
ATTACHMENT D
VARIANCE AND SPECIAL PERMIT

Variations, Permits, and Other Special Permits Previously Issued by other Town Boards or State and Federal Agencies:

1. Sanitary Facilities Variance
 - a. A copy of the Variance is included within this Attachment.
2. Nagog Ozone Facility Special Use Permit, Site Plan Special Permit, and Flood Plain Special Permit
 - a. A copy of the Permit (Plan File #3405) is included within the Attachment.

Permits Required to complete the Proposed Work:

1. Town of Acton Special Use Permit
2. Town of Acton Site Plan Special Permit
3. MEPA Environmental Notification Form
4. Massachusetts Historical Commission Project Notification Form
5. MADEP BRP WPA Form 3 Notice of Intent
6. MADEP BRP 24 Approval to Construct a Water Treatment Facility
7. MADEP Chapter 91 Waterways License
8. United States Army Corps of Engineers General Permit
9. MADEP 401 Water Quality Certification
10. MADEP Disposal System Construction Permit (Title 5)
11. MADEP BRP US 06 Underground Injection Control
12. Town of Acton Building Permits
13. NPDES Construction Stormwater General Permit
14. Hazardous Material Storage Notification/Licenses/Permits

Variations Required to complete the Proposed Work:

1. There are no Variations required to complete the proposed work.

Haley and Ward, Inc.

Civil and Environmental Engineers

October 24, 1995

Town of Acton
Board of Health
472 Main Street
Acton, MA 01720

Attn: Mr. Doug Halley, Health Director

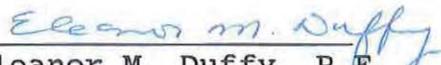
Re: Town of Concord
Nagog Pond Disinfection Facility
Request for Variance

Dear Mr. Halley,

We have obtained a variance from the requirement for sanitary facilities at the Nagog Pond Disinfection Facility. The variance was unanimously approved by the Board of State Examiners of Plumbers and Gas Fitters on their October 4, 1995 meeting. Enclosed please find a copy of the variance for your files.

Yours very truly,

HALEY AND WARD, INC.


Eleanor M. Duffy, P.E.

Enclosure

CON\021-058



The Commonwealth of Massachusetts

Division of Registration

Leverett Saltonstall Building, Government Center

100 Cambridge Street, Boston 02202

October 19, 1995

Eleanor M. Duffy, P. E.
Haley and Ward, Inc.
25 Fox Road
Waltham, MA 02154

Dear Ms Duffy:

October 4, 1995 the Board of State Examiners of Plumbers and Gas Fitters approved your application for a variance from the Massachusetts State Plumbing and Fuel Gas Code CMR 248, section 2.02 Principle #6 for the Nagog Pond Disinfection Facility, 339 Nagog Hill Road, Acton, MA.

Very truly yours,
For the Board

Louis J. Visco

Louis J. Visco, Executive Secretary
Board of State Examiners of Plumbers and Gas Fitters

emr:

IMPORTANT NOTICE

A copy of this approval must be filed by you with the local plumbing and/or gas inspector and if applicable the Board of Health.



TOWN OF ACTON

BUILDING PERMIT APPLICATION

Permit No. _____
Date Issued _____
Received 8/10/95

I. LOCATION OF PROJECT

At (Location) BEHIND 13 Rear Hazelnut Street
339 NAGOG HILL ROAD (No.) (Street) Zoning District RESIDENTIAL
Applicant _____ Phone _____
Lot Description: Parcel C40 014 Plate _____ Latest Recorded Plan: Book NA Page NA
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II. TYPE AND USE OF BUILDINGS

<p>A. TYPE OF IMPROVEMENT</p> <p><input checked="" type="checkbox"/> New Building <input type="checkbox"/> Addition <input type="checkbox"/> Alteration <input type="checkbox"/> Repair, Replacement <input type="checkbox"/> Wrecking, Demolition <input type="checkbox"/> Moving, Relocation <input type="checkbox"/> Swimming Pool <input type="checkbox"/> Sign <input type="checkbox"/> Other - Specify _____</p>	<p>COMMERCIAL ONLY</p> <p>B. TYPE OF CONSTRUCTION (Section 401 Mass. State Bldg. Code)</p> <p><u>3B</u></p> <p>USE GROUP CLASSIFICATION (Section 301 Mass. State Bldg. Code)</p> <p><u>F-2</u></p>	<p>C. FLOOR AREA (Based on Exterior Dimensions in square feet)</p> <p>Basement, (Unfinished) _____ Basement, (Finished) <u>1400</u> First Floor <u>1400</u> Second Floor _____ Third Floor _____ Garage _____ Porch/Deck _____ Other - Specify _____</p> <p>D. RESIDENTIAL BUILDINGS ONLY</p> <p>Number of Bedrooms Existing _____ Proposed _____ Number of Bathrooms Existing _____ Proposed _____</p>
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F. DESCRIBE PROPOSED USE OF STRUCTURE OR BUILDING IN DETAIL.
PUBLIC DRINKING WATER TREATMENT

