TOWN BOARD
JANUARY 9, 1991

A public hearing of the Town Board of the Town of Bethlehem was held on the above date at the Town Hall, 445 Delaware Avenue, Delmar, NY. The meeting was called to order by the Supervisor at 7:30 p.m.

PRESENT: Kenneth J. Ringler, Supervisor
Frederick C. Webster, Councilman
Robert J. Burns, Councilman
M. Sheila Galvin, Councilwoman
Charles Gunner, Councilman
Bernard Kaplowitz, Esq., Town Attorney
David Austin, Administrator, Parks & Recreation Dept.
Phil Maher, Comptroller
Bruce Secor, Commissioner of Public Works
Jim Fraser, Fraser Associates
George Kaufman
Kelly Robinson
Kiva Block
Mike Fahey
Laurie Dudzik
Mary Bilicic
Ed Hale
Erin Rodat
Donald Stahlman
Joan Stahlman
Elayne Cross, Progress Club Representative
Brett Smith
Jessica Backer
Joe Robbins
Emily Mineau
Adrianne Wright
Brian Farrell
Chris Cerezin
Kathy Keenan - News Herald Representative
Mike Larabee - The Spotlight Representative
Kathleen A. Newkirk, Deputy Town Clerk

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Public Hearing Wastewater Treatment Plant Modifications

Supervisor Ringler called the meeting to order and stated the first item on the agenda is a public hearing. He welcomed the students from Bethlehem Central participation in government class. The public hearing, according to Supervisor Ringler, regards modifications to the Wastewater Treatment Plant.

Supervisor Ringler asked the Deputy Town Clerk to read the call of the hearing.

NOTICE OF PUBLIC HEARING

Notice is hereby given that the Town Board of the Town of Bethlehem in the Town of Bethlehem in the County of Albany, State of New York will meet at Bethlehem Town Hall, 445 Delaware Avenue, Delmar, New York, on the 9th day of January, 1991, at 7:30 p.m. and will hold a public hearing for the purpose of considering a certain Wastewater Treatment Plant modification proposal which includes, among other things, refurbishment and modifications to the Wastewater Treatment Facility located in the Cedar Hill area on the west bank of the Hudson River, Town of Bethlehem, all of said improvements being located within the Bethlehem Sewer District, and that the Town Board will at said time and place hear all persons interested in the subject of such hearing and will receive all evidence offered which will enable the Town Board to determine, pursuant to the provisions of the Town Law of the State of New York, whether it is in the public interest to make the modifications and improvements as described in said map, plan and report, either in whole or in part.

Said map, plan and report, entitled "Wastewater Treatment Plant Modification Study", dated June 1990, submitted by J. Kenneth Fraser and Associates, P.C., competent engineers duly licensed by the State of New York, are now on file in the office of the Town Clerk of the Town of Bethlehem. The improvements described in said plan and report

consist of, among other things, providing power factor correction capacitors, providing another means of sludge thickening, providing separate pump controls for both return and waste activated sludge pumps, providing a third return sludge pump and waste sludge pump, replacing the sludge storage tank mixing system, providing a new additional final clarifier tank unit, refurbishing the dissolved air flotation thickener and associated equipment, refurbishing the bar screen, construction of a new grit removal and grit loading system and enclosure of the new sludge tank, bar screen, grit removal and grit loading facilities in a new plant headworks building.

The estimated cost of making such improvements if Three Million One Hundred Thousand Dollars ($3,100,000.00).

Dated: December 12, 1990
Carolyn M. Lyons
Town Clerk, Town of Bethlehem

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STATE OF NEW YORK)
COUNTY OF ALBANY)

KATHRYN OLSEN of the Town of Bethlehem, being duly sworn, says that she is the bookkeeper of THE SPOTLIGHT, a weekly newspaper published in the Town of Bethlehem, County of Albany, and that the notice of which the annexed is a true copy, has been regularly published in said THE SPOTLIGHT once a week for one week consecutively, commencing on the 26th day of December 1990.

/s/ Kathryn Olsen

Sworn to before me this 4th
day of January, 1991.
/s/ Bruce A. Neyerlin
Notary Public, Albany County

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STATE OF NEW YORK)
COUNTY OF ALBANY) ss.:

CAROLYN M. LYONS, being duly sworn, deposes and says that she is the Town Clerk of the Town of Bethlehem, Albany County, New York and that I posted on December 26, 1990, a Notice of Public Hearing, a copy of which is hereto attached, on the sign board of the Town maintained pursuant to subdivision six of Section thirty of the Town Law.

/s/ Carolyn M. Lyons

Sworn to before me this
7th day of January, 1991.
/s/ Kathleen A. Newkirk
Notary Public, Albany County

The motion was made by Ms. Galvin and seconded by Mr. Webster that the Notice of Hearing, Affidavit of Publication and Affidavit of Posting Notice be indented on the minutes of the public hearing. The motion was passed by the following vote:

Ayes: Mr.Ringler, Mr.Webster, Mr.Burns, Ms.Galvin, Mr.Gunner.
Noes: None.

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Supervisor Ringler explained that before this is open to comment, he was going to ask the Consultant and the Commissioner of Public Works to give an overview of the project, explaining it in English, just exactly what is being proposed. He said when they have finished, if anyone has any questions, the questions will be entertained. He said after this, anyone wishing to speak in favor or opposition may do so. Supervisor Ringler requested anyone wishing to speak, get up and state their name for the record. He turned the floor over to Mr. Secor.

