



Town of Watertown Connecticut

51 Depot Square Business Center

Suite 502, Watertown Connecticut 06795-2200

Planning and Zoning, Zoning Board of Appeals, Conservation Commission/Inland Wetland Agency

Telephone: (860) 945-5266

Fax: (860) 945-2704

Website: www.watertownct.org

MINUTES CONSERVATION COMMISSION/ INLAND WETLANDS AGENCY WATERTOWN, CONNECTICUT

PUBLIC HEARING

**Town of Watertown Department of Public Works
Sunnyside Avenue, Oakville, CT**

Time: 7:00 P.M. (7:53 P.M.)

Date: Thursday, March 11, 2010

Place: Watertown High School Lecture Hall
324 French Street
Watertown, Connecticut

1. Call Hearing to Order

The Chairman called the public hearing to order at 7:53 p.m.

2. Roll Call

Secretary, Mr. Thomas Murphy executed the roll call.

Present: Chairman, Mr. Edwin Undercuffler
Vice Chairman, Mr. Donato Orsini
Secretary, Mr. Thomas Murphy
Mr. Michael Genovese
Ms. Martha Sturgis

Absent: Mr. Joseph Polletta
Mr. Brian Benoit
Mr. Richard Sarandrea
Mr. Todd Robinson

Also Present: Wetlands Enforcement Officer, Mr. Moosa Rafey
Town Engineer, Mr. Chuck Berger
Land Use Secretary, Mr. Chuck Bezio

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3. Hearing of Applications

B Application #708 of the Town of Watertown Department of Public Works for reconstruction of Sunnyside Avenue, Oakville, CT.

Recess or adjourn the Public Hearing must be closed by April 15, 2010 unless applicant grants an extension of time.

Chairman, Mr. Edwin Undercuffler read the legal notice into the record.

TOWN OF WATERTOWN Legal Notice

The Conservation Commission/ Inland Wetlands Agency of the Town of Watertown will hold a public hearing at 7:00PM on Thursday, March 11, 2010 at Watertown High Lecture Hall 324 French Street, Watertown, CT to hear and act upon the following application deemed as significant activity by the Conservation Commission/ Inland Wetland Agency pursuant to Section 2.1(ddl-7) of the Watertown Inland Wetlands and Watercourse Regulations.

Application #708 of the Town of Watertown Department of Public Works to conduct the following regulated activities associated with the reconstruction of Sunnyside Avenue located in Oakville, CT:

1. Disturbance of approximately 2,178 Sq. Ft of watercourse/ wetland and 28,504 Sq. Ft of upland review area for Turkey Brook culvert replacement.
2. Disturbance of approximately 625 Sq. Ft of wetland and approximately 15,850 Sq. Ft. upland review area for reconstruction of a drainage outfall.
3. Installation of erosion and sediment control measures within watercourse/ inland wetlands and upland review areas.

At this hearing interested persons may be heard and written communications received. A copy of the application is on file at the Planning and Zoning Office, 51 Depot Street, Suite 502, Watertown, CT.

Dated at Watertown, CT this 25th day of February 2010

Dated at Watertown, CT this 4th day of March 2010

Tom Murphy, Secretary
Conservation Commission/ Inland Wetlands Agency

Mr. Berger:

This project is located in the Oakville section of Watertown on two Sections of Sunnyside Avenue between Falls Avenue and the Waterbury corporate limits. Please refer to the enclosed watershed maps in Appendix A. This report includes calculations for the four storm drainage systems on the effected sections of roadway. The first section of the project involves full depth reconstruction of 832 linear-feet of road starting between Turkey Brook and the Falls Avenue intersection and ending 273-ft east of the Franklin Avenue intersection and the replacement of a culvert at Turkey Brook. The second section of the project involves full depth reconstruction of 1550 linear-feet of road starting between Shaws Farm Road and Hilltop Road and ending at the Waterbury corporate limits. We designed the proposed drainage system using the Hydrailow Storm Sewers 2003 software. This software employs the Rational Method to calculate peak flow rates and it employs the energy-based Standard Step Method to compute hydraulic grade lines within storm sewers and the Manning's equation for open channel flow capacity. The storm water collection and conveyance system is designed for a 25-year storm according to Sec 5.10.1 of the Town of Watertown Subdivision Regulations (WSR). LEI used Connecticut rainfall intensity values from the ConnDOT 2000 drainage manual. According to WSR Appendix G-1; LEI used a 5-minute minimum time of concentration (Tc) for paved areas and 10-minute minimum Tc for unpaved areas. Please note that critical time of concentration calculations follow the NRCS format outlined in Appendix C of the ConnDOT Drainage Manual 2000. Please refer to Appendix B of this report for these calculations. We estimated the Coefficient of imperviousness using the following values from WSR Appendix G-2:

For design and layout of the storm drainage system, LEi followed the following Town guidelines wherever practical:

- 15-inch diameter minimum pipe size (WSR 5.10.2).
- Flow Capacity determined by open channel flow (WSR App. G-IO).
- Maintain one foot of freeboard from hydraulic grade line to top of structure (WSR 5.10.1b).
- Minimum slope, pipe = 0.5% (WSR 5.10.2).
- Maintain 2-ft minimum cover on all new pipes (WSR 5.10.5).
- Maximum spacing of catch basins shall be 300 feet or that required to intercept gutter flow before flow width equals to 112 travel lane width, whichever is closer (WSR 5.10.1b).
- Locate catch basins as close to PC and PT of intersection curb arcs as possible (WSR 5.10.1b).

- Keep CB locations a minimum of 5-feet away from driveway entrances (WSR App. G-13).

The proposed project funding from the Department of Transportation Local Road Program requires the project construction plans to be designed in metric units. The calculations are presented in this report in English units because the hydrology data is available and more familiar in English units. However, we provide a metric conversion of the pipe system analysis in metric units (see appendix D) to ease in the preparation of construction plans. Three of the drainage systems studied in this report discharge into Turkey Brook at the proposed bridge replacement as shown on Figure A-I. The eastern section of the project discharges onto private property approximately 200-feet east of the Old Colonial Road intersection. The following table provides pertinent data for storm system outlets as shown on Figure A-2.

Storm Drainage System

Outlet from Station Meters	Watershed Area Acres	Pipe Diameter Inches	25-yr Discharge cfs	25-yr Velocity Fps	Invert Feet (meters)
MH 0+077 L	10.6	24	25.3	8.6	397.31 (121.1)
CB 0+93 R11m	1.8	15	5.3	5.5	396.46 (120.841)
MH 0+103 L	40.3	42	68.1	8.7	399.96 (121.902)
CB 1+319L	15.2	30	25.2	6.2	568.54 (173.291)

We based Stormwater quality measures on a "retro-fit" approach according to Section 10 of the ConnDEP 2004 Stormwater Quality Manual we propose to install secondary treatment practice to mitigate runoff pollutants. Section 10.4.1 suggests that installing deep sump catch basins with hoods will increase the capture of floatables and greatly extend the cleaning interval without degrading capture performance. A ConnDOT memo (Arthur Gruhn, June 16, 2003) regarding "Design Measures for Stormwater Permits Phase II" suggests 4-foot sumps for catch basins. We propose to use these four foot deep sumps for all four proposed drainage systems associated with this project.

For the drainage systems with more than 10 inlets, we propose to install hydrodynamic separators prior to the outlet. Please refer to appendix E for the water quality flow calculations used to determine the bypass flow for the structures. System outlet protection measures for erosion control will consist of riprap. The discharges into Turkey Brook will require riprap sized for both the stream flows and for the storm drainage discharge protection. The stream will require intermediate size riprap to protect the streambed from erosion for the 100-year return frequency design discharge. A worst case scenario for outlet protection occurs when the receiving watercourse is low and the outlet pipe has reached peak flow. The proposed Sunnyside Avenue storm drainage system discharge from MH 0+ 103L has a drainage area of 40-acres which results in a 1 :30 ratio to the 1.98 sq-mi Turkey Brook drainage area. Table 8-3 on page of 8.3.4 of the ConnDOT drainage manual suggests checking the outflow conditions for a 5-year return frequency storm in Turkey Brook for our design 25-year storm system outflow.

Storm Drainage System

Receiving watercourse data: Turkey Brook (1,267 acres)

Outlet from Station meters	Watershed Area Acres	Watershed Ratio 1:X	Coincidental Frequency Return Year	Outlet Brook Station	Waters Surface Elevation Feet	Main Channel Validity
MH 0 + 077 L	10.6	120	2	1138	399.01	5.57
CB 0+93 R11 M	1.8	704	2	1087	396.00	4.96
MH 0+103 L	40.3	32	5	1138	399.67	4.89

Table 8-3 Joint Probability Analysis, ConnDOT 2000 Drainage Manual

A check of the 24-cfs range outflows using HEC-15 flexible channel lining guidelines shows that a 4-ft wide intermediate riprap lined channel with 3:1 side slopes will resist erosion for the 25-year return frequency storm. Therefore, the discharges from Tumor Avenue (5.3-cfs) and manhole at Sta O+077L (25-cfs) should not erode intermediate riprap on the banks of Turkey Brook. The 68-cfs discharge from Manhole 0+ 1 03L will discharge approximately 0.3-feet above the estimated water surface elevation and will require standard riprap protection at the outlet.

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The 25-cfs discharge from CB 1+ 319L will require a preformed scour hole with intermediate riprap. Please refer to Appendix E for calculations.

