indicates greater than 4 picocuries per liter radon concentration, builder must follow EPA guidelines to reduce radon levels.

Radon/soil gas vent system
A passive radon vent system shall be installed in compliance with EPA guidelines for "Model Standards and Techniques for Control of Radon in New Residential Buildings."

Vented garage storage room
A separate storage room shall be provided in the garage with a lockable door and vented directly to the outdoors with a minimum of 100 square inches of net free vent area per 100 square feet of floor area.

Whole house fan
Whole house fan shall be installed with an insulated cover. A cover shall be constructed to air seal and insulate whole house fan. Homeowner shall be instructed to remove cover before operating the fan and replace cover during seasons when not in use. Attic ventilation must provide at least one square foot of net free vent area per 750 CFM of fan air flow (CFM= Whole House Fan ACM Capacity x Volume of House).



A low-cost insulated whole house fan cover should be used during the off season

MATERIALS

All surfaces of particle board in house sealed with water-based sealant
If urea formaldehyde materials are used in conditioned space, all 6 sides must be coated with a water based polyurethane sealant or a specialty formaldehyde sealant. Sealant shall have a maximum VOC (Volatile Organic Compounds) content of 250 g/l.

Alternative termite treatment
Acceptable termite soil treatments include termite baiting, stainless steel mesh, or basaltic sand.

Homeowner shall be educated to type of system installed and maintenance or monitoring requirements.

Central vacuum system with outside collection receptacle

A central vacuum system shall be installed with storage receptacle located outside of conditioned space or sealed to prevent dust from entering the home.

Ducts protected until construction completed

All duct boots shall be protected from contamination during construction, including during sheetrock, finish floor installation, and painting.

Filter/air cleaner with minimum 30% dust spot efficiency

The installed air filter/cleaner shall have a minimum atmospheric dust spot efficiency of 30% according to ASHRAE standard 52-76. (Ozone generators are not permissible as air cleaners.)

Low VOC Carpet

The builder shall provide a current letter from the Carpet and Rug Institute certifying that the specified carpet type to be supplied has been tested and meets all the requirements of the CRI Indoor Air Quality Carpet Testing Program.

Low VOC paints

All interior paints shall have a maximum VOC content of 250 g/l.

Low VOC sealants and adhesives

All interior sealants and adhesives shall have a maximum VOC (Volatile Organic Compound) content of 250 g/l.

Low VOC stains and finishes on wood floors

All interior wood floor stains and finishes shall have a maximum VOC (Volatile Organic Compound) content of 250 g/l.

No carpet in house

The house shall be free of carpet, using alternative flooring instead. Having no carpet avoids VOC issues, dust mites, trapped dust, etc.

No urea formaldehyde materials inside conditioned space

Materials containing urea formaldehyde shall not be used within conditioned space, including subfloors, cabinetry, and countertops. Exterior grade sheathing is acceptable for use in conditioned space.

Outdoor structures made from non-CCA pressure treated lumber

All outdoor decking and porches shall be constructed of lumber that has not been pressure treated with CCA (Copper Chromium Arsenic). Other types of pressure treated lumber or plastic lumber are eligible.

Urea formaldehyde materials inside conditioned space sealed

If urea formaldehyde materials are used in conditioned space, all 6 sides must b e coated with a water based polyurethane sealant or a specialty formaldehyde sealant. Sealant shall have a maximum VOC contgent of 250 g/l.

Winmore Green Builder Guidelines
(Adapted from EarthCraft/Southface Energy Institute Standards)

WATER—INDOOR

Required: All fixtures must meet National Energy Policy Act standards for low flow.

Heat Pump Water Heater
An electric heat pump water heater shall be installed in place of or as a supplement to an electric resistance water heater. The unit shall be installed in conditioned or tempered space (such as a basement) to take advantage of its cooling and dehumidification capabilities.

Heat recovery water heating
A refrigerant to water superheating coil shall be used to recover waste heat from an air conditioner or heat pump to heat domestic water.