DEPARTMENTAL APPROVALS:

	Approved	Disapproved	Not Applicable
ENGINEERING DEPARTMENT:			
Street Number	<input checked="" type="checkbox"/>	_____	_____
Street Cut	_____	_____	<input checked="" type="checkbox"/>
Plate & Parcel	<input checked="" type="checkbox"/>	_____	_____
Flood Plain	<u>10-18-94</u>	_____	_____
Other <u>SPECIAL USE PERMIT</u>	<u>10-18-94</u>	_____	_____
PLANNING BOARD:			
Lot Release (date _____)	_____	_____	_____
Bond Posted (date _____)	_____	_____	_____
ANR Plan	_____	_____	_____
Special Permit	<u>10-18-94</u>	_____	_____
Other _____	_____	_____	_____
CONSERVATION COMMISSION:			
Wetlands	<input checked="" type="checkbox"/>	_____	_____
Other <u>W. 8/17/95</u>	<u>9-8-94</u>	_____	_____
HEALTH DEPARTMENT:			
<u>ADP 8/14/95</u>	<input checked="" type="checkbox"/>	_____	_____
<u>HAZ. MAT. PERMIT REQUIRED PRIOR TO OCCUPANCY.</u>			

Health

RECEIVED & FILED

DATE October 18, 1994

Barbara Brown
for TOWN CLERK, ACTON



MASSACHUSETTS

BOARD OF APPEALS

DECISION NO. 94-19

DECISION ON THE PETITION BY TOWN OF CONCORD PUBLIC WORKS COMMISSION, 133 KEYES ROAD, CONCORD, MA

A public hearing of the ACTON BOARD OF APPEALS was held in Room 126 of the Acton Town Hall, Acton, Massachusetts on Monday, September 12, 1994 at 8:00 PM on the petition by Town of Concord Public Works Commission for a PETITION FOR A VARIANCE from the Acton Zoning Bylaw, for all Sections of the Bylaw that apply, in order to allow the construction of a drinking water disinfection facility for the Nagog Pond water supply facility in Acton, Map C4/Parcel 14 and Map B4/Parcels 101034 through 144446.

The public hearing on September 12th was continued to September 19, 1994 at 8:00 PM due to the lack of a quorum on September 12th.

Members of the Board of Appeals present on September 19th were Duncan Wood, Chairman; Nicholas Miller, Member and Acting Clerk; Janet Clark, Alternate Member; and Valerie Grier, Board of Appeals Secretary. Also present were Harold Storrs, representing the Town of Concord, Petitioner; Maurice Caron, Town of Concord; Jack O'Connell, Haley & Ward; and Michael Griffin.

Mr. Wood opened the hearing, introduced the Board Members, read the petition, noted file contents, and explained hearing procedures.

The Board of Appeals, after considering the materials submitted with the petition together with the information developed at the public hearing, finds that:

- (1) The Town of Concord is attempting to comply with USEPA requirements for disinfection of all surface water based public water supplies. The project proposes to install a ozonation based treatment process in a new building to be built on land owned by the Town of Concord just to the south of the existing dam where Nagog Brook discharges from the reservoir.
- (2) The project site is located in woods at a location that currently lacks vehicle access. The property also lacks frontage on a public way, due to the history of how the land was acquired by the Town of Concord.

(3) In order to provide vehicle access to the site, a driveway is proposed to connect the site to the Acorn Park subdivision which is currently under construction. This access also requires an easement across property owned by Palmer. The treatment facility is proposed on the south side of Nagog Brook, thus requiring a crossing of the brook. The proposed location of the crossing is a location where relatively little flood plain storage exists due to the steepness of the stream channel and the narrowness of the valley.

(4) The location of the treatment building is isolated and remote from any other active land use. Most of the adjacent land is controlled by either the Town of Concord as a water supply protection district or is Acton Conservation Land. The only abutting private property (Palmer) is undeveloped and is likely to be transferred to the Town of Concord as part of a proposed land swap.

(5) The project has already received an "Order of Conditions" from the Acton Conservation Commission. Partly in response to that review, the design of the crossing was modified to reduce the volume of flood plain fill. Revised calculations for the wetland and floodplain fill volume were submitted by Haley & Ward at the hearing.

(6) The specific provisions of the Acton Zoning Bylaw that may require variances for the proposed design, and a paraphrased summary of the requirement, are as follows:

Section 4.1.8.1.b Retain 98% of the existing natural floodplain storage without construction of compensatory storage areas.