Mr. Secor said to get started, in the early 1970s the Town began with a wastewater facility plan which looked at the entire Town of Bethlehem to provide sanitary sewers to the Town. The outcome, according to Mr. Secor, was the construction of the Town's wastewater treatment plant which is located in Cedar Hill as shown in the exhibited picture. He said the plant has been in operation since 1974 and has been basically, in continuous operation from that point. He said what is being talked about at this time, are some major maintenance improvements to this and the addition of another clarifier to allow for bypass flows when they are providing major maintenance to some of these facilities which are approaching an age, 16 or 17 years old when it is anticipated that they should be taken down, bearings replaced and major repair work be done. Mr. Secor said we are at a flow not at the plant -- and Mr. Fraser will get into this in more detail -- about capacities of the plant itself. He said basically, the plant was set up with the design of 4.9 MGD. He said we have been treating on the average of around 3 to 4 MGD, somewhere in that range. He further said last year it was about 3.6 MGD that was treated on a yearly average to the plant.

But, he said, the situation is that half of the plant, if half the plant is taken out of service to work on it for major repairs, there is really no ability in the clarifiers to bypass the entire base flow through the remaining clarifier. He said that is why this report is recommending another clarifier to allow major maintenance on the other two clarifiers that are now located at the site. Basically, the flows are not at a point where justification can be made to double the plant size to its ultimate capacity which is 9 MGD per day, according to Mr. Secor. The plant was designed in modular form, Mr. Secor stated, so that it could be easily expanded to accommodate the entire Town, again since the wastewater treatment facility plan looked on a town-wide basis. At some point in the future, Mr. Secor said there might be additional aeration chambers, there was allowance for primary settling but we are not getting into any of that at this time. He said this only to do major maintenance and one additional clarifier to allow for bypass flows while the work is being done in this area. Mr. Secor asked Mr. Fraser to present the details of the report which his firm has done and then he will talk a little bit about the tax implications before closing.

Mr. Jim Fraser, J. Kenneth Fraser and Associates P.C., said some, if not all of what he had to say is going to sound very similar to what Mr. Secor had just stated, except he told everyone in a lot fewer words than he had planned to. He said he wanted to emphasize a couple of the things Mr. Secor said. Mr. Fraser said when the plant was built back in the early 1970s, it was built during 1972 and 1973 and placed into operation in 1974, it was part of a comprehensive plan to bring sewage treatment to the entire Town of Bethlehem someday. He said at that point in time, the only portion of the Town that had sewage treatment available to it was the original Delmar-Elsmere area. The treatment plant was located down on Rockefeller Road, according to Mr. Fraser, near the Normanskill bridge. He said part of the project that was done -- and this was about a 10 million dollar project done in the early 70s -- abandoned that plant, built a major pump station at that point and put in major trunk sewers and interceptor sewer and other collection facilities for additional areas of the Town. The main feature, according to Mr. Fraser, being an interceptor sewer that ran down the Vlomankill and the Dowerskill valleys, a total distance of some 10 or 11 miles to the plant location in Cedar Hill, at the point where the Vlomankill empties into the Hudson River. At that point in time, this was a very large step according to Mr. Fraser, because to build a plant in Cedar Hill where there were really no needs for sewage treatment at the time, was a rather bold step. It was, Mr. Fraser said, a plan to put the plant in a location where it would have to be to ultimately serve the needs of the entire Town. He said this is why the plant is located in Cedar Hill. He said, as Mr. Secor said, the plant was designed in a modular form so that by providing piping that was large enough for the ultimate flows and space for adding units in the future, the plant capacity could ultimately grow to 9 million gallons per day, average flow, if and when it is ever required. Mr. Fraser said Mr. Secor also told that the capacity of the plant is 4.9 MGD. The original design, Mr. Fraser stated, allowed it to be operated in two different modes, a conventional mode with enough units in place at this point in time to

provide 3 million gallon per day capacity but also to be operated on a contact stabilization mode -- that is another method of treatment -- but it is activated sludge, which would allow capacity to be stretched to 4.9 MGD.

Mr. Fraser said in the some 17 years the plant has been operating, it has not reached its hydraulic capacity or its biological capacity and it has continued to meet its permit requirements throughout this entire period of time. Mr. Fraser, using the aerial photograph which shows most of the plant, at least all of the treatment units that are there now, gave a run through so the Board could understand what each of the units is and what they do and what the flow through the plant is. The interceptor sewer that conveys all of the sewage to the plant comes down the Vlomankill valley which is back in the trees, the interceptor sewer enters the plant and the preliminary treatment units are located there, he said. The first unit is a mechanically cleaned bar screen which removes from the flow things such as dish towels, foreign objects that may have gotten into the flow, 2 x 4s or anything that has gotten into the flow that should not have gotten into the plant and will cause a problem if it gets into the plant, he described. Following this, Mr. Fraser said there are two parallel grit chambers that are simply long channels where the velocity of the flow is controlled at about 1 foot per second, which is a velocity that will allow grit to settle out but suspended solids not to settle out. He said those solids settle to the bottom of the chambers, they are scraped with mechanical scrapers and that material that is collected is stored temporarily and removed and taken to landfill periodically either once a day or every several days.

