

**TOWN OF CARMEL  
PUTNAM COUNTY, NEW YORK  
WATER DISTRICT NUMBER 2**

**CARMEL WATER DISTRICT NO. 2 DISTRIBUTION SYSTEM  
FACILITY PLAN**

**FEBRUARY 2019**

**J. ROBERT FOLCHETTI & ASSOCIATES, L.L.C.**  
*CIVIL / ENVIRONMENTAL ENGINEERS*

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**31 SODOM ROAD  
BREWSTER, NEW YORK 10509**

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## **1.0 BACKGROUND**

### **1.1 District Formation, Supply and Treatment**

The Town of Carmel (Town) Water District Number 2 (“the District”) was formed by resolution of the Town Board on December 31, 1935, and was extended by resolution of the Town Board on December 29, 1998. Please refer to Appendices-A.1 and A.2 for copies of resolutions. See Figure-1 for District Limits. The District serves a population of approximately 5,300 people. Town records indicate that there are approximately 2,000 metered connections, including residential, commercial, institutional and government facilities within the District. The sole source of supply for the District is Lake Gleneida, located at the intersection of New York State (NYS) Routes 6 and 52 in the Hamlet of Carmel. As Lake Gleneida is a surface water supply, raw water must be treated prior to distribution for consumption in order to comply with the 1986 Amendments to the Safe Drinking Water Act. An eight (8) inch diameter raw water intake transfers water from the lake via a pump station in the area of the intersection, under NYS Route 52, thence to the treatment plant located approximately 1,000 feet to the east along NYS Route 6. See Figure-2, Location Map. Based on engineering department records the plant was constructed in 1976 and is permitted to treat and distribute up to 1.0 Million Gallons per Day (1.0 MGD). It is a direct filter facility consisting of three (3) Diatomaceous Earth (DE) filters that discharge to a 95,000 gallon clearwell. From the clearwell, disinfected water is pumped to three (3) storage tanks for final distribution to the consumer. Based on its age, the plant is beyond its design life. In the summer of 2018 the Town retained Hazen & Sawyer, an ENR Top 20 water engineering firm, to develop a Facility Plan to replace the plant. That project is currently underway and the plan is scheduled for delivery in September 2019.

### **1.2 Description of the Existing Distribution System**

The District provides service to residential, commercial, institutional and government facilities within its limits. The distribution system consists of nearly 52 miles of water main and approximately 2000 service connections. Within that 52 miles of water main the system demonstrates a wide variety of pipe materials, including: asbestos-cement (ACP); unlined cast iron (CI); unlined and lined ductile iron (DI); and poly-vinyl chloride (PVC). Much of this variety is based on eight decades of development by multiple developers. Many of these installed what was the most economically viable material at the time then dedicated the system to the Town. Figure 3 depicts the location and type of distribution main that is found around the district.

Each type of pipe material exhibits similar hydraulic characteristics at the time of installation, yet each ages differently. ACP, lined DI and PVC all resist chemical reaction with minerals contained in the water being conveyed through the system. On the other hand, unlined CI & unlined DI both react with minerals in the water. This reaction

typically takes the form of metallic salt growth on the interior wall of the water main, commonly referred to as tuberculation. See Figure 4 for typical segment of tuberculated main. This figure also illustrates the deposition of suspended solids within the distribution mains. This deposition is most likely the result of loss of diatomaceous earth in the filter process. The DE may leave the plant suspended in the treated water and ultimately get trapped against the tuberculation in quiescent sections of the main during low demand periods. Because the tuberculation/sediment entrapment occurs in the main downstream of treatment, it can lead to delivery of discolored water to the consumer despite high quality finished water being provided by the treatment facility.

## **2.0 EXISTING CONDITIONS AND INVESTIGATION**

### **2.1 Existing Conditions**

The Town has received consistent complaints from District residents regarding discolored water. During late summer 2017, complaints originating in the area of Gleneida Ridge Road, Glenvue Drive, and Glenvue Drive North (The Gleneida Ridge area) led to the implementation of the Carmel Water District 2 Emergency Water Main Replacement Project. Awarded in February 2018, the project began delivering clean water to residents in the late spring of 2018. New mains on Gleneida Ridge Road and Glenvue Road were completed and in service by mid July; service connections to dwellings were completed by the end of August. The project is currently 85% complete; the final reach of water main along NYS Route 301 is currently underway and is scheduled for substantial completion in May of this year.

Historically water quality complaints have also been received from the following areas:

- Everett Road/Kelly Ridge
- Sunset Ridge, Collier Drive, Collier Drive East, and Collier Drive West (the Collier Drive area),
- Lakeview/ Avery Road
- Lindy Drive/Tower Road

### **2.2 Investigation**

With Board approval in October 2017, the Town Consulting Engineer undertook a program of examination of the water mains to determine their fitness to undergo a reaming and lining rehabilitation program. Preliminary coupons were collected from Gleneida Ridge Road, Collier Drive West and Tower Road. Results from the Gleneida Ridge Road coupon, combined with resident complaints, led to the emergency water main replacement discussed above. Subsequent to the award of the emergency main replacement contract a meeting was held with the district residents. It was agreed that a continuation of the coupon collecting program would be undertaken. Additionally, the former district operator

offered to host a tour for the Consulting Engineer to help identify traditional trouble spots. The tour was made in May 2018. Based on the location of historic complaints, the results of the district tour, and the results of the prior coupon collection efforts, the following targeting criteria for coupon extraction were established:

- Known/suspected unlined CI/DI mains
- Areas of known complaints where no coupon/repair had been previously collected
- Areas with working valves that allow isolation of a small section of the District for water shutdown
- Roads that had not been repaved by Highway Superintendent within five (5) years

Based on those criteria, initial coupon collection locations were identified as follows:

- 1: Fair Street Between Glenna Dive and Everett Road
- 2: Willow Road between Route 6 and Leaside
- 3: Stoneleigh Avenue between the hospital entrance and Vista
- 4: Hughson Road at the intersection with Kelly Road
- 5: Old Route 6 between the WWTP and the feed to the Everett tank
- 6: Seminary Hill Road near the Willow intersection
- 7: Route 52 across from East Drive

See Figure 5 for the proposed coupon locations. During the summer of 2018 two separate efforts were initiated to collect coupons from these areas within the District. Identified target sites were coordinated with system operator Inframark. Unfortunately, neither effort bore fruit. In the first instance the valving arrangements surrounding the targeted locations were either inadequate or proved inoperable. This situation prevented the extraction of additional coupons without shutting down or draining excessively large sections of the system. The target locations were adjusted to remain representative of the original locations and were marked out again. Again, most of the valve locations proved inadequate to allow for isolation of a small portion of the system. The valve arrangement on the Willow Drive spur was successfully located and operated, yet the pipe was never located near the mark despite excavating to a depth of more than 6 feet. The alternative was to conduct exploratory excavation into a newly paved road without benefit of an accurate mark and the Consulting Engineer decided to abandon the effort. Throughout this period, Inframark made a concerted effort to coordinate all repairs within the district with the Consulting Engineer, and collected coupons during the repair process when possible. By the end of September 2018 repair coupons had been collected from the following locations:

- Everett Road near Fair Street
- Seminary Hill near Church Street
- Hughson Road north of the Kelly Road intersection
- Shoprite Plaza

Plotted against the target coupon collection sites, these locations correspond very closely with locations 1, 4, 6 and 7 as originally targeted. Refer to Figure 6 for comparison of proposed coupon collection sites vs repair coupons actually collected. Location 2 is the Willow Spur site described above where excavation failed to uncover the pipe. Location 3 is near Putnam Hospital Center. Multiple efforts were made to collect a coupon from Stoneleigh Avenue south of Kelly Road. Due to the scarcity of operable valving and the absence of a viable supply loop it was not possible to collect a coupon from Stoneleigh Avenue without cutting off the supply of water to the hospital for an extended period. The effort to cut a coupon at this location was abandoned. Location 5 presented the same issues as Stoneleigh Avenue with regard to valving arrangements and inability to isolate the pipe run. Further, this run is directly downgradient of the Everett Road tank. Failure to isolate the pipe run risked draining the tank; consequently the effort to cut a coupon at this location was also abandoned. Ultimately, the collected coupons, whether intentional or resulting from repairs, were judged to adequately represent the total coupons intended for collection. Photos of all pipe segments collected are shown in Figures 7-12.

### **3.0 FINDINGS AND CONCLUSIONS**

#### **3.1 Findings**

- 3.1.1 The coupons taken from across the district demonstrate significant consistency regardless of the location from which they were taken. Figures 7, 8, 9 and 11 are of unlined pipe and demonstrate varying degrees of tuberculation or sedimentation. Figures 10 and 12 are of lined pipe and demonstrate no tuberculation or sedimentation.
- 3.1.2 All of the unlined pipe coupons demonstrate varying degrees of tuberculation and sedimentation. Significantly, the tuberculation is uniformly built up on the interior of the pipe wall of every sample taken. Nowhere in the inventory of samples do the pipe walls show any indication of deterioration resulting from chemical reactions. The tuberculated pipe segments show no visible sign of erosion or other reduction of the pipe wall thickness. The primary purpose of this investigation was to determine the fitness of the existing iron pipe to withstand the impact of reaming out the tuberculation and leaving an adequate pipe wall to withstand continued operational pressure in the distribution system. To confirm the visual observations, pipe wall thickness was measured using a digital micrometer and compared to the specified wall thickness. Table 1 provides the results of these measurements. Based on these measurements, all the 6" pipe appears to be Class 54-56, and the 10" pipe appears to be Class 56.

