LIST OF APPENDICES

APPENDIX A: ROAD CONSTRUCTION SPECIFICATIONS

A.1 Location and Alignment

a. Proposed streets in the subdivision shall be coordinated with each other and with existing streets with due consideration given to contours and other natural features.

b. Provision may be made for the projection of streets to adjoining property which is not subdivided.

c. Reserve strips prohibiting access to streets or adjoining property will not be permitted, except where, in the opinion of the Board such strips shall be in the public interest.

d. Streets entering opposite sides of another street shall be laid out either directly opposite one another or with a minimum offset of 125 feet between their center lines.

e. The minimum center line radii of curved streets shall be 150 feet for local and 300 feet for collector and arterial streets, except that in no case will the stopping sight distance be less than 200 feet. All reverse curves shall be separated by a tangent of at least 100 feet. (8/21/97) (9/05/02)

f. Streets shall be laid out so as to intersect as nearly as possible at right angles. No street shall intersect any other street at less than sixty (60) degrees.

g. Property lines at street intersections shall be cut back to provide for a property line radius of not less than twenty-five (25) feet.

h. Street right of way widths shall be a minimum of fifty (50) feet.

i. A minimum design speed of 30 miles per hour shall be used. (8/21/97)

A.2 Grade

a. The minimum center line grade for any street shall not be less than 0.75%.

b. The maximum center line grade shall not be more than eight (8) percent except where in the opinion of the Board a greater grade is required for short distances due to unusual topographic conditions. However, in no case shall the grade be more than ten (10) percent. (8/21/97)

c. Grades at intersecting roadways shall not exceed three (3) percent for the first 75 feet from the sideline of the intersecting edge of pavement. (8/21/97)

d. Grades at cul-de-sacs shall be restricted to a maximum of four (4) percent along the roadway baseline and perpendicular to it.

e. The maximum profile grade of a cul-de-sac shall not exceed five (5) percent.

f. All changes in grade exceeding three (3) percent shall be connected by vertical curves of sufficient length to provide a sight distance of at least 200 feet for all local and collector streets and 300 feet for arterial streets. (8/21/97)

A.3 Dead End Streets

a. Dead-end streets shall not exceed twelve hundred (1,200) feet in length and shall terminate in a turn around 150 feet in diameter, with an outside paved diameter of 138 feet or a hammerhead with a minimum of 55 feet on each leg as measured from the centerline of the street. The width of the paved roadway shall not be diminished at the turn around. (5/9/89) (11/15/07)

A.4 Easements

a. Easements for storm drains, water courses, utilities and other purposes shall be provided where such are located outside the right-of-way and shall be at least 25 feet in width.

b. Where possible easements shall be on rear or side lot lines.

c. All lines of all easements will be calculated, described and shown on the final plat with bearings and distance.

A.5 Construction

a. As a minimum, roadway construction shall conform to the typical cross section included with these regulations. Where specifications relative to materials and construction requirements are not included in these regulations, the specifications found in the Standard Specifications for Highways and Bridges, State of NH DOT, in its latest issue shall be used. (11/19/91)

b. The entire area of each right-of-way shall be cleared of all stumps, brush, roots, and trees not designated for preservation.

c. The full length and width of the proposed roadway pavement area and shoulders shall be excavated or filled as necessary, to a depth of at least nineteen (19) inches below the finished grade as shown on the profile. However, if the soil is soft and yielding, or contains undesirable material such as loam, peat, soft clay, or any other material detrimental to the base gravel grade, such material shall be removed and replaced with suitable well compacted material. In fill areas, no stone greater than one (1) foot in largest dimensions shall be placed within two (2) feet of the gravel base. (8/21/97)

d. The center line of the paved roadway area shall coincide with the center line of the right-of-way unless a minor variance is specifically approved by the Board.

e. As a minimum, the paved roadway shall be provided with a foundation of 12" of gravel and 4" of crushed gravel. These materials shall conform to the State of NH Standard Specifications 304.2 gravel, and 304.3 crushed gravel for both material quality and construction requirements. (11/19/91, 11/7/95)

f. The gravel shall be spread and then rolled true to line and grade with a roller of proper size. Any depressions that appear during or after rolling shall be filled with additional gravel and re-rolled until the surface is true and even.

g. The wearing surface shall consist of 3 inches of plant mixed bituminous concrete. It shall be applied in two (2) courses, 2" base course and 1" top course. The top course shall not be applied until at least one calendar year has passed from the date of the completion of the base course. (8/21/97)

h. Stabilized shoulders having a width of 4'-0" shall be constructed on each side of the paved roadway as shown on the typical cross section. (11/19/91)

i. The area in back of the shoulders shall be sloped no steeper than a rate of three feet horizontal to one foot vertical to a point where in coincides with the ditchline or the finished grade of abutting lots. Loam shall be applied to a depth of four (4) inches, rolled and seeded or covered with other suitable mulching materials. (8/21/97)

j. Guard rails equal in quality to those guard rails defined under section 606 of the State of NH Standard Specifications for Highways and Bridges shall be provided in back of the shoulder where fills are greater than six feet and slopes are steeper than 4 to 1. (11/19/91, 8/21/97)

A.6 Drainage

a. Storm drains, culverts, and related installations, including catch basins, gutters and manholes shall be installed within the subdivision as necessary to adequately dispose of surface water. Where ground water conditions necessitate it, the Board may require the use of sub drain to drain the base course of the road.

b. Storm drains shall be reinforced concrete pipe, corrugated plastic pipe, or plain aluminum corrugated pipe. The minimum size of pipe shall be 12 inches inside diameter and shall be of greater size when required by the Board. The minimum pitch shall be 0.5%. All drains shall be laid to uniform grades and carefully back filled so that the pipe is supported throughout its entire length with compacted earth. (8/21/97) (11/15/07)

c. Catch basins, where required, shall be installed on both sides of the roadway at intervals of not more than 350 feet, at low points, and near the corners of the roadway grade, at intersecting streets. Any change in alignment or grade, if not normally the location of a catch basin, shall be made by using a manhole.

