

AGENDA
CARRBORO BOARD OF ALDERMEN
TUESDAY, NOVEMBER 22, 1994
7:30 P.M., TOWN HALL BOARD ROOM

Approximate Time*

7:30 - 7:35 A. Approval of Minutes of Previous Meeting: November 1, 1994

7:35 - 7:45 B. Resolutions, Proclamations and Charges

7:45 - 7:55 C. Requests from Visitors and Speakers from the Floor

 D. Public Hearing

7:55 - 8:00 (1) **Voluntary Annexation Request/Cates Farm, Phases 3 and 4**
NP

Richard Westmoreland, on behalf of Rhein-Raleigh-Charlotte Limited Partnership, has submitted a petition for annexation of Phases 3 and 4 of the Cates Farm Subdivision. These phases are contiguous to Cates Farm Phases 1 and 2, which have previously been annexed into the town's corporate limits. The administration recommends that the Board of Aldermen adopt the attached ordinance which will annex this property into the town limits effective February 28, 1995.

E. Other Matters

8:00 - 8:10 (1) **Award of Bid/Front Loading Refuse Dumpster Truck**
NP

The administration recommends that the Board of Aldermen:

- 1) Adopt a resolution declaring the front loading refuse dumpster truck #53 (Fixed Asset #0277) surplus upon delivery and acceptance of the new refuse dumpster truck.
- 2) Authorize disposition of Truck #53 by sale to Lodal-South, Inc., sale price to be applied as trade-in amount to the purchase price of the new front loading refuse dumpster truck.
- 3) Award the contract for the purchase of a new front loading refuse dumpster truck to Lodal-South, Inc. of Rockingham, NC for the contract price of \$111,255 (bid price of \$119,755.00 minus trade-in amount of \$8,500.00).
- 4) Waive the requirement for a Performance and Payment Bond for the execution of this contract.

8:15 - 8:30
P/5

(2) Acceptance of the Weaver Family Cemetery

The purpose of this item is to review a petition submitted by Carrol S. Weaver and Jane Brill requesting that the town accept the Weaver Family Cemetery onto the town's cemetery maintenance system.

8:30 - 8:45
P/5

(3) Award of Contracts for Phase I of the Town Commons Project

The administration requests that the Board authorize the Town Manager to execute contracts between the town and the contractors for the construction of Phase I of the Town Commons project.

8:45 - 8:55
P/5

(4) Request for Traffic Signal at Lloyd/Main Street Intersection

The town staff has sent a letter to NCDOT requesting that the Department improve the conditions at the Lloyd/Main Street intersection by installing a traffic signal at that intersection. The administration recommends that the Board receive the letter and ask for periodic updates concerning the progress of installing the signal.

8:55 - 9:05 **BREAK**

9:05 - 9:50
P/5

(5) Worksession on Requests for Revisions to Impervious Surface Requirements in the University Lake Watershed

The administration will present options for the Board's consideration in response to requests for revisions to the University Lake Watershed impervious surface requirements.

9:50 - 9:55
NP

(6) Appointments to Orange County Senior Center Task Force and Human Services Coordinating Council

The Orange County Board of Commissioners have established a committee to develop an Orange County Senior Center Development Plan and have requested that the Town of Carrboro nominate a representative to serve on this task force. In addition, Orange County has requested that the Town nominate a representative to serve on the Human Services Coordinating Council. The purpose of this agenda item is for the Board of Aldermen to consider making an appointment to this Senior Center Task Force and the Human Services Coordinating Council.

9:55 - 10:05 F. **MATTERS BY MANAGER**

10:05 - 10:15 G. **MATTERS BY TOWN ATTORNEY**

10:15 - 10:25 H. **MATTERS BY BOARD MEMBERS**

BOARD OF ALDERMEN

ITEM NO. E(1)

AGENDA ITEM ABSTRACT

MEETING DATE: November 22, 1994

SUBJECT: Award of Bid: Front Loading Refuse Dumpster Truck

DEPARTMENT: Administrative Services	PUBLIC HEARING: YES ____ NO <u>X</u>
ATTACHMENTS: Resolution	FOR INFORMATION CONTACT: Roger Thorne, Purchasing Officer, 968-7729

PURPOSE

On Thursday, November 3, 1994, the Town received bids on the purchase of a new, thirty-eight (38) cubic yard Front Loading Refuse Dumpster Truck. Lodal-South, Inc. of Rockingham, NC was the low bidder of the three companies that submitted complete and responsive bids. Net bid price after trade-in was \$111,255.00. The purpose of this agenda item is to request that the Board of Aldermen so award this purchase contract.

SUMMARY

On August 9, 1994 the Carrboro Board of Aldermen passed Resolution No. 2/94-95 authorizing the installment purchase of, among other things, a Front Loading Refuse Dumpster Truck to replace existing Dumpster Truck #53. Bid packages and requests for cost and price quotations for the purchase of a new Dumpster Truck and for the trade-in value of the truck to be replaced were sent to six (6) companies in the southern U.S. Three companies submitted unqualified (i.e. acceptable) responses to the request:

<u>Company</u>	<u>Bid Price</u>	<u>Trade-In</u>	<u>Net Price</u>
Lodal-South, Inc. Rockingham, NC	\$ 119,755	\$ 8,500	\$ 111,255
Container Systems Daytona Beach, FL	\$ 122,815	\$ 5,000	\$ 117,815
Amick Equipment Lexington, SC	\$ 126,725	\$ 6,500	\$ 120,225

ANALYSIS

When the 1994-1995 Budget was created and approved, staff used a budget figure of \$115,000 for the replacement of Front Loading Refuse Dumpster Truck #53. The lowest responsive bid received falls within this budgetary allowance.

General Statute 143-129 specifies that the low bidder for any contract for equipment, material or supplies in excess of \$20,000 must provide a Performance and Payment Bond for the successful completion of the contract, unless this requirement is waived by the governing body. Cost to the Town for Lodal-South, Inc. to provide a Performance and Payment Bond would be \$1200 in addition to the Bid Price.

Lodal-South, Inc. has agreed that any contract signed for the purchase of a Dumpster Vehicle will contain provisions for liquidated damages in the amount of \$100 for each day delivery exceeds their specified delivery date. Staff feels that this provision is sufficient guarantee of successful completion of the contract and that requiring a Performance and Payment Bond in addition would be an unnecessary expense to the Town.

ADMINISTRATION ' S RECOMMENDATIONS

It is the recommendation of the Administration that the Board

- 1) Adopt the attached Resolution declaring Front Loading Refuse Dumpster Truck #53 (Fixed Asset #0277) surplus upon delivery and acceptance of a new Refuse Dumpster Truck.
- 2) Authorize disposition of Truck #53 by sale to Lodal-South, Inc., sale price to be applied as Trade-In Amount to the Purchase Price of a new Front Loading Refuse Dumpster Truck.
- 3) Award the contract for purchase of a new Front Loading Refuse Dumpster Truck to Lodal-South, Inc. of Rockingham, NC for the Contract Price of \$111,255 (Bid Price of \$119,755.00 minus Trade-In Amount of \$8,500.00).
- 4) Waive the requirement for a Performance and Payment Bond for the execution of this contract.

ACTION REQUESTED

To adopt by motion the Administration's recommendations.

The following resolution was introduced by Alderman _____ and duly seconded by Alderman _____

**A RESOLUTION DECLARING TRUCK #53 (ASSET #0277) SURPLUS
AND AUTHORIZING ITS SALE AS TRADE-IN ON A REPLACEMENT TRUCK
Resolution No. 17/94-95**

WHEREAS, Article 12 of the General Statutes, Chapter 160A, authorizes the Town to dispose of surplus personal property; and

WHEREAS, making Front End Loading Refuse Dumpster Truck #53 currently used by the Town available for sale as Trade-In for the purchase of a new Front End Loading Refuse Dumpster Truck will reduce the net cost of the replacement Dumpster Truck; and

WHEREAS, the Town has received three acceptable bids for the purchase of a replacement Dumpster Truck, the lowest of which (after allowing for Trade-In of Truck #53) is within the amount included in the FY 1994-1995 Budget for replacement of Truck #53;

NOW, THEREFORE, THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO
HEREBY RESOLVES:

Section 1. The Front Loading Refuse Dumpster Truck #53 (Fixed Asset #0277) is hereby declared surplus upon delivery and acceptance of a replacement Front Loading Refuse Dumpster Truck.

Section 2. The Town Manager shall be and is hereby authorized to dispose of the surplus personal property listed in Section 1 in accordance with statutory requirements.

Section 3. The proceeds of the sale shall be applied as trade-in towards the purchase of a replacement Refuse Truck

Section 4. The Refuse Truck is sold on an "as is" and "where is" basis and the Town makes no guarantee of and assumes no responsibility for the Refuse Truck.

Section 5. It will be the Buyer's responsibility to remove the Refuse Truck from the grounds of the Public Work Facility upon delivery and acceptance of the replacement Dumpster Truck.

Section 6. This resolution shall become effective upon adoption.

The forgoing resolution having been submitted to a vote, received the following vote and was duly adopted this 22nd day of November, 1994:

Ayes:

Noes:

Absent or Excused:

The following resolution was introduced by Alderman Randy Marshall and duly seconded by Alderman Jay Bryan.

**A RESOLUTION DECLARING TRUCK #53 (ASSET #0277) SURPLUS
AND AUTHORIZING ITS SALE AS TRADE-IN ON A REPLACEMENT TRUCK
Resolution No. 17/94-95**

WHEREAS, Article 12 of the General Statutes, Chapter 160A, authorizes the Town to dispose of surplus personal property; and

WHEREAS, making Front End Loading Refuse Dumpster Truck #53 currently used by the Town available for sale as Trade-In for the purchase of a new Front End Loading Refuse Dumpster Truck will reduce the net cost of the replacement Dumpster Truck; and

WHEREAS, the Town has received three acceptable bids for the purchase of a replacement Dumpster Truck, the lowest of which (after allowing for Trade-In of Truck #53) is within the amount included in the FY 1994-1995 Budget for replacement of Truck #53;

NOW, THEREFORE, THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO HEREBY RESOLVES:

Section 1. The Front Loading Refuse Dumpster Truck #53 (Fixed Asset #0277) is hereby declared surplus **upon delivery and acceptance** of a replacement Front Loading Refuse Dumpster Truck.

Section 2. The Town Manager shall be and is hereby authorized to dispose of the surplus personal property listed in Section 1 in accordance with statutory requirements.

Section 3. The proceeds of the sale shall be applied as trade-in towards the purchase of a replacement Refuse Truck

Section 4. The Refuse Truck is sold on an "as is" and "where is" basis and the Town makes no guarantee of and assumes no responsibility for the Refuse Truck.

Section 5. It will be the Buyer's responsibility to remove the Refuse Truck from the grounds of the Public Work Facility upon delivery and acceptance of the replacement Dumpster Truck.

Section 6. This resolution shall become effective upon adoption.

The forgoing resolution having been submitted to a vote, received the following vote and was duly adopted this 22nd day of November, 1994:

Ayes: Michael Nelson, Randy Marshall, Hank Anderson, Eleanor Kinnaird, Frances Shetley, Jacquelyn Gist, Jay Bryan

Noes: None

Absent or Excused: None

BOARD OF ALDERMENITEM NO. E(3)**AGENDA ITEM ABSTRACT****MEETING DATE: November 22, 1994****SUBJECT: Recommendation of awards of contracts on the Town Commons Project based upon the recommendation of the construction manager with consultation with the architect**

DEPARTMENT: MANAGER'S OFFICE	PUBLIC HEARING: YES ____ NO <u>X</u>
ATTACHMENTS: Breakdown of contracts by supplier and cost , Letter to all contractors, Project Time line,	FOR INFORMATION : James Harris 968-7700
THE FOLLOWING INFORMATION IS PROVIDED: (x) Purpose (x) Analysis (x) Summary	
(x) Action Requested (x) Recommendation	

PURPOSE :

The purpose of this item is to recommend to the Board of Aldermen the names of contractors that are able to provides services to build the Town Commons project less the band stand and playground utilizing the funds on hand.

SUMMARY:

If the Mayor and the Board of Aldermen approve the action requested, the administration's recommendation will:

- Allow the Town Manager to execute the contracts between the Town and the contractors
- According to CCSC'S current and best estimation this action will allow for the construction of phase I of the project with \$231,000 of the \$250,00 on hand.
- Allow the Town Commons Fund Raising Committee and the CCSC Volunteer/M/W/DBE Coordinator and opportunity to begin soliciting the funds needed to construct the band stand and playground equipment.
- will promote the creation of jobs by encouraging the contractors to hire local people

ANALYSIS:

On August 16, 1994 the Board of Aldermen accepted the recommendation of the Town commons Construction committee to hire Construction Control Services to provide Construction management services for the Town Commons Project. The Manager executed the contract between the town and Construction Control Services per the boards direction and the construction manager has solicited proposals from subcontractors and suppliers for services and materials to complete the project. Local contractors and suppliers , including women and minority businesses, were encouraged to submit proposals. The result of the solicitation and negotiation has resulted in a budget for phase one that is well below the amount of money we currently have on hand. This is a result of the solicitation of goods and services at reduced costs by the fund raising committee and through negotiation by the construction manager. The projected cost to build phase I of the project is \$231,825.

Approach to Construction by Cost Phase I

Labor

<u>Contractor</u>	<u>Amount</u>
Bruce Wrenn Electrical	\$ 10,691.24
J&J Contractors (concrete work)	\$ 24,737.00
Lanier Construction Co. (Grading)	\$ 42,500.00
Tar River Roofing Co.	\$ 3,650.00
Ted Chagaris (framing Contractor)	<u>\$ 20,050.00</u>
Labor Sub-Total	\$101,628.24
Materials Sub-total	\$64,831.00 *
CCSC	\$40,000.00
Architect	\$ 7,000.00
Survey or (approx.)	\$ 1,500.00
Contingency (10%)	<u>\$16,666.00</u>
Grand Total	\$231,⁶25.00

*** This figure reflects cost reductions and donations by many vendors**

(This option reflects the use of a prefabricated truss system which will if, approved by the Board of Aldermen, save the town approximately \$15,000 which can be used toward the bandstand. On Monday you will receive an additional option which will reflect the cost using stick built trusses on site per the architects plans.)

Time Line: This project will begin shortly after Board authorization and be completed by March 17, 1995. (Please see the attached time line.)

Use of Local Labor: The enclosed letter has been sent to the recommended contractors.

Recommendations:

It is the recommendation of the staff that the Board of Aldermen approve the contracts submitted by the construction manager, as reviewed and approved by the town attorney for the provision of services by contractors to complete Phase I of the Town Commons project. Phase I includes two farmers market structures, landscaping, and parking. It is further recommended that the manager be authorized to execute all necessary documents to accomplish this task.

Action requested:

To authorize by motion the manager to hire the contractors to perform the work as outlined in the project manual specifications and execute the contracts with the aforementioned contractors to begin the construction of the Town Commons Project.



CONSTRUCTION CONTROL SERVICES CORPORATION

115 W. Main Street - Durham, N.C. 27701 • P.O. Box 1808 - Durham, N.C. 27702-1808 • (919) 682-6566 • Fax (919) 688-4492

November 17, 1994

TO: All Contractors

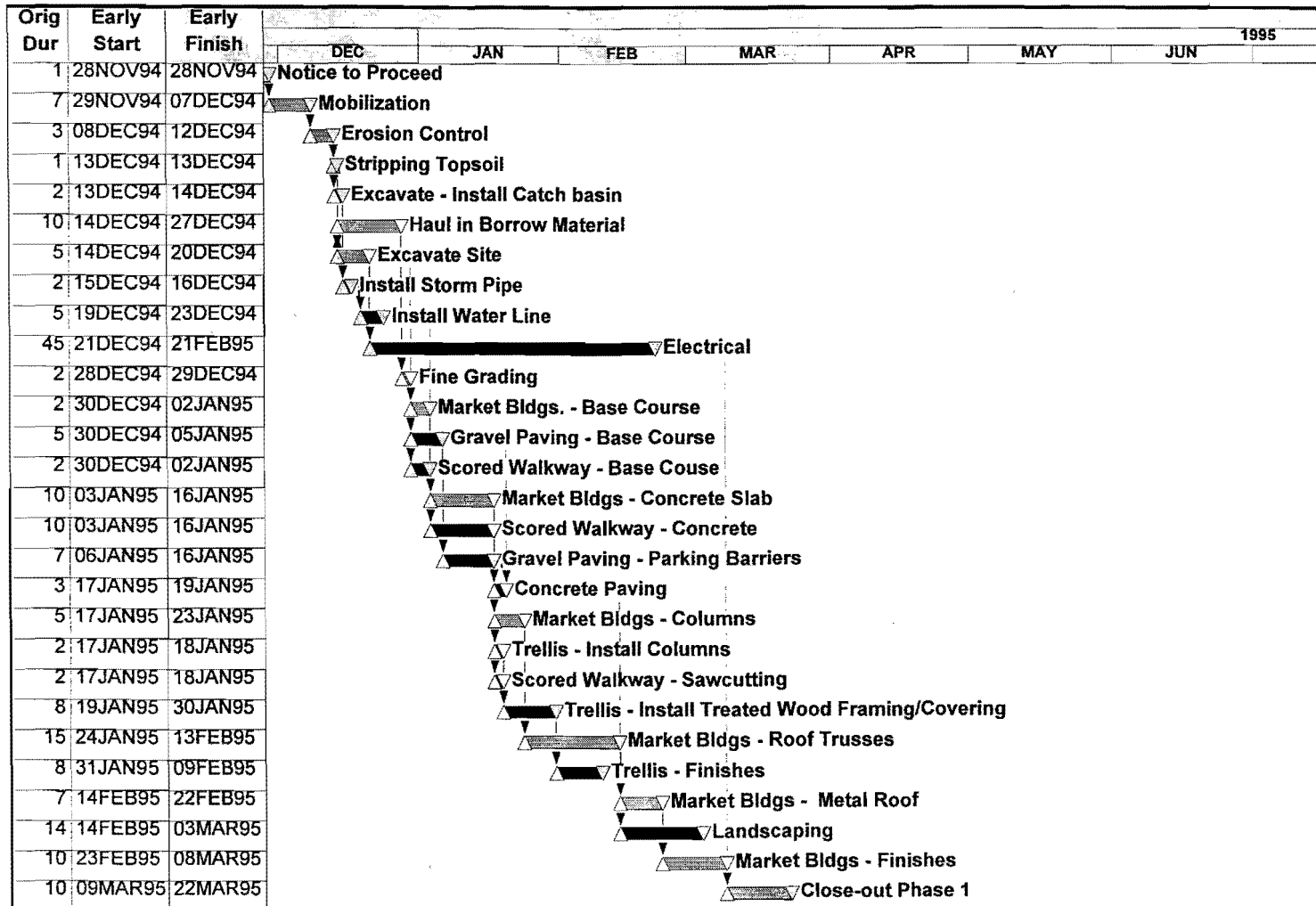
RE: Town Commons Project
Carrboro, NC

This letter is to inform you that it is the Town of Carrboro and CCSC's policy to encourage all contractors to use local suppliers and employees whenever possible. The community has worked very hard and long to make this project a reality by donating materials, time and personal labor. Along with constructing the actual Town Commons Project, our goal is to promote community goodwill. You can show your support by using local suppliers and employees. CCSC will be happy to help you to identified local suppliers. We also have a list of volunteers available should you need assistance. The local employment security commission at 919-967-0177 will help you find local people willing and able to work in your trade.




We look forward to a successful completion of the project.

Sincerely,

John Duncan



Project Start 09AUG94
 Project Finish 22MAR95
 Data Date 17NOV94
 Plot Date 17NOV94

 Early Bar
 Progress Bar
 Critical Activity

CARC

Carrboro Town Commons
 Proposal Construction Schedule
 Classic Schedule Layout

Sheet 1 of 1



Option 1 - Break down the contracts as small as practical, the Town buys the material

Carrboro Town Commons

Item	Labor	Material	Total	Supplier
Strip Topsoil	42,500		L	Lanier
Cut			L	
Waste Topsoil			L	
Borrow			L	
Replace Topsoil			L	
Turfstone	6,434	5,164		J&J/Adams
Sand	J	683		648 Scott Sand and Gravel - Mebane
Concrete	11,303	8,872		J&J/Chandler
Access Drive	L	7,545		American Stone
Silt Fence			L	
ABC 6"	J	A		
Gravel Walk	V	382		Mellot Contractors
6x6 Wood Curb	V	1,406		Carolina Builders
8x8 Wood	V	766		Carolina Builders
Pipe 2"			L	
Steel Encasement			L	
Bore & Jack			L	
Water Pipe 1.5"			L	
Hose Bibbs			L	
1.5" BFP in Vault			L	
CB (0-6)			L	
12" RCP			L	
Tie into existing CB			L	
Lower CB			L	
70' of 4" PVC			L	
Water Fountain			L	
Trench Box	J	500		?
Concrete Columns	7,000	394		Chandler/ J&J Contractors
PVC for Concrete Columns	J	2,091		Water Pro - SDR -35 comes in 13'lengths 781-5410
Rebar for Columns	J	683		Durham Rebar

Option 1 - Break down the contracts as small as practical, the Town buys the material

Carrboro Town Commons

Item	Labor	Material	Total	Supplier
Trusses for Market Buildings		15,643		Truss Builders
Misc. Wood for Market Bldg.CC		1,000		
Brackets for Trusses				Apex Steel Corp. 4,975(not required)
Misc. Steel	TC	5,300		
Framing Labor	20,050			Ted Chagaris
Trellis - 2	TC	630		Ted Chagaris
Nailers for Roof	TC	600		Ted Chagaris
Framing for Service Panel	TC	1,000		
Metal Roof		2,776		Southern States
Labor for Roof	3,650			Tar River Roofing - 528-4472 (Rick Allen)
Painting	V	1,000		Volunteer Labor
Brick for Columns	PW	200	200	
Electrical underground	10,691 BW			Bruce Wrenn
Electrical Panel			BW	Bruce Wrenn
Electrical Light Fixtures	BW	918		Hunt
	BW			? fixture D
Electrical Poles	BW			?
Modifications to Parking lot	PW	2,750		PW
Soil Testing		500		Wilson Engineering(approx. cost)
Landscaping	PW	975		Apex
		3,053		Mebane Shrubbery
Total Prices	101,828	64,831	166,659	
Contingency (10%)			16,666	
CCSC's (Approx. Cost)			40,000	
Architect's Fee			7,000	
Surveyer(approx. cost)			1,500	
Grand Total			231,825	

L= Lanier Construction
 J = J&J Contractors
 V = Volunteer Force
 TC = Ted Chagaris
 BW = Bruce Wrenn Electrical
 PW = Carrboro's Public Work Dept.

Town of Carrboro
Town Commons Project

November 15, 1994

List of Draft Contracts for Phase 1

Contractor	Amount	Location of Contractor
Bruce Wrenn Electrical	\$10,691.24	Roxboro
J&J Contractors	\$24,737.00	Durham
Lanier Construction Co.	\$42,500.00	Snow Hill
Tar River Roofing Co.	\$3,650.00	Creedmoor
Ted Chagaris	\$20,050.00	Chapel Hill
Total	\$101,628.24	

TO: Mayor and Board of Aldermen

FROM: Robert W. Morgan, Town Manager and James Harris

DATE: November 21, 1994

RE: Truss Construction for Town Commons and Building Wood Preservatives

In an effort to save money on Phase I to be applied to Phase II, the construction manager of the Town Commons project came up with five options for building the truss system for the Town Commons project.

Option I

The Town could conceivably save up to \$15,000 on the truss system by using prefab main and perimeter truss systems on this project. The draw back to using prefab versus site built or shop built trusses would be appearance. Prefab trusses are joined at the joints with gang plates. Gang plates are not usually exposed. The strength of the connection is as strong as any other connection process. The issue is simply one of aesthetics.