<b>TABLE -1</b>									
<b>PIPE WALL DIMENSIONS</b>									
<b>Specified Pipe Wall Thickness*</b>								<b>Casting Tolerance*</b>	
	CL 50	CL 51	CL52	CL 53	CL54	CL55	CL56	4"-8"	10"-12"
<b>Six Inch (6")</b>	<b>0.25</b>	<b>0.28</b>	<b>0.31</b>	<b>0.34</b>	<b>0.37</b>	<b>0.4</b>	<b>0.43</b>	<b>0.05</b>	<b>0.06</b>
<b>Ten Inch (10")</b>	<b>0.29</b>	<b>0.32</b>	<b>0.35</b>	<b>0.38</b>	<b>0.41</b>	<b>0.44</b>	<b>0.47</b>		
<b>Measured Pipe Wall Thickness</b>									
<b>Gleneida Ridge Road 6"</b>	<b>1</b>	<b>2</b>	<b>3</b>						
Pipe Section 1	0.403	0.416	0.443						
Pipe Section 2	0.390	0.413	0.401						
Pipe Section 3	0.417	0.457	0.410						
Pipe Section 4	0.405	0.430	0.441						
<b>Collier Drive 6"</b>									
Pipe Section 1	0.441	0.434	0.414						
Pipe Section 2	0.414	0.409	0.398						
Pipe Section 3	0.409	0.430	0.423						
<b>Tower Drive 6"</b>									
Pipe Section 1	0.400	0.397	0.411						
Pipe Section 2	0.455	0.408	0.423						
<b>Seminary Hill Road 10"</b>									
Pipe Section 1	0.485	0.528	0.538						
Pipe Section 2	0.532	0.518	0.502						
<b>Everett Road 6"</b>									
Pipe Section 1	0.435	0.432	0.452						
* American Cast Iron Pipe Company									



3.1.3 Valving arrangements and operability throughout the District proved insufficient for the purpose of isolating reasonable areas for collecting coupons from targeted locations. This inability to isolate specific areas of the system translates into larger areas of the district than necessary being shut down during routine maintenance or repair work.

3.1.4 Putnam Hospital Center is isolated at the end of a single main. There is no alternative loop to feed water to the hospital south of the intersection of Stoneleigh Avenue and Interlochen Road.

3.1.5 The backlot main between Hughson Road and Stoneleigh Avenue bypasses Kelly Road and is subject to frequent breakage.

### 3.2 Conclusions

3.2.1 Where lined cast or ductile pipe exists in the system there is no need for pipe rehabilitation.

3.2.2 Where unlined cast or ductile iron pipe exists in the system it is capable of withstanding the cleaning operation. Unlined iron pipe of either type should be rehabilitated or replaced.

3.2.3 A valve replacement/insertion program should be considered in parts of the District that otherwise don't need repairs.

3.2.4 An alternate supply line to Putnam Hospital Center should be installed to ensure uninterrupted supply.

3.2.5 The backlot main between Hughson Road and Stoneleigh Avenue should be abandoned in favor of a new main.

## 4.0 RECOMMENDATIONS

4.1 Rehabilitate unlined CI/DI mains using cementitious lining techniques. Table 2 identifies the roads and estimated footages of pipe recommended for lining.

<b>TABLE-2</b>	
<b>ESTIMATED PIPE FOOTAGE</b>	
<b>ROAD NAME</b>	<b>LENGTH OF PIPE (LF)</b>
Circle Drive North	588
Collier Drive	786
Collier Drive East/West	3,229
Cross Road/Lakeview Road	4,530
East Drive	531
Everett Road	4,165
Fair Street	4,177
Fowler Avenue	1,262
Garrett Place	400
Hillside Place	1,100
Hughson Road	403
Kelly Road	1,100
Kelly Ridge Road	3,111
Leeside Road	765
Lindy Drive	1,691
North Drive	955
Old Route 6	3,727
Old Route 6 to Everett Road Tank	1,700
Old Town Road	400
Peterson Road	500
Raymond Drive	528
Ridge Road	1,800
Seminary Hill Road	3,572
St. Michael's Terrace	610
Sunnycrest Road	875
Sunset Ridge	2,460
Tower Road	1,214
Vink Drive	1,681
Willow Road and Spur	3,374
Woodland Trail	731
<b>Total</b>	<b>51,965</b>

- 4.2 Install a supplemental main from Hughson Road to Stoneleigh Avenue and south along Stoneleigh Avenue to the entrance of Putnam Community Hospital.
- 4.3 Implement a valve replacement/installation program where water main rehabilitation is not otherwise recommended. Per the 10 State Standards, valve spacing in commercial districts should not exceed 500 feet; in residential or other areas valve spacing should not exceed 800 feet.

## **5.0 DESCRIPTION OF THE WORK AND COST ESTIMATES**

### **5.1 Water Main Rehabilitation by Pipe Lining**

The pipe lining process follows several steps. Temporary water supply, including temporary hydrants, is laid at grade, disinfected and connected to the home either at the outside hose bib or inside the home ahead of the meter. Connection at the hose bib is less expensive but typically bypasses the meter, foregoing billing for water consumption for the duration of construction as a result. Once the temporary supply is installed the water main is exposed and cut for purpose of entry. This is typically done either at existing valves or every 500 feet. Approximately 5 feet of pipe is removed and the run is reamed out from that entry point. Upon completion of the reaming the pipe is flushed and lined with a cementitious coating. After curing, a new valve or a replacement pipe section is installed and the process is repeated until the area under contract is completed. The newly rehabilitated mains are then pressure tested and disinfected much the same way new water mains are tested and disinfected. Upon completion of testing/disinfection the results are presented to the Health Department for approval. Once the mains are approved services are then reinstated and the system is returned to service.

Consultation with contractors indicates that production rates of 1000 LF of lining per week are achievable. Typical production season lasts from April-October in our area. Projects ranging from 8000-12000 LF of main are recommended in order to attract the maximum number of bidders possible. Larger projects tend to attract only the largest contractors, limiting competition. Typical bid costs range from \$125-\$150 per foot of pipe rehabilitated. Variables affecting bid costs include temporary water supply, number of temporary hydrants, number of service connections, amount of asphalt concrete restoration, and maintenance and protection of traffic requirements.

Figure 13 shows the areas recommended for rehabilitation. Table-3 presents the work in  $\pm$  10,000 LF projects. The total footage recommended for lining is 51,965 LF. For estimating purposes, the quantity of 52,000 LF shall be used. At an estimated cost of \$125 - \$150 per linear foot, the estimated cost to the District to line the recommended mains ranges from \$6,500,000.00 - \$7,800,000.00.

<b>TABLE-3</b>						
<b>RECOMMENDED LINING PROJECTS</b>						
<b>Road</b>	<b>No. of Feet</b>	<b>Project 1</b>	<b>Project 2</b>	<b>Project 3</b>	<b>Project 4</b>	<b>Project 5</b>
Circle Drive North	588	X				
Collier Drive	786	X				
Collier Drive East/West	3,229	X				
Cross Road/Lakeview Road	4,530					X
East Drive	531	X				
Everett Road	4,165		X			
Fair Street	4,177			X		
Fowler Avenue	1,262	X				
Garrett Place	400			X		
Hillside Place	1,100		X			
Hughson Road	403					X
Kelly Road	1,100					X
Kelly Ridge Road	3,111		X			
Leeside Road	765				X	
Lindy Drive	1,691				X	
North Drive	955	X				
Old Route 6	3,727					X
Old Route 6 to Everett Road Tank	1,700		X			
Old Town Road	400				X	
Peterson Road	500					X
Raymond Drive	528			X		
Ridge Road	1,800			X		
Seminary Hill Road	3,572				X	
St. Michael's Terrace	610		X			
Sunnycrest Road	875				X	
Sunset Ridge	2,460	X				
Tower Road	1,214				X	
Vink Drive	1,681			X		
Willow Road and Spur	610				X	
Woodland Trail	875			X		
<b>Total</b>		9,811	10,686	9,465	9,127	10,260

## 5.2 New and Supplemental Water Mains

A new main connecting Hughson Road to Stoneleigh Avenue and extending south to the Hospital is recommended in order to ensure uninterrupted supply to the Hospital. This entails new construction in Town and County Roads. The distance is approximately 7700 LF.

