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Report of Findings

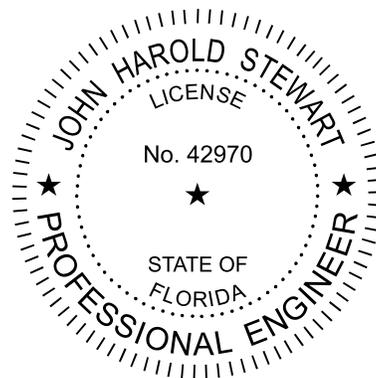
The Carallton Isles Condominiums
Milestone Structural Assessment

Rimkus Matter No: 100181085

Prepared For:
The Carallton Isles Condominium
419 Golden Isles Drive
Hallandale Beach, FL 33009

Attention:
Mr. Paul Melnik

John H. Stewart, P.E.
Engineering Number P.E. 42970
Principal Engineer



This item has been digitally signed and sealed by John H. Stewart, P.E., on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



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Section I

INTRODUCTION

Upon the request of The Carallton Isles Condominiums, Rimkus was retained to provide a milestone structural assessment for The Carallton Isles Condominium building located at 419 Golden Isles Drive in Hallandale Beach, Florida.

The primary purpose of the milestone structural assessment was to identify visually apparent deficiencies in the building structural system and building exterior and roofing systems as they relate to the structural performance of the building. The evaluation included a site visit to observe the building's structural systems, including the exterior building, the interior of a limited number of condominium units, and the roofing of the subject property.

This limited assessment and walk-through of the building was completed in general accordance with industry standards and the American Society of Civil Engineers 11 (ASCE-11), *Guideline for Structural Condition Assessment of Existing Buildings*. Our scope of services did not include a condition assessment of below-grade waterproofing or building code review.

We performed a visual, nondestructive assessment of the structural systems, exterior building envelope, and roofing as follows:

- **Structural System.** We observed the structure for visible signs of distress and have reported our findings. Our visual observations were based on those conditions that can be observed from the ground level, roof, and balconies of each building. We did not perform any destructive testing or uncover or expose any system members. We did not complete a seismic risk assessment of the property as this property is not in a location of known seismic activity.
- **Exterior Building System.** We visually observed the exterior wall systems and window and door systems for visible evidence of deficiencies and distress as they related to the structural performance of the building and have reported our findings. Our visual observations were based on those conditions that can be observed from

the ground level, roof, and balconies of the building. We did not perform any destructive testing or uncover or expose any system members.

- **Roofing System.** We visually evaluated the condition of accessible roof systems, accessories, and details. The scope of services under which the exterior building system and roofing system condition assessment report was completed was visual in nature and not intended to be destructive to the property to gain access to hidden conditions. We did not perform any destructive testing or uncover or expose any system members. We have documented the type and extent of visually apparent defects in the systems to perform the condition assessment.

The scope of services under which the milestone structural assessment report was completed includes only those items specifically indicated. The evaluation does not include any environmental services, such as (without limitation) sampling, testing, or evaluation of asbestos, lead-based paint, lead-in-water, indoor air quality, polychlorinated biphenyls, radon, mold, or any other potentially hazardous materials, air-borne toxins, or issues not outlined in the previous scope of services. In addition, the assessment does not include the identification of underground soils, identification, or the quantification of underground contaminants.

Section II

BUILDING DESCRIPTION

The Carrallton Isles Condominium building was a three-story structure (**Figure 1 and Photographs 1 through 3**). The front of the building will be referenced to face east (albeit northeast). The main entrance of the property was located through a parking lot on the east side of the property and was fronted by Golden Isles Drive. A seawall and pool deck were located along the canal on the west side of the property (**Photograph 4**). The building structure consisted of a concrete slabs-on-grade with a reinforced concrete-framed structure. The exterior cladding for the building primarily consisted of concrete masonry unit walls covered with a stucco parge coat. The roof was covered with a low-sloped, built-up rolling roofing membrane. There were generally 10 or 11 condominium units per floor. The building was built in the early 1960s.



Figure 1 – An aerial view of The Carrallton Isles Condominium property. The aerial view was taken by Google. Notations by Rimkus.