Heat traps on water heater
Convective check valves, loops, or inverted "U" piping shall be plumbed within two feet of the inlet and outlet of the water heater to serve as heat traps and prevent standby convective losses.

High efficiency bathroom faucets
At least 80% of all bathroom faucets in the home must exceed the National Energy Policy Act (NEPA) by a minimum of 10% less flow. The NEPA requires flow of 2.5 gal/minute or less, so bathroom faucets with 2.25 gal/minute or less qualify for this point.

High efficiency clothes washer
Installed clothes washer shall consume less than 27 gallons of water per use.

High efficiency kitchen faucets
At least 80% of all kitchen faucets in the home must exceed the National Energy Policy Act (NEPA) by a minimum of 10% less flow. The NEPA requires flow of 2.5 gal/minute or less, so kitchen faucets with 2.25 gal/minute or less qualify for this point.

High efficiency showerheads
At least 80% of all showerheads in the home must exceed the National Energy Policy Act (NEPA) by a minimum of 10% less flow. The NEPA requires flow of 2.5 gal/minute or less, so showerheads with 2.25 gal/minute or less qualify for this point.

High efficiency toilets
At least 80% of all toilets in the home must exceed the National Energy Policy Act (NEPA) by a minimum of 10% less flow. The NEPA requires flow of 1.6 gal/flush or less, so toilets with 1.45 gal/ flush or less qualify for this point.

High efficiency water heater
Tank type water heaters shall meet Energy Star standards or have an Energy Factor rating equal to or greater than 0.62 for natural gas, 0.62 for propane, or 0.92 for electric resistance.

Hot water demand re-circulation
A hot water demand system shall be installed on the fixture furthest from the water heater. This recirculation pump will minimize wait time for hot water, thereby reducing waste. Remote switches to activate the system shall be installed on intermediate fixtures between the pump and water heater.

Pressure reducing valve
A pressure reducing valve shall be installed on the house side of the main shut off valve to control water pressure to all fixtures.

Shower drain heat recovery device
A drain heat recovery device shall be installed on one shower in the home. This device recovers a minimum of 25% of the wasted heat from the shower drain water.

Solar domestic water heating
A licensed plumber or certified installer shall install a passive or active solar domestic water heater. If possible, the collector shall be oriented within 30 degrees of true south and remain unshaded from 10 a.m. to 4 p.m. The collector shall include freeze protection capability and conform to the specifications of the Solar Rating and Certification Corporation.

Tankless Water Heater
It is possible to completely eliminate standby heat losses from the tank and reduce energy consumption 20% to 30%. Tankless water heaters can be used to supplement solar hot water systems.

Water filter
Primary kitchen faucet shall be installed with a water filter that meets National Sanitation Foundation specifications.

Water heater pipe insulation
The first two feet of cold and hot water pipe closest to the water heater tank shall be insulated with a minimum of 1/2 inch foam, preferably through the heat traps installed in the hot and cold water pipes.

Water heater tank insulation
Water heater tank shall have an insulating jacket equal to or greater than R5. Jacket must be installed according to manufacturer's recommendations.

WATER—OUTDOORS

Drip irrigation system
A minimum of 50% of landscape planting beds shall have a drip irrigation system.

Greywater irrigation
A greywater irrigation system shall be approved by local building and/or health departments, and at a minimum shall have a dedicated clothes washer box with 2-inch drain connected to a subterranean drain field. A separate clothes washer box shall be provided that connects to the sanitary drain system.

Permeable pavement
A minimum of 80% of paved surfaces for driveways, sidewalks, and patio areas shall have a pavement system that allows for infiltration of water.

Rainwater harvest system
A minimum of 50% of the rain from the roof shall be collected and stored for irrigation use.

Rainwater infiltration device
A minimum of 50% of the rain from the roof and rain from other impervious surfaces shall be infiltrated through engineered devices such as French drains, drywells, and manufactures sediment traps. Infiltration devices shall only be used when ground perk tests show that soils can be infiltrated.