d. Catch basins shall have a three (3) foot sump. (8/21/97)

e. Where adjacent property is not subdivided, provision shall be made for the extension of the drainage system by continuing appropriate drains to the exterior boundaries of the subdivision, at such size and grade as will allow for their proper future connection. (8/21/97)

f. Ditches when designed for drainage in cut sections shall have their flowline grade at least 27" below center line finished grade. (11/19/91, 8/21/97)

A.7 Monuments

a. Monuments shall be installed on both sides of the right-of-way, at all street intersections, at all points of change of direction or curvature of streets and at other points where in the opinion of the Board, permanent monuments are necessary. Such monuments shall be of granite or reinforced concrete not less than four (4) inches square and not less than four (4) feet long set flush with the finished grade. When surface ledge is encountered, a one (1) foot by three quarter inch 1" x 3/4") iron pin inserted in the ledge may be substituted.

b. No monuments shall be installed until all construction which would destroy or disturb the monument is completed.

c. The setting of the monuments shall be supervised by a registered land surveyor.

A.8 Street Signs

a. The subdivider shall furnish and erect street signs at all street intersections. These signs shall be of the same type being used in the Town at the same time of Subdivision approval.

b. The subdivider shall also furnish and set such other traffic control signs as the Board shall require. (5/9/89)

A.9 Clean up

a. Upon completion of all work on the ground, the subdivider shall remove from the streets and adjoining property, all temporary structures and all surplus material and rubbish which may have accumulated during construction, and shall leave the work site in a neat and orderly condition.

A.10 Inspection

a. The Board shall designate an inspector for all construction in an approved subdivision to insure full compliance with the foregoing rules and regulations. This inspector shall not authorize any changes from these regulations or from the approved record plan for the subdivision without specific approval of the Board. He/she will inspect the work in progress during reasonable hours as he will see fit; but in any case it will be the subdivider's responsibility to request his inspection at the following progress steps:

1. After grubbing stumps, but before any fill is placed. (8/21/97)
2. After excavation and/or filling has been started but before the gravel placement operation has been started.
3. After drainage system is installed, but before it is covered. The inspector shall check the pipe alignment and any defective runs shall be corrected before approval is given.
4. After each type of gravel has been placed and shaped and before the bituminous concrete surface has been applied. (8/21/97)
5. After bituminous concrete surface has been placed and while shoulder work is in progress.
6. Before acceptance by the Town of Brookline.

7. At other specific times deemed necessary by the Board.

b. The subdivider shall give at least 24 hours notice to the inspector whenever an inspection is indicated. He shall also furnish the necessary baseline and grade stakes to allow the inspector to properly carry out his function.

c. Records of inspections shall be kept on file at the Town Hall and shall be signed and dated by the authorized inspector.

APPENDIX B: FEES
BROOKLINE PLANNING BOARD

FEE SCHEDULE

Subdivision Development:

$60.00 (sixty) per lot (including parent lot)	$_____
$40.00 (forty) for the first Mylar sheet	$_____
$30.00 (thirty) for each additional Mylar sheet to be recorded	$_____
$25.00 (twenty five) to Hillsborough County Treasurer (plan recording)	$_____

Lot Line Adjustment Fee:

$50.00 (fifty) for the entire adjustment (not per lot)	$_____
$40.00 (forty) for the Mylar sheet	$_____
$25.00 (twenty five) to Hillsborough County Treasurer (plan recording)	$_____

Notification Fee:

Postage Cost plus $2.00 (two) per abutter	$_____

Discretionary Easement Applications:

$30.00 (thirty) application fee	$_____

Parcel Boundary Digitizing Fee:

$10.00 (ten) per lot (not applicable if digital file is provided)	$_____
Total Amount Due:	$_____

Other Fees:

Nashua Regional Planning Commission
Town Planner
Town Counsel Review
Site Inspections
Town Engineer
Road Inspector
Other Consulting
Off-Site Improvement Agreement, plat or legal document Recording

To be billed separately, based on time spent for reviews and inspections

(Fees amended 10/3/89, 11/19/91, 11/7/95, 8/21/97, 5/6/99, 5/17/01, 10/04/01, 11/15/07 and 06/18/09)

APPENDIX C: APPLICATIONS

BROOKLINE PLANNING BOARD

APPLICATION FOR PRELIMINARY CONCEPTUAL CONSULTATION PHASE

Case #_____ Date_____

Name _____

Address _____

Telephone _____ Fax _____

Email Address _____

I respectfully request a meeting with the Brookline Planning Board to discuss in general terms the Board's subdivision regulations and how they pertain to a potential subdivision I am considering. I understand that this discussion, by law, can only be conceptual in nature and that the proposal can only be discussed in general terms. Such consultation shall not bind either myself or the Planning Board, and statements made by Planning Board members shall not be the basis for disqualifying said members or invalidating any action taken.

I also understand that this meeting is informal in nature and is separate and apart from subdivision consideration, and that the time limits for Planning Board action provided in NH R.S.A. 676:4(I)(c) as amended, do not apply.

Signed _____

Date _____

APPENDIX C: APPLICATIONS

BROOKLINE PLANNING BOARD

APPLICATION FOR DESIGN REVIEW PHASE

Case #_____ Date _____

Name _____

Address _____

Telephone _____ Fax _____

Email Address _____

Name of Agent _____

Address of Agent _____

The names and addresses of abutters (as defined by NH R.S.A. 672:3) on three (3) sets of adhesive labels need to be attached with this application.

I respectfully request a meeting with the Brookline Planning Board to discuss a preliminary layout of the above proposed subdivision. I understand that the Planning Board must have this application on file fifteen (15) days prior to a regularly scheduled meeting of the Brookline Planning Board in order to provide adequate time to notify abutters as required by NH R.S.A. 676:4 (I)(d) and the Brookline subdivision regulations. Such consultation shall not bind either myself or the Planning Board, and statements made by Planning Board members shall not be the basis for disqualifying said members or invalidating any action taken.

