



Comprehensive Legacy
Sediment Removal and Multi-
Benefit Outcomes:

Santo Domingo Creek
Restoration at Rock Lititz

March 4, 2026

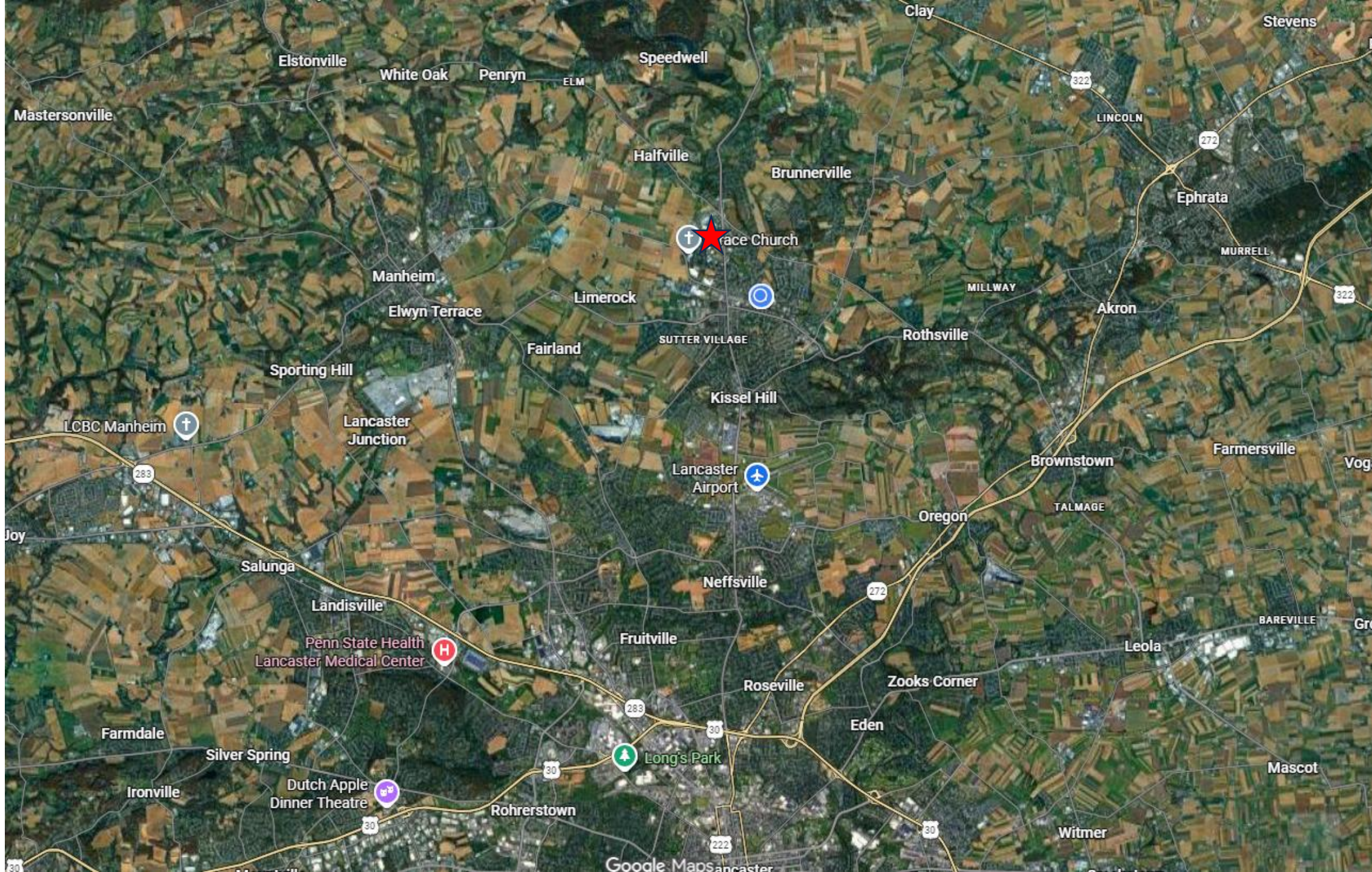
**PA Aquatic Resource
Restoration Conference**

