

1 Background

Hernando County (the County) has requested Stantec Consulting Services Inc. (Stantec) to provide a schedule, scope, and fee to perform a Road Safety Audit (RSA) on a section of Spring Hill Drive, County Road 574, from the intersection at the study area's eastern extent, Linden Drive (signalized), to the study area's western extent, Coronado Drive. Including approach roadways and transit stops/amenities at both extent intersections, the study area is approximately 1.1 miles in length. This corridor consists of a 45 mph arterial with four 11' travel lanes (two in each direction) and a 13' two-way left-turn lane (TWLTL) median providing separation between opposing through traffic, as well as a staging area for left-turn ingress/egress vehicles. This TWLTL transitions to left-turn only lanes approximately 250' in advance of both signalized intersections on the study area corridor. Roughly in the middle of the study area corridor, there is some horizontal and vertical curvature. There is full corridor sidewalk coverage on the north and south sides of the corridor with four pairs of transit stops at the following cross streets: Coronado Drive, Glenridge Drive (near Veteran Memorial Park), Marble Avenue, and Linden Drive.

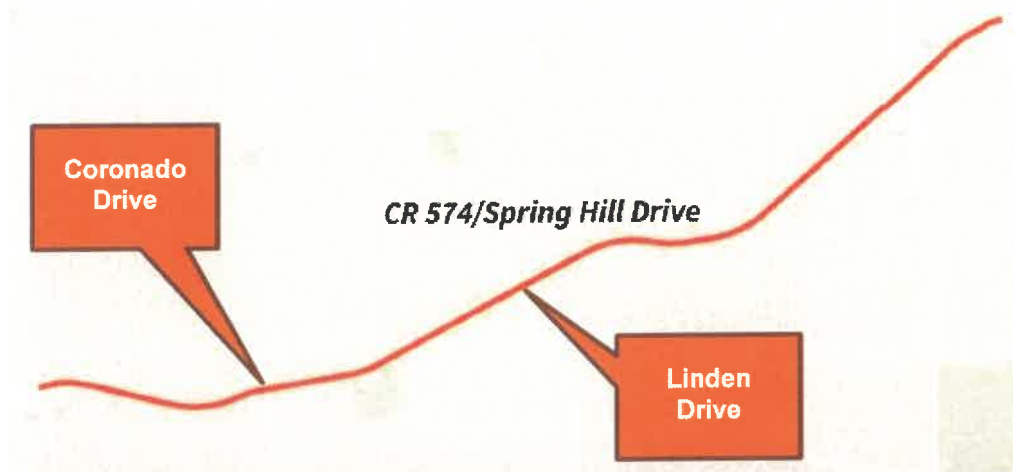
2 Scope of Work

2.1 Task 1 - Existing Conditions and Document Review

This task forms the background and basis for the RSA to be performed and will include the following: demographics, roadway classification, transit services, zoning, redevelopment districts/applications, land use, schools, parking, bike/ped accommodations, ADA provisions, traffic generators, speed limits, signal timing/phasing/coordination, intersection characteristics, horizontal/vertical/cross-section geometry, and any other County or MPO study information (such as information from **Figure 1**). All data collected in this task will be summarized within the first three chapters of the RSA Report, serving as the study area introduction.

Additionally, collision diagrams of the corridor will be prepared to assist in the review of crash patterns on the corridor using police report data available through SignalFour Analytics. Ten-year crash data history (2016 through 2025) will be collected not only for the extents of the corridor, but those being coded as occurring on side street approaches to the County corridor intersections, providing a complete picture of safety conditions. To provide the most accurate picture of crash causality, a detailed review of Fatal and Serious Injury (FSI) crash report narratives will be made to understand applicable crash countermeasures that could have helped to prevent severe crashes. In reviewing the crash reports, Stantec will confirm and/or correct the location of all geocoded crashes, correct all blank or incorrect fields in the electronic crash summary files, and pinpoint the actual location of non-geocoded crashes, as well as view the more nuanced contributing circumstances occurring at specific crash clusters.

Figure 1 – Spring Hill Drive, from Mariner Boulevard to Suncoast Parkway (from Hernando/Citrus MPO)



Total Travel Lanes	Context Classification	Roadway Jurisdiction
4	C3R – Suburban Residential	Hernando County
Average Annual Daily Traffic	Functional Classification	Posted Speed Limit
18,400 AADT	Minor Arterial – Urban	45 MPH
Transit Service	Total Bike/Ped Crashes	Affected Governments
Yes	18	Hernando County
Sidewalk	Bicycle Facility	Equity Area
Yes	No	Yes
Existing Conditions		
This segment is a four-lane, undivided roadway with a continuous center turn lane, except for approximately 1,000' of the western portion that is divided. Although there are sidewalks on both sides of the road, there is no bicycle facility.		