Following these grit chambers, there is a measuring devise that measures continuously, according to Mr. Fraser, the amount of flow that is coming into the plant. It is a par shelf measuring plume and also at the effluent of the plant there is a measuring device so that the effluent can be compared with the influent to the plant, he said. He further said when this plant was designed it was designed without what they call preliminary clarifiers or primary clarification. He said there is a large area here that was reserved for primary clarifiers if in the future they might be required. The plant is operated just fine the way it was designed, according to Mr. Fraser. He said those units have never been required and therefore, that is a nice lawn area. The sewage comes down the channel and goes underground into a conduit and comes through this area, to this point which is a junction point and some open channels. He said it then goes down and around and enters what is called an aeration tank. This aeration tank is divided into two halves, each of the six units are called bridges and they support a mechanical aerator. He said the mechanical aerator is simply a devise that sits down in the liquid and acts like a large pump, propeller if you wish. It causes the contents of the tank to rise and roll and be agitated, he said, and as it does this, air is added to the liquid providing the oxygen for the process that is going on in there called aerobic digestion of the organic material. This is performed by bacteria in the presence of food, organic material and oxygen, according to Mr. Fraser. He said from the aeration tank, the flow comes into a channel and goes on down and goes underground to a center splitter box and is divided equally and is fed into each of two clarifiers. These are circular tanks that are approximately 10 to 12 feet deep, 75 feet in diameter, he said. Each one of these theoretically has the capacity to handle a flow of 3 million gallons per day, he further stated. He said the two of them together theoretically have a capacity of 6 million gallons per day and a third one would be required to provide 9 million gallons a day. He indicated where space is reserved for two more aeration tanks in the future, if and when they are needed. He said right now this aeration tank has sufficient capacity to handle the present flows and loadings and is expected to do so for some reasonable period of time into the future, at least a matter of several years or more.

Mr. Fraser said after clarification, the liquid overflows these tanks into a chamber that is chlorinated, chlorine is added and it flows into a 48 inch diameter sewer that goes down to the river and goes out under the river and the effluent is defused into the river flow. He said solids that settle out in the final clarifiers providing the clear effluent that goes to the river -- two things happens to it. Part of it is pumped back into the aeration tank and is used to supply

food to keep the biological process going, he said. A portion of it is pumped into the sludge treatment process which is housed in the administration building, according to Mr. Fraser. He said the sludge treatment process consists of a flotation thickener which is simply a devise that takes a very watery liquid that may be only 1 or 2 percent solids and thickens it to the extent of 4, 5, or 6 percent solids. He said this is then stored in the sludge holding tank, indicating its location on the aerial photo. It has a mixing system in it to keep the sludge aerated and from going septic until it can be further treated, he explained. Originally, the thickened sludge was de-watered with a vacuum filter to bring it to about 20 percent solids, which is a relatively dry cake and it was land-filled in the old Bethlehem landfill in South Bethlehem, he said. Mr. Fraser said this landfill closed, as everyone knew, so the sludge is no longer de-watered on site here, it is loaded into tank trucks owned by the Sewer District and hauled up to the City of Albany treatment plant, where it is added to their sludge and ultimately it is incinerated and destroyed in that way.

Mr. Fraser said the report that is dated June 1990 was the one exhibited and contained a lot of information, however, he will be talking about actually a very little bit of it. He said the present flow reaching the plant is approximately 3.6 MGD, there are many months of the year where it exceeds that and there are some months when it is less than that but this is the average over the course of a year. The older portions of the Bethlehem Sewer District system, Delmar and Elsmere areas, have what is called an infiltration inflow problem in that the sewers are old, they have some leaky joints, there are connections to the sewer that allow rain water to get in during periods of precipitation and as a result, Mr. Fraser explained, there are wet periods of the year when flows that come to the plant are considerably higher, particularly after a rain fall event. He said there is a possibility of a very high flow here, sometimes on the order of as much as 8 or 10 million gallons per day in terms of the rate. He said the plant can handle that as long as all of the units that are here are in service. It can handle it with some difficulty, the plant personnel have to do some special things. If they realize that this event is coming, Mr. Fraser explained, they can do a number of things that prevent upsetting of the process and prevent spilling of solids into the river which would contravene the permit requirements of the Sewer District. He said, incidentally, the permit requirement for this plant is simply that the solids and the biochemical oxygen demand of the incoming sewage has to be reduced during the treatment process by 75 percent or the effluent has to have no more than 30 parts per million of suspended solids and biochemical oxygen demand, whichever is the least. He said this plant has always far exceeded the 30 milligram per liter of part perlinium requirement and has always met the 75 percent removal requirement.

Mr. Fraser said the report contains, as he has said, a lot of information. He said it goes into a lot of detail about the existing conditions at the plant. He said there is a whole section that contains flow data and biological data concerning influent characteristics, effluent characteristics and removal efficiencies. He said there are also graphs and charts that analyze this, there are population predictions, there are load predictions to show what will be required in the future in the way of flow and loadings to be treated at this plant. He said the period of time that was looked at in this study, was approximately 20 years. He said we are talking about recommendations for things that need to be done now or will need to be done in order to make this plant capable of handling treatment requirements until approximately the year 2010. Mr. Fraser said there are a couple of sections, one of which he would specifically refer everyone to and of course, this report in its entirety is a part of the record of the hearing, but the identification of needs is on pages 2-4 through 2-6 of the report and recommendations with respect to those needs are on pages 4-1 through 4-5. There are drawings and diagrams, he said, which show the existing conditions and the proposed facilities recommended by this report.

