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VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

RATE REQUEST

BASED ON THE YEAR ENDED MAY 31, 2013 (BASE YEAR)
FORECAST PERIOD JULY 1, 2014 (EFFECTIVE DATE
OF RATE INCREASE) TO JUNE 30, 2015
Issued March 4, 2014

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

RATE REQUEST

BASED ON THE YEAR ENDED MAY 31, 2013 (BASE YEAR)
FORECAST PERIOD JULY 1, 2014 (EFFECTIVE DATE OF RATE INCREASE) TO JUNE 30, 2015

Issued March 4, 2014

C O N T E N T S

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Exhibit 1

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

FORECASTED STATEMENT OF OPERATIONS
Based on the Year Ended May 31, 2013 (Base Year)

	Base Year May 31, 2013	Normalizing Adjustments	Adjusted Base Year	Rate Year Adjustments	Normalized Rate Year Before Revenue Increase	Revenue Increase Request	Rate Year After Increase	Note Reference
Revenues								
Operating revenues - Base	$ 1,929,631	$ 44,589	$ 1,974,220	$ -	$ 1,974,220	$ 217,052	$ 2,191,272	1
Operating revenues - PPAC	861,787	50,462	912,249	-	912,249	-	912,249	1
Late charges	8,819	-	8,819	-	8,819	-	8,819	1
Miscellaneous operating revenues	(23,090)	-	(23,090)	23,090	-	-	-	1
Total revenues	2,777,147	95,051	2,872,198	23,090	2,895,288	217,052	3,112,340	
Expenses								
Purchased power	1,678,894	18,088	1,696,982	-	1,696,982	-	1,696,982	2.a.
Other Production Costs (recovered by PPAC revenues)								
PSC Assessment, Section 18-a	44,754	-	44,754	-	44,754	-	44,754	2.b.1
NYPA Payments for Electric Drive and Insulation Programs	28,570	25,862	54,432	-	54,432	-	54,432	2.b.1
Transmission Congestion Charges	6,215	-	6,215	-	6,215	-	6,215	2.b.1
Labor, net of capitalized labor	390,143	-	390,143	4,936	395,079	-	395,079	2.b.2
Labor and benefits of new position hire	-	-	-	89,000	89,000		89,000	2.b.3
FICA, medical, retirement, training, workers' compensation, etc.	123,973	-	123,973	30,873	154,846	-	154,846	2.b.4
Contractual/material expenses								
Transmission	2,835	-	2,835	2,496	5,331	-	5,331	2.b.5
Maintenance of poles and fixtures	255	-	255	200	455	-	455	2.b.5
Distribution	27,119	-	27,119	(1,017)	26,102	-	26,102	2.b.5
Street lights	1,563	-	1,563	(812)	751	-	751	2.b.5
Consumer accounting and collection	13,779	-	13,779	(1,372)	12,407	-	12,407	2.b.5
Sales expense	167	-	167	124	291	-	291	2.b.5
Administrative and general	80,206	-	80,206	957	81,163	-	81,163	2.b.5
Insurance	13,749	-	13,749	(1,483)	12,266	-	12,266	2.b.6
PILOT	-	-	-	43,000	43,000	-	43,000	2.b.7
Depreciation	218,544	-	218,544	51,523	270,067	-	270,067	2.b.8
Amortization of Rate Filing Costs	-	-	-	5,767	5,767	-	5,767	2.b.9
Contributions to IEEP (recovered by PPAC revenues)	65,750	121	65,871	-	65,871	-	65,871	2.b.10
Total expenses	2,696,516	44,071	2,740,587	224,192	2,964,779	-	2,964,779	
Operating income (*)	**$ 80,631**	**$ 50,980**	**$ 131,611**	**$ (201,102)**	**$ (69,491)**	**$ 217,052**	**$ 147,561**	
Rate Base	**$ 2,654,639**				**$ 3,221,853**		**$ 3,221,853**	
Rate of Return	**3.04%**				**-2.16%**		**4.58%**	
Return on Surplus	**2.89%**				**-5.04%**		**4.53%**	

(*) Operating income does not include interest income or interest expense.

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Exhibit 1-A

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

SUMMARY OF NORMALIZATION AND RATE YEAR ADJUSTMENTS

<u>Base Year Normalization Adjustments</u>		
a) Operating revenues		
To reflect increase in base revenues due to weather normalization	$	44,589
b) To reflect increase in purchased power due to revenue weather normalization		18,088
c) To adjust PPAC revenues for underbilling of revenues in fiscal year 2013		24,479
d) To increase PPAC revenues for increase in NYPA loan payments, which are passed through the PPAC		25,862
e) To increase PPAC revenues for increase in IEEP contributions, which are passed through the PPAC		121
f) To increase other production costs for increase in NYPA loan payments, which are passed through the PPAC		25,862
g) To increase contributions to IEEP, for anticipated increase in kWh consumption, which are passed through the PPAC		121
Total normalization adjustments	**$**	**50,980**
<u>Rate Year Adjustments</u>		
h) To reflect increase in expensed labor dollars due to anticipated wage increases, net of amounts to be allocated to capital accounts	$	4,936
i) To estimate costs related to hire of new position (Electric Technician), including salary at $60,000 plus benefits totaling $29,000	$	89,000
j) To establish estimated PILOT payment to be made to Village General Fund	$	43,000
k) To reflect net changes in employee benefits due to payroll tax calculation or allocated budgeted or known amounts for shared costs (excludes benefits on new hire)	$	30,873
l) To decrease insurance expense to equal 3 year average with no inflation factor	$	(1,483)
m) To increase depreciation expense for anticipated capital improvements, including significant upgrade to Vossler Substation	$	51,523
n) <u>Contractual/material expenses</u>		
Transmission - 3 year average with no inflation factor	$	2,496
Maintenance of poles and fixtures - 3 year average with no inflation factor		200
Distribution - 3 year average with no inflation factor		(1,017)
Street lights - 3 year average with no inflation factor		(812)
Consumer accounting and collection - 3 year average with no inflation factor		(1,372)
Sales expense - 3 year average with no inflation factor		124
Administrative and general - 3 year average with no inflation factor		957
	$	576
o) To amortize rate filing costs on a straight-line basis (3 year amortization)	$	5,767
p) To adjust miscellaneous operating revenues to zero in the Rate Year	$	(23,090)
Total Rate Year Adjustments	**$**	**201,102**

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Exhibit 2

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

FORECASTED RATE OF RETURN CALCULATION
CAPITALIZATION MATRIX
Based on the Year Ended May 31, 2013,
Adjusted for Rate Year Adjustments and Revenue Increase Request

		Amount	Per-Cent	Cost Rate	Rate of Return
	2013 (Base Year)				
Long-term debt	Exhibit 10	$ 162,500	5.6%	5.53%	0.31%
Customer deposits	Exhibit 10	-	0.0%	0.00%	0.00%
Net surplus	Exhibit 10	2,756,740	94.4%	2.89%	2.72%
Total		**$ 2,919,240**	**100.00%**		**3.04%**
	Rate Year Before Revenue Increase				
Long-term debt	Exhibit 10	$ 1,147,917	29.7%	4.70%	1.40%
Customer deposits	Exhibit 10	-	0.0%	0.00%	0.00%
Net surplus	Exhibit 10	2,714,799	70.3%	-5.04%	-3.56%
Total		**$ 3,862,716**	**100.00%**		**-2.16%**
	Rate Year After Revenue Increase				
Long-term debt	Exhibit 10	$ 1,147,917	29.7%	4.70%	1.40%
Customer deposits	Exhibit 10	-	0.0%	0.00%	0.00%
Net surplus	Exhibit 10	2,714,799	70.3%	4.53%	3.18%
Total		**$ 3,862,716**	**100.00%**		**4.58%**

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VILLAGE OF WELLSVILLE
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SUMMARY OF SIGNIFICANT FORECAST ASSUMPTIONS
Based on the Year Ended May 31, 2013 (Base Year)

NOTE 1 - OPERATING REVENUES

Base Revenues

Sales in kWh increased approximately 2.3% for the fiscal year ended May 31, 2013 (Base Year). This increase in electric consumption was primarily related to the slightly colder winter period experienced during 2012/2013 versus the prior winter. While total consumption rose slightly during the Base Year, consumption declined approximately 2% in the Industrial rate class.

As the increase in kWh consumption was primarily attributable to weather conditions (and not an increase in customers or usage patterns), kWh consumption and related Base Revenues in the Rate Year were calculated using weather normalization formulas discussed in Workpaper A. Weather normalization trends were developed using information included in the National Weather Service Forecast Office website (http://www.erh.noaaa.gov/buf/climate/roc_hdd00s.php) for heating degree days for the ten (10) year period 2003-2013. This data was specific to the Buffalo, New York area.

As the Department experienced minimal growth/decline in its customer base over the last four years, any impact on Base Revenues, as a result of customer growth or decline, has been ignored in this forecast.

Based on the weather normalization calculations described in Workpaper A, Base Revenues during the Rate Year are expected to increase $44,589 (2.31% increase) from the Base Year.

PPAC Revenues

PPAC Revenues represent a “dollar-for-dollar” pass-through of incremental power costs (defined as power costs and other production costs in excess of base purchased power costs). This “dollar-for-dollar” pass-through is reconciled at the end of each fiscal year to identify if any over billing or under billing of PPAC revenues had occurred during the fiscal period. As part of this rate filing, the Department is requesting that it formally prepare a reconciliation after each fiscal year, and recover (or credit) any under billing (over billing) in the subsequent fiscal period.

Assuming the Department will be successful in its request for reconciliation, PPAC revenues were increased for the under billing of PPAC revenues experienced during the Base Year. This under billing totaled $24,479 (see Workpaper D), and will be recovered in the fiscal period subsequent to approval of the rate reconciliation process.

In addition, PPAC revenues were increased for certain other costs that are passed onto the customer as part of the PPAC process. These costs include payments made to the New York Power Authority (NYPA) in connection with the Department’s Insulation Program and contributions made to the Independent Energy Efficiency Program (IEEP). Costs associated with the Insulation Program are expected to increase $25,862 during the Rate Year. Contributions to the IEEP are based on kWh sold, and are expected to increase $121 during the Rate Year. As such, PPAC revenues have been increased by $25,983 as the result of this pass-through.

Base Revenue, Revenue Increase Rate

Increase in Base Revenues (as a result of an 10.7% increase in base rates effective July 1, 2014) requested herein to support operations, capital improvements, annual debt service, establish adequate cash balances, and provide a reasonable rate of return on Rate Base, is expected to total $211,252. Base Revenues in the Rate Year are expected to be $2,185,472 (versus normalized Base Year revenues of $1,974,220).

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VILLAGE OF WELLSVILLE
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SUMMARY OF SIGNIFICANT FORECAST ASSUMPTIONS
Based on the Year Ended May 31, 2013 (Base Year)

NOTE 1 - OPERATING REVENUES - Continued

Other Revenues

Other revenues consist of late charges and, on occasion, miscellaneous electric revenues. These revenue sources, in general, are normally of an insignificant nature. Revenues from late charges have been fairly consistent from year to year, and as such, are expected to be similar to Base Year amounts. Miscellaneous electric revenues have historically been provided by inconsistent sources; as such, miscellaneous electric revenues have been forecasted to be zero in the Rate Year.

NOTE 2 - OPERATING EXPENSES

a. Purchased Power - The cost of electricity purchased for distribution is forecasted to be $1,696,982 during the Rate Year. This forecasted amount is based on actual purchased power costs incurred during the Base Year, adjusted for weather normalization calculations described in Workpaper A. As weather normalization is expected to increase consumption and Base Revenues (Note 1), purchased power is also expected to increase to meet those consumption needs. Increases in purchased power, due to normalization adjustments, are expected to be $18,088 (Workpaper A).

b. *Other Operating Expenses* - Other operating expenses are adjusted as follows:

(1) Other Production Costs (recovered by PPAC revenues)

- PSC Assessment (Section 18-a) costs are passed onto the customers “dollar-for-dollar” via the PPAC process. PSC Assessment costs in the Rate Year are expected to remain similar to those costs experienced in the Base Year, and total $44,754. Because of the “dollar-for-dollar” pass-through, these costs are included in PPAC revenues in the forecasted statement of operations (Exhibit 1).

- Payments to NYPA for the Electric Drive and Insulation Programs are passed onto the customers “dollar-for-dollar” via the PPAC process. Annual payments to NYPA are based on an amortization schedule that began in March 2013 and will terminate in February 2018. Monthly payments, under the terms of the agreement, are $4,536. NYPA payments in the Rate Year are expected to be $54,432, which represents an increase of $25,862 from the Base Year. Because of the “dollar-for-dollar” pass-through, these costs are included in PPAC revenues in the forecasted statement of operations (Exhibit 1).

- Transmission Congestion Charges are an annual contractual charge from the New York Independent System Operator (NYISO). These charges usually remain consistent from year to year, and have totaled $6,215 for each of the past three historical years. Rate Year charges are expected to remain at $6,215. Because of the “dollar-for-dollar” pass-through, these costs are included in PPAC revenues in the forecasted statement of operations (Exhibit 1).

(2) Labor (charged to expense accounts)

Labor charged to expense accounts includes:

- Salaries of the line crew laborers (allocated via the work order system based on the work performed).

- Salaries of the Director of Public Works, Assistant Director of Public Works, Village Treasurer, and several clerical workers (allocated to the Electric Department based on estimated level of effort). Salaries of the Village Board members and the Village Clerk are not allocated to the Electric Department.

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VILLAGE OF WELLSVILLE
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SUMMARY OF SIGNIFICANT FORECAST ASSUMPTIONS
Based on the Year Ended May 31, 2013 (Base Year)

NOTE 2 - OPERATING EXPENSES - Continued

b. *Other Operating Expenses* - Continued

(2) Labor (charged to expense accounts) - Continued

Total salaries incurred during Base Year 2013 were $409,822, of which $19,679 was capitalized to operating property via the Department's work order system. Salaries charged to the various expense accounts of the Department totaled $390,143 during Base Year 2013.

Total salaries to be incurred during the Rate Year are projected to be $426,379, of which $31,300 is expected to be capitalized to operating property, and $395,079 will be expensed in the forecasted statement of operations. (See Exhibit 14 for capitalized salaries.)

The increase in total salaries from the Base Year was primarily due to an average hourly wage increase of 2.0% implemented during June 2013, and an average hourly wage increase of 2.0% expected to be implemented during June 2014. It is the Department's contractual obligation to again increase hourly wages by 2.0% during June 2015. These wage increases had the effect of increasing total salaries by $16,557.

(3) Labor and Benefits - New Hire

The Department has been operating for some time without the services of an Electric Technician, who would oversee the various capital improvements and maintenance programs of the Department. This individual would also supervise the anticipated upgrade of the Department's existing substation, known as the Vossler Road Substation. It is the Department's intentions to hire for this position, pending a successful rate increase, to help recover these costs. The gross salary of this new position is expected to be $60,000 plus related benefits of $29,000 (including health care costs of $11,000). As this is an anticipated new hire, the gross salary and related benefits of this position have been separately stated in the forecasted statement of operations (Exhibit 1), and have not been included in the amounts reported for "Labor, net of capitalized labor" and benefits in the forecasted statement of operations (Exhibit 1).

(4) Employee Benefits

Employee benefits include medical insurance (health and dental), workers' compensation, disability insurance, New York State retirement contributions, FICA, and various safety training courses. Costs in Base Year 2013, represent the Electric Department's share of actual invoiced amounts (or via calculation on labor dollars for FICA), and is primarily based on a ratio of Electric Department labor dollars to total Village labor dollars.

In general, employee benefit costs have increased significantly over the past few years, especially medical insurance and retirement costs. Employee benefits have approximated 30-35% of total salary costs over the last few years (30% in Base Year 2013).

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VILLAGE OF WELLSVILLE
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SUMMARY OF SIGNIFICANT FORECAST ASSUMPTIONS
Based on the Year Ended May 31, 2013 (Base Year)

NOTE 2 - OPERATING EXPENSES - Continued

(4) Employee Benefits - Continued

Rate Year employee benefit costs are based on (1) actual invoiced amounts, (2) calculation (FICA), or (3) budgeted amounts based on historic trend. Rate Year employee benefit costs are expected to be approximately 36% of total labor dollars. The net increase in employee benefits costs is expected to be as follows:

Type	Base Year 2013	Rate Year	Rate Year Increase (Decrease)
Medical insurance (a)	$ 25,138	$ 25,000	$ (138)
NYS retirement (b)	49,518	78,074	28,556
Workers' compensation (c)	8,566	7,854	(712)
Disability insurance (c)	271	300	29
FICA (d)	31,601	32,618	1,017
Safety/OSHA (e)	8,879	11,000	2,121
	$ 123,973	$ 154,846	$ 30,873

(a) Medical insurance, which includes dental coverage, is based on quoted premiums from the Village of Wellsville's insurance providers. These premiums have been included in the Village's entity-wide budgets and have been allocated to the Electric Department based on level of effort within the Department.

(b) In general, retirement costs have increased significantly from prior years. The costs reported in the Rate Year will be paid in either December 2014 or February 2015, as allowed by the New York State Retirement System. Retirement cost included in the Rate Year is based on invoiced amounts to the Village, pro-rated to the Electric Department based on level of effort within the Department.

(c) Workers' compensation premiums are expected to decline based on the Village's overall claim experience. Total Village-wide workers' compensation premiums have been allocated to the Electric Department based on level of effort within the Department.

(d) FICA is calculated at 7.65% of expected total gross salaries.

(e) Represents cost of linemen's training programs (through the MEUA), attendance at various educational workshops and events, and clothing allowances. Costs in the Rate Year are expected to increase due to an increase in training fees and greater participation.

(5) Contractual/Material Expenses

Contractual and material expenses consist of materials, supplies, and/or services provided by outside vendors which are charged to the transmission, pole maintenance, distribution, street lights, consumer accounting, sales and administrative and general cost categories.

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VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

SUMMARY OF SIGNIFICANT FORECAST ASSUMPTIONS
Based on the Year Ended May 31, 2013 (Base Year)

NOTE 2 - OPERATING EXPENSES - Continued

(5) Contractual/Material Expenses - Continued

During the Rate Year, these costs are expected to equal the three-year average (2011-2013) of these categories; with no adjustment for inflation factors (see Workpaper C).

	Base Year 2013	Rate Year	Rate Year Increase (Decrease)
Transmission	$ 2,835	$ 5,331	$ 2,496
Maintenance of poles	255	455	200
Distribution	27,119	26,102	(1,017)
Street lights	1,563	751	(812)
Consumer accounting	13,779	12,407	(1,372)
Sales expense	167	291	124
Administrative and general	80,206	81,163	957

(6) Insurance

Insurance expense represents the Electric Department's share of general liability insurance. As insurance premiums are not expected to change significantly, general liability insurance during the Rate Year is based on the Electric Department's three year average (2011-2013).

Three-year average (2011-2013)	$ 13,749
Base Year 2013	12,266
Rate Year decrease	$ (1,483)

(7) PILOT

In previous years, the Department did not make a Payment in Lieu of Taxes (PILOT) to the Village's General Fund. Pending a successful rate increase to recover a PILOT payment, the Department will begin making this payment during the Rate Year. The PILOT payment will be based on the net book value of its operating property located within the Village multiplied by the Village's current property tax rate. The expected PILOT payment during the Rate Year will be $43,000, and is calculated as follows (see Exhibit 14 for further analysis):

Operating property subject to PILOT calculation	$ 5,942,162
Accumulated depreciation	(3,822,810)
Net book value	2,119,352
Village tax rate per $1,000	$ 20.49
PILOT (rounded)	$ 43,000

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VILLAGE OF WELLSVILLE
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SUMMARY OF SIGNIFICANT FORECAST ASSUMPTIONS
Based on the Year Ended May 31, 2013 (Base Year)

NOTE 2 - OPERATING EXPENSES - Continued

(8) Depreciation Expense

Depreciation expense (Exhibit 14) has been calculated based on existing operating property plus future operating property acquisitions detailed in Exhibit 15, which includes the significant upgrade and renovation of the Vossler Road Substation. Future operating property acquisitions include anticipated costs for material, subcontractor costs, and capitalized labor. Future operating property acquisitions are reported "net" of anticipated retirement values.

Estimated costs of the Vossler Road Substation (see engineers report in the Appendix), total $2,257,000. Half of those costs are expected to be incurred during the Rate Year (approximately $1,128,500), and will be placed into service shortly after installation. Costs for the upgrade/renovation will be material and subcontractor cost only, as it is the Department's intent not to use its internal workforce on this project.

Depreciation charges are calculated using rates that are consistent with rates used in prior years. Depreciation charges are calculated on average annual operating property balances.

Depreciation expense, Rate Year	$ 270,067
Depreciation expense, Base Year	218,544
Rate Year increase	$ 51,523

(9) Contributions to IEEP (recovered by PPAC revenues)

The Department participates in the Independent Energy Efficiency Program (IEEP) to offer programs and make capital improvements to promote energy efficiency by and for its customers. Contributions to the IEEP are based on kWh sold multiplied by .001 per kWh. Expected kWh sold in the Rate Year is 65,870,657 which calls for a $65,871 contribution to the IEEP during the Rate Year. These costs and related revenues (recovered by the PPAC process) are "revenue neutral" to the operations of the Department.

NOTE 3 - INDEBTEDNESS

The Electric Department's indebtedness at the end of the Rate Year consists of existing debt obligations and anticipated borrowings related to the upgrade/renovation of the Vossler Road Substation. At least in the short-term, it is expected that 100% of the estimated cost of the upgrade/renovation will be financed through the issuance of Bond Anticipation Notes. Based on the total cost of the project, and future borrowing terms, the Department will most likely enter into a long-term bond obligation.

A summary of indebtedness at the end of the Rate Year is as follows:

Serial Bond, issued December 2007, interest at 4.375%, annual principal payments of $25,000, due March 2019 (a)	$ 100,000
Serial Bond, issued December 2013, interest from 2.125%-3.750%, annual principal payments of $10,000, due October 2023(a)	90,000
Total existing bonds	190,000
Bond Anticipation Note, to be issued Summer 2014, interest at 4.00%, renewable on anniversary date of issuance, with principal payment of 5%-10% of outstanding balance	1,128,500
Total indebtedness (existing and anticipated)	$ 1,318,500

(a) Bond issued for distribution system improvements.