Presented by Ben Ehrhart, PE, CFM
LandStudies



Benefits of Santo Domingo Restoration at Rock Lititz

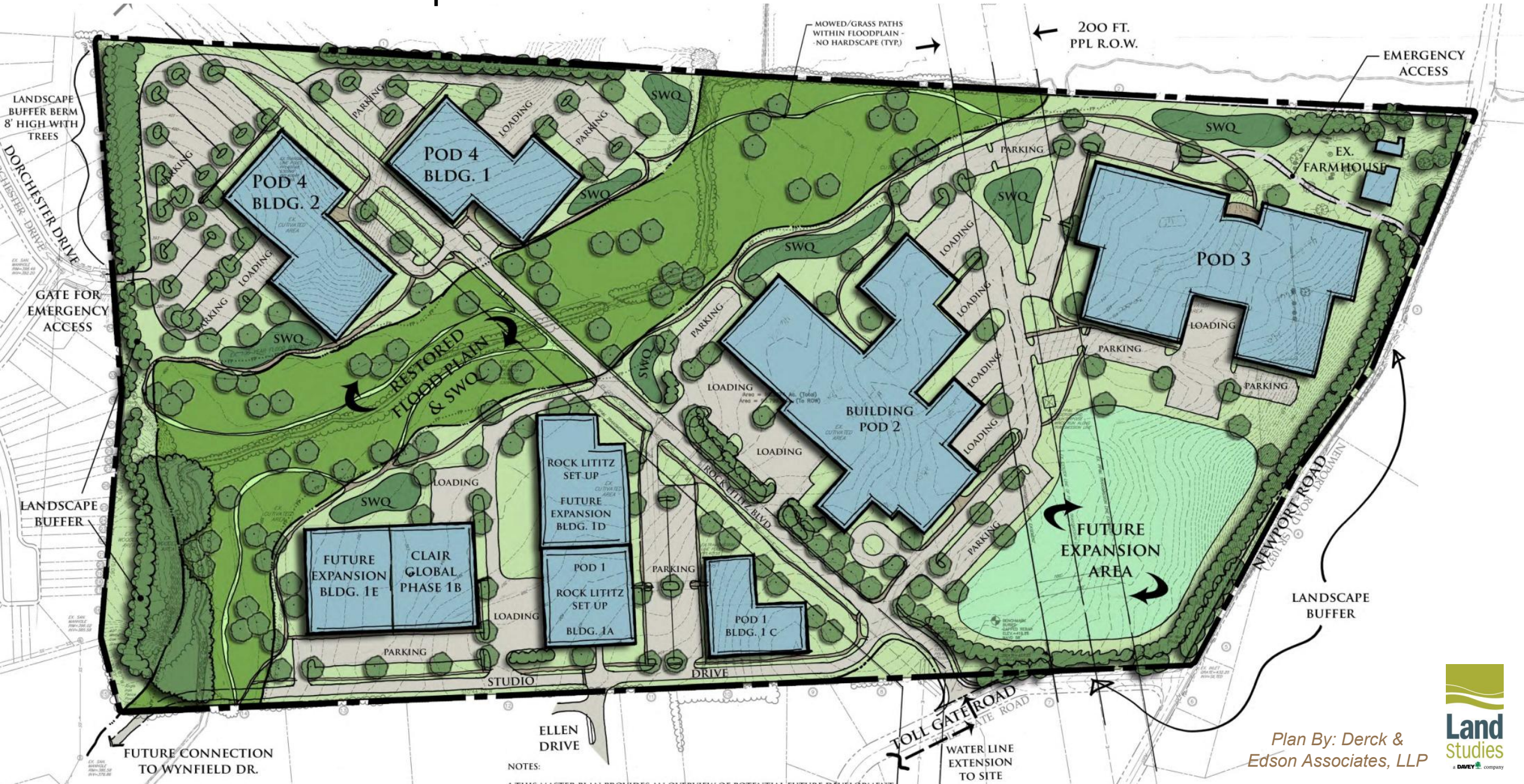
- Post Construction Stormwater Management (Primary Financial Driver)
 - Peak Attenuation
 - Volume Reduction(Infiltration, ET, Retention)
- Aquifer Recharge (Lititz Water Supply, CARA)
- Water Quality (MS4, TMDL)
 - Bank Erosion Prevention
 - Sediment Trapping
- Flood Hazard Mitigation (LOMR)
- Recreation