Option II

Option II would give the Town the option of using prefab trusses on the interior and altering the exterior truss. The perimeter truss would be changed to a glue laminated beam (16" high out of 2 x 4's). This option would slightly change the exterior appearance of the market structure but at the same time the prefab trusses would not be seen from the street. This option would be \$2,240 more expensive than Option I.

Option III

Option three would be to build the interior and perimeter truss system per the architects plans on site. This option would cost \$9,057 more than option I which uses all prefab trusses. Because the trusses are built on site they may be slightly different in size. This option is more expensive than Option I.

Option IV

This option would require that the trusses be built in the shop of the truss builder. The trusses would be mass produced and would therefore be exact in size. The exact size of the truss is the only difference between option III and IV except for where they are constructed. The cost of this option is \$15,643 or \$6,586 more than Option III.

Option V

Option V is the best of all proposed options because it addresses the aesthetics problem of using prefab trusses and reducing the overall cost of the project so that money will be saved to address the band stand construction. This option would use prefab trusses on the interior and site built trusses on the perimeter. The appearance of the Farmers Market structure from the street would be exactly like the plans. This option would be \$2,011 cheaper than Option I. The architect said he would be satisfied with this option.

During the final discussion on this project a question arose about the preservative used to treat the wood. Because the beams will be exposed to the weather some type of treatment is needed. Chromated Cooper Arsenate and Pentachlorophenol treatments are the treatment most often used. Both treatments are according to EPA and AWPI, suitable for a use like the Farmers Market where people are not directly in contact with the wood. All wooden structures are 8 feet 8 inches off the ground.

Date: Nov. 21, 1994

Carrboro Town Commons

Truss design options

Option 1. Build per proposed truss design using gal. plate connectors for both perimeter and main truss.

Truss Builders	15,643
Connectors(approx.)	2,500
Labor(Ted Chagaris)	20,050

Total	38,193
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Amount over what we proposed	0
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Option 2. Build main truss using gal. plates as proposed and use glue-lam. beam(16" high out of 2x4's) for perimeter.

Truss Builders	17,883
Connectors(approx.)	2,500
Labor(Ted Chagaris)	20,050

Total	40,433
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Amount over what we proposed	2,240
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Option 3. Build everything per architectural plans. The main and perimeter trusses built on site.

Cost of wood	13,000
Cost of large Plates	6,000
Connectors(approx.)	2,500
Labor(Ted Chagaris)	25,750

Total	47,250
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Amount over what we proposed	9,057
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Option 4. Build everything per architectural plans by Truss Builders in their shop.

Truss Builders(approx.)	31,286
Connectors(approx.)	2,500
Labor(Ted Chagaris)	20,050

Total	53,836
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Amount over what we proposed	15,643
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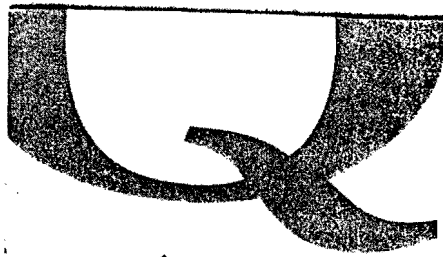
Note: Price is not firm from Truss Builders at this time.

Option 5. Build main truss as proposed using gal. plates and build perimeter truss on site.

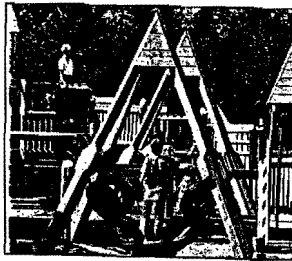
Truss Builders	7,532
Wood	3,400
Connectors(approx.)	2,500
Labor(Ted Chagaris)	22,750

Total	36,182
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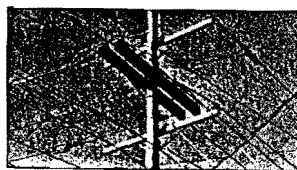
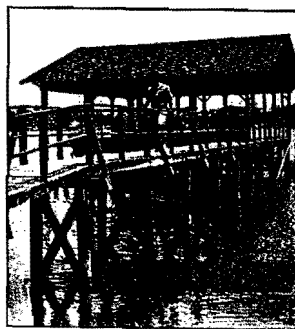
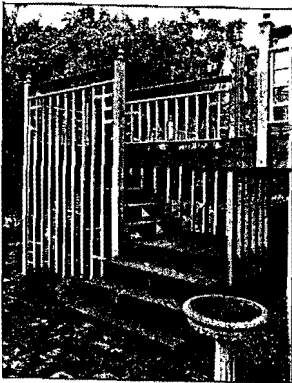
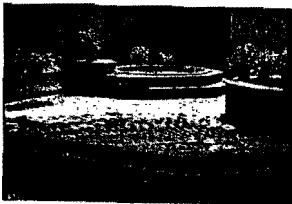
Amount ^{under} over what we proposed	(2,011)
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ANSWERS



*to consumer
questions about
treated wood
products*



James Harris 11-21

James
This information from EPA & AWPI describes that both CCA & Pentachlorophenol treatment are suitable for a use like the Farmers Market, where people are not in direct contact.

No one at AWPI could respond to the question of relative toxicity between the two treatments. If people could regularly touch this material, it could not be treated with Pentachlorophenol per the enclosed Consumer info sheet. I will speak w/ you tomorrow.
Jay

Decades of Proven Performance

America has consumed billions of board feet of pressure-treated lumber and wood products in the past century for thousands of uses, ranging from railroad ties to outdoor decks. This versatile material resists decay and termites even under the most severe conditions. Properly treated wood products provide a long, economical, and serviceable life in hundreds of construction applications.

More than likely, your home (or your neighbor's house) has a treated outdoor deck. Or perhaps there is a playground at your local school or park constructed of pressure-treated wood. And don't forget the utility poles, retaining walls, and highway guardrails posts that are an important part of everyday life.

Because of the widespread use and popularity of pressure-treated material, the product has come under increased scrutiny from consumers, raising questions regarding its use and health aspects. The following information provides answers to some of those frequently asked questions and concerns.

Q *What is pressure treatment?*

A Pressure treatment is a carefully controlled and monitored process involving a series of pressure and vacuum cycles within an enclosed cylinder. During the process, wood preservatives are forced deep into the cellular structure of the wood, forming a chemical barrier against termites and decay. Data from ongoing USDA Forest Service field tests indicate that pressure-treated wood can be expected to last for decades.

Q *Why should wood be pressure-treated?*

A Wood is a readily available and economical building material and the *only* one which comes from a renewable resource. However, wood products used in contact with the ground or in high-moisture locations are subject to attack by termites and microorganisms that promote decay. Under these conditions, wood will be destroyed within 4 to 7 years, in most cases.

Pressure treatment provides the protection needed to significantly prolong the life of wood products, assuring structural soundness and a long service life. This process greatly reduces the amount of wood that would be required to replace untreated wood structures damaged by decay or termites, thereby extending our important forest resource. In fact, an estimated 6.5 billion board feet of wood, or the equivalent of building 425,000 new homes, is conserved each year by using pressure-treated wood products.

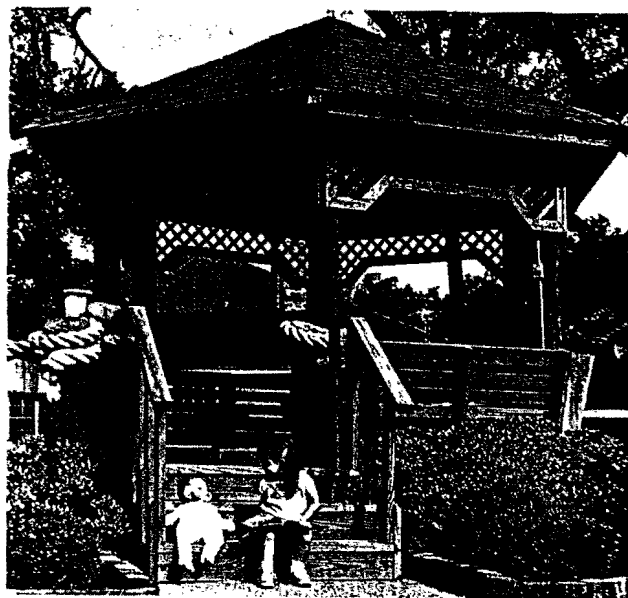
Q *What types of preservatives are used to treat wood?*

A There are three broad classes of wood preservatives used in the pressure-treating process.

Wood pressure treated with **creosote** is primarily used in railroad ties, utility poles, and piling. It is also used for timbers in highway bridges and guardrail posts, as well as for marine structures — bulkheads, docks, and seawalls.

Pentachlorophenol is the most widely utilized of the **oil-borne preservatives**. Utility poles and crossarms are commonly treated with pentachlorophenol. The vaulted ceilings over sports arenas, indoor swimming pools, churches, and shopping centers frequently use glued-laminated beams treated with pentachlorophenol. Copper naphthenate is also an approved oil-borne preservative.

Wood treated with **waterborne preservatives** is used in a wide variety of products and applications, indoors and outdoors, for residential, commercial and industrial structures. Chromated Copper Arsenate (CCA) and Ammoniacal Copper Zinc Arsenate (ACZA) are the most common waterborne preservatives. Other approved waterborne preservatives include Ammoniacal Copper Arsenate (ACA) and Ammoniacal Copper Quat (ACQ). Wood products pressure treated with waterborne preservatives are used in the construction of residential decking and walkways, fences, gazebos, boat docks, playground equipment, as well as for highway noise barriers, sign posts, utility poles, and retaining walls.



Q Has the Environmental Protection Agency (EPA) approved the preservatives used in treated wood?

A Preservatives such as CCA, ACZA, creosote, and pentachlorophenol are registered with the EPA for use in the pressure treatment of wood products.

Since its formation in 1970, EPA has regulated all wood preservatives. From 1978 to 1986, EPA conducted a special review of wood preservatives. This review focused on the potential for these preservatives to produce adverse health effects.

After close examination of the evidence, EPA concluded that the benefits of these preservatives outweighed any potential risk and reregistered their use. Except for creosote, the wood preservative chemicals are not available to consumers and can only be applied in a closed-system process by certified professional pesticide applicators.

For more details, please refer to the EPA-approved Consumer Information Sheet for the respective preservative, beginning on page 7.

Q Does the EPA recommend the use of additional safety equipment while working with CCA-treated wood?

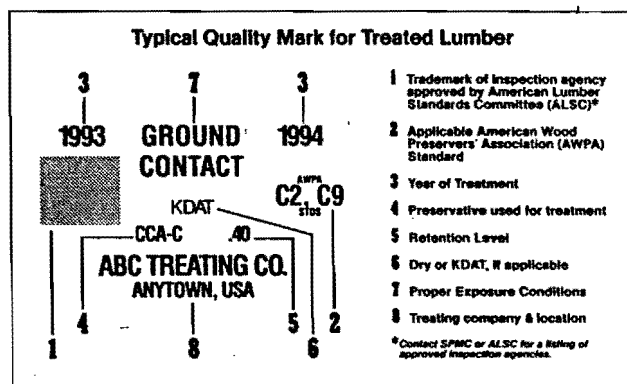
A Not true. The use of standard safety equipment reflects good industrial common sense when working with *all* types of building materials. Eye protection, dust mask, and gloves should be used when sawing or machining any type of building material, including wood products, treated or untreated. Practicing good personal hygiene at the completion of any construction project also applies.



Q Are there any standards for treated wood?

A Yes. The American Wood Preservers' Association (AWPA) has established extensive treating standards for wood products to be used in all types of construction applications, from lumber and timbers to poles and piling. These standards provide guidance to wood treaters with detailed information on treatment conditions and required results. The standards also assist purchasers in specifying adequately treated wood products.

To be certain that the wood you are buying for your building project is properly treated, look for a treated quality mark on each item. The quality mark may be in the form of an end tag or as an ink stamp. The logo of an accredited third-party inspection agency should be included on the quality mark, along with additional pertinent consumer information. A typical quality mark for lumber is illustrated below.



The presence of the quality mark is a clear indication that the producer of the product subscribes to rigorous quality-control standards. For residential applications such as outdoor decks, remember to choose wood products that are visibly clean and free of surface residue.

Q Do the building codes require the use of treated wood in construction?

A Most building codes require the use of pressure-treated wood or naturally resistant wood species where building components come into contact with concrete, masonry, or exposed soil. This includes floor joists and crawlspace support members within 12 to 18 inches of exposed soil.

CCA-treated wood is also ideal when optimum service is desired in the framing and subfloors of bath and kitchen areas, in addition to soffit and fascia, where the possibility of water leakage and subsequent costly damage is present.

Q *Should treated wood be kept away from food and water?*

A Incidental contact of treated wood with drinking water, like that of piling, docks, piers or bridges is acceptable. Moreover, CCA-treated wood can be used for animal drinking water troughs. Treated wood should not be used where it is likely to become a component of food or animal feed; that is, where the wood is likely to mix with foodstuffs. Also, it should not be used for those portions of beehives which come in contact with the honey, or structures or containers for storing silage.

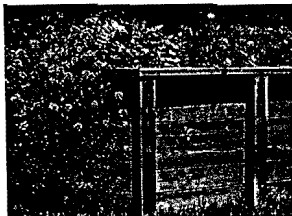
Creosote-treated products are suitable for use in fresh water structures, and have an excellent record in terms of broad resistance to marine borer attack. EPA's investigations have indicated negligible effects on fresh water and marine life from creosote-treated wood. It is quite common to see algae and other organisms growing unharmed on the treated wood's surface.

Q *Can treated wood be used safely in the garden?*

A Yes. The added durability of pressure treatment makes wood treated with creosote or waterborne preservatives the perfect product for grape or tomato stakes, building raised beds and terraced gardens, mushroom trays, trellises, arbors, garden furniture, compost bins, walkway steps, flowerbed edging, and planters. Any assertion that gardeners should not grow edibles in planters or raised beds made with treated wood is without basis.

The forest products industry and the U.S. Forest Service have been conducting research for more than 40 years to determine whether or not preservatives from treated wood migrate into the soil. Stake tests have shown no evidence that sufficient depletion occurs to pose significant risks to human health or the environment.

Independent research conducted by county extension agents in Texas, in cooperation with Texas A&M's Laboratory and Southwest Research Institute, has concluded that neither creosote nor waterborne-treated wood is harmful in garden use.



Q *What can I do with treated wood scraps?*

A Pressure-treated wood scraps should be disposed of through normal trash collection services or by burial. Treated wood must not be burned because combustion breaks the unique bond formed between the preservative solution and the wood cellulose. When this bond is destroyed, the components of the preservative are released in the form of ash and particulates, which can be harmful if inhaled.

The best environmental solution is to recycle. CCA-treated wood scraps can be utilized in secondary uses such as decorative garden borders, planters, stepping, and other backyard amenities. Additional project ideas include constructing mailbox stands, birdhouses, or outdoor furniture.

Used creosote and pentachlorophenol-treated wood products are increasingly being utilized as a fuel, in properly permitted industrial boilers, for the generation of electricity.

Q *Where can additional information about pressure treated wood be obtained?*

A For more information on the use of treated wood products, contact the following organizations for the publications listed:

Answers to Often-Asked Questions about Treated Wood

American Wood Preservers Institute
1945 Old Gallows Road, Suite 550
Vienna, VA 22182

Technical Guidelines for Construction with Treated Round Timber Piling

National Timber Piling Council, Inc.
446 Park Avenue
Rye, NY 10580

Pressure Treated Southern Pine

Marine Construction Manual for Southern Pine

Southern Forest Products Association
P.O. Box 641700
Kenner, Louisiana 70064-1700

Guide to the Characteristics, Use and Specifications of Pressure Treated Wood

Western Wood Preservers Institute
601 Main Street, Suite 401
Vancouver, WA 98660

INORGANIC ARSENICAL PRESSURE-TREATED WOOD

(Including: CCA, ACA, and ACZA)

CONSUMER INFORMATION

This wood has been preserved by pressure-treatment with an EPA-registered pesticide containing inorganic arsenic to protect it from insect attack and decay. Wood treated with inorganic arsenic should be used only where such protection is important.

Inorganic arsenic penetrates deeply into and remains in the pressure-treated wood for a long time. Exposure to inorganic arsenic may present certain hazards. Therefore, the following precautions should be taken both when handling the treated wood and in determining where to use or dispose of the treated wood.

USE SITE PRECAUTIONS

Wood pressure-treated with waterborne arsenical preservatives may be used inside residences as long as all sawdust and construction debris are cleaned up and disposed of after construction.

Do not use treated wood under circumstances where the preservative may become a component of food or animal feed. Examples of such sites would be structures or containers for storing silage or food.

Do not use treated wood for cutting-boards or counter-tops.

Only treated wood that is visibly clean and free of surface residue should be used for patios, decks and walkways.

Do not use treated wood for construction of those portions of beehives which may come into contact with the honey.

Treated wood should not be used where it may come into direct or indirect contact with public drinking water, except for uses involving incidental contact such as docks and bridges.

HANDLING PRECAUTIONS

Dispose of treated wood by ordinary trash collection or burial. Treated wood should not be burned in open fires or in stoves, fireplaces, or residential boilers because toxic chemicals may be produced as part of the smoke and ashes. Treated wood from commercial or industrial use (e.g., construction sites) may be burned only in commercial or industrial incinerators or boilers in accordance with state and Federal regulations.

Avoid frequent or prolonged inhalation of sawdust from treated wood. When sawing and machining treated wood, wear a dust mask. Whenever possible, these operations should be performed outdoors to avoid indoor accumulations of airborne sawdust from treated wood.

When power-sawing and machining, wear goggles to protect eyes from flying particles.

After working with the wood, and before eating, drinking, and use of tobacco products, wash exposed areas thoroughly.

If preservatives or sawdust accumulate on clothes, launder before re-use. Wash work clothes separately from other household clothing.

Approved by the U.S. Environmental Protection Agency

CREOSOTE PRESSURE-TREATED WOOD

CONSUMER INFORMATION

This wood has been preserved by pressure treatment with an EPA-registered pesticide containing creosote to protect it from insect attack and decay. Wood treated with creosote should be used only where such protection is important.

Creosote penetrates deeply into and remains in the pressure-treated wood for a long time. Exposure to creosote may present certain hazards. Therefore, the following precautions should be taken both when handling the treated wood and in determining where to use the treated wood.

USE SITE PRECAUTIONS

Wood treated with creosote should not be used where it will be in frequent or prolonged contact with bare skin (for example, chairs and other outdoor furniture) unless an effective sealer has been applied. Creosote-treated wood should not be used in residential interiors. Creosote-treated wood in interiors of industrial buildings should be used only for industrial building components which are in ground contact and are subject to decay or insect infestation and wood block flooring. For such uses, two coats of an appropriate sealer must be applied. Sealers may be applied at the installation site.

Wood treated with creosote should not be used in the interiors of farm buildings where there may be direct contact with domestic animals or livestock which may crib (bite) or lick the wood.

In interiors of farm buildings where domestic animals or livestock are unlikely to crib (bite) or lick the wood, creosote-treated wood may be used for building components which are in ground contact and are subject to decay or insect infestation if two coats of an effective sealer are applied. Sealers may be applied at the installation site.

Do not use creosote-treated wood for farrowing or brooding facilities.

Do not use treated wood under circumstances where the preservative may become a component of food or animal feed. Example of such use would be structures or containers for storing silage or food.

Do not use treated wood for cutting-boards or counter-tops. Only treated wood that is visibly clean and free of surface residues should be used for patios, decks and walkways.

Do not use treated wood for construction of those portions of beehives which may come into contact with the honey.

Creosote-treated wood should not be used where it may come into direct or indirect contact with public drinking water, except for uses involving incidental contact such as docks and bridges.

Do not use creosote-treated wood where it may come into direct or indirect contact with drinking water for domestic animals or livestock, except for uses involving incidental contact such as docks and bridges.

HANDLING PRECAUTIONS

Dispose of treated wood by ordinary trash collection or burial. Treated wood should not be burned in open fires or in stoves, fireplaces, or residential boilers, because toxic chemicals may be produced as part of the smoke and ashes. Treated wood from commercial or industrial use (e.g., construction sites) may be burned only in accordance with state and Federal regulations.

Avoid frequent or prolonged inhalation of sawdust from treated wood. When sawing or machining treated wood, wear a dust mask. Whenever possible, these operations should be performed outdoors to avoid indoor accumulations of airborne sawdust from treated wood.

Avoid frequent or prolonged skin contact with creosote-treated wood; when handling the treated wood, wear long-sleeved shirts and long pants and use gloves impervious to the chemicals (for example, gloves that are vinyl-coated).

When power-sawing and machining, wear goggles to protect eyes from flying particles. After working with the wood, and before eating, drinking, and use of tobacco products, wash exposed areas thoroughly. If oily preservatives or sawdust accumulate on clothes, launder before reuse. Wash work clothes separately from other household clothing.

Coal tar pitch and coal tar pitch emulsion are effective sealers for creosote-treated wood-block flooring. Urethane, epoxy, and shellac are acceptable sealers for all creosote-treated wood.

Approved by the U.S. Environmental Protection Agency

Consumer Information Sheet

PENTACHLOROPHENOL PRESSURE-TREATED WOOD

CONSUMER INFORMATION

This wood has been preserved by pressure treatment with an EPA-registered pesticide containing pentachlorophenol to protect it from insect attack and decay. Wood treated with pentachlorophenol should be used only where such protection is important.

Pentachlorophenol penetrates deeply into and remains in the pressure-treated wood for a long time. Exposure to pentachlorophenol may present certain hazards. Therefore, the following precautions should be taken both when handling the treated wood and in determining where to use the treated wood.

USE SITE PRECAUTIONS

Logs treated with pentachlorophenol should not be used for log homes.

Wood treated with pentachlorophenol should not be used where it will be in frequent or prolonged contact with bare skin (for example, chairs and other outdoor furniture) unless an effective sealer has been applied. Pentachlorophenol-treated wood should not be used in residential, industrial, or commercial interiors except for laminated beams or for building

components which are in ground contact and are subject to decay or insect infestation and where two coats of an appropriate sealer are applied. Sealers may be applied at the installation site.

Wood treated with pentachlorophenol should not be used in the interiors of farm buildings where there may be direct contact with domestic animals or livestock which may crib (bite) or lick the wood.

In interiors of farm buildings where domestic animals or livestock are unlikely to crib (bite) or lick the wood, pentachlorophenol-treated wood may be used for building components which are in ground contact and are subject to decay or insect infestation if two coats of an effective sealer are applied. Sealers may be applied at the installation site.

Do not use pentachlorophenol-treated wood for farrowing or brooding facilities.

Do not use treated wood under circumstances where the preservative may become a component of food or animal feed. Example of such use would be structures or containers for storing silage or food.

Do not use treated wood for cutting-boards or counter-tops. Only treated wood that is visibly clean and free of surface residues should be used for patios, decks and walkways.

Do not use treated wood for construction of those portions of beehives which may come into contact with the honey.

Pentachlorophenol-treated wood should not be used where it may come into direct or indirect contact with public drinking water, except for uses involving incidental contact such as docks and bridges. Do not use pentachlorophenol-treated wood where it may come into direct or indirect contact with drinking water for domestic animals or livestock, except for uses involving contact such as docks and bridges.

HANDLING PRECAUTIONS

Dispose of treated wood by ordinary trash collection or burial. Treated wood should not be burned in open fires or in stoves, fireplaces, or residential boilers, because toxic chemicals may be produced as part of the smoke and ashes. Treated wood from commercial or industrial use (e.g., construction sites) may be burned only in accordance with state and Federal regulations.