Recent bids in the Town for new water main construction range from \$140.00 to \$360.00 per linear foot. Recent bids in other communities around Putnam County range from \$175.00 to \$315.00 per linear foot. All of these bids are conventional water main construction projects that include house services. This main is intended to supplement the existing main supplying the Hospital. As such, it does not include hydrants, significant valving, or service connections. While these conditions mitigate cost, nearly eighty percent (80%) of the construction is in a County highway. Putnam County requires backfill with Controlled Low Strength Material (K-Crete), a much more expensive material than standard aggregate backfill. Consequently, a cost of \$225.00 - \$250.00 per linear foot will be used. On this basis, the estimated cost to the District to construct the recommended main is between \$1,732,500.00 - \$1,925,000.00.

## 5.3 Valve Installation

As stated above, the 10 State Standards require valve spacing in commercial districts of 500 feet and spacing of 800 feet elsewhere. Since the rehabilitated areas will receive new valves as part of the lining process, the remaining watermain footage in the District should be considered for valve replacement or insertion as necessary. Inframark conducts annual valve operation tests on approximately 20 percent of the valves in the system. Historically, inoperable valves have been replaced through a system of planned operating expenses. This has proven less than optimal. One year of 100% testing of the valves in areas not planned for rehabilitation should be undertaken by Inframark and replacement of inoperable valves undertaken next year. A count of the mapped valves in areas not planned for lining rehabilitation yields a total of 100 valves. A reasonable planning factor for capital budget purposes is the replacement of approximately 50% of the existing valves and the insertion of 25% of the total to improve operational characteristics of the system. This yields an estimated total of approximately 75 valves requiring replacement or insertion into the system. Gate valves installed as part of new construction have recently been bid between \$1,800.00 - \$2,500.00 each. Replacement of existing valves requires a process similar to coupon removal plus the valve installation. The process of system isolation, maintenance & protection of traffic, excavation, installation, and restoration of the road can be expected to cost an between \$8,000.00 to \$10,000.00 per valve. The total estimated cost for the valve replacement/insertion program is therefore estimated to range from \$600,000.00 to \$750,000.00.

## 5.4 Program Cost Estimates

Table-4 presents estimated project costs for system-wide upgrades to the Carmel Water District No. 2 Distribution System. Clearly, the project types require different contractors. Professional services and construction contract considerations are as follows:

- 5.4.1 The rehabilitation by lining can be awarded as a single professional services contract for the preparation, bidding and execution of five (5) separate construction contracts to be bid separately.
- 5.4.2 The supplemental watermain in Hughson Road/Stoneleigh Avenue can be awarded as a single professional services contract for the preparation, bidding and execution of a single construction contract.
- 5.4.3 The valve installation program can be awarded as a single professional services contract for the preparation, bidding and execution of a single construction contract.

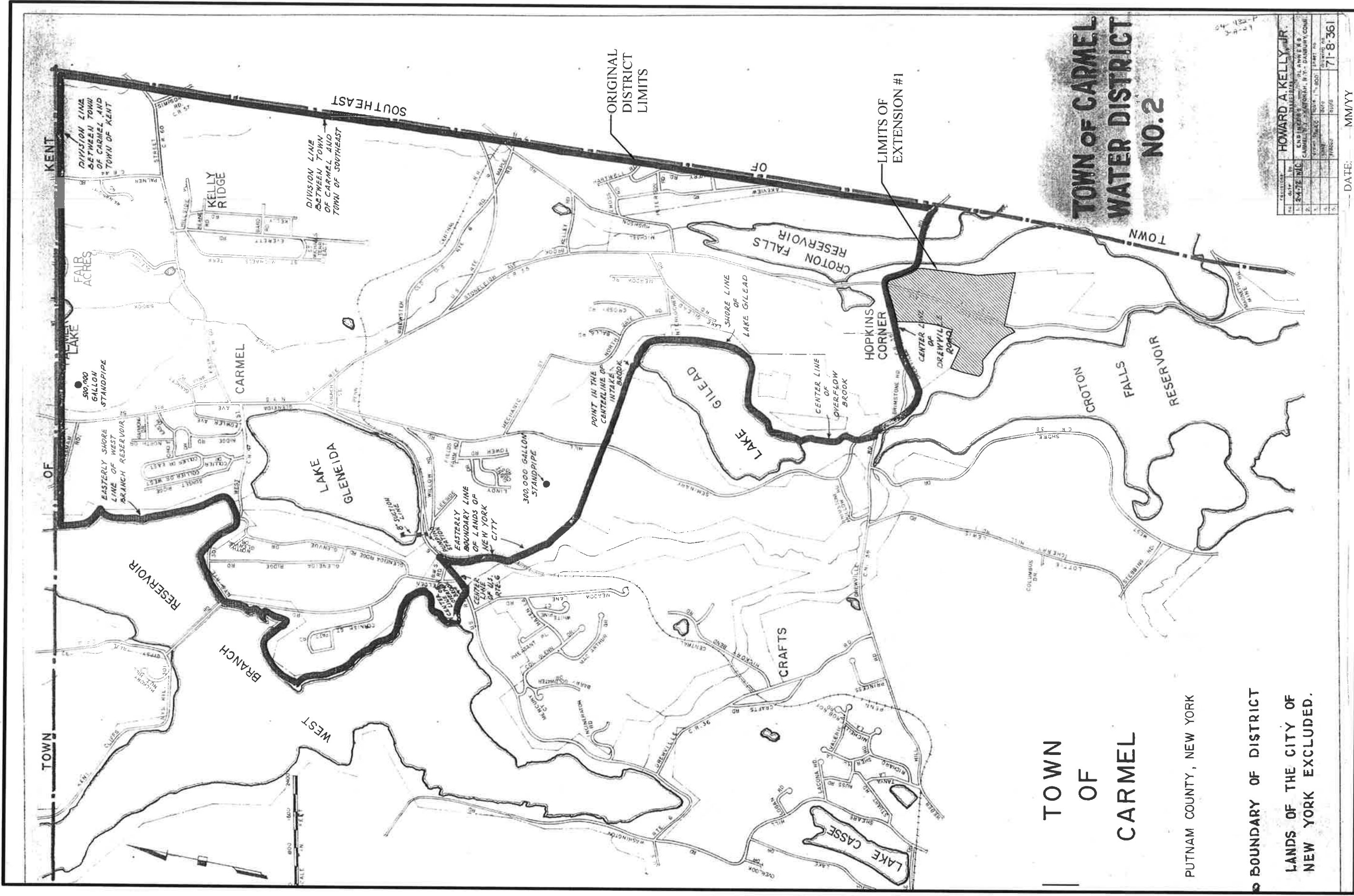
<b>TABLE-4</b>					
<b>ESTIMATED PROJECT COSTS</b>					
<b>Project</b>	<b>Estimated Quantity</b>	<b>Estimated Unit Cost per Linear Foot</b>		<b>Estimated Project Cost Range</b>	
<b>Rehabilitation by Lining</b>					
Lining Project 1	9811 LF	\$125.00	\$150.00	\$1,226,400.00	\$1,471,700.00
Lining Project 2	10686 LF	\$125.00	\$150.00	\$1,335,800.00	\$1,602,900.00
Lining Project 3	9461 LF	\$125.00	\$150.00	\$1,182,700.00	\$1,419,200.00
Lining Project 4	9127 LF	\$125.00	\$150.00	\$1,140,900.00	\$1,369,000.00
Lining Project 5	10260 LF	\$125.00	\$150.00	\$1,282,500.00	\$1,539,000.00
<b>Supplemental Water Main</b>					
Hughson Road/Stoneleigh Avenue to Putnam Hospital	7700 LF	\$225.00	\$250.00	\$1,732,500.00	\$1,925,000.00
<b>Valve Installation Program</b>	75 EA.	\$8,000	\$10,000.00	\$600,000.00	\$750,000.00
<b>Sub-Total</b>				\$8,500,500.00	\$10,076,800
<b>Contingency @ 15%</b>				\$1,275,120.00	1,511,500.00
<b>Engineering/Bond/Legal @17%</b>				\$1,445,140.00	\$1,713,100.00
<b>Estimated Total</b>				\$11,221,060.00	\$13,301,400.00

