Revenue Producing Plant Additions
Account 367 (Mains) > $100K

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10	Col. 11	Col. 12	Col. 13
List No.	Yr	Location	Internal Hurdle Rate for Project Approval (%)	Pre – Construct Estimated IRR (%)	Estimated Cost - Mains[1]	Actual Cost - Mains[2]	Amount the Estimate Varied from Actual Cost (+/(-))	Percentage of Actual Cost Over or Under (-) in relation to Estimate (%)	Total[3] Cost – Mains	Total[4] Cost - Project	Post - Construct IRR (%)[5]	Project ID
1	2001	West Springfield/ ConEd	10%	16%	$1,152,300	$858,993	($293,307)	-25%	$880,367	$1,072,177	23%	S01D1038
2	2001	Foxboro/Gillette Stadium – Washington St.	10%	16%	$156,116	$238,598	$82,482	53%	$259,775	$302,986	11%	BO1D0041
Basis for Cost Variation: Washington Street, Foxboro, is Route 1. The project aligned with the demolition of the New England Patriot's Foxboro Stadium, the construction of the new CMGI (now Gillette) Stadium and major highway reconstruction to accommodate increased traffic. Elevation changes, road widening, depth of cover problems, and the need to coordinate utility construction with all other site activity resulted in considerable unexpected additional costs. In areas, Bay State's main had to be installed in atypically deep trenches. In other areas, the existing main required cover after final grade changes and extra cost was incurred to lower the main beneath the paved roadway. These were activities that could not be anticipated in advance and increased construction cost.												
3	2000	Methuen / Spicket Common	11.4%	10%	$93,538	$76,432	($17,106)	-18%	$80,725	$142,192	12%	L2000D0045
4	1999	Bridgewater/ MCI Bridgewater	8.75%	15%	$1,406,663	$1,771,239	$364,576	26%	$1,837,636	$2,233,648	11%	B99D0121
Basis for Cost Variation: This project provided for the installation of over 7 miles of main to the Massachusetts Correctional Institute (MCI) - BridgewaterFollowing initial estimates, it was determined that some mains should be installed to anticipate increased capacity and growth in the localized area. In addition, while the estimate called for 34,508 feet of new main, the actual installation was 37,919 feet. Additional unexpected charges were also incurred for encasing at a RR crossing, where Bay State was required for public safety purposes to enclose the gas carrier pipe in a 30" casing beneath the RR lines.												
5	1999	North Andover/ Brooks School/ Great Pond Rd.	8.75%	12%	$120,405	$122,979	$2,574	2%	$130,570	$143,932	11%	L99D0052
6	1999	Methuen/ The Loop, Oak St.	8.75%	17%	$204,099	$73,485	($130,614)	-64%	$76,260	$121,847	30%	L99D0026
7	1999	Springfield/ Van Sickle Public Sch/ Merrimack Ave.	8.75%	3%	$55,987	$108,094	$52,107	93%	$111,907	$118,531	13%	S99D1064
Basis for Cost Variation: Originally designed to run 2,850 ft of mainto serve school, extended 3,583 ft to connect new police and fire complex that was located on Rte. 20A. CIAC of $60,000.												

1 Estimated Cost – Mains is Direct Main Cost only.
2 Actual Cost – Mains is Direct Main Cost only
3 Total Cost - Mains is Actual Indirect and Direct Main Costs for the Project.
4 Total Cost – Project is Actual Indirect and Direct Main, Service and Meter Costs for the Project.
5 Post-Construct IRR is determined by Total Cost and Realized Customer Additions

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List No.	Yr	Location	Internal Hurdle Rate for Project Approval (%)	Pre – Construct Estimated IRR (%)	Estimated Cost - Mains[1]	Actual Cost - Mains[2]	Amount the Estimate Varied from Actual Cost (+/(-))	Percentage of Actual Cost Over or Under (-) in relation to Estimate (%)	Total[3] Cost – Mains	Total[4] Cost - Project	Post - Construct IRR (%)[5]	Project ID
8	1999	Southwick/Sunnyside Ranch Road	8.75%	12%	$56,169	$159,892	$103,723	185%	$168,540	$175,074	0%	S99D1091
Basis for Cost Variation: Job became muli-year project. Ultimately, considerably less main was installed that first thought (7,420 versus 11,190 ft). Significant unanticipated ledge was encountered, slowing construction efforts, requiring specialized removal equipment and increased cost. Police detail costs increased, as well as additional trucking and disposal costs (to dispose of removed ledge). Additional replacement backfill was required.												
9	1998	Raynham/King Phillip Estates	8.75%	11%	$89,229	$92,590	$3,361	4%	$96,019	$193,872	12%	B98D0093
10	1998	South Hadley/ Rexham Graphics	8.75%	34%	$274,085	$241,973	($32,112)	-12%	$253,492	$241,973	48%	S98D1052
11	1998	North Andover/ Genetics	8.75%	46%	$286,450	$405,989	$119,539	42%	$408,314	$424,856	35%	L98D0055
Basis for Cost Variation: The preferred route, that formed the basis for the estimate, included a RR crossing. When it was obvious the permits and approvals associated with the RR crossing would delay the project, the project route was updated and instead achieved by installing a new and longer section of main to serve the customer to by-pass the previous route.												
12	1997	Wrentham/ Outlet Mall	8.75%	15%	$143,156	$129,923	($13,233)	-9%	$140,271	$275,479	16%	B97D0086
13	1997	Southwick/ Southwick Exp., S. Longyard Rd.	8.75%	12%	$111,717	$124,988	$13,271	12%	$130,877	$204,333	7%	S97D1033
Basis for Cost Variation: The variation occurred because Bay State had to unexpectedly dig and backfill a 1,351 foot trench on Liquori Drive in order to install a main.												
14	1995	North Andover/ Phillips Academy/ Waverly Road	9.58	13%	$240,210	$275,208	$34,998	15%	$289,435	$321,564	22%	L95D0010
Basis for Cost Variation: The Town of North Andover required the new main to be placed under and along a concrete sidewalk, rather than under the normal asphalt road surface.												
15	1994	Agawam/ South West Street	8.55	9%	$118,860	$116,033	($2,877)	-2%	$144,454	$222,267	5%	South West St.
16	1993	Ludlow/ Electric Park	8.55	9%	$359,030	$280,160	($78,870)	-22%	$290,679	$458,274	5%	Electric Park
17	1992	Monson/Palmer MassPower and Monson / Palmer Expansion	*Analysis provided separately*	*Analysis provided separately*	*Analysis provided separately*	*Analysis provided separately*	*Analysis provided separately*	*Analysis provided separately*	*Analysis provided separately*	*Analysis provided separately*	*Analysis provided separately*	