Avoid frequent or prolonged inhalation of sawdust from treated wood. When sawing and machining treated wood, wear a dust mask. Whenever possible, these operations should be performed outdoors to avoid indoor accumulations of airborne sawdust from treated wood.

Avoid frequent or prolonged skin contact with pentachlorophenol-treated wood; when handling the treated wood, wear long-sleeved shirts and long pants and use gloves impervious to the chemicals (for example, gloves that are vinyl-coated).

When power-sawing and machining, wear goggles to protect eyes from flying particles.

After working with the wood, and before eating, drinking, and use of tobacco products, wash exposed areas thoroughly.

If oily preservatives or sawdust accumulate on clothes, launder before reuse. Wash work clothes separately from other household clothing.

Approved by the U.S. Environmental Protection Agency

Published by the

**Treated Products
Communications Council**

American Wood Preservers Institute

Southern Pine Marketing Council

American Wood Preservers' Association

National Timber Piling Council

Railway Tie Association

Southern Pressure Treaters Association

Western Wood Preservers' Institute



Printed on recycled paper

SFPA #301/10M/1-94

Date: Nov. 21, 1994

Carrboro Town Commons

Truss design options

Option 1. Build per proposed truss design using gal. plate connectors for both perimeter and main truss.

Truss Builders	15,643
Connectors(approx.)	2,500
Labor(Ted Chagaris)	20,050

Total	38,193
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Amount over what we proposed	0
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Option 2. Build main truss using gal. plates as proposed and use glue-lam. beam(16" high out of 2x4's) for perimeter.

Truss Builders	17,883
Connectors(approx.)	2,500
Labor(Ted Chagaris)	20,050

Total	40,433
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Amount over what we proposed	2,240
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Option 3. Build everything per architectural plans. The main and perimeter trusses built on site.

Cost of wood	13,000
Cost of large Plates	6,000
Connectors(approx.)	2,500
Labor(Ted Chagaris)	25,750

Total	47,250
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Amount over what we proposed	9,057
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Option 4. Build everything per architectural plans by Truss Builders in their shop.

Truss Builders(approx.)	31,286
Connectors(approx.)	2,500
Labor(Ted Chagaris)	20,050

Total	53,836
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Amount over what we proposed	15,643
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Note: Price is not firm from Truss Builders at this time.

Option 5. Build main truss as proposed using gal. plates and build perimeter truss on site.

Truss Builders	7,532
Wood	3,400
Connectors(approx.)	2,500
Labor(Ted Chagaris)	22,750

Total	36,182
-------	--------

Amount over what we proposed	(2,011)
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The following resolution was introduced by Alderman Frances Shetley and duly seconded by Randy Marshall.

**A RESOLUTION SENDING REGRETS TO THE
FAMILY OF FORMER CARRBORO MAYOR RUTH WEST
Resolution No. 19/94-95**

WHEREAS, Ruth West served as Mayor of the Town of Carrboro from 1975 to 1977; and

WHEREAS, Mayor West contributed significantly to the Town of Carrboro during her tenure as Mayor.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO:

Section 1. The Mayor and Board of Aldermen sends this memorial resolution to Ruth West's family expressing the Town of Carrboro regrets.

Section 2. This resolution shall be spread upon the minutes of the Board of Aldermen and a copy shall be delivered to Mayor West's family.

Section 3. This resolution shall become effective upon adoption.

The foregoing resolution having been submitted to a vote, received the following vote and was duly adopted this 22nd day of November, 1994:

Ayes: Michael Nelson, Randy Marshall, Hank Anderson, Eleanor Kinnaird, Frances Shetley, Jacquelyn Gist, Jay Bryan

Noes: None

Absent or Excused: None

NORTHEN, BLUE, ROOKS, THIBAUT, ANDERSON & WOODS, L.L.P.

A LIMITED LIABILITY PARTNERSHIP

ATTORNEYS AT LAW

100 EUROPA DRIVE

SUITE 550

CHAPEL HILL, NORTH CAROLINA 27514

JOHN A. NORTHEN
J. WILLIAM BLUE, JR.
DAVID M. ROOKS, III
CHARLES H. THIBAUT
CHARLES T. L. ANDERSON
JO ANN RAGAZZO WOODS
CAROL J. HOLCOMB
JAMES C. STANFORD
CHERYL Y. CAPRON
GREGORY HEHMAN-GIDDENS

MAILING ADDRESS:
P. O. BOX 2208
CHAPEL HILL, NC 27515-2208

TELEPHONE (919) 968-4441
TELEFAX (919) 942-6603

November 21, 1994

Board of Alderman
Town of Carrboro
301 W. Main Street
Carrboro, NC 27510

HAND-DELIVERED

RE: - Petition to Close Alleyway
- Alley Located Between Aluminum Recycling Building and
Midway Barbershop - Rosemary Street
- Shown on Tax Map # 7.92.B: between lots 11 and 12 and
abutting lot 10

Dear Board of Aldermen:

The undersigned represents Mr. John Dunkle, the record landowner of lot 12, Block B, as shown on the tax map referred to above (a copy of a portion of the subject tax map showing the alleyway is attached hereto and incorporated herein by this reference). Said lot is also shown as lot 6 per Plat Book 3, at Page 102, as recorded in the Orange County Registry (a copy of which is attached hereto and incorporated herein by this reference). Unless otherwise indicated, all further lot number references will refer to tax map # 7.92.B.

Immediately adjacent to this lot is a twelve foot wide contiguous alleyway that runs from Rosemary Street between lot 12 and lot 11 and abuts a third lot, lot 10. This alleyway was offered for dedication to the public pursuant to that certain plat recorded in Plat Book 3, at Page 102, of the Orange County Registry, referred to above.

Petition is hereby made for the closing of said alleyway, pursuant the authority granted to the Town of Carrboro under N.C. Gen. Stat. § 160A-229. The Town Council is hereby requested to adopt a resolution declaring the Town's intent to close the alleyway and calling for a public hearing on the issue.

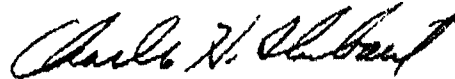
NORTHEN, BLUE, ROOKS, THIBAUT, ANDERSON & WOODS

Page Two
Carrboro Board of Alderman
November 21, 1994

This matter has been previously discussed with Carrboro Town Attorney Michael Brough. Should your Board need additional information or like to discuss this matter in more detail, please let me know.

Sincerely,

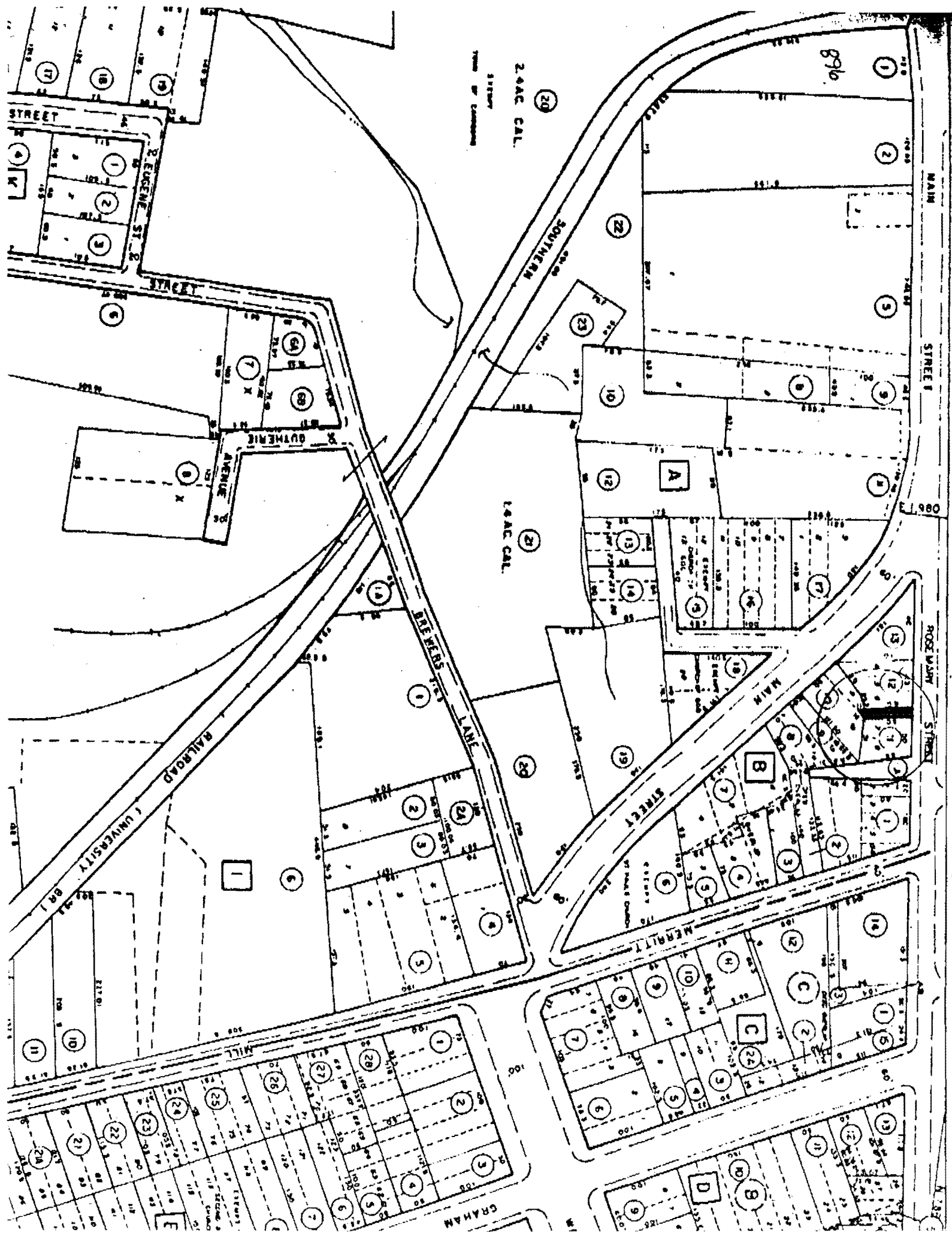
NORTHEN, BLUE, ROOKS, THIBAUT,
ANDERSON & WOODS LLP

A handwritten signature in cursive script, appearing to read "Charles H. Thibaut".

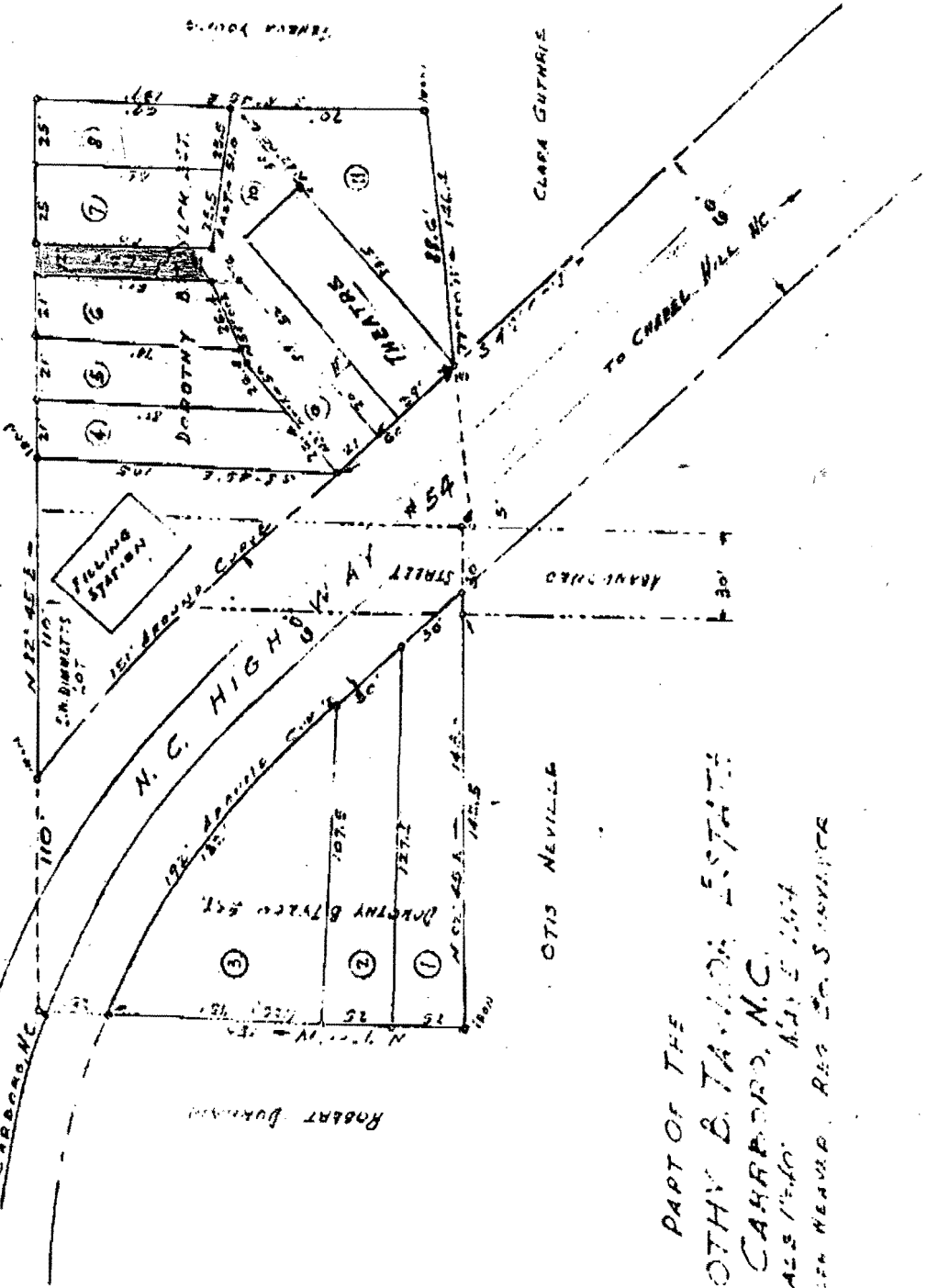
Charles H. Thibaut

enclosures

cc: John Dunkle
Michael Brough, Esq.



JONES FERRY ROAD
(FORMERLY MAIN ST.)



PART OF THE
DOROTHY B. TAYLOR ESTATE
CAHARRO, N.C.

SCALE 1"=40' AUG 5 1964
J. PAUL HENARD, REG. P.S. SURVEYOR

TRACED BY W. J. H. H. H.

BOARD OF ALDERMEN

ITEM NO. D(1)

AGENDA ITEM ABSTRACT

MEETING DATE: November 22, 1994

SUBJECT: Public Hearing: Voluntary Annexation of Cates Farm Phases 3 and 4

DEPARTMENT: PLANNING DEPARTMENT	PUBLIC HEARING: YES <u>X</u> NO <u> </u>	
ATTACHMENTS: Petition for Annexation Ordinance Location Map	FOR INFORMATION CONTACT: Roy M. Williford, 968-7713	
THE FOLLOWING INFORMATION IS PROVIDED:		
(x) Purpose	(x) Action Requested	(x) Analysis
() Summary	(x) Recommendation	

PURPOSE:

To receive citizen comments regarding the proposed annexation of Phases 3 and 4 of the Cates Farm Subdivision into the Town Limits.

ANALYSIS:

Richard Westmoreland, on behalf of Rhein-Raleigh-Charlotte Limited Partnership, submitted a petition for annexation. The petition for annexation requests that Phases 3 and 4 of the Cates Farm Subdivision be annexed into the Town. Phases 3 and 4 of the Cates Farm Subdivision are contiguous to the Town of Carrboro. Specifically, Phases 3 and 4 are contiguous to Phases 1 and 2 of the Cates Farm Subdivision which have previously been annexed into the Town Limits. The total acreage of Phases 3 and 4 is 24.793 acres and thirty-seven (37) dwelling units are to be located on the property. The petition for annexation requests that Phases 3 and 4 of the Cates Farm Subdivision be annexed into the Town Corporate Limits effective February 28, 1995.

ACTION REQUESTED:

The Board of Aldermen is requested to receive citizen comments and to consider the annexation petition submitted by Richard Westmoreland on behalf of Rhein-Raleigh-Charlotte Limited Partnership.

RECOMMENDATION:

The Administration recommends that the Board of Aldermen adopt the attached ordinance which annexes Phases 3 and 4 of the Cates Farm Subdivision into the Town Limits effective February 28, 1995.

TOWN OF CARRBORO, NORTH CAROLINA

PETITION FOR ANNEXATION OF CONTIGUOUS PROPERTY

TO THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO:

1) The undersigned, being the owner of all real property located within the area described in paragraph two below, requests that such area be annexed to the Town of Carrboro, North Carolina.

2) The area to be annexed is contiguous to the Town of Carrboro, and is located at an area West of Cobblestone Subdivision. The boundaries of such territory are as shown on the metes and bounds description attached hereto.

3) A map (no larger than 18" x 24") of the foregoing property, showing its relationship to the existing corporate limits of the town, is also attached hereto.

4) The total acreage and dwellings units located on this property are as follows:

24.793

24.793 Acres
(Phase 3 & 4)

37 Dwelling Units

Respectfully submitted this ____ day of October, 1994.

Rhein Raleigh-Charlotte Limited Partnership

By: Robert C. Rhein Interests, Inc.

Name

1905-G Ashwood Court
Greensboro, NC 27408

Address

Richard Westmoreland, Jr. V.P.
Owner/President

Richard Westmoreland, Jr. V.P.

Attest:

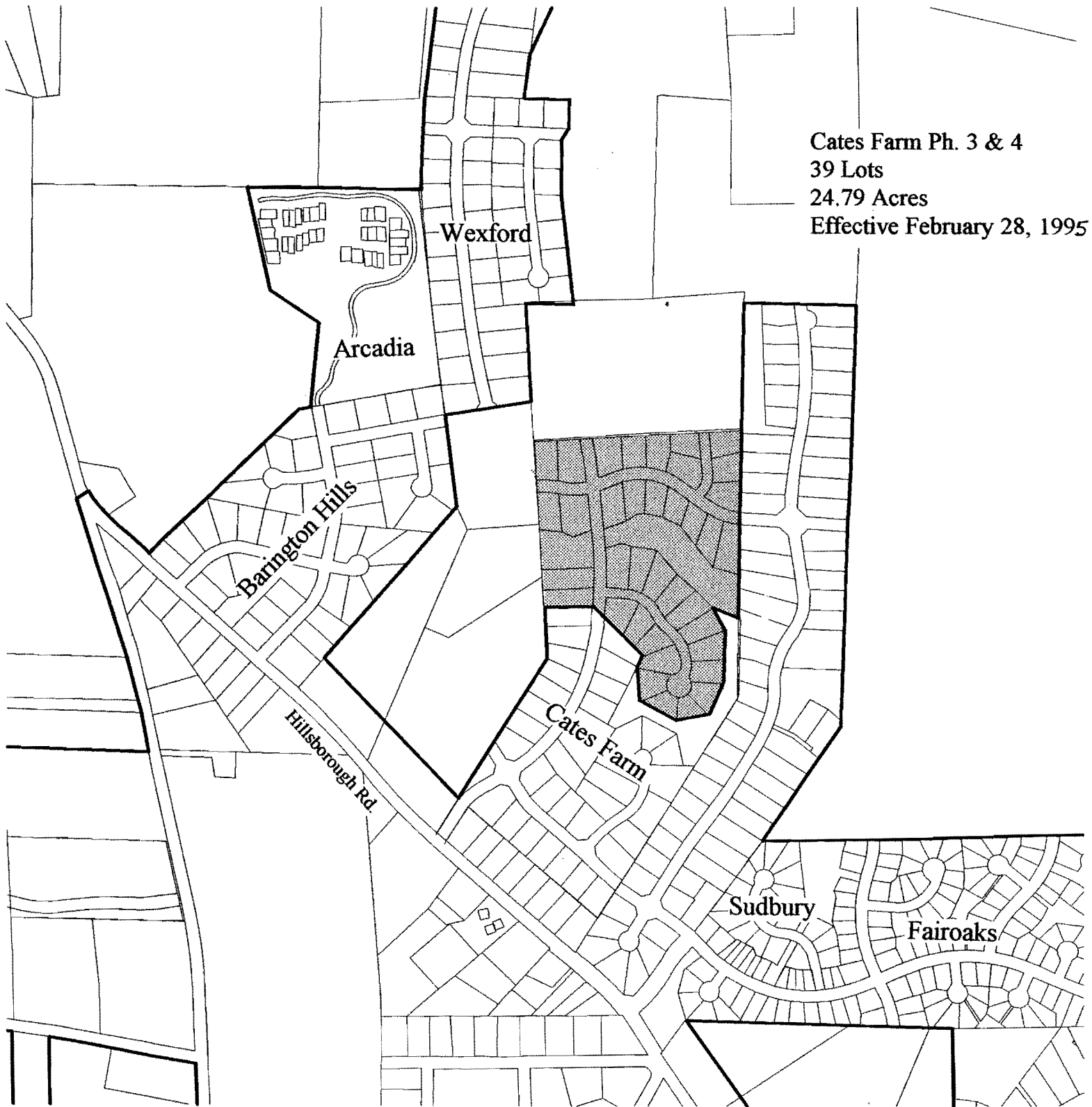
Richard W. Ma
Asst. Secretary

I, Sarah C. Williamson, Town Clerk of the Town of Carrboro, do hereby certify that the sufficiency of the above-referenced petition has been checked and found to be in compliance with G.S. 160A-31.

This the 25th day of October, 1994.

Sarah C. Williamson
Town Clerk

Annexation of Cates Farm Phase 3 & 4



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

**AN ORDINANCE ANNEXING
Cates Farm Subdivision, Phases 3 and 4**

WHEREAS, a petition was received requesting the annexation of Phases 3 and 4 of the Cates Farm Subdivision; and

WHEREAS, the petition was signed by the owners of all the real property located within such area; and

WHEREAS, a public hearing on the question of annexation was held on November 22, 1994, following notice of such hearing published in The Chapel Hill News on November 11, 1994.

NOW, THEREFORE, THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO ORDAINS:

Section 1. The Board of Aldermen finds that a petition requesting the annexation of the area described in Section 2 was properly signed by the owners of all the real property located within such area and that such area is contiguous to the boundaries of the Town of Carrboro, as the term "contiguous" is defined in G.S. 160A-31(f).

Section 2. The following area is hereby annexed to and made a part of the Town of Carrboro:

All that portion of a tract of land in Chapel Hill Township, Orange County, North Carolina, as per plat recorded in Book 36, Page 66 register of said county, being Phases 3 and 4 of Cates Farm Subdivision, described as follows:

Beginning at an existing iron pipe on the eastern line of the Amos Horne Property; said iron road also being the southwest corner of Virginia Pollitzer Leith; thence along Leith's southern line N 89° 57' 12" E, 1018.22 feet to an existing iron pipe on the line of Cobblestone Subdivision, Leith's southeast corner; thence along the western line of Cobblestone Subdivision S 04° 03' 36" W, 945.31 feet to an existing iron road at the northeast corner of Phases 1 and 2 of Cates Farm Subdivision; thence along the lines of Phases 1 and 2 of said Subdivision the following courses:

- 1- N 62° 41' 31" W, 148.66 feet;
- 2- S 25° 51' 26" E, 128.17 feet;
- 3- S 03° 53' 53" W, 254.40 feet;
- 4- S 25° 53' 03" W, 172.40 feet;
- 5- S 61° 00' 10" W, 89.82 feet;
- 6- N 76° 44' 15" W, 84.55 feet;
- 7- N 58° 19' 43" W, 164.09 feet;

8- N 21° 04' 41" W, 109.94 feet;
9- N 00° 57' 05" W, 87.40 feet;
10- N 27° 31' 03" E, 62.63 feet;
11- N 38° 36' 26" W, 165.10 feet;
12- N 58° 12' 12" W, 90.72 feet;
13- N 32° 23' 02" W, 91.11 feet;
14- N 86° 36' 16" W, 235.38 feet to an existing iron road on the line of Ned L. Riggsbee; thence with Riggsbee's eastern line N 00° 47' 24" W, 151.35 feet to an existing iron pipe, Riggsbee's northeast corner; said iron pipe also being the southeast corner of Betsy Lee Meadows Smith; thence along Smith's eastern line N 00° 48' 42" W, 254.45 feet to an existing iron pipe, Smith's northeast corner; said iron pipe also being the southeast corner of Amos Horne; thence along Horne's eastern line N 00° 03' 16" W, 417.19 feet to the point of beginning and containing 23.75 acres more or less.