Section III

BUILDING SYSTEMS AND OBSERVATIONS

Rimkus performed visual observations of selected areas of the structural systems, exterior building envelope, and roofing on December 8, 2022. The inspections were made from the exterior ground level, the front and back walkways, the roof, and other common areas made available to us. Interiors of four units were included in our tour of the property, including access to the balconies of two. During our inspection, John H. Stewart, P.E., of Rimkus, was accompanied and assisted by Mr. Eugene Almazan, Building Manager for The Carallton Isles Condominium. He stated that he had been employed at the building within the past year. He was aware that they recently completed painting of the exterior of the building and replacement of the roof prior to his employment.

The following descriptors will be used throughout this report:

- **Performing:** These items are in “like new” condition, and there were no conditions observed to indicate poor performance.
- **Marginal:** These items were in acceptable condition, and there were limited, or no repairs warranted.
- **Deficient:** These items require attention in order for the inspected system to function as intended.
- **Unsafe:** These components need to be replaced, and there is likely no cost-effective repair or restoration process available.

Structural and Exterior Wall Systems

The description of the respective structural systems is based upon our observation of exposed portions of the building structure and observation of the interior of four units. In general, given the exposed nature of the majority of the structural elements, distress or problems with the structural performance of the building would be observed directly at the exposed elements or reflected as cracking or distress in the exterior envelope of the building.

The building was constructed with a cast-in-place reinforced concrete frame with elevated floors at levels two and three and the roof level. Lateral load resistance was provided by the reinforced concrete framing. Exterior balconies and walkways at the second- and third-floor levels cantilevered out from the main building framing and were constructed monolithically with the main building framing. Three exterior stair towers were located at the north and south wings and on the east side of the middle section of the “U”-shaped building (**Photographs 5 and 6**). An elevator was also located on the central stair/elevator tower on the east side of the building.

The structural system of the building and the exterior wall system were both found to be generally in a **Performing** condition with several **Marginal** items as noted and included the following observations:

- In general, minimal cracking or stress was observed at exposed exterior concrete elements. Specifically, no cracking was observed at exposed beam-column joints (**Photographs 7 and 8**).
- In general, no cracks were observed in the stucco finish on the exterior walls of the building (**Photographs 9 and 10**).
- In general, no cracks were observed at the exterior cantilevered balconies (**Photographs 11 and 12**).
- Several areas of localized cracking were observed at old concrete patches on concrete columns (**Photograph 13**).
- Several areas of peeling paint and rusted steel were observed in the decorative exterior walls of the stair/elevator tower (**Photograph 14**).
- Transverse cracks were observed in the front and rear exterior walkways (**Photograph 15**). The hairline-width cracks were generally located at 10- to 15-foot intervals and went through the traffic coating applied to the long, linear, cantilevered walkway slabs.

- Isolated locations of minor spalling were observed in the concrete soffit under the transverse cracks in the front and rear cantilevered walkways (**Photograph 16**). Evidence of prior concrete patching was observed at these locations.
- The interiors of four random units were observed, units 202, 209, 303, and 307. No cracking or distress of significance was observed in the exposed concrete framing and wall finishes inside these units (**Photographs 17 and 18**).
- Minimal settlement and distress were observed at at-grade elements, such as slabs-on-grade, pool deck, and sidewalks near the building (**Photograph 19**).
- Isolated areas of settlement and distress were observed at several locations, generally near downspout discharge locations (**Photograph 20**).
- No settlement or lateral movement of significance was observed at the pool shell or the sea wall (**Photographs 21 and 22**).

Roofing

The roof of the buildings was a low-sloped, built-up roof (**Photographs 23 and 24**). Rolled roofing strips approximately 3 feet wide were observed oriented in the long direction of the building. Stormwater was conveyed to the exterior of the roof into an exterior gutter system with interior roof drains located near the edges of the roof (**Photographs 25 and 26**).

The roofing of The Carallton Isles Condominium apartment buildings generally appeared to be in **Performing** condition. The following **Marginal** items were noted:

- The metal roof edge flashing at several gutter corners was bent and was not laying flush with the sidewall of the gutter (**Photographs 27 and 28**).