I also understand that this meeting is informal in nature and is separate and apart from formal subdivision consideration, and that the time limits for Planning Board action provided in NH R.S.A. 676:4(I)(c) as amended, do not apply.

Signed _____

Date _____

APPENDIX C: APPLICATIONS

BROOKLINE PLANNING BOARD

APPLICATION FOR SUBDIVISION APPROVAL

File Number _____

Name and Address of Applicant _____

Name of Subdivision _____

Location _____ Tax Map Number _____ Parcel _____

Name and Address of Surveyor _____

Name and Addresses of all persons with 10% or more interest

_____

_____

Names and Addresses of abutters as defined by NH R.S.A. 672.3, as amended _____

_____

_____

Total Acreage _____ Number of Proposed Lots _____

The undersigned subdivider hereby submits to the Brookline Planning Board on _____,20___, a Completed Application as required by the Brookline Planning Board subdivision regulations and respectfully requests its approval of said Application. In consideration for approval and the privileges occurring thereto, the Applicant hereby agrees:

1. To carry out the improvements agreed upon and as shown and intended by said plat, including any work made necessary by unforeseen conditions which become apparent during construction.

2. To post all streets "Private" until accepted by the Town and to provide and install standard street signs as approved by the Town for all street intersections.

3. To give the Town on demand, proper deeds for land or rights-of-way reserved on the plat for streets, drainage or other purposes as agreed upon.

4. To save the Town harmless from any obligation it may incur, or repairs it may make, because of my failure to carry out any of the foregoing provisions.

5. To make no changes whatsoever in the Final Plat as approved by the Board unless a revised plat or a plat of re-subdivision is submitted to and approved by the Board.

6. To agree to pay for all engineering studies and reviews contracted for by the Town (5/9/89).

The undersigned subdivider understands that the Brookline Planning Board must have on file a Completed Application as outlined in its subdivision regulations thirty (30) days prior to a regularly scheduled meeting of the Board and that once the Board accepts the Completed Application at a regularly scheduled meeting, it has ninety (90) days to approve or disapprove the Completed Application subject to extension or waiver as provided in accordance with New Hampshire R.S.A. 676:4 (I)(f), as amended.

APPENDIX C: APPLICATIONS

BROOKLINE PLANNING BOARD

APPLICATION FOR SUBDIVISION APPROVAL

File Number _____

I do hereby designate: _____

Name _____

Address _____

Town_____ Zip Code _____

Phone Number _____ Fax_____

Email Address_____

as the person(s) to whom all communications to the Applicant may be addressed and the person to whom legal process may be served in connection with any proceedings arising out of this agreement.

Signed _____
(Applicant)

Date_____

FOR PLANNING BOARD USE ONLY:

Date completed application filed: _____

Date Fees paid: _____

Date of Notices to abutters: _____

Date completed application accepted/rejected: _____

Date of Public Hearing: _____

Date of Final Plat approval/disapproval: _____

APPENDIX D: SAMPLE FORM OF ACCEPTABLE LETTER OF CREDIT

(Today's date)

Board of Selectmen
Town of Brookline
C/o Town Hall
PO Box 360
Brookline, NH 03033

Re: Irrevocable Letter of Credit #: _____
Project: _____ Tax Map_____Lot_____
(Subdivision)
Developer(s) name: _____
Developer(s) address: _____
Bank: _____ Credit Amount: _____
Expiration Date:_____ Termination/Completion Date: _____

By this document the Bank establishes an Irrevocable Letter of Credit Number _____ in favor of the Town of Brookline at the request of the Developer(s) of the above Project. This Irrevocable Letter of Credit is issued to guarantee completion of all improvements required by the Brookline Planning Board and the Brookline subdivision regulations in conjunction with a plan entitled _____ _____, which was approved by the Brookline Planing Board on:_____.

Funds up to the Credit Amount shall be available at sight drawn on the Bank by draft executed by the Chairman of the Town of Brookline Planning Board which shall refer to the Developer as above, identify the Project as above, and make a demand for a specific sum. All draft must be marked "Drawn under the [bank name] Irrevocable Letter of Credit #_____, dated_____.

All drafts as provided for in this Irrevocable Letter of Credit must be received by the Bank not later than the expiration date, after which date all liability of the Bank shall cease. If all improvements guaranteed by this Irrevocable Letter of Credit are not completed by _____, and if a final road inspection has not been made by the road inspector for this project, then this Letter of Credit shall automatically be considered to be called without further action of the Brookline Planning Board. The Bank shall then forward a check to the Town in the amount of the Credit Amount to be used for completion of the guaranteed work. The funds forwarded to the Town of Brookline shall be used exclusively for the completion of work on this project. Any funds not used shall be returned to the Bank.

The Bank engages with the Town of Brookline that drafts drawn under and in compliance with the terms of this Irrevocable Letter of Credit will be duly honored by us up to the Credit Amount on delivery.

Except as otherwise expressly stated, this Irrevocable Letter of Credit is subject to the Uniform Customs and Practice for Documentary Credits of the International Chamber of Commerce.

BANK BY:_____ DATE:_____

I have read this letter of credit and agree to its terms.
_____ DATE:_____
(Signature of Developer)

APPENDIX E: CHECKLIST FOR SUBDIVISION REVIEW

BROOKLINE PLANNING BOARD

This checklist is to be used as a guide for complying with the Town of Brookline's subdivisions site plan review regulations. It is to be used for each individual subdivision site plan review application submitted.

The following information shall be required for a **completed application.** (Section 4.6.06 of the regulations) The information with an asterisk (*) next to it is also recommended for the design review phase. All references are to the current Brookline subdivision regulations.