Timer on hose bibs or irrigation system
Each outdoor hose bib shall have a timer to control irrigation, or if an irrigation system is installed, it shall have a time.

Xeriscape guidebook given to homeowner
A copy a Xeriscaping guidebook shall be provided to the home buyer.

Xeriscape installed
The installed landscape shall meet the requirements of a xeriscape as detailed in the University of Georgia Cooperative Extension Service's, "Xeriscape- A Guide to Developing a Water Wise Landscape," and at a minimum contain low, medium and high use water areas, minimal turf grass areas, and extensive use of drought tolerant plantings.

Xeriscape plan provided to homeowner
A drought tolerant landscape plan developed by a landscape architect, horticulturist or other professional shall be provided to the home buyer.

Winmore Green Builder Guidelines
(Adapted from EarthCraft/Southface Energy Institute Standards)

HOME BUYER EDUCATION/OPPORTUNITY

Required: Environmental checklist
Builder shall provide the homebuyer a list of the selected environmental features for the home.

Required: Household hazardous waste resources
The builder shall provide the homebuyer with information on the proper management of household hazardous waste.

Required: Local recycling contact
Builder shall provide the home buyer information on recycling facilities conveniently located to the home as well as a list of haulers that provide curbside service.

Required: Review energy operations
The builder shall review the proper use and maintenance of all energy using systems, such as bath fans, fireplaces, filters, ventilation filters, and thermostats, with the home buyer and provide a manual that summarizes these procedures.

Review irrigation system operations
The builder shall review the proper use and maintenance of all irrigation systems with the homebuyer and provide a manual that summarizes these procedures.

Built-in recycling center
The builder shall provide site-built or commercially manufactured recycling containers for newspaper, magazines, and at least one other material.

Guaranteed Energy Bills
The builder, utility or third party shall certify that the energy bills for a minimum two year period shall not exceed a baseline level. The guaranteed level shall be less than 30% of the energy use predicted for a home built to the standards of the current sate energy code.

BONUS POINTS

Accessible house
Home shall be built to incorporate accessibility features in the design and be approved by a home accessibility program. Accessibility features include things such as no-step entryway, 30' wide bathroom doorway, and bathroom on ground level.

See http://concretechange.home.mindspring.com for more information.

American Lung Association Health House
Bonus points shall be awarded for homes built according to the criteria and performance standards set forth by the American Lung Association for the Health House Project.

Exceeds Energy Star
One bonus point shall be awarded for each one point exceeded in the Energy Star rating in a home, for a maximum of 5 points. For example, an Energy Star rating of 88 shall receive 2 bonus points.

Innovation points
Builder submits specifications for innovative products or design features to qualify for additional points.

Solar electric system
Bonus points shall be awarded for a solar electric system which is capable of producing 20% of the home's electrical load. All electrical inspections must meet the National Electric Code. The solar array must remain unshaded year round, be oriented to within 15 degrees of true south, and be angled horizontally within 15 degrees of latitude.