Mr. Fraser said he would like to get into the particular recommendations of the report at this time. He said the recommended improvements or facilities fall into two basic categories -- one category is items that require modification due to wear and tear and

for improved maintenance. He said this plant has been operating, as stated by Mr. Secor, for almost 17 years day-in day-out, 24 hours a day and there are a lot of items that have never been replaced. He said these items are nearing the end of their useful life and will have to be replaced or refurbished. There are also some modifications which will be needed to be able to continue to meet the discharge permit requirements for the plant, according to Mr. Fraser. He further stated there is a third category of improvement and that is those that will be needed to meet increased flow requirements in the future. He said he will address all three of these. He said the first two categories, however, are the recommendations for improvements at this time. They fall under these categories -- sludge handling facilities -- the flotation thickener which is located on the side of the building, hidden from view on the photograph, it is a long narrow room that has the flotation thickener in it and is a very damp environment. He said it had a flat roof on it and there is now a pitched roof on it that was put on by the Town over the flat roof. He said what is needed there is to refurbish the flotation thickener, in other words renew the mechanisms in it to provide new equipment where necessary, the ability to use additional chemicals which will enhance the life and the ability of the capacity of the shop and to fix some of the environmental effects of that damp environment. He said in other words, the ceiling joists and the old flat roof have rusted badly and need to be removed. Ventilation equipment has to be placed in the room, according to Mr. Fraser, to provide a better environment in the future. He said also in connection with the sludge handling facilities, some new waste sludge pumps are going to be required and the ability to de-water sludge beyond the flotation thickener is going to be provided in the form of a gravity section of a belt filter press. He explained the belt filter press is a machine that mechanically de-waters sludge, similar to the original vacuum filter that was in here except it does it in two stages. He said it has a gravity section and it has an actual belt press that presses the liquid out of the sludge. The gravity section, he explained, would be placed in the center of the building in the area where the vacuum filter presently resides and would be there as an alternate means of de-watering sludge in the event of failure of the flotation thickener in the future. He said being able to get rid of the sludge as it is generated is extremely important and when only one device is available for doing this, if it is out of service for any reason for a length of time, the solids build up in these other tanks and the treatment process is not efficient and there is a chance that the effluent requirements would be contravened.

Mr. Fraser said in addition, he mentioned the sludge holding tank has a mixing system in it. He said the system is old, the piping has deteriorated and a new system will have to be installed to provide mixing of the sludge. He said in addition to this, piping is connected to that tank to load the tank trucks that transport the sludge up to the Albany County treatment plant. He said revised piping will be done so that loading can be done over in an area adjacent to the preliminary treatment in a new building which will be built at that point. He said the new building will house all of the proposed facilities at the plant head works and they will be to refurbish the bar screen that is presently located on the site, a new grit removal system which presently is planned to be what is known as a pista grit system -- it is a circular tank and it uses centrifugal force to swirl the incoming sewage around and to separate the grit from the rest of the flow. He said those will be housed in the new building and the building will be made large enough to also house the tank truck that is used to haul the sewage.

Mr. Fraser said there will be some building modifications. He said he already mentioned one of them and said there will be the addition in the building of a bulk tank to be able to store polymers and do the ceiling and ventilation work in the flotation thickener room. He said outside work, they have recommended a third final clarifier be installed. He indicated the location of this clarifier on the aerial photo and said it will be in a triangular pattern with the two that are there now, along with piping between it and the building where sludge pumps pump the sludge from those tanks either to the flotation thickener or back to the aeration tank. He further said the report mentions a number of electrical improvements -- power factor correction capacitors are going to be installed, the plant controls that were designed here originally did their job for a period of time.

He said they little by little as repairs to them were required, the plant personnel became more and more used to providing manual control. He said in other words, the controls were supposed to provide completely automatic operation and they were capable of doing that but over a period of time, through failures of components the plant personnel starting making manual settings and were at a point in time where the equipment that was installed there 17 years ago is outdated, not capable of doing the job that needs to be done and new controls are required. He said those controls are going to control pumps, control the functioning of the plant and the processes, they are going to be apparatus to monitor the system and to record data that can be used by the operators in analyzing how efficiently the system is operating and to make changes in the method of control. He said this is called a data monitoring and reporting system. He said there will be a supervisory computer which will really be nothing more than a personal computer with a lot of capacity but it will allow crunching of the data and let the operators make decisions and to store the data for future use instead of on circular charts on computer printouts and on computer discs.

Mr. Fraser said the third kind of facility that was looked at was those as mentioned, that would be needed to allow expansion of the capacity of the plant in the future. With the addition of a third clarifier, Mr. Fraser explained, and the other things mentioned, there really only remains the aeration capacity to be expanded either in the form of additional tanks or different forms of aeration devices. He said they took a very close look at that and as he said before, decided it is not yet time to add an additional aeration tank, that is some number of years down the line. He said the plant performance will have to be watched carefully along with plant flows and at such time in the future when those flows and the loadings approach the point where that next aeration tank is required, we will have to add an aeration tank. He said they also looked carefully at using another type of aeration device. He said these are mechanical aerators that are driven by 25 horsepower motors. He said there is another type of aeration device that is called defused air where a separate building is provided and a mechanical blower is located in that building and through a piping system air is blown into the aeration tank and into the liquid through what is known as defusers. Mr. Fraser said in fact when this plant was designed, mechanical aerators were basically more efficient, a more efficient way of doing it, and that is why they were employed here. He said since that time, great strides have been made in defused air equipment, there are fine bubble defusers available now that require less horsepower to operate and are more efficient. He said it is very likely that some time in the future these mechanicals aerators will be exchanged for defused air devices and when a second aeration tank is provided that type of aeration facility will also be used with it.

