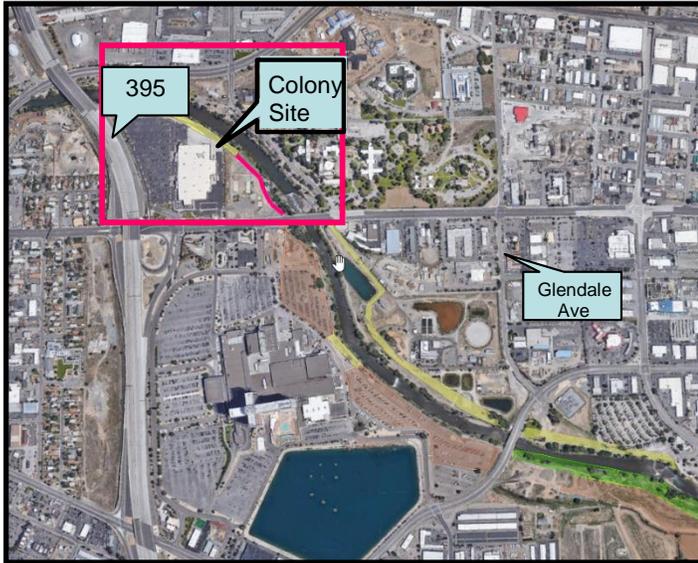




Truckee River Flood Management Authority

RENO- SPARKS INDIAN COLONY LEVEE AND FLOODWALL- FACT SHEET

Overview of the project:



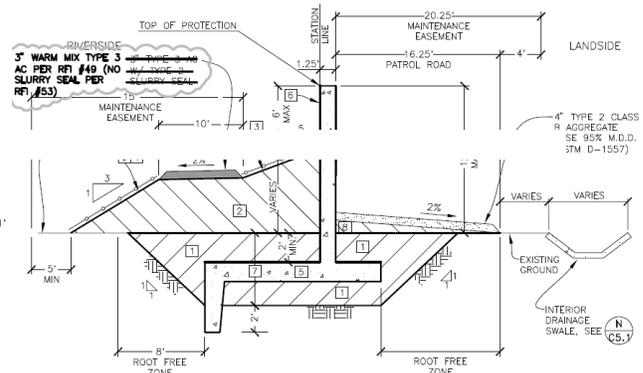
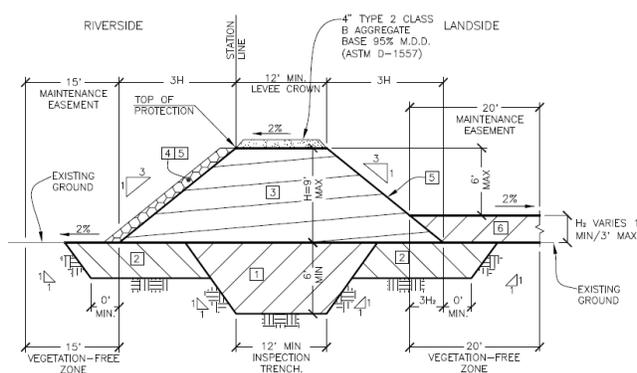
- The floodwall and levee system was built along the south bank of the Truckee River from US 395 to Glendale Avenue
- This project represents a unique public-private partnership between the Truckee River Flood Project partners (Reno, Sparks, and Washoe County), Reno-Sparks Indian Colony, Walmart, and the State of Nevada. This was the **first floodwall and levee (“flood damage reduction” feature)** constructed by TRFMA and is one of the key features of the Truckee Meadows Project.

Awards:

- 2010 Outstanding Achievement in Civil Engineering- Environmental- ASCE
- 2010 APWA Project of the Year – Environmental

Levee and Flood Wall Basics:

- There is a total of ~2300 linear feet (LF) of flood protection designed to withstand the 1997 flood which is larger than the calculated 100-year event.
- The Levee portion was approximately 1170 LF and Floodwall approximately 1070 LF.
- The Levee is typically 15 ft tall with 9 ft maximum height above existing grade and a 6 ft keyway below. On average the levee right a way width is about 66 ft wide and incorporates zones for access and maintenance.
- The Floodwall is typically about 21.5 ft tall with 12’ above existing ground. On average the total floodwall width with drainage swales is ~50-55 ft but can be as narrow as ~44 ft.
- Drawings of the floodwall and levee are given below to illustrate their complexity in design.



