

Validation & Test Scenarios

Application: Foothills R&R Wealth Planner

Version: v35 (Hybrid API Edition)

The following test suites validate the application's logic, tax accuracy, security protocols, and survivor handling.

Test Suite 1: Architecture & API Integration (New v35)

- **Test 1.1: RBAC Login.** Verify that standard user emails render the planner without Admin controls, while Admin emails unlock the Google Sheet URL input and Shared Dashboard tools.
- **Test 1.2: Dashboard Syncing.** Confirm the API successfully reads structured data from a restricted Google Sheet and populates the dashboard inputs correctly.
- **Test 1.3: Shared Dashboards.** Verify that clicking "Save Shared Dashboard" writes the payload to the server, and "Load Shared Dashboard" successfully pulls the exact state back into the UI.

Test Suite 2: The Import Pipeline (New v35)

- **Test 2.1: Net Equity Calculation.** Enter \$500,000 for Property 2 and \$200,000 for Mortgage 1. Click Import. Verify the planner receives a single asset named "Property 2 Net" with a \$300,000 balance.
- **Test 2.2: Tax Type Mapping.** Verify that Dashboard HSA balances automatically map to the "Roth" tax classification upon import.

Test Suite 3: Baseline Logic & Stress Testing

- **Test 3.1: Standard Couple.** Verify assets grow, expenses inflate, and transition to retirement works.
- **Test 3.2: The "Broke" Scenario.** Confirm the portfolio hits \$0 and stays there (no negative balances).

Test Suite 4: Dynamic Tax & Withdrawal Strategy

- **Test 4.1: High Tax vs No Tax.** Verify ~8% state tax impact for CA, and 0% for TX. NC must show \$0 tax on Social Security income.
- **Test 4.2: Drawdown Sequencing (New).** Run a scenario with a \$50k deficit. Select "Preserve Taxable." Verify the system drains Cash first, then Tax-Deferred, leaving Taxable intact.

Test Suite 5: Event Logic

- **Test 5.1: Taxable Event.** Input: Event "Bonus", Age 65, Amount \$100,000, Tax 20%. Validation: Confirm \$20,000 is deducted immediately.
- **Test 5.2: Event Destinations (New).** Input \$100,000 proceeds with 0% tax, set to "Hold as Cash." Verify that a new asset line item ("Event Cash Reserve") appears in the ledger with a 2% return rate.

Test Suite 6: Survivor Logic

- **Test 6.1: The Widow Scenario.** Input: Spouse Plan Until Age = 75. Validation: At Age 76, check that the filing status switches to Single and the household income drops to the Survivor Benefit (Max of 2 SS checks).

Certification Statement

Version 35 has passed all updated Test Suites, confirming the accuracy of the multi-year tax engine, withdrawal sequencing, and survivor benefit calculations, as well as the integrity of the Hybrid API architecture.