

Town of Atherton Storm Drainage Master Plan

Presented to Council Study Session
May 7, 2014

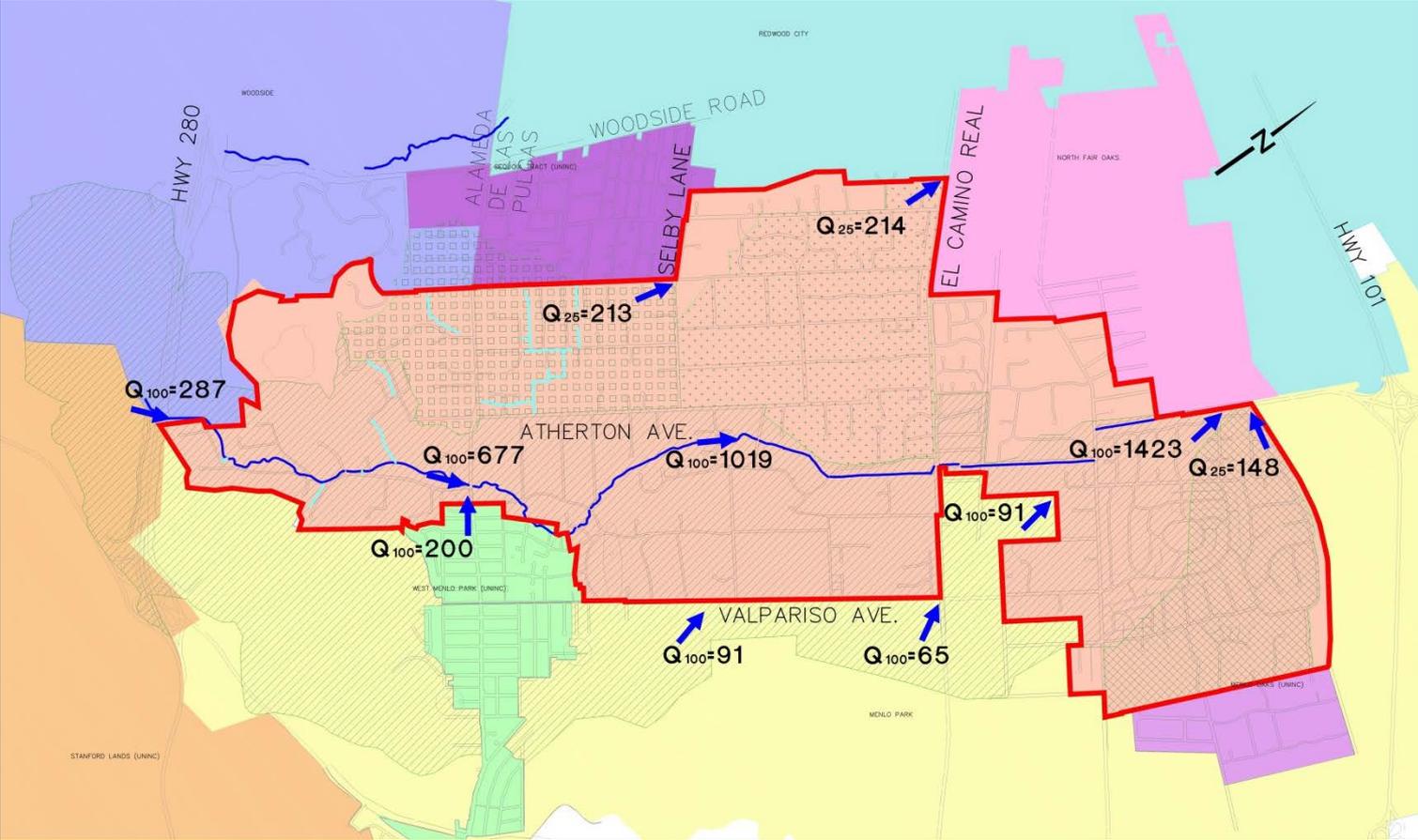
Presentation Overview

- Objectives of Presentation
- Study Area and Drainage Systems
- Drainage Issues
- Proposed Improvements
- Prioritizing Capital Improvement Program
- Questions

Objectives of Presentation

- Summarize Initial Findings
- Suggested Solutions
- Receive Feedback on Recommended Priorities
- Confirm Next Steps

Town of Atherton Drainage Area



Regional Drainage Considerations

Watershed	Drainage Area (acres)
Selby Lane Area	455
El Camino Real Area	544
Atherton Channel Area	3348
Bay Road Area	377

Communities	Percent of Runoff to Atherton Channel
Woodside/Stanford Uninc.	13%
Menlo Park/Uninc.	36%
Atherton	51%

Drainage System Components

- Atherton Channel
- Storm Drain Pipes
- Roadside Ditches
- Valley Gutters
- Drywells
- Onsite Detention

Overview of Initial Findings

- The Town's storm drain system capacity is limited to a 10-year storm event
- Atherton Channel receives 2/3 of the Town's stormwater runoff
- The Channel capacity is limited to a 7-year storm event
- Stormwater runoff remains the same for the Town since last update (2001)