Winmore Green Builder Worksheet

	POSSIBLE POINTS	SCORED	PROOF
SITE PLAN			
required: site erosion control plan	8		site plan
required: workshop on erosion and sediment control	2		certificate
excavated topsoil protected from erosion	5		
grind stumps and limbs for mulch	2		
mill cleared logs	2		
use of redundant mulch, compost, or straw bales for erosion control	3		
house certified under NAHB's *Building With Trees* program	25		confirmation letter
builder may certify that the house meets NAHB's *Building With Trees* program or score points from individual vegetation protection measures			
individual trees fenced at drip line (1 point per tree, max 5 trees)	1 per tree		
protected vegetation save area (min 25% of development or lot)	2		
tree planting	4		
tree preservation plan	5		tree plan
utilities in tree root zones tunneled or hand dug (1 point per tree, max 5 trees)	1 per tree		
SITE PLAN TOTAL			
BUILDING ENVELOPE AND SYSTEMS ENERGY EFFIC			
ENERGY STAR Builder may choose to certify house as ENERGY STAR OR earn a minimum of 75 points from Energy Measures	90		certificate or computer print-out
ENERGY MEASURES Must earn a minimum of 75 points. No more than 85 points under Energy Measures can be applied toward total score. Houses must meet or exceed the North Carolina Energy Code.			
AIR LEAKAGE TEST			
measures	35		test results
AIR SEALING MEASURES *maximum of 30 points*			
airtight IC recessed lights or no recessed lights in insulated ceilings	4		
attic access opening (pulldown stairs / scuttle hole)	2		
attic kneewall doors (weatherstripped with latch)	2		
attic kneewall has sealed exterior sheathing	5		
band joist between conditioned floors sealed	3		
bath tub and shower drain	2		
bottom plate of exterior walls	2		
cantilevered floors sealed above supporting walls	2		
ceiling drywall sealed to top plate	2		
ceiling penetrations sealed between conditioned and unconditioned space	2		
chases sealed and insulated	5		
door rough openings	1		
drywall penetrations in exterior walls	2		
drywall sealed to bottom plate of exterior walls	2		
exterior wall sheathing sealed at plates, seams, and openings	5		
fireplace air sealing package (all units)	2		
floor penetrations between unconditioned and conditioned space	2		
window rough openings	2		
AIR SEALING MEASURES SUBTOTAL *(max of 30 applied to Air Sealing S*			

Winmore Green Builder Worksheet

	POSSIBLE POINTS	SCORED	PROOF
INSULATION **Homes with multiple foundation types must use foundation type of greatest area for points*			
attic kneewall doors (R10)	1		
attic kneewall doors (R19)	2		
attic kneewall stud cavities (min R19)	3		
attic kneewall with insulated sheathing (R2.5)	3		
attic kneewall with insulated sheathing (R5)	5		
attic kneewall with non-insulated sheathing	1		
attic pull-down or scuttle hole (R19)	2		
band joist insulated (R19)	2		
cantilevered floor (R30)	2		
ceiling radiant heat barrier	1		
*concrete or masonry basement walls (continuous floor to ceiling R10)	3		
energy heel trusses or raised top plate	2		
exterior wall stud cavities (R15)	1		
*framed floor over unconditioned space (R19 in continuous contact with subfl	1		
flat ceilings (R30)	1		
flat ceilings (R38)	2		
insulate fireplace chase	1		
insulated corners	2		
insulated headers	2		
insulated T-walls (exterior/interior wall intersection)	2		
insulated wall sheathing (R 2.5 or greater)	2		
insulated wall sheathing (R 5 or greater)	3		
loose-fill attic insulation card and rulers	1		
*sealed, insulated crawl space walls (R8)	1		
*slab insulation (min R4)	2		
spray applied wall insulation	4		
vaulted and tray ceilings (R25)	1		
vaulted and tray ceilings (R30)	2		
INSULATION SUBTOTAL			
WINDOWS			
certified passive solar design (25% load reduction)	10		formula
east facing glazing less than 3% of floor area	2		
inert gas-filled double glazed units (e.g. argon gas filled)	3		window label
low emissivity glazing	5		window label
NFRC rated windows (max U.56)	3		NFRC label
solar heat gain coefficient (max 0.4)	3		window label
solar shade screens	3		
2-foot overhangs over 80% of windows (max 2' above windows)	1		
west facing glazing less than 2% of floor area	2		
WINDOWS SUBTOTAL			