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VILLAGE OF WELLSVILLE
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SUMMARY OF SIGNIFICANT FORECAST ASSUMPTIONS
Based on the Year Ended May 31, 2013 (Base Year)

NOTE 4 - RATE OF RETURN

The rate of return calculation is provided as an indicator of the level of forecasted income from operations compared to the risk/investment borne by the Electric Department.

The rate of return on Rate Base and Surplus for the year ended May 31, 2013, is calculated based on the prescribed format in the Village's Municipal Electric Utilities Annual Report filed with the New York State Department of Public Service for the year ended May 31, 2013. This rate of return on Rate Base and Surplus was 3.04% and 2.89%, respectively. The rate of return on Rate Base and Surplus for the Forecasted Rate Year of 4.58% and 4.53%, respectively, is calculated using Base Year 2013 amounts and applying forecasted changes to the Electric Department's operation, rate base, debt service, and surplus, as described herein.

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Exhibit 4

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

BALANCE SHEETS
May 31,

	Fiscal 2011	Fiscal 2012	Fiscal 2013	2012-2013 Average Balance
ASSETS				
Plant in service	$ 6,519,197	$ 6,616,113	$ 6,652,210	$ 6,634,162
Construction work in progress	-	-	-	-
Depreciation reserve	(4,116,220)	(4,294,014)	(4,512,558)	(4,403,286)
Contribution for extensions	-	-	-	-
Net plant	2,402,977	2,322,099	2,139,652	2,230,876
Depreciation reserve funds	230,510	231,287	231,764	231,526
Cash	150,899	190,020	187,071	188,546
Working funds	200	200	200	200
Loans to Operating Municipality	-	-	-	-
Materials and supplies	159,057	163,530	204,409	183,970
Receivables from operating municipalities	-	426	188	307
Accounts receivable	276,630	242,734	308,204	275,469
Reserve for uncollectibles	-	-	-	-
Prepayments	-	-	-	-
Miscellaneous current assets	-	-	-	-
Total assets	**$ 3,220,273**	**$ 3,150,296**	**$ 3,071,488**	**$ 3,110,892**
LIABILITIES				
Accounts payable	$ 108,785	$ 120,629	127,335	$ 123,982
Payables to Operating Municipality	-	5	-	3
Customer deposits	-	-	-	-
Taxes accrued	-	-	-	-
Interest accrued	2,041	2,041	1,363	1,702
Miscellaneous other current liabilities	63,038	62,565	69,366	65,966
Total current liabilities	173,864	185,240	198,064	191,652
Bonds payable	200,000	175,000	150,000	162,500
Long Term Debt - Other	-	-	-	-
Miscellaneous Unadjusted Credits	-	-	-	-
Total liabilities	373,864	360,240	348,064	354,152
Contributions to municipality	(3,853,227)	(3,987,393)	(4,139,569)	(4,063,481)
Surplus	6,699,636	6,777,449	6,862,993	6,820,221
Total surplus	2,846,409	2,790,056	2,723,424	2,756,740
Total liabilities and surplus	**$ 3,220,273**	**$ 3,150,296**	**$ 3,071,488**	**$ 3,110,892**

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Exhibit 5

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

INCOME STATEMENTS
(INCLUDING kWh SALES BY RATE CLASS)
Years Ended May 31,

		Fiscal 2011	Fiscal 2012	Fiscal 2013	Three Year Average
Operating revenues					
A/C 601	Residential sales	$ 979,751	$ 808,461	$ 964,334	$ 917,515
A/C 602	Commercial sales	439,587	422,867	473,184	445,213
A/C 603	Industrial sales	843,123	740,962	799,450	794,512
A/C 604	Public street lighting - operating municipality	92,893	90,883	110,590	98,122
A/C 605	Public Street lighting - other	382,634	356,723	408,068	382,475
A/C 606	Other sales to operating municipality	23,708	25,281	28,618	25,869
A/C 607	Other sales to other public authorities	804	681	719	735
A/C 608	Sales to other distributors	1,253	1,060	1,162	1,158
A/C 609	Sales to railroads	-	-	-	-
A/C 610	Security lighting	14,889	13,765	14,112	14,255
A/C 621	Rent from electric property	-	-	-	-
A/C 622	Miscellaneous electric revenues	-	42,364	(23,090)	6,425
	Total operating revenues	2,778,642	2,503,047	2,777,147	2,686,279
Operation and maintenance expense					
Electricity purchased		1,659,015	1,545,751	1,758,433	1,654,400
Transmission expense		43,097	15,060	11,617	23,258
Poles, towers and fixtures		3,249	1,529	1,045	1,941
Distribution expense		109,013	118,955	111,139	113,036
Street lighting and signal expense		1,924	1,131	6,405	3,153
Customer accounting and collection		52,760	51,550	56,468	53,593
Sales expense		(1,108)	4,322	685	1,300
Administrative and general expense		515,145	500,772	532,180	516,032
Depreciation		222,551	177,795	218,544	206,297
Taxes - electric		100,111	-	-	33,370
Uncollectible revenues		-	-	-	-
	Total operation and maintenance expense	2,705,757	2,416,865	2,696,516	2,606,379
Income from operations		72,885	86,182	80,631	79,899
Other income (expense)					
Interest income		1,360	980	342	894
Interest expense		(9,769)	(9,222)	(8,982)	(9,324)
Contractual appropriations of income		-	-	-	-
Miscellaneous interest deductions		-	-	-	-
Other		-	-	-	-
	Total other income (expense)	(8,409)	(8,242)	(8,640)	(8,430)
Net income		**$ 64,476**	**$ 77,940**	**$ 71,991**	**$ 71,469**
kWh Sales					
A/C 601	Residential sales	21,282,396	18,505,382	19,791,688	19,859,822
A/C 602	Commercial sales	8,161,379	7,501,864	7,794,693	7,819,312
A/C 603	Industrial sales	23,550,099	21,347,856	20,970,946	21,956,300
A/C 604	Public street lighting - operating municipality	1,035,815	1,028,081	1,039,554	1,034,483
A/C 605	Public street lighting - other	11,649,000	11,204,000	11,350,000	11,401,000
A/C 606	Other sales to operating municipality	704,097	545,914	577,395	609,135
A/C 607	Other sales to other public authorities	11,102	9,322	9,343	9,922
A/C 608	Sales to other distributors	17,505	19,122	18,038	18,222
A/C 610	Security lighting	127,073	125,594	124,988	125,885
	Total kWh sold	**66,538,466**	**60,287,135**	**61,676,645**	**62,834,082**

Received: 03/04/2014

Exhibit 6

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

STATEMENTS OF SURPLUS

	Fiscal 2011	Fiscal 2012	Fiscal 2013
BALANCE, beginning of year	$ 2,924,851	$ 2,846,409	$ 2,790,056
Add:			
Net income (loss)	64,476	77,940	71,991
Prior period adjustment	-	-	13,553
Deduct:			
Contributions to municipality	(131,969)	(134,166)	(152,176)
Prior period adjustment	(10,949)	(127)	-
BALANCE, end of year	**$ 2,846,409**	**$ 2,790,056**	**$ 2,723,424**

Received: 03/04/2014

Exhibit 7

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

RATE OF RETURN STUDY
RATE BASE
Based on the Year Ended May 31, 2013 (Base Year)

		Reference (Page, Column, Row)	(a) Fiscal Year	(b) Adjustments	(c) Adjusted Year	(d) Revenue Change	(e) Year After Revenue Change
35	Utility Plant in Service	RB, Ln 5 (c)	$ 6,634,162	$ 933,394	$ 7,567,556	$ -	$ 7,567,556
36	Construction Work in Progress	RB, Ln 8 (c)	-	-	-	-	-
37	Total Utility Plant	ROR, Ln 35 plus Ln 36	6,634,162	933,394	7,567,556	-	7,567,556
38							
39	Accumulated Provision for Depre and Amort	RB, Ln 14 (c)	(4,403,286)	(412,958)	(4,816,244)	-	(4,816,244)
40							
41	Contributions for Extensions	RB, Ln 17 (c)	-	-	-	-	-
42							
43	Net Utility Plant	ROR, Total Ln 37, Ln 39, Ln 41	2,230,876	520,437	2,751,313	-	2,751,313
44							
45	Materials and Supplies	RB, Ln 21 (c)	183,970	20,439	204,409	-	204,409
46							
47	Prepayments	RB, Ln 24 (c)	-	-	-	-	-
48							
49	Cash Working Capital	ROR, Ln 74	239,793	26,339	266,131	N/A	266,131
50							
51	Other: (Detail)						
52							
53							
54							
55							
56	Rate Base	ROR, Total Ln 43=>Ln 54	$ 2,654,639	$ 567,214	$ 3,221,853	$ -	$ 3,221,853

Received: 03/04/2014

Exhibit 8

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

RATE OF RETURN STUDY
CASH WORKING CAPITAL
Based on the Year Ended May 31, 2013 (Base Year)

		Reference (Page, Column, Row)	(a) Fiscal Year	(b) Adjustments	(c) Adjusted Year	(d) Revenue Change	(e) Year After Revenue Change
57	Cash Working Capital						
58	Total Operating Expenses	ROR, Ln 22	$ 2,696,516	$ 268,263	$ 2,964,779	$ -	$ 2,964,779
59							
60	Deduct:						
61	Fuel	ROR, Ln 6	-	-	-	N/A	-
62	Purchased Power	ROR, Ln 7	1,678,894	18,088	1,696,982	N/A	1,696,982
63	Depreciation	ROR, Ln16	218,544	51,523	270,067	N/A	270,067
64	Other Taxes	ROR, Ln17	-	-	-	N/A	-
65	Uncollectibles	ROR, Ln18	-	-	-	N/A	-
66							
67							
68	Adjusted Amount	ROR, Ln 58 minus Ln 61=>Ln 67	799,078	198,652	997,730	-	997,730
69							
70	Working Capital - Operating Expenses @ 1/8	ROR, Ln 68/8	99,885	24,832	124,716	N/A	124,716
71							
72	Working Capital - Purchased Power @ 1/12	ROR, Ln 61/12	139,908	1,507	141,415	N/A	141,415
73							
74	Total Cash Working Capital	ROR, Total Ln 70, Ln 72	$ 239,793	$ 26,339	$ 266,131	N/A	$ 266,131

Received: 03/04/2014

Exhibit 9

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

DETAIL OF RATE BASE
Based on the Year Ended May 31, 2013 (Base Year)

		Reference (Page, Column, Row)	(a) Balance at Beg of Year	(b) Balance at End of Year	(c) Avg Balance	(d) Bal. At Beg. of Rate Year	(e) Bal. At End of Rate Year	(f) Avg. Balance
1	Utility Plant in Service							
2	Operating Property - Electric	Pg 104, Ln 2 (c) & (d)	$ 6,616,113	$ 6,652,210	$ 6,634,162	$ 6,870,021	$ 8,265,091	$ 7,567,556
3	Operating Property - Other Operations	Pg 104, Ln 3 (c) & (d)	-	-	-	-	-	-
4	Operating Property - General	Pg 104, Ln 4 (c) & (d)	-	-	-	-	-	-
5	Utility Plant in Service		$ 6,616,113	$ 6,652,210	$ 6,634,162	$ 6,870,021	$ 8,265,091	$ 7,567,556
6								
7								
8	Construction Work in Progress	Pg 104, Ln 5 (c) & (d)	$ -	$ -	$ -	$ -	$ -	$ -
9								
10								
11	Accumulated Provision for Depre and Amort							
12	Accumulated Provision for Depreciation	Pg 105, Ln 19 (c) & (d)	$ 4,294,014	$ 4,512,558	$ 4,403,286	$ 4,681,210	$ 4,951,277	$ 4,816,244
13	Accumulated Provision for Amortization	Pg 105, Ln 20 (c) & (d)	-	-	-	-	-	-
14	Accumulated Provision for Depre and Amort		$ 4,294,014	$ 4,512,558	$ 4,403,286	$ 4,681,210	$ 4,951,277	$ 4,816,244
15								
16								
17	Contributions for Extensions	Pg 105, Ln 21 (c) & (d)	$ -	$ -	$ -	$ -	$ -	$ -
18								
19								
21	Materials and Supplies	Pg104, Ln 18 (c) & (d)	$ 163,530	$ 204,409	$ 183,970	$ 204,409	$ 204,409	$ 204,409
22								
23								
24	Prepayments	Pg 104, Ln 23 (c) & (d)	$ -	$ -	$ -	$ -	$ -	$ -

Received: 03/04/2014

Exhibit 10

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

DETAIL OF RATE OF RETURN
Based on the Year Ended May 31, 2013 (Base Year)

	Capital Structure	Reference (Page, Column, Row)	(a) Balance at Beg of Year	(b) Balance at End of Year	(c) Avg Balance	(d) Bal. At Beg. of Rate Year	(e) Bal. At End of Rate Year	(f) Avg. Balance
1	Debt							
2	Bonds	Pg 105, Ln 2 (c) & (d)	$ 175,000	$ 150,000	$ 162,500	$ 225,000	$ 190,000	$ 207,500
3	Expected BAN for Vossler Substation Upgrade, pro-rated for 10 months	Pg 105, Ln 3 (c) & (d)	-	-	-	-	1,128,500	940,417
4	Miscellaneous Long Term Debt	Pg 105, Ln 4 (c) & (d)	-	-	-	-	-	-
5	Notes Payable	Pg 105, Ln 9 (c) & (d)	-	-	-	-	-	-
6	Matured Long-Term Debt	Pg 105, Ln 12 (c) & (d)	-	-	-	-	-	-
7	Unamortized Premium on Debt	Pg 105, Ln 28 (c) & (d)	-	-	-	-	-	-
8	Unamortized Debt Discount and Expense	Pg 104, Ln 28 (c) & (d)	-	-	-	-	-	-
9								
10								
11	Debt		$ 175,000	$ 150,000	$ 162,500	$ 225,000	$ 1,318,500	$ 1,147,917
12								
13								
14	Customer Deposits	Pg 105, Ln 10 (c) & (d)	$ -	$ -	$ -	$ -	$ -	$ -
15								
16								
17	Surplus							
18	Contributions - Operating Municipality	Pg 105, Ln 32 (c) & (d)	$ (3,987,393)	$ (4,139,569)	$ (4,063,481)	$ (4,289,569)	$ (4,441,819)	$ (4,365,694)
19	Surplus	Pg 105, Ln 33 (c) & (d)	6,777,449	6,862,993	6,820,221	7,006,993	7,153,993	7,080,493
20	Deficit	Pg 104, Ln 37 (c) & (d)	-	-	-	-	-	-
21								
22								
23	Surplus		$ 2,790,056	$ 2,723,424	$ 2,756,740	$ 2,717,424	$ 2,712,174	$ 2,714,799
24								
25								
26	**Interest Costs**							
27	Interest on Debt							
28	Bonds	Pg 252, Ln 20 (k)			$ 8,982			$ 8,811
29	Expected BAN for Vossler Substation Upgrade	Pg 252, Ln 28 (k)			-			45,140
30	Miscellaneous Long Term Debt	Pg 252, Ln 35 (k)			-			-
31	Notes Payable	Pg 250, Ln 22 (g)			-			-
32	Matured Long-Term Debt	N/A			-			-
33	Unamortized Premium on Debt (Credit)	Pg 106, Ln 36 (c)			-			-
34	Amortization of Debt Discount and Expense	Pg 106, Ln 35 (c)			-			-
35								
36								
37								
38	Interest on Debt				$ 8,982			$ 53,951
39	Cost Rate				5.53%			4.70%
40								
41	Interest on Customer Deposits	Pg 309, Ln 10 (f)			$ -			$ -
	Cost Rate				0.00%			0.00%

Received: 03/04/2014

Exhibit 11

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

REVENUE CHANGE
For the Historic Year Ended May 31, 2013
and the Rate Year Ending May 31, 2015

Ln		Reference (Page, Column, Row)	Amount	
106	Rate Base	ROR, Ln 30 (e)	3,221,853	
107				
108	Rate of Return	ROR, Ln 32 (e)	4.58%	
109				
110	Required Operating Income	ROR, Ln 106 * Ln 108	147,561	
111				
112	Adjusted Operating Income	ROR, Ln 28 (c)	(69,491)	
113				
114	Deficiency (Surplus)	ROR, Ln 110 - Ln 112	217,052	
115				
116	Retention Factor	ROR , Ln 132	1.0000	
117				
118	Revenue Increase (Decrease)	ROR, Ln 114 / Ln 116	217,052	
119				
120				
121				
122	Calculation of the Retention Factor:		Factor	Proof
123	Sales Revenues		1.0000	217,052
124	- Revenue Taxes	N/A	N/A	N/A
125	- Uncollectibles	ROR, Ln 18/Ln 1	0.0000	0
126				
127				
128	Sub-Total	ROR, Ln123-Total Ln124=>Ln127	1.0000	217,052
129				
130	Federal Income Tax @ 35%	N/A	0.00	0
131				
132	Retention Factor	ROR, Ln 128 - Ln 130	1.0000	217,052

Received: 03/04/2014

Exhibit 12

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

CALCULATION OF AVERAGE LINE LOSS AND FACTOR OF ADJUSTMENT
Based on Line Losses for Fiscal Years 2008 Through 2013

	kWh Purchases	kWh Line Losses	Annual Line Loss	kWh Electric Dept. Use	kWh Sales
Fiscal Year 2008	68,339,763	3,334,910	0.048799	1,161,776	63,843,077
Fiscal Year 2009	68,538,088	3,086,979	0.045040	1,165,148	64,285,961
Fiscal Year 2010	64,947,593	3,883,607	0.059796	1,104,110	59,959,876
Fiscal Year 2011	67,644,729	2,322,205	0.034329	1,149,960	64,172,564
Fiscal Year 2012	64,608,707	3,180,054	0.049220	1,141,518	60,287,135
Fiscal Year 2013	65,858,069	3,099,114	0.047057	1,082,310	61,676,645
	399,936,949	18,906,869		6,804,822	374,225,258
Average Line Loss			**0.047275**		

	kWh Purchases	kWh Sales	Annual Factor Of Adjustment
Fiscal Year 2008	68,339,763	63,843,077	1.070433
Fiscal Year 2009	68,538,088	64,285,961	1.066144
Fiscal Year 2010	64,947,593	59,959,876	1.083184
Fiscal Year 2011	67,644,729	64,172,564	1.054107
Fiscal Year 2012	64,608,707	60,287,135	1.071683
Fiscal Year 2013	65,858,069	61,676,645	1.067796
	399,936,949	374,225,258	
Average Factor of Adjustment			**1.068706**

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

COMPARISON OF PRESENT AND PROPOSED RATES

	Present	Proposed	Increase $	Increase %
S.C. No. 1				
Customer Charge	$ 2.50	$ 2.78	$ 0.28	11.00%
Non-Winter Rate (June-November)				
Energy charge, per kWh	$ 0.0264	$ 0.0293	$ 0.0029	11.00%
Winter Rate (December - May)				
Energy charge, per kWh				
first 1000 kWh	$ 0.0264	$ 0.0293	$ 0.0029	11.00%
over 1000 kWh	$ 0.0515	$ 0.0572	$ 0.0057	11.00%
S.C. No. 2				
Customer Charge	$ 2.50	$ 2.78	$ 0.28	11.00%
Energy charge, per kWh	$ 0.0441	$ 0.0490	$ 0.0049	11.00%
S.C. No. 3				
Demand Charge, per kW	$ 5.00	$ 5.55	$ 0.55	11.00%
Energy Charge, per kWh	$ 0.0113	$ 0.0125	$ 0.0012	11.00%
Primary Service Rate:				
Demand Charge, per kW	$ 4.60	$ 5.11	$ 0.51	11.00%
Energy Charge, per kWh	$ 0.0113	$ 0.0125	$ 0.0012	11.00%
S.C. No. 4				
Facilities Charge, per Unit				
150 Watt Unit, Lucalox	$ 10.02	$ 11.12	$ 1.10	11.00%
175 Watt Unit, Mercury	$ 7.93	$ 8.80	$ 0.87	11.00%
250 Watt Unit, Mercury	$ 10.43	$ 11.58	$ 1.15	11.00%
250 Watt Unit, Lucalox	$ 12.53	$ 13.91	$ 1.38	11.00%
400 Watt Unit, Mercury	$ 13.15	$ 14.60	$ 1.45	11.00%
400 Watt Unit, Lucalox	$ 15.24	$ 16.92	$ 1.68	11.00%
1000 Watt Unit, Mercury	$ 28.17	$ 31.27	$ 3.10	11.00%
1000 Watt Unit, Lucalox	$ 30.28	$ 33.61	$ 3.33	11.00%
S.C. No. 5				
Energy Charge, per kWh	$ 0.060760	$ 0.067444	$ 0.006684	11.00%
Minimum Charge (each occasion when service is used)	$ 11.50	$ 12.77	$ 1.27	11.00%
S.C. No. 6				
Active Demand Charge, per KW	$ 5.00	$ 5.55	$ 0.55	11.00%
Reactive Demand Charge, per KW	$ 0.3325	$ 0.3691	$ 0.0366	11.00%
Energy Charge, per kWh	$ 0.0087	$ 0.0097	$ 0.0010	11.00%

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

COMPARISON OF MONTHLY BILLS
S.C. No. 1 - RESIDENTIAL (JUNE - NOVEMBER)

kWh	Present	Proposed	Increase $	Increase %
0	$ 2.50	$ 2.78	$ 0.28	11.20%
2	$ 2.58	$ 2.87	$ 0.29	11.07%
10	$ 2.90	$ 3.21	$ 0.31	10.64%
25	$ 3.51	$ 3.86	$ 0.35	10.04%
50	$ 4.52	$ 4.94	$ 0.43	9.41%
75	$ 5.53	$ 6.03	$ 0.50	9.00%
100	$ 6.54	$ 7.11	$ 0.57	8.72%
150	$ 8.56	$ 9.27	$ 0.72	8.36%
200	$ 10.57	$ 11.43	$ 0.86	8.13%
250	$ 12.59	$ 13.60	$ 1.01	7.98%
500	$ 22.69	$ 24.42	$ 1.73	7.63%
750	$ 32.78	$ 35.23	$ 2.46	7.49%
1,000	$ 42.87	$ 46.05	$ 3.18	7.42%
1,500	$ 63.06	$ 67.69	$ 4.63	7.34%
2,000	$ 83.25	$ 89.33	$ 6.08	7.30%
5,000	$ 204.37	$ 219.15	$ 14.78	7.23%
PPA/kWh include.*	0.013973	0.013973		