Section 3. The area within the street right-of-way (to the center of the street) immediately adjacent to the boundaries of the above-described area is also annexed to the Town of Carrboro.

Section 4. The Board hereby strongly requests that the applicant for the annexation and all persons associated with the annexed property indicate in all advertisements and sales information regarding this property that the property is located within the corporate limits of the Town of Carrboro.

Section 5. This ordinance shall become effective on February 28, 1995.

Section 6. The Town Clerk shall cause to be recorded in the Office of the Register of Deeds of Orange County and in the Office of the Secretary of State an accurate map of the annexed territory described in Sections 2 and 3 together with a duly certified copy of this ordinance. Such a map shall also be delivered to the Orange County Board of Elections as required by G.S. 163-288.1.

The foregoing ordinance having been submitted to a vote, received the following vote and was duly adopted this 22nd day of November, 1994:

Ayes:

Noes:

Absent or Excused:

The following ordinance was introduced by Alderman Randy Marshall and duly seconded by Alderman Hank Anderson.

AN ORDINANCE ANNEXING
CATES FARM SUBDIVISION, PHASES 3 AND 4
Ordinance No. 15/94-95

WHEREAS, a petition was received requesting the annexation of Phases 3 and 4 of the Cates Farm Subdivision; and

WHEREAS, the petition was signed by the owners of all the real property located within such area; and

WHEREAS, a public hearing on the question of annexation was held on November 22, 1994, following notice of such hearing published in The Chapel Hill News on November 11, 1994.

NOW, THEREFORE, THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO ORDAINS:

Section 1. The Board of Aldermen finds that a petition requesting the annexation of the area described in Section 2 was properly signed by the owners of all the real property located within such area and that such area is contiguous to the boundaries of the Town of Carrboro, as the term "contiguous" is defined in G.S. 160A-31(f).

Section 2. The following area is hereby annexed to and made a part of the Town of Carrboro:

All that portion of a tract of land in Chapel Hill Township, Orange County, North Carolina, as per plat recorded in Book 36, Page 66 register of said county, being Phases 3 and 4 of Cates Farm Subdivision, described as follows:

Beginning at an existing iron pipe on the eastern line of the Amos Horne Property; said iron road also being the southwest corner of Virginia Pollitzer Leith; thence along Leith's southern line N 89° 57' 12" E, 1018.22 feet to an existing iron pipe on the line of Cobblestone Subdivision, Leith's southeast corner; thence along the western line of Cobblestone Subdivision S 04° 03' 36" W, 945.31 feet to an existing iron road at the northeast corner of Phases 1 and 2 of Cates Farm Subdivision; thence along the lines of Phases 1 and 2 of said Subdivision the following courses:

- 1- N 62° 41' 31" W, 148.66 feet;
- 2- S 25° 51' 26" E, 128.17 feet;
- 3- S 03° 53' 53" W, 254.40 feet;
- 4- S 25° 53' 03" W, 172.40 feet;
- 5- S 61° 00' 10" W, 89.82 feet;
- 6- N 76° 44' 15" W, 84.55 feet;

7- N 58° 19' 43" W, 164.09 feet;
8- N 21° 04' 41" W, 109.94 feet;
9- N 00° 57' 05" W, 87.40 feet;
10- N 27° 31' 03" E, 62.63 feet;
11- N 38° 36' 26" W, 165.10 feet;
12- N 58° 12' 12" W, 90.72 feet;
13- N 32° 23' 02" W, 91.11 feet;
14- N 86° 36' 16" W, 235.38 feet to an existing iron road on the line of Ned L. Riggsbee; thence with Riggsbee's eastern line N 00° 47' 24" W, 151.35 feet to an existing iron pipe, Riggsbee's northeast corner, said iron pipe also being the southeast corner of Betsy Lee Meadows Smith; thence along Smith's eastern line N 00° 48' 42" W, 254.45 feet to an existing iron pipe, Smith's northeast corner, said iron pipe also being the southeast corner of Amos Horne; thence along Horne's eastern line N 00° 03' 16" W, 417.19 feet to the point of beginning and containing 23.75 acres more or less.

Section 3. The area within the street right-of-way (to the center of the street) immediately adjacent to the boundaries of the above-described area is also annexed to the Town of Carrboro.

Section 4. The Board hereby strongly requests that the applicant for the annexation and all persons associated with the annexed property indicate in all advertisements and sales information regarding this property that the property is located within the corporate limits of the Town of Carrboro.

Section 5. This ordinance shall become effective on February 28, 1995.

Section 6. The Town Clerk shall cause to be recorded in the Office of the Register of Deeds of Orange County and in the Office of the Secretary of State an accurate map of the annexed territory described in Sections 2 and 3 together with a duly certified copy of this ordinance. Such a map shall also be delivered to the Orange County Board of Elections as required by G.S. 163-288.1.

The foregoing ordinance having been submitted to a vote, received the following vote and was duly adopted this 22nd day of November, 1994:

Ayes: Michael Nelson, Randy Marshall, Hank Anderson, Eleanor Kinnaird, Frances Shetley, Jacquelyn Gist, Jay Bryan

Noes: None

Absent or Excused: None

BOARD OF ALDERMEN

ITEM NO. E(2)

AGENDA ITEM ABSTRACT MEETING DATE: NOVEMBER 22, 1994

SUBJECT: ACCEPTANCE OF THE WEAVER FAMILY CEMETERY

DEPARTMENT: PUBLIC WORKS DEPT.	PUBLIC HEARING: NO						
ATTACHMENTS: Petition Cemetery Commission's Recommendation Mailing Certification of Petition and Board Meeting notice to abutting property owners Resolution	FOR INFORMATION CONTACT: Chris Peterson 968-7719						
THE FOLLOWING INFORMATION IS PROVIDED: <table><tr><td><input checked="" type="checkbox"/> Purpose</td><td><input type="checkbox"/> Summary</td><td><input checked="" type="checkbox"/> Analysis</td></tr><tr><td><input checked="" type="checkbox"/> Recommendation</td><td><input checked="" type="checkbox"/> Action Requested</td><td></td></tr></table>		<input checked="" type="checkbox"/> Purpose	<input type="checkbox"/> Summary	<input checked="" type="checkbox"/> Analysis	<input checked="" type="checkbox"/> Recommendation	<input checked="" type="checkbox"/> Action Requested	
<input checked="" type="checkbox"/> Purpose	<input type="checkbox"/> Summary	<input checked="" type="checkbox"/> Analysis					
<input checked="" type="checkbox"/> Recommendation	<input checked="" type="checkbox"/> Action Requested						

PURPOSE

To review a Petition, submitted by Carrol S. Weaver and Jane Brill, to accept the Weaver Family Cemetery onto the Town's Cemetery Maintenance System.

To approve the Petitioners' request to accept the Weaver Cemetery.

ANALYSIS

In accordance with the Town's Policy for Acceptance of Private Cemeteries, Carrol S. Weaver and Jane Brill, family heirs, has submitted a Petition for the Town to accept the Weaver Family Cemetery located on West Main Street.

Summary of Petition:

- | | |
|---------------------|--|
| 1. Burial inventory | provided |
| 2. Property survey | provided |
| 3. Property irons | in place |
| 4. Deed: | No deed exists; <i>if the request to accept is approved and prior to the Town Manager's execution of an Notice of Acceptance, the Petitioners shall execute a Quit Claim Deed; Town Attorney would draft Deed and the Town would record.</i> |

5. Property Line

Demarcation:

An existing old fence demarcates the east boundary; if the request to accept is approved, the Petitioner has indicated that visible posts would be installed to define the west boundary outside the fenced plot

6. Landscaping:

Petitioner recommends that the cemetery grounds be maintained in a "natural state" in order to preserve the historicalness of the site; The Director of Public Works recommends that the cemetery be left in its natural state; however, if the request to accept is approved, the Director of Public Works shall inspect the condition of the landscaping to ensure that all underbrush has been removed; trees/shrubs properly pruned and the areas around the monuments/markers have been properly trimmed to his satisfaction; The Director of Public Works will approve the condition of the cemetery prior to the Town Manager's execution of a Notice of Acceptance.

7. Foot/head markers

Petitioner requests the foot/head markers be maintained in their present position to maintain a natural state; If the cemetery is accepted, the Town would not be obligated to place, replace or repair any monument or marker (Section 13-20.1 of the Town Code)

8. Monuments/markers

Petitioner indicates monuments/markers are straighten; It should be noted that some are "lending"; If the cemetery is accepted, the Town would not be obligated to place, replace or repair any monument or marker (Section 13-20.1 of the Town Code)

The Citizens Cemetery Commission has recommended acceptance of this cemetery.

Recommendation

The Administration recommends that the Petitioner's request for acceptance be approved with the stipulation that following conditions must be satisfactorily fulfilled within six (6) months of the adoption of a Resolution by the Board stating the Town's intent to Accept:

- 1. Demarcation of all property lines**
- 2. The cemetery grounds shall be accepted in a natural state; however the Director of Public Works shall inspect the landscaping prior to an Acceptance Notice being executed by the Town Manager to ensure that all underbrush has been removed; trees/shrubs have been pruned and areas around monuments/markers have been trimmed to the Director of Public Works' satisfaction.**
- 3. Execution of a Quit Claim Deed**

The Administration also recommends that no future burials be allowed in this historic cemetery.

Action Requested

The adoption of the attached Resolution which would:

- **authorize the Town Manager to execute a Notice of Acceptance when the conditions outlined in the resolution were fulfilled to the satisfaction of the Town's Cemetery Administration;**
- **resolve that the outlined conditions must be fulfilled within six (6) months of the date of the resolution and that failure to fulfill within this period would nullify the Board of Aldermen's authorization to accept the cemetery onto the Town's cemetery system; and**
- **if accepted, no future burials will be allowed in this cemetery.**

PETITION
TO ACCEPT A PRIVATE CEMETERY
ONTO THE
TOWN OF CARRBORO'S
CEMETERY MAINTENANCE SYSTEM

Name of Cemetery: Weaver Family Cemetery

Street Location: West Main Street adjacent to 802 West Main Street

PETITION FORM REQUESTED BY:

Name: Carrol S. Weaver

Address: 1611 Smith Level Road
Chapel Hill, NC 27516

This is to certify that the attached Petition was filed in the Office of the Town Clerk this 15th day of ^{November}~~October~~ 1994.

Sarah C. Williamson
Town Clerk

PETITION FOR CEMETERY ACCEPTANCE

TO THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO:

- A. We, the undersigned property owners, family heirs, or associated/interested party(s), of the below identified cemetery lands, hereby Petition the Board of Aldermen, pursuant to the Town's Policy for the Acceptance of Private Cemeteries to accept the below identified cemetery lands onto the Town's Cemetery Maintenance System.

Carrol S. Weaver
Family heir

Jane S. Brill
family heir

- B. The cemetery land desired to be accepted is within the Town of Carrboro's municipal limits and is: known as the Weaver Family Cemetery, located on West Main Street; and further identified on Tax Map: 103 Block: A Lot: 36 Parcel Identification Number: 9778-48-5102

- C. The cemetery's location is further identified on the attached sketch which hereby becomes Attachment I of this Petition.

- D. With respect to this Petition, we submit the following purposes for this acceptance request:

This historic Weaver family cemetery, within the corporate limits of the Town of Carrboro, will be classified as an abandoned private cemetery when Carrol S. Weaver, a family heir, can no longer maintain its present upkeep. The heirs of the Weaver family request that the Town of Carrboro take possession of the cemetery, maintain it in its natural state in the interest of historic preservation, and protect it from encroachment by future development in the Town of Carrboro.

This cemetery is the burial site of the first Weavers in this area of North Carolina and is of significance to the history of Orange County and to the Town of Carrboro. Please refer to the enclosed documents to the North Carolina Cemetery Survey for the details of the Weaver family involvement in the early years of the development of the Town of Carrboro and of the early land holdings of this family in the counties of Orange and Chatham - dating back to the early 1800s.

2

- E. It is understood that when cemetery acceptance is requested, established criteria must be fulfilled and the expenses incurred to fulfill such criteria shall be borne by the petitioners.**

- F. It is understood that if the Board of Aldermen approves the request to accept the petitioned cemetery, the petitioners will have six (6) months to fulfill the criteria and/or conditions set forth in the Board's Acceptance Resolution. It is further understood, that failure to fulfill such criteria and/or conditions within the six (6) month period, will nullify the Board's Action to Accept.**

- G. With respect to the cemetery acceptance petitioned for, we hereby confirm that Attachment II, entitled "Town of Carrboro Criteria for Cemetery Acceptance," is a part of this Petition Form. It is understood that, as the Petitioner(s), each criterion shall be responded to and such responses become a part of this Petition.**

Petitioners:

1. Name	Address	Telephone #
GAROLD S. WEAVER	1011 SMITH WEAVER RD	919-942-5011
Signature	Date	Relationship to cemetery lands
Garold S. Weaver	NC CHAPEL HILL 27516	FAMILY HEIR

2. Name	Address	Telephone #
JANE S. BRILL	3419 FAIRWAY LANE Durham NC 27712	919-620-0330
Signature	Date	Relationship to cemetery lands
Jane S. Brill	10/30/94	FAMILY HEIR

3. Name	Address	Telephone #
Signature	Date	Relationship to cemetery lands

4. Name	Address	Telephone #
Signature	Date	Relationship to cemetery lands

5. Name	Address	Telephone #
Signature	Date	Relationship to cemetery lands

Petitioners:

6. Name	Address	Telephone #
Signature	Date	Relationship to cemetery lands

7. Name	Address	Telephone #
Signature	Date	Relationship to cemetery lands

8. Name	Address	Telephone #
Signature	Date	Relationship to cemetery lands

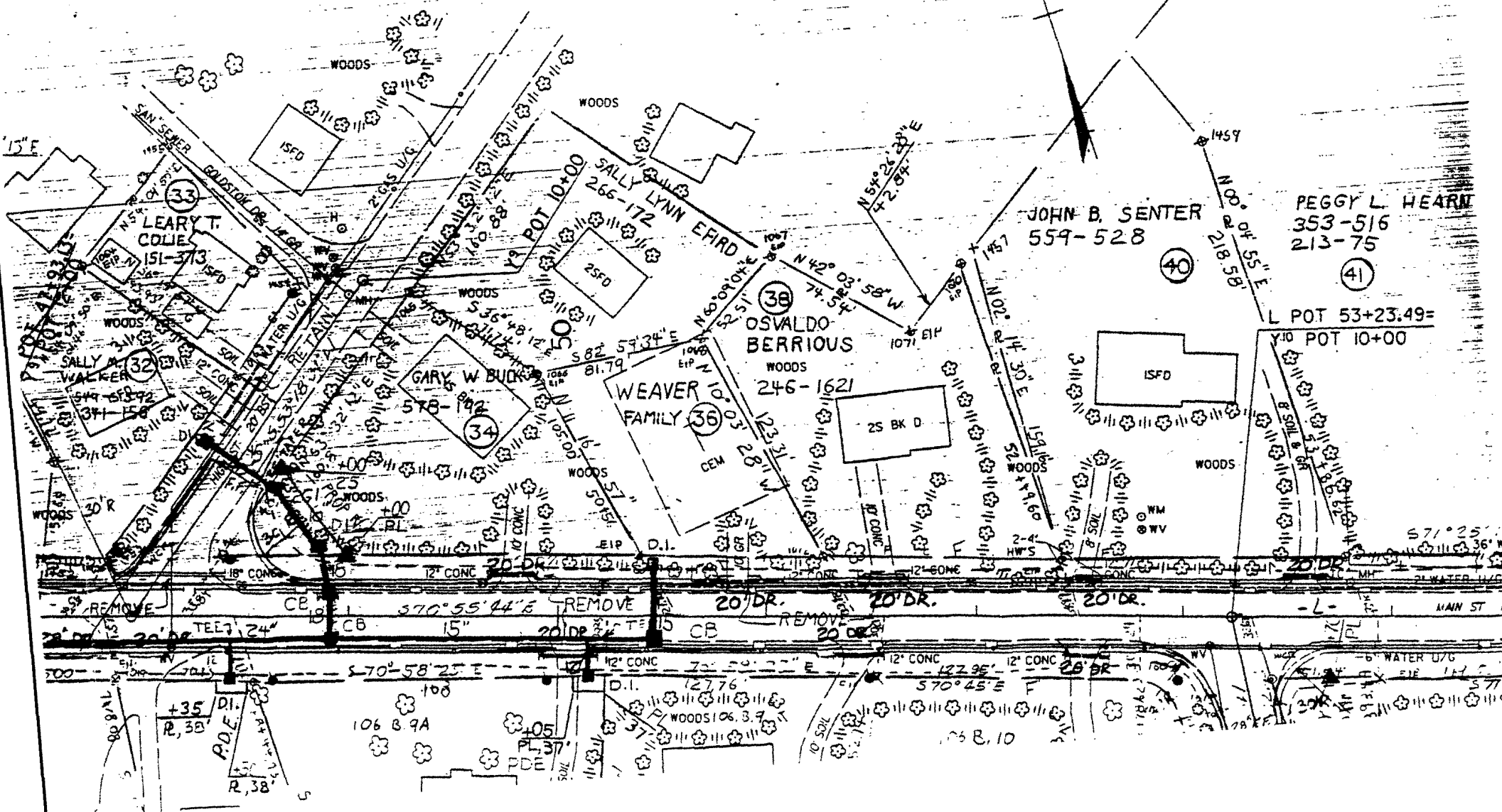
9. Name	Address	Telephone #
Signature	Date	Relationship to cemetery lands

10. Name	Address	Telephone #
Signature	Date	Relationship to cemetery lands

ATTACHMENT I
SKETCH OF CEMETERY LOCATION

PROJ. REFERENCE NO.	
8.1500701	
STATE PROJ. NO.	F. A. F.

ROX M. WILKINSON



ATTACHMENT II

"Town of Carrboro Criteria for Cemetery Acceptance,"

Criterion	Complies	Does Not Comply	Proposed Course of Action
1. Burial Inventory If available, attach to Petition	Yes		Inventory Included ✓
2. Property Survey If available, attach to Petition	Yes		MR. CHRIS PETERSON HAS A COPY OF SURVEY DONE IN 1994
3. Placement of Property Irons	Yes		
4. Deed If available, attach to Petition		No	The heirs propose that the Town of Carrboro file for a Deed to the Cemetery Property
5. Demarcation of property lines by clearing, fencing and/or plantings (i.e. trees, shrubs)		No	IN ADDITION to the existing old fence, visible posts will define the West boundary of the Cemetery lot outside the Fenced Plot.

ATTACHMENT II

"Town of Carrboro Criteria for Cemetery Acceptance,"

Criterion	Complies	Does Not Comply	Proposed Course of Action
<p>7. Landscaping:</p> <p>Leaves removed</p> <p>Underbrush removed</p> <p>Trees/shrubs properly pruned</p> <p>Established stand of grass or be left in <u>natural state</u> (to be determined by Director of Public Works)</p> <p>Grass mowed and areas around monuments/markers trimmed</p>	<p>YES</p> <p>YES</p> <p>YES</p>	<p>NO</p> <p>NO</p>	<p>PRESERVATION of NATURAL HISTORIC SITE</p> <p>NATURAL STATE - PRESERVATION of HISTORIC CEMETERY</p> <p>NATURAL STATE - PRESERVATION of HISTORIC CEMETERY</p>
<p>8. Foot/head markers raised and/or lowered to be flush with the ground</p>		NO	<p>NATURAL STATE - PRESERVATION of HISTORIC CEMETERY</p>

ATTACHMENT II

"Town of Carrboro Criteria for Cemetery Acceptance,"

Criterion	Complies	Does Not Comply	Proposed Course of Action
9. Monument/markers straightened	YES		
Special Information or Requests by Petitioner			

The Weaver Family Cemetery has been registered with the North Carolina Department of Cultural Resources: Raleigh, NC, in the permanent files of the Orange County Cemetery Survey. Answers, compiled by Jane S. Brill, to the NC Cemetery Survey pertaining to the Weaver Family Cemetery are included in this petition to the Town of Carrboro, to document the extent of research of this cemetery that awarded commendation to Jane S. Brill and to Carrol S. Weaver for their extensive research of the Weaver Family private cemetery in Carrboro, NC.

The official plot survey of the Weaver Family Cemetery has been registered in Hillsborough with the Registrar of Deeds by Carrol S. Weaver in 1994.

**WEAVER FAMILY CEMETERY
ROUTE 54 WEST
CARRBORO, NORTH CAROLINA**

Information compiled by Jane Shaw Brill on May 1, 1993

I found evidence of 28 documented grave sites in the Weaver Cemetery, and I recorded information on the tombstones.

1. Kate Weaver Phipps	10.12.1871 - 5.7.1951
2. Herbert L. Weaver	2.1.1875 - 1.8.1902
3. D. Weldon Weaver	12.27.1858 - 12.24.1929
4. J. Winfield Weaver	5.16.1852 - 5.19.1930
5. Sallie Weaver Purefoy	4.19.1858 - 6.10.1941
6. Thomas S. Weaver	1823 - 1897
7. Ann Sterling Clack Weaver	1820 - 1893
8. Wiley Cromwell Weaver	7.3.1846 - 12.13.1906
9. Amelia Kirkland Weaver	4.7.1847 - 1.8.1914
10. Norman [son of WCW & AKW]	n.d.
11. Nellie [dau of WCW & AKW]	n.d.
12. J. H. Weaver	4.10.1814 - 3.25.1887
13. Martha M. Weaver	5.20.1814 - 7.6.1862
14. Nannie E. Weaver [dau of JHW & MMW]	8.11.1848 - 9.15.1883
15. Sara J. Weaver [dau of JHW & MMW]	4.22.1850 - 3.12.1908
16. Rev. Thomas Weaver	1785 - 1843
17. Sarah Jane Brewer Weaver	1787 - 1850
18. Elizabeth C. [w of Meritt Cheek]	4.8.1820 - 12.16.1880
19. William Matthew Weaver	6.30.1878 - 12.1.1952
20. Beulah Smith Weaver	5.8.1888 - 7.23.1948
21. W. G. Weaver	1812 - 1891
22. Eliza Weaver [1st w of WGW]	Age about 53 years
23. Elizabeth Jane Weaver [2nd w of WGW]	1827 - 1914
24. I. S. Weaver	1852 - 1911
25. Dell Harward Weaver	9.22.1855 - 7.8.1931
26. Ida Sparrow	4.18.1877 - 7.16.1896
27. Flossie Sparrow	1895 - 4.1897
28. WDW on footstone found - headstone missing (probable grave of William D. Weaver)	n.d.

I also found evidence, confirmed by Carrol Weaver a descendent of the family and for many years caretaker of the cemetery, of at least 18 other crudely marked graves - either by distinctive rock and unmarked stones or by sunken indentations in the cemetery lot, inside and directly outside of the existing fence on a portion of the lot, that would indicate the possibility of grave sites of slaves who once were owned by the Weaver families.