Y	*N*	*NA*	
❑	❑	❑	Eight (8) copies prepared by a registered land surveyor.[4.6.05](*)
❑	❑	❑	Scale is not more than one hundred (100) feet per inch.[4.6.05](*)
❑	❑	❑	Parcel tax lot number and total acreage.[4.6.05a, 4.6.06f](*)
❑	❑	❑	Name of the subdivision.[4.6.05a](*)
❑	❑	❑	Name and address of the owner of record.[4.6.05a](*)
❑	❑	❑	Name and address of the subdivider and designer.[4.6.05a](*)
❑	❑	❑	Names and addresses of every engineer, architect, land surveyor, or soil scientist whose professional seal appears on any plat submitted to the Board.
❑	❑	❑	Boundaries of zoning districts lying within the subdivision and any municipal boundaries.[4.6.05g](*)
❑	❑	❑	Location or "locus" map at the scale of the municipal base map[4.6.05h](*)
❑	❑	❑	Date the plans were first drafted. Any revision(s) made to any of the sheets first submitted are to be so noted in the **Revision Block.** The Revision Block is to be placed on the Mylar original(s) of the revised sheet(s). Additional paper copies are to be made and submitted to the Planning Board to replace those sheets previously submitted.(*)
❑	❑	❑	Topography for site with the contour interval not to exceed five (5) feet.[4.6.05j, 4.6.06k](*)

Abutting Property Information

❑	❑	❑	The names and addresses of all abutting property owners (with three sets of labels) as indicated in the Town records not more than five (5) days before the date of filing.[4.6.05b](*)
❑	❑	❑	Name(s) and location(s) of abutting subdivisions.[4.6.05b](*)
❑	❑	❑	Name(s) and location(s) of abutting streets, easements, and alleys within one hundred (100) feet of the parcel to be subdivided.[4.6.05b,d,e](*)
❑	❑	❑	Name(s) and location(s) of abutting parks and open space.(*)
❑	❑	❑	Location of existing abutting buildings.[4.6.05b](*)

❑ ❑ ❑ Location of existing abutting water supply wells or springs.[4.6.05b](*)

❑ ❑ ❑ Location of existing abutting septic system leach field(s).[4.6.05b](*)

❑ ❑ ❑ Road and/or driveway intersection(s) within two hundred (200) feet of property lines.[4.6.05b](*)

❑ ❑ ❑ Fees paid to secretary.(*)

❑ ❑ ❑ Properly completed application form.(*)

Existing Property Information

❑ ❑ ❑ Location of property lines, dimensions and bearings and lot areas, and the source of that information.(*)

❑ ❑ ❑ Location and dimensions of all easements.[4.6.05e](*)

❑ ❑ ❑ Location and dimensions of all buildings.[4.6.05c](*)

❑ ❑ ❑ Location of all building setback lines.[4.6.05e](*)

❑ ❑ ❑ Location of electric or other utilities, both for existing and proposed subdivision property.[4.6.05f]

❑ ❑ ❑ High Intensity Soil Survey.[4.6.05k](9/7/93)

❑ ❑ ❑ Watershed areas and drainage computations.[4.6.05l](*)

❑ ❑ ❑ Location, name, and widths of streets with their grades, profiles, both existing and proposed. Design criteria for proposed roads also need to be shown.[4.6.05m](*)

❑ ❑ ❑ Location of fire ponds and fire protection drafting sites, if any.[4.6.05n](*) (11/15/07)

❑ ❑ ❑ Access for fire fighting apparatus.[4.6.05o](*)

❑ ❑ ❑ Wet areas as defined by the Wet Lands Ordinance, in square feet of wet and non-wet.[4.6.05p](*)

❑ ❑ ❑ A letter stating the proposed disposal of tree stumps. If they are to be disposed of on-site, areas shall be shown on the plat.[4.6.05q](*)

❑ ❑ ❑ Location of soil test pits and accompanying test pit and perc test data.[4.6.05r](*)

❑ ❑ ❑ Location of Special Flood Hazard Areas (SFHA) designated by the National Flood Insurance Program (NFIP), permits received from SFHA and NFIP. Subdivisions with any development within a SFHA shall submit evidence (construction drawings, grading and land treatment plans) so as to allow determination that (i) all such proposals are consistent with the need to minimize flood damage (ii) all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage and (iii) adequate drainage is provided so as to reduce exposure to flood hazards. [4.6.05s](*) (8/21/97) (11/15/07)

❑ ❑ ❑ Base Flood Elevation (BFE) data for subdivisions greater than fifty (50) lots or five (5) acres, whichever is lesser. [4.6.05s](*) (8/21/97)

- ❑ ❑ ❑ Location and size of the area considered necessary for septic leach fields and any proposed connections of alternative means for disposal of sewage. [4.6.05t](*)
- ❑ ❑ ❑ Number of lots to be created.[4.6.05u](*)
- ❑ ❑ ❑ Magnetic and true north point.[4.6.05v](*)
- ❑ ❑ ❑ Eight (8) blue print copies of the Final Plat.[4.6.06]
- ❑ ❑ ❑ One (1) permanent, reproducible mylar copy suitable for recording.[4.6.06]
- ❑ ❑ ❑ Name and seal of the engineer and land surveyor registered with the State of New Hampshire.[4.6.06b]
- ❑ ❑ ❑ Final disposition of land into lots, streets, open spaces, drainage courses and any easements running with the land.[4.6.06c]
- ❑ ❑ ❑ Sufficient, acceptable information to readily determine the location, bearing, and length of every street line, lot line, and property boundary line and to reproduce such lines on the ground. Dimensions shall be shown to hundredths of a foot and bearings to the nearest second. The error of closure shall not exceed 1 to 10,000.[4.6.06d]
- ❑ ❑ ❑ Stations, radii, curve data and paving widths for proposed streets. [4.6.06e]
- ❑ ❑ ❑ Lot dimensions, area in square feet and acres, street numbers for the lots as determined by the Brookline Building Inspector.[4.6.06f] (8/21/97)
- ❑ ❑ ❑ Location and engineering design calculations for culverts, drainage requirements and connection of alternative means to provide water supply and disposal of surface drainage.
- ❑ ❑ ❑ Location of all parcels of land to be dedicated to public use, the conditions of such dedication, and a copy of applicable deed restrictions.
- ❑ ❑ ❑ Proposed twenty-five (25) year storm drainage accompanied by a drainage analysis map and computations for the entire watershed area.[4.6.06m] (5/6/99)
- ❑ ❑ ❑ 75 foot well radii [4.6.06o] (11/19/91).
- ❑ ❑ ❑ If the subdivision abuts a State Highway, or if a proposed street intersects a State Highway, a driveway permit from the NH Department of Transportation approving said access.[4.6.06q] (8/21/97)
- ❑ ❑ ❑ Plan and profile for common driveways (Added August, 2003)
- ❑ ❑ ❑ Building Inspector review (Added June, 2003)
- ❑ ❑ ❑ Determination of off-site improvements by the Planning Board based on a special study or letter from the Road Agent. The Planning Board needs to send a letter to the Selectmen on recommendation prior to final action on the plan. (Added April, 2004)