* = PPAC factor in effect during Rate Year (equivalent to average PPAC Factor in Base Year)

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

COMPARISON OF MONTHLY BILLS
S.C. No. 1 - RESIDENTIAL (DECEMBER - MAY)

kWh	Present	Proposed	Increase $	Increase %
0	$ 2.50	$ 2.78	$ 0.28	11.20%
2	$ 2.58	$ 2.87	$ 0.29	11.07%
10	$ 2.90	$ 3.21	$ 0.31	10.64%
25	$ 3.51	$ 3.86	$ 0.35	10.04%
50	$ 4.52	$ 4.94	$ 0.43	9.41%
75	$ 5.53	$ 6.03	$ 0.50	9.00%
100	$ 6.54	$ 7.11	$ 0.57	8.72%
150	$ 8.56	$ 9.27	$ 0.72	8.36%
200	$ 10.57	$ 11.43	$ 0.86	8.13%
250	$ 12.59	$ 13.60	$ 1.01	7.98%
500	$ 22.69	$ 24.42	$ 1.73	7.63%
750	$ 32.78	$ 35.23	$ 2.46	7.49%
1,000	$ 42.87	$ 46.05	$ 3.18	7.42%
1,500	$ 75.61	$ 81.64	$ 6.03	7.98%
2,000	$ 108.35	$ 117.23	$ 8.88	8.20%
5,000	$ 304.77	$ 330.75	$ 25.98	8.52%
PPA/kWh include.*	0.013973	0.013973		

* = PPAC factor in effect during Rate Year (equivalent to average PPAC Factor in Base Year)

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

COMPARISON OF MONTHLY BILLS
S.C. No. 2 - GENERAL SERVICE - NON-DEMAND METERED (APRIL - NOVEMBER)

kWh	Present	Proposed	Increase $	Increase %
0	$ 2.50	$ 2.78	$ 0.28	11.20%
2	$ 2.62	$ 2.91	$ 0.29	11.08%
10	$ 3.08	$ 3.41	$ 0.33	10.68%
25	$ 3.95	$ 4.35	$ 0.40	10.19%
50	$ 5.40	$ 5.93	$ 0.52	9.72%
75	$ 6.86	$ 7.50	$ 0.65	9.45%
100	$ 8.31	$ 9.08	$ 0.77	9.27%
150	$ 11.21	$ 12.23	$ 1.02	9.05%
200	$ 14.11	$ 15.37	$ 1.26	8.93%
250	$ 17.02	$ 18.52	$ 1.51	8.84%
500	$ 31.54	$ 34.27	$ 2.73	8.66%
750	$ 46.05	$ 50.01	$ 3.96	8.59%
1,000	$ 60.57	$ 65.75	$ 5.18	8.55%
1,500	$ 89.61	$ 97.24	$ 7.63	8.51%
2,000	$ 118.65	$ 128.73	$ 10.08	8.50%
5,000	$ 292.87	$ 317.65	$ 24.78	8.46%
10,000	$ 583.23	$ 632.51	$ 49.28	8.45%
PPA/kWh include.*	0.013973	0.013973		

* = PPAC factor in effect during Rate Year (equivalent to average PPAC Factor in Base Year)

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

COMPARISON OF MONTHLY BILLS
S.C. No. 3 - GENERAL SERVICE - DEMAND METERED

kW	kWh	Present	Proposed	Increase $	Increase %
50	1,000	$ 275.27	$ 303.97	$ 28.70	10.43%
	1,500	$ 287.91	$ 317.21	$ 29.30	10.18%
	2,000	$ 300.55	$ 330.45	$ 29.90	9.95%
75	2,000	$ 425.55	$ 469.20	$ 43.65	10.26%
	3,000	$ 450.82	$ 495.67	$ 44.85	9.95%
	4,000	$ 476.09	$ 522.14	$ 46.05	9.67%
100	5,000	$ 626.37	$ 687.37	$ 61.00	9.74%
	7,500	$ 689.55	$ 753.55	$ 64.00	9.28%
	10,000	$ 752.73	$ 819.73	$ 67.00	8.90%
	PPA/kWh include.*	0.013973	0.013973		

* = PPAC factor in effect during Rate Year (equivalent to average PPAC Factor in Base Year)

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

COMPARISON OF MONTHLY BILLS
S.C. No. 3 - GENERAL SERVICE - DEMAND METERED

kW	kWh	Present	Proposed	Increase $	Increase %
50	1,000	$ 255.27	$ 281.97	$ 26.70	10.46%
	1,500	$ 267.91	$ 295.21	$ 27.30	10.19%
	2,000	$ 280.55	$ 308.45	$ 27.90	9.94%
75	2,000	$ 395.55	$ 436.20	$ 40.65	10.28%
	3,000	$ 420.82	$ 462.67	$ 41.85	9.94%
	4,000	$ 446.09	$ 489.14	$ 43.05	9.65%
100	5,000	$ 586.37	$ 643.37	$ 57.00	9.72%
	7,500	$ 649.55	$ 709.55	$ 60.00	9.24%
	10,000	$ 712.73	$ 775.73	$ 63.00	8.84%
	PPA/kWh include.*	0.013973	0.013973		

* = PPAC factor in effect during Rate Year (equivalent to average PPAC Factor in Base Year)

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

COMPARISON OF MONTHLY BILLS
S.C. No. 7 - PRIVATE OUTDOOR LIGHTING

Type of Lamps	# of Units	Present	Proposed	Increase $	Increase %
150 Watt, Lucalox	1	$ 10.02	$ 11.12	$ 1.10	10.98%
	10	$ 100.20	$ 111.20	$ 11.00	10.98%
	20	$ 200.40	$ 222.40	$ 22.00	10.98%
175 Watt, Mercury	1	$ 7.93	$ 8.80	$ 0.87	10.97%
	10	$ 79.30	$ 88.00	$ 8.70	10.97%
	20	$ 158.60	$ 176.00	$ 17.40	10.97%
250 Watt, Mercury	1	$ 10.43	$ 11.58	$ 1.15	11.03%
	10	$ 104.30	$ 115.80	$ 11.50	11.03%
	20	$ 208.60	$ 231.60	$ 23.00	11.03%
250 Watt, Lucalox	1	$ 12.53	$ 13.91	$ 1.38	11.01%
	10	$ 125.30	$ 139.10	$ 13.80	11.01%
	20	$ 250.60	$ 278.20	$ 27.60	11.01%
400 Watt, Mercury	1	$ 13.15	$ 14.60	$ 1.45	11.03%
	10	$ 131.50	$ 146.00	$ 14.50	11.03%
	20	$ 263.00	$ 292.00	$ 29.00	11.03%
400 Watt, Lucalox	1	$ 15.24	$ 16.92	$ 1.68	11.02%
	10	$ 152.40	$ 169.20	$ 16.80	11.02%
	20	$ 304.80	$ 338.40	$ 33.60	11.02%
1000 Watt, Mercury	1	$ 28.17	$ 31.27	$ 3.10	11.00%
	10	$ 281.70	$ 312.70	$ 31.00	11.00%
	20	$ 563.40	$ 625.40	$ 62.00	11.00%
1000 Watt, Lucalox	1	$ 30.28	$ 33.61	$ 3.33	11.00%
	10	$ 302.80	$ 336.10	$ 33.30	11.00%
	20	$ 605.60	$ 672.20	$ 66.60	11.00%

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

COMPARISON OF MONTHLY BILLS
S.C. No. 5 - ATHLETIC FIELD LIGHTING

Exhibit 13
Page 8 of 9

VILLAGE OF WELLSVILLE - ELECTRIC DEPARTMENT
COMPARISON OF MONTHLY BILLS

S.C. No. 5 - ATHLETIC FIELD LIGHTING

kWh		Present		Proposed	Increase $	Increase %
100		$ 7.47	^	$ 8.14	$ 0.67	8.94%
200		$ 14.95		$ 16.28	$ 1.34	8.94%
500		$ 37.37		$ 40.71	$ 3.34	8.94%
	PPA/kWh include.*	0.013973		0.013973		

* = PPAC factor in effect during Rate Year (equivalent to average PPAC Factor in Base Year)

^ = Subject to minimum charge of $11.50 (present) and $12.77 (proposed)

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

COMPARISON OF MONTHLY BILLS
S.C. No. 3 - LARGE GENERAL SERVICE

kW	kWh	Present	Proposed	Increase $	Increase %
50	1,000	$ 289.30	$ 319.63	$ 30.33	10.48%
	1,500	$ 300.63	$ 331.46	$ 30.83	10.25%
	2,000	$ 311.97	$ 343.30	$ 31.33	10.04%
75	2,000	$ 445.28	$ 491.28	$ 46.00	10.33%
	3,000	$ 467.96	$ 514.95	$ 47.00	10.04%
	4,000	$ 490.63	$ 538.62	$ 48.00	9.78%
100	5,000	$ 646.62	$ 710.28	$ 63.66	9.85%
	7,500	$ 703.30	$ 769.46	$ 66.16	9.41%
	10,000	$ 759.98	$ 828.64	$ 68.66	9.03%
	PPA/kWh include.*	0.013973	0.013973		

* = PPAC factor in effect during Rate Year (equivalent to average PPAC Factor in Base Year)

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

OPERATING PROPERTY ANALYSIS
May 31, 2013 Through May 31, 2015

A/C#	5/31/13 Beg of Yr. Bal.	Actual Additions 6/1/13 to 12/31/2013	Actual Retirements 6/1/13 to 12/31/2013	Estimated Additions, net of retirements 1/1/14 to 5/31/14	PROJECTED 5/31/14 END OF Year BAL	ADDITIONS, NET OF RETIREMENTS	PROJECTED 6/30/15 END OF RATE YR. BAL
301	$ 750				$ 750		$ 750
302					-		-
303	2,858				2,858		2,858
311	52,323				52,323		52,323
312	329,196				329,196		329,196
321					-		-
322					-		-
323					-		-
325					-		-
331					-		-
332					-		-
333					-		-
334					-		-
342					-		-
344					-		-
345					-		-
351	13,848				13,848		13,848
352	799,495				799,495		799,495
353	158,582				158,582		158,582
354					-		-
358	680,015	4,864	(2,342)		682,537	18,970	701,507
359	14,028				14,028		14,028
361	1,908,471				1,908,471	1,128,500	3,036,971
362					-		-
363	712,665	8,628	(3,161)		718,132	5,700	723,832
364	23,232				23,232		23,232
365	477,550	21,161	(11,312)		487,399	22,450	509,849
366	149,045	1,189	(232)		150,002	700	150,702
367	1,980				1,980		1,980
368	60,294				60,294	15,500	75,794
369	205,174	12,425	(30,229)		187,370	3,350	190,720
370	21,667	12,119	(1,749)		32,037	700	32,737
371	320,751	17,326	(18,449)		319,628	10,700	330,328
381	65,611				65,611		65,611
382	7,917				7,917		7,917
383	2,123				2,123		2,123
384	436,126	134,495		33,000	603,621	179,000	782,621
385	85,876				85,876		85,876
386	44,569	719			45,288	5,000	50,288
387	78,064	9,359		30,000	117,423	4,500	121,923
388					-		-
391					-		-
392					-		-
393					-		-
	$ 6,652,210	**$ 222,285**	**$ (67,474)**	**$ 63,000**	**$ 6,870,021**	**$ 1,395,070**	**$ 8,265,091**
		(a)		(a)			

(a) - Includes capitalized salaries, materials and related overhead.

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

DEPRECIATION CALCULATIONS
Year Ending May 31, 2014

A/C#	5/31/13 Beg of Yr. Bal.	5/31/14 End of Yr. Bal.	Avg. Gross Bal.	Less: Contributions for Extension	Avg. Balance Subject to Depreciation	Dep. Rate	Depreciation Expense A/C#	Depreciation Expense Amt.	Depreciation Reserves Beg of Yr. Bal.	Depreciation Reserves Retirements	5/31/14 End of Yr. Bal.	Remaining Cost
301	$ 750	$ 750	$ 750		$ 750			$ -			$ -	$ 750
302	-	-	-		-			-			-	-
303	2,858	2,858	2,858		2,858			-	2,858		2,858	-
311	52,323	52,323	52,323		52,323		743 & 788	-			-	52,323
312	329,196	329,196	329,196		329,196	2.50%	743 & 788	8,230	169,359		177,589	151,607
321	-	-	-		-			-			-	-
322	-	-	-		-			-			-	-
323	-	-	-		-			-			-	-
325	-	-	-		-			-			-	-
331	-	-	-		-		711	-			-	-
332	-	-	-		-		711	-			-	-
333	-	-	-		-		711	-			-	-
334	-	-	-		-		711	-			-	-
342	-	-	-		-		717	-			-	-
344	-	-	-		-		717	-			-	-
345	-	-	-		-		717	-			-	-
351	13,848	13,848	13,848		13,848	1.80%	733	249	6,184		6,433	7,415
352	799,495	799,495	799,495		799,495	2.50%	733	19,987	661,587		681,574	117,921
353	158,582	158,582	158,582		158,582	2.00%	733	3,172	67,534		70,706	87,876
354	-	-	-		-		733	-			-	-
358	680,015	682,537	681,276		681,276	3.32%	738	22,618	405,852	(2,342)	426,128	256,409
359	14,028	14,028	14,028		14,028	1.70%	738	238	3,757		3,995	10,033
361	1,908,471	1,908,471	1,908,471		1,908,471	3.00%	743	57,254	1,241,262		1,298,516	609,955
362	-	-	-		-		743	-			-	-
363	712,665	718,132	715,399		715,399	2.50%	743	17,885	355,146	(3,161)	369,870	348,262
364	23,232	23,232	23,232		23,232	2.50%	743	581	15,416		15,997	7,235
365	477,550	487,399	482,475		482,475	3.00%	743	14,474	289,359	(11,312)	292,521	194,878
366	149,045	150,002	149,524		149,524	3.32%	743	4,964	80,585	(232)	85,317	64,685
367	1,980	1,980	1,980		1,980	3.00%	743	59	2,038		2,097	(117)
368	60,294	60,294	60,294		60,294	3.00%	743	1,809	40,849		42,658	17,636
369	205,174	187,370	196,272		196,272	3.00%	743	5,888	141,218	(30,229)	116,877	70,493
370	21,667	32,037	26,852		26,852	5.00%	743	1,343	22,644	(1,749)	22,238	9,799
371	320,751	319,628	320,190		320,190	4.00%	753	12,808	213,076	(18,449)	207,435	112,193
381	65,611	65,611	65,611		65,611	4.00%	788	2,624	47,680		50,304	15,307
382	7,917	7,917	7,917		7,917	4.00%	788	317	4,928		5,245	2,672
383	2,123	2,123	2,123		2,123	4.00%	788	85	2,208		2,293	(170)
384	436,126	603,621	519,874		519,874	10.00%	804	51,987	563,852		615,839	(12,218)
385	85,876	85,876	85,876		85,876	5.00%	788	4,294	90,170		94,464	(8,588)
386	44,569	45,288	44,929		44,929	3.00%	788	1,348	22,923		24,271	21,017
387	78,064	117,423	97,744		97,744	4.00%	788	3,910	62,074		65,984	51,439
388	-	-	-		-		788	-			-	-
391	-	-	-		-		788	-			-	-
	$ 6,652,210	$ 6,870,021	$ 6,761,116	$ -	$ 6,761,116			$ 236,125	$ 4,512,559	$ (67,474)	$ 4,681,210	$ 2,188,811

Amount of depreciation expense charged to:

A/C#	Amount Charged
711	$ -
717	-
733	23,408
738	22,857
743	164,475
753	12,808
788	12,577
	$ 236,125

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

DEPRECIATION CALCULATIONS
Rate Year Ending June 30, 2015

A/C#	5/31/14 Beg of Yr. Bal.	6/30/15 End of Rate Yr. Bal.	Avg. Gross Bal.	Less: Contributions for Extension	Avg. Balance Subject to Depreciation	Dep. Rate	Depreciation Expense A/C#	Depreciation Expense Amt.	Depreciation Reserves Beg of Yr. Bal.	Retirements	6/30/15 End of Rate Yr. Bal.	Remaining Cost
301	$ 750	$ 750	$ 750		$ 750			$ -	$ -		$ -	$ 750
302	-	-	-		-			-	-		-	-
303	2,858	2,858	2,858		2,858			-	2,858		2,858	-
311	52,323	52,323	52,323		52,323		743 & 788	-	-		-	52,323
312	329,196	329,196	329,196		329,196	2.00%	743 & 788	6,584	177,589		184,173	145,023
321	-	-	-		-			-	-		-	-
322	-	-	-		-			-	-		-	-
323	-	-	-		-			-	-		-	-
325	-	-	-		-			-	-		-	-
331	-	-	-		-		711	-	-		-	-
332	-	-	-		-		711	-	-		-	-
333	-	-	-		-		711	-	-		-	-
334	-	-	-		-		711	-	-		-	-
342	-	-	-		-		717	-	-		-	-
344	-	-	-		-		717	-	-		-	-
345	-	-	-		-		717	-	-		-	-
351	13,848	13,848	13,848		13,848	2.00%	733	277	6,433		6,710	7,138
352	799,495	799,495	799,495		799,495	2.00%	733	15,990	681,574		697,564	101,931
353	158,582	158,582	158,582		158,582	2.20%	733	3,489	70,706		74,194	84,388
354	-	-	-		-	2.00%	733	-	-		-	-
358	682,537	701,507	692,022		692,022	3.30%	738	22,837	426,128		448,965	252,542
359	14,028	14,028	14,028		14,028	2.00%	738	281	3,995		4,276	9,752
361	1,908,471	3,036,971	2,472,721		2,472,721	3.00%	743	74,182	1,298,516		1,372,698	1,664,273
362	-	-	-		-		743	-	-		-	-
363	718,132	723,832	720,982		720,982	3.00%	743	21,629	369,870		391,499	332,333
364	23,232	23,232	23,232		23,232	3.00%	743	697	15,997		16,694	6,538
365	487,399	509,849	498,624		498,624	3.00%	743	14,959	292,521		307,480	202,369
366	150,002	150,702	150,352		150,352	5.00%	743	7,518	85,317		92,835	57,867
367	1,980	1,980	1,980		1,980	3.00%	743	59	2,097		2,157	(177)
368	60,294	75,794	68,044		68,044	3.00%	743	2,041	42,658		44,699	31,095
369	187,370	190,720	189,045		189,045	3.00%	743	5,671	116,877		122,549	68,171
370	32,037	32,737	32,387		32,387	3.00%	743	972	22,238		23,209	9,528
371	319,628	330,328	324,978		324,978	3.00%	753	9,749	207,435		217,184	113,144
381	65,611	65,611	65,611		65,611	5.00%	788	3,281	50,304		53,585	12,026
382	7,917	7,917	7,917		7,917	3.80%	788	301	5,245		5,546	2,371
383	2,123	2,123	2,123		2,123	5.00%	788	106	2,293		2,399	(276)
384	603,621	782,621	693,121		693,121	10.00%	804	69,312	615,839		685,151	97,470
385	85,876	85,876	85,876		85,876	4.00%	788	3,435	94,464		97,899	(12,023)
386	45,288	50,288	47,788		47,788	4.00%	803	1,912	24,271		26,182	24,106
387	117,423	121,923	119,673		119,673	4.00%	788	4,787	65,984		70,771	51,152
388	-	-	-		-		788	-	-		-	-
391	-	-	-		-		788	-	-		-	-
	$ 6,870,021	$ 8,265,091	$ 7,567,556	$ -	$ 7,567,556			$ 270,067	$ 4,681,210	$ -	$ 4,951,277	$ 3,313,814

Amount of depreciation expense charged to:

A/C#	Amount Charged
711	$ -
717	-
733	19,756
738	23,117
743	203,624
753	9,749
788	13,821
	$ 270,067

PILOT Calculation

A/C# 311 to 371	$ 5,942,162	Balance at Beg of Yr
Accum Deprec	(3,822,810)	Balance at Beg of Yr
Net Book Value	$ 2,119,352	
Prop Tax Rate	$ 20.49	2013-2014 Tax Rate
PILOT - Rounded	$ 43,426	
PILOT - Rounded	$ 43,000	

Received: 03/04/2014

Exhibit 15

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

FORECASTED CAPITAL IMPROVEMENTS

In addition to normal annual capital improvements (which are included in the Village's annual operating budget), the Village has identified a significant capital improvement expected to begin during the Rate Year. This improvement only includes material and subcontractor costs, as no internal Village labor is expected on this capital improvement. Construction/Renovation is expected to be complete during the year after the Rate Year. For purposes of this Rate Filing, it is anticipated that one-half of the total estimated costs will be incurred during the Rate Year.