Mr. Fraser said in the report there is a table at the very end which he would refer the Board to. He said it summarizes all of the improvements that have been mentioned and gives preliminary estimates of cost for each of them. He said these were not in detail but gross figures for instance, for refurbishing the bar screen and the various other items under the plant headworks. He said he would not go into detail about all of them, just refer to several figures. He said at the plant headworks, indicating the location on the map, which includes the bar screen work, the building enclosure, the grit system and new slide gates, work on the channels, etc., the estimated cost is approximately $704,000. The final clarifier, Mr. Fraser indicated, providing the clarifier complete with pipe and tube building and for providing additional return sludge pump, total cost of approximately $477,000. He said under the category of sludge thickening for refurbishing the air flotation thickener, new pressurization system, new waste sludge pumps, new polymer feed system and the gravity section of the belt filter press, a total of approximately $445,000. The sludge storage, providing a new mixing system and a new decaf mechanism, approximately $53,000., according to Mr. Fraser. The building modifications, including polymer bulk tank, the dissolved air flotation room, ceiling removal and ventilation system, approximately $50,000., he said. He further said the electrical work that needs to be done along with controls approximately $474,000. He said these items coupled with a 10 percent contingency and an allowance of 25 percent for administration, engineering, financing, interest during

construction, legal costs and other miscellaneous costs brings the total estimated project cost to approximately $3,030,000. and they have recommended that the maximum amount to be spent on this project be set at $3,100,000.

Mr. Fraser said basically this is the proposal. He said he did not get to use the diagram that was on the overhead but if any questions are generated that require it, it can be used. He said at this point, he would be glad to answer any questions.

Supervisor Ringler asked Mr. Secor to comment on the effects on the taxes. Mr. Secor said as Mr. Fraser was going through this and the cost of $3,100,000. was talked about for the system, he said he wanted to put that into perspective in regard to the existing tax rates in the system and what the affect would be, anticipating that it would not cause a great increase in taxes. He said probably on the order of 3 to 5 percent which will be seen over the next year and this is due in a large part to the size of the system. He pointed out on the graph, which showed a plotting of tax rates starting in 1977 and taking this up to 1989. He said he put 1990 and 1991 on top because of space, but he further explained, as seen on the graph, the tax rate in the beginning was $9.62 and went down to $8.75 down to $7.76 in 1980. He said the tax rate for 1991 is $7.74, about the same as it was in 1980. He said the reason for the shape of the curve on the graph is basically, as the system grew, it was a fixed cost. He said the sewage treatment plant had been built and as the system grew and expanded and took in all of North Bethlehem and various areas of the Town, at a larger and larger tax base, it paid off the cost that had been incurred for the original plant. Mr. Secor said the collector sewers that are out, whether they be in North Bethlehem or Delmar or wherever, the actual sewers in front of the houses, are paid off on a front footage charge and are not in the exhibited rate. He said the rate pays for major facilities. Mr. Secor said what is being looked at here, is a fairly uniform increase off into the future but we are still significantly less than what it was back in the late 70's and early 80's. Again, he said, there is no correction here for inflation or anything else, this is just dollars out of pocket. He said we are in real good shape on that. Mr. Secor said, again, this has to do with the tax base that we are working with.

Supervisor Ringler asked that Mr. Secor point out that this is the sewer tax rate and it only affects those people who are on sewers. Mr. Secor said this was correct. Supervisor Ringler further said this is not the general tax town. Mr. Secor said only the people in the sewer district will participate in this cost. He said this is basically where we are at. He said there are bonds which are being matured. He said the bonds on the original plant were 30 year bonds. Mr. Secor said he checked with the Comptroller's office on this date and there is about 14 years left on these. He said those payments are 6.7 percent or 6.8 percent, something like this and they are relatively a level payment. He said they are being absorbed in this additional cost. Supervisor Ringler asked Mr. Secor what the estimated increase per thousand would be. Mr. Secor said about 3 to 5 percent. Supervisor Ringler asked for Mr. Secor to translate this into dollars. Mr. Secor said 30 cents a thousand on the tax rate. Supervisor Ringler said this would be approximately 36 cents per thousand.

Supervisor Ringler asked if there were any questions from the Board. Councilman Gunner asked if this included the expansion of the sewer system. Mr. Secor said it does not, again, the only thing being added is the clarifier which is really needed for the flows and to allow the major maintenance on the two existing tanks. Councilman Webster said any expansion will take place in a special district and will not affect this, only in the fact that it might reduce it, asking if this was correct, because those people would then participate. Mr. Secor said if a sewer district extension was to come in, they would pay for their own collector sewers and then as they get into this, they would contribute to the major facility. Thus, Mr. Secor explained, this would help to reduce the tax rate in here. He said that is why there was a reduction rate over the years, as the district is expanded and you get more assessed valuation, again, the plant can do it. He said at some point in the future, when additional facilities are needed, again, there will be additional bonding but it is spread over a very large tax base. He said the impact in this case would be minor.