Drainage Issues

- Atherton Channel – severe erosion, loss of conveyance, limited bridge/culvert capacity



Drainage Issues

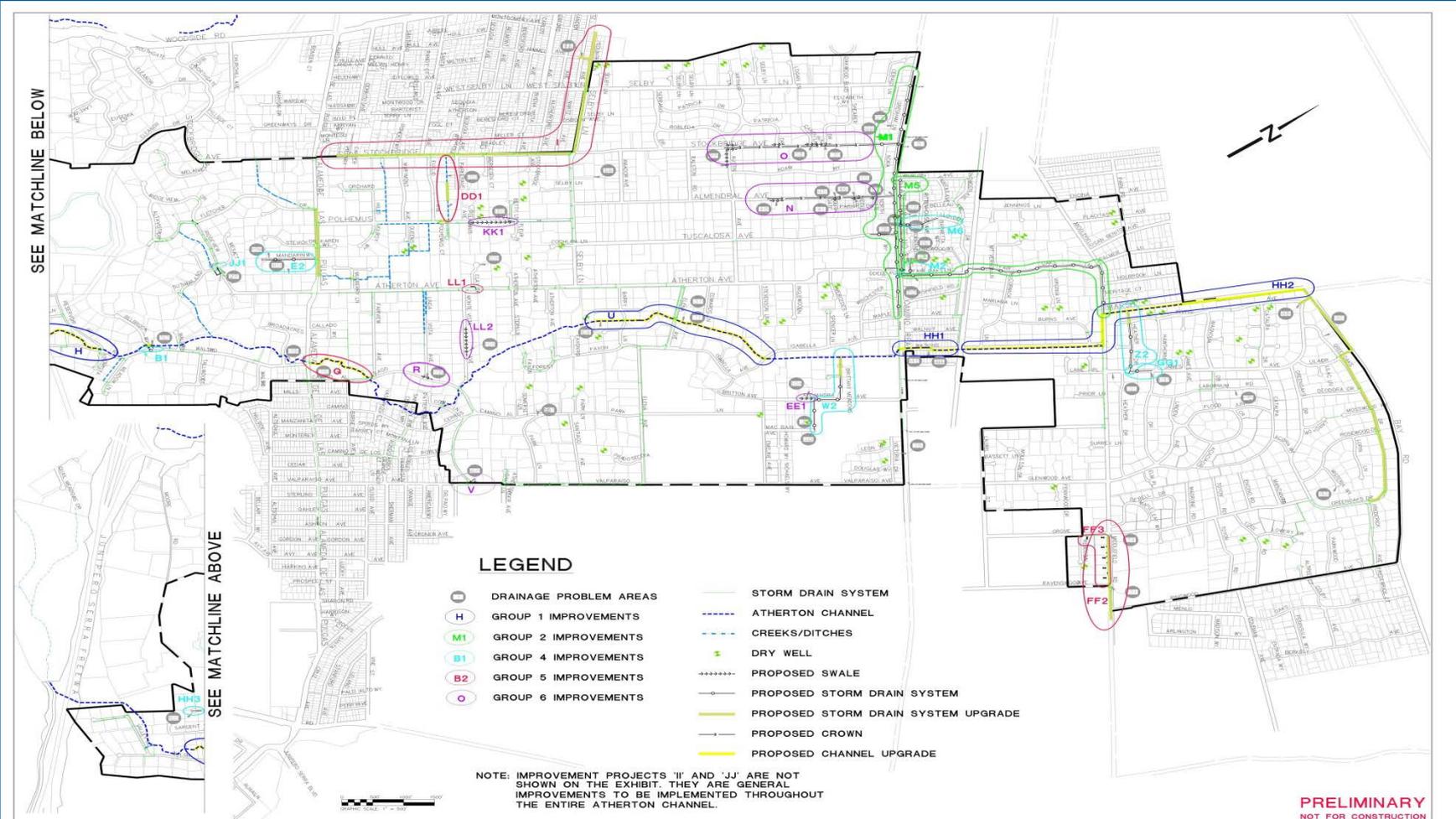
- Localized flooding/ponding
 - December 2012 School flooding



Summary of Initial Findings

- Construction of drainage improvements has alleviated localized ponding/flooding since 2001
 - 26 projects completed
- New drainage improvements will further improve local conditions and maintain the current drainage systems
- Investment in new drainage facilities is required to bring the drainage system to 10-year or higher protection level

Proposed Improvements



Recommended Capital Improvement Program

- 39 Projects
- Projects range in cost from \$17,000 to \$20,500,000
- Projects can be categorized into 6 groups:
 - ✓ Atherton Channel Restoration
 - ✓ El Camino Real Interchange Flooding Relief
 - ✓ Middlefield and Marsh Traffic Lane Flooding Relief
 - ✓ Collector Street/Lane Flooding Relief – New Storm Drain
 - ✓ Collector Street/Lane Flooding Relief – Upgrade Existing Storm Drain
 - ✓ Collector Street/Lane Flooding – Swale/Berms