## FIGURES



FIGURE-1

Carmel Water District No. 2 District Limits



**TOWN OF CARMEL**

PUTNAM COUNTY, NEW YORK

**BOUNDARY OF DISTRICT LANDS OF THE CITY OF NEW YORK EXCLUDED.**

**TOWN OF CARMEL WATER DISTRICT NO.2**

DATE: MM/YY	
1	24-72 W.C.
2	EXHIBIT 1, PLANNED
3	CARMEL, N.Y. - DAQUIBIA CON
4	SCALE: 1"=2000'
5	DATE: 7-18-36

NO.	BY	DATE	REMARKS

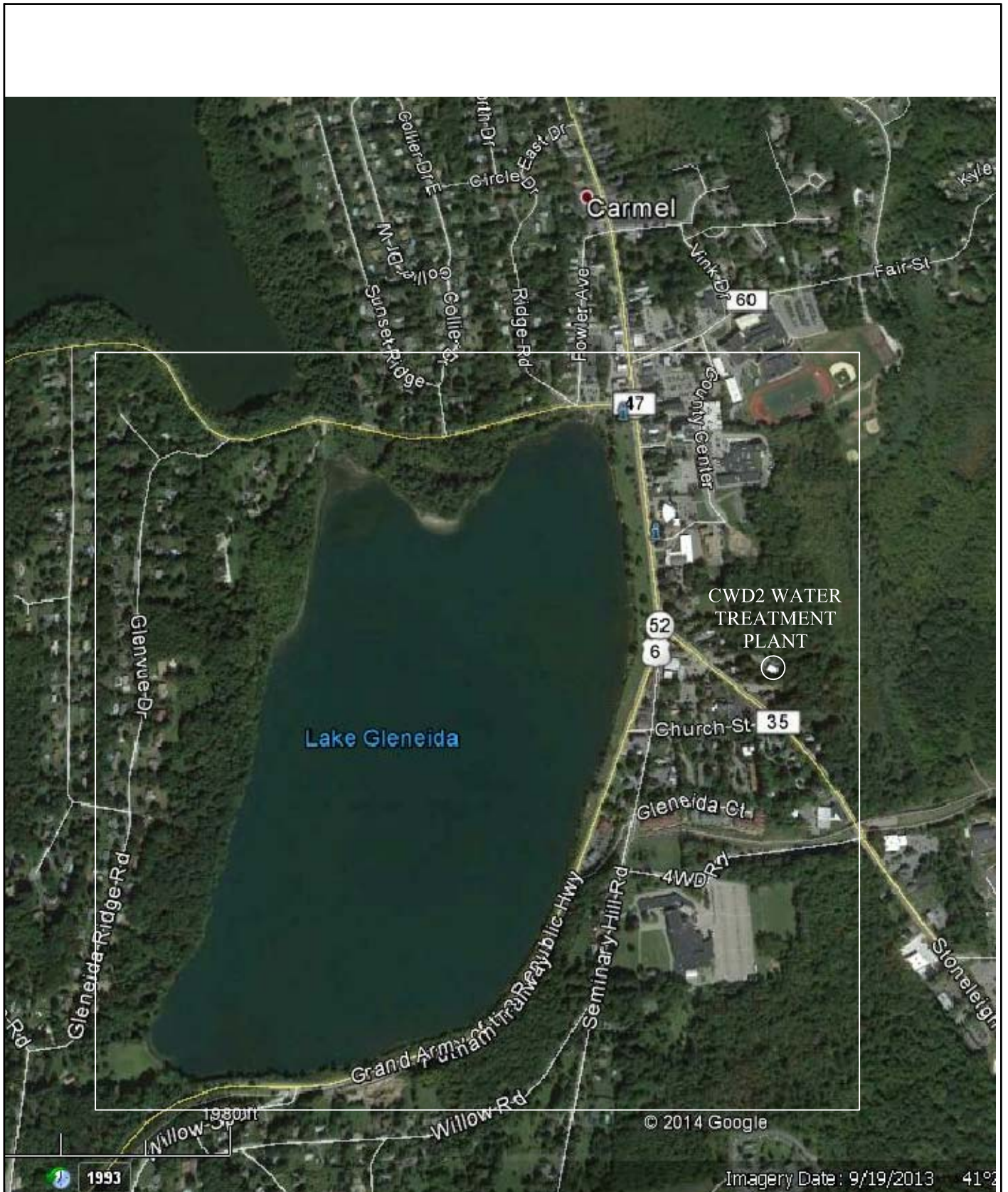
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TOWN OF CARMEL WATER DISTRICT No. 2 DISTRICT LIMITS

FIGURE: 1  
 SCALE: 1"=2000'  
 DWG. NO. 1

FIGURE-2

Water Treatment Plant Location Map



J  
R  
F  
A

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BREWSTER, NY 10509  
845-363-1560

LAKE GLENEIDA AND  
CWD2 TREATMENT PLANT

FIGURE: 2

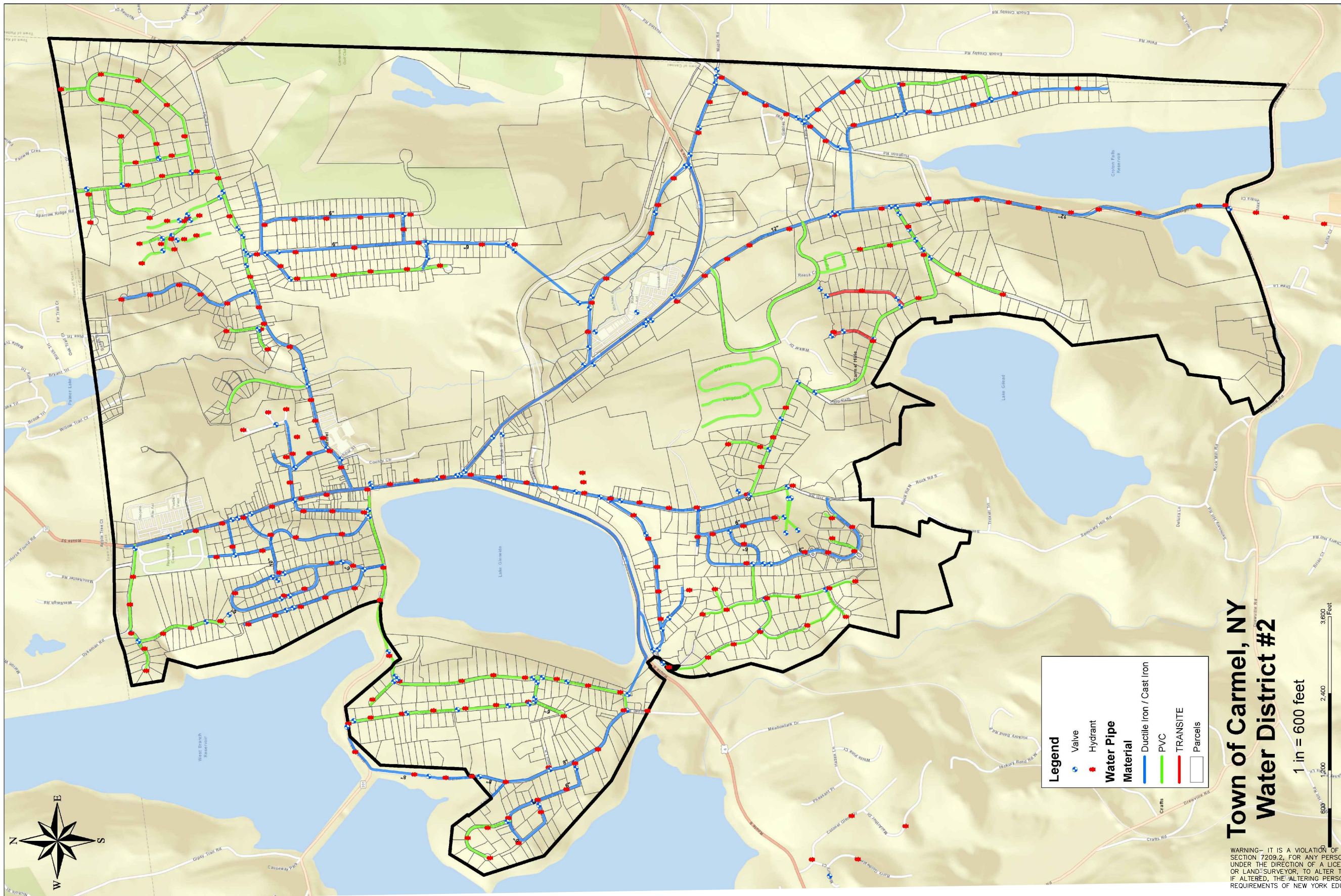
SCALE: 1" = 800'

DWG. NO. \_\_\_\_\_

FIGURE-3

Watermain Type and Location





**Legend**

- Valve
- Hydrant

**Water Pipe Material**

- Ductile Iron / Cast Iron
- PVC
- TRANSITE
- Parcels

**Town of Carmel, NY  
Water District #2**

1 in = 600 feet



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REVISIONS			
NO.	BY	DATE	REMARKS

DES. \_\_\_\_\_  
 DWG. \_\_\_\_\_  
 CHK. \_\_\_\_\_

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TOWN OF CARMEL  
 PUTNAM COUNTY, NEW YORK  
**WATER DISTRICT No. 2**

**FIGURE 3**  
**WATERMAINS, VALVES & HYDRANTS**  
 N.T.S.

JRFA  
 DATE   MAY 2018    
 G SHEET      OF       
 DWG. NO.

