



# Streamlining Survey in Reno's Spaghetti Bowl

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In the decades after World War II, residential subdivisions sprang up across the United States as developers responded to the nationwide housing shortage and population boom. Many of these subdivisions contained hundreds of modest homes, constructed using similar or even identical building forms to maximize efficiency and economy. Just as the original builders applied a streamlined model to design and construct these subdivisions, architectural historians can use a similar approach to document and evaluate them when transportation agencies need to consider project-related impacts to these subdivisions.

## Problem

Known locally as the Spaghetti Bowl, the US-395/I-80/I-580 interchange in Reno, Nevada, occupies a substantial footprint. Under Section 106 of the National Historic Preservation Act, agencies must determine whether any historically significant buildings, sites, or other resources may be affected by projects receiving federal funds.

In advance of a proposed Spaghetti Bowl improvement project, the Nevada Department of Transportation (DOT) needed to identify and evaluate several

post-World War II, or postwar, residential subdivisions in the area of potential effects (APE) and retained a contractor to prepare an assessment of these resources for Section 106 review. Overall, the APE contained more than 1,400 properties, including more than 650 single-family residences in several postwar subdivisions. A traditional approach would have required individual documentation and evaluation of each property for the National Register of Historic Places—a disproportionately high level of effort given the relative uniformity of architectural styles and historic contexts in the subdivisions.

## Solution

*National Cooperative Highway Research Program (NCHRP) Research Report 723: A Model for Identifying and Evaluating the Historic Significance of Post-World War II Housing*, provides a historical context and methodology to streamline the process of surveying and evaluating these postwar subdivisions. Published in 2012, the report includes a general context that establishes significant national trends and influences, offering an existing framework within which the project team could situate Reno-area regional and local trends.

Hiko Avenue streetscape. These houses are mirrored examples of a single form with slightly varied decorative details.



Photo: Mead & Hunt, Inc.

Three examples of the same form showing the variation of decorative detail.

Crucially, the methodology in NCHRP Research Report 723 also provides a framework that allows an entire subdivision to be treated as a single entity or district. Rather than surveying each home within a subdivision, historians can identify recurring styles and forms and develop a typology of homes in the

subdivision. The resulting survey report documents the distribution of the styles and forms with representative examples of each types and subtypes.

Using the national context as a starting point, the research team found that postwar residential development in Reno and the adjacent Sparks area mirrored national trends; between 1945 and 1960, local employment soared, incomes increased, and the number of housing units constructed nearly doubled. Residential construction skyrocketed in the mid-1950s and 1960s as developers built thousands of homes in planned subdivisions at the fringes of the city. Located at the northeastern edge of the Reno city limits, much of the Spaghetti Bowl APE lay in one of these formerly agricultural areas that, between 1955 and 1965, transformed into dense residential neighborhoods.

### Application

Project historians applied the guidance in NCHRP Research Report 723 in the documentation and evaluation of several postwar residential developments, including the Silverada subdivision. Located at the northwest quadrant of the US-395/I-80/I-580 interchange, the 50-acre Silverada subdivision is the largest cohesive residential development within the APE, containing 244 single-family homes constructed between 1960 and 1965. Its properties generally conform to one of seven general types, although the builder employed a range of modest decorative details and roof forms to create more variety.

A two-person survey team completed two windshield surveys of the subdivision, driving each street once to record general impressions and preparing simple sketches of each of the distinct house types to use as a guide (see Figure 1, page 39). On a second drive-through of the subdivision, surveyors recorded the type of each property, noting major alterations, and took representative photographs of the most intact examples of each type. This level of documentation was sufficient to establish the defining characteristics of the subdivision as a whole and served as the basis for inventory forms, maps, and National Register determinations of eligibility.