© 2014 Google

Rock Lititz- Masterplan



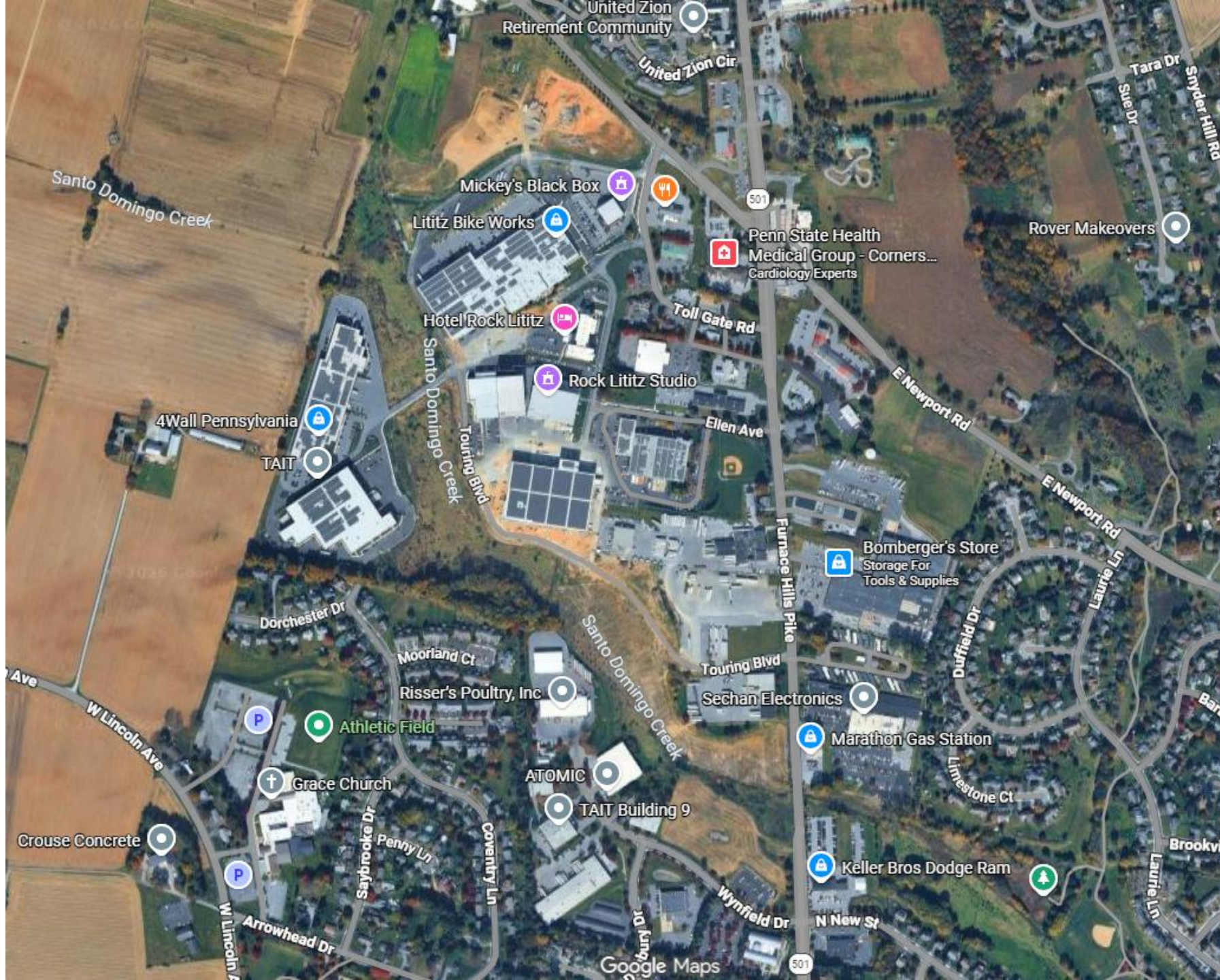
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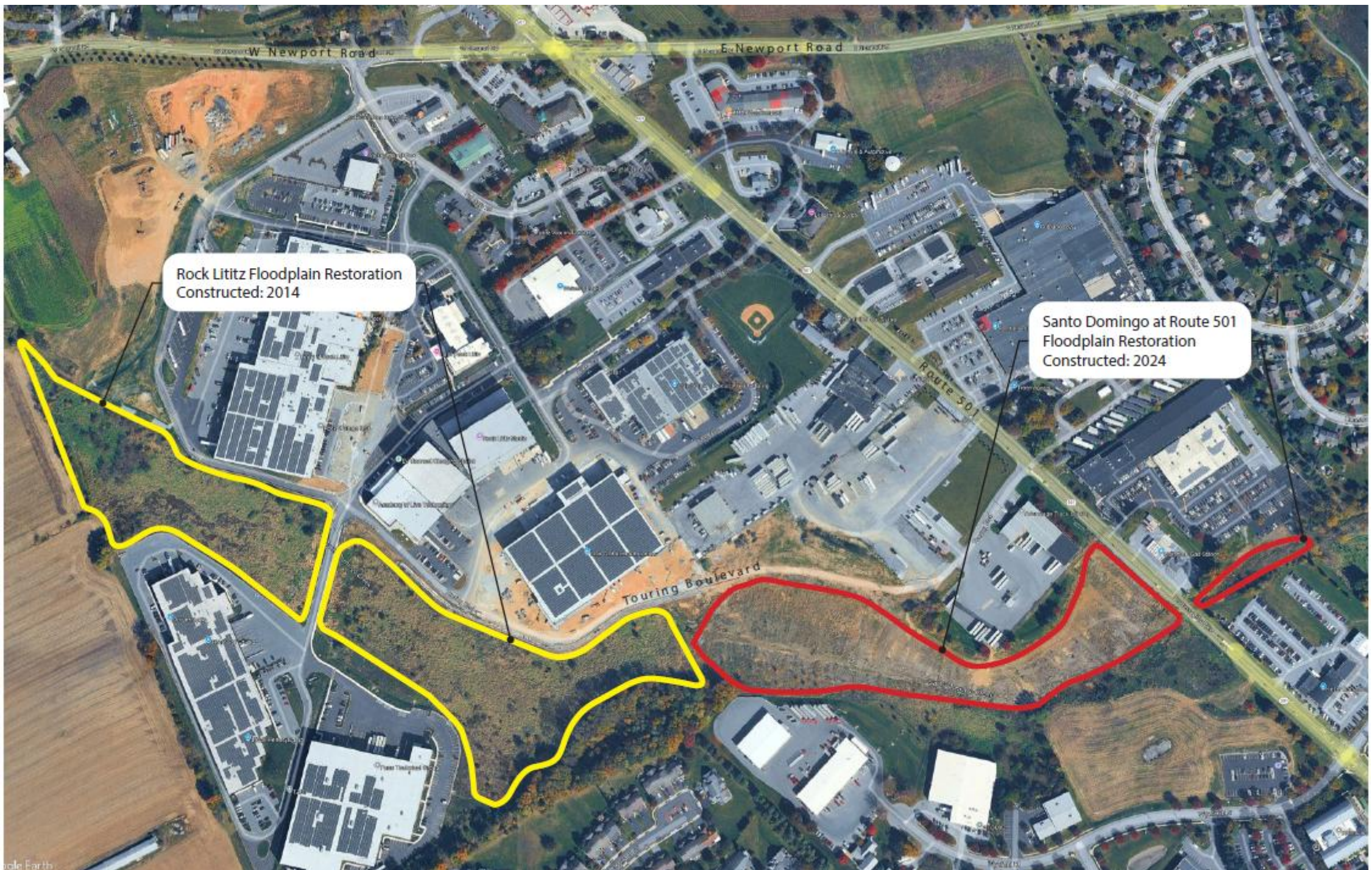
THIS MASTER PLAN PROVIDES AN OVERVIEW OF POTENTIAL FUTURE DEVELOPMENT