Winmore Green Builder Worksheet

	POSSIBLE POINTS	SCORED	PROOF
HEATING AND COOLING EQUIPMENT			
cooling equipment has non-CFC and non-HCFC refrigerant	3		product literature
cooling equipment sized within 6000 btu/h of Manual J (all units)	5		load calc + eqmt siz
geothermal heat pump (75% total capacity)	7		
heating equipment output sized within 25,000 btu/h of Manual J (all units)	5		load calc + eqmt siz
HSPF 7.8 heat pump (75% total capacity)	2		product literature
HSPF 8.0 heat pump (75% total capacity)	3		product literature
measured airflow within 15% of manufacturer's specifications	3		test results
90% AFUE furnaces (75% total capacity)	3		energy guide label
outdoor thermostat for heat pump	1		
programmable thermostat (all systems)	1		
radiant floor heating-electric or hydronic using domestic hot water tank	1		
radiant floor heating-gas	2		
radiant floor heating-hydronic using solar heated water	3		
SEER 12 cooling equipment (75% total capacity)	2		energy guide label
SEER 14 cooling equipment (75% total capacity)	3		energy guide label
sensible heat fraction less than or equal to 0.7 (all air conditioners)	2		
zone control - one system services multiple zones	5		
HEATING AND COOLING SUBTOTAL			
DUCTWORK / AIR HANDLER			
required: all duct seams and air handler sealed with mastic	10		
air handler located within conditioned space (all units)	5		
airflow for each duct run measured and balanced	3		test results
certify duct leakage less than 5%	20		test results
duct design complies with Manual D	5		sizing calculation
duct trunk lines outside conditioned space insulated to R8	2		
ducts located within conditioned space (min 90%)	5		
interior doors with 1 inch clearance to finish floor	2		
multiple return ducts (min 1 in each bedroom)	2		
no ducts in exterior walls or vaulted ceilings	3		
no ductwork	50		
rigid supply trunk	2		
transfer grilles	2		
DUCTWORK / AIR HANDLER SUBTOTAL			
BUILDING ENVELOPE AND SYSTEMS ENERGY EFFICIENC			

ENERGY EFFICIENT LIGHTING AND APPLIANCES			
automatic outdoor lighting controls (e.g. motion sensor)	2		
energy efficient clothes dryer	1		product label
energy efficient dishwasher	1		product label
energy efficient refrigerator	2		product label
high efficiency exterior lighting	2		product literature
indoor fluorescent fixtures (min 200 watts)	2		
no garbage disposal	1		
recessed light fixtures are compact fluorescents	2		
LIGHTING / APPLIANCES ENERGY EFFICIENCIES TOTAL			

Winmore Green Builder Worksheet

	POSSIBLE POINTS	SCORED	PROOF
RESOURCE EFFICIENT DESIGN			
all wall studs @ 24-in. centers	3		
floor joists @ 19.2-in. centers (all floors)	2		
floor joists @ 24-in. centers (all floors)	3		
floor plan adheres to 2-ft dimensions	2		
house smaller than 2100 square feet	2		
interior living space adheres to 2-ft dimensions	1		
non-load bearing wall studs @ 24-in. centers	2		
non-structural headers in non-load bearing walls	2		
single top plate with stacked framing	3		
T-walls with drywall clips or alternative framing	3		
2-stud corners with drywall clips or alternative framing	3		
window rough openings eliminate jack stud	2		
RESOURCE EFFICIENT DESIGN TOTAL			
RESOURCE EFFICIENT BUILDING MATERIALS			
RECYCLED AND NATURAL CONTENT MATERIALS			
air conditioner condensing unit pad (min 50% recycled)	1		
carpet (min 50% recycled)	2		product literature
carpet pad (min 50% recycled)	1		
concrete with fly ash (min 25% fly ash)	3		content print-out
cork or bamboo flooring	2		
insulation (min 25% recycled)	2		product literature
outdoor decking and porches (min 40% recycled)	2		
reclaimed wood flooring	1		letter
recycled concrete used as aggregate	1		letter
recycled content tiles (min 30% recycled)	1		product literature
RECYCLED AND NATURAL CONTENT MATERIALS SUBTC			
ADVANCED PRODUCTS			
all beams are steel, engineered wood, or trusses	1		
all headers are steel or engineered wood	1		
engineered exterior trim including soffit, fascia, and trim	1		
engineered floor framing (all floors)	2		
engineered interior trim	1		
engineered roof framing	2		
engineered wall framing (25% of studs)	1		
engineered wall framing (80% of studs)	2		
insulated concrete forms	5		
OSB roof decking	1		
precast autoclaved aerated concrete	5		
steel interior wall framing	1		
structural insulated panels (exterior walls)	5		
structural insulated panels (roof)	3		
ADVANCED PRODUCTS SUBTOTAL			