### Benefits

This tailor-made process for postwar residential subdivisions can help to ensure that significant examples are documented and understood, allowing members of the public to take greater pride in their communities. The application of the guidance provided by NCHRP Research Report 723 also resulted in substantial savings of time and effort for Nevada DOT. The project team was able to complete context research, field survey, and evaluation—and to



PHOTOS: MEAD & HUNT, INC.



compile project deliverables—in less than 20% of the time typically required to survey a comparable number of individual resources for similar projects. Nevada DOT estimates that the review of these deliverables took less than 50% of the time it would have taken to review individual and district evaluations for postwar residential subdivisions in a large urban transportation project.

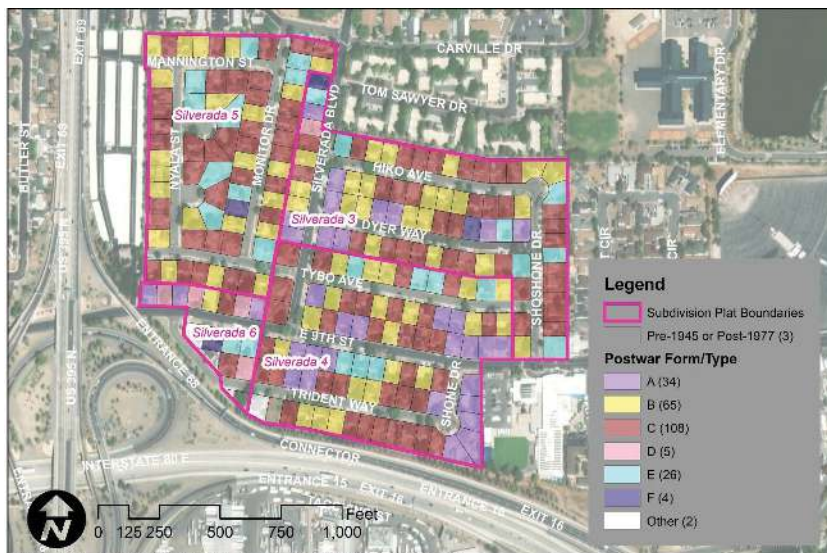
Other benefits of the streamlined approach included the following:

- ◆ Preparation of a historic context typically requires consideration of national, state, and local or regional trends to establish whether a historic resource is significant for purposes of National Register eligibility. By eliminating the need to research national trends and by allowing project historians to focus on local and regional trends, the national context provided by NCHRP Research Report 723 reduced the level of effort by half.

- ◆ Individual field survey of 244 properties can require up to a week of field work. Using the streamlined approach, the survey team was able to complete field work in less than one day.

- ◆ Preparation of individual inventory forms exponentially increases the level of effort required to produce report deliverables. Using the guidance in NCHRP Research Report 723, the project team documented the Silverada subdivision as a district on a single inventory form for submission to the Nevada State Historic Preservation Office (SHPO). Documentation included representative photographs of each architectural type or form, a table of addresses, and the preparation of maps showing the construction date and typological distribution (see Figure 2, above right).

- ◆ Preparation of a single district inventory form greatly reduces the amount of agency review time. Nevada DOT and SHPO staff were able to review a single form rather than hundreds of individual property forms. Nevada DOT noted that this approach



**FIGURE 2** Map of the Silverada subdivision, showing platted additions and properties color-coded by form and type.

offered “added benefit for the agency and SHPO review of the single inventory form in comparison to the number of individual forms and definitely decreased the amount of review.” After its review, SHPO described the project as “an excellent example of the balance necessary to ensure that critical infrastructure occurs, while taking historic properties into consideration.”

The project is ongoing and has progressed through the Section 106 review process with the determinations of eligibility and concurrence on eligibility from Nevada SHPO. Nevada DOT now is addressing effects and mitigation per 36 C.F.R. Part 800 (I).

### Contact

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### Reference

1. Protection of Historic Properties, 36 C.F.R. 800 (2000).

Suggestions for Research Pays Off topics are welcome. Contact Stephen Maher, Transportation Research Board, Keck 486, 500 Fifth Street, NW, Washington, DC 20001; 202-334-2955; [smaher@nas.edu](mailto:smaher@nas.edu).



**FIGURE 1** Survey team sketches of typology in the Silverada subdivision.