Plan By: Derck & Edson Associates, LLP



DAVEY company





Rock Litz Floodplain Restoration
Constructed: 2014

Santo Domingo at Route 501
Floodplain Restoration
Constructed: 2024



Santo Domingo Creek at Rock Lititz

Before Construction



Santo Domingo Creek at Rock Lititz

During Construction



Santo Domingo Creek at Rock Lititz

After Construction



Santo Domingo Creek at Rock Lititz

After Construction



Santo Domingo Creek at Rock Lititz

After Construction



Santo Domingo Creek at Rock Lititz Phase 2

Before Construction



Santo Domingo Creek at Rock Lititz Phase 2

After Construction



Santo Domingo Creek at Rock Lititz Phase 2

After Construction



Economic Benefits

Developer Benefits

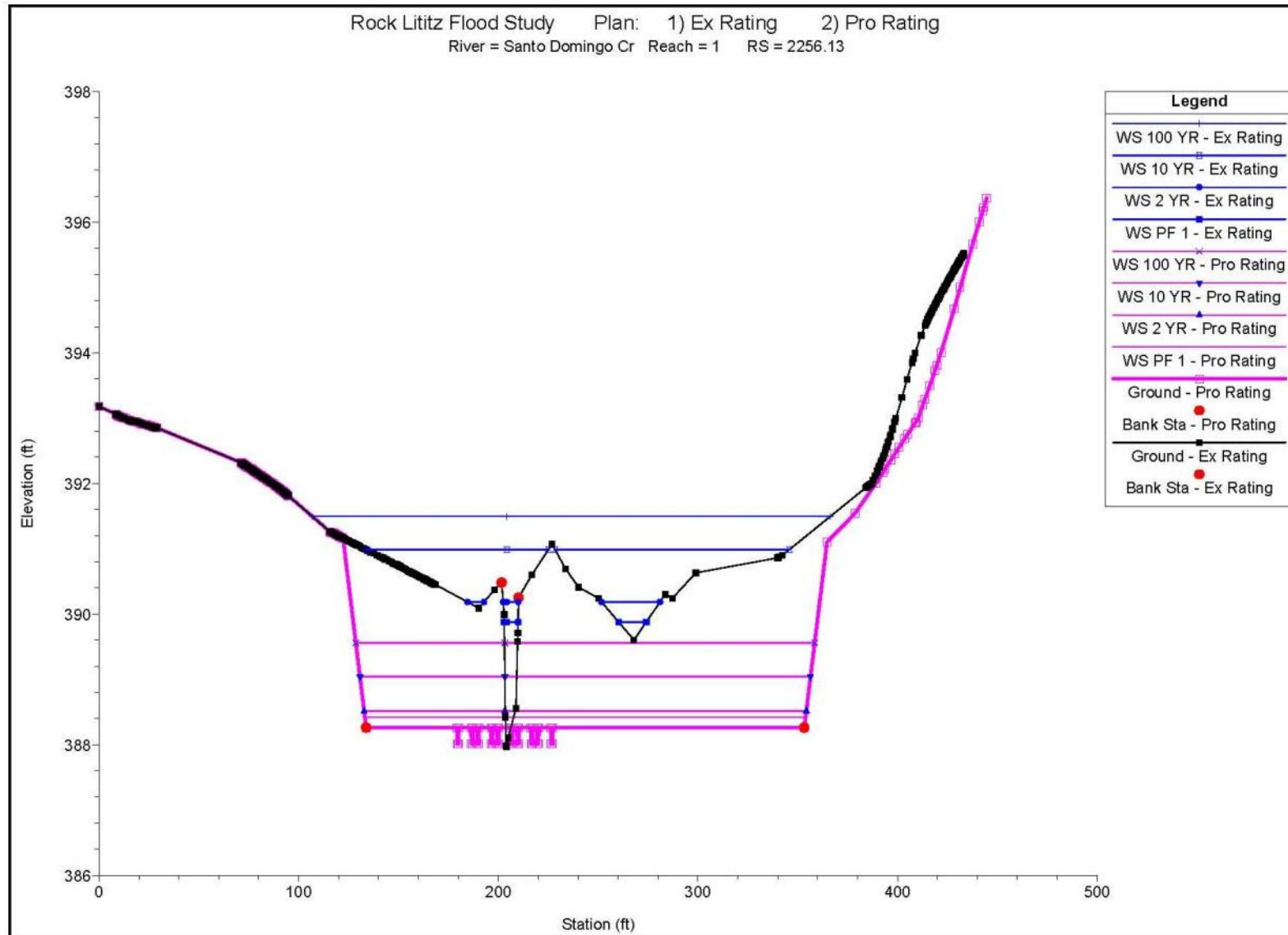
- Stormwater Benefits
 - Peak Flow Reduction
 - Volume Reduction
- Increased Density
- Increased Annual Revenue