Collision diagrams will be prepared on 11" x 17" sheets at 60-scale to provide a visual representation of crash trends throughout the selected corridor. Charts and graphs will also compare crash types, surface condition, month of occurrence, contributing circumstances, lighting condition, and other crash data to average County roadway crash performance data from SignalFour Analytics to determine if any types of collisions are overrepresented, thereby helping the County to select more targeted crash countermeasures. Bold colors for crash severity and circling of crash clusters within our collision diagrams helps in the deciphering of crash analysis findings. Utilizing traffic volume data collected in this task, corridor crash rates will be calculated and compared to crash rates for similar cross-sections of roadway, as a means of quantifying the need for improvements.

2.1.1 Task 1 Deliverable

- Existing Conditions Report will be prepared to summarize aforementioned data collection and analysis efforts under Task 1 and 2.

2.2 Task 2 – Multimodal Data Collection

The Existing Condition Analysis effort will also consist of the following comprehensive traffic volume data collection effort, which will observe multimodal volumes during the entire week of an event at Veterans Memorial Park, such as the upcoming fourth annual County Vet Fest in November (or other event based on time of Notice to Proceed), to observe temporal shifts in volume both with and without traffic. An ATR (automatic traffic recorder, or "road tubes") will be placed on Spring Hill Road, east of the driveway with Veterans Memorial Park to record bi-directional volume, speed, and classification data over a seven (7) day period. Furthermore, manual turning movement counts (TMC) will be collected at the nine (9) intersections listed below during 7-9 AM, 4-6 PM, and event peak period to be determined. TMC volume classifications will include pedestrian/bicycle crossings, bikes-on-road, light trucks, and heavy trucks.

1. Linden Drive (signalized, at 28°28'01.2"N 82°30'40.6"W¹);
2. Marble Avenue;
3. Lema Drive;
4. Glenridge Drive;
5. Veterans Memorial Park main driveway;
6. Fentress Court;
7. Alameda Drive;
8. Stoneville Court; and,
9. Coronado Drive (signalized, at 28°27'41.7"N 82°31'35.5"W²).

2.2.1 Task 2 Deliverables (included in Existing Conditions Report)

- ATR and TMC traffic volume/speed data
- Volume diagrams

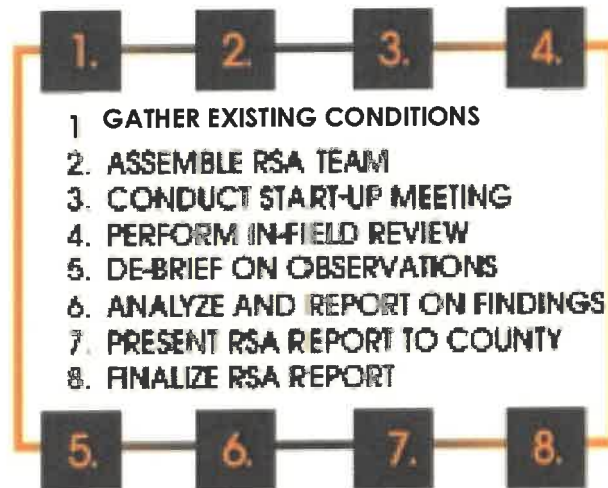
¹ Please note that other Spring Hill Road (CR 574) & Linden Drive intersections exist to the west.

² Please note that another Spring Hill Road (CR 574) & Coronado Drive intersection exists to the east.

2.3 Task 3 – RSA Kick-Off and Field Review

Stantec is cognizant of the fact that an RSA is a large multidisciplinary undertaking. As such, we will work with the County to develop a written Logistics Plan to designate the schedule of the RSA activity, from the length of time to traverse the corridor, any possible facility holding the debrief and presentation. **Figure 2** depicts the Federal Highway Administration's (FHWA) process for RSAs as it pertains to this study.