Winmore Green Builder Worksheet

	POSSIBLE POINTS	SCORED	PROOF
DURABILITY			
required: roof gutters that direct water away from foundation	2		
back-primed siding and trim	1		
continuous foundation termite flashing	1		
covered entry ways (all doors)	1		
exterior cladding (min 3 sides with 40-year warranty or masonry)	1		
insulated glazing (min. 10-year warranty)	1		warranty
light roof color (asphalt or fiberglass shingles)	1		
light roof color (tile or metal)	2		
roof drip edge	1		
roofing (min 25-year warranty)	1		warranty
roofing (min 30-year warranty)	2		warranty
roofing (min 40-year warranty)	3		warranty
siding with vented rain screen	2		
walls covered with builder paper or housewrap (drainage plane)	1		
window and door head flashing	1		
window and door pan AND side flashing	1		
DURABILITY SUBTOTAL			
RESOURCE EFFICIENT BUILDING MATERIALS TOTAL			

WASTE MANAGEMENT			
Prerequisite: No construction materials shall be burned or buried on job site or anywhere but in a state-approv			
WASTE MANAGEMENT PRACTICES			
central cut area	3		
donation of excess materials or re-use (min $500/job)	1		letter
job site framing plan and cut list	1		frame plan + cut lis
job site framing plan with stud locations, joist locations, and roof structure an	10		frame plan + cut lis
WASTE MANAGEMENT PRACTICES SUBTOTAL			
RECYCLE CONSTRUCTION WASTE			
required: cardboard	1		
required: metal	1		
required: wood	3		
drywall (recycle or grind and spread on site)	3		
plastics	1		
posted job site waste management plan - recycle 75% of 3 materials	5		management plan
shingles	1		
RECYCLE CONSTRUCTION WASTE SUBTOTAL			
WASTE MANAGEMENT TOTAL			

Winmore Green Builder Worksheet

	POSSIBLE POINTS	SCORED	PROOF
INDOOR AIR QUALITY			
Prerequisite: No unvented combustion fireplaces or space heaters are permitted.			
COMBUSTION SAFETY			
attached garage - exhaust fan controlled by motion sensor or timer	2		
attached garage - seal bottom plate and penetrations to conditioned space	4		
backdraft depressurization test	4		test results
carbon monoxide detector (one per floor required)	4		
detached garage	5		
direct vent, sealed combustion fireplace (all units)	3		
furnace combustion closet isolated from conditioned area (all units)	4		
water heater combustion closet isolated or power vented	4		
COMBUSTION SAFETY SUBTOTAL			
MOISTURE CONTROL			
required: gravel bed beneath slab-on-grade floors	3		
required: sealed crawl-space	5		
capillary break between foundation and framing	1		
drainage board for below grade walls	4		
foundation drain at outside perimeter edge of footing	2		
foundation drain on top of footing	1		
vapor barrier beneath slab (above gravel) and in crawl space	2		
MOISTURE CONTROL SUBTOTAL			
VENTILATION			
required: all exhaust fans should be vented to exterior	3		
automatic tub/shower room fan controls (e.g. timer)	1		
ceiling fans (minimum of 3 fans)	1		
controlled house ventilation (0.35 ACH)	4		
dehumidification system	3		
Energy Star bath fans (all units)	3		product literature
no power roof vents	1		
outside air intake with damper	3		
outside air intake without damper	2		
radon test of home prior to occupancy	2		
radon/soil gas vent system	3		
vented garage storage room	1		
whole house fan	2		
VENTILATION SUBTOTAL			

