



Bay Park Drainage Improvements

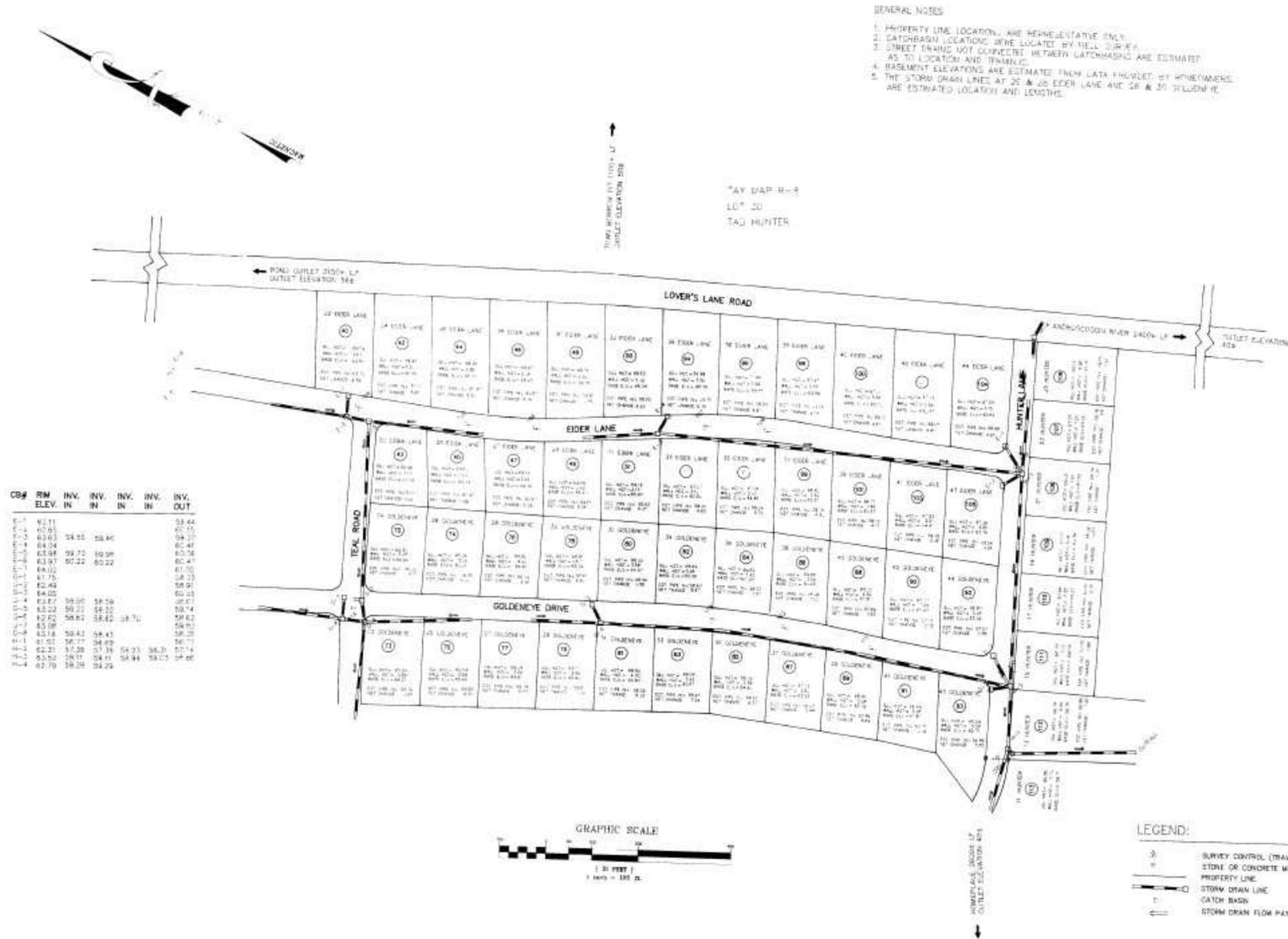
Status Report as of 2/5/09

Problem Identification

- Basements Flooding
 - Constant Running of Sump Pumps
- Street Flooding
- Clogged Drainage Lines
- Inadequate Outlet
- Elevated Groundwater Table
- Natural Aquifer