Figure 2 – FHWA's RSA Process as Adapted to This Study



Together, the County and Stantec will identify specific experts to join the multi-disciplinary team for the audit, including engineering, traffic operations, road design, bike/pedestrian planning, enforcement, public outreach, and EMS experts who will provide varied, fresh perspectives regarding the possible crash causes and the potential crash countermeasures. In preparation for the RSAs, Stantec will conduct pre-audit field visits to make observations, assess existing conditions, and flag locations or issues for discussion during the audits. The field visit team will observe corridor characteristics such as roadway condition, traffic control, lighting, ADA compliance, sidewalk condition, roadway maintenance issues, bike accommodations, transit stops and access, driveways/property access, motorist behavior, sightlines, and other factors or features of each corridor for further evaluation and discussion. The pre-audit field visits will be conducted on weekdays and may be aligned with times of day and/or sets of conditions when crashes have occurred according to historic crash data. Field visit teams will be limited to up to three Stantec staff. The teams will informally record observations and take photographs during each field visit to supplement the RSA Reports.

Stantec will prepare fact sheets and prompt list sheets, with accompanying clipboard backings to assist in the orientation of the study corridor and the taking of notes. The collaborative portion of the RSA will consist of the following three (3) elements:

1. **Pre-Audit Briefing:** Each audit will begin with a brief presentation where Stantec will distribute the project fact sheet and deliver the prepared PowerPoint presentation. The presentation can be held virtually a day or more before each audit or in-person (via flipbook) immediately before the audit.
2. **RSA:** Stantec will lead the RSA and will have a facilitator, note taker, and photographer to ensure that information and observations are captured for the duration of the in-field activity. Stantec will

supply participants with materials including pens, safety vests, and audit forms. The team will facilitate discussions focused on safety issues and potential corridor improvements covering a range of topics including but not limited to sidewalks, crosswalks, pedestrian and bicyclist accommodations, lighting, signal equipment, curb ramps, transit stops and access, driveways, parking, and drainage. Primary field visit objectives will be to identify safety and accessibility issues, barriers, gaps, and related concerns.

3. **Post-Audit Debrief:** After each audit, a debrief session will be conducted in-person at a pre-selected location near the corridor. This will provide an opportunity for RSA participants to discuss observations and ask questions. Stantec will take notes during the debrief for inclusion in the RSA Reports.

2.4 Task 4 – Draft and Final RSA Study Report

Stantec will prepare a draft report summarizing outcomes. Report content may be structured as follows:

1. Introduction
 - a. RSA definition and purpose
 - b. Project background
2. Existing Conditions
 - a. Roadway characteristics and study limits
 - b. Crash data
 - c. Traffic data
3. Audit Process
 - a. Date, time, meeting platform
 - b. List of attendees by meeting/date
4. Audit Findings
 - a. Issues
 - b. Recommendations
 - c. Concept plans
 - d. Potential demonstration project locations
 - e. Implementation matrix
 - f. Conclusion

Report recommendations will include FHWA Proven Safety Countermeasures and/or other recognized and applicable safety treatments intended to improve the safety and mobility of all roadway users. The report will include an implementation matrix of recommendations which will include:

- Estimated implementation timeframes (short/mid/long-term);
- Responsible agency or agencies;
- Order of magnitude implementation costs (low, medium, high defined in coordination with County staff);
- Available/applicable funding sources; and,
- Priority (low, medium, high defined in coordination with County staff).

The ATR speed data and FHWA's USLIMITS2³ software will be used to determine the appropriate speed limit for the study area and if any changes/traffic calming or multimodal connectivity is appropriate, especially in the vicinity of Veterans Memorial Park. Other crash countermeasures to be investigated by Stantec, as requested by the County, will include the following:

- Signing and markings, such as faded stop bars and crosswalks on side street approaches;
- Mid-block crossing treatments, as determined by crash history/volumes/speeds/etc.;
- Pedestrian, bicycle, and transit access needs, which may propose high-vis. treatments for crosswalks traversing Spring Hill Road; and,
- Changes in signal head placement and/or phasing, such as the permissive left-turn movements at the study area signals.

Once complete, the draft report will be submitted to the County and RSA participants for review and comment. Stantec will then incorporate comments from the review and prepare the final RSA report. It is anticipated that all study materials will be delivered electronically.

2.4.1 Task 4 Deliverables

- Draft RSA Study Report
- Final RSA Study Report
- Limited to two (2) rounds of revisions

³ <https://highways.dot.gov/safety/speed-management/uslimits2>

3 Schedule

As requested by the County, the RSA Study Report shall be completed within 60 days of Notice to Proceed (NTP) as follows:

- Existing Conditions Report – Three (3) weeks after NTP
- In-field review – Four (4) weeks after NTP
- Draft RSA Study Report – Six (6) weeks after NTP
- Final RSA Study Report – Eight (8) weeks after NTP