FIGURE-4

Tuberculated Main Segment



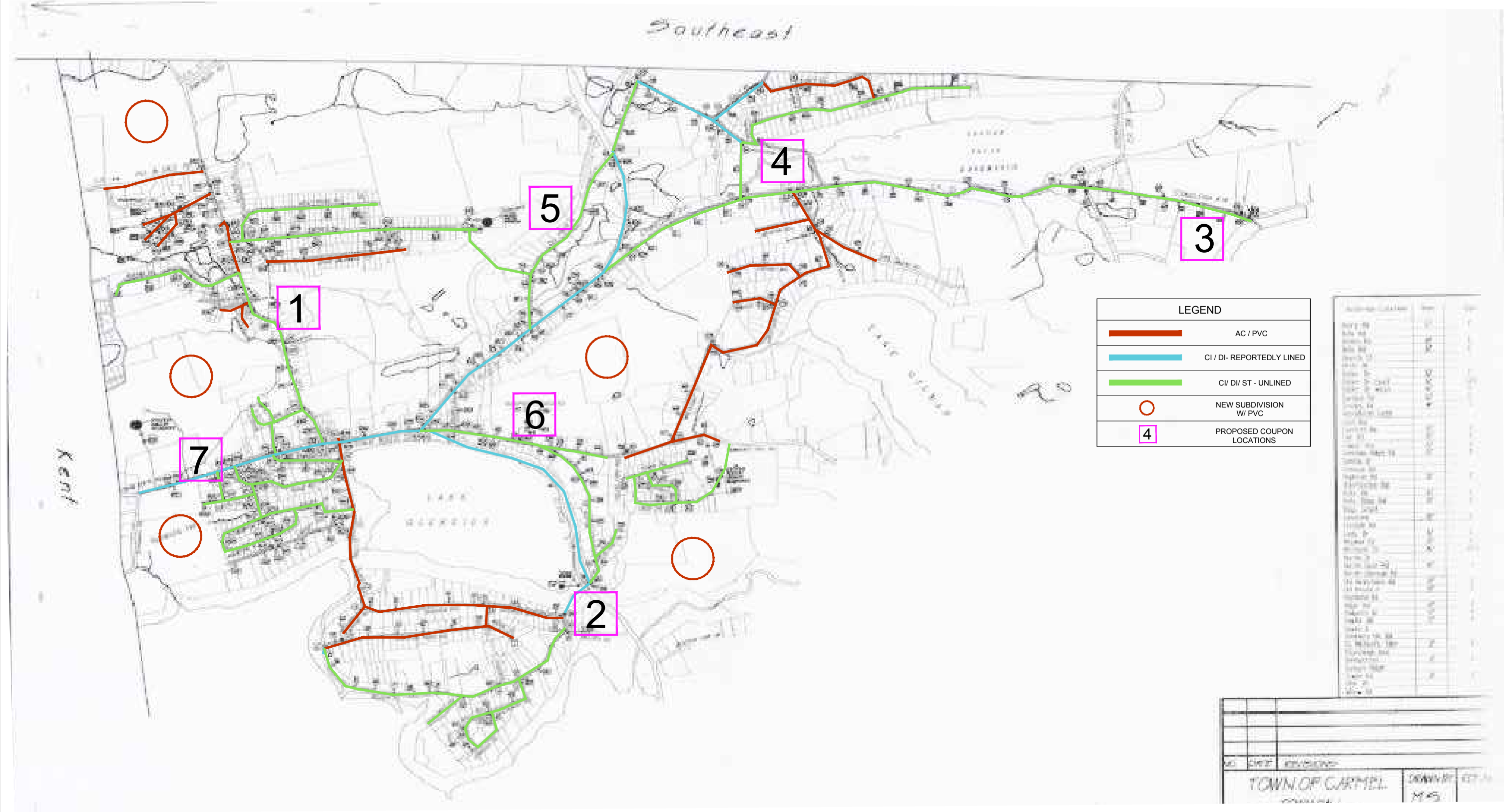


FIGURE 4  
TUBERCULATED MAIN SEGMENT



FIGURE-5

Proposed Coupon Locations



LEGEND	
	AC / PVC
	CI / DI- REPORTEDLY LINED
	CI / DI/ ST - UNLINED
	NEW SUBDIVISION W/ PVC
	PROPOSED COUPON LOCATIONS

NO.	DATE	BY	REVISIONS

REVISIONS			
NO.	BY	DATE	REMARKS

DES. \_\_\_\_\_  
 DWG. \_\_\_\_\_  
 CHK. \_\_\_\_\_

J  
R  
F  
A

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TOWN OF CARMEL  
 PUTNAM COUNTY, NEW YORK  
 WATER DISTRICT No. 2

FIGURE 5  
**PROPOSED COUPON LOCATIONS**  
 N.T.S.

JRFA  
 DATE MAY 2018  
 G SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 DWG. NO. \_\_\_\_\_

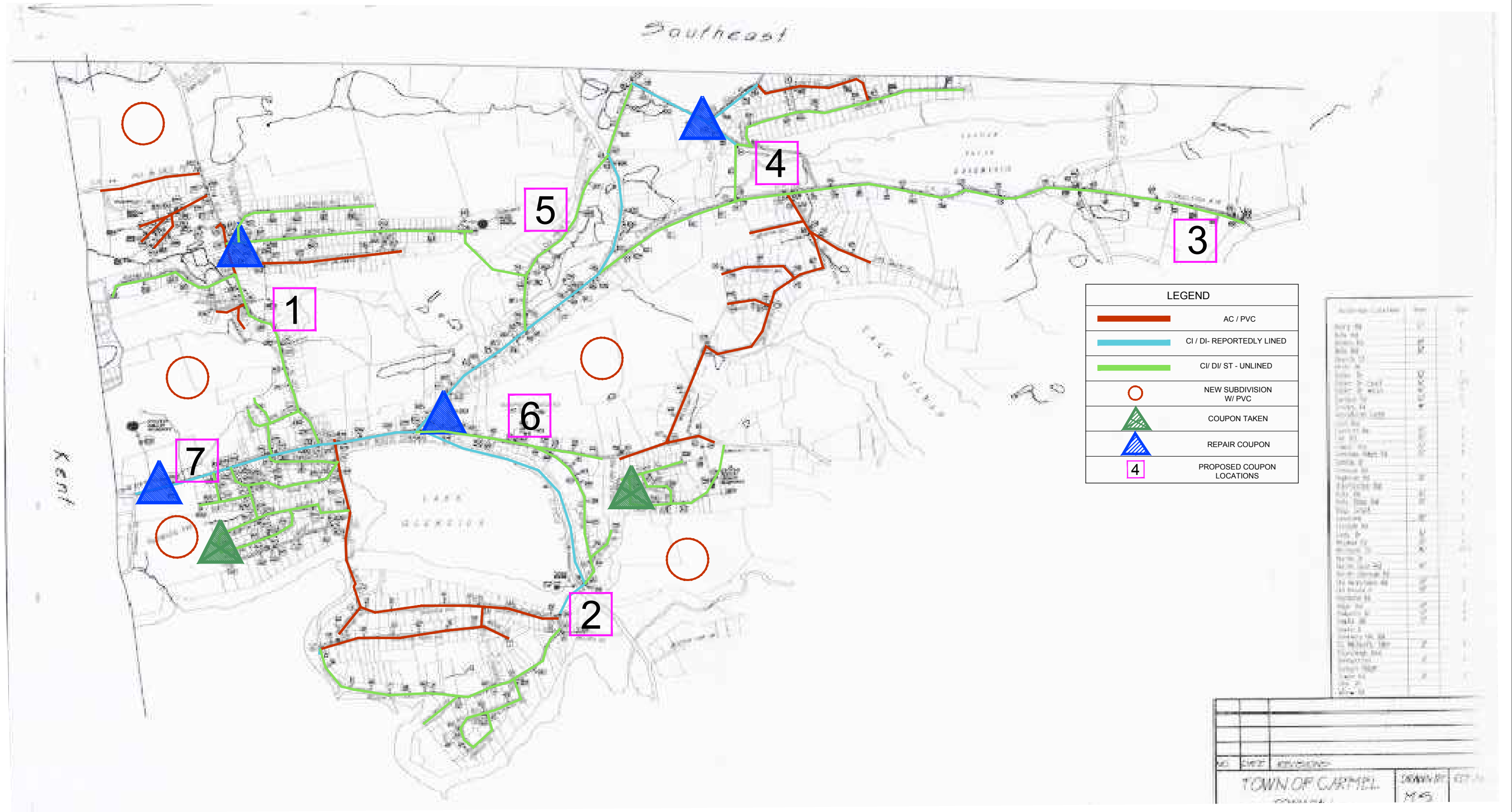
WARNING-- IT IS A VIOLATION OF NEW YORK EDUCATION LAW, SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW, SECTION 7209.2

**FIGURE-6**

**Actual Coupon Locations**



SouthEast



LEGEND	
	AC / PVC
	CI / DI- REPORTEDLY LINED
	CI / DI / ST - UNLINED
	NEW SUBDIVISION W/ PVC
	COUPON TAKEN
	REPAIR COUPON
	PROPOSED COUPON LOCATIONS

NO.	DATE	REVISIONS

NO.	DATE	REVISIONS

WARNING- IT IS A VIOLATION OF NEW YORK EDUCATION LAW, SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW, SECTION 7209.2

REVISIONS			
NO.	BY	DATE	REMARKS

DES. _____
DWG. _____
CHK. _____

*JRF*  
**J. ROBERT FOLCHETTI & ASSOCIATES, L.L.C.**  
 CIVIL / ENVIRONMENTAL ENGINEERS  
 www.jrfa.com  
 31 SODOM ROAD  
 BREWSTER, NY 10509  
 845-363-1560

TOWN OF CARMEL  
 PUTNAM COUNTY, NEW YORK  
 WATER DISTRICT No. 2

FIGURE 6  
**ACTUAL COUPON LOCATIONS**  
 N.T.S.