Section 4.3.6.2 Retain volume of groundwater recharge occurring on site to pre-development condition.

Section 5.2.2 Frontage on a street is required for a building lot.

Section 6.7.3 Access driveways should consist of a 24 foot wide pavement.

Sections 6.7.5, 6.7.6, and 6.7.7 Specific requirements for landscaping around the perimeter of the project site and within designated parking areas.

Section 10.4.3.1 No increase in the peak rate of runoff from up to a 10-year design storm.

(7) The Town of Concord's design has attempted to be sensitive to the issues raised in the sections of the Bylaw listed above, but certain aspects of the requirements that are intended for more conventional site plan layout are not fully met, and the need for frontage can not be met.

Without the requested variances the project is either infeasible, or will require more extensive tree cutting and grading alterations to the natural environment in that location.

(8) Protection of water resources is a specific goal of the Acton Master Plan. Granting appropriate variances to allow the construction of the disinfection facility is consistent with the

objectives of the Master Plan.

As a result of the above findings, the Board of Appeals concludes that:

(1) The proposed project will benefit the safety of the water supply resources serving the Town of Concord and a portion of Acton.

(2) The volume of floodplain storage that will be lost is limited to approximately 400 cubic feet. It can not reasonably be determined whether this exceeds 2% of the storage on the site without a much more detailed topographic survey and a decision on what existing volume should be considered, since the fill is within an easement crossing the brook at some distance from the actual construction site for the treatment building. The strict application of Section 4.1.8.1.b at this location is not appropriate given the character of the stream valley, the limited loss of storage volume that has been engineered, and the dominating flood control benefit provided by the Nagog Pond, just upstream of the crossing location.

(3) The proposed drainage swale, if lined with stone, will limit the loss of groundwater recharge resulting from the project. The actual existing recharge in the area of the proposed building is currently limited due to the steep slopes and density of vegetative cover. The strict application of Section 4.3.6.2 is not appropriate for this particular project, but the design of the drainage swales should include an enhanced opportunity for the recharge of runoff from the site.

(4) The lot where the treatment facility is to be built lacks frontage. The strict enforcement of Section 5.2.2, would prohibit the project without the purchase of significant additional land for no purpose other than to reach a public way. Given the nature of this project there is no overriding need for frontage on a street as long as access has been provided via permanent easements.

(5) The site will be visited once per day by a water system operator. There will not be a significant traffic using the driveway. Thus the need for a driveway with a 24 foot wide pavement does not exist.

(6) The site is in the midst of an existing woodland. The specific requirements for landscaping are not appropriate to this location.

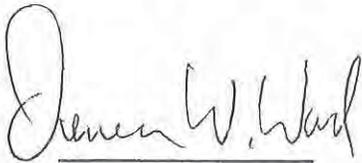
(7) The impact on drainage patterns resulting from construction of this project will be very limited due to the small size of the treatment structure and the narrow width of the access road surface, and the small parking area.. The waterway or swale along the northern side of the access road should include an enhanced opportunity for the recharge of runoff from the site.

Based upon the findings and conclusions, the Board voted unanimously to GRANT a general variance to Sections 4.1.8.1.b, 4.3.6.2, 5.2.2, 6.7.3, 6.7.5, 6.7.6, 6.7.7, and 10.4.3.1 of the Zoning Bylaw for the construction of this project, subject to the following condition.

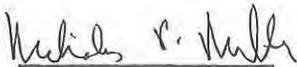
(1) The drainage swale along the northern side of the access driveway will have a crushed rock bottom at least 12 inches deep and two feet wide. The purpose of the crushed rock bottom in the swale will be to encourage infiltration of runoff from smaller storm events and to reduce erosion in the trench during larger storms.

Any person aggrieved by this decision may appeal pursuant to the provisions of Massachusetts General Laws, Chapter 40A, Section 17, within twenty (20) days after this decision is filed with the Acton Town Clerk.

**TOWN OF ACTON
BOARD OF APPEALS**



Duncan Wood
Chairman



Nicholas Miller
Member-Acting Clerk



Janet Clark
Alternate Member

I certify that copies of this decision have been filed with the Acton Town Clerk and Planning Board on Oct. 18, 1994.



Valerie Grier
Secretary
Board of Appeals

Application
Site Plan Special Permit

RECEIVED
AUG 25 1994
ACTON BOARD OF HEALTH

3.2 Certified Abutters List

List of Abutters and List of Abutters and Other Interested Parties attached.

3.3 Use Description

The project involves the construction of a drinking water disinfection facility for the existing surface water supply at Nagog Pond. The purpose of the project is to provide disinfection of the drinking water as required by new EPA regulations. The principal use will be a municipal waterworks facility.