Rate Year - Vossler Road Substation Upgrades

As described in a report titled "Village of Wellsville - Vossler Road Substation Upgrades
Prepared by O'Brien & Gere, dated March 17, 2013 (attached as an Appendix)

Total cost of substation upgrade	$ 2,257,000
Total cost expected to be incurred during Rate Year (estimate at 1/2 of total cost)	**$ 1,128,500**

Rate Year - Normal annual capital improvements (per Village budget)

Account	Type	Capitalized Labor	Capitalized Material	Total Cost
358	Poles	$ 5,700	$ 13,270	$ 18,970
363	Distribution Overhead Conductors	5,700	-	5,700
365	Line Transformers	4,450	18,000	22,450
366	Overhead Services	700	-	700
368	Consumer Meters	-	15,500	15,500
369	Consumer Meter Installation	3,350	-	3,350
370	Other Property on Consumer Premises	700	-	700
371	Street Lighting	10,700	-	10,700
384	Transportation Equipment			
	4x4 Plow Pickup Truck	-	28,000	28,000
	Quad Cab	-	21,000	21,000
	Digger Truck	-	130,000	130,000
386	Lab Equipment	-	5,000	5,000
387	General Tools	-	4,500	4,500
		$ 31,300	**$ 235,270**	**$ 266,570**
	Total Capital Improvements Anticipated in Rate Year			**$ 1,395,070**

Received: 03/04/2014

Exhibit 16

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

STATEMENTS OF CASH FLOWS WITH 11.0% REVENUE INCREASE
EFFECTIVE JULY 1, 2014
Actual for Years Ended May 31, 2012 and 2013, and Forecast for Rate Year

	2012 Actual	2013 Actual	Forecasted Rate Year
Net operating income, as reported in Annual Report	**$ 86,182**	**$ 80,631**	**$ 147,561**
Add: depreciation expense	177,794	218,544	270,067
Receipts (expenditures)			
Acquisition of operating property	(96,916)	(36,097)	(1,395,070)
Proceeds from depreciation reserves to fund operating property	-	-	-
Transfers to depreciation reserves	(777)	(477)	-
PILOT made to General Fund	-	-	(43,000)
Repayment of long-term debt, net	(25,000)	(25,000)	(35,000)
Issuance of bond	-	-	100,000
Issuance of bond anticipation note (Vossler Road substation)	-	-	1,128,500
Paydown of bond anticipation note at 5% of balance	-	-	(56,425)
Interest expense paid	(9,222)	(8,982)	(53,951)
Interest income received	980	342	-
Change in other assets, net	28,997	(93,235)	-
Change in other liabilities, net	(122,917)	(138,675)	-
Net increase (decrease) in operating cash	**39,121**	**(2,949)**	**$ 62,682**
OPERATING CASH, beginning of year	151,099	190,220	
OPERATING CASH, end of year	**$ 190,220**	**$ 187,271**	

Received: 03/04/2014

Revised Tariff Leaves

Received: 03/04/2014

COVER

VILLAGE OF WELLSVILLE

CONCURRENCE TARIFF

Received: 03/04/2014

TABLE OF CONTENTS LEAF #

Received: 03/04/2014

GENERAL INFORMATION

A. CONCURRENCE:

The Village of Wellsville concurs in and agrees to abide by the rules and regulations as set forth in the generic tariff filed by the New York Municipal Power Agency (NYMPA) in Case No. 97-E-1575.

B. TERRITORY TO WHICH SCHEDULE APPLIES:

These rates, rules, and regulations are applicable to the Village of Wellsville, NY, and that portion of the Town of Wellsville served under franchises granted to the Village of Wellsville, New York.

Received: 03/04/2014

SERVICE CLASSIFICATION NO. 1
Residential

APPLICABLE TO USE OF SERVICE FOR:

Single-phase residential purpose usage in an individual residence; in an individual flat or individual apartment in a multiple-family dwelling; for residential purposes in a rooming house where not more than four (4) rooms are available for rent; and for single phase farm service when supplied through the farm residence meter; use exclusively in connection with religious purposes by corporations or associations organized and conducted in good faith for religious purposes, and including the operation by such corporation or association of a school, not withstanding that secular subjects are taught at such school; for single-phase service exclusively in connection with a community residence as defined in subdivision 28, 28A or 28B of section 1.03 of the Mental Hygiene Law, provided that such residence is operated by a not-for-profit corporation and if supervisory staff is on site on a twenty-four hour per day basis that the residence provides living accommodations for fourteen or fewer residents; and use for any post or hall owned or leased by a not-for-profit organization that is a veterans organization.

Residential purposes in individual single family dwellings or in individual flats or apartments in multiple family dwellings. Also for religious purposes.

CHARACTER OF SERVICE:

Continuous 60 hertz single phase alternating current, 120 volts or 120/240 volts, at the option of the Commission.

MONTHLY RATE:

	Rate
Customer Service Charge	$2.77
Non-winter Rate (June - November)	
Energy Charge, per kWh	$0.0292
Winter Rate (December - May)	
Energy Charge, per kWh	
First 1,000 kWh	$0.0292
Over 1,000 kWh	$0.0570

MINIMUM CHARGE:

The minimum charge is the customer charge.

Received: 03/04/2014

SERVICE CLASSIFICATION NO. 1 (CONT'D)
Residential

TERM:

The consumer will be responsible for any use of service until 2 days after notice to discontinue has been received by the Commission.

SPECIAL PROVISIONS:

When not more than two rooms of an individual dwelling or apartment are used by the occupant for professional or business purposes, service may be taken under this classification for the entire dwelling or apartment, including such business or professional use. If the amount of business or professional use exceeds the above, this service classification will apply only to that portion of the premises used for residential purposes. If the wiring of the premises is not so arranged that the portions used for residential and business and professional purposes may be metered separately, service for the entire establishment may be taken through a single meter at the rates for Service Classification 2.

TERMS OF PAYMENT:

All bills are due when rendered. Full payment must be received on or before the date shown on the bill to avoid a late payment charge of 1.5% as provided in Rule VIII of the NYMPA generic tariff.

PURCHASED POWER ADJUSTMENT:

Charges set forth in this Service Classification shall be subject to a purchased power adjustment as explained in Rule IX of the NYMPA generic tariff.

Received: 03/04/2014

SERVICE CLASSIFICATION NO. 2
General Service - Non-demand Metered

APPLICABLE TO USE OF SERVICE FOR:

Total requirement customers with monthly kWh ranges of 3,500 or less per month. Customers exceeding 3,500 kWh in 3 consecutive winter months (November through April readings) shall have a demand meter installed and the account will be moved into Service Classification No. 3 for a period of 12 months.

If consumption is less than 3,500 kWh and less than 20 kW of demand per month for 12 consecutive months, the customer will be returned to Service Classification No. 2.

CHARACTER OF SERVICE:

Continuous 60 hertz alternating current, single phase at 120 or 120/240 volts, at the option of the Commission.

MONTHLY RATE:

	Rate
Customer Charge	$ 2.77
Energy Charge, per kWh	$ 0.0488

MINIMUM CHARGE:

The minimum charge is the customer charge.

Received: 03/04/2014

SERVICE CLASSIFICATION NO. 2 (CONT'D)
General Service - Non-demand Metered

TERM:

The consumer will be responsible for any use of service until 2 days after notice to discontinue has been received by the Village.

SPECIAL PROVISIONS:

(a) Current delivered under this classification may be used on the premises where delivered, for any purposes, at the option of the consumer, except for resale.

TERMS OF PAYMENT:

All bills are due when rendered. Full payment must be received on or before the date shown on the bill to avoid a late payment charge of 1.5% as provided in Rule VIII of the NYMPA generic tariff.

PURCHASED POWER ADJUSTMENT:

The charges set forth in this Service Classification shall be subject to a purchased power adjustment clause as explained in Rule IX of the NYMPA generic tariff.

Received: 03/04/2014

SERVICE CLASSIFICATION NO. 3
General Service - Demand Metered

APPLICABLE TO USE OF SERVICE FOR:

All purposes subject to Special Provision (a).

CHARACTER OF SERVICE:

Continuous 60 hertz alternating current, single phase at 120 or 120/240 volts or three phase at 208, 480 or 4160 volts, subject to special provision (b), voltage and phase at the option of the Commission.

MONTHLY RATE: (per meter)

	Rate
Energy Charge, per kWh	$0.0125
Demand Charge, per KW	$5.54

Primary Service Rate:

(Service is metered at primary line voltage of 4160 volts)	Rate
Energy Charge, per kWh	$0.0125
Demand Charge, per kW	$5.09

Received: 03/04/2014

SERVICE CLASSIFICATION NO. 3 (CONT'D)
General Service - Demand Metered

MINIMUM CHARGE (per meter):

(a) Minimum demand charge will not be less than 75% of the maximum demand during the preceding 11 months.
(b) Applicable to all polyphase service and to single phase service when a demand meter is required (see Determination of Demand) or when an extension of lines or the installation of a new service lateral or of additional transformers is required.

DETERMINATION OF DEMAND:

Demand will be determined by meter whenever consumption for three consecutive winter billing months (November thru April) exceeds 3,500 kWh or demand exceeds 20KW. Demand will be the maximum 15-minute integrated demand during the month but will not be less than 75% of the maximum demand during the preceding 11 months.

A demand meter, once installed, shall not be removed until after the energy consumption has been less than 3,500 kWh per month for twelve consecutive months, which requirement may not be avoided by temporarily terminating service.

SPECIAL PROVISIONS:

(a) Current delivered under this classification may be used on the premises where delivered, for any purposes, at the option of the consumer, except for resale.
(b) Service at 4,160 volt primary line voltage will be supplied only to consumers who employ an electrician competent to maintain and operate 4,160 volt equipment.

TERMS OF PAYMENT:

All bills are due when rendered. Full payment must be received on or before the date shown on the bill to avoid a late payment charge of 1.5% as provided in Rule VIII of the NYMPA generic tariff.

TERM:

One year and thereafter until terminated on 48 hours written notice to the Village.

Received: 03/04/2014

SERVICE CLASSIFICATION NO. 4
Private Outdoor Lighting

APPLICABLE TO USE OF SERVICE FOR:

Outdoor lighting for driveways, roadways, parking areas and protection of property.

CHARACTER OF SERVICE:

Limited period, approximately 4100 hours per year, 60 hertz alternating current at approximately 120 volts.

MONTHLY RATE:

	Mercury	Lucalox
Facilities Charge, per unit:		
150 Watt Unit	-	$11.09
175 Watt Unit	$ 8.78	-
250 Watt Unit	$11.55	$13.87
400 Watt Unit	$14.56	$16.87
1000 Watt Unit	$31.18	$33.52

TERMS OF PAYMENT:

Net amount monthly.

TERM:

One year from date of installation, and yearly thereafter until canceled by the customer upon 30 days notice.

Received: 03/04/2014

SERVICE CLASSIFICATION NO. 4 (CONT'D)
Private Outdoor Lighting

SPECIAL PROVISIONS:

The Municipal Electrical Utility shall furnish, install, own, operate and maintain a photo-electrically controlled luminaire complete with ballast and lamp at the wattage designated under the rate charge desired. The Utility shall furnish a service span of 100 feet. On longer spans the customer shall pay for any additional material used.

The customer shall provide a pole or other support of the required mounting height to provide proper light distribution except that the Utility may elect to install the unit on its own pole if one is available.

Lighting service will be provided every night from dark until dawn aggregating about 4100 hours per year unless prevented by accidents beyond the control of the Utility.

The customer shall notify the Utility whenever the unit fails to operate and the Utility shall replace the lamp and/or make necessary repairs with reasonable promptness.

Received: 03/04/2014

SERVICE CLASSIFICATION NO. 5
Athletic Field Lighting

APPLICABLE TO USE OF SERVICE FOR:

Lighting, available for athletic fields administered for the common good of the community and without profit.

CHARACTER OF SERVICE:

Continuous, alternating current, 60 cycle, 120/240 volt, single phase.

RATE:

Energy Charge, per kWh	$0.067261

MINIMUM CHARGE:

$12.73 for each occasion when service is used.

TERMS OF PAYMENT:

Bills are net cash and due when received.

SPECIAL PROVISIONS:

None.

Received: 03/04/2014

SERVICE CLASSIFICATION NO. 6
Large General Service

APPLICABLE TO USE OF SERVICE FOR:

For customers that have all electrical service from a 34.5/4.16 kV Substation.

CHARACTER OF SERVICE:

Continuous, alternating current, three-phase, 4160 volt, approximately 60 hertz.

MONTHLY RATE:

	Rate
Active Demand Charge:	
Total Demand on 15-minute basis per KW month	$5.54
Plus Reactive Demand Charge:	
Each kilovolt-ampere of billing reactive demand per month, per RKVA	$0.3681
Plus Total Energy Charge Per KWH:	$0.0096

MINIMUM CHARGE:

The minimum charge shall be the demand charge as explained in DETERMINATION OFDEMAND.

Received: 03/04/2014

SERVICE CLASSIFICATION NO. 6 (CONT'D)
Large General Service

DETERMINATION OF DEMAND:

(a) The Measured Active Demand shall be the maximum fifteen-minute integrated kilowatt demand. For billing purposes, the active demand shall be the greatest of the following:

1. The measured Active Demand occurring during the month for which the bill is rendered.

2. 75% of the largest Measured Active Demand during the preceding 11 months.

3. 2500 kilowatts.

(b) The Measured Reactive Demand shall be the maximum fifteen-minute integrated kilovolt-amperes of lagging reactive demand as measured by a demand meter each month. For billing purposes, the reactive demand shall be the amount so measured minus 35% of the total active demand metered during this month.

TERMS OF PAYMENT:

All bills are due when rendered. Full payment must be received on or before the date shown on the bill to avoid a late payment charge of 1.5% as provided in Rule VIII of the NYMPA generic tariff.

PURCHASED POWER ADJUSTMENT:

The charges set forth in this Service Classification shall be subject to a purchased power adjustment clause as explained in Rule IX of the NYMPA generic tariff.

Received: 03/04/2014

CHARGES

RECONNECTION CHARGE:

When service has been discontinued, either by the Municipality as provided in Rule (XIII) of the NYMPA generic tariff or at the request of the customer and the same consumer applies for reconnection of service at the same premise within four (4) months, there shall be a reconnection charge payable before service will be reestablished, in the amounts as follows:

$25.00 during the regular working hours of the Electric Department, Monday through Friday;

$40.00 after the regular working hours of the Electric Department, Monday through Friday; and Saturday, Sunday and Holidays.

INSUFFICIENT FUNDS CHECK CHARGE:

Any checks received in payment for electric service which are returned to the Municipality for insufficient funds, or are otherwise dishonored by the bank, shall bear a nonrecurring charge of $20.00 for each check that has to be processed by the Municipality. If two checks have been returned by the bank, the customer who issued the dishonored checks may be required by the Municipality to render future payments by cash, money order, certified or cashier's check.

Post-dated checks shall be returned to the customer as invalid for the transaction.

Only United States currency shall be accepted for payment of accounts due the Municipality.

Received: 03/04/2014

PURCHASED POWER ADJUSTMENT CHARGE

APPLICABILITY:

All customers receiving service under any of the Village of Wellsville's Electric Department's Service Classification are subject to purchased power adjustment charges ("PPAC").

ADJUSTMENT CHARGE:

The PPAC shall be the amount which shall be added to each kilowatt-hour of each rate schedule to reflect and recover all purchased power and transmission costs billed to the Village of Wellsville Electric Department from all service providers.

CALCULATION OF THE PURCHASED POWER ADJUSTMENT CHARGE:

The PPAC shall equal the total cost of all power and transmission costs billed to the Village of Wellsville Electric Department in each month divided by the kWh purchases in that month, less the base cost of purchased power measured at system input level adjusted by a loss factor (Factor of Adjustment). The resultant cost per kWh shall be rounded to the nearest $0.000001 and applied as a charge or credit to all kilowatt-hours billed in the following month.

ANNUAL RECONCILIATION:

At the end of each fiscal year, the Village of Wellsville will perform a reconciliation to determine whether there was an under- or over-collection of purchased power expense during the preceding year. The calculation is as follows:

Total Purchased Power Cost - (kWh sold x Base Cost of Purchased Power x Factor of Adjustment)

The result will then be compared to the actual PPAC revenues recovered during this period to determine if a PPA Reconciliation Surcharge or Refund is applicable. The resultant Surcharge or Refund will be included as a line item in the following month(s) calculation(s) of PPAC in order to adjust revenues to more accurately reflect actual expenses. The number of months over which the Surcharge or Refund will be included will depend on the size of the Surcharge or Refund. If the Surcharge/Refund is under $10,000 it will be included in one month. Surcharges/Refunds between $10,000 and $20,000 will be split between two months and any Surcharges/Refunds over $20,000 will be charged/credited in $10,000/month increments until complete in order to minimize the impact on rate payers.

Received: 03/04/2014

Workpapers

Received: 03/04/2014

Workpaper A

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

WEATHER NORMALIZATION OF REVENUES (BASED ON MAY 31, 2013)

Assume non-weather load to be average of lowest two months kWh sales

From 5/31/13 Annual Report: Actual kWh & Actual Base Revenue

		kWh Sold			Base Revenue		
		Winter	Summer		Winter	Summer	
		Nov - April kWh	May - Oct kWh	Total kWh	Nov-April $	May-Oct $	Total $
601	Residential	12,024,716	7,766,972	19,791,688	$ 445,681	$ 235,668	$ 681,349
602, 608	Commercial	4,643,672	3,151,021	7,794,693	$ 214,206	$ 148,035	$ 362,241
	Total	16,668,388	10,917,993	27,586,381	$ 659,887	$ 383,703	$ 1,043,590

Weather Normalization

				Increase/(Decrease)			
		Nov-April	Nov-April	15.9%	Adjusted		
		Non-Weather kWh	Weather kWh	Weather Load	Nov - Apr kWh		
601	Residential	6,786,081	5,238,635	6,073,672	12,859,753		
602, 608	Commercial	2,816,511	1,827,161	2,118,410	4,934,921	17,794,674	
	Total	9,602,592	7,065,796	8,192,082	17,794,674	16,668,388	
						1,126,286	6.8%

		Nov - April	Adjusted		
		Base Revenue	Base Revenue		
601	Residential	445,681	475,796		
602 - 608	Commercial	214,206	228,680		
	Total	659,887	704,476	44,589	increase to base revenue

Purchased Power

change in kWh	1,126,286
Base Cost of Fuel	0.015027
FOA - RY	1.068706
	0.0160594
	18,088

	Staff Adjustment	Rev. Req. Effect
Revenue	44,589	(44,589)
Purchased Power	18,088	18,088
Net		(26,501)

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

WEATHER NORMALIZATION OF REVENUES (BASED ON MAY 31, 2013)

5/31/2013	Sales - from Annual Report					
601- RESIDENTIAL						
	kWh	**Total**			**Base Rev**	**Total**
June	1,194,876	1,194,876			$ 36,845	$ 36,845
July	1,499,709	1,499,709	Lowest 2 Months		44,802	44,802
August	1,295,878	1,295,878	1,067,151	Oct	39,421	39,421
September	1,328,107	1,328,107	1,194,876	June	40,247	40,247
October	1,067,151	1,067,151			33,042	33,042
November	1,601,899	1,601,899	AVG		55,008	55,008
December	1,855,819	1,855,819	1,131,014		70,388	70,388
January	2,288,146	2,288,146			86,044	86,044
February	2,302,874	2,302,874			87,433	87,433
March	2,047,547	2,047,547			76,328	76,328
April	1,928,431	1,928,431			70,480	70,480
May	1,381,251	1,381,251			41,311	41,311
	19,791,688	19,791,688			$ 681,349	$ 681,349
602 - COMMERCIAL						
	kWh	**Total**			**Base Rev**	**Total**
June	518,360	518,360			$ 24,355	$ 24,355
July	567,614	567,614	Lowest 2 Months		26,433	26,433
August	526,321	526,321	420,477	Oct	24,673	24,673
September	558,559	558,559	518,360	June	26,135	26,135
October	420,477	420,477			20,297	20,297
November	647,984	647,984	AVG		30,183	30,183
December	727,326	727,326	469,419		33,743	33,743
January	846,915	846,915			38,918	38,918
February	882,363	882,363			40,574	40,574
March	791,312	791,312			36,393	36,393
April	747,772	747,772			34,395	34,395
May	559,690	559,690			26,142	26,142
	7,794,693	7,794,693			$ 362,241	$ 362,241

Received: 03/04/2014

Workpaper A-2

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

WEATHER NORMALIZATION OF REVENUES (BASED ON MAY 31, 2013)

Heading Degree Data									
http://www.erh.noaa.gov/buf/climate/roc_hdd00s.php									
Buffalo, NY									
SEASON	NOV	DEC	JAN	FEB	MAR	APR		Total	% deviation from 10-yr avg
2003-04	728	1125	1445	1229	951	646		6124	
2004-05	678	1006	1475	1153	811	574		5697	
2005-06	708	1098	1334	1091	1085	562		5878	
2006-07	634	1138	908	1019	892	502		5093	
2007-08	566	798	1077	1246	913	608		5208	
2008-09	785	1102	1065	1113	1030	386		5481	
2009-10	761	1060	1414	1001	896	556		5688	
2010-11	686	1141	1259	1098	770	382		5336	
2011-12	742	1198	1331	1125	960	556		5912	
2012-13	565	914	1071	956	545	576		4627	-15.9%
								5504	10 Year Average of November-April

Received: 03/04/2014

Workpaper B

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

EXPENSE ALLOCATION
Fiscal Year May 31, 2013

Expense	Fiscal Yr. 2013 Amount	Comment
Purchased Power	$ 1,678,894	Account 721, PSC Report page 306
Other Production Costs (recovered by PPAC revenues)		
PSC Assessment, Section 18-a	44,754	Account 722, PSC Report page 306
NYPA Payments for Electric Drive and Insulation Programs	28,570	Account 722, PSC Report page 306
Transmission Congestion Charges	6,215	Account 722, PSC Report page 306
Labor	390,143	PSC Report, page 102. Total salaries less salaries capitalized ($409,822 less $19,679)
Taxes	-	Account 403, PSC Report page 106
Uncollectible revenues	-	Account 404, PSC Report page 106
Rent	-	Account 786, PSC Report page 307
FICA, Medical, Wcomp, Retirement, DBL, Training	123,973	Actual per client
Insurance	13,749	Account 783, PSC Report page 307
Depreciation	218,544	Accounts 733, 738, 743, 753, 788, PSC Report pages 306 and 307
Contractual		
Transmission	2,835	Represents an allocation of remaining costs based on cost of individual category. (See below)
Maint. Poles	255	Represents an allocation of remaining costs based on cost of individual category. (See below)
Distribution	27,119	Represents an allocation of remaining costs based on cost of individual category. (See below)
Street Lights	1,563	Represents an allocation of remaining costs based on cost of individual category. (See below)
Consumer Accounting and Collection	13,779	Represents an allocation of remaining costs based on cost of individual category. (See below)
Sales Expense	167	Represents an allocation of remaining costs based on cost of individual category. (See below)
General & Administ.	80,206	Represents an allocation of remaining costs based on cost of individual category. (See below)
Contributions to IEEP (recovered by PPAC Revenues)	65,750	Included in Account 785, PSC Report page 306 and 307
	$ 2,696,516	

Cost Category (per PSC Report, excluding depreciation and separately stated costs)	Actual	%	Allocated Remaining Cost**
Transmission	$ 11,617	2.25%	$ 2,835
Maint. Poles	1,045	0.20%	255
Distribution	111,139	21.54%	27,119
Street Lights	6,405	1.24%	1,563
Consumer Accounting and Collection	56,468	10.94%	13,779
Sales Expense	685	0.13%	167
General & Administrative	328,708	63.69%	80,206
	$ 516,067	100.00%	$ 125,924