May 3, 1993
To: Carrol Weaver
From: Jane Brill

RE: First Draft of answers to the NC Cemetery Survey for you to look at; we need much more rewriting of these answers before we have someone type the form. I did the best I could from talking to you one afternoon, using some of your information, and guessing at some things that I wrote. Read what I wrote, correct me whenever I am wrong, add or subtract from what I answered to each question, send me a revised answer, and I will find someone to type the final form for us.

Answers to NC Cemetery Survey

1. Location

- a) Weaver Family Cemetery b) Orange
- c) Carrboro, North Carolina
- d) West Main Street, Carrboro, North Carolina (? block) - right side of Main Street on lot before intersection of West Main Street and High Street
- e) property owned by no one as interpreted by NC State Statutes governing municipal cemeteries - §65--37. (1947, c. 821, s.1.)
- f) 7.103.A.36 - Map Reference
9778-48-5102 PIN
 - 1) Latitude S 82° 54' 34" E
 Longitude N 10° 03' 28" W
 N 11° 16' 57" W
 - 2) cemetery number on map - unknown

2. Classification

- b) Private X family
- c) Status: X abandoned
- d) Size: approx # of graves 45 ; approx size: 9,336.33 sq.ft.
- e) Type: X Slave; X White
Wills, copies of slave sales, court documents charging some of the Weaver slaves with theft indicate that early Weaver families, buried in the cemetery, owned slaves; unmarked, crude head and foot stones indicate that family slaves may also have been buried in this cemetery.

3. Accessibility to public

- a) X unrestricted

4. Condition

- b) X poorly maintained
- c) X somewhat overgrown, easily identifiable
EXPLANATION: 2 crude head and foot stones and 2 sunken indentations remain outside the existing cemetery fence which was reconstructed in the 1940s or 1950s along existing fence post lines. However, no evidence exist

that the supposed grave sites outside the present fence did not belong to the original cemetery burial ground, dating back to at least 1843, prior to the existing and former fences. Because of the age of the cemetery, perhaps all of the suspected graves were a part of the old burial site. All of the four suspected graves outside the existing fence are within a few feet of graves inside the existing fence.

5. Cemetery enclosure

- a) X fence old wire fence with barbed wire on top of fence; wooden gates
- b) condition of fence deteriorated; location of fence on map survey seems to overlap at back right corner onto OSVALDO BERRIOWS property by four feet; existing iron stake lot markers show the fence within the cemetery lot.

6. Tombstones or markers

- a) yes b) yes
- c) 28 including one footstone inscribed **WDD** for which the headstone is missing (probably the grave of William D. Weaver)
- d) Date of last known burial 1952
- e) Date of earliest known burial 1843
- f) Unusual stones yes Unmarked stones, that may be slave graves, are crudely hewed or carefully selected natural stones and are placed in positions of typical head and foot stones.
- g) Cemetery seems not to have vandalized although one suspected head stone is missing.

7. Hazards: Town of Carrboro expansion and residential development; absence of maintenance

8. NO, cemetery has not been previously listed in surveys.

9. & 10. Historical significance of cemetery and related information:

This cemetery is the burial site of the first Weavers in this area of North Carolina: Rev. Thomas Weaver 1785-1843 and his wife Sarah Jane Brewer 1787-1850. Rev. Weaver was a Baptist minister and lived on a plantation near the Weaver burying ground which is now in the town limits of Carrboro. Also of historical importance buried in this cemetery are his son, William G. Weaver who acquired vast land holdings in Orange and in Chatham Counties, and his grandson, Isham S. Weaver, a

CITIZENS CEMETERY COMMISSION

On May 4, 1994, a meeting of the Citizens Cemetery Commission was held at the Public Works Facility.

*Present: Herman Wilson, Chair
Ben Grantham
Cleo Perry
Shelton Sparrow
Terry Campbell, Town Staff
Chris Peterson, Town Staff*

*Absent: Rolland Wrenn
Randy Marshall, Board Liaison*

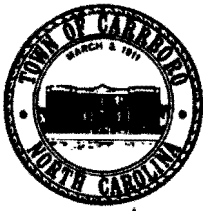
Carrol Weaver requested that the Committee approve his request to dedicate the Weaver Family Cemetery located on Main Street to the Town of Carrboro. The Commission unanimously approved the proposed request for dedication.



C. Herman Wilson

Chairman

Citizens Cemetery Commission



TOWN OF CARRBORO

NORTH CAROLINA

**CERTIFICATE SHOWING NOTICES OF
THE NOVEMBER 22, 1994 BOARD OF ALDERMEN MEETING
TO REVIEW A PETITION
TO ACCEPT THE WEAVER FAMILY CEMETERY**

I, Terry Thomas-Campbell, Administrative Assistant - Public Works Department of the Town of Carrboro, North Carolina, do hereby certify that a Notice of the November 22, 1994 Board of Aldermen Meeting and a copy of the Petition filed by the Weaver Family were mailed certified mail on November 4, 1994 to the following property owners:

<u>Street Address</u>	<u>Tax Map Identification</u>	<u>Property Owner(s)</u>
800 West Main Street	7.103.A.34	John and Carrie Senter
801 West Main Street	7.106.C.10	LeRoyce Rice
802 West Main Street	7.103.A.35	Osvaldo and Lois Berrious
803 West Main Street	7.106.C.10	LeRoyce Rice
805 - A West Main Street	7.106.C.9	LeRoyce Rice
805 - B West Main Street	7.106.C.9	LeRoyce Rice
809 West Main Street	7.106.C.9A	LeRoyce Rice
813 West Main Street	7.106.C.8	Harold Williams
121 - A High Street	7.103.A.1	Gary and Toni Buck
121 - B High Street	7.103.A.1	Gary and Toni Buck
119 High Street	7.103.A.2	Sally Effird
115 High Street	7.103.A.3	Elizabeth Williams Eggleston and Robert Bomont Chipman
113 High Street	7.103.A.4	Gracie Blake

This the 4 day of November 1994.

Terry Thomas-Campbell

**Terry Thomas-Campbell
Administrative Assistant
Public Works Department**

**A RESOLUTION
AUTHORIZING THE ACCEPTANCE
OF THE WEAVER FAMILY CEMETERY
ONTO THE TOWN'S CEMETERY MAINTENANCE SYSTEM
Resolution No. /94-95**

WHEREAS, the Town has received a petition requesting that the Weaver Family Cemetery located on West Main Street, adjacent to 802 West Main Street; and

WHEREAS, the petition is consistent with the Town's policy for acceptance of private cemeteries

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO:

Section 1. The Board hereby expresses its intent to accept the Weaver Family Cemetery located on West Main Street.

Section 2. The Board hereby outlines the following conditions for acceptance:

- 1. All property lines shall be demarcated**
- 2. The Director of Public Works shall inspect the landscaping to ensure that all underbrush has been removed; trees/shrubs have been pruned and areas around monuments/markers have been trimmed; Cemetery grounds are to remain in a natural state.**
- 3. The Petitioner shall execute a Quit Claim Deed prepared by Town Attorney; and such deed shall be recorded by the Town.**
- 4. The Petitioner shall comply with all applicable requirements of the Town's cemetery policy**

Section 3. The Board hereby authorizes the Town Manager to execute a Notice of Acceptance if the above conditions are satisfactorily fulfilled within six (6) months from the adoption of this resolution.

Section 4. The Board's intent to accept the Weaver Family Cemetery will be nullified if the conditions of this resolution are not satisfactorily fulfilled within six (6) months from the adoption of this resolution.

Section 5. Upon the Town Manager's execution of a Notice of Acceptance, the Weaver Family Cemetery will become a part of the Town's cemetery maintenance system and no future burials will be permitted within this cemetery.

Section 6. This resolution shall become effective upon adoption.

The foregoing resolution having been submitted to a vote, received the following vote and was duly adopted this ____ day of November 1994.

Ayes:

Noes

Absent or Excused:

The following resolution was introduced by Alderman Frances Shetley and seconded by Jay Bryan.

**A RESOLUTION AUTHORIZING THE ACCEPTANCE
OF THE WEAVER FAMILY CEMETERY
ONTO THE TOWN'S CEMETERY MAINTENANCE SYSTEM
Resolution No. 20/94-95**

WHEREAS, the town has received a petition requesting that the Weaver Family Cemetery located on West Main Street, adjacent to 802 West Main Street; and

WHEREAS, the petition is consistent with the town's policy for acceptance of private cemeteries.

NOW, THEREFORE, THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO RESOLVES:

Section 1. The Board hereby expresses its intent to accept the Weaver Family Cemetery located on West Main Street.

Section 2. The Board hereby outlines the following conditions for acceptance:

- 1. All property lines shall be demarcated;**
- 2. The Director of Public Works shall inspect the landscaping to ensure that all underbrush has been removed; trees/shrubs have been pruned and areas around monuments/markers have been trimmed; cemetery ground are to remain in a natural state;**
- 3. The Petitioner shall execute a Quit Claim Deed prepared by the Town Attorney, and such deed shall be recorded by the Town; and**
- 4. The Petitioner shall comply with all applicable requirements of the Town's cemetery policy.**

Section 3. The Board hereby authorizes the Town Manager to execute a Notice of Acceptance if the above conditions are satisfactorily fulfilled within six months from the adoption of this resolution.

Section 4. The Board's intent to accept the Weaver Family Cemetery will be nullified if the conditions of this resolution are not satisfactorily fulfilled within six months from the adoption of this resolution.

Section 5. Upon the Town Manager's execution of a Notice of Acceptance, the Weaver Family Cemetery will become a part of the Town's cemetery maintenance system and not future burials will be permitted within this cemetery.

Section 6. This resolution shall become effective upon adoption.

The foregoing resolution, having been submitted to a vote, received the following vote and was duly adopted this 22nd day of November, 1994:

Ayes: Michael Nelson, Randy Marshall, Hank Anderson, Eleanor Kinnaird, Frances Shetley, Jacquelyn Gist, Jay Bryan

Noes: None

Absent or Excused: None

BOARD OF ALDERMEN

ITEM NO. E(4)

AGENDA ITEM ABSTRACT

MEETING DATE: **November 22, 1994**

SUBJECT: Request for traffic signal at Lloyd Street/Main Street intersection

DEPARTMENT: PLANNING DEPARTMENT	PUBLIC HEARING: YES ____ NO ____						
ATTACHMENTS Letter sent to NCDOT Maps showing location of the Lloyd Street/Main Street intersection. Previous resolution adopted by the Town requesting signalization at the aforementioned intersection as of 12/5/78.	FOR INFORMATION CONTACT: Kenneth Withrow, 968-7713						
THE FOLLOWING INFORMATION IS PROVIDED: <table><tr><td><input checked="" type="checkbox"/> Background</td><td><input checked="" type="checkbox"/> Action Requested</td><td><input checked="" type="checkbox"/> Analysis</td></tr><tr><td><input type="checkbox"/> Alternatives</td><td><input checked="" type="checkbox"/> Recommendation</td><td></td></tr></table>		<input checked="" type="checkbox"/> Background	<input checked="" type="checkbox"/> Action Requested	<input checked="" type="checkbox"/> Analysis	<input type="checkbox"/> Alternatives	<input checked="" type="checkbox"/> Recommendation	
<input checked="" type="checkbox"/> Background	<input checked="" type="checkbox"/> Action Requested	<input checked="" type="checkbox"/> Analysis					
<input type="checkbox"/> Alternatives	<input checked="" type="checkbox"/> Recommendation						

PURPOSE

The planning staff sent a letter to officials at the North Carolina Department of Transportation requesting that the Department improve the conditions at the Lloyd Street/Main Street intersection by installing a traffic signal at the aforementioned intersection. The administration recommends that the Board receive the letter and ask for periodic updates concerning progress in installing the signal.

ANALYSIS

The earliest request made by the Town of Carrboro to the North Carolina Department of Transportation concerning the installation of a traffic signal at the intersection of Lloyd Street and Main Street occurred on December 5, 1978. Currently, no traffic signal exists at the intersection; however, congestion has increased at that intersection, particularly during morning and afternoon rush hours.

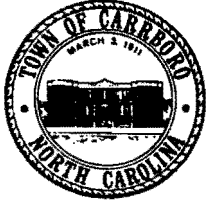
The letter notes that the aforementioned intersection has been a major concern to residents and local officials. The intersection is located one hundred feet east of the Norfolk/Southern Railroad. The intersection is also located close to Main Street's congested intersection with Roberson Street and entrance to Carr Mill Mall. Furthermore, proposals are being made to connect a bikepath from North Greensboro Street to the Libba Cotton Bikepath that would be useful for cyclists. The mixture of bicycle and pedestrian movements could be very detrimental to drivers, bicyclists, and the like as they attempt to negotiate through the streets. Traffic volumes along Main Street in the Lloyd Street have increase to 20,200 ADT (as of 1992). The State has made various improvements within the area through the use of regulatory signs and railroad flashers. These remedies will not have a long-term effect on ever-increasing traffic volumes. The Town therefore, is making efforts to get the State's attention concerning the project.

RECOMMENDATION

The administration recommends that the Board receive the letter and ask for periodic updates concerning progress in installing the signal.

ACTION REQUESTED

That the Board receive the report.



TOWN OF CARRBORO

NORTH CAROLINA

November 3, 1994

Mr. Vance Barham
Division Traffic Engineer
N.C. Dept. of Transportation
P.O. Box 14996
Greensboro, NC 27415-4996

Dear Mr. Barham:

The intersection of Lloyd Street and East Main Street in downtown Carrboro has been a major concern for over a decade. The intersection is located less than one hundred feet east of the Norfolk/Southern Railroad Line, as well as the Main Street intersection with Roberson Street and Weaver Street. Also located within this same vicinity is the main entrance to Carr Mill Mall. Matters are further complicated by the fact that the proposed Carr Mill Mall Bikepath, which will connect with the Libba Cotton Bikepath, is to be routed through this general area.

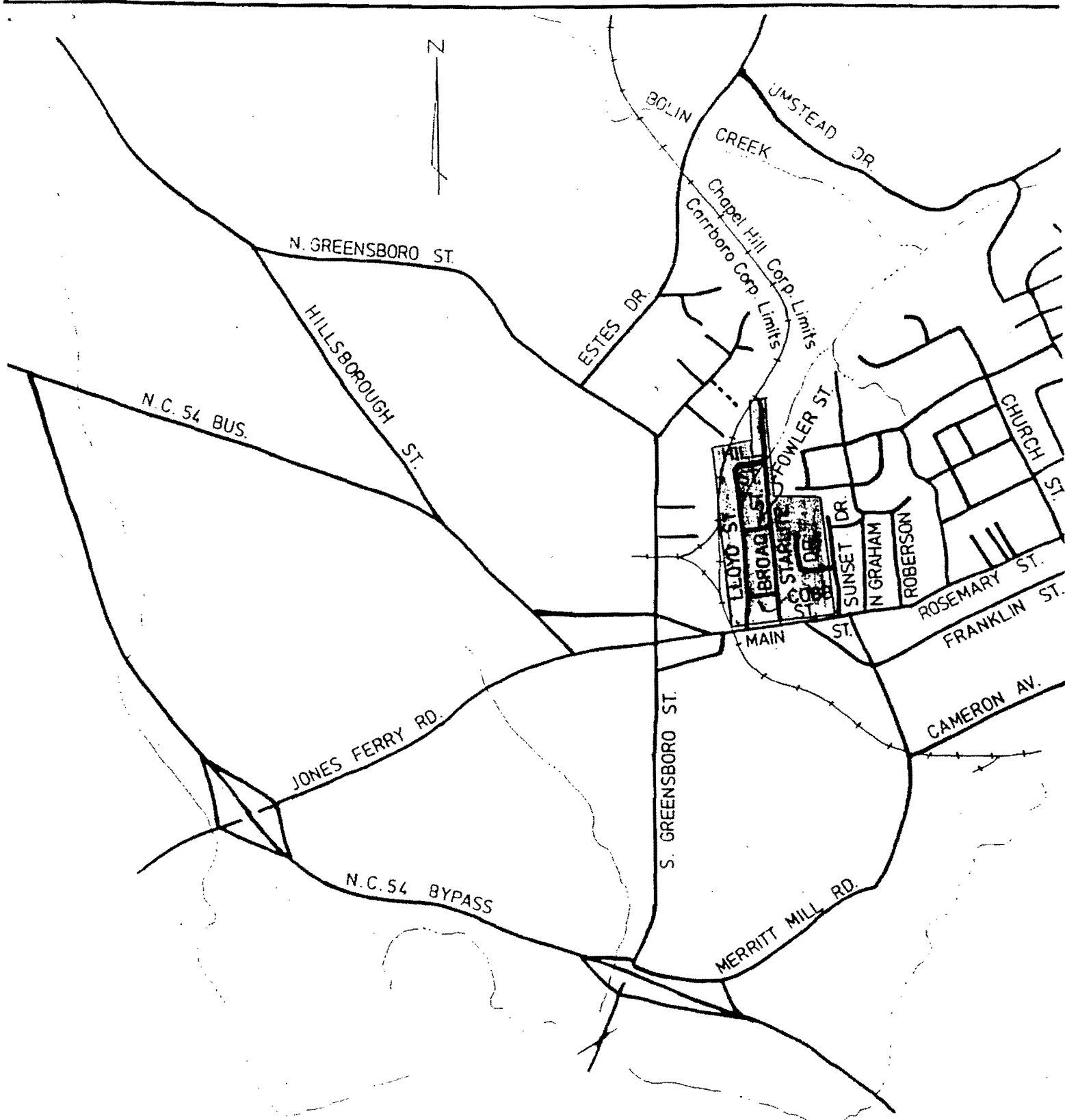
An earlier action conducted by the Town concerning the Lloyd Street/Main Street intersection was to adopt a resolution requesting that the North Carolina Department of Transportation (NCDOT) provide the necessary signalization at the Lloyd Street/Main Street intersection. Although this request was made in December, 1978, no signal exists at the intersection. Traffic control devices have been placed in the general location of the intersection; however, increasing traffic volumes along East Main Street (20,200 ADT as of 1992) especially during morning and afternoon rush hours still produce hazardous conditions at the Lloyd Street/Main Street intersection.

Attached to this letter are copies of maps showing the general area of the Lloyd Street/Main Street intersection, along with improvements done to the Lloyd Street/Main Street intersection as a part of a CDBG project awarded to the Town as of 1987. Also attached is the resolution requesting signalization at the aforementioned intersection as adopted by the Board of Aldermen as of December 5, 1978. The Town would greatly appreciate any support that you may give in improving the conditions at the intersection as well as the general area. Thank you for your attention to this letter; and please feel free to call me if you have any questions.

Sincerely,


Kenneth W. Withrow
Transportation Planner

attachments



LOCATION MAP - NO SCALE

BROAD STREET

LLOYD STREET

HOUSIERY STREET

COBB STREET

MAIN

STREET

LLOYD STREET SIGNALIZATION

This matter was considered by the Public Works Committee at its meeting of December 5, 1978.

The Public Works Committee recommended that the Board of Aldermen adopt a resolution to send to the Secretary of the North Carolina Department of Transportation requesting that the necessary signalization to permit ease of movement of pedestrian, vehicular and bicycle traffic at the Lloyd Street/Main Street intersection be installed.

The following resolution was introduced by Alderman John Boone and duly seconded by Alderman Nancy White.

A RESOLUTION REQUESTING THE SECRETARY OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TO PROVIDE THE NECESSARY SIGNALIZATION AT THE LLOYD STREET/MAIN STREET INTERSECTION

WHEREAS, the Lloyd Street/Main Street intersection within the Town of Carrboro is an extremely hazardous one for pedestrians, motorists and bicyclists; and

WHEREAS, it is particularly difficult and hazardous to make a left turn from Lloyd Street onto Main Street; and

WHEREAS, Main Street is a State-maintained street and the jurisdiction to establish traffic control regulations for this street is shared by the State and the Town;

NOW, THEREFORE, THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO
RESOLVES:

Section 1. The Board represents the Secretary of the North Carolina Department of Transportation to establish the necessary signalization to permit ease of movement of pedestrian, vehicular and bicycle traffic at the Lloyd Street/Main Street intersection within the Town of Carrboro.

Section 2. The Board further requests that this signalization be established as soon as reasonably possible, and that the Department of Transportation not wait until serious injuries or fatalities are produced at this intersection.

Section 3. A copy of this resolution shall be forwarded to the Secretary of the North Carolina Department of Transportation.

Section 4. This resolution shall become effective upon adoption.

The foregoing resolution having been submitted to a vote received the following vote and was duly adopted this the 12th day of December, 1978:

Ayes: Sherwood Ward, Ernie Patterson, John Boone, Braxton Foushee, Nancy White

Noes: None

Absent or Excused: Douglas Sharer

MAIN



BOARD OF ALDERMEN

ITEM NO. E(5)

AGENDA ITEM ABSTRACT

MEETING DATE: November 22, 1994

SUBJECT: Worksession on Requests for Revisions to Impervious Surface Requirements in the University Lake Watershed

DEPARTMENT: Planning	PUBLIC HEARING: YES ___ NO <u>X</u>___	
ATTACHMENTS: Carrboro Baptist Church Request (8/23/94,10/4/94,&10/5/94) Winsome Lane Request 9/15/94 Background Report on Winsome Lane & Watershed Regulations 2/12/93 Impervious Surface Revision Memo Letter from OWASA	FOR INFORMATION CONTACT: Roy M. Williford, 968-7714	
THE FOLLOWING INFORMATION IS PROVIDED:		
(x) Purpose	(x) Action Requested	(x) Analysis
(x) Summary	(x) Recommendation	(x) Background

Purpose:

The Administration will present options for the board's consideration in response to requests for revisions to the University Lake Watershed impervious surface requirements.

Summary:

- The Carrboro Baptist Church requested revisions to allow " on-site stormwater detention" and alternative pervious paving strategies in order to comply with the impervious surface limitations.
- The Winsome Lane Homeowners' Association requested amendments to:(1) provide new 5 acre lots with a 4% impervious surface allocation, (2) allow an impervious surface variance to be granted due to unforeseen circumstances, and (3) allow the reduction in the calculated impervious surface area where partially porous driveway materials are used
- The following options are provided for the board's consideration:

Pervious Paving: (1) Continue to calculate pervious surfaces as 65% impervious with further definition and design criteria, (2) allow pervious surfaces with a 6% built upon area cap calculated at 6% with design criteria, (3) allow pervious surfaces to be used for commercial or institutional applications only, and (4) make no distinction between pervious pavements and impervious pavements.

Onsite Stormwater Detention: (1) revising the land use ordinance and meeting DEM regulations to provide up to a 24% built upon area where wet detention pond systems are used, (2) requesting the DEM to approve the use of grass lined "runoff" trenches as an acceptable stormwater control method, revising the Carrboro Land Use Ordinance, and meeting DEM's community obligation requirements, and (3) not providing for the use of wet detention or other structural controls and maintaining the existing land use ordinance requirements.

New Lot 4% Impervious Surface: (1) allow a 4% impervious surface allocation for all new lots over 5 acres plus an additional allocation such as 1% or 2% for new roads serving the subdivision,

(2) increase the overall impervious surface limit to 5% or 6% to account for new roads, or (3) maintain the existing impervious surface limit

Variance: (1) specifically exclude the situation associated with longer than necessary driveways from the 6 tests, (2) include this situation under the less stringent special exception procedure, and (3) no change.

Background:

Since the May 15, 1990 adoption of the 4% impervious surface restriction, Carrboro has received several requests to consider changes in the application of this limitation. Following is a chronological listing of the requested changes and responses to date:

December 21, 1992

Request from Jerry Levit and Liz Rooks for revisions to the ordinance to provide calculations for semi-impervious surfaces as follows:

- (1) Porous paving-65% impervious;
- (2) Gravel or crushed stone-50% impervious;
- (3) 100% of roof areas subtracted by infiltration of storm water across natural vegetation i.e. French drains.

