Garren Creek Landslide

Kevin Madsen

Helene Recovery Office

Background Information

- **Countywide**
  - 55 slides initially identified as impacting 2 or more properties
  - 25 met FEMA criteria for Architectural & Engineering (A&E)
  - All A&E projects are obligated by FEMA for funding
  - 3 projects developed (*Grovemont, Garren Creek, and group 3*)
- **Community Impacts for the Project**
  - Assessment of risks and landslide hazards
  - Identification of potential mitigation efforts
  - Design and engineering solutions

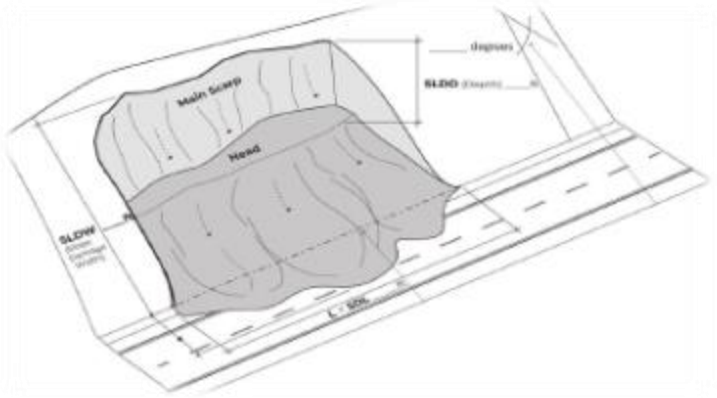
Garren Creek Landslide



- 13 lives lost
- Approximately 8 predominant slide areas
- Total length of the 8 slides is documented at 26,670 feet (*5.08 miles long*)
- Total cumulative area of the slides was reported to be 351,825 square yards (*72.69 acres*)

Project Scope

- Provide a comprehensive, phased strategy for a thorough assessment of the impacted areas
- **Phase I**
  - Site evaluations
  - Hazard modeling
  - Identifying potential mitigation solutions
  - Engineering analysis and design, as applicable
  - Development of bid-ready construction documents & cost estimates
- **Phase II** *(Requires FEMA Approval)*
  - Performed separately for this contract



Estimated Phase One Costs

All costs are funded in Phase One by FEMA Public Assistance

• Task 1A - Existing Data Review	$ 44,300
• Task 1B - Aerial LiDAR Mapping & Surveying	$346,300
• Task 1C - Field Reconnaissance	$164,800
• Task 1D - Hazard Modeling & Interim Report	$ 29,800
• Task 1E - Geotechnical Investigations	$388,900
• Task 1F - Engineering Designs	$852,700
Total Project Fees	**$1,826,800***

**Includes $599,200 in recommended contingency costs*

Estimated Phase One Schedule

• Task 1A - Existing Data Review	3 Weeks
• Task 1B - Aerial LiDAR Mapping	6 Weeks
• Task 1C - Field Reconnaissance	8 Weeks
• Task 1D - Hazard Modeling and Risk Assessments	4 Weeks
• Task 1E - Geotechnical Investigations	10 Weeks
• Task 1F - Engineering Designs	12-14 Weeks
TOTAL DURATION FOR SERVICES:	**30-31 Weeks**

Next Steps

- **Project Funds**
  - Signed contract shared with North Carolina Emergency Management within 14 days
  - NCEM will provide 75% of the FEMA obligated funds to Buncombe County within 30 days (*estimated*)
  - The remaining obligated funds will be received at project completion (*Based on final invoices*)
- **Contracted Services**
  - ECS will proceed with project in the next 30 days
  - Project completion within 8 months of start date based on accepted proposal by ECS Southeast, LLC

Requested Board Action

Approval for the ECS Southeast, LLC contract execution for geotechnical engineering services for examining potential landslide hazard mitigation options in the Garren Creek community as conveyed in the associated resolution.

Questions?

Thank you