Total Cost in P&L (not incl. interest expense) **$ 2,696,516**

** **Contractual Costs**

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

EXPENSE ALLOCATION
Fiscal Year May 31, 2012

Expense	Fiscal Yr. 2012 Amount	Comment
Purchased Power	$ 1,483,519	Account 721 & 722, PSC Report page 306
Other Production Costs (recovered by PPAC revenues)		
PSC Assessment, Section 18-a	46,391	Account 722, PSC Report page 306
NYPA Payments for Electric Drive and Insulation Programs	9,626	Account 722, PSC Report page 306
Transmission Congestion Charges	6,215	Account 722, PSC Report page 306
Labor	371,500	PSC Report, page 102. Total salaries less salaries capitalized ($385,564 less $14,064)
Taxes	-	Account 403, PSC Report page 106
Uncollectible revenues	-	Account 404, PSC Report page 106
Rent	-	Account 786, PSC Report page 307
FICA, Medical, Wcomp, Retirement, DBL, Training	127,266	Actual per client
Insurance	14,227	Account 783, PSC Report page 307
Depreciation	177,796	Accounts 733, 738, 743, 753, 788, PSC Report pages 306 and 307
Contractual		
Transmission	3,336	Represents an allocation of remaining costs based on cost of individual category. (See below)
Maint. Poles	339	Represents an allocation of remaining costs based on cost of individual category. (See below)
Distribution	26,347	Represents an allocation of remaining costs based on cost of individual category. (See below)
Street Lights	251	Represents an allocation of remaining costs based on cost of individual category. (See below)
Consumer Accounting and Collection	11,419	Represents an allocation of remaining costs based on cost of individual category. (See below)
Sales Expense	957	Represents an allocation of remaining costs based on cost of individual category. (See below)
General & Administ.	77,389	Represents an allocation of remaining costs based on cost of individual category. (See below)
Contributions to IEEP (recovered by PPAC Revenues)	60,287	Included in Account 785, PSC Report page 306 and 307
	$ 2,416,865	

Cost Category (per PSC Report, excluding depreciation and separately stated costs)	Actual	%	Allocated Remaining Cost**
Transmission	$ 15,060	2.78%	$ 3,336
Maint. Poles	1,529	0.28%	339
Distribution	118,955	21.95%	26,347
Street Lights	1,131	0.21%	251
Consumer Accounting and Collection	51,550	9.51%	11,419
Sales Expense	4,322	0.80%	957
General & Administrative	349,411	64.47%	77,389
	$ 541,958	**100.00%**	**$ 120,038**

Total Cost in P&L (not incl. interest expense) **$ 2,416,865**

**** Contractual Costs**

Received: 03/04/2014

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

EXPENSE ALLOCATION
Fiscal Year May 31, 2011

Expense	Fiscal Yr. 2011 Amount	Comment
Purchased Power	$ 1,624,936	Account 721 & 722, PSC Report page 306
Other Production Costs (recovered by PPAC revenues)		
PSC Assessment, Section 18-a	23,195	Account 722, PSC Report page 306
NYPA Payments for Electric Drive and Insulation Programs	4,669	Account 722, PSC Report page 306
Transmission Congestion Charges	6,215	Account 722, PSC Report page 306
Labor	385,828	PSC Report, page 102. Total salaries less salaries capitalized ($413,293 less $27,465)
Taxes	-	Account 403, PSC Report page 106
Uncollectible revenues	-	Account 404, PSC Report page 106
Rent	-	Account 786, PSC Report page 307
FICA, Medical, Wcomp, Retirement, DBL, Training	129,387	Actual per client
Insurance	8,821	Account 783, PSC Report page 307
Depreciation	222,551	Accounts 733, 738, 743, 753, 788, PSC Report pages 306 and 307
Contractual		
Transmission	9,821	Represents an allocation of remaining costs based on cost of individual category. (See below)
Maint. Poles	740	Represents an allocation of remaining costs based on cost of individual category. (See below)
Distribution	24,841	Represents an allocation of remaining costs based on cost of individual category. (See below)
Street Lights	438	Represents an allocation of remaining costs based on cost of individual category. (See below)
Consumer Accounting and Collection	12,023	Represents an allocation of remaining costs based on cost of individual category. (See below)
Sales Expense	(252)	Represents an allocation of remaining costs based on cost of individual category. (See below)
General & Administ.	85,895	Represents an allocation of remaining costs based on cost of individual category. (See below)
Contributions to IEEP (recovered by PPAC Revenues)	66,538	Included in Account 785, PSC Report page 306 and 307
	$ 2,605,646	

Cost Category (per PSC Report, excluding depreciation and separately stated costs)	Actual	%	Allocated Remaining Cost**
Transmission	$ 43,097	7.36%	$ 9,821
Maint. Poles	3,249	0.55%	740
Distribution	109,013	18.61%	24,841
Street Lights	1,924	0.33%	438
Consumer Accounting and Collection	52,760	9.01%	12,023
Sales Expense	(1,108)	-0.19%	(252)
General & Administrative	376,937	64.34%	85,895
	$ 585,872	100.00%	$ 133,506

Total Cost in P&L (not incl. interest expense) $ 2,605,646

** **Contractual Costs**

Received: 03/04/2014

Workpaper C

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

PROJECTED COSTS FOR RATE YEAR

Expense	(Workpaper B) Fiscal Yr. 2013 Amount	(Workpaper B-1) Fiscal Yr. 2012 Amount	(Workpaper B-2) Fiscal Yr. 2011 Amount	Three Year Average	Costs Adjusted for Known or Calculated Changes	Cost Determined by:
Purchased Power	$ 1,678,894	$ 1,483,519	$ 1,624,936	$ 1,595,783	$ 1,696,982	Calculated - Weather Normalization Adjustment
Other Production Costs (recovered by PPAC revenues)						
PSC Assessment, Section 18-a	44,754	46,391	23,195	38,113	44,754	Estimated to be similar to Historic Base Year.
NYPA Payments for Electric Drive and Insulation Programs	28,570	9,626	4,669	14,288	54,432	Per NYPA amortization schedule
Transmission Congestion Charges	6,215	6,215	6,215	6,215	6,215	Per Agreement
Labor, net of capitalized amounts	390,143	371,500	385,828	382,490	395,079	Salaries will be increased 2% each year for Fiscal Year 2013-2014, and the two subsequent years (including the Rate Year), as per Village agreements. Total salaries for the Rate Year are budgeted to be $426,379 of which $31,300 is expected to be capitalized.
Labor and fringe benefits, new position	-	-	-	-	89,000	Hire of Electric Technician, who will also serve as Project Engineer on Vossler Substation Upgrade and future system management. Gross Salary expected to be $60,000 plus $29,000 in fringe benefits, which includes $11,000 in health care.
Taxes/PILOT	-	-	-	-	43,000	PILOT made to Village based on placed infrastructure (Calculated at Exhibit 14)
FICA, Medical, Wcomp, Retirement, Training	123,973	127,266	129,387	126,875	154,846	Based on estimated or known amounts (allocated to Electric Department), calculation (for FICA) on total salaries.
Insurance	13,749	14,227	8,821	12,266	12,266	3 Year average
Depreciation	218,544	177,796	222,551	206,297	270,067	Calculated at Exhibit 14. Increase is due to asset additions, including Vossler Road Substation Upgrades
Contractual						
Transmission	2,835	3,336	9,821	5,331	5,331	3 Year average
Maint. Poles	255	339	740	445	455	3 Year average
Distribution	27,119	26,347	24,841	26,102	26,102	3 Year average
Street Lights	1,563	251	438	751	751	3 Year average
Consumer Accounting and Collection	13,779	11,419	12,023	12,407	12,407	3 Year average
Sales Expense	167	957	(252)	291	291	3 Year average
General & Administ.	80,206	77,389	85,895	81,163	81,163	3 Year average
Amortization of Rate Filing Costs	-	-	-	-	5,767	Cost of Rate Filing ($17,300) amortized over 3 years, the period of expected benefit.
Contributions to IEEP (recovered by PPAC Revenues)	65,750	60,287	66,538	64,192	65,871	Rate Year costs includes 6.8% increase in kWh consumption, as the result of weather normalization. (Historic Base Year consumption of 61,676,645 x 106.8% x .001 = $65,871)
	$ 2,696,516	**$ 2,416,865**	**$ 2,605,646**	**$ 2,573,009**	**$ 2,964,778**	

* Fringe Benefit allocation

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Workpaper D

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

PURCHASED POWER ADJUSTMENT RECONCILIATION
Fiscal Year May 31, 2013

Municipality/Coop Name	WELLSVILLE			PURCHASE POWER ADJUSTMENT CLAUSE RECONCILIATION FOR THE FISCAL YEAR ENDED							May 31, 2013
	Total sales per annual report				1/12 TCC, Nat'l				[Note 1]	[Note 2]	
					Grid, NYPA, NYMPA				Difference in		previous year
	Current Activity				Total	Surcharge	Total	Base Cost	Present	Net	
BILLING	KWH	PPAC	PPAC	BILLING	Power Bills	(credit)	Delivered	of Power	and	(Overcollection)	Adustment
Month	Sales	($ per KWH)	Revenues	Month	($)	($) [1]	KWH	($ per KWH)	Base Costs	Undercollection	Factor
JUNE '12	4,485,125	0.009733	43,654	JUNE' 12	$100,032	$16,672	4,766,589	0.015027	45,076	1,422	1.071683
JULY	4,936,056	0.009422	46,508	JULY	$99,375	$14,938	5,400,929	0.015027	33,153	(13,355)	1.071683
AUG	4,695,911	0.013172	61,855	AUG	$121,486	$24,208	5,028,712	0.015027	70,128	8,273	1.071683
SEPT	4,796,291	0.009962	47,781	SEPT	$113,327	$17,338	4,567,227	0.015027	62,033	14,252	1.071683
OCT	4,042,551	0.011138	45,026	OCT	$100,061	$16,876	4,974,228	0.015027	42,189	(2,837)	1.071683
NOV	5,089,985	0.011733	59,721	NOV	$112,871	$17,283	5,760,522	0.015027	43,591	(16,130)	1.071683
DEC	5,417,955	0.013143	71,208	DEC	$140,327	$18,069	6,214,770	0.015027	65,007	(6,201)	1.071683
JAN '13	6,167,090	0.012555	77,428	JAN '13	$148,914	$18,524	6,754,850	0.015027	65,933	(11,495)	1.071683
FEB	6,232,664	0.020364	126,922	FEB	$212,750	$19,064	6,200,406	0.015027	138,640	11,718	1.071683
MARCH	5,712,627	0.018862	107,752	MARCH	$180,942	$23,046	6,353,110	0.015027	108,520	768	1.071683
APRIL	5,551,458	0.019757	109,680	APRIL	$191,184	$23,198	5,116,318	0.015027	137,499	27,819	1.071683
MAY	4,548,932	0.014125	64,254	MAY	$123,470	$21,962	4,720,408	0.015027	74,498	10,244	1.071683
TOTAL	61,676,645		$861,789	TOTAL	$1,644,739	$231,178	65,858,069		$886,268	**$24,479**	1.071683

[1] Credits and Surcharges are as follow:
Please enter nature, amount and months affected)

Sept

Cumulative Undercollection	**$0**
2012-13 PPAC Undercollection	**$24,479**
M.A.P.(Electric) Veh. Prog.	$0
I.E. Energy Efficiency Prog.	$0
FMC Energy Efficiency Prog.	$0
PSC Assessment Charges	$0
NYPA (IEEP) Weather. Prog.	$0

[Note 1]
Difference in Present and Base Costs = [Total Power Bill & Surcharges - Credits] - [Total Delivered KWH x Base Cost of Power]

[Note 2]
Net (Overcollection) Undercollection = Difference in Present and Base Cost - PPAC Revenues collected

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Appendix

VILLAGE OF WELLSVILLE
ELECTRIC DEPARTMENT

Engineer Report for Vossler Substation Upgrades

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REPORT

Village of Wellsville

Vossler Road Substation Upgrades

March 17, 2013

O'BRIEN & GERE

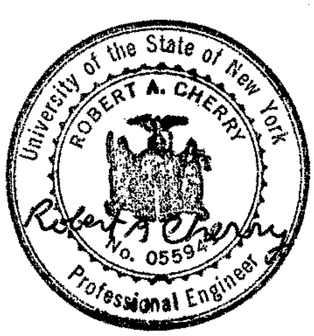
Received: 03/04/2014

858 | 49497

Vossler Road Substation Upgrades

Vossler Road
Wellsville, New York

Prepared for:
Village of Wellsville



ROBERT A. CHERRY, TECHNICAL DIRECTOR
O'Brien & Gere Engineers, Inc.

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FIGURES

APPENDICES

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EXECUTIVE SUMMARY

The estimated budgetary cost for the project, as presently defined by the Village, is $2,257,000. This roughly compares to the amount of $2,750,000 for the original project scope. The original project scope is Alternative 2a in the Budgetary Cost chapter and included the following:

- A revised site layout that facilitates construction and maintenance and includes secondary containment for transformer oil
- Two new transformers with mineral oil and automatic load tap changers (LTCs)
- Two new 34.5 kV, vacuum type, circuit breakers
- New indoor metal-clad switchgear with one breaker per vertical section (1-high switchgear)
- A masonry control building.

Costs were developed for various alternatives, including:

- Retaining existing site layout (Alternative 1, $2,630,000)
- Switchgear with two breakers per vertical section (Alternative2b, $2,680,000)
- A factory fabricated E-Building in lieu of a masonry building (Credit of $43,000)
- Voltage regulators in lieu of automatic load tap changers (Additional cost of ($9,000)
- Biodegradable oil in lieu of mineral oil(Additional cost of $50,000)

On February 15, 2013, the Village requested that the project scope be revised to delete the replacement of the south (Dresser-Rand) transformer. A subsequent constructability review indicated that replacement of the following equipment associated with the Dresser-Rand transformer should also be deleted from the project: transformer foundation, oil circuit breaker and voltage regulators. It is anticipated that the existing Dresser-Rand transformer could be reconnected, via underground cables, to supply the new switchgear, since replacement of the existing switchgear is a major goal of this project.

The construction cost estimate breakdown that was submitted with the draft of this report has been modified to include an additional cost column that addresses the village requested changes. These changes are as follows:

- Use of a factory fabricated "e-building" rather than a field constructed masonry building.
- Use of three individual voltage regulators in the new bay, rather than a transformer automatic load tap changer (LTC)
- Deletion of costs associated with the replacement of the Dress-Rand transformer and related work,
- Engineering fees has been changed to more closely reflect the scope of engineering services appropriate for this project.
- A contingency line has been added since only conceptual design has been completed to date and since construction prices may vary substantially with commodity prices and contractor's work loads.

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The estimated project cost, including a 10% contingency, for the project scope and options selected by the Village is about $2,257,000. The following sections of this report describe the project in more detail and provide a solid basis for final design.

BACKGROUND

2.1 GENERAL

The Village of Wellsville electric system includes three substations:

- The Niles Hill (or E. J. Rowe) 115 kV supply substation
- The State Street 4.16 kV distribution substation
- The Vossler Road (or J.L. Moore or Worthington) 4.16 kV distribution substation

This project addresses work at the Vossler Rd. Substation.

2.2 EXISTING SUBSTATION

The existing substation was constructed in 1969 to meet the power requirements of Worthington Corporation and to support general load growth in the franchise area of the Village electric system. The substation has been known by various names, including the Vossler Road Substation, J.L. Moore Substation, and Worthington Substation. The Worthington Corporation facility that was supplied by the substation is now owned by the Dresser-Rand Corporation.

The initial substation included a single power transformer and did not include any voltage regulation. A second transformer was added in 1973 to provide backup capability in the event the original transformer required maintenance or failed. The original transformer did fail and was replaced in 1996. A three-phase regulator to provide voltage regulation on circuits supplying Village electric system loads was installed sometime after 1974. Selected ratings for the existing substation are as follows:

	South Bay	North Bay
Supply Voltage	34.5 kV	34.5 kV
Secondary Voltage	4.16 kV	4.16 kV
Primary Protection-Oil Circuit Breaker		
Manufacturer	Westinghouse	Westinghouse
Approx date of manufacture	1969	1974
Type	345GS1500	345GS1500
Current rating	1200 A	1200 A
Protective Relays	CO Overcurrent & RC Reclosing	CO Overcurrent & RC Reclosing
Transformer		
Manufacturer	Cooper	Westinghouse
Approx date of manufacture	1996	1970
Base Power Rating	5,000 kVA	5,000 kVA
Maximum Power Rating	7,000 kVA	7,000 kVA
Voltage Regulator	None	
Manufacturer	NA	General Electric

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	South Bay	North Bay
Base Power Rating	NA	600 kVA (800 A)
Metal-Clad Switchgear		
Manufacturer	General Electric	General Electric
Approx date of manufacture	1969	1974
Voltage Rating	4.76 kV	4.76 kV
Main/Tie Breaker Current Rating	2000 A	2000 A
Feeder Breaker Current Rating	1200 A	1200 A

Design life for substation equipment is in the order of 30 years. Most substation equipment has now been in service from to 39 to 44 years. Most equipment is presently in serviceable condition, however settlement of the switchgear foundation installed in 1974 has occurred. This has caused serious damage to the equipment and results in both reliability and safety concerns. Protective relaying located in the oil circuit breakers and in the switchgear is obsolete.

2.3 PROJECT DESCRIPTION

2.3.1 General

The primary driving force for the project is to replace the existing metal-clad switchgear. Based on discussions held on August 10, the project is also to upgrade and extend the life of other substation equipment. The project, as originally defined by the Village, is to include replacing 34.5 kV circuit breakers, replacing power transformers, and providing voltage regulation on all buses.

2.3.2 34.5 kV Circuit Breakers

Existing circuit breakers are oil-filled and have substantially exceeded their design lives. The existing oil circuit breakers are obsolete and no longer available. Current 34.5 kV breaker designs use either SF6 gas or vacuum style breakers. Either design eliminates the potential for environmental contamination due to oil spills. The Village has indicated that vacuum type breakers are preferred.

2.3.3 Transformers

The Village had originally indicated that both existing transformers should be replaced as part of the project and that voltage regulation should be provided for the 4.16 kV bus. However, due to budget limitations, the project scope has been reduced to include the replacement of only one 34.5 kV circuit breaker and transformer. The desired rating of each transformer, based on Dresser-Rand load projections and estimated load growth within the Village, is about 8,400 kVA. There are various means of obtaining this rating and detailed transformer ratings will need to be determined during final design. Niagara Transformer Corporation is one of the primary manufacturers of transformers in this size and voltage range. Niagara has indicated that it can supply a transformer rated 8400 kVA, but detailed ratings would not necessarily be the same as the ratings of the transformer at the Village's State St substation. Based on discussions with the Village, the following options for transformers were to be considered.

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- Mineral Oil vs. Biodegradable Fluid (such as Cooper/Cargill FR3) for transformer insulating fluid
- Transformers with integral automatic load tap changers vs. stand-alone voltage regulators, for voltage regulation.
- After review of the draft version of this report, the Village has elected to purchase a transformer containing mineral oil and to purchase stand-alone voltage regulators.

2.3.4 Metal-Clad Switchgear

The Village initially indicated that a masonry building similar to that at its State Street Substation was desired. Based on discussions with Jon Tucker and the Village, it was determined than a factory fabricated switchgear building (sometimes called an E-Building, Pre-engineered Building, Power Center, or Power Control Complex) should also be considered. Old-fashioned sheltered-aisle switchgear is not desired due to maintenance, life, and energy efficiency concerns. After review of the draft version of this report, the Village has elected to proceed with a factory fabricated switchgear building.

Revenue metering for Dresser Rand is located within the existing metal-clad switchgear. The project must address Dresser-Rand revenue metering, but the entire metering installation does not necessarily need to be within the new switchgear or building.

2.4 ENGINEERING AUTHORIZATION

A budgetary cost estimate for the substation upgrades is needed in order to complete a rate study that is presently in progress. The following documents describe the engineering services to be provided in support of this budgetary estimate.

- Purchase Order Acknowledgement dated August 3, 2012
- Purchase Order 0403 dated July 5, 2012
- Village -email of July 17, 2012 regarding project responsibilities
- Jon Tucker's discussion points of August 7, 2012 and meeting on August 10, 2012

The services included developing a conceptual basis of design as well as identifying and evaluating design alternatives that might substantially impact project costs.

PROJECT ALTERNATIVES

3.1 GENERAL

The original substation was designed as small, low cost, substation primarily to supply power to Worthington Corporation. Much has changed since the substation was designed over 40 years ago. There is now a much higher emphasis on power reliability, power quality, maintainability, operational safety, construction safety, and environmental impacts. Two overall conceptual alternatives have been considered to address these changes:

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- Alternative 1: a basic design that attempts to minimize disturbance to the site and reuse as much of the existing foundations as possible.
- Alternative 2: Site layout upgrade to address the increased emphasis on reliability and safety.

These alternatives are discussed in sections 3.2 and 3.3. Sub-alternatives and other design considerations are discussed in the following sections:

3.4 Transformer and Voltage Regulation Alternatives

3.5 Mineral Oil vs. Biodegradable Fluid

3.6 Dresser Rand Metering

3.7 Distribution Feeder Configuration

3.2 ALTERNATIVE 1 - EQUIPMENT REPLACEMENT

This alternative attempts to reuse the existing 34.5 kV structure, 34.5 kV oil circuit breaker foundations, and transformer foundations. It appears that this alternative is feasible, but space is very limited and feasibility cannot be confirmed until final design is substantially complete.

Considerations regarding this alternative include:

- Space between the 34.5 kV structure, 34.5 kV circuit breakers, and each 34.5 kV transformer is extremely limited. There is a reasonably high probability that the present surge arrester support steel on the existing 34.5 kV structure will need to be raised to permit full access to the controls and mechanism on a modern vacuum breaker. This work is easily done while de-energized, but presents a challenge if outages must be of short duration or are prohibited altogether. See Figure E1 and photos below.