February 12, 1993

Response from Zoning Administrator (Helen Waldrop):

- (1) Within watershed residential zoning districts, if vehicle accommodation areas (driveways, parking areas, etc.) are paved with porous materials as approved by the Public Works Director, then the area covered by such material shall be considered 65% impervious (for purposes of calculating the total impervious surface on the lot);
- (2) If strip driveways are proposed then only the area covered by the impervious surface (such as gravel, or concrete) shall be calculated. The grass strip shall be excluded from the overall calculation and a legal document filed which would specify that further paving of the drive would not be allowed if the lot in question is at its maximum impervious surface limitation;
- (3) Staff did not advocate that roof areas should be excluded from impervious surface calculations, as we believe that the monitoring, enforcement, and maintenance of facilities/materials that would allow appropriate infiltration in the watershed would not be practicable on a long term basis.

February 25, 1993

Letter from Jerry Levit to Helen Waldrop thanking her for the 2/12/93 response and also indicating that the Winsome Homeowners Association was gratified though disappointed that gravel drives were not treated as requested.

September 21, 1993

Phil Szostak requested the Board of Aldermen to have the town staff review the impervious surface requirements and consider the possibility of allowing the use of French drains.

November 1, 1993

The town staff (Julia Trevarthen) sent a letter to the Division of Environmental Management (DEM) requesting their position on the issues raised by Phil Szostak. The first issue

concerned the use of French drains to discount roof areas as impervious surfaces. The second issue regarded the counting of pre-existing structures as part of the impervious surface calculation for a lot or tract.

February 25, 1994

David Swanson and Mark Fritz of Winsome Lane, requested the town staff to respond to the use of stormwater detention ponds, pervious paving to allow extended use of property in the watershed, and the issuance of a variance to allow existing ponds to act as detention facilities.

April 15, 1994

DEM responded to the town's November 1, 1993 letter. The use of French drains "...it does not appear at this time that these devices are appropriate to reduce the effective impervious area of a site". In regard to the second issue, existing development is not subject to the requirements and the owner could cover the lot with buildings and other impervious surfaces in addition to the existing buildings on the site.

April 27, 1994

Carrboro's Zoning Administrator (Keith Lankford) responded to David Swanson and Mark Fritz indicating that an increase in impervious surfaces cannot be achieved through the variance process. The use of detention basins to increase impervious surface allocations would not be acceptable either since the use of such facilities would run counter to existing policy. That is, in 1990, the local governments of Carrboro, Chapel Hill, and Orange County did not select the use of structural Best Management Practices (BMP's) for residential development in part due to increased liability for inspection and maintenance programs.

May 12, 1994

Jerry Levit, president of the Winsome Lane Homeowners' Association invited the ~~Mayor~~ ^{*Brd of Ald*} to a June 13, 1994 meeting to discuss the numerous difficulties from the administration of the Town's regulations regarding residential construction in the watershed.

June 2, 1994

The Zoning Administrator (Keith Lankford) responded to Mr. Levit regarding the May 12, 1994 letter and Mr. Szostak's petition to the Board of Aldermen on September 21, 1993. Mr. Lankford reiterated DEM's April 15, 1994 position regarding the fact that the state does not recognize French drains as an effective method for reducing the impervious surface on a lot. Mr. Lankford also explained that even though the state does not count existing impervious surface areas from existing structures, the town does. The Town of Carrboro's position has been that existing surfaces have the same detrimental impact as new surfaces when they are constructed. Therefore, the town is more restrictive than the state in this matter.

June 14, 1994

The Board of Aldermen requested the Winsome Lane Homeowner's Association to submit a formal request outlining the issues that the residents would like for them to address.

August 23, 1994

Representatives of the Carrboro Baptist Church requested that the town consider alternative approaches to parking areas including on-site stormwater detention and the use of alternate paving strategies that would not be considered 100% impervious in the watershed. In summary the Baptist Church requested that the town consider the following: (1) structural BMP's such as stormwater detention provides active control of stormwater quality, (2) pervious paving strategies to reduce the area calculated as impervious surface such as: (a) Turfstone 50/50 mix of concrete and turf surface, (b) Geogrid 90/10 mix of turf and plastic surface, and (c) grass "paving" surface on a 8" stone base, and (3) grass lined "runoff" trenches used to filter and clean runoff from normal paved surfaces.

September 20, 1994

Winsome Lane Homeowner's Association requested that the Board of Aldermen consider the following: (1) amend the ordinance to treat lots in new subdivisions existing prior to the adoption of the 4% watershed restrictions such that a 5 acre lot in a new subdivision would have the same 4% impervious surface limitation as does a 5 acre lot in a pre-existing subdivision (i.e. do not count the new roads serving the subdivision as part of the 4% impervious surface limitation). (2) amend the ordinance to allow variances to be issued by the Board of Adjustments under circumstances where necessary driveway length requires that an inordinate amount of impervious be used for the driveway, and (3) amend the ordinance to permit the allocation of impervious surface at less than 100% for driveways where it can be demonstrated that the surface areas are porous or partially porous (i.e. grassrings, turfstone, etc.).

October 4&5, 1994

The Carrboro Baptist Church reiterated their request for the use of pervious materials for parking areas as a means for solving their ability to meet the impervious surface limitations. The church also requested that their request be considered apart from other issues raised by the Winsome Lane Homeowner's Association.

Analysis:

This analysis addresses the request received from the Carrboro Baptist Church on August 23, 1994 and the request received from the Winsome Lane Homeowners' Association on September 20, 1994. Since each request deals with several components and/or applications of the impervious surface restrictions, requests associated with essentially the same technique will be reviewed first, followed by the request unique to the Baptist Church, and then the Winsome Lane Homeowners' association.

Pervious Paving

Strategies to reduce the area calculated as impervious surface (essentially requested by both) include the use of: (a) Turfstone 50/50 mix of concrete and turf surface, (b) Geogrid 90/10 mix of turf and plastic surface, and (c) grass "paving" surface on a 8" stone base. All three grass paving materials should be installed on or with a stable base (compacted from 90-95%) of crushed stone from 2" to 8" in depth depending on traffic loads and the load bearing capacity of the soils, and instillation should be limited to slopes of less than 5% to prevent slippage. These surfaces require frequent maintenance including fertilizing and watering. Traffic use should be limited in terms of frequency and volume. The higher the volume of traffic during an event the more time between traffic events there must be for the grass to recover. For instance the literature from the manufacturer of the grassrings product recommends a daily traffic volume of around 5 trips, a weekly volume of 20 trips, a monthly volume of 50 trips, and an annual volume of 100 trips.

Literature on grassings cite church parking as a suitable use where activities are limited to two or three services once a week where the grassings would have an opportunity to recover and grow in between events. The use of these products on an occasional basis exclusively for parking spaces and not as a traffic aisle is perhaps the most practical application from an intensity of use standpoint. Turfstone on the other hand would be more suitable than the turf surfaces for residential driveways since it provides a more supportive concrete surface to withstand higher traffic volumes averaging 8 trips per day.

Pervious paving as opposed to conventional paving does provide a water quality benefit. Proper site design and construction will be a determining factor as to the degree of water quality benefit realized. The underlying soils should have an infiltration rate of at least 0.25 inches per hour, as defined by the least permeable layer in the soil profile, which would include the following "B" hydrologic group soils: Appling, Cecil, Congaree, Georgeville, Herndon, Hiwassee, and Louisburg. Pervious paving should be designed to exfiltrate a minimum of runoff equivalent to the first one half inch (1/2") of runoff which is roughly the volume produced by a one inch (1") storm. This design will reduce the first flush effect produced on impervious surfaces where a majority of pollutants deposited on impervious surfaces lifted and transported by the first one half inch (1/2") of runoff.

The Carrboro Land Use Ordinance does not specifically provide for the use of pervious paving as a means for reducing the area devoted to driveway or parking lot uses in the watershed residential zone. The land use ordinance limits the actual impervious surface devoted to such uses. Due in part to the restrictive limitation of the impervious surface area several property owners have requested interpretations from the zoning administrator regarding the calculation of the actual surfaces that partially cover the ground as opposed to the entire driveway width. As a result of these requests, an interpretation was made to count such surfaces as 65% impervious (using the same calculation provided in the WM-3 and B-5 zones). Additionally, if strips of pavement are used, then the remaining grass strip would not be counted as impervious.

The Camp Dresser and McKee, *University Lake Watershed Study*, 1989, included pervious paving strategies under the category of infiltration BMP's. This report discouraged the areawide use of such applications due in part to their high maintenance and permeable soils requirement. They did state that "...they may be suitable for use at certain commercial sites, based on case by case applications. Where infiltration BMP's are used, a storage volume requirement of 0.5 inch of runoff per impervious acre is the most appropriate design standard (CDM, 1985b).".

The Division of Environmental Management (DEM) has designated the University Lake Watershed within Carrboro's jurisdiction as a WS-II critical area. According to the critical area criteria "New development is limited to either no more than one dwelling unit per two acres or six percent built upon area". The DEM further defines BUILT UPON AREA as that portion of a development project that is covered by impervious or partially impervious cover including buildings, pavement, gravel roads, recreation facilities (e.g. tennis courts), etc...". The Town of Carrboro's regulations exceed DEM's requirements by regulating new lots to a minimum of five acres (except for up to 5 two acre lots created from pre-existing tracts) and generally requires a 4% impervious surface limit. The DEM's definition of "built upon area" is broader than Carrboro's impervious surface definition since it includes partially impervious as well as impervious surfaces; therefore, DEM makes no distinction between conventional pavements and pervious pavements. If DEM's 6% built upon area is exceeded then wet detention facilities and associated requirements will be imposed.

In reviewing the background and technical information on the use of pervious pavements, it is appropriate that the staff's administration associated with the application of these materials be

revisited. Several alternatives exist including: (1) Continue to calculate pervious surfaces as 65% impervious with further definition and design criteria, (2) allow pervious surfaces with a 6% built upon area cap calculated at 6% with design criteria, (3) allow pervious surfaces to be used for commercial or institutional applications only, and (4) make no distinction between pervious pavements and impervious pavements.

Onsite Stormwater Detention

The Carrboro Baptist Church requested that the town consider allowing the employment of onsite stormwater detention and grass lined "runoff" trenches to provide active control of stormwater quality rather than relying solely on a 4% impervious surface limitation. The Camp Dresser and McKee (CDM), *University Lake Watershed Study*, 1989, did discuss two different types of detention basins: wet detention and extended dry detention. "In wet detention basins, pollutant removal occurs primarily within a permanent pool during the period of time between storm events. The 'extended dry' method provides increased detention times for captured first flush runoff in order to enhance solids settling and the removal of suspended pollutants." Wet detention basins are similar to a pond since they have a permanent pool of water. Dry detention basins fill up in response to a rainfall event and dry up shortly thereafter due to exfiltration and/or controlled release of stormwater. The CDM study recommended wet detention basins as the preferred structural BMP since it offers significant advantages over extended dry detention. Advantages include nutrient loading reductions, reduced maintenance, reliability, and location flexibility. In order to be effective; however, the structural BMP approach requires a publicly funded and operated facility maintenance program. The CDM study evaluated the use of structural BMP's or wet detention and nonstructural controls such as the 5 acre lot restriction coupled with stream buffers and a 4% impervious surface limitation. They concluded "that both approaches are capable of mitigating future nonpoint pollution impacts and achieving sufficient water quality protection. From the standpoint of less risk and a greater factor of safety, the nonstructural approach (land use) is preferable." In regard to the grass lined "runoff" trenches, infiltration BMP's were not recommended for areawide application.

The Carrboro Land Use Ordinance does not provide for the use of stormwater detention facilities within the watershed residential district even though the CDM study recommended the use of wet detention as an acceptable method of providing watershed protection. In formulating a revised watershed protection strategy the town decided not to include the structural BMP approach for several reasons. One of the primary reasons for selecting the nonstructural approach was that it provided less risk and was a more reliable method for protecting the community's water supply than the structural approach. The structural approach, in order to work effectively, required the use of regional rather than on site detention basins since the regional basins could be better managed, maintained, monitored and controlled by the local governments. If there were fewer of them and if they were publicly owned then they could be strategically located and would be more manageable. The nonstructural approach also provided a method for limiting the source of nonpoint source pollution, impervious surface and land use intensity, rather than allowing the pollutants to be generated and then devising methods of treatment.

The Division of Environmental Management (DEM) requires "engineered stormwater controls to be used to control runoff from the first inch of rainfall; if a "high density option" is chosen by a local government. This option, in the water quality critical area, limits development density to not more than a 24% built upon area. Furthermore, if a local government chooses a high density option which requires stormwater controls then the local government is required to assume the ultimate responsibility for the operation and maintenance of the required controls.

This responsibility requires local governments to inspect BMP's at least once a year, maintain records of inspections, and provide enforcement remedies. The town must also obtain an adequate financial assurance from the property owner to guarantee maintenance, repair, and performance of the BMP. The DEM requires that the engineered stormwater control system use wet detention ponds as specified in their regulations.

The use of grass lined "runoff" trenches is not recommended by Camp Dresser and McKee (CDM) or approved by DEM as an acceptable method of controlling stormwater runoff and increasing the built upon area. The use of wet detention, even though acceptable to CDM and DEM, will place an unnecessary and long term obligation on the town both administratively and legally. Furthermore, the land use or nonstructural control is preferable in terms of its reliability and minimizing risks to the health and safety of the public.

Options available could include (1) revising the land use ordinance and meeting DEM regulations to provide up to a 24% built upon area where wet detention pond systems are used, (2) requesting the DEM to approve the use of grass lined "runoff" trenches as an acceptable stormwater control method, revising the Carrboro Land Use Ordinance, and meeting DEM's community obligation requirements, and (3) not providing for the use of wet detention or other structural controls and maintaining the existing land use ordinance requirements.

New Lot 4% Impervious Surface

The Winsome Lane Homeowner's Association (WLHA) requested the town to consider amending the land use ordinance to "...treat lots in new subdivisions as lots in subdivisions existing prior to the adoption of the ordinance such that a 5 acre lot in a new subdivision would have the same 4% impervious surface as a pre-existing subdivision.". In essence, lots greater than 5 acres that were created prior to the adoption of the watershed amendments on May 15, 1990, are able to utilize the full 4% impervious surface because a proportional amount of the roadway impervious surface was not deducted from each of the lots in the subdivision. The land use ordinance treats all pre-existing lots the same by not deducting existing roadway impervious surface areas. Existing 5 acre lots have 4% and existing 140 acre lots have 4%. Theoretically, if a new subdivision was created utilizing existing road frontage, then all of the newly created lots would be able to use their full impervious surface allocation. However, in most cases when a new subdivision is created a new road or impervious surface will be added which deducts a portion (usually from 15% to 30%) of the impervious surface available to the new lots. This creates a very stringent standard for new subdivisions but on the other hand it achieves the water quality management objective of a 4% impervious surface limit recommended by Camp Dresser and McKee (CDM) and accepted by the Orange Chatham Work Group.

Options available for meeting this request include a reexamination of the 4% impervious surface limit strategy to: (1) allow a 4% impervious surface allocation for all new lots over 5 acres plus an additional allocation such as 1% or 2% for new roads serving the subdivision, (2) increase the overall impervious surface limit to 5% or 6% to account for new roads, or (3) maintain the existing impervious surface limit.

Allow a Variance for Unnecessary Driveway Lengths

The Winsome Lane Homeowners' Association (WLHA) requested that the land use ordinance be amended to "...allow variances to be issued by the Board of Adjustment under circumstances where necessary driveway length requires that an inordinate amount of impervious be used for the driveway.". The WLHA cited two situations which caused an alternation in the

planned driveway location: (1) due to unforeseen topographic problems, and (2) due to a change in the planned location of a septic field as required by the Orange County Health Department.

The Carrboro Land Use Ordinance currently allows the Board of Adjustments to consider any application for a variance, however in order to issue a variance the board must evaluate the hardship according to 6 basic tests as summarized: (1) No reasonable use can be made of the property, (2) the hardship is suffered by the applicant rather than neighbors or the general public, (3) hardship relates to the land rather than personal circumstances, (4) the hardship is unique, (5) the hardship is not the result of the applicants own actions, (6) the variance will not extend or authorize a nonconforming situation. The variance cannot be issued unless the situation in meets these tests or is specifically excluded from these tests.

Options may include: (1) specifically exclude the situation associated with longer than necessary driveways from the 6 tests, (2) include this situation under the less stringent special exception procedure, and (3) no change.

Action Requested:

To instruct the staff to prepare amendment proposals as required to implement selected options and to provide the staff with further direction on the administration of the 65% impervious surface calculation for pervious pavements.

Recommendation:

The staff recommends that the Board of Aldermen consider an amendment to the land use ordinance which would allow grass paver surfaces to be employed and calculated as 65% impervious where the total built upon area does not exceed 6% of the lot created before 10/2/89.

**CARRBORO
BAPTIST
CHURCH**



August 23, 1994

Members, Board of Alderman
Town of Carrboro
Carrboro, NC 27510


Dear Board Members,


The Carrboro Baptist Church is in the process of seeking a site for relocation of the church facilities to accommodate growth and program expansion. Remaining within the Carrboro city limits or planning district is one criteria for this relocation. A 29 acre site on Old Fayetteville Road, located within the watershed and the Town of Carrboro planning district, is under study for purchase by the church. A preliminary plan by Philip Post & Associates for this site was submitted to the Town of Carrboro for consideration in July. The proposed facilities exceed the 4% limit for impervious surface imposed by the watershed building restrictions if parking areas are constructed entirely with traditional impervious surface material. Alternative approaches to allow construction of the facilities and protect the watershed are being sought.

We request that the Board of Alderman consider alternate approaches to parking areas including on-site stormwater detention and the use of alternate paving strategies that would not be considered impervious for a portion of this proposed facility. Attached is a description from Philip Post describing possible alternatives.

Thank you for your consideration of our request.

Sincerely,


Phillip Parker
Chairman


Alan Stiles
Vice-Chairman

Building Steering Committee
Carrboro Baptist Church

PHILIP

POST

&

ASSOCIATES

August 23, 1994
#54402A

Mayor Eleanor Kinnaird
Carrboro Board of Aldermen
Manager Bob Morgan

Re: Impervious Surface in Watershed

Dear Ladies and Gentlemen:

We are currently working with Carrboro Baptist Church on a potential new site for their sanctuary which would be in University Lake Watershed.

The property in question has a 4% impervious limitation, in spite of the fact that the site would be a substantial distance from either a flowing stream or the Lake.

In my opinion, it would be very helpful for the Board to consider two avenues of changes to the Ordinance in order to continue stringent protection of the watershed, but allow a reasonable use of the land.

A. On-Site Stormwater Detention:

Engineered, wet-bottom detention ponds have been adopted by Chapel Hill, Greensboro, Guilford County, High Point, Durham and other municipalities as well as by NCDHNR as a strategy to allow impervious surface ratios above 4%, but still retain effective watershed protection. Watershed protection Leaders in the Triad believe that well-designed and well-constructed detention facilities offer a greater level of watershed protection than simply limiting impervious area since you are substituting active, well designed controls for more passive limitations. On other words, you have no control over the 4% impervious runoff that is currently allowed. By allowing an increase in impervious area but requiring detention, you would have effective control over 100% of the runoff that is permitted.

ENGINEERS
PLANNERS
SURVEYORS

401 Providence Road
P.O. Box 2134
Chapel Hill, NC 27515-2134
(919) 929-1173
FAX (919) 929-1173

54402A01.LTA.082394.1

PHILIP
POST
&
ASSOCIATES

B. Paving Strategies:

In order to comply with a 4% impervious limitation, or other low impervious ratios, it may be necessary to resort to alternative strategies for paving, driveways, car movement and car parking areas which would not be calculated as part of the impervious limitation.

Some Alternative Strategies are:

- a) Turfstone: a concrete block grid placed on a sand base, where grid spaces are filled with sand/topsoil and turf grows, resulting in about a 50/50 mix of turf and concrete surface. Best example is the "crossover" on Wade Avenue at the special exit for Carter Finley Stadium.
- b) Geogrid: similar concept to Turfstone, except the grid is made from plastic. About a 90/10 mix of turf and plastic, but not as stable as turfstone.
- c) Carter-Finley Stadium Grass "Paving": eight inches of stone, covered with 4 inches of topsoil and grass. The parking area looks and feels like turf, but has the strength of stone underneath. Great for intermittent use, such as a church, where grass will not be regularly shaded by cars parking every day.
- d) Grass-lined "Runoff" trenches at the edge of normal paving to "filter" and "clean" runoff from normal paved surfaces. This alternative is more experimental than the three strategies above, and not as effective as a wet-bottom detention basin.

I hope you will consider the above concerns and strategies as you discuss the very restrictive, and possibly ineffective, concept of the existing 4% impervious limitation in the watershed.

Sincerely,

Philip N. Post
Philip N. Post, P.E.

MEMORANDUM

To: Mayor and Board of Aldermen
From: Winsome Lane Homeowners Association
Subject: Impervious Surface Limitations
Date: September 15, 1994

We understand Winsome Lane Subdivision was one of the first areas to develop under Carrboro's watershed ordinance. Seven houses have been completed to date and three are under construction. All of the property owners in Winsome Lane were aware of the impervious surface limitations before purchasing their lots; however, many of us have faced unanticipated problems meeting those requirements. The purpose of this memorandum is to inform you of those problems and to explore ways in which they might be addressed.

The watershed ordinance provides an impervious surface limitation of 4% on any lot of 5 acres or more. However, in new subdivisions, the 4% limitation is applied to the total acreage being developed so the actual impervious surface area available for allocation to individual lots in the subdivision is net of subdivision roads. As a result, the actual impervious surface available per lot is less than 4% even where, as is the case in Winsome Lane, all of the lots are 5 or more acres. In fact, the actual allowable impervious surface in Winsome Lane left after deducting the impervious surface used by the subdivision road represents 2.98% of the remaining land.

The ordinance permits the developer to allocate the available impervious surface area to the individual lots. It is our understanding that the developer of Winsome Lane attempted to take into account difficult lot shapes and topographical constraints in apportioning the permitted impervious surface. As shown in the attached Table 1, the allowable impervious allocated to the individual 5+ acre lots in Winsome Lane ranges from 1.79% to 4.31%. In terms of actual square footage, these percentages yield a lower allowable square footage for many Winsome Lane lots than the square footage permitted by the ordinance for 2 acre lots in subdivisions existing prior to the adoption of the ordinance. See Table 2.

In several cases the actual house location had to be shifted from that anticipated by the developer due to topographic problems or because the Orange County Health Department changed the required location of the septic field. Since, as demonstrated in Table 3, driveways account for a substantial percentage of the impervious surfaces for each lot, changes in the location of the houses resulting in the need for longer driveways than originally anticipated has caused owners real difficulty in meeting the impervious surface limitations while having reasonable use of their property.

In order to address this problem, we would like to suggest that the Board consider adopting the following:

1. Amend the ordinance to treat lots in new subdivisions the same as lots in subdivisions existing prior to the adoption of the ordinance such that a 5 acre lot in a new subdivision would

Memorandum to Mayor and Board of Aldermen
September 15, 1994
Page 2

have the same 4% impervious surface limitation as does a 5 acre lot in a pre-existing subdivision;

2. Amend the ordinance to allow variances to be issued by the Board of Adjustment under circumstances where necessary driveway length requires that an inordinate amount of impervious surface be used for the driveway;

3. Amend the ordinance to permit the allocation of impervious surfaces at less than 100% for driveways where it can be demonstrated that the surface areas are porous or partially porous. The attached brochure describing a new type of paving system is illustrative of what we would encourage you to consider.