Councilman Webster asked what the time span, perhaps, for that aeration tank before we would be going into that. He asked if this would not come into play again until this system has reached the year 2010 and it is supposedly at capacity. Mr. Fraser said it would be soon. Mr. Secor said it would be someplace in between there. Mr. Fraser said it would depend strictly on how much growth takes place henceforth. He said, as everyone knows in recent years, a great deal of rapid growth has been trying to take place and that appears to be over at least momentarily. Supervisor Ringler said as the growth is taking place, the infiltration has been reduced and therefore, the flows have stayed or been reduced. Mr. Secor said this is why we are looking at the graph, the pink line is flows to the plant. He said we have had a couple wet years but also we have had some vandalism out in the system which has been replaced. He said, the Town Board and the Sewer Department have been actively pursuing drainage projects, the Snowden Avenue/Lincoln Avenue areas where there was drainage installed where there was no existing drainage, removing sump pumps and drainage that used to get into the sanitary system, when the facility plan was done in the early 70s and when the new facility plan was done just recently in the early 80s, both looked at the economics. He said it was cheaper in both of these cases to treat that water -- basically rain water or ground water -- it was cheaper to treat it than it was to dig up every street in Delmar and Elsmere and replace all the sewers. He further said, the report said that the way to watch that --- as technology improved, take advantage of the technology and do something. He said there is a whole new group of processes coming along which are called trenchless technology. He said the contract is coming before the Board very shortly for a project to start us off in Elsmere where they actually go in and slip line or line the inside of the existing sewers, to provide a brand new pipe without ever digging up the street. He said they do it just like the TV process that they go in and look at your heart, this process is the same for the water pipes, the sewer pipes or gas pipes and look at them. He said there are also methods to go in and line these without digging up the streets. He said this is what is being looked at. He said it is now becoming cost effective to go back and address old problems that were not cost effective in the early 70s or early 80s. He said they are moving forward on these. He said his own projection is that we are 5 to 7 years out here before we really have to start looking at additional aeration capacity. He said it will come at some point because the hydraulics are going to get to the point where we will have to do something with them. He said he does expect it will be far enough off that it is not wise or justifiable at this time to throw it in and try and take advantage of say bulk purchasing. He said it would probably add another 1/2 million or $600,000. Mr. Fraser agreed, stating it is an expensive one. He did not remember specifically. Mr. Secor said maybe 6 or $700,000. because you have to buy additional piping, pumping and there is quite a bit that goes with it. Councilman Webster indicated this is down the line.

Supervisor Ringler asked if there were any other Board questions. Councilman Burns asked Mr. Secor review the manpower situation at the plant now and whether there would be any modifications after the improvements were made, including any shift changes or additions to staff. Mr. Secor said they are not anticipating any. He said they are working Monday through Friday, 8 to 4:30 is the normal shift and there are five people at the plant. He said on Saturday and Sunday one of the operators comes in for 3 or 4 hours whatever it takes, to do the normal maintenance and a certain amount of lab work, certain adjustments to the biological process that has to be done and so the permit requirements are met by doing it. He further stated the plant is not manned 24 hours a day. He said it is monitored continuously through electronic controls and various alarm things, so if something falls, the automatic dial out system to the Police Department is activated and the Police Department calls the person on duty and the person can go down and take care of the maintenance. He said he does not anticipate as a result of the this that there will be anyone added or really do away with anyone. He said the process is there. He further stated if we were still doing the de-watering on site, if we were still doing the belt filtering watering, still doing our own trucking where we had to load the truck and have the driver take it to the landfill and do everything, there would have probably been a need to add a man but the Highway Department -- there is a part time sub-contract arrangement with the Highway Department which is very

efficient. Mr. Secor said the Highway Department comes down as needed and does the hauling. He further indicated the same tractor that does the pulling for the sewer plant also takes care of the solid waste, recycling program and the employee has a full time job and shares himself with the three different areas. He said he really does not anticipate any manpower increase as a result of any of this.

Councilman Burns further asked Mr. Secor about the possibility of any federal money, indicating there was no hope of this, or any other money source to assist us with this. Mr. Fraser said any of the federal or state aid programs towards sewage treatment/waste water treatment have disappeared completely and have been replaced by loan programs and even those loan programs give priority to those who have treatment problems that have to be solved, not existing plants that are beginning to wear out and need replacement parts and that sort of thing. He said those who are polluting are the ones who have the high priority when it comes to getting anything from any program. He further said that program right now is a loan program and he thinks it is just trying to get underway and he is not sure whether it actually even exists at this time. Mr. Secor said an application had been put in as soon as information about the loan program was presented and the list came out. He said we are on the list but we are so far down on the priority list that it is relatively unlikely that anything will come of it. He said we are going to try, however. He said it is a subsidized or a lesser bonding. Supervisor Ringler said if we are on the higher priority, it is conceivable that we can at some point look into refinancing any bonding that might be done now through general obligation bonds through the loan program, as he understands it. Mr. Secor said we may become eligible even after construction if there is room within the program.

Councilman Webster said Mr. Fraser made mention that within our permit that we are exceeding the 75 percent requirement and asked if we are not, just for the record, exceeding the 90th percentile on our discharge. Mr. Secor said at this time we are running 90 to 95 percent removal, is the normal rate. The problem, according to Mr. Secor, is when we get into the lower percentiles is there is a normal design of about 100 to 200 parts per million of influent that you are looking at and knowing you can take this out of. He said there are days down there, especially right after a rain -- when you first get a rain the old section of towns, the first wash water stuff that comes down has all of the organic loading in it and the next 8, 10, 12 or 24 hours is basically rain water. He said that influent goes from 100 or 200 parts per million down to 20 or 30 parts per million. He further stated the water coming in meets the discharge requirements and yet we are still required to take 75 percent of that relatively clean water. He said the plant will take the 75 percent but we cannot get into the 90s because we are down then to less than 1 part per million in the effluent. He said this just is not set up to do this, it would require a sand filter to do this. It is not necessary or practical according to Mr. Secor, to do this. He said the plant is running very well but it is just the variation and the influent loading that gives the statistical variations. Mr. Fraser added, it gives a false impression to look at percentage removal in a case like that. He said what really should be looked at is the strength of the effluent and that is always way below 30 parts per million which calculates to 25 percent of 200 parts per million which is the influent strength. He said this is how that 30 parts per million was derived.

Supervisor Ringler asked if there were any other Board questions. Hearing none, he asked if anyone had any questions in the audience. The Supervisor next asked if anyone wished to speak in favor of this proposal. There were none. He next asked if anyone would like to speak in opposition. There were none. The Supervisor thanked everyone.