- Space between the north and south transformers is very limited. The existing Cooper transformer appears to use an inexpensive and less reliable rectangular winding design that results in a relatively small tank size. It appears that a more reliable circular core transformer may fit in the available space, but there may not be sufficient space for a circular core transformer with an automatic load tap changer. Alternative 1 might require the use of stand-alone voltage regulators, if there is not sufficient space for transformers with automatic load tap changers
- Even if new transformers will fit in the available space, transformers will be very close to one another. A catastrophic transformer failure would almost assuredly damage the adjacent transformer. Construction will be difficult due to need to work close to energized equipment.

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- Secondary containment for transformer oil would be difficult to provide. Secondary containment is recommended, but not presently required, for new transformer installations. Lack of space prohibits use of most common containment designs. A drip-pan type design with drainage to a buried tank might be feasible, but is not a preferred design.
- Design and construction will be complicated by the outage, coordination, and safety issues related to work in close proximity to existing energized equipment.

3.3 ALTERNATIVE 2 - EQUIPMENT REPLACEMENT & SITE UPGRADE

This alternative creates a new north bay between the existing north transformer and the existing control building. See Figures E2 and E3. The new north bay and new switchgear may be constructed and energized without requiring an outage to either of the existing transformers. All existing feeders would be transferred to the new transformer and switchgear before upgrading existing equipment.

The existing north transformer, voltage regulator, and metal-clad switchgear would be de-energized , but remain in place, while the new south bay is being constructed. This will provide emergency backup throughout most of the construction period. The existing north transformer, voltage regulator, and existing switchgear would be permanently de-energized and removed once the new south transformer is placed on its pad.

Potential site layouts are shown in Figures E2 and E3. A new 34.5 kV tap pole and a new 34.5 kV dead-end steel structure will be required. There is just sufficient space between the existing meter building and existing structure to construct a structure with standard recommended electrical clearances for 34.5 kV conductors. However, removing the existing meter building would allow a slightly wider structure. This would allow greater electrical clearances and decrease the possibility of bird or rodent initiated faults.

Alternative 2 allows for secondary containment for transformer oil and for voltage regulator oil, if regulators are used. Either one or two sumps with manually controlled electric pumps would be provided to remove accumulated rain water. Costs for a concrete style, stone-filled, secondary containment system are included in the cost estimates. However, containment is not presently an absolute DEC or EPA requirement.

Alternative 2 provides additional space between the substation fence and Vossler Road. This will allow for additional landscaping and/or an architectural fence or visual barrier.

Alternative 2 allows for two different control building orientations. Either orientation is technically feasible and similar in cost, so orientation is mainly a matter of Village preference and possibly local zoning laws. Both orientations appear to require the relocation of the existing 34.5 kV line. The Village has indicated that it prefers the East-West orientation shown in figure E-3.

3.4 TRANSFORMER AND VOLTAGE REGULATION ALTERNATIVES

3.4.1 Alternatives Considered

- Transformers with integral automatic load tap changers
- Transformers with separately mounted voltage regulators
- Transformers with mineral oil

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- Transformers with biodegradable fluid

3.4.2 Automatic Load Tap Changers vs. Voltage Regulators

Voltage regulation may be provided by either automatic load tap changers (LTCs) integral to transformers or by voltage regulators mounted separately from the transformer. O'Brien & Gere has been unable to find a manufacturer willing to quote a price for a three-phase voltage regulator of the required size and voltage. Conceptual design and pricing was therefore based on three single-phase regulators with a steel structure for supporting cables and by-pass switches.

75% or more of modern installations use automatic load tap changers for the following reasons:

- Installation simplicity: A transformer with an automatic load tap changer is one device. A voltage regulator installation requires three regulators, five foundations (one per regulator plus two for the structure), additional oil containment, 3 regulator controllers, a cable riser structure, and a by-pass switch structure.
- Design and construction complexity: an installation using transformers with automatic load tap changers is much easier to design and install
- Aesthetics and real estate: A transformer with an automatic load tap changer takes up less space and is more aesthetically pleasing than an installation using regulators
- Reliability: An installation using voltage regulators has more connections and is prone to faults caused by weather or animals. But see advantages of voltage regulators below.
- Safety: Voltage regulator installations have exposed energized components that are within 6 feet of the regulator base. Special bases are required to meet Safety Code clearance requirements.
- Costs: Initial capital cost of voltage regulator installations is usually higher and on-going maintenance costs are higher. Jon Tucker has advised that voltage regulators have required an unexpected amount of maintenance. The project cost estimate shows a capital cost premium of about $8,500 for a voltage regulator installation. Operational, maintenance and design costs may result in a differential owning cost that is $30,000 to $50,000 higher for the voltage regulators.

Installations using voltage regulators have two major advantages over transformers with automatic load tap changers:

- Regulation is provided on a per-phase basis.
- Automatic load tap changer failures are the most common cause of transformer failures. A power transformer without an automatic load tap changer is more reliable. A failure of a voltage regulator does not necessarily result in a loss of load. Since the Village's 34.5 kV system is a regulated system, voltage regulator by-pass switches may be used to by-pass a failed regulator.


5 kV Voltage Regulators


Transformer with Automatic Load Tap Changer

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3.5 MINERAL OIL VS. BIODEGRADABLE FLUID

Transformer main tanks may be filled with either mineral oil or a biodegradable fluid. In either case, the oil or fluid provides both insulation and cooling. Mineral oil has been used in transformers since the reign of Thomas Edison and George Westinghouse. Biodegradable fluids were first placed in commercial use in 1996. Biodegradable fluids are now common in distribution pole-top and pad-mounted transformers. Biodegradable fluids were developed by Cooper Power. Cooper designates its biodegradable fluid as FR3. In 2012, ABB announced the availability of BioTemp: its version of a biodegradable fluid.

Advantages of biodegradable fluid, compared to mineral oil, generally include the following:

- Resistance to fire (FM non-flammable listing, high flash point and high fire point)
- Lower smoke production in event of fire
- Biodegradable, food grade, renewable
- Non-toxic
- Recyclable
- Improved insulation capabilities
- Longer life expectancy of paper insulation

Disadvantages of biodegradable fluid include:

- Higher transformer operating temperature (or larger radiators)
- Not suitable for use where fluid is exposed to air (due to degradation from oxygen)
- Not suitable for applications involving contact movement (due to higher viscosity)
- No present basis for interpreting the meaning of the gas ratios obtained from dissolved gas tests
- Cost: FR3 cost $5.00 to $8.00 more per gallon. It is expected that transformers for this project would contain 2,500 to 3,500 gallons each.

No manufacturer provided estimating prices showing comparative prices for mineral oil and FR3 filled transformers. Comparative prices in the cost estimate are based on 3,100 gallons at $8.00/gallon. Transformer cost should be equivalent, if it is assumed that the longer insulation life resulting from use of a biodegradable fluid off-sets the higher temperature resulting from use of a biodegradable fluid.

3.6 DRESSER RAND SERVICE

3.6.1 Existing Service

Dresser Rand is currently supplied by two overhead circuits that are dedicated to Dresser Rand. Both circuits are connected to bus A (the south/west bus), which is supplied from a Cooper 3Phase transformer rated 5000/5600 kVA, OA/FA, 55 degrees C and 6250/7000 kVA, OA/FA, 65 degrees C. There is no voltage regulation at 4160 volts, although a small capacitor bank is connected the north/east circuit near the Dresser Rand property line. Both circuits are supported by common poles and crossarms. Total length of the overhead line is about 1100 feet. It appears that loads are located at multiple points along the line.

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3.6.2 Existing Revenue Metering

Revenue metering for Dresser Rand is provided by instrument transformers and meters located at the Vossler Rd Substation. Details for the current metering installation were not field verified for this initial investigation, but, based on O'Brien & Gere's documentation from 1973, meters are supplied from outdoor Westinghouse PTOM 2400/4160Y voltage transformers and switchgear mounted General Electric JCS-H, 600/5 current transformers.

Accuracy data for the existing General Electric JCS-H current transformers cannot be located. The last character of General Electric's style number (H) generally refers to the CT voltage class. Switchgear bushing mounted current transformers are generally rated 600 volts. If it is assumed that accuracy classification of the exiting CTs is the same as a modern 600 volt GE JCS-0 CT, then the existing CTs have a rated metering accuracy classification of 0.3 for burdens of B-0.1, B-0.2, and B-0.5. It is likely that the burden (resistance of wiring, meters, and electromechanical relays) on existing CTs exceeds B-0.5. Therefore, the existing CTs, with present loads, probably do not provide an ANSI 0.3 (0.3%) metering accuracy.

3.6.3 Proposed Revenue Metering

For a customer taking primary service, such as Dresser Rand, many utilities would provide revenue metering via a stand-alone pole or pad-mounted metering installation located at the property line. Revenue meters and accessories would typically be located outdoors or within an outdoor cabinet. However, the Village has indicated that meters must be indoors. Options for metering installations that can accommodate indoor meters include:

- Construction of new metering installation at the Dresser Rand property line. The installation would include pole-mounted instrumented transformers and a new walk-in building at the property line to house meters. This would be costly and not particularly aesthetic.
- Installation of pole-mounted instrument transformers at the property line and installation of meters within the Vossler Rd Substation. Meter secondary wiring would have to cross Vossler Road. Crossing public roads with metering wiring is not desirable and the distance would negatively impact metering accuracy.
- Installation of pole-mounted instrument transformers on the substation site. Available space, aesthetics, and distribution switching considerations make this undesirable.
- Installation of pad-mounted instrument transformers at the substation site. This would be costly and the additional 5 kV cable and terminations may adversely impact reliability.
- Installation of instrument transformers within the switchgear. This would be the least expensive option, if the switchgear can readily accommodate transformers of the required accuracy and if the installation can be made flexible enough to accommodate initial and future Dresser Rand services.

Investigation has shown that instrument transformers for revenue metering may be mounted within standard switchgear units. The investigation indicated that:

- Standard switchgear mounted voltage transformers have sufficient accuracy for use in metering circuits. Accuracy is usually an issue only when a substantial number of devices are connected to the same set of VTs, which should not be the case in this project.
- Up to four (per phase) GE/ITI model 780 current transformer will fit on the bushings of standard, modern, metal-clad switchgear. These CTs are dual rated for either metering or

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relay use. Relay accuracy is C200. Metering accuracy is class 0.3 at burdens onB-0.1, B-0.2, B-0.5, B-0.9, and B-1.8.

- Preliminary design requires two CTs per phase for relaying purposes, so sufficient space is available for one set of CTs dedicated to metering on each breaker. There would also be space for one additional set of CTs.
- With the low burdens of modern meters and microprocessor based relays, it may be feasible to use the same CTs for both metering and relaying. This may be investigated further in final design and could result in a minor cost savings.

3.7 FEEDER CONFIGURATION

3.7.1 Dresser Rand Feeders

It is anticipated that two breakers within the metal-clad switchgear will initially be dedicated to Dresser Rand. There is a possibility that Dresser Rand load may exceed the capability of one circuit and that a third circuit may eventually be needed for reliability purposes. This possibility appears to be low and substantial capital expenditures to support a third circuit cannot be justified at this time.

Because Dresser Rand revenue metering will be located within the substation, all circuits that supply, or may supply Dresser Rand will need to be dedicated to Dresser Rand. For consistency and future flexibility, the cost estimate assumes that every switchgear circuit breaker will have a set of CTs dedicated to revenue metering. Future changes in circuit configurations may require reconnection of metering current or voltage circuits, which should be a relatively minor cost.

3.7.2 System Grounding and Back-up Capability

The substation was originally designed to supply Dresser Rand. The south/west part of the substation was designed to meet Dresser Rand's requirements. This included an industrial style, resistance grounded electric service. A substation addition to supply other Village loads was designed shortly after initial substation design was completed. The north/east part of the substation was designed to meet the requirements of other Village loads. This included a utility style, solidly grounded electric supply. Since the Dresser Rand electric service was not solidly grounded, the south/west and north/east parts of the substation had to operate as two separate substations. This meant that the Dresser Rand transformer could not supply Village loads and the Village transformer could not supply Dresser Rand.

The Dresser Rand service was subsequently converted to a solidly grounded system that was compatible with the circuits supplying Village loads. There is no longer an absolute requirement to segregate Dresser Rand from other Village loads.

3.7.3 Bus Connections

Supplying all Village loads from one bus and Dresser Rand from the other bus makes it difficult to perform maintenance on either bus. Outages or reconfiguration of the distribution system are required in order to perform substation maintenance. It would generally be preferable to supply one Village circuit and one Dresser Rand circuit from the south/west bus and the other Village and Dresser Rand circuit from the north/east bus. The desirability of reconfiguring the substation circuits should be confirmed during final design. Among final design considerations:

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- Does Dresser Rand have any large motors, furnaces, or other loads that may cause objectionable flicker to other residential or commercial customers?
- How is load at Dresser Rand allocated between the two feeders? Is paralleling of the two feeders at Dresser Rand possible or permitted?
- Are normal operating voltages on Bus A and bus B similar and acceptable for supplying either Dresser Rand or other Village Loads?
- What is the frequency of faults on Village circuits? A fault on a Village circuit should not result in an outage to Dresser Rand, but momentary voltage dips occur during faults. Such voltage dips are more pronounced at the secondary of the transformer supplying the fault. Dresser Rand may see more momentary voltage dips if it is supplied from the same transformer that supplies other Village loads.
- What are present and future options if voltage regulation for the Dresser-Rand transformer is not installed as part of this project?

3.8 1-HIGH VS. 2-HIGH SWITCHGEAR

Modern metal-clad switchgear with vacuum circuit breakers allows for mounting breakers in a 2-high configuration. Each 36 inch wide vertical section may contain two circuit breakers: one in an upper compartment and one in lower compartment. Switchgear manufactured prior to the mid 1970's could only accommodate one breaker per vertical section.

Advantages of 2-high construction include:

- Less floor space required
- Fewer vertical sections
- Lower cost

Disadvantages of 2-high construction include:

- Limited space for incoming conduits
- Limited space for terminating cable
- Limited space for protective relays
- Special cart required to remove upper breaker
- Inability to use infrared thermal imaging windows in cable termination compartments
- Multiple circuits share the cable termination compartment

The majority of O'Brien & Gere's electric utility clients prefer a 1-high breaker design that has only one breaker per vertical section. The majority of O'Brien & Gere's commercial and industrial clients prefer a 2-high breaker design. Where space and budget permits, O'Brien & Gere believes that the 1-high design is preferable since it may provide higher reliability and greater safety. The cost estimate indicates that 1-high switchgear may increase project costs by about $72,000 as a result of higher equipment and building costs.

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3.9 TRANSFORMER STORAGE YARD

The Village indicated that the project should include space for a storage facility for indoor storage of pole and pad-mounted transformers and other equipment. The site is relatively large and can readily accommodate a reasonable size storage facility. None of the alternatives considered should have any substantial impact on storage yard options. It is anticipated that the storage yard would be to the north or west of the new control building.

BUDGETARY COSTS

Detailed itemized budgetary costs are shown in the construction cost estimate breakdown and metal-clad switchgear cost estimates in the appendices. Costs for metal-clad switchgear, 34.5 kV breakers, transformers, and voltage regulators were based on preliminary quotations solicited from equipment suppliers. Costs are summarized below.

Alternative 1-Replace In-Kind (1-High Swgr, Masonry Bldg, LTC, Mineral Oil)	$2,630,000
Alternative 2a (1-High Swgr, Masonry Bldg, LTC, Mineral Oil)	$2,750,000
Alternative 2b (2-High Swgr, Masonry Bldg, LTC, Mineral Oil)	$2,680,000
Options	
E-Building in lieu of masonry building	($43,000)
Voltage Regulators in lieu of LTCs	$9,000
FR3 in lieu of mineral oil	$50,000

Costs include an allowance for a site topographic survey, geotechnical investigation (boring samples), and engineering. Engineering fees are based on preliminary discussions regarding scope of services appropriate to this project.

See the executive summary for the total cost of options selected by the Village.

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Figure E1
Existing Plan

Figure E2
Proposed Plan
Control Building Oriented North-South

Figure E3
Proposed Plan
Control Building Oriented East-West

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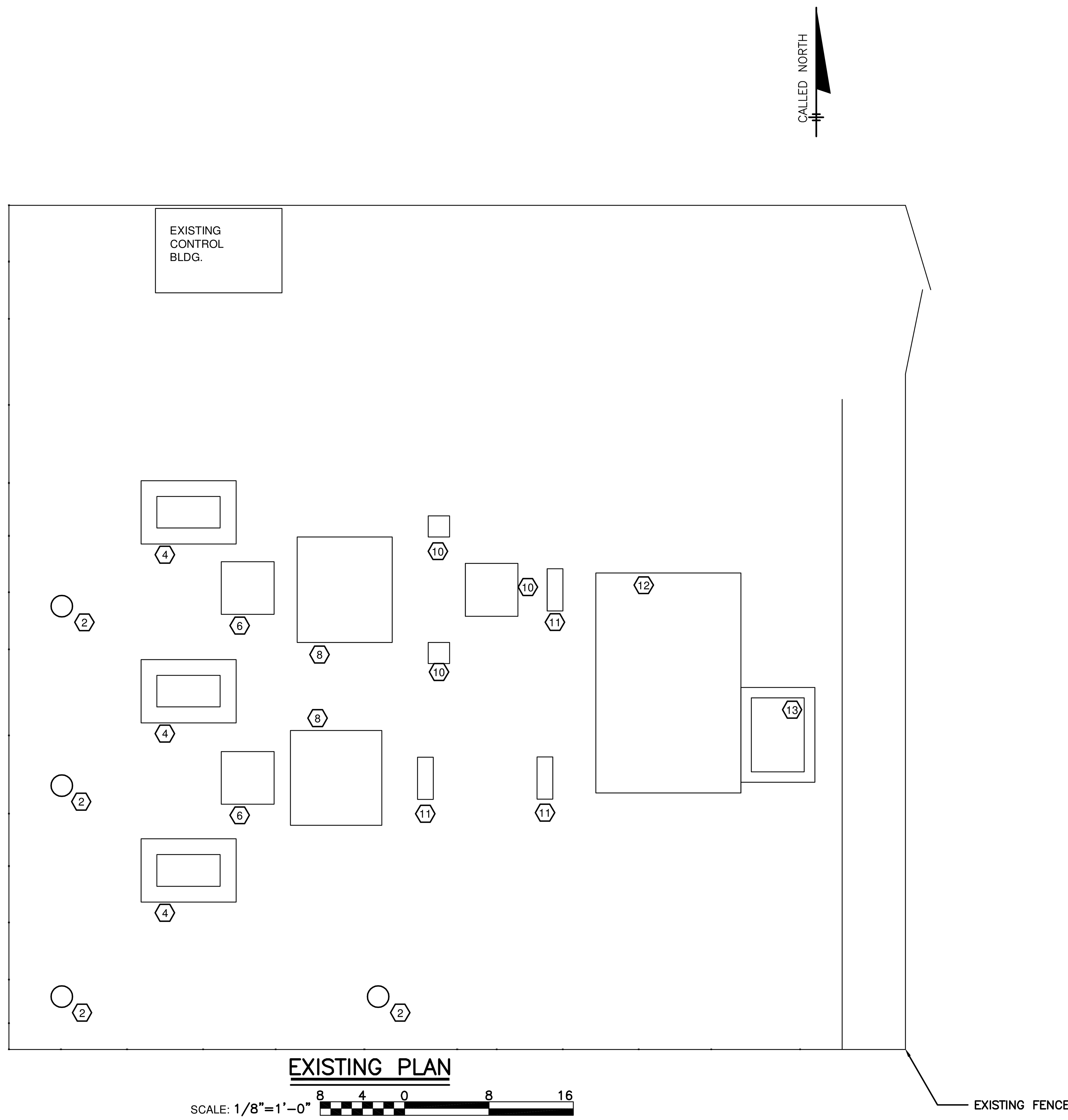

(2) EXISTING 34.5 KV WOOD POLE
(4) EXISTING 34.5 KV STRUCTURE FOUNDATION
(6) EXISTING 34.5 KV OIL CIRCUIT BREAKER TO BE DEMOLISHED
(8) EXISTING TRANSFORMER FOUNDATION TO BE DEMOLISHED
(10) EXISTING VOLTAGE REGULATOR AND STRUCTURE TO BE DEMOLISHED
(11) EXISTING BUS SUPPORT TO BE DEMOLISHED
(12) EXISTING METAL CLAD SWITCH GEAR TO BE DEMOLISHED
(13) EXISTING MANHOLE TO REMAIN

PRELIMINARY NOT FOR CONSTRUCTION
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DESIGNED BY	RAC
CHECKED BY	CHS
DRAWN BY	WGF

NO.	DATE	REVISION	INT.