- ❑ ❑ ❑ The Final plat shall contain a volume and page reference sufficient to indicate the subdivider's derivation of title in the event only one parent tract is involved, and if the subdivision constitutes an assemblage of several tracts, the plat shall contain a title reference of each and indicate where each of the lots shall be numbered so as to coincide with the Town of Brookline Tax Map numbers.[4.6.06r]

- ❑ ❑ ❑ New Hampshire Water Supply and Pollution Control Commission Subdivision Subsurface Sewage Disposal Approval (permit #_____ noted on the plat).[4.605s] (8/21/97)

- ❑ ❑ ❑ New Hampshire Water Supply and Pollution Control Commission Site Specific Approval (permit #_____ noted on the plat).[4.6.06s] (8/21/97)

- ❑ ❑ ❑ New Hampshire Wetlands Board Dredge and Fill Approval (permit #_____ noted on the plat).[4.6.06s] (8/21/97)

- ❑ ❑ ❑ Army Corp. of Engineers Dredge and Fill Approval (permit #_____ noted on the plat).[4.6.06s] (8/21/97)

- ❑ ❑ ❑ New Hampshire Department of Transportation Curb Cut Approval (permit #_____ noted on the plat).[4.6.06s] (8/21/97)

- ❑ ❑ ❑ School bus stops and areas shown on plans. The Brookline School Board should be contacted for assistance [4.6.06p] (9/7/93)

- ❑ ❑ ❑ Open Space determination made.

- ❑ ❑ ❑ All engineer prints shall be done by a qualified, registered engineer by the State of New Hampshire and have his seal affixed to each sheet.[4.6.06t]

- ❑ ❑ ❑ A statement of off-site improvements requested, based on a meeting with the Selectmen.[4.6.06u]

- ❑ ❑ ❑ Separate, permanent, reproducible sheets (24" x 36") with three (3) prints thereof, for each street or way within the subdivision. Plan view and profile of the street is to be at a horizontal scale of forty (40) feet per inch and at a vertical scale of four (4) feet per inch. Profile shall also show this size, elevation, and location of existing and proposed storm drains and shall extend on hundred (100) feet into adjacent land. The plan is to show street dimensions, bearings, curve lengths, center line stationing, proposed bound location, lot numbers, radii, curve data paving widths, and the location of all existing and proposed utilities.

- ❑ ❑ ❑ A check payable to the Town of Brookline to cover filing fees, mailing, advertising, recording, special investigative and consulting studies, and other costs.[4.6.06v]

- ❑ ❑ ❑ A traffic study, if required by the Board. [4.6.06w] (5/9/89)

- ❑ ❑ ❑ A fiscal impact analysis, if required by the Board [4.6.06x], (5/9/89).

- ❑ ❑ ❑ Payment of a fee to update the Town's computerized parcel map as specified in Appendix B. [4.6.06y] (8/21/97)

- ❑ ❑ ❑ Any other information felt necessary by the Planning Board to allow the Board to proceed with consideration and to make an informed decision.

APPENDIX F: DRAFTING BASIN SPECIFICATIONS

BROOKLINE FIRE DEPARTMENT

1. The pipe shall be either ductile iron or a galvanized corrugated metal pipe, minimum 18" in diameter, with bands at each coupling.

2. The pipe will be level from the pond to the basin with no bends in the pipe. Minimum pipe cover will be 5' to be well below the frost line.

3. The inlet pipe must be a minimum of 2' off the bottom of the water source.

4. There shall be a 2' sump below the invert of the basin pipe. The inlet pipe penetration into the draft basin shall be sealed to prevent silt infiltration.

5. The basin shall be a standard concrete manhole with a minimum 4' inside diameter and with minimum 5" reinforced concrete walls.

6. The basin will have a vertical wall from the bottom to the top at the steps location. Cast iron or aluminum steps shall be provided at maximum 12" on center, vertically, for the full height of the basin.

7. The base section will be a concrete structure having a solid bottom.

8. The top shall have a 24" diameter cast iron manhole cover and frame centered over the steps.

9. The lift of water shall not exceed 12' between the bottom of the pipe and the top of the manhole cover.

10. The manhole cover is to be flush with the ground level. A paved apron of asphalt, at least 2" thick, shall extend for 30' in front and 10' behind and to each side of the basin, and shall slope 1/4" per foot away from the cover.

11. The bollard shall be set 4' below ground level, in concrete and shall extend 3' above ground, 4' directly behind manhole cover. (6/15.00) (11/15/07)

12. A minimum of 12" of well compacted bank run gravel with a minimum 4" top course of crushed gravel is required for the access road to the fire pond and basin. (6/15.00)

13. The vehicle pad shall be paved and of sufficient length to permit convenient access to the basin when the pumper is set at 45 degrees to the road. (11/15/07)

14. The area adjacent to the fire pond needs to have a place for a second fire truck to pump directly out of the pond.

15. All construction, backfill and grading materials to be in accordance with proper construction practices and acceptable to the fire department.