We thank you for your attention to this matter. Please feel free to contact Jerry Levit (office 493-6905, home 967-1772) or Liz Rooks (office 549-8181, home 942-3013) if you have any questions.

TABLE 1

Winsome Lane Subdivision Impervious Surface Limitations

Lot #	Acreage	Lot Area In Square Fee	Impervious Surface Permitted	Impervious Surface as Percentage of Lot Area
1 & 2	5.23AC	228,103SF	6,120SF	2.68%
3a	5.00AC	217,859SF	7,600SF	3.49%
3b	5.01AC	218,173SF	5,980SF	2.74%
4a	5.01AC	218,329SF	6,640SF	3.04%
4b	5.00AC	218,230SF	7,240SF	3.32%
5a	5.00AC	217,823SF	5,690SF	2.61%
5b	5.02AC	218,983SF	6,880SF	3.14%
6a	6.59AC	287,274SF	7,840SF	2.73%
6b	5.02AC	219,093SF	5,560SF	2.54%
7a	5.00AC	218,229SF	7,720SF	3.54%
7b	5.01AC	218,239SF	8,080SF	3.70%
8a	5.00AC	218,230SF	6,160SF	2.82%
8b	5.01AC	218,237SF	5,800SF	2.66%
9a	5.01AC	218,237SF	7,360SF	3.37%
9b	5.00AC	218,017SF	9,400SF	4.31%
10a	5.01AC	218,319SF	6,080SF	2.78%
10b	5.01AC	218,317SF	7,880SF	3.61%
11a	5.01AC	218,514SF	5,440SF	2.50%
11b	5.01AC	218,515SF	8,729SF	3.99%
12a	6.58AC	286,694SF	9,613SF	3.35%
12b	5.59AC	243,841SF	8,000SF	3.28%
13a	5.00AC	217,952SF	5,680SF	2.61%
13b	5.00AC	217,803SF	5,680SF	2.61%
14	6.10AC	265,585SF	5,440SF	2.05%
15	7.57AC	329,854SF	5,920SF	1.79%

TABLE 2
EXCERPT FROM CARRBORO ORDINANCE

IMPERVIOUS SURFACE CALCULATIONS

Art. XVI. FLOODWAYS, FLOODPLAINS, DRAINAGE, AND EROSION

LOT SIZE		IMPERVIOUS SURFACE	
ACRES	SQUARE FOOTAGE	SQUARE FOOTAGE	PERCENTAGE
0.5	21,780	4,200	19.28%
0.6	26,136	4,300	16.45%
0.7	30,492	4,400	14.43%
0.8	34,848	4,500	12.91%
0.9	39,204	4,600	11.73%
1	43,560	4,700	10.79%
1.1	47,916	4,800	10.02%
1.2	52,272	4,900	9.37%
1.3	56,628	5,000	8.83%
1.4	60,984	5,100	8.36%
1.5	65,340	5,200	7.96%
1.6	69,696	5,300	7.60%
1.7	74,052	5,400	7.29%
1.8	78,408	5,500	7.01%
1.9	82,764	5,600	6.77%
2	87,120	5,700	6.54%
2.1	91,476	5,800	6.34%
2.2	95,832	5,900	6.16%
2.3	100,188	6,000	5.99%
2.4	104,544	6,100	5.83%
2.5	108,900	6,200	5.69%
2.6	113,256	6,300	5.56%
2.7	117,612	6,400	5.44%
2.8	121,968	6,500	5.33%
2.9	126,324	6,600	5.22%
3	130,680	6,700	5.13%
3.1	135,036	6,800	5.04%
3.2	139,392	6,900	4.95%
3.3	143,748	7,000	4.87%
3.4	148,104	7,100	4.79%
3.5	152,460	7,200	4.72%
3.6	156,816	7,300	4.66%
3.7	161,172	7,400	4.59%
3.8	165,528	7,500	4.53%
3.9	169,884	7,600	4.47%
4	174,240	7,700	4.42%
4.1	178,596	7,800	4.37%
4.2	182,952	7,900	4.32%
4.3	187,308	8,000	4.27%
4.4	191,664	8,100	4.23%
4.5	196,020	8,200	4.18%
4.6	200,376	8,300	4.14%
4.7	204,732	8,400	4.10%
4.8	209,088	8,500	4.07%
4.9	213,444	8,600	4.03%
5	217,800	8,712	4.00%

TABLE 3

Winsome Lane Driveway Calculations

Lot	Driveway Square Footage	% of Permitted Impervious Surface
3A	3,580	47.0%
4B	4,975	68.7%
7A & B ¹	9,560 ²	60.5%
8A ³	2,460	39.9%
9A	5,050	53.7%
10A	2,768	45.5%
10B	1,780	22.6%
11A ⁴	2,325	42.7%
11B	5,298	60.6%
13A	3,590	63.2%
13B & 14 ⁵	6,000	53.9%

¹ Under construction.

² Includes walks.

³ Under construction.

⁴ Under construction.

⁵ Proposed.

Grassrings Porous Paving System

The Right Choice For A Better Environment

Grassrings reinforce turf so that fire trucks and cars can drive and park on grass.

As we keep stretching the limits of our physical environment and continue to demand greater quality from our built environment, the demand for porous paving, and specifically grass paving, is rapidly increasing. Historical solutions using impervious asphalt or concrete paving for all paving surface applications is no longer acceptable. Better choices for the environment are required. New and exciting solutions are available.

Innovation in design and materials, as found in the Grassrings porous paving system, provides effective functional and environmental alternatives for numerous paving applications. Especially where the specific attributes of asphalt and concrete are not required.

Porous paving offers many environmental and project advantages over impervious pavements:

Multiple-Use Surfaces

- grass firelane/park land
- green space/access drive
- lawn/parking area
- park/maintenance access

Immediate Percolation

- on-site control of storm water
- local recharge of water table
- reduced size and cost of required drainage system

Higher Visual Quality

- park appearance
- 100% grass coverage
- no concrete squares showing

Cooler Environment

- low heat retention
- low light/heat reflectivity
- preserve existing trees/support new plantings

The Leader of Porous Paving Industry

Rings, Inc., headquartered in Denver, Colorado, is the world manufacturer of Grassrings and has been in business since 1982. A name change from Ritterings to Rings, Inc. was made in August '90.

We maintain the philosophy that the quality and environmental soundness of porous paving is directly linked to understanding the major components that comprise any paving system (especially grass paving systems) - a. the structural, load-bearing base; b. the grass surface; and c. the rings that support and transfer the loading through the grass surface to the base course.

Each of these components have their own characteristics and requirements, and must be designed in response to those characteristics, and the needs of any particular application.

Rings, Inc. was the first grass paving designer and manufacturer to respond to the unique needs and requirements of a complete grass paving system, not just a porous paving product.

Rings, Inc. continuously responds to the needs of the marketplace by incorporating improvements, developing design information, and maintaining a professional staff to answer technical questions and solve project-specific design issues.

Another step Rings, Inc. has taken to protect the environment is to manufacture our rings using a majority of recycled plastic. Grassrings2 (100% plastic) can also be reclaimed and recycled again.

Grassrings -- Innovations and Advantages

Grassrings has undergone constant modification and improvement, responding to new applications and more demanding criteria. In doing so, Grassrings has established and maintains a technological lead on all competitive products.

Unique features of the product and system include:

The only grass paving with 100% grass coverage.

The only grass paving with a 92% root zone potential (three times greater than with concrete grass pavers).

The only grass paving with flexibility to respond to surface undulations required by design, or caused by settlement or frost.

The first grass paving to require a porous sandy gravel road base for structural support and to accommodate the extended grass root zone.

The grass paving that is by far the easiest and fastest to install.

The grass paving with the lowest installed cost.

Additional features and advantages of Grassrings include:

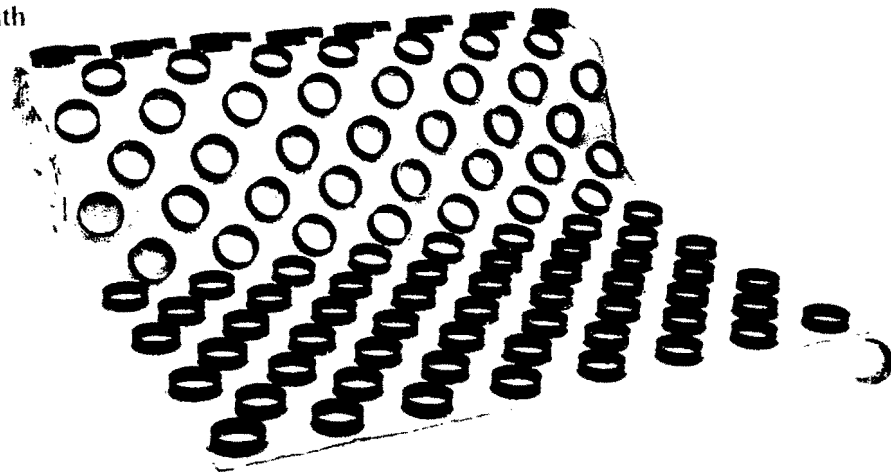
Heavy vehicles (such as a 70,000 lb. fire truck) can be driven and parked on a Grassrings installation without compacting soil, damaging the rings, or causing any measurable deformation of the paving system. Grassrings has been laboratory tested to support direct loading in excess of 5000 psi (351 kg/sq cm).

The Grassrings system provides for maximum percolation of rainfall and irrigation, and minimizes the amount of runoff experienced, thereby reducing the required drainage system size and cost.

No heat is absorbed by the Grassrings system eliminating heat stress on turf commonly found with concrete pavers.

Grassrings is installed totally below the surface of the turf, and therefore has no sharp or hard edges exposed above the surface that could be dangerous.

Mowing and other maintenance is the same as for normal turf areas. Even snow can be plowed with regular removal equipment.



*The Original Grassrings Mat.
One roll measures 4' x 20' x 1" and weighs less than 25 lbs. Supports 750 psi, and installs at rate of 2000 sq ft/hr.*

Grassrings -- Two Versions

Grassrings is manufactured in two distinct formats - the original 4' by 20' mat and the new 20" by 20" (0.5m x 0.5m) molded unit.

The mat is rolled for shipment and delivery to the job site, making it extremely easy for the installer to carry and install 80 square feet of Grassrings at a time. The mat weighs approximately 25 pounds (0.31 lbs/sq ft).

The molded units are shipped to the job site assembled into four-unit squares (40" by 40", 1 meter x 1 meter), or as individual units, depending on project requirements. Each four-unit square (square meter) weighs approximately four pounds, or 0.37psf (2 kg/sqm).

Grassrings -- Applications and Uses

Grassrings no longer is just for grass. While the majority of our applications are and will continue to be grass paving, Grassrings2 also provides the same benefits to gravel porous paving applications.

Grassrings no longer is just for vehicles. Due to the design and flexibility of Grassrings2, its benefits are also being realized in pedestrian and sports field/park applications.

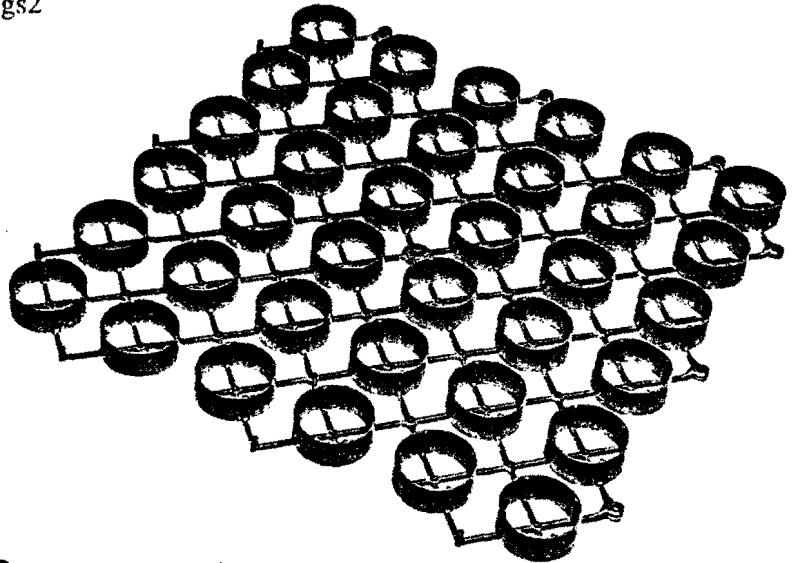
Some of the most common and best suited applications for Grassrings and Grassrings2 include:

- Firelanes
- Church parking
- Employee parking
- Overflow and event parking
- Guest parking
- Residential driveways
- Utility access/service drives
- Street parking/shoulder area
- Highway shoulders
- Emergency turnarounds
- Golf cart paths
- Pedestrian pathways/trails
- Slope/channel stabilization

soils also influences the design of the base, a registered civil or geotechnical engineer should be consulted.

The base course also performs as the extended root zone for the grass. Compaction of the base course must be restricted to between 90% to 95% Modified Proctor to ensure adequate water percolation and air infiltration to supply the root system.

Chemical and cement stabilizer additives to the base course must be avoided, as they may affect the pH and porosity of the grass root zone.



Design Considerations -- Grassrings Paving System

New Grassrings2 Unit.

20" x 20" x 1" (0.5m x 0.5m x 25mm) square, all injection molded. Can support 5000 psi, and be installed at 1200 sf/hr.

Grass Paving

Grassrings grass paving system is similar to hard surface paving systems. The paving system is made up of two components -- the wearing course and the base course. The wearing course (grass and sand filled rings) is structurally supported by the base course. Since our system is basically the same as traditional paving, the same design steps and considerations must be used.

Base Course

Project requirements for traffic loads (whether vehicular or pedestrian) will determine the load bearing requirements of the base course. Since the load bearing capacity of the existing subbase

Wearing Course

The Grassrings unit and the grass are the wearing course of the porous paving system. Grassrings can support loads in excess of 5000 psi (exceeding the capability of standard asphalt and concrete paving). It, therefore, is capable of supporting heavy vehicles and other concentrated loads.

Grassrings transfers the loading from vehicles and pedestrian traffic to the base course, protecting the upper root zone from compaction; and extends the strength of the base course up to the surface, supporting vehicles or other loads applied to the area.

Grass, as a living plant, is the most fragile element within this paving system. While Grassrings protects roots from the compacting forces of vehicles and pedestrians, grass blades can only withstand a limited amount of traffic (passes). The wear resistance grasses have depends on the combination of many factors, including:

- Species used
- Amount of sun the grass receives
- Overall climatic conditions
- Amount of water/irrigation
- Level of maintenance provided

While grass paving is not suitable for high traffic situations, its use and success can be enhanced on low traffic projects through careful planning and appropriate design.

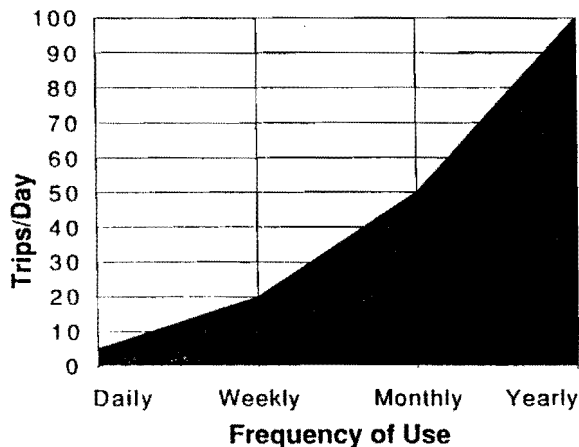
Traffic Frequency and Volume

Both the frequency of traffic events (daily, once a week, once a month, or two or three times a year) and the volume of traffic at each event (number of vehicles passing over an area in a set period of time - typically a day) are important in determining the appropriateness of grass paving in a traffic situation.

As a general rule of thumb, the higher the frequency of traffic events, the lower the volume must be to maintain the integrity and quality of the grass. Put another way, the higher the volume of traffic during an event, the more time between traffic events there must be for the grass to recover.

In situations where high traffic volumes are combined with high frequency of use, grass paving will most probably perform unsatisfactorily, and will not provide the visual and aesthetic character desired.

The following graph illustrates the relationship between volume of traffic and frequency of use.



The information in the graph is theoretical since insufficient research data is available to make any warranty or specify exact volumes of traffic

for different species of grass. The information is, however, based on several observations of various conditions and usage.

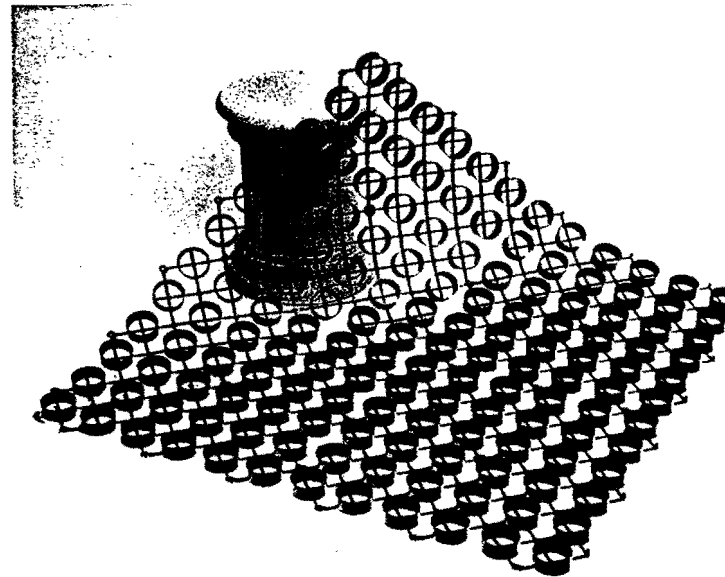
Examples of applications that are within limits of grass paving include firelanes, and:

Church Parking - moderate volumes of traffic with two or three services, but is only used once a week. The grass would have a chance to grow and recover between occurrences.

Employee Parking - low volume of traffic (one to three passes per day), but the frequency is daily (except for weekends). Only the parking stall area should be paved in grass. The aisles would be hard surface paving or gravel.

Event/Holiday Overflow Parking - high volumes of traffic, but only used once a month or less frequently. The grass may sustain significant damage during the event, but would have ample time between usage to maintain a quality appearance.

Pedestrian Traffic - high volumes in random directions as found in parks and campuses. Concentrated traffic ("cowpaths") may require an alternative surface like gravel to withstand high wear and tear on grass.



Flexibility of standard 40"x40" Grassrings² Square.

Flexibility/Versatility

Not all areas in need of compaction protection and stabilization are flat and straight. With the flexibility and ease of shaping and cutting both versions of Grassrings, swales, berms and other rolling terrain can be easily constructed and maintained.

By combining porous paving (grass and gravel) with hard surface materials such as stone, brick and concrete, exciting designs can be created.

Selection of Grass

Grass species differ widely in their capacity to perform in a paving application.

The most important criteria is hardiness - responsive to local growing conditions. Second is wearability - to withstand wear and tear of traffic and respond with rapid growth and repair. Third is maintenance requirements - including fertilization needs, water demands, and mowing height and frequency needed.

Low frequency applications (such as firelanes) can use a wide and fleshy (high water content) bladed grass, or bunch type native grass, because wear and tear will be low. Parking areas will require a thinner and drier bladed grass with a dense rizome type root structure. Grasses must also be selected for shade tolerance responsive to site specific conditions.

Maintenance

As traffic use of the grass paved area increases, maintenance observation and response will increase accordingly. A firelane will require the same care as normal lawn areas, while parking areas may require care similar to athletic fields. Over the life cycle of a grass paved area, however, the maintenance requirements should still be less than an asphalt paved surface.

Mow, irrigate and fertilize as needed for other healthy, high quality turf. Once a year add micronutrients with regular fertilizers to keep the turf healthy.

Snow Removal

Snow removal is easily accomplished with standard small truck snowplows, with skids attached to keep the blade one inch above the surface. Snow blowers and power brooms can also be used effectively on smaller areas.

Should small areas be damaged by plow blades, then simple reseeding and topdressing with sharp sand is all that is necessary.

Irrigation

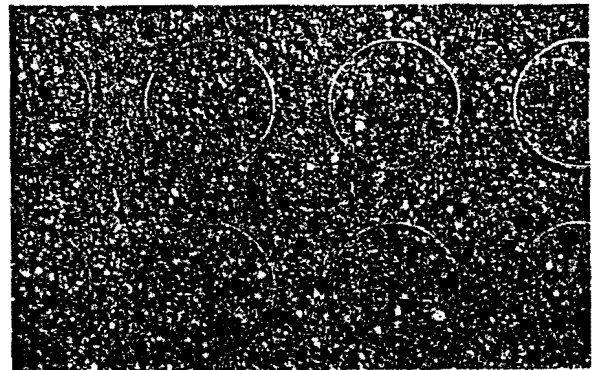
The past ten years have shown us that regardless of "historical" rainfall data, there is no area of the country immune to the possibility of long periods of drought.

We strongly recommend that grass parking areas be provided with an irrigation system - whether manual with hoses, a simple "coarse coverage" semi-automatic system, or a totally automated "fine coverage" system, to protect the paving investment.

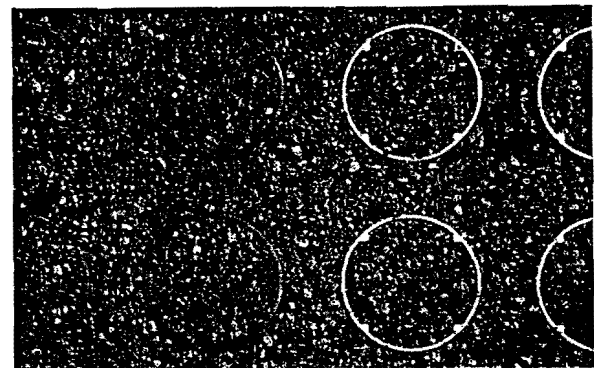
If an irrigation system is not provided and a drought occurs, grass coverage can be restored by reseeding the area, but may have to be done in phases so as to minimize disruption of traffic activity.

Gravel Paving

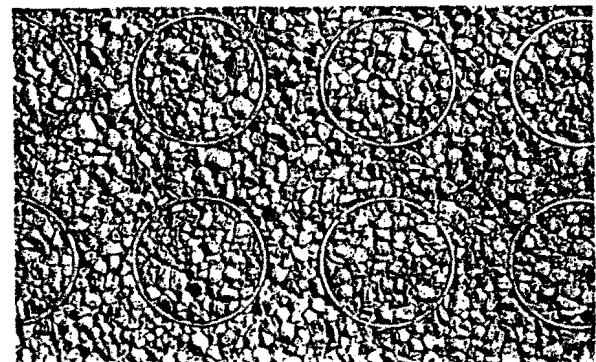
Gravel paths, trails, access drives and parking areas can also be surfaced in gravel with Grassrings², when traffic volume and frequency are too great for grass surfacing, or when the appearance and texture of gravel is desired.



Complementary color rings in gravel.



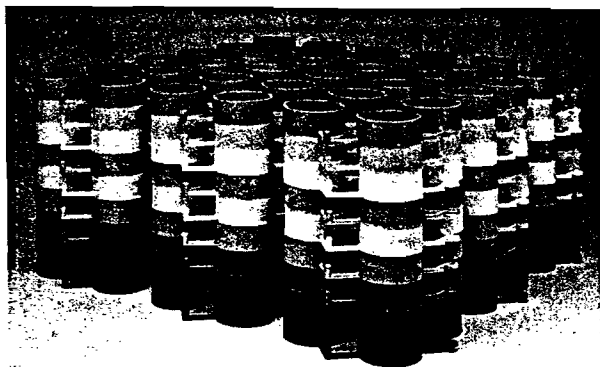
Contrast color rings to identify pathways.



Matching color rings with gravel.

Grassrings2 will stabilize the gravel fill material (size 0.25" minus) and reduce lateral migration which causes ruts, thereby providing long life, and requiring less repair and maintenance than normal gravel surfaces.