Mr. Webster made a motion and it was seconded by Ms. Galvin to close the public hearing at 8:20 p.m. The motion was passed by the following vote:

Ayes: Mr.Ringler, Mr.Webster, Mr.Burns, Ms.Galvin, Mr.Gunner.
Noes: None.

Kathleen A. Newkirk
Deputy Town Clerk

Supervisor Ringler convened the regular meeting following the public hearing. He said if anyone has any questions about any item on the agenda, if time permits, he will be glad to answer it. At the end of the regular meeting, he said the floor will be open to anything anyone would like to bring to the attention of the Board.

Conference - National Narcotic Detector Dog Association

The first item, according to Supervisor Ringler, is a request from Chief of Police, Paul E. Currie, for Officer LaChapelle and Grando to attend the National Narcotic Detector Dog Association recertification two day seminar in Keuka Park, New York. He stated, as everyone knows, the staff has been limited to only local travel due to current fiscal restraints, however, special requests have to be honored. He noted in this particular circumstance, this one has to be done because it is required that Grando be recertified each year in case there is any involvement in any litigation or so forth before the courts. The cost factor is $122.35, according to Supervisor Ringler.

The motion was made by Ms. Galvin and seconded by Mr. Gunner that at the request of Paul E. Currie, Chief of Police, Officer LaChapelle and Grando be and they hereby are authorized to attend the National Narcotic Detector Dog Association two day recertification seminar to be held January 17 and 18, 1991 at Keuka College, Keuka Park, New York, with expenses paid. The motion was passed by the following vote:

Ayes: Mr.Ringler, Mr.Webster, Mr.Burns, Ms.Galvin, Mr.Gunner.
Noes: None.

Approvals Secretary, Board of Appeals and LUMAC Clerk-Typist

Supervisor Ringler said the next two items were inadvertently left off the Organizational Agenda. He said they are the appointment of Thomas W. Scherer as Secretary to the Board of Appeals and Lisa Bopp, Clerk/Typist to serve as LUMAC secretary at $9.64 per hour for the year 1991 and this would be retroactive to January 1, 1991.

The motion was made by Ms. Galvin and seconded by Mr. Gunner that Thomas W. Scherer be appointed as Secretary to the Board of Appeals and Lisa Bopp be appointed Clerk/Typist to serve as LUMAC secretary at a rate of $9.64 per hour for the year 1991. The motion was passed by the following vote:

Ayes: Mr.Ringler, Mr.Webster, Mr.Burns, Ms.Galvin, Mr.Gunner.
Noes: None.

Assignment of House Numbers - Meads Lane

The next item on the agenda according to Supervisor Ringler was a request from Terrence W. Ritz, Department of Public Works, regarding the assignment of house numbers for Meads Lane, Delmar.

MEMORANDUM

TO: Members of the Town Board
FROM: Terrence W. Ritz
DATE: January 3, 1991
SUBJ: Proposed house numbers on Meads Lane, Delmar

The Engineering Department has completed the work to establish house numbers on Meads Lane from Feura Bush Road to Delaware Avenue.

We are attached five (5) sets of prints for Meads Lane on which the proposed house numbers are indicated. Please return these prints to the Town Clerk after your review. Vacant land has not been numbered, but numbers have been reserved for future development.

We are enclosing a list of various property owners, not necessarily the present residents, with the proposed house number and tax map number to further identify the house involved.

Proposed hours numbers for buildings on corner lots are usually based on the direction the house is facing.

Should this proposed house number system be adopted by the Town Board, we suggest that these proposed numbers be made effective six (6) months after the date of adoption because no house numbers exist at this time.

The Delmar Post Office, the Delmar Fire Department and the residents should be informed of these new numbers.

The Engineering Department can supply additional maps or lists of property owners as may be required by the Town Board or the Town Clerk's Office.

Please be advised that these house numbers and others that have been approved by the Town Board in the past are of no value to anyone if the numbers are not displayed on the house, fence or mailbox.

PROPERTY OWNER	PROPOSED NUMBER	TAX MAP NO.
Morris & Mary Ann Irons	119	96.00, 1, 33
Stuart & Jane Lyman	140	96.00, 1, 34.2
Albert Mead	254(house) 262(store)	96.00, 1, 44
John H. Mead	304	96.00, 1, 46
Kenneth & Ruth Joslin	307	96.00, 1, 45
Albert H. Mead	360	96.00, 1, 47.1
John C. Nock	361	96.00, 1, 48
Ralph W. Brown	363	96.00, 1, 49

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Supervisor Ringler asked if there were any questions regarding this proposal. There were none. Mr. Gunner made a motion that the proposed house numbers be assigned as per the request of the Department of Public Works and Ms. Galvin seconded the motion. The motion was passed by the following vote:

Ayes: Mr.Ringler, Mr.Webster, Mr.Burns, Ms.Galvin, Mr.Gunner.
Noes: None.

Restricted Highway Route 443 Delaware Avenue

Supervisor Ringler said the next item was notice from the Department of Transportation regarding designation of a restricted highway for Route 443, Delaware Avenue bridge over the Normanskill which will expire on August 31, 1991.

Supervisor Ringler explained briefly that DOT is going to be doing some interim repairs this summer on the bridge and this allows them to put temporary speed limits on it and weight restrictions and so forth. He said this is strictly notification that this will be done. He said this is not the major reconstruction. He said the major reconstruction of this bridge is still scheduled for 1994.