O'BRIEN & GERE ENGINEERS, INC

VILLAGE OF WELLSVILLE
VOSSLER RD. SUBSATION
WELLSVILLE, NY

ELECTRICAL
EXISTING PLAN

FILE NO. 858.49497 -001
DATE JANUARY 2013

E1

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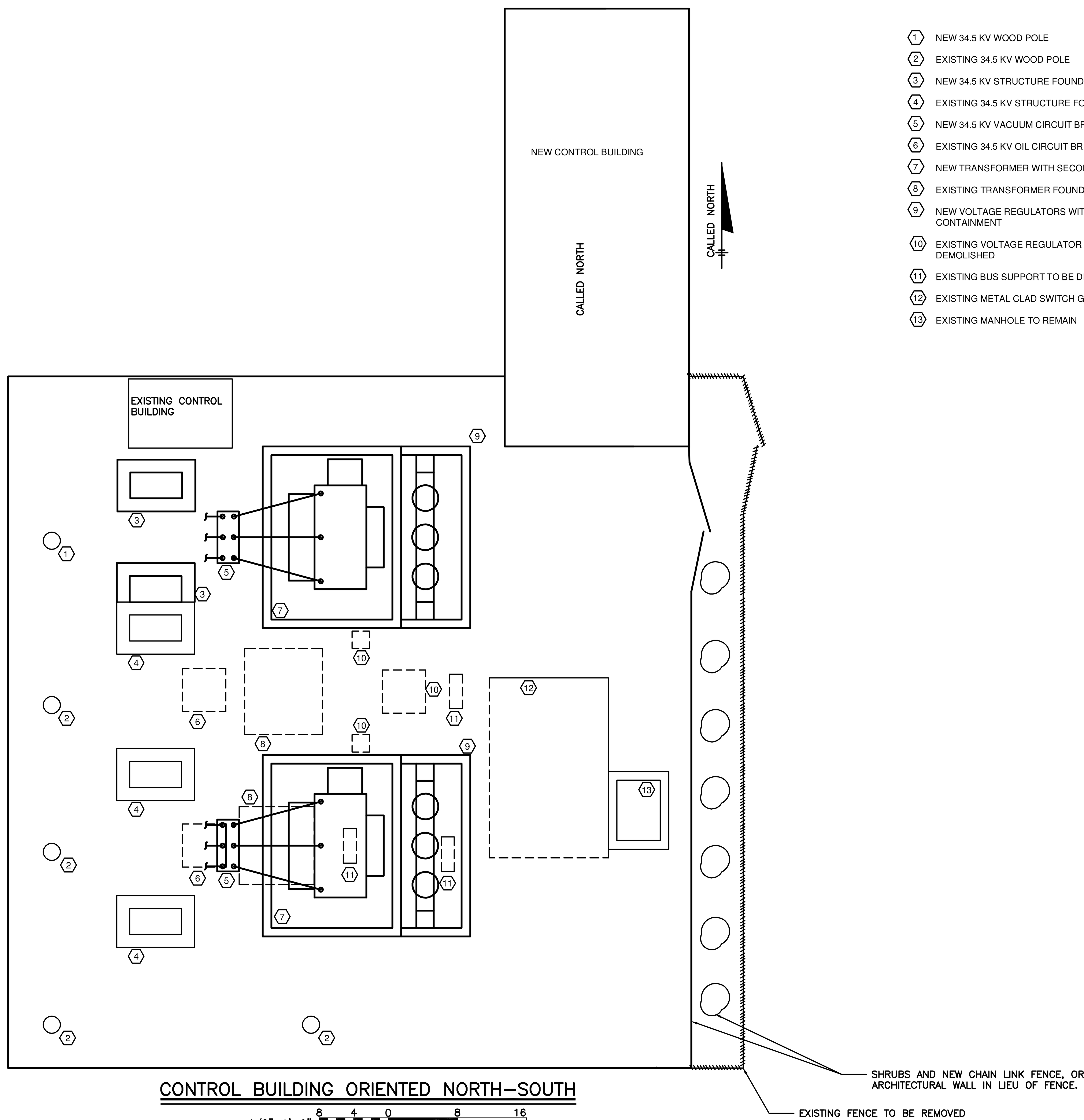

CONTROL BUILDING ORIENTED NORTH–SOUTH

SCALE: 1/8"=1'–0" 8 4 0 8 16

1. NEW 34.5 KV WOOD POLE
2. EXISTING 34.5 KV WOOD POLE
3. NEW 34.5 KV STRUCTURE FOUNDATION
4. EXISTING 34.5 KV STRUCTURE FOUNDATION
5. NEW 34.5 KV VACUUM CIRCUIT BREAKER
6. EXISTING 34.5 KV OIL CIRCUIT BREAKER TO BE DEMOLISHED
7. NEW TRANSFORMER WITH SECONDARY CONTAINMENT
8. EXISTING TRANSFORMER FOUNDATION TO BE DEMOLISHED
9. NEW VOLTAGE REGULATORS WITH SECONDARY CONTAINMENT
10. EXISTING VOLTAGE REGULATOR AND STRUCTURE TO BE DEMOLISHED
11. EXISTING BUS SUPPORT TO BE DEMOLISHED
12. EXISTING METAL CLAD SWITCH GEAR TO BE DEMOLISHED
13. EXISTING MANHOLE TO REMAIN

PRELIMINARY
NOT FOR
CONSTRUCTION
DATE: 01/28/13

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O'BRIEN & GERE ENGINEERS, INC
WELLSVILLE, NY

VILLAGE OF WELLSVILLE
VOSSLER RD. SUBSTATION
WELLSVILLE NY

ELECTRICAL

CONTROL BUILDING ORIENTED
NORTH-SOUTH

FILE NO. 858.49497 -002
DATE JANUARY 2013

E-2

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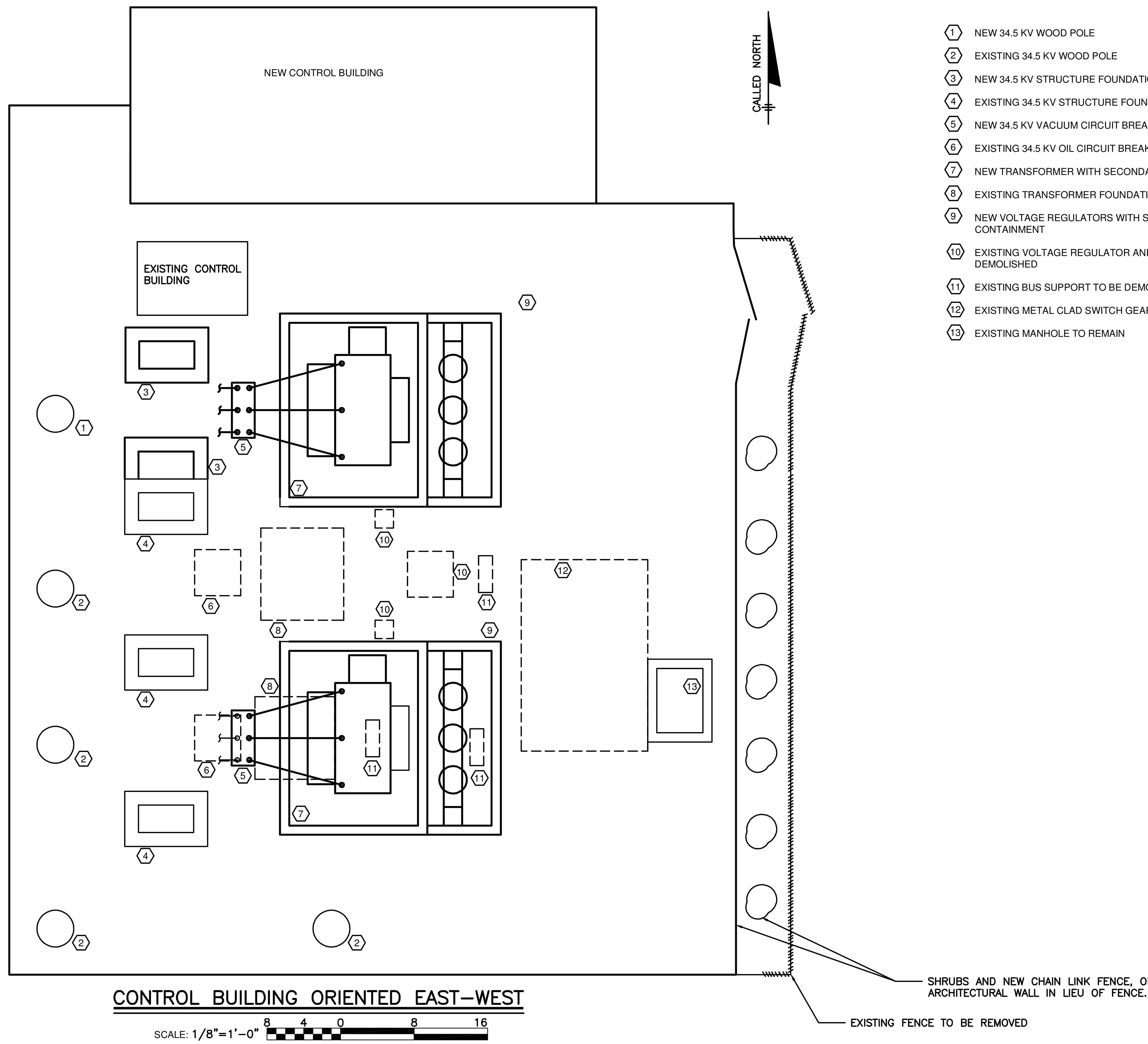

CONTROL BUILDING ORIENTED EAST–WEST

SCALE: 1/8"=1'–0"

1. NEW 34.5 KV WOOD POLE
2. EXISTING 34.5 KV WOOD POLE
3. NEW 34.5 KV STRUCTURE FOUNDATION
4. EXISTING 34.5 KV STRUCTURE FOUNDATION
5. NEW 34.5 KV VACUUM CIRCUIT BREAKER
6. EXISTING 34.5 KV OIL CIRCUIT BREAKER TO BE DEMOLISHED
7. NEW TRANSFORMER WITH SECONDARY CONTAINMENT
8. EXISTING TRANSFORMER FOUNDATION TO BE DEMOLISHED
9. NEW VOLTAGE REGULATORS WITH SECONDARY CONTAINMENT
10. EXISTING VOLTAGE REGULATOR AND STRUCTURE TO BE DEMOLISHED
11. EXISTING BUS SUPPORT TO BE DEMOLISHED
12. EXISTING METAL CLAD SWITCH GEAR TO BE DEMOLISHED
13. EXISTING MANHOLE TO REMAIN

PRELIMINARY
NOT FOR
CONSTRUCTION
DATE: 01/28/2013

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DESIGNED BY	RAC
CHECKED BY	CHS
DRAWN BY	WGF

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC

VILLAGE OF WELLSVILLE
VOSSLER RD. SUBSTATION
WELLSVILLE, NY

ELECTRICAL

CONTROL BUILDING ORIENTED EAST-WEST

FILE NO. 858.49497 -0043
DATE JANUARY 2013

E-3

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Construction Cost Estimate Breakdown

Metal-Clad Switchgear Cost Estimates

Metal-Clad Switchgear Ratings

One-Line Diagram-Existing

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O'BRIEN & GERE

CONSTRUCTION COST ESTIMATE BREAKDOWN
Village of Wellsville
Vossler Substation Upgrades
858/49497
January 21, 2013 Rev March 17, 2013
Location: Wellsville, NY
by: RA Cherry

LINE	ITEM (1)	UNIT (2)	QTY (3)	BARE MATERIALS UNIT COST (4)	BARE MATERIALS TOTAL (5)	BARE LABOR UNIT COST (7)	BARE LABOR TOTAL (8)	DIRECT COSTS UNIT (9)	DIRECT COSTS TOTAL (10)	Line Item Cost TOTAL (WITH O&P) (11)	Total Cost LTC, Masonry Options 1-High Switchgear (12)	Total Cost LTC, Masonry Options 2-High Switchgear (13)	Total Cost LTC, Masonry Options Replace In-Kind (1-high) (14)	Option Comparative Costs Building Options Masonry Control Bldg (15)	Option Comparative Costs Building Options E-Building (16)	Option Comparative Costs Transformer Options Transformer LTC (17)	Option Comparative Costs Transformer Options Voltage Regulators (18)	Total Cost Village Selected Options
10	**Division 1 - General Requirements**																	
11	Performance bond (1.0%)	LS	1	$0.00	$0	$0.00	$0	$16,000.00	$16,000	$17,600	$25,000	$24,000	$23,000					$18,000
12	Insurance, builder's risk (0.50%)	LS	1	$0.00	$0	$0.00	$0	$8,000.00	$8,000	$8,800	$12,000	$12,000	$11,000					$9,200
13	Insurance, liability (1.5%)	LS	1	$0.00	$0	$0.00	$0	$24,000.00	$24,000	$26,400	$37,000	$36,000	$34,000					$28,000
14	Temporary electric service	EA	1	$1,500.00	$1,500	$1,000.00	$1,000	$0.00	$0	$2,965	$2,965	$2,965	$2,965					$2,965
15	Temporary office trailer	Month	12	$250.00	$3,000	$0.00	$0	$0.00	$0	$3,300	$3,300	$3,300	$3,300					$3,300
16	Temporary power	Month	12	$100.00	$1,200	$0.00	$0	$0.00	$0	$1,320	$1,320	$1,320	$1,320					$1,320
17	Toilet, portable	Month	12	$150.00	$1,800	$0.00	$0	$0.00	$0	$1,980	$1,980	$1,980	$1,980					$1,980
18	**Division 2 - Site Construction**																	
19	Demolition																	
20	Transformer foundation (5 CY Ea *2)	CF	270	$0.00	$0	$14.00	$3,780	$4.00	$1,080	$6,160	$6,160	$6,160	$0					$3,080
21	Voltage regulator pad (1.4 CY Ea)	CF	54	$0.00	$0	$14.00	$756	$4.00	$216	$1,232	$1,232	$1,232	$1,232					$1,232
22	Voltage regulator structure pad (1.9 CY Ea)	CF	54	$0.00	$0	$14.00	$756	$4.00	$216	$1,232	$1,232	$1,232	$1,232					$1,232
23	5 kV bus support (1.4 CY Ea*3)	CF	135	$0.00	$0	$14.00	$1,890	$4.00	$540	$3,080	$3,080	$3,080	$3,080					$3,080
24	Switchgear pad (19.9 CY Ea)	CF	430	$0.00	$0	$14.00	$6,020	$4.00	$1,720	$9,811	$9,811	$9,811	$9,811					$9,811
25	OCB pad (6 CY Ea*2)	CF	324	$0.00	$0	$14.00	$4,536	$4.00	$1,296	$7,392	$7,392	$7,392	$0					$3,696
26	15 kV breaker Pad (4.2 CY)	CF	135	$0.00	$0	$20.00	$2,700	$4.00	$540	$4,146	$4,146	$4,146	$4,146					$4,146
27	Site grading	CY	100	$30.00	$3,000	$12.00	$1,200	$12.00	$1,200	$6,198	$6,198	$6,198	$4,000					$6,198
28	Fence, 7' chain link	LF	300	$35.00	$10,500	$5.00	$1,500	$2.00	$600	$14,183	$14,183	$14,183	$14,183					$14,183
29	Gate, 16 ft	EA	1	$1,000.00	$1,000	$400.00	$400	$200.00	$200	$1,846	$1,846	$1,846	$1,846					$1,846
30	Fence, 7' chain link, storage yard	LF	100	$25.00	$2,500	$4.00	$400	$2.00	$200	$3,496	$3,496	$3,496	$3,496					
31	Gate, 12 ft	EA	1	$800.00	$800	$300.00	$300	$2.00	$200	$1,495	$1,495	$1,495	$1,495					$1,495
32	2" crushed stone, site	CY	145.0	$35	$5,075	$5	$725	$3	$435	$7,015	$7,015	$7,015	$1,000					$7,015
33	2" crushed stone, control bldg perimeter NS	CY	180.0	$35	$6,300	$5	$900	$3	$540	$8,708	$8,708	$8,708	$8,708					
34	2" crushed stone, control bldg perimeter, EW	CY	140.0	$35	$4,900	$5	$700	$3	$420	$6,773								$6,773
35	2" crushed stone, parking	CY	12.0	$35	$420	$5	$60	$3	$36	$581	$581	$581	$581					$581
36	Excavation, backfill, compaction	CY																
37	34 kV structure, 18CY/leg	CY	36.0	$0.00	$0	$10.00	$360	$10.00	$360	$870	$870	$870	$0					$870
38	Vacuum breaker, 0.6 CY/breaker	CY	1.2	$0.00	$0	$10.00	$12	$10.00	$12	$29	$29	$29	$0					$29
39	Transformer, 130CY/transformer	CY	260.0	$0.00	$0	$10.00	$2,600	$10.00	$2,600	$6,280	$6,280	$6,280	$0			$6,280	$6,280	$3,140
40	Voltage regulator, 40CY/regulator	CY	80.0	$0.00	$0	$10.00	$800	$10.00	$800	$1,932	$1,932	$1,932	$0				$1,932	$966
41	Control building, 21'x50'	CY	60.0	$0.00	$0	$10.00	$600	$10.00	$600	$1,449	$1,449	$1,200	$1,449	$1,449	$1,449			$1,449
42	5 kV manholes	CY	70.0	$0.00	$0	$10.00	$700	$10.00	$700	$1,691	$1,691	$1,691	$1,691					$1,691
43	**Division 3 - Concrete, Div 4 - Masonry**																	
44	Equipment & Structures																	
45	34 kV structure, 5.7CY/Leg	CY	12	$200.00	$2,400	$120.00	$1,440	$1.00	$12	$4,547	$4,547	$4,547	$0					$4,547
46	Vacuum Breaker, 1.5 CY/breaker	CY	3	$200.00	$600	$50.00	$150	$1.00	$3	$861	$861	$861	$0					$430
47	Transformer, 45 CY/transformer	CY	90	$200.00	$18,000	$120.00	$10,800	$1.00	$90	$34,105	$34,105	$34,105	$0			$34,105	$34,105	$17,053
48	Voltage regulator,24 CY/set of regulators	CY	48	$200.00	$9,600	$120.00	$5,760	$1.00	$48	$18,190	$0	$0	$0				$18,190	$9,095
49	Control Building		1															
50	Floor, 21'x50'	CY	40	$150.00	$6,000	$50.00	$2,000	$1.00	$40	$9,275	$9,275	$7,400	$9,275	$9,275	$9,275			$9,275
51	Footers, 21' x 50'	CY	60	$150.00	$9,000	$50.00	$3,000	$1.00	$60	$13,912	$13,912	$11,200	$13,912	$13,912				
52	Masonry, 21'x50'x11'H	SF	1600	$20.00	$32,000	$20.00	$32,000	$0.00	$0	$77,293	$77,293	$62,000	$77,293	$77,293				
53	5 kV precast manholes	EA	2	$6,500.00	$13,000	$3,000.00	$6,000	$1,000.00	$2,000	$24,392	$24,392	$24,392	$24,392					$24,392
54	**Division 6 - Wood, Composites**																	
55	Carpentry, trusses, insulation, drywall	SF	1000	$30.00	$30,000	$30.00	$30,000	$0.00	$0	$72,462	$72,462	$58,000	$72,462	$72,462				
56	Doors, hardware	LS	1	$8,000.00	$8,000	$6,000.00	$6,000	$0.00	$0	$16,692	$16,692	$16,692	$16,692	$16,692				
57	Louvers	LS	1	$2,000.00	$2,000	$2,000.00	$2,000	$0.00	$0	$4,831	$4,831	$4,831	$4,831	$4,831				
58	Roofing, siding	SF	1000	$8.00	$8,000	$6.00	$6,000	$0.00	$0	$16,692	$16,692	$14,000	$16,692	$16,692				
59	Painting	SF	1000	$2.00	$2,000	$6.00	$6,000	$0.00	$0	$10,092	$10,092	$10,100	$10,092	$10,092				
60	**Division 13 - Special Construction**																	
61	Fire alarm control panel	EA	1	$1,000.00	$1,000	$500.00	$500	$0.00	$0	$1,758	$1,758	$10,100	$1,758	$1,758	$1,758			$1,758
62	Alarm	EA	1	$250.00	$250	$100.00	$100	$0.00	$0	$407	$407	$10,100	$407	$407	$407			$407
63	Detector	EA	1	$150.00	$150	$100.00	$100	$0.00	$0	$297	$297	$10,100	$297	$297	$297			$297
64	**Division 15 - Mechanical**																	
65	Unit heaters, control building, 10 kW	EA	2	$1,000.00	$2,000	$1,000.00	$2,000	$0.00	$0	$4,831	$4,831	$4,831	$4,831	$4,831				$4,831
66	Wall exhaust fan, 1000 CFM	EA	1	$1,500.00	$1,500	$1,000.00	$1,000	$0.00	$0	$2,965	$2,965	$2,965	$2,965	$2,965				$2,965
67	Packaged terminal air conditioner (6000 BTU)	EA	1	$2,000.00	$2,000	$2,000.00	$2,000	$0.00	$0	$4,831	$4,831	$4,831	$4,831	$4,831				$4,831
68	**Division 16 - Electrical**																	
69	Grounding																	
70	Ground grid, 4/0 copper	LF	1500	$4.25	$6,375	$1.50	$2,250	$0.00	$0	$9,972	$9,972	$9,972	$1,000					$9,972