JRFA  
 DATE    MAY 2018     
 G SHEET    OF     
 DWG. NO.

FIGURE-7

Collier Drive





FIGURE-7  
COLLIER DRIVE



FIGURE-8

Tower Road





FIGURE-8  
TOWER ROAD



FIGURE-9

Everett Road



# Intersection of Everett Rd. And Kelly Ridge



FIGURE-9  
EVERETT ROAD



FIGURE-10

Hughson Road





10" Ductile Water  
main in front of  
Hughson commons

FIGURE-10  
HUGHSON ROAD



FIGURE-11

Seminary Hill Road





FIGURE-11  
SEMINARY HILL ROAD



FIGURE-12

ShopRite



FIGURE-12  
SHOPRITE



FIGURE-13

Recommendations for Repair of Existing Watermains



Southeast



LEGEND	
	RECOMMEND LINING
	RECOMMEND SUPPLEMENTAL MAIN

NO.	DATE	BY	REVISIONS

TOWN OF CARMEL	DRAWN BY: [Signature]
	DATE: MAY 2018

WARNING- IT IS A VIOLATION OF NEW YORK EDUCATION LAW, SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW, SECTION 7209.2

REVISIONS			
NO.	BY	DATE	REMARKS

DES. \_\_\_\_\_  
 DWG. \_\_\_\_\_  
 CHK. \_\_\_\_\_

**J R F A**  
**J. ROBERT FOLCHETTI & ASSOCIATES, L.L.C.**  
 CIVIL / ENVIRONMENTAL ENGINEERS  
 www.jrfa.com  
 31 SODOM ROAD  
 BREWSTER, NY 10509  
 845-363-1560

TOWN OF CARMEL  
 PUTNAM COUNTY, NEW YORK  
 WATER DISTRICT No. 2

**FIGURE 13**  
**RECOMMENDATIONS FOR REPAIR**  
**OF EXISTING WATERMAINS**  
 N.T.S.

DATE: MAY 2018  
 G SHEET \_\_\_\_ OF \_\_\_\_  
 DWG. NO. \_\_\_\_\_

## APPENDICES

APPENDIX A

Town Board Resolutions Forming and Extending

Carmel Water District #2

APPENDIX A.1

Town of Carmel Town Board  
Resolution Forming Carmel Water District No. 2

Dec 31 1935

Meeting of the Town Board held in the Town Hall, Mahopac, N.Y.

Meeting was called to order by the Supervisor.

The following members were present Fred H. Smith, James C. Kanong, William A. Mead, Clayton C. Mason, Orson H. Ryoff, Harry M. Barnett.

The reading of the minutes of the previous meeting were omitted.

Supervisor Smith explained that the purpose of the meeting was to give the people a chance to voice their sentiments either in favor or against the establishment of the Canal Water District.

The Supervisor asked Attorney Klobb to file the necessary petition, consent of Rose Oakman, affidavit of the Supervisor, proof of posting notice of hearing, proof of mailing notices to all Public Service Corporations, and publication of notice of hearing.

Upon motion which was carried all papers were accepted and filed with the Town Clerk.

Attorney Klobb explained in detail the legal end of the proposed district.

Engineer Smith explained in detail the engineering factors, also matters of finance, health and fire protection in regard to the proposed district.

Supervisor Smith asked those who wished to oppose the formation of the district to state their views first.

Supervisor Smith asked those who were in favor of the district to state their views.

Supervisor Smith called for a standing vote, those opposed to stand first and those in favor to stand last.

The result was a unanimous vote in favor of the district.

Letter received from the N.Y.C. Railroad Co. in protest against the proposed water district

over.

Certification of assessment within and outside of the proposed water district received from the Board of Assessors.

Mr. Kemp asked that the district be extended to cover his property, and also that of Mr. Herrobach.

The Determination and order was received and upon resolution which was carried it was approved and ordered filed with the Town Clerk.

Upon resolution which was carried J. Wilbur Irish and Bradford Kloss were appointed to take care of the engineering and legal matters pertaining to the water district.

Upon motion which was carried the Town Board voted to establish the water district as soon as possible.

Resolution authorizing for bids was passed by the Town Board.

Resolution accepting Government offer of aid was also passed by the Board.

Upon motion, the meeting adjourned  
Harry M. Bennett, Clerk.

EXTRACTS FROM THE MINUTES OF A (REGULAR) (SPECIAL) MEETING OF THE Town Board  
of Town of Carmel, HELD ON THE 31<sup>st</sup> DAY OF December, 1935

A special meeting of the \_\_\_\_\_ of \_\_\_\_\_  
held pursuant to the preceding call of the \_\_\_\_\_, was held on the \_\_\_\_\_ day  
of \_\_\_\_\_, 19\_\_\_\_.

A regular meeting of the Town Board of Town of Carmel  
was held on the 31<sup>st</sup> day of December, 1935.

The meeting was called to order by Fred H. Smith, Supervisor of Town of Carmel and  
Chairman of Town Board of Town of Carmel and on roll call the following

answered present: Orron H. Lyars, William A. Mead, Clayton C.  
Wixson, Janett C. Ganong, Fred H. Smith

The following were absent: None

After discussion of the offer of the United States of America to aid by way of loan and grant in financing  
the construction of a waterworks system and the purchase of land therefor  
the following Resolution, numbered Two, and entitled "A RESOLUTION ACCEPTING THE OFFER OF THE  
UNITED STATES TO AID BY WAY OF LOAN AND GRANT IN FINANCING THE CONSTRUCTION OF a waterworks system  
and the purchase of land therefor" was proposed by Orron H. Lyars, and  
read in full:

RESOLUTION NO. TWO

A RESOLUTION ACCEPTING THE OFFER OF THE UNITED STATES TO THE Town of  
Carmel TO AID BY WAY OF LOAN AND GRANT IN FINANCING THE CON-  
STRUCTION OF a waterworks system and the purchase of land therefor.

Be it resolved by the Town Board of Town of Carmel

SECTION 1. That the offer of the United States of America to the Town of Carmel  
to aid by way of loan and grant in financing the construction of a waterworks system and  
the purchase of land therefor,

a copy of which offer reads as follows:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



APPENDIX A.2

Town of Carmel Town Board  
Resolution for the Extension of Carmel Water District 2

Cont.

**PART III—DETERMINATION OF SIGNIFICANCE (To be completed by Agency)**

**INSTRUCTIONS:** For each adverse effect identified above, determine whether it is substantial, large, important or otherwise significant. Each effect should be assessed in connection with its (a) setting (i.e. urban or rural); (b) probability of occurring; (c) duration; (d) irreversibility; (e) geographic scope; and (f) magnitude. If necessary, add attachments or reference supporting materials. Ensure that explanations contain sufficient detail to show that all relevant adverse impacts have been identified and adequately addressed.

Check this box if you have identified one or more potentially large or significant adverse impacts which MAY occur. Then proceed directly to the FULL EAF and/or prepare a positive declaration.

Check this box if you have determined, based on the information and analysis above and any supporting documentation, that the proposed action WILL NOT result in any significant adverse environmental impacts AND provide on attachments as necessary, the reasons supporting this determination:

CARMEL TOWN BOARD  
Name of Lead Agency

FRANK J. DEL CAMPO  
Title of Type Name of Responsible Officer in Lead Agency

[Signature]  
Signature of Responsible Officer in Lead Agency

[Signature]  
Signature of Preparer (if different from responsible officer)

12/29/98  
Date

2

**C.W.D. #2 - APPROVE EXTENSION #1 (STONELEIGH AVE., HOSPITAL VISTA ON LAKE, ETC.)**

In the Matter of Extension #1 to Carmel Water District #2  
in the Town of Carmel, Putnam County, New York

WHEREAS, the Town Board of the Town of Carmel has previously expressed its intention to expand a water district in said town, known as Carmel Water District #2, pursuant to Article 12-A of the Town Law, and

WHEREAS, the Town Board of the Town of Carmel, Putnam County, New York duly caused a map, plan and report in relation to the expansion of said Water District to be prepared and did cause said map, plan and report to be filed in the Office of the Town Clerk, and

WHEREAS, an order was duly adopted by the Town Board on December 2, 1998, reciting the intention of the Board to expand the district, the improvements proposed, the boundaries of the proposed extension to the district, and the estimated expense thereof, and specifying December 23, 1998 at 7:30 p.m. as the time and the Town Hall, 60 Mc Alpin Avenue, Mahopac, NY in the said Town of Carmel as the place when the said Board would meet to consider the proposed extension to the water district and to hear all persons interested in the subject thereof concerning the same, and