Section IV

RECOMMENDATIONS

The following are repair and maintenance items that are recommended for structural and exterior building systems and the roof over the next 10 years. Year 1 items are identified for repair due to observed damage, displacement, and/or items that have reached the end of their useful life.

Structural and Exterior Building Systems

- Year 1: Rework the cracked concrete patches on several columns and the minor concrete spalls on the soffit of the front and back exterior walkways.
- Year 1: Clean and repaint the peeling paint and corroded metal elements at the central stair/elevator tower exterior walls.

Years 1 through 10: Seal cracks in traffic coating on the front and back exterior balconies.

Roofing

- Year 1: Repair the bent roof flashing at gutter corners.

Section V

OPINIONS OF PROBABLE COST

Our Opinions of Probable Cost for structural and exterior building system and roofing related to our recommendations, seen above, can be found in the cost tables located in the Opinions of Costs to Remedy Physical Deficiencies Table. The Opinion of Probable Cost over the immediate and 10-year period for the structural and building system and roofing is approximately \$11,400.

This report and the attached expenditure forecast generally identify the expected useful life (EUL) and the remaining useful life (RUL) of observed systems and components. EUL is projected based upon industry-standard guidelines and our experience with similar systems. RUL is projected based upon our assessment of age, condition, and maintenance/repair history.

The timing of the projected expenditures and their associated costs represent our opinion considering the aforementioned factors. Alternative methods of managing the existing equipment or systems may be feasible over the 10-year study period. However, these alternative methods will depend upon executed management practices, financing requirements, and the ability of the engineering/maintenance staff to perform some of the repairs in-house. Alternative scenarios that have not been presented to Rimkus have not been considered within this report.

This report has been presented based upon our on-site observations, the information provided to us, discussions with building management, our review of available documentation, and our experience with similar systems.

If any information becomes available that is not consistent with the observations or conclusions expressed within this report, we request that this information be immediately forwarded to us.

The evaluation of existing structures requires that certain assumptions be made regarding existing conditions. This evaluation was based upon our visual, nondestructive evaluation of accessible conditions of the subject property. Furthermore, this evaluation was limited in time on-site, fees, and scope and was not based upon a comprehensive engineering evaluation. As such, our report is not intended to represent a complete review of all

systems or system components or a check or validation of design professionals' computations. Therefore, our evaluation and this report do not represent, warranty, or guarantee any system or system component or the future performance of any site improvement.

Section VI

BASIS OF REPORT

1. Survey by M.E. Berry & Associates dated February 1969.
2. Design Engineering drawings prepared by Buchannan P.E. Consulting, Inc, undated.
3. Architectural/Structural drawing prepared by an unknown architectural firm.
4. Review photographs and field notes taken by John H. Stewart, P.E., during the site visit on December 8, 2022.

Section VII

ATTACHMENTS

A. Photographs

B. Opinions of Probable Cost

C. Curriculum Vitae

Section V
ATTACHMENT A

Photographs

Photographs taken during our inspection, including photographs that were not included in this report, were retained in our files and are available to you upon request.

Photograph 1
Front (east) elevation of building.



Photograph 2
Back (west) elevation of building.



Photograph 3
North elevation of building.



Photograph 4
Seawall on west side of property.



Photograph 5

Typical view of stair tower at north and south wings.



Photograph 6

View of central stair/elevator tower on east side of building.



Photograph 7

In general, no cracks were observed at exposed beam-column joints.



Photograph 8

In general, no cracks were observed at exposed beam-column joints.



Photograph 9

In general, no cracks were observed in the exterior wall finishes.



Photograph 10

In general, no cracks were observed in the exterior wall finishes.



Photograph 11

In general, no cracks were observed at the cantilevered balconies.



Photograph 12

In general, no cracks were observed at the cantilevered balconies.



Photograph 13

Minor cracks observed at an old patch on a concrete column.



Photograph 14

Paint peeling at a stair tower beam.



Photograph 15

Overview of typical transverse cracks in an exterior walkway.