Winmore Green Builder Worksheet

	POSSIBLE POINTS	SCORED	PROOF
MATERIALS			
all surfaces of particle board in house sealed with water-based sealant	1		
alternative termite treatment	2		
central vacuum system	1		
ducts protected until construction is completed	2		
filter / air cleaner with minimum 30% dust spot efficiency (e.g. pleated filter)	2		
low VOC carpet certified by the Carpet AND Rug Institute	1		product literature
low VOC paints (less than 250 g/L)	2		product literature
low VOC sealents and adhesives (less than 250 g/L)	1		product literature
low VOC stains and finishes on wood floors	2		product literature
no capet in house	4		
no urea formaldehyde materials inside conditioned space	2		product literature
outdoor structures made from non-CCA pressure treated lumber	1		product literature
urea formaldehyde materials inside conditioned space sealed	1		product literature
MATERIALS SUBTOTAL			
INDOOR AIR QUALITY TOTAL			

Winmore Green Builder Worksheet

	POSSIBLE POINTS	SCORED	PROOF
WATER - INDOOR			
Prerequisite: All fixtures must meet National Energy Policy Act standards for low flow.			
heat pump water heater	2		
heat recovery water heating	1		
heat traps on water heater	1		
high efficiency bathroom faucets (max 2.25 gal/min)	1		product literature
high efficiency clothes washer	2		product label
high efficiency kitchen faucets (max 2.25 gal/min)	1		product literature
high efficiency showerheads (max 2.25 gal/min)	1		product literature
high efficiency toilets (max 1.45 gal/min)	1		product literature
high efficiency water heater (min Energy Factor: gas 0.62 electric 0.92)	2		energy guide label
hot water demand re-circulation	1		
pressure reducing valve	1		
shower drain heat recovery device	1		
solar domestic water heating	4		
tankless water heater (2 points per tank)	2 per		
water filter (NSF certified)	1		product literature
water heater pipe insulation on first two feet of pipe	1		
water heater tank insulation	1		
WATER - INDOOR TOTAL			
WATER - OUTDOORS			
drip irrigation system	2		
greywater irrigation	3		
permeable driveway / parking area	2		
rainwater harvest system	3		
rainwater infiltration device	3		
timer on hose bibs or irrigation system	1		
xeriscape guidebook given to homeowner	1		resource
xeriscape installed	15		
xeriscape plan provided to homeowner	4		xeriscape plan
WATER - OUTDOORS TOTAL			

Winmore Green Builder Worksheet

	POSSIBLE POINTS	SCORED	PROOF
HOMEBUYER EDUCATION/OPPORTUNITIES			
required: environmental features checklist for walk through	1		
required: household hazardous waste resources	1		
required: local recycling contact	1		
required: review energy operations with homeowner	4		
required: review irrigation system operations with homeowner	2		
built-in recycling center	2		
guaranteed energy bills	15		energy bill guarante
HOMEBUYER EDUCATION TOTAL			
BONUS POINTS			
innovation points	Varies		
exceeds Energy Star (one bonus point per one Energy Star point)	1 per		
American Lung Association Health House	5		
accessible house	5		
solar electric system (2 pts per 150 watt capacity for max of 25 pts)	25		
BONUS POINTS TOTAL			

Winmore Green Builder Worksheet

	POSSIBLE POINTS	SCORED	PROOF
	MIN		
WINMORE GREEN BUILDER PROGRAM TOTALS			
SITE PLANNING	10		
ENERGY EFFICIENT BUILDING ENVELOPE AND SYSTEMS	75		
ENERGY EFFICIENT LIGHTING / APPLIANCES	0		
RESOURCE EFFICIENT DESIGN	0		
RESOURCE EFFICIENT BUILDING MATERIALS	2		
WASTE MANAGEMENT	0		
INDOOR AIR QUALITY	11		
WATER - INDOOR	0		
WATER - OUTDOORS	0		
HOMEBUYER EDUCATION	9		
BONUS POINTS	0		
GRAND TOTAL	200		

Note: These standards were developed by the Southface Energy Institute and the Atlanta Home Builders Association for their EarthCraft House program. However, neither organization is involved in any way in the Winmore Green Builder Program. The Winmore Green Builder Program gratefully acknowleges the work of the Southface Energy Institute and the Atlanta Home Builders Association.