Councilman Burns asked if there would be lane restrictions as well. Supervisor Ringler said he did not know, whatever restrictions DOT wants to put in it as necessary. He said they are not specific as to what they are.

Approval 1991 Association of Towns

Supervisor Ringler indicated the next item was a recommendation pertaining to the Association of Towns Annual Meeting and attendance by Town employees.

MEMORANDUM

TO: Town Board Members

FROM: Kenneth J. Ringler, Jr.

SUBJECT: Association of Towns Meeting

DATE: January 9, 1991

In the past it has been the policy of the Town of Bethlehem to allow any official who desired to attend the Annual Association of

Towns meeting at Town expense. Due to our current economic situation, I would like to recommend this year that only the following be allowed to attend:

I would recommend the Town Justices be allowed to attend as they are required to receive mandatory training each year and at this point in time, this is the where the training is being offered. I would also recommend that John Flanigan and Barbara Hodom be allowed to attend. John has been asked by the Association of Towns to participate in the committee structure and Barbara Hodom will be teaching courses at the conference.

In addition, I would request that any other official who would like to attend be granted the time off from work and the registration fee be paid by the Town but attend the conference at their own expense.

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Supervisor Ringler said again, due to current restrictions although he feels it is important that we do participate in the Associations of Towns, he would like to limit those who would be attending this year. He further asked for the approval of the Town Board to accept his recommendation in regard to this. He recommended that the Town Justices be allowed to go as they are required to receive mandatory training each year and at this point in time, this is where the training is being offered. He said, however, he understands that if another course comes out in between and it gets announced,they would be getting this locally too. He said he wished to asked for the approval in case the other course is not offered. Supervisor Ringler said he also recommends that John Flanigan and Barbara Hodom be allowed to attend. He stated Mr. Flanigan is working actively with the Association on their committee structure and Mrs. Hodom will be teaching courses at the conference. In addition, Supervisor Ringler also requested that any other official who would like to attend, be granted the time off and the registration fee be paid by the Town. He further explained, that these officials would attend the conference at their own expense. He asked if there were any questions. There were none.

A motion was made by Mr. Gunner and seconded by Mr. Burns the Town Justices, Barbara Hodom, Court Clerk and John Flanigan, Building Inspector, and other Town official wishing to attend the conference at their own expense be granted the time off and the registration fee be paid by the Town, be and they hereby are authorized to attend the Annual Associations of Towns Meeting to be held February 17-20, 1991 at the Hilton Hotel, New York City. The motion was passed by the following vote:

Ayes: Mr.Ringler, Mr.Webster, Mr.Burns, Ms.Galvin, Mr.Gunner.
Noes: None.

Supervisor Ringler next asked for a motion to hold an Executive Session following the close of the regular meeting to discuss pending litigation.

The motion was made by Ms. Galvin and seconded by Mr. Gunner, that the Town Board meet in Executive Session following the close of the regular meeting to discuss pending litigation. The motion was passed by the following vote:

Ayes: Mr.Ringler, Mr.Webster, Mr.Burns, Ms.Galvin, Mr.Gunner.
Noes: None.

Supervisor Ringler asked if there was anything else anyone would like to bring to the attention of the Board. Councilman Burns asked if there has been any information received in regard to 443, the Glenmont Road, Thruway Authority progress on the reconstruction. He said he thought this was going on longer than expected. Supervisor Ringler said the Thruway has a real problem with their contractor and the last he talked to them in November. He said they had expected to button up

one side of it and not do the rest of it until spring and then open. He indicated he did not know the current status but he would check into it and let Councilman Burns know.

Discussion - Red Light Wemple Road and Route 9W

Supervisor Ringler asked if there were any other questions. Mrs. Joan Stahlman, residing on Route 9W just south of Wemple Road, asked a question in regard to the red light being located at 9W and Wemple. She wanted to know if there is going to be any warning signals south of this light, as you come around the curve. Supervisor Ringler said there will be due to the concern the Town had. He said he contacted DOT and they have said there will be a warning sign and initially it is going to have flags on it to get everyone's attention that it is new. Mrs. Stahlman commented another sign on her lawn probably. She said they already have the big arrow and several others but it is a bad corner. Supervisor Ringler said it may be just south of her lawn. He further said the sight line is a concern that the Town has and he called DOT last week and they will install the warning signs. He said he thought the signs will be for both directions, advising the people that there is a traffic signal there.

Mr. Michael Fahey of South Bethlehem was just wondering, since the subject is DOT, are there prospects for possible 4 way flashers or stop signs at Routes 102 and 306 or is this pretty much dead. Supervisor Ringler said they responded telling the Town that they did not feel it is necessary at this point in time. He said they mentioned putting in new, larger stop signs and stop lines to attempt to address the concerns that the people had in the petition. He said they further stated their study indicated they would not put any flashing lights there. Mr. Faher further asked if it will still be a 2 way stop or a 4 way stop. Supervisor Ringler said at this time, it is a 2 way stop, continue this way and have much larger signs because apparently there was some concern that people were ignoring the stop signs, not seeing them. He further said they were going to redo what was there but no flashing lights.

Supervisor Ringler asked if there were any further questions. There were none.

The motion was made by Mr. Webster and seconded by Ms. Galvin to adjourn the regular Town Board meeting at 8:30 p.m. The motion was passed by the following vote:

Ayes: Mr.Ringler, Mr.Webster, Mr.Burns, Ms.Galvin, Mr.Gunner.
Noes: None.

Kathleen A. Newkirk
Deputy Town Clerk

EXECUTIVE SESSION

Executive Session

No formal action was taken at the Executive Session.