Santo Domingo Creek at Rock Lititz

- **3,156 LF restored, 17-acre floodplain**
- **Design-Permit-Construction Cost: ~\$1M**
- **Stormwater Peak Flow & Volume Benefits**

- **Additional Buildable Area:**
 - 200,000 sf @ \$15/ sf
 - \$3M
- **Annual sediment reduction of 125 Tons/ yr**
 - Exceeds NPDES WQ requirements by 2 orders of magnitude



Santo Domingo Creek at Rock Lititz

Stormwater Benefits

➤ Site and Watershed Peak Attenuation

- Exceeds Pre-/ Post Requirement for full build out of 96 acre campus
- 83% reduction of 2-year watershed peak
- 10% reduction of the 10-year watershed peak

➤ Runoff Volume Reduction

- 983,000 cf runoff reduction for the 2-year storm
- 185% of 2yr/24 hr volume requirement
- Enhanced Aquifer Recharge

➤ But does it work?



Flow Monitoring

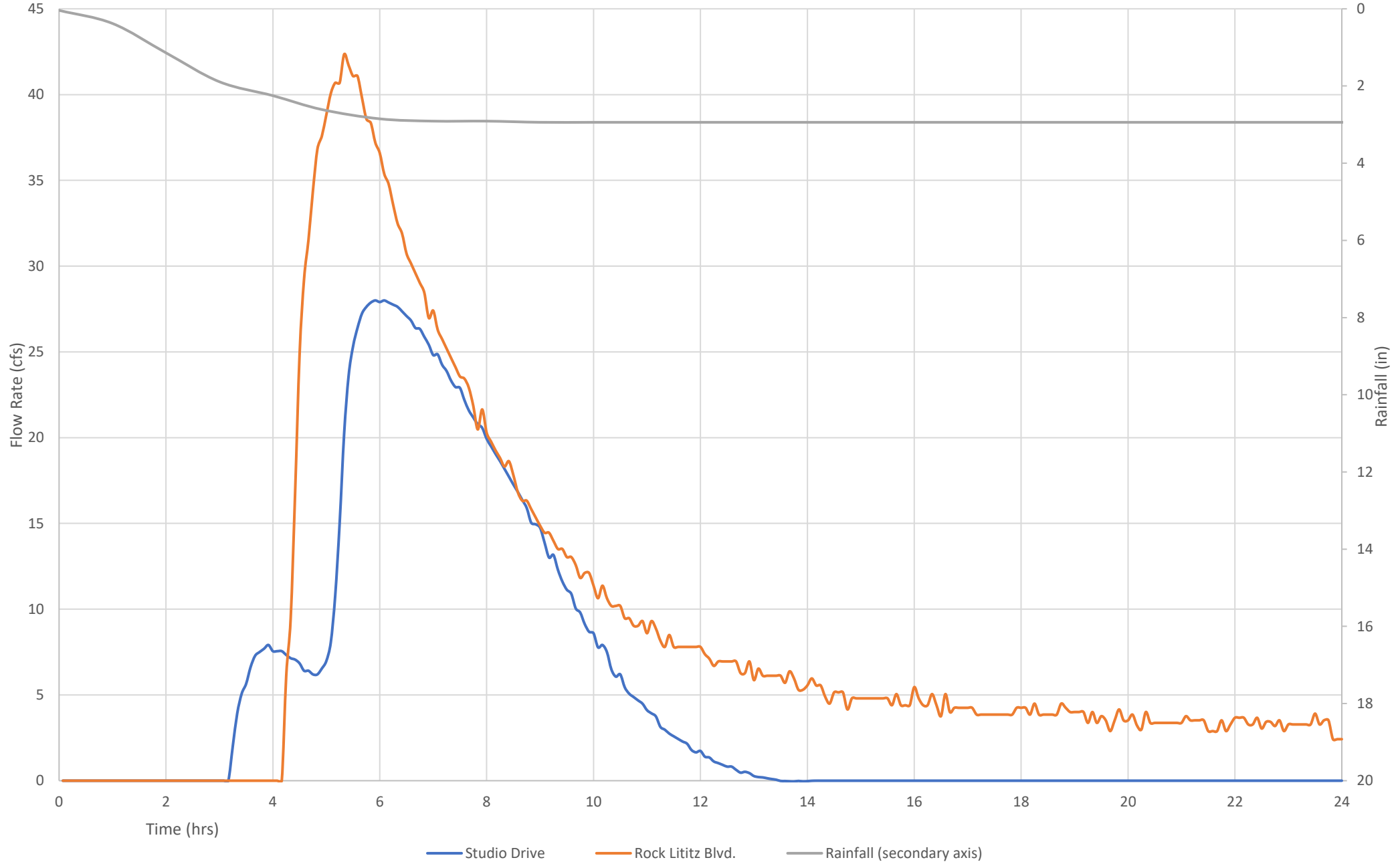


Studio Drive

Rock Lititz Blvd.

September 10, 2015 Storm Analysis

2.94" Rainfall Event



Rock Lititz Flow Monitoring Results

Lower half of site only

➤ Storm events recorded over 6 years

- 67 total events > 0.5" rainfall
- 35 events >1"
- 5 events >2"

➤ Runoff Volume Reduction

- All storms resulted in reduced runoff volume
- 72% of events exceeded CG-1

➤ Runoff Peak Attenuation

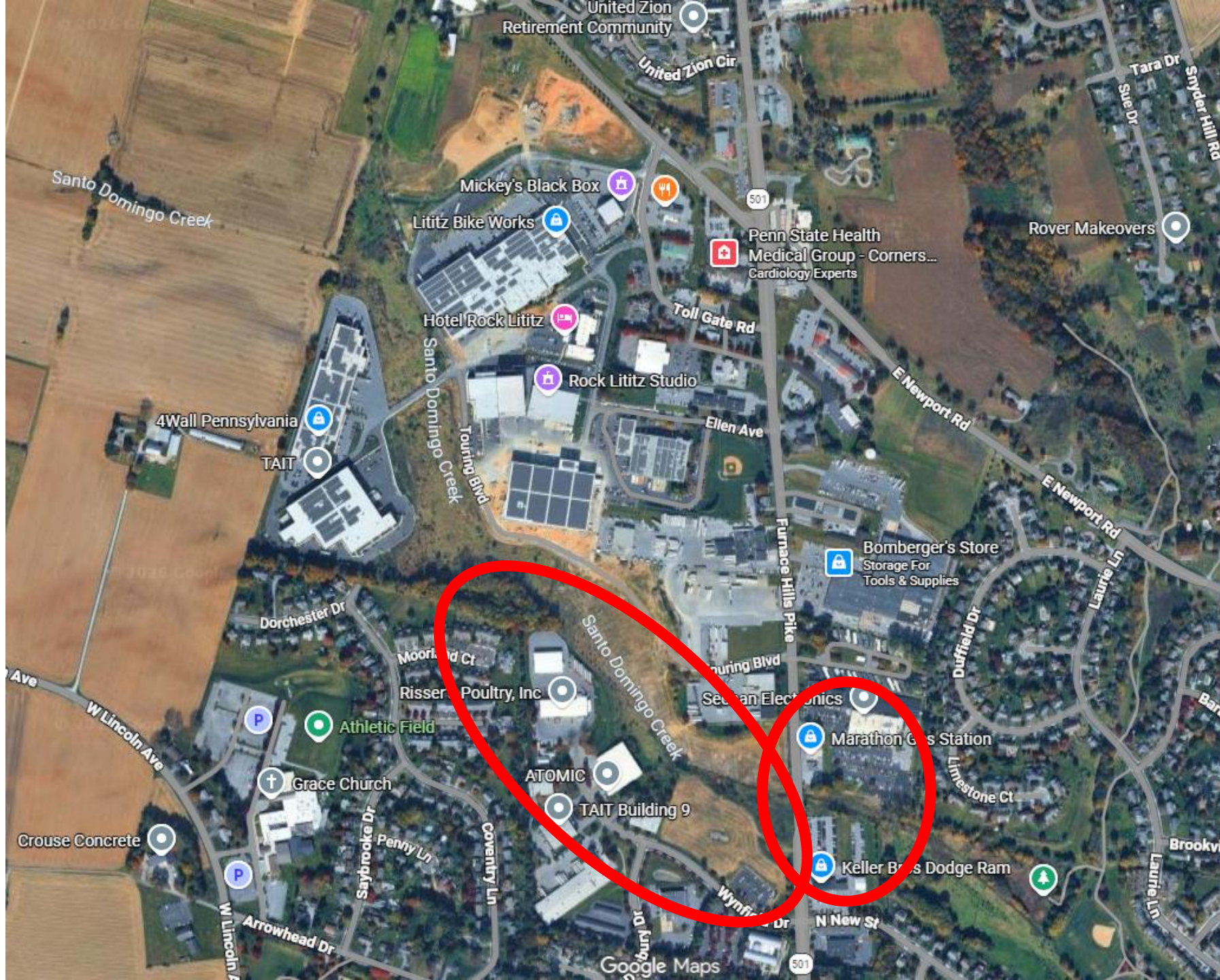
- 93% of storms resulted in peak reduction
- Average peak reduction of 62%