Mr. Undercuffler I want to make sure we stay on wetland issues only.

Public:

Mr. Argentta Ed Argentta of 46 Hilltop Road was present and expressed concerns with the area south of the bridge. What are you doing in this area.

Mr. Berger We are going to remove the entire structure. There will be a new concrete retain wall that will help support the earth and Turner Avenue. The channel will be restored to a trapezoidal type section.

Mr. Argentta The shutdown of Sunnyside is a major concern because I am with the Fire Department. We are going to have a difficult time getting the ladder truck up to Franklin, Hilltop, and Shaw Farm. If we come in through Bushnell we will not be able to make the swing up the hill. If we come in through Lilac we are going to have another problem making that swing with the ladder truck. We should be able to do it with the pumpers but we are not going to be able to do it with the ladder trucks. You may want to talk to the Chief and do a dry run with one of the ladder truck.

Mr. Berger DOT is recommending that we close it for the two month period. Before we started down that path the Police and Fire Chiefs were the first ones we contacted. They were both agreed to the closing of Sunnyside.

Mr. Argentta I strongly suggest that you do a dry run with the ladder truck to see if you can make the corner.

Mr. Walker Ken walk of 519 Sunnyside Avenue was present. What is the location of the culvert by Colonial?

Mr. Berger You have done significant amount of work on the house recently and it looks great. The culvert borders your property. There is a 50' right of way the borders your property, this is were the out fall is. He explained the location to culvert to the Commission.

Mr. Berger

What I recommend that when we are talking with the DOT when we formalizing the negotiations, I will not be part of that but I would like to be present to hear your concerns and hear their responses. I recommend that you reserve your right, although you maybe granting us a right to do this now, you reserve the right in the future to make modifications to that to accommodate whatever future plans you may have. Your future road plans, I will just do a scenario may include piping this outfall further down. You're just not going to just take it and turn the brook onto your neighbor's property. This is a brook coming down your right of way now and comes onto your neighbor's property. You may have to pipe it. When the time comes when you want to do this you will be in front of the Wetland Commission talking about extending the pipe. From the town's drainage standpoint if you can get a wetlands permit to do that I think the town would be ok to do that. If the Commission will give you a permit to pipe the brook further down the town would be ok with you change the out fall, eliminating the plunge pool, and moving the plunge pool to a new location to accommodate your development plans. I am not sure how we will work all this out as we go forward, but I am willing to try.

Mr. Santamaria

I have no definite time frame of when this road is going to be built.

Mr. Berger

I see no reason why we cannot reserve the right to accommodate that. I can't, I am doing minimum necessary to get the road built. I do not want to be piping the watercourse a greater distance based on a future plan. I do not want to spend state money on piping the watercourse any further. This is something that would have to be at your cost to do this.

Mr. Santamaria

I feel comfortable with this.

Mr. Rafey

Is this the only frontage Mr. Santamaria has on Sunnyside Avenue? Do you have more frontage?

Mr. Santamaria

I have another entry to the property from Berkshire Drive in Waterbury. But this is in Waterbury. Is this project going to be done in phase?

Mr. Berger

The way the specifications are worded the contractor cannot close the road and do the culvert and at the same time rebuild the road.

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The closing of Sunnyside Avenue to rebuild the culvert at the bottom has to be a separate project from the rest of the road work. Sunnyside will only be closed for the two months period for the culvert replacement the road will remain open during the reconstruction. The road will remain open to residents during the reconstruction.

Mr. Santamaria Will there excess material after you straiten that curb out? Is there excess material that will be removed?

Mr. Berger I do not know. I would think so since we are cutting into the back significantly. During the construction of this project there will be full time construction inspection by DOT. They will have one or more people on site while the contractor is working, with weekly job meeting and while any issues any come up. There will be another informal meeting with the residents when the project is about to begin. We will make ourselves as available as possible.

Mr. Rafey The Commission determined that this is a significant activity is there any alternates that have been looked at. Why are you in favor of this proposal than the alternative?

Mr. Berger This is a built up area and we have limited area to work with. This is an existing road and any significant change of the footprint of the road or design to incorporate something other than what is proposed would have significant property impacts. There is already impacts to residents we do not wish to impact them any more than needed. We want to minimize the foot print of our disturbance. The major wetlands impact is culvert at Turkey Brook under Sunnyside Avenue. There were numerous alternatives investigated as part of the Turkey brook drainage improvement project on how to reduce the flood levels. Up grading the culvert size was determined to be the best solution.

Mr. Rafey By doing this project are you lowering the flood potential by approximately 5'? You are saying that this project will improve the existing flooding problems in that area.

Mr. Berger Yes.

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Attest:

Tom Murphy, Secretary
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