Problem Area – 1991 Study



SITELINES, INC.
ENGINEERS PLANNERS SURVEYORS
1015 100 1ST AVENUE 14 WINDY HILL ST. BALDWIN, MASS 01931
(508) 325-0200

BAY PARK DRAINAGE STUDY
EDOR LANE / GOLDENEYE DRIVE AREA
FOR
TOWN OF TOWNHAM

DATE: 12/20/90
BY: J. W. WILSON
CHECKED BY: J. W. WILSON
SCALE: 1" = 100 FT.
JOB NO. 90-002
PROJECT NO. 90-002

Problem Area



History

- 1981 Ground Water Simulation Study
 - Lewis Stuart-Contractor
 - Robert Gerber, Geologist and Civil Engineer
 - 1978, 1980 and 1981 Studies
 - APPROVED BY DEP
 - “Will not cause an unacceptable impact on the ground water quality or quantity”
- 1991 “Bay Park Drainage Study”
 - Sitelines, P.A.
 - Under-drain system installed at “less than optimum” slope
 - Basements are higher than drainage system in road
 - Recommend Public/Private effort to install drains and improve system. Recommend additional relief.

History Continued

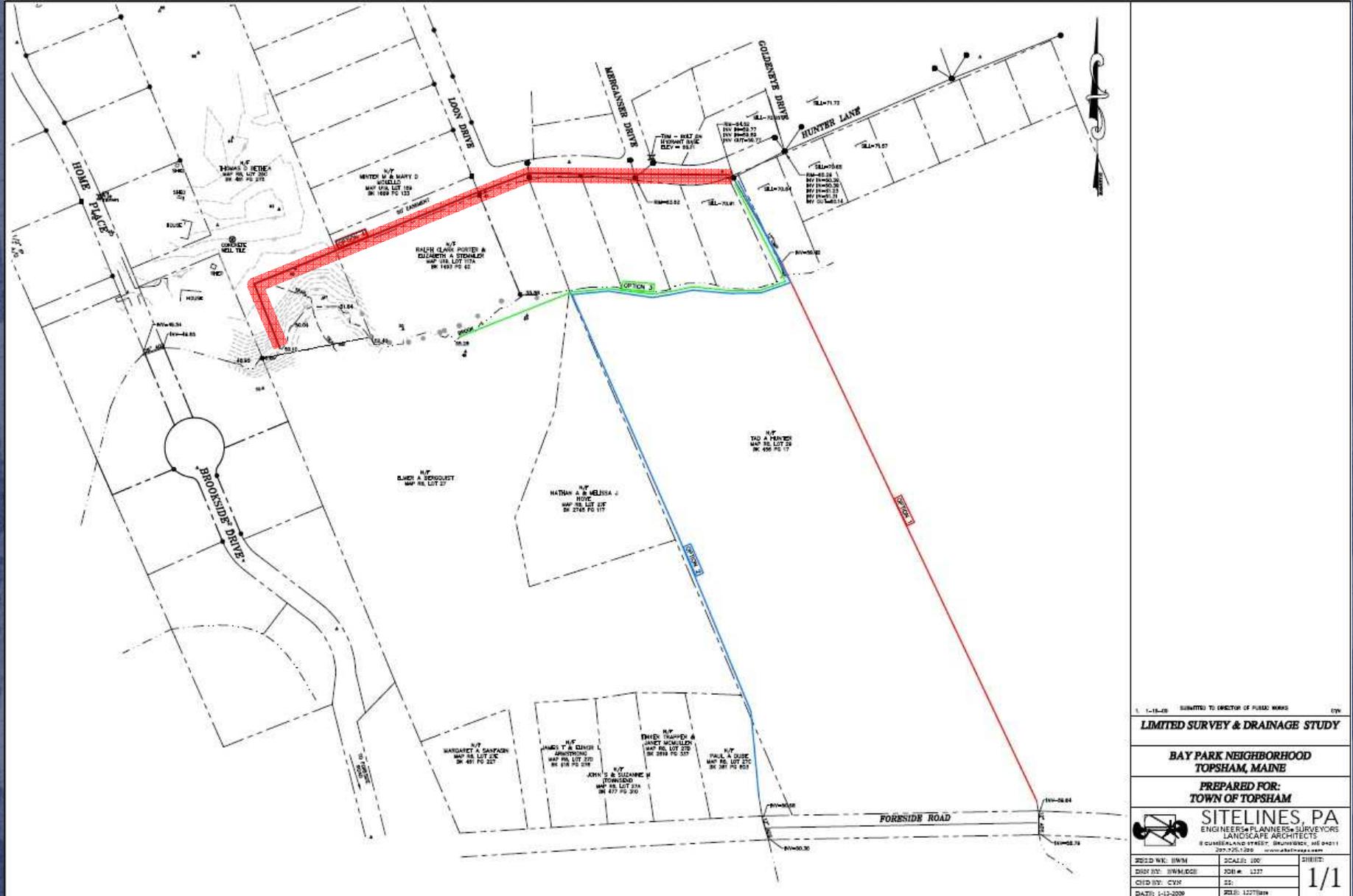
- 1991? – Jetting of Lines and Fix Collapsed Pipe
 - Result of 1991 Sitelines Study?
- 2008-Present
 - Clogged lines on Goldeneye Drive and Eider Lane
 - Jetting of Lines
 - PW Crews, R.A. Webber, D.H. Jones, Brunswick Sewer
 - **Update: Lines are flowing!!!**
- 2009 Sitelines Study
 - Reason: Basements and streets continuously flooding
 - Purpose: Determine options for new outlet pipe
 - Provide lower elevation to increase pipe slope
 - Better water flow = More Sediment Removal (Less Backups)