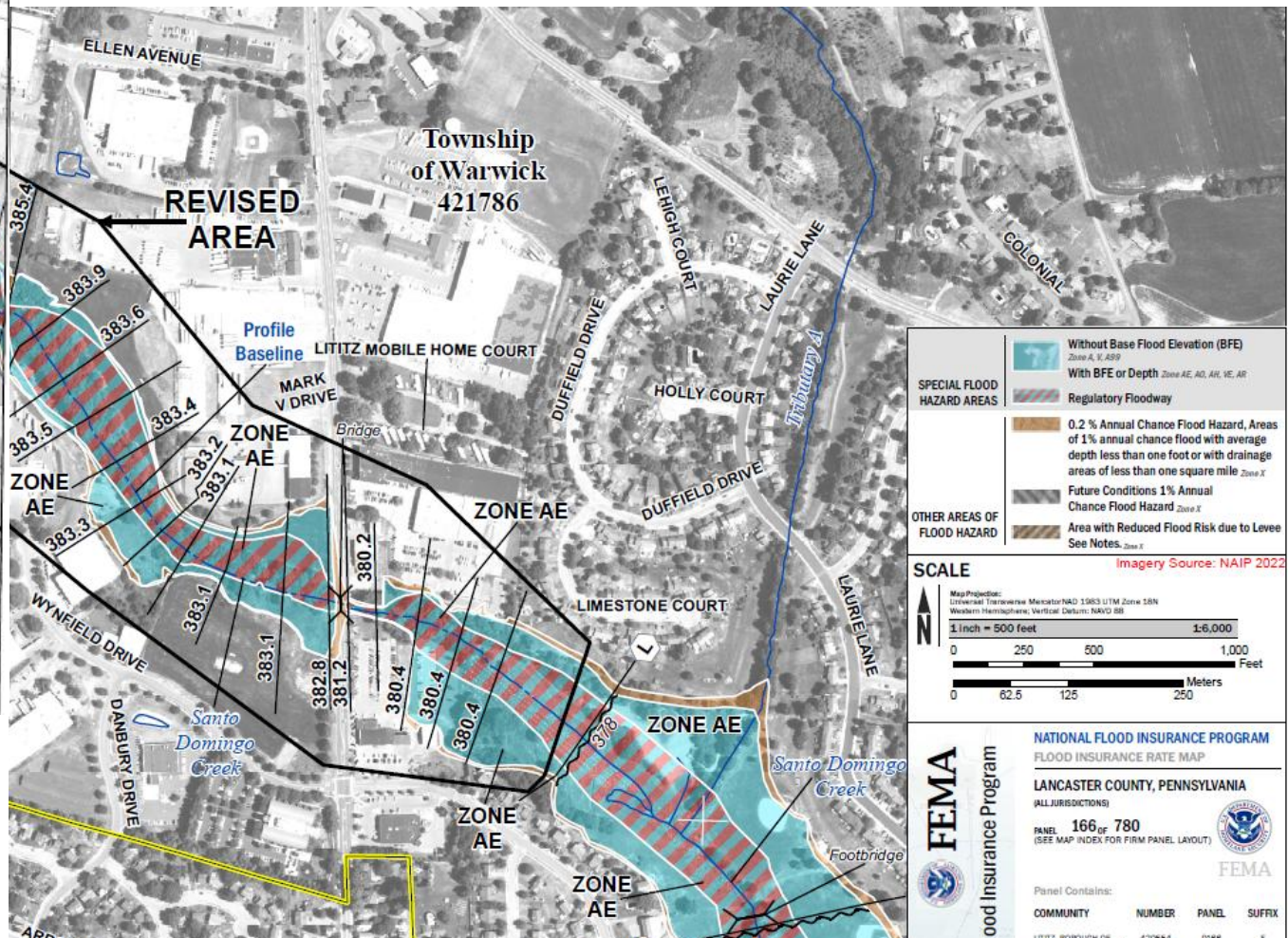
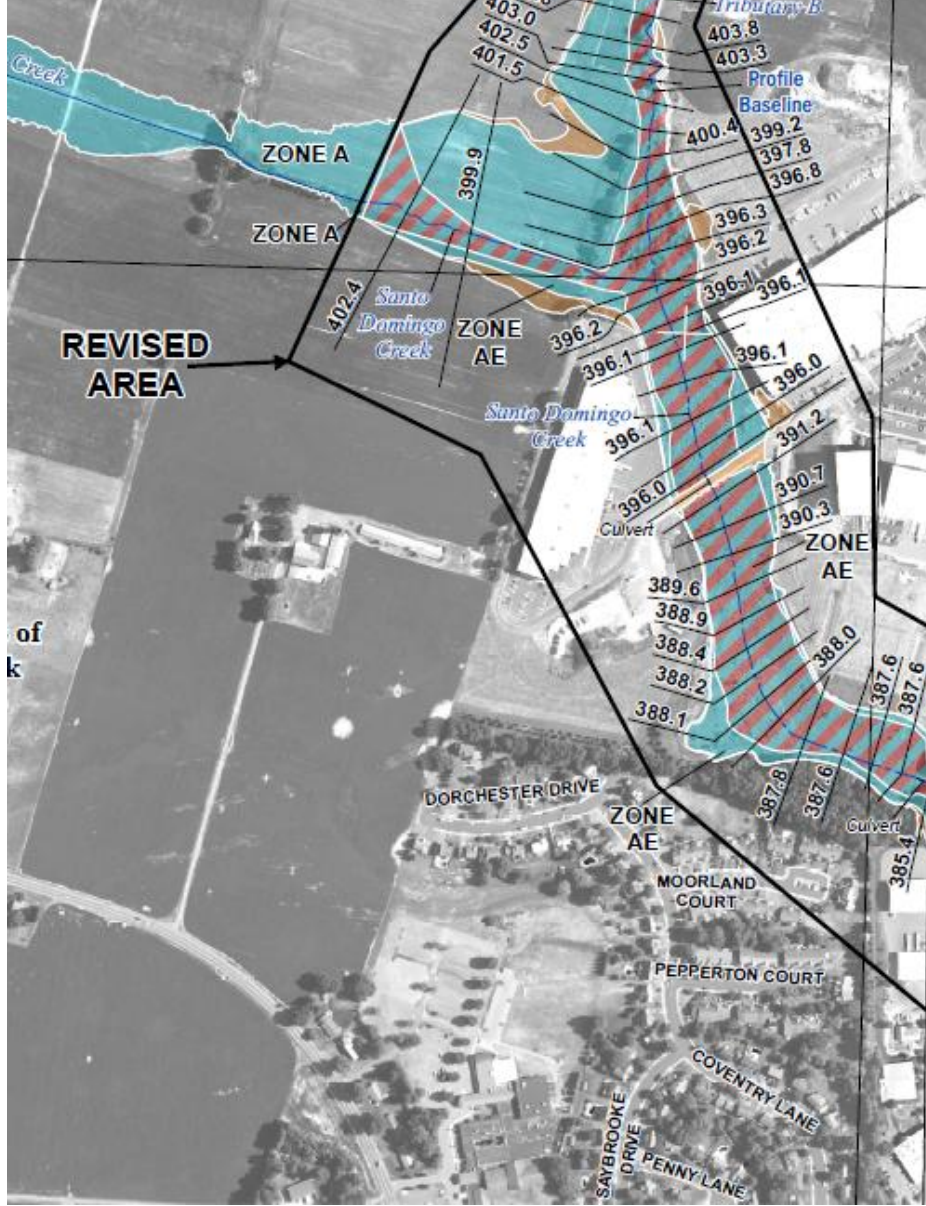


Santo Domingo Phase 2 Data

- 2,350 LF, 6.5 ac Restoration
- Peak Attenuation and Volume Reduction for an additional 31 ac. of impervious (PCSM)
- 1.08 M lb/yr sediment reduction (MS4)
- 571,038 CF 2-yr volume reduction (Aquifer Recharge)
- Reduced Flood Elevation and Footprint (LOMR)







SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, X, APF</i>
		With BFE or Depth <i>Zone AE, AD, AH, VE, AR</i>
OTHER AREAS OF FLOOD HAZARD		Regulatory Floodway
		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee See Notes. <i>Zone X</i>

Imagery Source: NAIP 2022

SCALE

Map Projection:
Unstated Transverse Mercator NAD 1983 UTM Zone 18N
Western Hemisphere; Vertical Datum: NAVD 88

1 inch = 500 feet 1:6,000

0 250 500 1,000 Feet

0 62.5 125 250 Meters

FEMA National Flood Insurance Program

FLOOD INSURANCE RATE MAP

LANCASTER COUNTY, PENNSYLVANIA
(ALL JURISDICTIONS)

PANEL 166 of 780
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX

FEMA logo





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