As with standard pavement design, the sub-base and base course must be designed to meet necessary loads. For longevity, a sandy gravel base must be adequate to provide a very rigid base for the wearing course.



Custom colors are available to allow the Grassrings2 unit to complement or contrast in color with the gravel fill material. More expensive "decorative" gravel can be used in the rings above the base course because the finish thickness is kept to only one inch.

Grading & Slopes

Grass paving should be designed to reduce the potential for slippage when the grass is wet. Long slopes in excess of 5% should consider use of gravel or concrete traction bars. Vertical curves should allow adequate clearance for long wheel-based vehicles with long overhangs. Check with local fire authorities for their clearance requirements.

Surface grading should be directed to take advantage of storm water runoff from hard surface areas for supplemental irrigation and storm detention/infiltration. In sandy soils, Grassrings can accommodate up to a 6" rainfall over 24 hours before generating runoff.

Both versions of Grassrings can be used for slope stabilization and erosion control on steep slopes or slopes subject to occasional flooding and rapid flow. Contact our headquarters for more information and design assistance.

Additional Information

Our Grassrings Design and Maintenance Manuals contain additional information and details on the design, care and renovation of grass and gravel paved areas. Call our toll free number for free copies.

Other Products

Manufactured by Rings, Inc.:

Drainrings - subsurface composite drainage system featuring excellent strength, high volume flow capacity, horizontal or vertical flow channels. The short or long term storage capabilities provide for detention with infiltration, or retention for possible reuse of stormwater (irrigation, fire protection, livestock water, etc.).

Beachrings - portable mats to provide access for people in wheelchairs or using walkers across loose sand. Mats are made in two sizes and sold to individuals as well as public recreation agencies to provide for total population access to public recreation facilities.

Pillowdrain - sub-surface drainage product, composed of a filter fabric envelope filled with "plastic foam gravel". The lightweight and reusability features provide many benefits to roof gardens and interior planters to reduce structural and handling costs.

Products Distributed by Rings, Inc.:

Hydrogrow - plastic polymer material used as a soil amendment to retain moisture in the soil for use by roots of plant material.

Tensar Geogrids® - "geotextile" to strengthen and keep the roadbase in place. Use of this product reduces the depth of required base material, prevents migration of base into subsoils, and minimizes material and excavation costs.

® The Tensar Corporation

Our products are protected by US Patent Numbers: 4,067,197, 4,896,993, 4,986,699, with other patents pending.

Product Specification

Grassrings - (original mat version)

Made of 3" dia. x 1" high rigid rings, injection molded with HDPE or similar recycled plastic material, spaced 6 rings per square foot in staggered rows, bonded to polyester knitted fabric with non-biodegradable thermoset plastic adhesive, and backed by a single layer of recycled paper; as manufactured by: Rings, Inc., 7700 Cherry Creek South Drive, Unit 6, Denver, Colorado, USA 80231, phone (toll free USA and Canada) 1-800-428-1333, International 303-696-1510, and fax (303)696-9757.

Grassrings² - (injection molded version)

Made of recycled HDPE or equivalent rigid plastic, with integral grid and rings in a square spacing pattern, with rings 2.25" (60 mm) dia. x 1" (25mm) high, spaced 13 per square foot (144/sq m), with integral post and eye alignment and interlock system, exhibiting flexibility such as to be folded to 90 degree angle without breaking; as manufactured by: Rings, Inc., 7700 Cherry Creek South Drive, Unit 6, Denver, Colorado, USA 80231, phone (toll free USA and Canada) 1-800-428-1333, International 303-696-1510, and fax (303)696-9757.

Alternates

Alternative products may be accepted, but must be reviewed prior to bidding, with bids submitted in addition to the product described above, and identified as an alternate selection.

Design specifications

A complete design and installation specification with guidelines for base course, product, and grass installation, in CSI style format, is available upon request from our Headquarters in Denver. Call our toll free number, or fax your request.

Call for your nearest Distributor or Sales Representative toll free - 800-428-1333 from anywhere in the 50 states or Canada.

International Headquarters:

Rings, Inc.

7700 Cherry Creek South Drive, Unit 6
Denver, Colorado 80231
Toll Free USA & Canada • 800-428-1333
Overseas • Country Code + 303-696-1510
FAX 303-696-9757

Grassrings Grass Paving System

Hydrogrow Crystals (Shown Expanded and Dry)

Sandy Gravel Roadbase
(0.75" Dia. Gravel to Fine Sand)

Grassrings² Version

Washed Concrete Sand Filling
Grassrings - to Top for Thin Sod,
or Seeding (Not Necessary for
1"-1.5" Thick Sod)

100% Grass Coverage - Seeded
or Sod Using Hardest Grass for
Local Conditions



We Use Recycled Materials
Please Recycle

RECEIVED

DEC 10 1991

NBBJ North Carolina, Inc.

UNIVERSITY LAKE WATERSHED & AMBERLY/ WINSOME LANE BACKGROUND

1980-1981

- Comprehensive residential rezoning adopted by the Town of Carrboro to implement new zoning districts established by Carrboro's new Land Use Ordinance, and a five acre interim zoning was placed on properties within the University Lake Watershed, until an appropriate watershed protection strategy and zoning could be established.

1981-1983

- Initial University Lake Watershed report and ordinance adopted by the Carrboro Board of Aldermen. The ordinance adopted on November 9, 1983 established a graduated zoning scheme with a conservation district placed on University owned property surrounding the lake, a two acre lot requirement approximately a mile from the lake, and a one acre lot requirement for the remaining portion of the watershed. The ordinance placed a system of natural protective buffers along the shores of University Lake and along streams contributing water to the lake. This ordinance created impervious surface area limitations for residential and commercial land uses. Residential developments were limited to 25% and commercial developments were limited to 25% without BMP'S, 35% with porous paving, and 60 % with on site storm water retention.

1986-1987

- Amberly conditional use permit, rezoning, and annexation was reviewed and approved by the town. An application for Amberly was submitted for 180 single family units on April 30, 1986 and was approved early in the morning on July 29, 1987. The approved development required a private waste water collection and treatment system. The Board of Aldermen also adopted a resolution calling for a public hearing and full review by the NC Environmental Management Commission regarding the issuance of a permit for the private waste water system.
- Carrboro, Chapel Hill, and Orange County adopted the Joint Planning Agreement on November 2 1987. An appendix to the Joint Planning Agreement that applied to properties outside of Carrboro's corporate limits called for OWASA to commission a carrying capacity study of University Lake. This study would later be known as the Camp Dresser McKee or CDM Study.

1988-1989

- Amberly applies to the Division of Environmental Management (DEM) for a non-discharging waste water treatment permit in December of 1988. DEM holds a public hearing on February 2, 1989 and issues a letter denying the permit on April 19, 1989.
- CDM completes the final draft of the University Lake Watershed Study on March 17 of 1989. The CDM study recommended two basic watershed protection strategies:
 - (1) Nonstructural Controls or land use restrictions on density and imperviousness were recommended as the preferred approach. The Nonstructural controls included three basic elements which were: a) five acre minimum lot size, b) a 4% impervious surface limitation, and c) buffers along streams. The CDM study also recommended a cluster

option that would meet the annual nonpoint pollution loadings of the five acre lot subdivision provided that 85% open space, 1/2 acre lots, and 4% impervious surface restrictions were imposed along with an overall density limitation of 5%.

(2) Structural BMP's (Best Management Practices) should be required for all areas where nonstructural controls are not considered feasible. The preferred Structural BMP is the Regional Wet Detention Basin serving drainage areas of 200-300 acres in size with a commitment of County or Town funding to insure adequate maintenance and operation. "The use of infiltration BMP's should be restricted to nonresidential land uses (e.g., porous pavement, infiltration trench) where a wet detention basin is not a feasible option and where an effective maintenance program can be ensured through maintenance agreements with the property owner and a local inspection/enforcement program."

- Town of Carrboro adopts a motion proposing the implementation of the University Lake Watershed Study that refers the task to the Orange/Chatham Work Group.
- NC General Assembly ratified House Bill 156 "Water Supply Watershed Protection" on June 23, 1989.
- The Orange/Chatham Work Group recommended a 13 Point Agreement for the implementation of a watershed protection strategy. This strategy generally called for the following land use development standards:

(1) Basic Strategy

Minimum Lot Size	5 acres
Density	1 unit per 5 acres
Impervious Surface	4%
Waste Water Disposal	Individual, on-site septic with public monitoring or alternative disposal with Board of Health oversight and inspection.
Stormwater	On-site structural BMP's not required

(2) Cluster Strategy

Minimum Lot Size	1 acre
Density	1 unit per 5 acres
Impervious Surface	4%
Waste Water Disposal	Individual, on-site septic with public monitoring or alternative disposal with Board of Health oversight and inspection.
Stormwater	On-site structural BMP's if needed to control slug loadings (public inspection and maintenance required)
Open Space	Land not in lots due to clustering to be set aside

permanently.

(3) Existing Lots (as of October 2, 1989)

a) Less than 5 acres

1. allowed to develop at current size
2. could not be further subdivided
3. structural BMP's not required
- 4 impervious surface

12% for lots less than 2 acres

6% for lots between 2 and 5 acres

4% for lots greater than 5 acres

b) Any lot may be subdivided to create up to 5 lots no less than 2 acres in size with remaining land subdivided with 5 acre lots:

6% impervious surface for lots between 2 and 5 acres

4% for lots greater than 5 acres

(4) Joint land use plan amendment necessary to accommodate proposed zoning and subdivision ordinance amendments such as the creation of a water supply watershed land use classification.

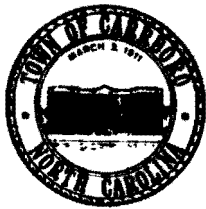
(5) Joint planning agreement amendments necessary to incorporate proposed joint land use plan amendments.

1990-1991

- Carrboro, Chapel Hill, and Orange County held a joint public hearing on February 28, 1990 to consider amendments to the Joint Planning Area Land Use Plan text and map to incorporate the recommendations of the 13 Point Agreement. The Carrboro Board of Aldermen adopted Joint Planning amendments on March 27, 1990.
- The Carrboro Board of Aldermen adopted amendments to the Land Use Ordinance implementing the CDM study and the 13 point agreement reached by the Orange/Chatham Work Group. Among other changes the amendments to the land use ordinance established a 4% impervious surface limitation for lots 5 acres or more in size and a sliding scale for lots less than 5 acres in size. Newly created lots must be 5 acres or more in size except that tracts existing prior to the adoption of the ordinance could be subdivided into five 2 acre lots.

1992-1993

- Winsome Lane application was submitted on March 2, 1992 for 26 lots and the Board of Aldermen approved the CUP on May 19, 1992. The final Plat was approved on August 6, 1992 and indicated the approximate buildable area and impervious surface for each lot.
- The Town of Carrboro, on July 6, 1993, amended the land use ordinance to comply with state watershed protection regulations and in so doing designated the portion of the University Lake Watershed within Carrboro's jurisdiction as a water quality critical area. The state's water quality critical area limits new development to no more than one dwelling unit per 2 acres or 6% built upon area. Built upon areas include both impervious or partially impervious cover.



TOWN OF CARRBORO

NORTH CAROLINA

MEMORANDUM

TO: Jerry Levit, Liz Rooks

FROM: Helen Waldrop, Zoning Administrator *HMW (TR)*

DATE: February 12, 1993

RE: Revisions To The Watershed Ordinance

Staff has examined your request for revisions to the ordinance with regard to impervious surface calculations and arrived at the following Conclusion:

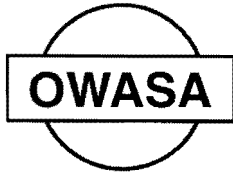
Within residential zoning districts, if vehicle accommodation areas (driveways, parking areas, etc.) are paved with porous paving materials as approved by the Public Works Director, then the area covered by such materials shall be considered 65% impervious for purposes of calculating the total impervious surfaces on the lot.

If strip driveways are proposed then only the area covered by impervious surface (such as gravel/ concrete) shall be calculated. The grass strip shall be excluded from the overall calculation and a legal document filed which would specify that further paving of the drive would not be allowed if the lot in question is at its maximum impervious surface limitation.

We feel that the changes could be dealt with inhouse.

Staff did not advocate that roof areas be excluded from impervious surface calculations, as we believe that the monitoring, enforcement and maintenance of facilities/materials that would allow appropriate infiltration in the watershed would not be practicable on a long term basis.

If you should have any questions about the above please contact this office.



Orange Water and Sewer Authority
400 Jones Ferry Road
P.O. Box 366
Carrboro, NC 27510
(919) 968-4421

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Hand Delivered

November 17, 1994

Mr. Roy M. Williford
Planning and Economic
Development Director
Carrboro Town Hall
Carrboro, NC 27510

SUBJECT: IMPERVIOUS SURFACE REQUIREMENTS IN UNIVERSITY LAKE
WATERSHED

Dear Mr. ~~Williford~~: *Roy,*

Per your request I have reviewed the Carrboro Planning staff's draft report on impervious surface options that was delivered to our office on November 10, 1994. This letter expresses my best professional judgment and does not represent a formal position by the Orange Water and Sewer Authority. Any response from the OWASA Board of Directors would likely occur if and when the Board of Aldermen decide to pursue changes to the land use ordinance.

By way of background, it is useful to recall that one of the primary purposes for engaging Camp Dresser & McKee to conduct the 1989 *University Lake Watershed Study* was to answer questions about the type and degree of development activities that would either maintain or jeopardize University Lake water quality. Carrboro, Chapel Hill, Orange County, and OWASA all supported a protection strategy based on non-structural management practices. Foremost among these were lot size and impervious surface requirements. The local governing boards were uniformly opposed to a structural BMP approach due to high cost and management requirements as well as the low technical reliability of detention and infiltration devices.

The suggestions in your draft staff report for pervious or porous paving materials all come under the category of structural (infiltration) BMPs. The Analysis section of that report describes some of the installation and maintenance requirements of alternative paving materials based apparently on manufacturers' literature, but contains little analysis of actual field performance of these systems. Attached to this letter is an excerpt from the 1989 CDM report highlighting the considerable limitations and constraints of infiltration BMPs.

Until reading the November 10, 1994 draft report I had not been aware that the Town has been administering a limited infiltration BMP program for porous paving materials since February, 1993. Given the rather severe performance and maintenance constraints noted in the CDM report, and the lack of any site, soil, installation, or maintenance criteria

Mr. Roy M. Williford
November 17, 1994
Page 2

provided by the Town to support this approach, there appears to be little technical basis for the current practice of considering porous paving surfaces to be only 65 percent impervious. For purposes of protecting the University Lake water supply, it is my best professional judgment that Carrboro's definition of impervious surfaces should remain unchanged and that no increase in impervious surface coverage be granted in exchange for the use of porous paving materials.

Page 9-4 of the 1989 CDM report recommends stringent lot size and impervious surface limits:

"Restrictions on density and imperviousness represent the preferred approach to watershed management. For those jurisdictions which elect to rely in whole or in part upon land use controls, a 5-acre minimum lot size for single family residential development is the optimum restriction. In order to be effective at managing future nonpoint pollution impacts, the 5-acre lot requirement must be accompanied by a 4% imperviousness ceiling" (emphasis included in original text).

Although CDM recommended a 4 percent ceiling (i.e., upper limit), it is noted that the water quality modeling scenarios on which this recommendation were based assumed an average imperviousness of 4 percent. It would appear, therefore, that certain minor modifications to the Town's sliding scale of lot size and imperviousness might be technically justifiable as long as the actual application of those requirements results in an average impervious coverage of 4 percent or less for new development.

Please let me know if you need any further information or clarification.

Yours very truly,

A handwritten signature in black ink, appearing to read 'Ed Holland', with a stylized flourish at the end.

Edward A. Holland, AICP
Director of Planning and Development

attachment

cc: Everett Billingsley

RECEIVED

NOV 17 1984

Structural BMP requirements in Chatham County are also dependent on percent imperviousness for new development. All new commercial, industrial, and institutional development must infiltrate the first 0.5-inch of stormwater runoff if the site is more than 6% impervious. For residential development, the first 0.5-inch of runoff must be controlled by infiltration BMP's should the percent imperviousness of the entire development exceed 4%.

6.2.2 COMPARISON OF BMP'S

Infiltration BMP's require much more frequent maintenance and major cleanouts than detention basin BMP's (CDM, 1985a). Infiltration BMP's tend to require major cleanouts every year or so to eliminate clogging conditions. In the absence of an intensive, continuing maintenance program, these BMP's will tend to fail within a few years after start-up. Because of their clogging problems and significant maintenance requirements, some jurisdictions regard infiltration measures as unreliable BMP's and discourage their use. In addition, because infiltration BMP's require highly permeable soils which are not restricted by a high water table, these devices will not be feasible in many sections of the University Lake watershed. In light of these constraints, infiltration BMP's are not recommended for areawide application in the University Lake watershed. However, they may be suitable for use at certain commercial sites, based on case-by-case applications. Where infiltration BMP's are used, a storage volume requirement of 0.5 inch of runoff per impervious acre is the most appropriate design standard (CDM, 1985b).

Two different detention basin BMP's are currently used for runoff pollution control: wet detention and extended dry detention. In wet detention basins, pollutant removal occurs primarily within a permanent pool during the period of time between storm events. The "extended dry" method provides increased detention times for captured first-flush runoff in order to enhance solids settling and the removal of suspended pollutants.

In comparison with extended dry detention basins, wet detention basin BMP's offer the advantage of pollution removal mechanisms for dissolved phosphorus and dissolved nitrogen. Whereas dry detention systems can only

from: CDM University Lake Watershed Study, March, 1989.

BOARD OF ALDERMEN

ITEM NO. E(6)

AGENDA ITEM ABSTRACT MEETING DATE: November 22, 1994

SUBJECT: Appointments to Orange County Senior Center Task Force and Human Services Coordinating Council

DEPARTMENT: n/a	PUBLIC HEARING: YES ____ NO <u>x</u>
ATTACHMENTS: Letter from Moses Carey, Memo from Jody Lindsay, Application from Elizabeth Hutton, Letter from John Link	FOR INFORMATION CONTACT: Mayor Kinnaird or Robert Morgan, 968-7706

PURPOSE

The Orange County Board of Commissioners have established a committee to develop an Orange County Senior Center Development Plan and have requested that the Town of Carrboro nominate a representative to serve on this task force. In addition, the Orange County Manager has contacted the Town Manager requesting that the Town of Carrboro appoint a representative to serve on the Human Services Coordinating Council. The purpose of this agenda item is for the Board of Aldermen to consider making these appointments.

SUMMARY

Mayor Kinnaird has received a letter from Moses Carey stating that the Board of Commissioners have approved recruitment of one Carrboro nominee to serve on a committee to develop an Orange County Senior Center Development Plan.

Jody Lindsay, the town's Recreation Specialist, was asked by Jerry Passmore, Director of the Orange County Department of Aging, to recommend individuals from Carrboro who might serve as the town's representative on the task force. Ms. Lindsay submitted a memorandum to Mayor Kinnaird listing the names of four individuals who could be considered to represent the needs of older adults in Carrboro. Those individuals are: Betty Denny, Elizabeth Hutton, Jim Kempe, and Carl Siebert.

The Board of Aldermen at its meeting on October 11, 1994 discussed this item and requested that the Town Clerk contact the four individuals suggested as possible appointees and ask that they submit applications for the Board's consideration at a later date.

The Town Clerk has received one application from Ms. Elizabeth Hutton.

The Town Manager has received a letter from John Link requesting that the Town of Carrboro appoint a replacement for Maribel Carrion on the Human Services Coordinating Council.

The town staff contacted Christine Taylor, the chair of the town's Human Services Commission, and she has agreed to serve as the town's representative on the Human Services Coordinating Council.

ACTION REQUESTED

To consider making a recommendation for appointment to the Orange County Senior Center Task Force and the Human Services Coordinating Council.

May 26, 1994

Mayor Eleanor Kinnaird
Town of Carrboro
207 W. Poplar Avenue
Carrboro, NC 27510

Dear Ellie:

On May 17, 1994 the Board of Commissioners approved recruitment of one Carrboro nominee to serve on committee to develop an Orange County Senior Center Development Plan. This appointment will be presented to the Board of Commissioners at the June 28 meeting. Would you take this matter to the Board of Aldermen and forward the name of their selection to the Clerk's office. Receipt of this name prior to June 20th will allow enough time to prepare the agenda abstract.

Sincerely,

Moses Carey, Jr.,

cc. Bob Morgan

Post-It™ brand fax transmittal memo 7671		# of pages 1	
To	Richard Kinney	From	Jerry Passmore
Co.	CARRBORO B+P	Co.	ASING
Dept.		Phone #	
Fax #	968-7737	Fax #	644-3044

*Thank you for following up
on this Appointment*
Jerry

TO: Mayor Kinnard
FROM: Jody Lindsay, Recreation Specialist
RE: Orange County Senior Center Task Force
DATE: July 27, 1994

Mr. Jerry Passmore, Director of Orange County Department on Aging recently contacted me asking to recommend individuals from Carrboro to serve on the Orange County Senior Center Task Force. I would like to have the following persons considered to represent the needs of the older adults in Carrboro.

Mrs. Betty Denny
967-0540
210 Carol Street
Carrboro, NC 27510

Mr. Jim Kempe
967-3543
118 Lorilane Drive
Carrboro, NC 27510

Ms. Elizabeth Hutton
942-2276
409 Lindsay Street
Carrboro, NC 27510

Mr. Carl Siebert
942-6934
106 Lisa Drive
Carrboro, NC 27510

These individuals (excluding Mr. Siebert) are long time residents of Carrboro. They have all participated in Carrboro Recreation programs and activities on a regular basis. I feel these individuals will serve Carrboro and the Task Force well. Please feel free to contact me at 968-7703 for any further information. Thank you for your consideration.

JL/cl

C:\winword\jl\mayor

ORANGE COUNTY
HILLSBOROUGH
NORTH CAROLINA

RECEIVED NOV 09 1994

Manager's Office

Established 1752

November 7, 1994

Bob Morgan, Manager
Town of Carrboro
P. O. Box 821
Carrboro, NC 27510

Dear Bob:

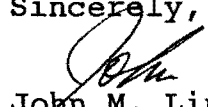
The Human Services Coordinating Council was established in 1991 to develop a mechanism to coordinate the delivery of human services in the County. The Coordinating Council was instrumental in developing the joint private non-profit funding proposal form which is currently being used by Chapel Hill, Carrboro, the United Way and Orange County. The Coordinating Council also produces an annual report on the state of human services entitled, "A Snapshot of Human Services in Orange County".

Since the Coordinating Council has representation from the local governments, United Way and the Association of Community Agencies, I have requested that this group serve as the planning group for the County's new automated information and referral initiative. The County currently maintains a loose leaf binder ("The Orange Book") which describes every public and private human services agency in the County and numerous state and federal agencies providing services to our community. Although there are hundreds of the Orange Books located in agencies throughout the County, an automated system would be more efficient and easier to update. Jan Scholper, Chair, and members of the Coordinating Council support this concept.

I will discuss how the new initiative will improve collaboration and coordination among youth and family programs at the Coordinating Council November 16, 1994 meeting. The meeting will begin at 4:30 p.m. in the 1st floor conference room, Chapel Hill Town Hall.

Currently, the Town does not have a representative on the Coordinating Council. Maribel Carrion was an active member in 1991 and 1992; however, the Town has not appointed Maribel's replacement. I hope you can attend this meeting and encourage your Board of Aldermen or Human Services Advisory Council to appoint a representative to participate in future discussions.

Sincerely,


John M. Link, Jr.
County Manager

JML/ltc

**DUPLICATE
NOT FOR FILE**