2009 Sitelines Study

Summary and Conclusions

- Examined 4 Possible Outlets
- Determined elevations of basins on Hunter Lane, natural drainage way and culverts along Foreside Road
- Recommend Alternative #4 (Next Slide)
 - Lowest Outfall Elevation (lower 2'+)
 - Allow for future construction
 - Allow homeowners to connect to system
 - No 'significant' changes to drainage system (permit)
 - Would require a drainage easement

Examined Outlet Options



1-18-09 SUBMITTED TO DIRECTOR OF PUBLIC WORKS 079

LIMITED SURVEY & DRAINAGE STUDY

**BAY PARK NEIGHBORHOOD
TOPSHAM, MAINE**

**PREPARED FOR:
TOWN OF TOPSHAM**

SITELINES, PA
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
8 CUMBERLAND STREET, SHREWSBURY, MA 01461
507-725-1325 www.sitelines.com

DESIGNER: BWM	SCALE: 100'	SHEET:
DRAWN BY: BWM/EGE	DATE: 11/17	1/1
CHECKED BY: CYH	SS:	
DATE: 1-17-2009	PROJECT: 1277809	

Proposed Project (Solution)

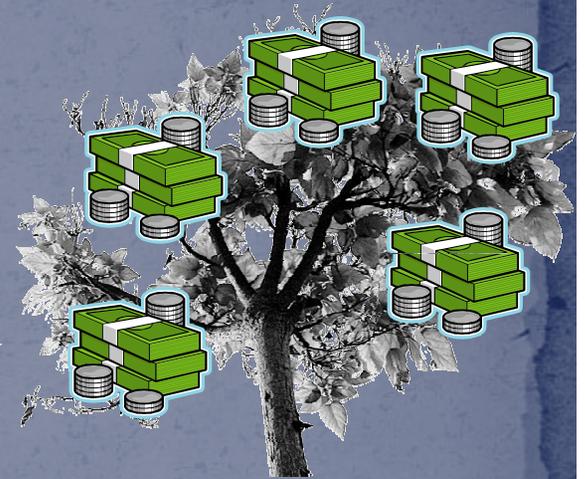
- Install new outlet to stream
 - Proposed Sitelines “Option 4”
- Install ` new storm drain line along Hunter Lane
 - Also part of “Option 4”
- New 12-18” Under drain along Goldeneye Drive
 - From Hunter Lane to Teal Road
- New 12-18” Under drain along Eider Lane
 - From Hunter Lane toward Teal Road 1,000’
- Not all sections need to be under drain, saving \$\$\$

Obstacles

- Cost
 - Outlet (1,400 LF, 24" DIA)
 - \$170,000
 - Goldeneye Drive (1,400 LF, 18" UD)
 - \$170,000
 - Eider Lane (1,000LF, 12" UD)
 - \$80,000
 - Design/Overhead/Misc.
 - \$50,000
 - **Total Cost  \$500,000 (R.O.M.)**
- Easement

Funding Options

- 2009-2010 Budget
- Bond
- FEMA Grant
 - Town must still provide 25% Cost share
 - Can be “In-Kind” match
 - No money for engineering design/study
 - No Guarantee
 - Grants are competitive
 - Depend on money in grant pool and declarations
 - May not be funded in immediate future



Conclusion

- Public Works Director Recommendation
 - Pursue proposed project
 - There is a problem that needs to be corrected
 - Build money into 2009-2010 Budget
 - Engineering Design (\geq \$20,000)
 - Possible FEMA match
 - \$50,000
 - Continue Pursuit of FEMA Grant