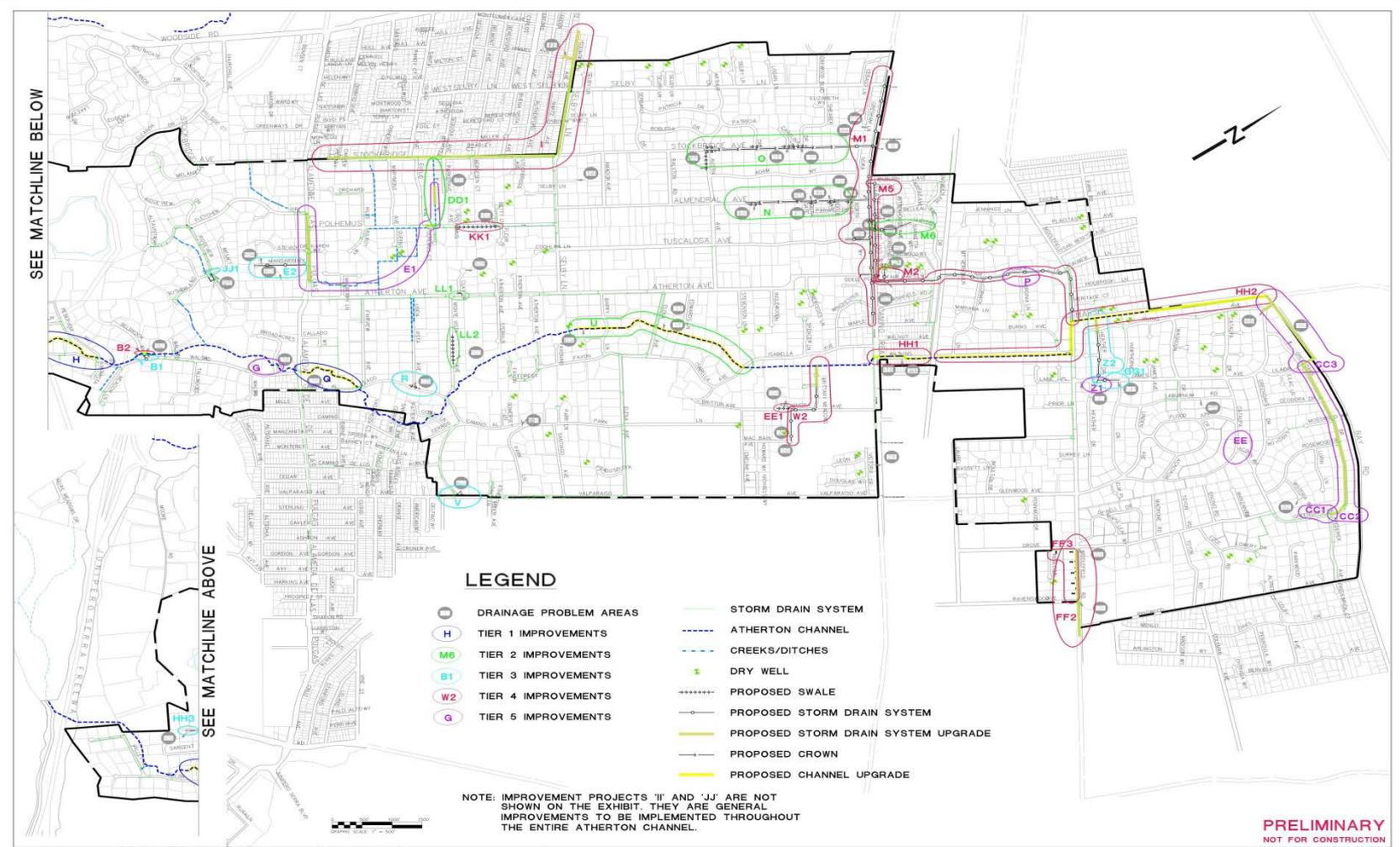
Recommended Capital Improvement Program

- Prioritize projects considering:
 - ✓ Emphasizing health and safety
 - ✓ Benefiting greatest number of individuals
 - ✓ Avoiding property damage
 - ✓ Maintaining drainage systems
 - ✓ Recognizing downstream constraints

Recommended Capital Improvement Program

- Five “Tiers” of Projects
 - ✓ Tier 1 Protect Health and Ensure Safety
 - ✓ Tier 2 Avoid Damage to Private Property
 - ✓ Tier 3 Install New Storm Drains
 - ✓ Tier 4 Upgrade Existing Storm Drains
 - ✓ Tier 5 Remaining Projects from 2001 Master Plan

Recommended Capital Improvement Program



Recommended Capital Improvement Program

Tier	No. of Projects	2014 Cost, \$
1	2	5M
2	7	10M
3	10	6M

Next Steps ...

- Evaluate new drainage facilities to provide 10-year and 25-year flood protection levels along Atherton Channel
- Hold 2nd Public Meeting

Questions?