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CONSTRUCTION COST ESTIMATE BREAKDOWN											Line Item Cost	Total Cost LTC, Masonry Options			Option Comparative Costs				Total Cost
Village of Wellsville		Location:																	
Vossler Substation Upgrades		Wellsville, NY										1-High Switchgear	2-High Switchgear	Replace In-Kind (1-high)	Building Options		Transformer Options		
858/49497		by:													Masonry Control Bldg	E-Building	Transformer LTC	Voltage Regulators	Village Selected Options
January 21, 2013 Rev March 17, 2013		RA Cherry																	
				BARE MATERIALS		BARE LABOR		DIRECT COSTS		TOTAL									
LINE	ITEM	UNIT	QTY	UNIT COST	TOTAL	UNIT COST	TOTAL	UNIT	TOTAL	(WITH O&P)									
	(1)	(2)	(3)	(4)	(5)	(7)	(8)	(9)	(10)	(11)		(12)	(13)	(14)	(15)	(16)	(17)	(18)	
71	Ground rods, 5/8" x 8'	EA	20	$34.00	$680	$110.00	$2,200	$0.00	$0	$3,642		$3,642	$3,642	$0					$3,642
72	Ground connections, exothermic	EA	40	$10.00	$400	$60.00	$2,400	$0.00	$0	$3,597		$3,597	$3,597	$600					$3,597
73	Ground connections, bolted	EA	40	$15.00	$600	$20.00	$800	$0.00	$0	$1,712		$1,712	$1,712	$200					$1,712
74	5 kV Wire and Conduit																		
75	Conduit, PVC, 6", sch 40	LF	350	$16.00	$5,600	$14.00	$4,900	$0.00	$0	$12,605		$12,605	$12,605	$12,605					$12,605
76	Conductor, 5 kV, 750 kcmil	LF	1200	$16.00	$19,200	$4.00	$4,800	$0.00	$0	$27,434		$27,434	$27,434	$27,434					$27,434
77	Conductor, 600 V, #250	LF	400	$6.00	$2,400	$2.20	$880	$0.00	$0	$3,798		$3,798	$3,798	$3,798					$3,798
78	Conductor terminations, 750 kcmil, 5 kV	EA	24	$150.00	$3,600	$75.00	$1,800	$0.00	$0	$6,328		$6,328	$6,328	$6,328					$6,328
79	Conduit, PVC,5", sch 40	LF	600	$11.00	$6,600	$11.00	$6,600	$0.00	$0	$15,942		$15,942	$15,942	$15,942					$15,942
80	Conductor, 5 kV, 500 kcmil	LF	500	$10.00	$5,000	$4.00	$2,000	$0.00	$0	$8,131		$8,131	$8,131	$8,131					$8,131
81	Conductor, 600 V, #250	LF	1500	$6.00	$9,000	$2.20	$3,300	$0.00	$0	$14,241		$14,241	$14,241	$14,241					$14,241
82	Conductor terminations, 500 kcmil, 5 kV	EA	24	$150.00	$3,600	$75.00	$1,800	$0.00	$0	$6,328		$6,328	$6,328	$6,328					$6,328
83	Outdoor AC & DC Control Wire & Conduit																		
84	Conduit, rigid steel, 0.75"	LF	1300	$3.00	$3,900	$2.50	$3,250	$0.00	$0	$8,565		$8,565	$8,565	$8,565					$8,565
85	Conduit, rigid steel, 1.0"	LF	600	$3.80	$2,280	$4.00	$2,400	$0.00	$0	$5,665		$5,665	$5,665	$5,665					$5,665
86	Conductor, 600 V, #8	LF	15000	$0.40	$6,000	$0.55	$8,250	$0.00	$0	$17,452		$17,452	$17,452	$17,452					$17,452
87	Conductor, 600 V, #10	LF	3000	$0.25	$750	$0.50	$1,500	$0.00	$0	$2,798		$2,798	$2,798	$2,798					$2,798
88	Conductor, 600 V, #12	LF	4500	$0.16	$720	$0.40	$1,800	$0.00	$0	$3,160		$3,160	$3,160	$3,160					$3,160
89	Outdoor AC Distribution																		
90	Conduit, rigid steel, 0.75"	LF	300	$3.00	$900	$2.50	$750	$0.00	$0	$1,977		$1,977	$1,977	$1,977					$1,977
91	Conduit, rigid steel, 1.5"	LF	100	$6.00	$600	$5.00	$500	$0.00	$0	$1,318		$1,318	$1,318	$1,318					$1,318
92	Conductor, 600 V, #1/0	LF	400	$2.50	$1,000	$1.30	$520	$0.00	$0	$1,784		$1,784	$1,784	$1,784					$1,784
93	Conductor, 600 V, #12	LF	900	$6.00	$5,400	$0.40	$360	$0.00	$0	$6,414		$6,414	$6,414	$6,414					$6,414
94	Indoor AC & DC Power Wire & Conduit																		
95	Conduit, rigid steel, 0.75"	LF	500	$3.00	$1,500	$5.25	$2,625	$0.00	$0	$5,103		$5,103	$5,103	$5,103	$5,103	$5,103			$5,103
96	Conductor, 600 V, #12	LF	1500	$0.16	$240	$0.40	$600	$0.00	$0	$1,053		$1,053	$1,053	$1,053	$1,053	$1,053			$1,053
97	Control Building Equipment																		
98	Transfer switch, 240 V, 225 A, manual	EA	1	$4,000.00	$4,000	$400.00	$400	$0.00	$0	$4,926		$4,926	$4,926	$4,926	$4,926	$4,926			$4,926
99	Panelboard, 225A, 240 VAC, 42 ckt	EA	1	$2,000.00	$2,000	$2,000.00	$2,000	$0.00	$0	$4,831		$4,831	$4,831	$4,831	$4,831				$4,831
100	Panelboard, 225A, 125 VDC, 42 ckt	EA	1	$2,000.00	$2,000	$2,000.00	$2,000	$0.00	$0	$4,831		$4,831	$4,831	$4,831	$4,831	$4,831			$4,831
101	Light fixture, 2-lamp, fluorescent, 4 ft	EA	12	$200.00	$2,400	$200.00	$2,400	$0.00	$0	$5,797		$5,797	$5,797	$5,797	$5,797				$5,797
102	Light fixture, Holophane substation	EA	2	$600.00	$1,200	$300.00	$600	$100.00	$200	$2,329		$2,329	$2,329	$2,329					$2,329
103	Light fixture, 70 W HPS, wall mount	EA	2	$200.00	$400	$100.00	$200	$0.00	$0	$703		$703	$703	$703	$703	$703			$703
104	Battery, 125 VDC, C&D 3-DCU-9, 100 AH	EA	1	$10,000.00	$10,000	$1,500.00	$1,500	$0.00	$0	$12,973		$12,973	$12,973	$12,973	$12,973	$12,973			$12,973
105	Battery charger	EA	1	$3,000.00	$3,000	$200.00	$200	$0.00	$0	$3,563		$3,563	$3,563	$3,563	$3,563	$3,563			$3,563
106	Battery accessories (eye wash, containment)	EA	1	$1,500.00	$1,500	$500.00	$500	$0.00	$0	$2,308		$2,308	$2,308	$2,308	$2,308	$2,308			$2,308
107	Transformer Options, 8.4 MVA, 34.5:4.16 kV																		
108	Mineral oil, with load tap changer	EA	2	$400,000.00	$800,000	$20,000.00	$40,000	$2,000.00	$4,000	$937,016		$937,016	$937,016	$937,016			$937,016		
109	FR3, with load tap changer	EA	2	$425,000.00	$850,000	$20,000.00	$40,000	$2,000.00	$4,000	$992,016									
110	Mineral oil, without load tap changer	EA	2	$260,000.00	$520,000	$15,000.00	$30,000	$2,000.00	$4,000	$615,862								$615,862	$307,931
111	FR3, without load tap changer	EA	2	$285,000.00	$570,000	$15,000.00	$30,000	$2,000.00	$4,000	$670,862									
112	Metal-Clad Switchgear Options, 5 kV, 40 kA																		
113	1-high stacked circuit breakers	EA	1	$580,000.00	$580,000	$50,000.00	$50,000	$0.00	$0	$703,770		$703,770		$703,770					$703,770
114	2-high stacked circuit breakers	EA	1	$525,000.00	$525,000	$50,000.00	$50,000	$0.00	$0	$643,270			$643,270						
115	Factory furnished building for 1-high	EA	1	$175,000.00	$175,000		$0	$0.00	$0	$192,500						$192,500			$192,500
116	Factory furnished building for 2-high	EA	1	$95,000.00	$95,000		$0	$0.00	$0	$104,500									
117	Vacuum breaker, 34.5 kV, 600 A	EA	2	$40,000.00	$80,000	$7,000.00	$14,000	$0.00	$0	$106,416		$106,416	$106,416	$106,416					$53,208
118	Voltage regulator, 5 kV, 333 kVA, 1332 A	EA	6	$32,000.00	$192,000	$3,000.00	$18,000	$0.00	$0	$234,877								$234,877	$117,439
119	Substation Structures																		
120	34. 5 kV dead-end structure	LS	1	$20,000.00	$20,000	$8,000.00	$8,000	$3,000.00	$3,000	$35,823		$35,823	$35,823	$8,000					$35,823
121	Voltage regulator structure	EA	2	$20,000.00	$40,000	$10,000.00	$20,000	$2,000.00	$4,000	$74,708								$74,708	$37,354
122	34.5 kV line relocation	LS	1	$8,000.00	$8,000	$6,000.00	$8,000	$3,000.00	$3,000	$22,623		$22,623	$22,623	$22,623					$22,623
123	TOTAL CONSTRUCTION OR OPTION COMPARATIVE COST											$2,489,560	$2,417,623	$2,368,224	$283,875	$241,145	$977,401	$985,954	$1,899,083
124	Survey	LS	1									$3,000	$3,000	$3,000	Difference		Difference		$3,000
125	Geo Technical Investigation	LS	1									$5,000	$5,000	$5,000	$42,730		($8,553)		$5,000
126	Engineering (10%))	LS	1									$250,000	$250,000	$250,000					$130,000
	Contingency (10%)																		$220,000
127	TOTAL PROJECT COST											$2,747,560	$2,675,623	$2,626,224					$2,257,083

Received: 03/04/2014

Equipment Cost Estimate
1-High Metal-Clad Switchgear
Village of Wellsville
Vossler Rd. Substation Upgrades

Item Description	Quantity	Unit Price	Total Price
Breaker Units -1000 MVA (37 kA at 15 kV)			
Base Unit with breaker, 1200A	6	$ 35,121	$ 210,725
Base Unit with breaker, 2000A	3	$ 44,968	$ 134,903
Base Unit with breaker, 3000A	0	$ 56,173	$ -
Base Unit without breaker, 1200A	0	$ 9,541	$ -
Base Unit without breaker, 2000A	0	$ 11,688	$ -
Base Unit without breaker, 3000A	0	$ 15,122	$ -
Breaker, 1200A	0	$ 25,929	$ -
Breaker, 2000A	0	$ 33,284	$ -
Breaker, 3000A	0	$ 41,401	$ -
Empty Unit	10	$ 5,000	$ 50,000
Ground & Test Device, Manual,1200A	0	$ 8,214	$ -
Bus Adders			
Bus Transition Section, 2000A	1	$ 2,823	$ 2,823
Main Bus, 2000A Copper, per vert sect	10	$ 1,106	$ 11,064
Control Power			
Control Power Transf section, 1Ph, 15kVA	0	$ 5,373	$ -
Control Power Transformer section, 1Ph, 25kV	0	$ 6,209	$ -
Control Power Transformer section, 1Ph, 37kV	0	$ 7,063	$ -
Control Power Transformer section, 1Ph, 50kV	0	$ 7,895	$ -
Control Power Transformer section, 3Ph, 15kV	0	$ 9,024	$ -
Control Power Transformer section, 3Ph, 30kV	0	$ 9,873	$ -
Control Power Transformer section, 3Ph, 45kV	0	$ 11,254	$ -
Control Power Transformer section, 3Ph, 75kV	0	$ 13,507	$ -
Miscellaneous			
Test Cabinet, Wall Mtd	1	$ 305	$ 305
Wire Marker Sleeves, per unit	14	$ 341	$ 4,771
Space Heaters for Indoor Equip, per unit	20	$ 177	$ 3,540
Protection/Control			
Current Transformers, EA	78	$ 434	$ 33,829
Current Transformers, Zero Sequence, EA	0	$ 535	$ -
VT Compartment with 3-LG VT	4	$ 6,784	$ 27,137
Surge Arresters, set of 3, 15 kV, Dist Class	0	$ 1,120	$ -
Surge Arresters, set of 3, 15 kV, Int Class	0	$ 1,996	$ -
Surge Arresters, set of 3, 15 kV, Sta Class	8	$ 3,532	$ 28,252
Cable Termination Boots, set of 3	8	$ 252	$ 2,018

Received: 03/04/2014

Equipment Cost Estimate
1-High Metal-Clad Switchgear
Village of Wellsville
Vossler Rd. Substation Upgrades

Item Description	Quantity	Unit Price	Total Price
Test Block, EA	36	$ 212	$ 7,647
Breaker Control Switch with 2 lights	11	$ 407	$ 4,479
Indicating Lamp	13	$ 44	$ 575
Ammeter or Voltmeter Switch	0	$ 239	$ -
Mimic Bus, plastic	0	$ 412	$ -
Ammeter or Voltmeter	0	$ 496	$ -
Overcurrent Relay, Mechanical, EA	0	$ 810	$ -
Lockout Relay	4	$ 602	$ 2,407
Capacitor trip, EA	0	$ 1,137	$ -
Overcurrent Relay, SEL 501	5	$ 2,000	$ 10,000
Bus Differential Relay, SEL 587Z	2	$ 8,000	$ 16,000
Transformer Differential Relay, SEL 587	2	$ 4,000	$ 8,000
Distribution Feeder Relay, SEL 751A	6	$ 2,000	$ 12,000
Multi-function Meter	2	$ 3,500	$ 7,000

Total Estimated Cost $ 577,477

Received: 03/04/2014

Equipment Cost Estimate
2-High Metal-Clad Switchgear
Village of Wellsville
Vossler Rd. Substation Upgrades

Item Description	Quantity	Unit Price	Price
Breaker Units -1000 MVA (37 kA at 15 kV)			
Base Unit with breaker, 1200A	6	$ 35,121	$ 210,725
Base Unit with breaker, 2000A	3	$ 44,968	$ 134,903
Base Unit with breaker, 3000A	0	$ 56,173	$ -
Base Unit without breaker, 1200A	0	$ 9,541	$ -
Base Unit without breaker, 2000A	0	$ 11,688	$ -
Base Unit without breaker, 3000A	0	$ 15,122	$ -
Breaker, 1200A	0	$ 25,929	$ -
Breaker, 2000A	0	$ 33,284	$ -
Breaker, 3000A	0	$ 41,401	$ -
Empty Unit	0	$ 5,000	$ -
Ground & Test Device, Manual,1200A	0	$ 8,214	$ -
Bus Adders			
Bus Transition Section, 2000A	1	$ 2,823	$ 2,823
Main Bus, 2000A Copper, per vert sect	6	$ 1,106	$ 6,638
Control Power			
Control Power Transf section, 1Ph, 15kVA	0	$ 5,373	$ -
Control Power Transformer section, 1Ph, 25kV	0	$ 6,209	$ -
Control Power Transformer section, 1Ph, 37kV	0	$ 7,063	$ -
Control Power Transformer section, 1Ph, 50kV	0	$ 7,895	$ -
Control Power Transformer section, 3Ph, 15kV	0	$ 9,024	$ -
Control Power Transformer section, 3Ph, 30kV	0	$ 9,873	$ -
Control Power Transformer section, 3Ph, 45kV	0	$ 11,254	$ -
Control Power Transformer section, 3Ph, 75kV	0	$ 13,507	$ -
Miscellaneous			
Test Cabinet, Wall Mtd	1	$ 305	$ 305
Wire Marker Sleeves, per unit	12	$ 341	$ 4,089
Space Heaters for Indoor Equip, per unit	12	$ 177	$ 2,124
Protection/Control			
Current Transformers, EA	78	$ 434	$ 33,829
Current Transformers, Zero Sequence, EA	0	$ 535	$ -
VT Compartment with 3-LG VT	4	$ 6,784	$ 27,137
Surge Arresters, set of 3, 15 kV, Dist Class	0	$ 1,120	$ -
Surge Arresters, set of 3, 15 kV, Int Class	0	$ 1,996	$ -
Surge Arresters, set of 3, 15 kV, Sta Class	8	$ 3,532	$ 28,252
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Received: 03/04/2014

Equipment Cost Estimate
2-High Metal-Clad Switchgear
Village of Wellsville
Vossler Rd. Substation Upgrades

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Bus Differential Relay, SEL 587Z	2	$ 8,000	$ 16,000
Transformer Differential Relay, SEL 587	2	$ 4,000	$ 8,000
Distribution Feeder Relay, SEL 751A	6	$ 2,000	$ 12,000
Multi-function Meter	2	$ 3,500	$ 7,000

Total Estimated Cost $ 520,953

Received: 03/04/2014

MEMORANDUM

TO: File **cc:**
FROM: R Cherry
RE: Switchgear Current Ratings
FILE: 858/49497
DATE: Jan 21, 2013

Present and Potential Fault Currents

System Configuration	Bus A	Bus B	Total
Existing, per arc flash study	5,612 A	6,386 A	11,998 A
Existing, infinite 34 kV bus	9,774 A	12,347 A	22,121 A
5000 kVA, Non LTC, infinite 34 kV bus 7.0% Z	9,913 A	9,913 A	19,827 A
5000 kVA LTC, infinite 34 kV bus, 7.5% Z	9,252 A	9,252 A	18,505A
7500 kVA, Non LTC, infinite 34 kV bus 7.0% Z	14,1870 A	14,870 A	29,740 A
7500 kVA LTC, infinite 34 kV bus, 7.5% Z	13,879 A	13,879 A	27,757A

Currently Available metal-clad switchgear short circuit current ratings, 5 and 15 kV class, k=1

Nominal MVA, 5 kV	GE	Eaton
250 MVA	31.5 kA	
350 MVA	40.0 kA	40 kA
	50 .0 kA	50 kA
450 MVA	63.0 kA	63 kA

Based on anticipated transformer size no larger than 7500 kVA and transformers with ANSI standard impedances, a switchgear short circuit current rating of 31.5 kA should be adequate. This short circuit rating would allow temporary or permanent paralleling of the two transformers, without exceeding the switchgear short circuit current rating. However, the minimum short circuit current rating offered by Eaton is 40 kA. Basis of design should be 40 kA.

Continuous Current Requirements

Transformer kVA	
5000	694 A
5600	777 A
6250	867 A
7000	971 A
7500	1041 A
8400	1166 A

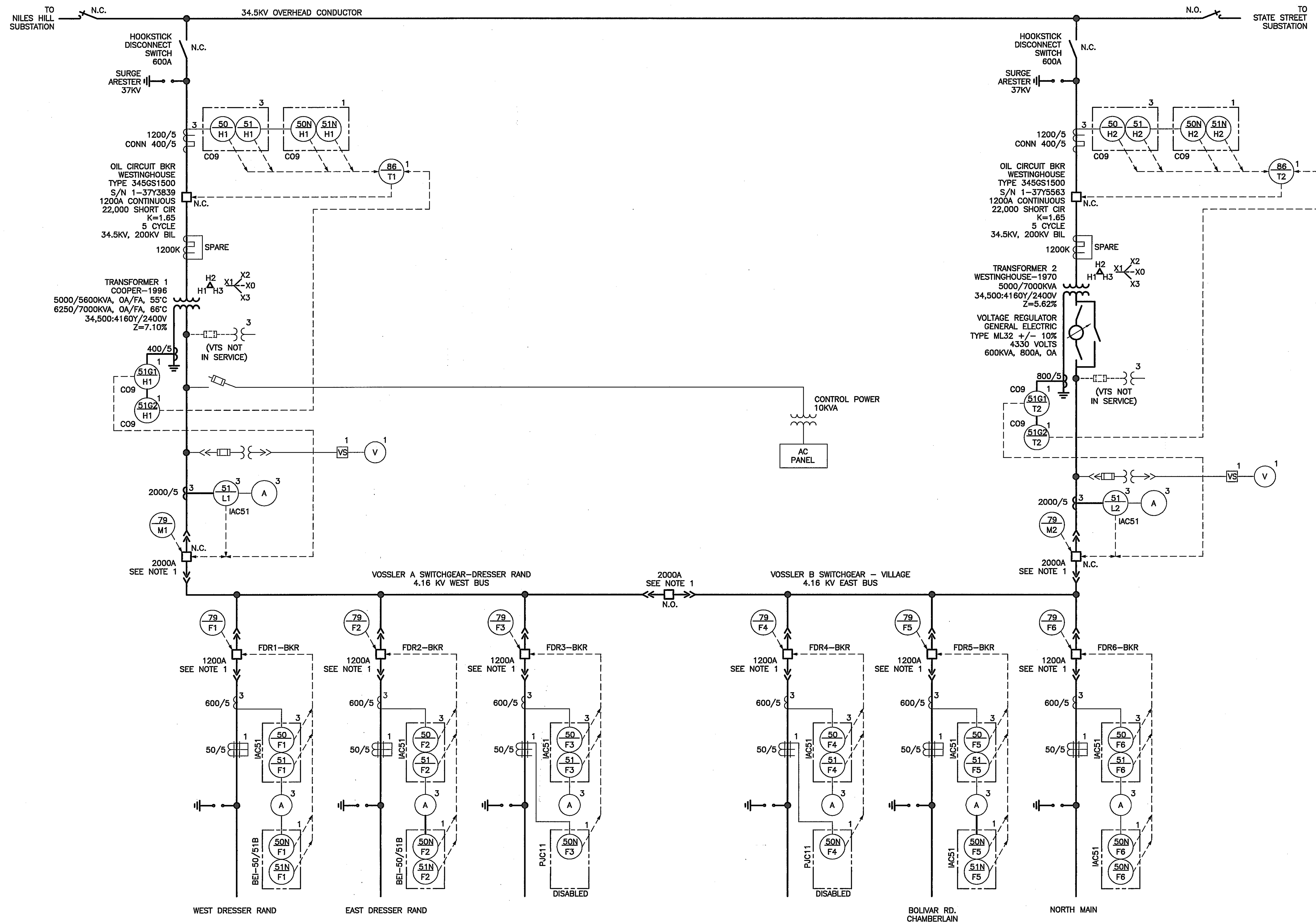
Currently Available metal-clad switchgear continuous current ratings

1200 A
2000 A
3000 A

Niagara Transformer recommended either a 7500/8400 kVA, or a 6300/8400 kVA transformer. It is unlikely that total bus current would ever exceed the transformer rating 8400 kVA/1166 A. However, good design practice requires that the switchgear continuous rating be at least 20% higher than transformer rated current. Transformers may be operated above their continuous current rating. Switchgear should never be operated its continuous current rating. Basis of design should be 2000A main and tie breakers, 2000 A main bus, and 1200 A feeders.

Received: 03/04/2014

SAVED: 08/24/09 09:57 AM



LEGEND

A	AMMETER
V	VOLTMETER
VS	VOLTMETER SWITCH
G	GROUND
N	NEUTRAL
H	HIGH SIDE
L	LOW SIDE
M	MAIN
F	FEEDER
T	TRANSFORMER
50	INSTANTANEOUS OVERCURRENT
51	TIME OVERCURRENT
79	RECLOSING RELAY
86	HAND RESET LOCKOUT RELAY

NOTES:

1. BREAKERS ARE GENERAL ELECTRIC TYPE AMH-4.76-250, RATED 250MVA

RECORD DRAWINGS
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.
O'BRIEN & GERE ENGINEERS, INC.
By:

ONE LINE DIAGRAM
NOT TO SCALE

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

University of the State of New York · ROBERT A. CHERRY · No. 055941 · Professional Engineer

IN CHARGE OF RAC
DESIGNED BY RAC CHECKED BY RAC
DRAWN BY GDF

NOT TO SCALE

NO.	DATE	REVISION	INIT.
0	7/31/09	ISSUED FOR RECORD	RAC

O'BRIEN & GERE

VILLAGE OF WELLSVILLE

ELECTRICAL
VOSSLER RD 4.16 KV SUBSTATION ONE LINE DIAGRAM

FILE NO. 858.44459.02F
DATE JULY 2009
E-1

FILENAME: \\SYROES03\ALT\SYRACUSE\WELLSVILLE-V.858\44459.RECORD-1-LINE-D\DOCS\DWG\SHEETS\RECORD DRAWINGS\44459.02F.DWG