16. The basin shall be situated for year round all weather access and away from traffic. The location is to be approved by the Planning Board with input from the Fire Engineers and the Town Engineer during the Subdivision or Site Plan Review Process.(6/15/00)

17. The contractor/developer shall provide a drawing of the location, design and elevation to the fire department for approval prior to the start of any construction

18. All permits and approvals are to be accomplished by the contractor/developer at their expense, prior to the start of any construction.

19. The basin must be tested by the fire department before final acceptance.

20. The contractor/developer shall notify the fire department at least two (2) business days before construction of the fire pond or basin. (11/15/07)

21. The 50,000 gallon water source shall be completed and operational before any occupancy permits will be issued pursuant to final inspection by Fire Engineer and Town Engineer. (6/15.00)

22. The contractor/developer is responsible for maintaining access to the pond and basin until acceptance of the road by the Town. Snowplowing shall be done at the same time the road is cleared.

APPENDIX G: CISTERN SPECIFICATIONS

BROOKLINE FIRE DEPARTMENT

1. The Brookline Fire Department expects the design of a cistern to be trouble free and last a lifetime.

2. The minimum cistern capacity is to be 30,000 gallons.

3. The suction piping system is to be capable of delivering a minimum of 1,000 gallons per minute for three quarters of the cistern capacity. (Velocity and friction losses plus static head may not exceed 16 feet.)

4. The design of the cistern is to be submitted to the Planning Board for approval prior to construction. All plans must be signed and stamped by a professional structural engineer registered in the State of New Hampshire. (6/15.00)

5. The entire cistern is to be rated for H-20 highway loading.

6. The attached drawings are only a guide and are not to be used as the design.

7. Each cistern must be sited to the particular location by a registered professional engineer and approved by the Planning Board. (6/15.00)

8. Cast-in-place concrete is to achieve a minimum twenty-eight (28) day strength of 3,000 psi. It must be vibrated in place.

9. The concrete is to be mixed, placed, and cured without the use of calcium chloride. Winter placement and curing must follow the accepted ACI codes.

10. All suction and fill pipe is to be ASTM Schedule 40 galvanized steel. All vent piping is to be ASTM Schedule 40 PVC with glued joints.

11. All PVC piping is to have glued joints.

12. The final suction connection is to be 5" National Hose male thread. It must be capped with a hydrant cap with a safety chain. The safety chain shall be connected to the pipe so that the cap is not lost. (6.15.00) (11/15/07)

13. The filler pipe is to have a 4 inch Stortz Coupling with a 90 degree elbow, cap and chain. The chain shall be connected to the pipe to prevent the cap from being lost. (11/15/07)

14. <u>The entire cistern is to be completed and inspected by a town engineer before any backfilling is done.</u> The tank may then be backfilled but not covered for a four week leak test. (11/15/07)

15. The completed cistern shall be guaranteed for 1 year from the date of acceptance by the town. This guarantee includes watertightness of the tank and all appurtenances associated with the operation of the cistern. The completed cistern will be inspected for compliance by the road inspector prior to the release of the maintenance bond, and a report to that effect will be submitted to the Town.

16. All backfill material shall be screened gravel with no stones larger than 1-1/2 inches and shall be compacted to 95% of maximum, ASTM 1557.

17. Bedding for the cistern shall be a minimum of 12 inches of 3/4 to 1-1/2 inch crushed, washed stone, compacted. No other fill shall be allowed under this stone.

18. The filler and vent pipes are to be 36 inches above finish grade. (11/15/07)

19. The suction pipe connection is to be 20 - 24 inches above the level of the fire truck wheels when the cistern is in use.

20. Pipe bollards or minimum 1 cubic yard boulders are to be placed 2 feet off each side and 12 inches in front of the suction pipe for the protection of the pipe. Bollards shall be set in concrete 4 feet below ground level and shall extend 10 inches above the suction pipe.(11/15/07)

21. Suction pipe is to be supported by the top of the tank.

22. The cistern must be designed so that it will not float when empty. (6/15.00)

23. The perimeter of the tank at floor/wall joint, if not monolithic, is to be sealed a water stop. (6/15.00)

24. Backfill over tank shall be:

    a) 4 feet of fill; or
    b) the top and highest 2 feet of the sides of the cistern shall be insulated with a vermin resistant foam insulation, minimum 2" thick, and 2 feet of fill.

25. All backfill shall extend 10 feet beyond the edge of the cistern, then maximum 3:1 slope, loamed and seeded.

26. After backfilling, the tank is to be protected by fencing or large stones.

27. The bottom of suction pipe to pumper connection vertical distance must not exceed 14 feet.

28. Pitch of shoulder and vehicle pad from edge of pavement to pumper connection must be 1 - 6% downgrade.

29. Shoulder and vehicle pad must be of sufficient length to permit convenient access to suction connection when pumper is set at 45 degrees to road.

30. All construction, backfill, and grading materials are to be in accordance with proper construction practices and acceptable to the Planning Board in accordance with the approved design. (6/15.00

31. All horizontal suction piping must slope slightly uphill (1 - 3%) towards the pumper connection.

32. Installer is responsible for completely filling cistern until accepted by the Fire Department. This includes refilling after each flow test until acceptance.

33. Two (2) "No Parking – Fire Lane" signs must be installed. The placement of these signs will be one at either side of the cistern easement. (11/15/07)

APPENDIX H: RESIDENTIAL SPRINKLER SYSTEM REQUIREMENTS

BROOKLINE FIRE DEPARTMENT

1. Requirements for approval to install:

A. Submit drawings showing pipe sizes, lengths, and type of pipe used.
B. Submit a cut sheet and performance graph for the pump.
C. Submit sprinkler head cut sheets.
D. Submit pressure switch cut sheets.
E. Documentation of type and concentration of antifreeze solution used.
F. Submit 1 and 2 sprinkler head operating calculations.
G. Submit details of the tank size.
H. Provide a description of the tank type.