WHEREAS, such order was duly posted and published as required by law, and

WHEREAS, the Water District is to be extended by the addition of fourteen properties; and

WHEREAS, the water main to service said properties currently exists and any properties not currently connected to the system will connect to the existing water distribution system of Carmel Water District #2 at their sole cost and expense; and

WHEREAS, a hearing in the matter was duly held by the Board on the 23rd day of December, 1998 commencing at 7:30 p.m. at the Town Hall, 60 Mc Alpin Avenue, Mahopac, NY in the said Town and discussion upon the matter having been had and all persons desiring to be heard having been duly heard:

NOW THEREFORE, BE IT RESOLVED AND DETERMINED that (a) the Notice of Hearing was published and posted as required by law and is otherwise sufficient; (b) all the property and property owners within the proposed extension to the district are benefitted thereby; (c) all the property and property owners benefitted are included within

Cont .

the limits of the proposed extension to the district; and (d) it is in the public interest to approve Extension #1 to Carmel Water District #2, with its boundaries as defined on the map duly filed in the Town Clerk's Office; and it is further

RESOLVED AND DETERMINED that the expansion of the water district as proposed be approved; that the improvements therein mentioned be acquired and the service therein mentioned be provided for upon the required funds being made available or provided for; and that such Extension #1 to Carmel Water District #2 shall be bounded and described as follows:

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam and State of New York, more particularly bounded and described as follows:

ALL that certain plot, piece or parcel of land with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam and State of New York shown on a certain map entitled "Survey Map of Vista on the Lake Condominium," dated December 30, 1974, made by Richard H. Gorr, Licensed Surveyor, of Mahopac, New York, and filed in Office of the Clerk of the County of Putnam on March 17, 1975 as map No. 1434 (TM#66-2-1)

TOGETHER WITH all roads which abut the premises herein above regardless of whether they were ever improved or dedicated to the Town of Carmel, County of Putnam or any other municipal corporation.

All that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam, State of New York bounded and described as follows:

BEGINNING at a the southwesterly corner of what is known as Hopkins Corners; thence southerly along Stoneleigh Avenue to lands formerly of John Peterson; thence westerly along lands formerly of said Peterson to lands of Burton White; thence northerly along lands of said White to the highway leading westerly from Stoneleigh Avenue; thence easterly along the last mentioned highway to the place of the BEGINNING. (TM#66-2-2)

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam, State of New York bounded and described as follows:

BEGINNING at a point on the Easterly side of the Improved county highway known as Stoneleigh Avenue leading from Carmel to Croton Falls, which point is in the intersection of two stone walls, one stone wall running North and South along the Easterly side of said Stoneleigh Avenue and the Northerly side of another stone wall running East and West separating the premises herein described from lands now or formerly of SHAW: Said point being further described as 145.05 feet on a course South-08-07-05W from the Southwesterly corner of Parcel "A" as shown on a map entitled "Subdivision Plat prepared for Merritt L. Ryder" dated December 9, 1961 and filed in the office of the Clerk of Putnam County on May 23, 1969 as Map No. 1144.

- THENCE,  
Along the Easterly side of Stoneleigh Avenue S-09-58-25W, 415.19'
- THENCE,  
S-10-14-25W 603.15' continuing along the Easterly side of Stoneleigh Avenue.
- THENCE,  
S-10-20-15W, 360.56 continuing along the Easterly side of Stoneleigh Avenue.
- THENCE,  
S-16-56-55W, 551.13 continuing along the Easterly side of Stoneleigh Avenue.
- THENCE,  
S-17-38-00W 44.16' to a point on the Easterly side of Stoneleigh Avenue.
- THENCE, along lands now or formerly RUBIN. S-88-40-20E, 1109.56'
- THENCE, along the Westerly base of the stone wall and lands now or formerly City of New York, N8-13-00W, 800.00'

Cont.

THENCE, continuing along lands now or formerly City of New York. N00-18-15W, 1228.24'.

THENCE, along lands now or formerly YON and lands now or formerly SHAW S90-15-10W, 451.70' to a City monument.

THENCE, N86-03-00W, 125.42 to the point and place of BEGINNING.(TM#66-2-57)

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam, State of New York bounded and described as follows:

BEGINNING at the southeasterly corner of the premises herein conveyed, said corner being distant along the westerly side of Stoneleigh Avenue from the lands now or formerly of Casey North 9° 36' 40" East 127.05 feet and North 10° 28' 50" East 85.87 feet; thence northwesterly along the lands of American Fund for Israel Institution, Inc. North 76° 19' 40" West 225 feet; thence northeasterly parallel to Stoneleigh Avenue North 10° 28' 50" East 175 feet; thence southeasterly South 76° 19' 40" East 225 feet to the westerly side of Stoneleigh Avenue; thence along the westerly side of Stoneleigh Avenue, South 10° 28' 50" West 175 feet to the point and place of beginning.(TM#66.15-1-2)

ALL that certain plot, piece of parcel of land with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam and State of New York shown and designated as Lots #1, #2 and #3 on a certain map entitled "Subdivision Map Prepared for American Fund For Israel Institutions, Inc. and Dr. John Simmons," dated December 22, 1972 and amended December 29, 1972, made by D. Walcott, Licensed Surveyor, of Lake Carmel, New York, and filed in the Office of the Clerk of the County of Putnam on January 12, 1973 as Map. No. 1288, (TM#66.15-1-1, 66.15-1-3, 66.15-1-7)

TOGETHER WITH any and all rights of way as shown on said map;

TOGETHER WITH all roads which abut the premises herein above regardless of whether they were ever improved or dedicated to the Town of Carmel, County of Putnam or any other municipal corporation.

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam, State of New York bounded and described as follows:

BEGINNING at a point on the northeasterly corner of the premises herein described said point being on the westerly side of Stoneleigh Avenue, south of the intersection of the southwesterly corner of Stoneleigh Avenue and Drewville Road, and being distant South 8° 53' 30" West 53.12 feet and South 9° 27' 20" West 415.04 feet from the lands now or formerly of Miller, as measured along the Westerly side of Stoneleigh Avenue; thence along the Westerly side of Stoneleigh Avenue South 9° 27' 20" West 5.51 feet and South 10° 28' 50" West 134.49 feet; thence along lands now or formerly of American Fund for Israel Institutions, Inc. North 79° 31' 10" West 155.60 feet, North 10° 28' 50" East 140.01 feet and South 79° 31' 10" East 155.49 feet to the point and place of beginning, containing one-half acre of land.(TM#66.15-1-6)

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam, State of New York bounded and described as follows:

BEGINNING at a point marked by an iron pin on the westerly side of Stoneleigh Avenue at the northeast corner of lands now or formerly of Holt; RUNNING THENCE along said lands North 84° 49' 36" West 82.08 feet; THENCE along said lands and a stone wall North 85° 40' 46" West 265.33 feet to a point in the stone wall marked by a drill hole; RUNNING THENCE along a stone wall North 7° 05' 24" East 149.92 feet to an iron pin and Drewville Road; RUNNING THENCE along Drewville Road and a stone wall North 68° 48' 22" East 20.70 feet to an iron pin at the southwest corner of lands now or formerly of Padovani;

Cont .

RUNNING THENCE along said lands of Padovani and a stone wall South 82° 59' 54" East 130.05 feet;

RUNNING THENCE along same South 82° 25' 22" East 197.25 feet to an Iron pin and Stoneleigh Avenue;

RUNNING THENCE along the westerly side of Stoneleigh Avenue South 6° 28' 21" West 142.70 feet to the point of BEGINNING. (TM#66.15-1-8)

ALL that certain plot, piece of parcel of land with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam and State of New York shown and designated as Lots #1, #2, and #3 on a certain map entitled "Subdivision Plat Prepared for Merritt L. Ryder," dated January 12, 1971, made by Richard H. Gorr, Licensed Surveyor, of Mahopac, New York, and filed in the Office of the Clerk of the County of Putnam on June 17, 1971 as Map. No. 1232, (TM#66.15-1-16&17, TM#66-2-56)

TOGETHER WITH all roads which abut the premises herein above regardless of whether they were ever improved or dedicated to the Town of Carmel, County of Putnam or any other municipal corporation.

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam, State of New York bounded and described as follows:

BEGINNING at a point in the easterly side of the public highway known as Stoneleigh Avenue in the northwesterly corner of a parcel of land which was conveyed by Merritt L. Ryder to David Shaw and Esther Shaw by deed dated December 19, 1961, and recorded in the Putnam County Clerk's Office in Book 555 of deeds at page 181 on December 20, 1961, and running from said point of beginning along the northerly line of said Shaw lands South 87° 36' 45" East 311.05 feet and South 8° 45' 00" East 102.50 feet to a point in the wall in the northerly line of lands of Putnam Community Hospital, Inc. formerly Samuel Rubin, and running thence along the said wall and the line of said hospital lands North 80° 15' 00" East 227.70 feet to a point in the westerly edge of a wall and the line of lands of the City of New York, and thence along the westerly edge of said wall and said City of New York lands, North 18° 29' 00" West 207 feet, thence leaving said wall and along the line of other lands of Merritt L. Ryder South 79° 36' 12" West 153.858 feet; South 53° 16' 13" West 88.955 feet; North 86° 44' 42" West 194.500 feet and North 47° 29' 05" West 70.695 feet to a point in the road face of the wall and the easterly side line of said Stoneleigh Avenue; thence along the road face of the wall and the easterly side line of said Stoneleigh Avenue, South 10° 28' 10" West 51.43 feet and still running along the road face of the wall and said highway South 8° 07' 05" West 48.57 feet to the point of the beginning. Containing 60204 square feet of land, be the same more or less.