What are the benefits to this project?

- Manage flood waters and floodplains to protect life and property
- Improve access to the river for recreation
- Enhance redevelopment of area and achievement of Indian Colony goals
- Leverage private dollars to achieve public community goals
- Build early and avoid inflation in costs of materials and services
- Build early to protect from large floods that often happen every 10-20 years
- This project was built to the 1997 Flood of record / 117-year flood elevation with extra safety factors for Risk and Uncertainty so comparable 100 year designs benefited from knowledge and costs comparisons from this project

Are there any downsides or impacts?

- Anytime the bank is constrained it effects water levels on other banks and downstream. The overall Meadows Project increases flows downstream during the peak of the runoff event as well as raising local water levels on the river alongside where the project is built.

Interesting project highlights:

- Just prior to project construction the site was purchased by the Colony and cleaned up through the Nevada Brownfields Program in which over 7,000 tons of contaminated soil was removed.
- The goal was to redevelop area. The Colony leased most of the site to Walmart and Walmart would only build if the site was not in a flood zone so Walmart contributed to the construction costs of the Levee and Floodwall. The Colony uses tax revenue to support the Tribal Health Center.
- Soils were able to be reprocessed on site and blended as needed with some fine material from downstream to help minimize project impact/ footprint. Warm mix asphalt was utilized to lower energy consumption costs.
- The project features a meandering trail along the river side that can be used for recreation. (picture to the right)
- Pattern of wall selected to emulate local rock patterns.
- Anti-graffiti products were tested for the floodwall-architectural concrete with paint-overs were selected for being more economical.
- The visible height with back landscaping is roughly six feet and blends in with the riparian landscaping.
- Completed project “On Time” and “In Budget”



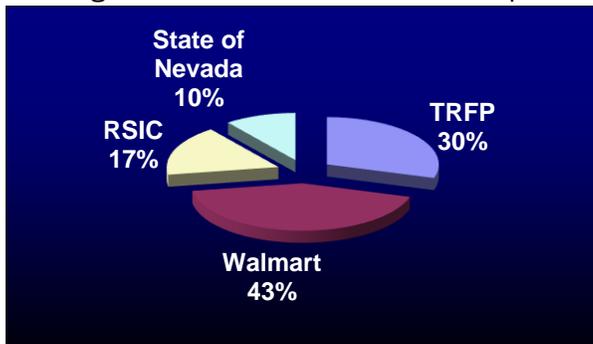
What was the timeline for this project and what is the current status?

- **April 2007**- Colony Project approved by the Flood Project Coordinating Committee.
- **December 2007**- Project approved by the Washoe County Commission and the Reno-Sparks Indian Colony tribal council.
- **January 7, 2008** - Agreement Signing between Walmart, Reno-Sparks Indian Colony and Washoe County (on behalf of Flood Project).
- **January 2009** - Floodwall and levee system construction began.
- **Fall 2009** - Floodwall and levee system completed.

- **Spring 2012-** Redesign of Corps Landscaping and retry of landscaping implementation
- Current Status- Monitoring vegetation/ landscaping, annual safety review inspections

Costs:

- The project cost \$5.8 million and was shared between the Flood Project (\$1.72 million), Walmart (\$2.28 million) and the Reno-Sparks Indian Colony (\$1.7 million in land value).
- Project planning and design was \$775,700. Final Construction Costs were \$2,986,612 to Campbell Construction. Utilities and Construction Management was \$437,688.
- All costs from TRFP/ TRFMA were paid from the 1/8 cent Infrastructure Sales Tax to manage flooding and build flood infrastructure to protect homes and businesses along the River.



- Average Costs: Levee= \$1,294/ lf and Floodwall= \$2,364 /lf
- Costs included 117 year over design as well as 100 year design. Design and CM costs were split 1/3rd levee and 2/3rd wall as the floodwall oversight is more expensive.
- Ongoing Maintenance costs are paid by the Colonies in lieu of being part of tax district and coordinated by TRFMA. TRFMA then pays Washoe County to perform maintenance as needed. So far beyond landscape contract that is subcontracted out, primary County response assistance has been with graffiti paint overs.