2. Additional requirements for inspection approval:

A. An attached garage shall be sprinkled.
B. The attic shall be sprinkled if utilities are present.
C. The pump shall have 10 PSI between off and on.
D. Closets shall NOT have sidewall heads.
E. Sprinkler heads shall be located from all heat sources per table 3-5,2.3 of NFPA 13-D.
F. The Tank shall have a level indicator.
G. A manual fill line shall be provided.
H. A vent for the tank shall be provided.
I. All sprinkler control valves should be locked-open.
J. A lock to the pump circuit breakers shall be installed.
K. A lock shall be provided to any pump power switches.
L. All wiring from the pump to the electric breaker panel shall be in metal conduit.
M. All bathrooms shall be sprinkled.

3. Inspections:

A. Pipe rough in. (if additional fittings or major changes are made from the approved Drawings, a new calculation sheet shall be required.)
B. Final Inspection and function test.

The Fire Department must be notified at least five (5) working days in advance for approvals and inspections. (11/15/07)

APPENDIX I: IMPACT FEE SCHEDULE

The Planning Board may modify the following fee schedules from time to time, after public hearing, when data becomes available indicating that the variables used in the impact fee schedule calculations have changed or are no longer in effect.

A. Impact Fee Schedule – Captain Samuel Douglas Academy

*Article I, March 6, 1999 Brookline School District Annual Meeting

I. **Variables**. Variables may be re-assessed by the Planning Board on an annual basis, or periodically as better information becomes available, after public hearing. The following is a residential impact fee.

1.	Total Project Cost (principal and interest)	$8,793,563.98
2.	Principal only	$5,367,912.00
3.	State of NH reimbursement for capital projects (30% of principal)	$1,610,373.60
4.	Net Debt (# 1 - # 3)	$7,183.190.30
5.	Current Enrollment (2003-2004)	198
6.	Total Capacity	300
7.	Future demand capacity (#6 - #5)	102
8.	Cost per student (based on total students: #4 / #6)	$23,943.97
9.	**Total Impact Future Demand** (#8 x #7)	$2,442,284.94
10.	CSDA students per housing unit	.12
11.	Impact Fee per Housing Unit (#10 x #8)	**$2,873.28**

II. Credits. Credits are estimated in order to factor out the amount in taxes a unit subject to an impact fee is likely to pay for the portion of project cost that is likely to be financed through impact fees. The Planning Board may adjust the calculation of credits on an annual basis if changes are made to the variables located above in section I.

1.	Total assessed valuation of Brookline, 2003:	$406,476,988
2.	Total residential buildings and land, 2003:	$386,508,200
3.	Average residential assessment (#2 / 1,478 housing units)	$261,507.58
4.	Total impact future demand (#9 above / total assessed valuation)	.0060
5.	Credit per Housing Unit (#4 x #3)	$1,569.04

III. Calculation of Fee. The Planning Board may adjust the calculation of credits on an annual basis if changes are made to the variables located above in section I and resulting changes to section II.

1.	Impact Fee per Housing Unit	$2,873.28
2.	Credit per Housing Unit	$1,569.04
3.	***Net Fee per Housing Unit (****Includes all new housing units)*	**$1,304.24**

IV. Number of Permits to be Issued. When the impact fee is established, a tally of the number of impact fees that have been paid shall be recorded. The impact fee will automatically be terminated when the total number of permits issued, as herein described, has been reached. The Planning Board may adjust the total number of permits to be issued on an annual basis or when better information becomes available, if changes are made to the variables located in section I.

1.	Average number of units built in Town each year:	40
2.	Number of housing units to be assessed impact fee: 102 future students / .12 CSDA students per unit =	850
3.	Subtract out the number of building permits that have been issued since the school became operational in 1998-1999: 850 – 223 =	**627**
4.	The total amount to be collected through impact fees: 627 units x $1,304.24 =	**$817,758.48**
5.	The CSDA impact fee will sunset when **627** building permits have been issued.	

V. Other exemptions. In addition to the types of development excluded from a residential impact fee in the zoning ordinance, the following conditions and circumstances shall be precluded from the payment of a CSDA impact fee and shall not be included in the number of permits to be issued:

Elderly housing units developed under the Housing for Older Persons section of the Brookline Zoning Ordinance.

This impact fee shall become effective on January 1, 2004.

B. Impact Fee Schedule – New Ambulance Facility

* Article 3, March 13, 2003 (Continuation) Brookline Town Meeting

I. **Variables**. Variables may be re-assessed by the Planning Board on an annual basis, or periodically as better information becomes available, after public hearing. The following is a residential impact fee.

Assumptions:

- The current ambulance facility is 3,011 sq.ft., the new facility will be 5,426.5 sq.ft.
- It is assumed that this increase in space will accommodate the Town's population through the life of the bond (*20 year bond*) Since the number of housing units in 20 years is estimated at 2,358 (1,478 in 2003 plus 880 (20 years x 44 units per year), and since the size of the planned facility is 5,426.5 sq.ft., it can be assumed that the amount of ambulance space needed per housing units is 2.30 sq.ft. (facility sq.ft. / future number of housing units).

1.	Total amount of ambulance space needed to accommodate the current number of housing units (1,478 units x 2.30 sq.ft.) =	3,399.40 sq.ft.
2.	Amount of the new facility to accommodate new growth: 3,399.40 sq.ft. / 5,426.5 sq.ft. = .626 1.00 (entire demand) - .626 (proportion existing demand) = .37.4 or	37.4%
3.	Total project cost:	$1,392,500.00
4.	Project cost attributable to new development (#3 x #2)	$520,795.00
5.	Approx. 85.7% of all ambulance calls are attributable to residences. Therefore the **total impact future demand** = #4 x 85.7% =	$446,321.32
6.	Impact fee per unit (#5 / 880 future units) =	**$507.18**

II. Credits. Credits are estimated in order to factor out the amount in taxes a unit subject to an impact fee is likely to pay for the portion of project cost that is likely to be financed through impact fees. The Planning Board may adjust the calculation of credits on an annual basis if changes are made to the variables located above in section I.