Said parcel also being further described as follows:

ALL that plot or parcel of land situate, lying and being in the Town of Carmel, County of Putnam and State of New York, shown and designated as Parcel "A" on "Subdivision Plat prepared for Merritt L. Ryder..." by Charles W. Carpenter dated December 9, 1961 and filed in the office of the Clerk of the County of Putnam on May 23, 1969 as Map No. 1144. (TM#66.15-1-18)

All that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam, State of New York bounded and described as follows:

BEGINNING at a point on the easterly side of the improved county highway known as Stoneleigh Avenue leading from Carmel to Croton Falls, which point is in the intersection of two stone walls, one stone wall running north and south along the easterly side of said Stoneleigh Avenue and the northerly side of another stone wall, and the other stone wall running east and west separating the premises herein described from lands now or formerly of Samuel Rubin, which point is in the most southwesterly corner of the parcel of land herein described; thence from said point of beginning along the approximate northerly edge of said last mentioned stone wall and along lands now or formerly of Samuel Rubin, South 86° 03' 00" East 125.40 feet to a point; and North 80° 15' 00" East 225.00 feet; thence leaving said stone wall and along other lands of Merritt L. Ryder, North 8° 45' 00" West 102.50 feet

Cont.

to a point; thence still along other lands of Merritt L. Ryder, North 87° 38' 45" West 311.05 feet to a point in the roadface of the stone wall on the easterly side of Stoneleigh Avenue; thence along the roadface of said stone wall along the easterly side of Stoneleigh Avenue; South 8° 07' 05" West 145.00 feet to the point or place of beginning. CONTAINING 1.000 acre of land.(TM#66.15-1-19)

The foregoing property description identifies the following parcels as shown on the Tax Maps of the Town of Carmel as they existed on June 1, 1998:  
Tax Map 66., Block 2 Parcels 1 and 2 inclusive.  
Tax Map 66., Block 2 Parcels 56 and 57 inclusive.  
Tax Map 66.15, Block 1 Lots 1 through 3 inclusive.  
Tax Map 66.15, Block 1 Lots 6 through 8 inclusive.  
Tax Map 66.15, Block 1 Lots 16 through 19 inclusive.

BE IT FURTHER RESOLVED that the costs of expanding the water district including the required water system capital improvements are \$0 and will not be financed by the Water District either by bonds or tax; and

BE IT FURTHER RESOLVED that should any unforeseen costs to expand the Water District be incurred or if the Town Comptroller determines that a contribution towards past capital costs incurred by the District are required to be paid by law, they shall be assessed only to property owners in the extension area on an ad valorem basis; and

BE IT FURTHER RESOLVED, that this resolution shall be subject to a permissive referendum in the manner provided in Article 7 and 12-A of the Town Law.

Resolution

Offered by: Councilman Ravallo

Seconded by: Councilman Marino

<u>Roll Call Vote</u>	<u>YES</u>	<u>NO</u>
Timothy Wilson	<u>x</u>	___
James McDonough	<u>x</u>	___
Norman Marino	<u>x</u>	___
Robert Ravallo	<u>x</u>	___
Frank DelCampo	<u>x</u>	___

C.W.D.#2 IMPROVEMENTS TO DISTRIBUTION SYSTEM AND FACILITIES.  
\$200,000 - SEQRA REVIEW AND DETERMINATION

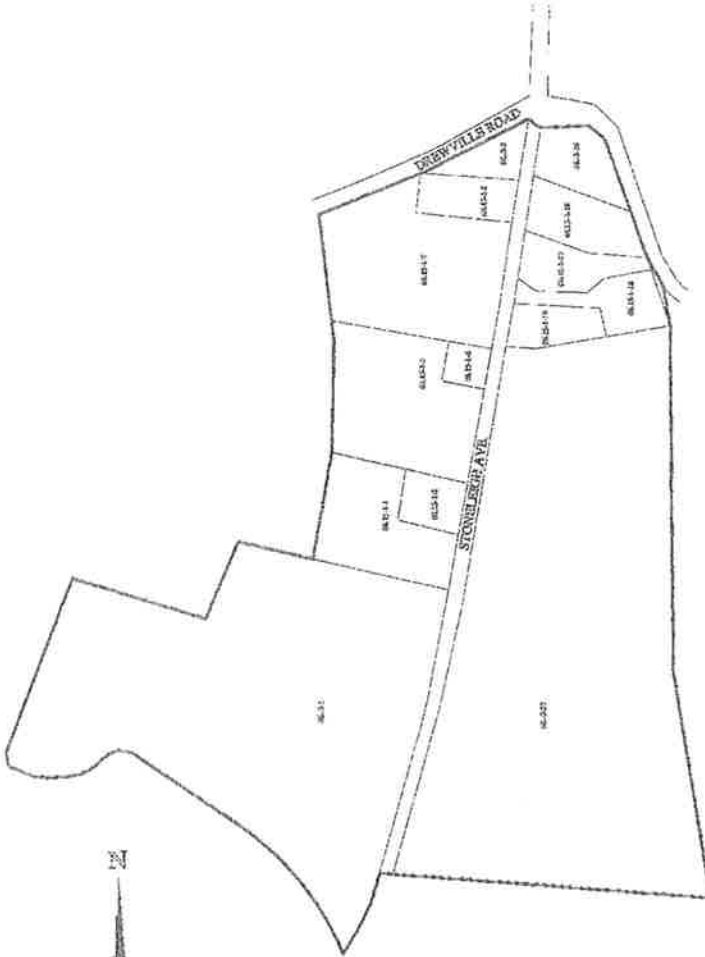
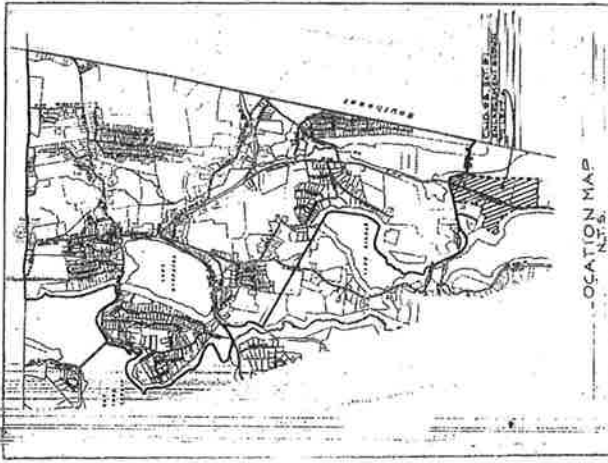
Supervisor DelCampo reviewed the Short Environmental Assessment Form with the Town Board.

RESOLVED, that the Town Board of the Town of Carmel hereby determines after appropriate SEQRA review, environmental assessment form attached hereto and made a part hereof, that the proposed C.W.D.#2 facility improvements will not result in any significant adverse environmental impacts.

Resolution

Offered by: Councilman Marino

Seconded by: Councilmen Ravallo and McDonough



**NOTES**

1. THIS MAP IS MADE OF CAMBRIE TAX MAP NUMBERS 46 AND 65
2. THIS MAP WAS PREPARED BY THE TOWN OF CAMBRIE PLANNING DEPARTMENT
3. THIS MAP SUPPLEMENTS THE TOWN OF CAMBRIE DISTRICT #1 BOUNDARY MAP APPROVED BY THE CAMBRIE TOWN BOARD.

**LEGEND**

EXISTING DISTRICT BOUNDARY	(Symbol: solid line)
DISTRICT EXTENSION	(Symbol: dashed line)

DATE: OCT 10, 1997  
SCALE: 1"=50'



**DISTRICT EXTENSION #1 BOUNDARY MAP**

REV	DATE	DESCRIPTION	BY
1.0	10/10/97	PREPARED BY PLANNING DEPT.	

DISTRICT EXTENSION #1 BOUNDARY MAP

APPROVED BY RESOLUTION OF THE TOWN BOARD OF THE TOWN OF CAMBRIE, HELD ON THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 19\_\_.

TOWN OF CAMBRIE  
TOWN CLERK  
CORPORATE RECORDS

**J. ROBERT FOLCHETTI & ASSOCIATES, L.L.C.**  
*Civil/Environmental Engineering*

---

**31 SODOM ROAD**  
**BREWSTER, NEW YORK 10509**  
**[www.jrfa.com](http://www.jrfa.com)**