The work will involve the construction of a small building (approximately 50' x 30') to house air preparation equipment, ozone generators and associated equipment; construction of two ozone contact chambers beneath the building; and an access road to the facility from Acorn Park Development. The access road includes a culvert crossing at Nagog Brook.

The facility includes two (2) ozone generators each capable of producing seventy-five pounds per day of ozone gas. The generators will require a Hazardous Waste Permit.

3.4 Other Permits and Variances

The following permits are considered relevant to the project:

<u>Permit</u>	<u>Agency</u>
Order of Conditions	Acton Conservation Commission Central Region DEP
Programmatic General Permit	Army Corp of Engineers
Water Quality Certification	Department of Environmental Protection
Environmental Notification Form	MEPA
Archaeological Survey	Mass. Historical Commission
Site Plan Special Permit	Acton Board of Selectmen
Floodplain Special Permit	Acton Zoning Board of Appeals
Variances from Subdivision Rules and Regulations	Acton Zoning Board of Appeals
Variances from Zoning Bylaws	Acton Zoning Board of Appeals
Hazardous Waste Permit	Board of Health

3.5 Recorded Plans

A copy of the general location plan for the lot on which the work will take place is attached.

3.6 Drainage Calculations

The project includes an access road with culvert crossing over Nagog Brook and a small parking area in front of the building. The building and parking area are shown on the Site Plan G-1. Plans of the access road include G-4, G-5, G-6 and G-7. Drainage calculations with documentation are attached.

3.7 Water Balance Calculations

The project site is located within Groundwater District 4. We respectfully request relief from the requirement of water balance calculation for pre- and post-development conditions due to the minimal alteration of ground surface as outlined on Drawing G-3 "Grading Plan".

3.8 Earth Removal Calculations

We respectfully request relief from the requirement of earth removal calculations.

3.9 Plans

The following plans are included with this application.

G-1	Site Plan
G-3	Grading Plan
G-4	Roadway Cross Section at Box Culvert Sta. 0+0 to -1+0
G-5	Roadway Cross Sections Sta. 0+50 to 2+0
G-6	Roadway Cross Sections Sta. 3+0 to 6+0
G-7	Roadway Profile
A-1	Building Floor Plan
A-2	Building Elevations and Architectural Details

3.9.2 Locus Plan

A section of a USGS of the site is included as well as the general location plan.

3.9.3 General Site Characteristics

Site characteristics are shown on Drawing G-1 "Site Plan".

3.9.4 Natural Site Characteristics

Refer to Drawing G-1 "Site Plan" for natural site characteristics. Proposed contours of the land are shown on Drawing G-3 "Grading Plan".

3.9.5 Site Improvements

Erosion and sedimentation control measures are summarized in the attached Specification for Environmental Controls to be included in the Contract Documents. Additionally, a Notice of Intent has been filed with the Conservation Commission.

An outline of the proposed structures is shown on Drawing G-1 "Site Plan". Drawing A-1 shows floor plan of the building. Building elevations and architectural details are shown on Drawing A-2.

No signs are proposed for the facility.

No sidewalks are proposed for the facility. Under a separate application for variances from certain sections of the Zoning Bylaws, we are requesting relief from requirements for roadway width, structured drainage facilities, sidewalks, driveway requirements, and parking facilities. No handicapped access to the building will be provided.

3.9.6 Phasing

The project is not to be built in phases.

3.9.7 Site Utilities

At the present time, underground telephone and electrical service are proposed in the access road. Utilities will be brought into the site from the Acorn Park Development stub road. No emergency power facilities are included in the project.

No underground storage tanks for fuel or other chemical storage are included in the project. Above ground propane gas storage tank, on a concrete pad, is proposed for space heating of the building.

No potable water service is provided within the facility. Process water is supplied from Nagog Pond.

One fire hydrant is proposed, located within 500 feet of the principal building. However, the water main at this location is not pressurized.

3.9.8 Waste Disposal Facilities

No waste disposal facilities will be provided at the facility because this activity is inconsistent with the watershed protection bylaw.

We intend to apply for a variance from this requirement from the Massachusetts Division of Plumbing and the Massachusetts Department of Environmental Protection.

3.9.9 Construction Details

Construction details are outlined in contract drawings submitted with the application.

3.9.10 Landscape Plan

No landscaping will be provided for the site. The site is to be restored to its preconstruction condition of woodland and wooded wetlands as much as possible.

3.9.11 Building Elevations

Refer to Drawing A-2 for building elevations and architectural details.

3.9.12 Floor Plans

Refer to Drawing A-1 for building floor plan.

3.9.13 Plan Notes

We request that the required notes be inserted into the contract specifications rather than appear on the contract drawings.

3.9.14 Traffic Study

Two vehicle trips per day are estimated for operation and maintenance. We respectfully request relief from the requirement for a traffic study as the project will have a minimal impact on traffic.