1.	Total assessed valuation of Brookline, 2003:	$406,476,988
2.	Total residential buildings and land, 2003:	$386,508,200
3.	Average residential assessment (#2 / 1,478 housing units)	$261,507.58
4.	Total impact future demand (#5 above / total assessed valuation)	.00109
5.	Credit per Housing Unit (#4 x #3)	**$ 285.04**

III. Calculation of Fee. The Planning Board may adjust the calculation of credits on an annual basis if changes are made to the variables located above in section I and resulting changes to section II.

1.	Impact Fee per Housing Unit	$507.18
2.	Credit per Housing Unit	$285.04
3.	***Net Fee per Housing Unit*** *(Includes all new housing units)*	**$222.14**

IV. Number of Permits to be Issued. When the impact fee is established, a tally of the number of impact fees that have been paid shall be recorded. The impact fee will automatically be terminated when the total number of permits issued, as herein described, has been reached. The Planning Board may adjust the total number of permits to be issued on an annual basis or when better information becomes available, if changes are made to the variables located in section I.

1.	Impact Fee per housing unit	$222.14
2.	Life of the bond	20 years
3.	880 new housing units to be built over the life of the facility and to be charged ambulance impact fee.	
4.	The total amount to be collected through impact fees: 880 units x $222.14 =	**$195,483.20**
5.	The ambulance facility impact fee will sunset when **880** building permits have been issued from 2/01/04.	

V. Other exemptions. In addition to the types of development excluded from a residential impact fee in the zoning ordinance, the following conditions and circumstances shall be precluded from the payment of an ambulance facility impact fee and shall not be included in the number of permits to be issued:

Commercial and Industrial.

This impact fee shall become effective on January 1, 2004.

C. Residential Impact Fee Schedule - H/B Cooperative Middle School Renovation/Expansion* (Brookline Portion)

* Article 4, March 3-4, 2004 Hollis Brookline Cooperative School District Annual Meeting

I. VARIABLES: Annual or periodic review is necessary by the Planning Board as updated or better information becomes available. A public hearing is required to amend this fee schedule. A change in methodology requires a zoning amendment at Town meeting.

1	Total Project Cost (Gross Debt) (Principal and Interest)	$12,349,166.09
2	Project Cost (Principal Only)	$7,900,000.00
3	State of NH reimbursement for capital projects (40% of principal)	$3,160,000.00
4	Net Project Cost (Net Debt) (#1 - #3)	$9,189,166.09
5	Brookline's share of Net Debt is 36%	$3,308,099.79
6	Current Brookline Enrollment - grades 7 & 8 (2004-2005)	182
7	Total HBMS (classroom) Capacity (Brookline and Hollis)	550
8	Brookline average proportion of students at HBMS (38.7%)	0.387
9	Brookline's future total capacity (38.7% of 550) - Per apportionment	213
10	Brookline's future demand capacity (#9 - #6)	31
11	Cost per student (Brookline) (#5 / #9)	$15,530.98
12	Total Impact Future Demand (Brookline) (#10 x #11)	$481,460.53
13	HBMS students per housing unit (Brookline)	0.139
14	**IMPACT FEE per HOUSING UNIT** (#13 x #11)	**$2,155.11**

II. CREDITS: A credit provided for estimated taxes likely to be paid per housing unit (Brookline) for the portion of the HBMS expansion likely to be paid for by Impact Fees. The Planning Board may adjust the calculation of credits on an annual basis or periodically concurrent with changes made to the variables located above in Section I.

1	Total assessed valuation of Brookline (2004)	$414,965,696.00
2	Total assessed value of residential buildings and land (2004)	$412,302,729.00
3	Average residential assessment (#2 / 1,535 housing units) *Source: 12/18/03 Growth Mgmt. Building Inspectors Report through 2004*	$268,601.13
4	TOTAL IMPACT FUTURE DEMAND (#12 (sec. I) / #1 (sec. II))	0.0012
5	**CREDIT per HOUSING UNIT** (#4 x #3)	**$311.64**

III. CALCULATION of FEE: The Planning Board may adjust the calculation of the Net Impact Fee on an annual basis or periodically concurrent with changes made to variables located in Section I and Section II above.

1	Impact Fee per Housing Unit	$2,155.11
2	Credit per Housing Unit	$311.64
3	**NET IMPACT FEE** per Housing Unit *(Includes all new housing units)*	**$1,843.47**

IV. NUMBER of PERMITS to be ISSUED: As of the effective date noted below, there shall be a record kept of all building permits issued for new housing units assessed an impact fee under the Hollis Brookline Cooperative Middle School Renovation. The impact fee shall automatically expire when the number of housing units to be assessed an impact fee in Section IV, 5 has been reached. The Planning Board may adjust the total number of permits on an annual basis or periodically as better information becomes available concurrent with changes made to the variables located above in Section I.

1	Average number of housing units built in Town each year (1994-2004) *Source: Building Inspectors Report*	44
2	Number of housing units to be assessed impact fee: 31 future students/.139 HBMS students per housing unit (Sec. I. #10/Sec. I. #13) =	223
3	Deduct the number of building permits issued for housing units since the renovation/expansion was completed.	0
4	The total amount to be collected through the HBMS impact fee: housing units(#2 - #3) x $1,843.47 (Sec. III. #3) =	$411,838.48
5	The HBMS impact fee will sunset when 223 building permits for housing units have been issued. (#2 - #3)	**223**

V. OTHER EXEMPTIONS: In addition to the types of development excluded from a residential impact fee, the following shall be exempt from payment of the Hollis Brookline Cooperative Middle School Renovation impact fee and shall not be included in the number of housing units to be assessed an impact fee in Section IV, 5.

1	Elderly housing units under Brookline's Housing for Older Persons zoning ordinance	

This Impact Fee shall becomes effective on: <u>August 4, 2005</u>

#210I-26-1