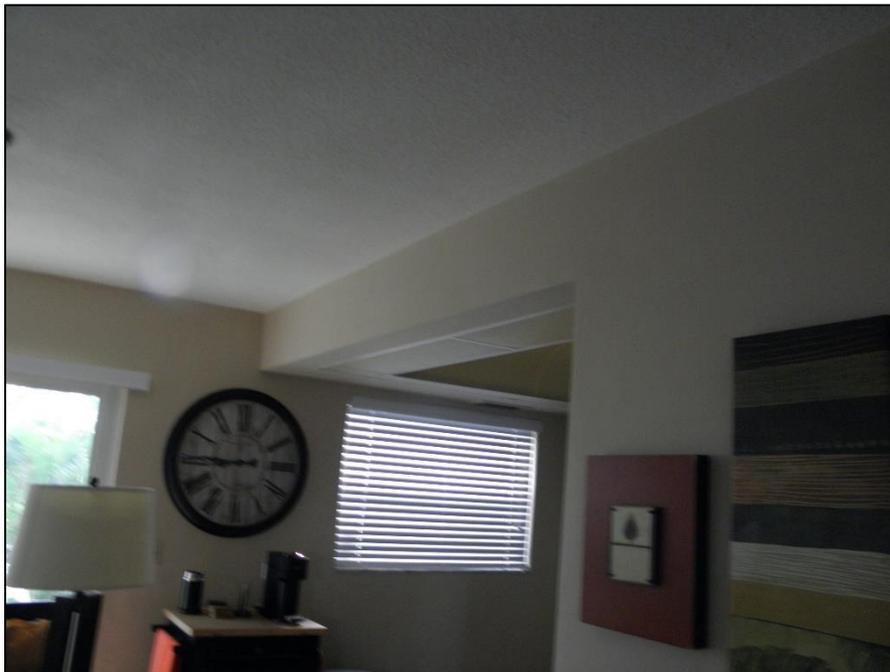
Photograph 16

Overview of minor spalls in slab soffit under typical transverse cracks in an exterior walkway.



Photograph 17

No cracks were observed inside the units observed.



Photograph 18

No cracks were observed inside the units observed.



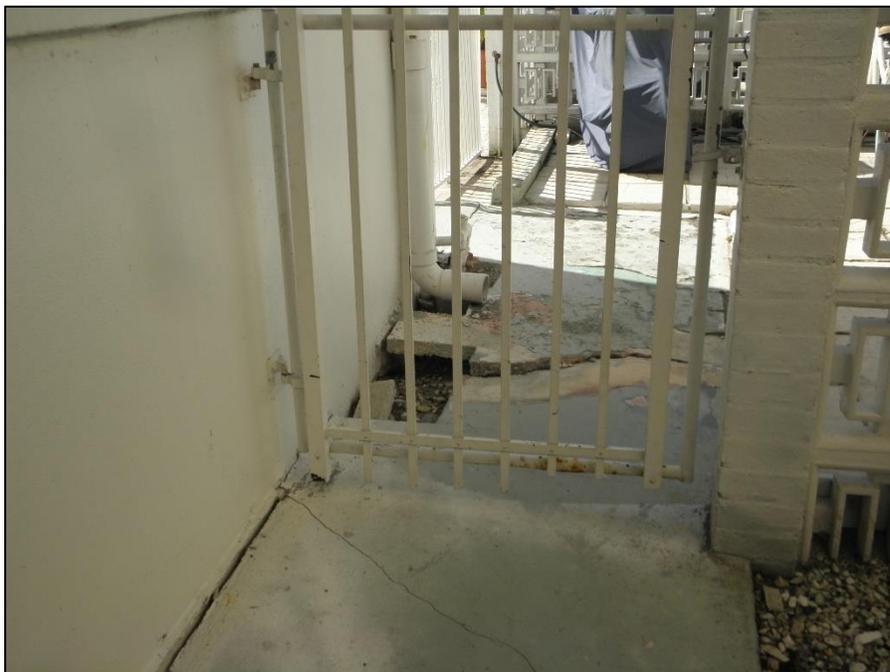
Photograph 19

Minimal settlement and distress were observed at at-grade slabs.



Photograph 20

Minor settlement and distress was observed at several isolated exterior locations.



Photograph 21

No settlement or distress was observed in the pool shell.



Photograph 22

No settlement or distress was observed at the seawall.



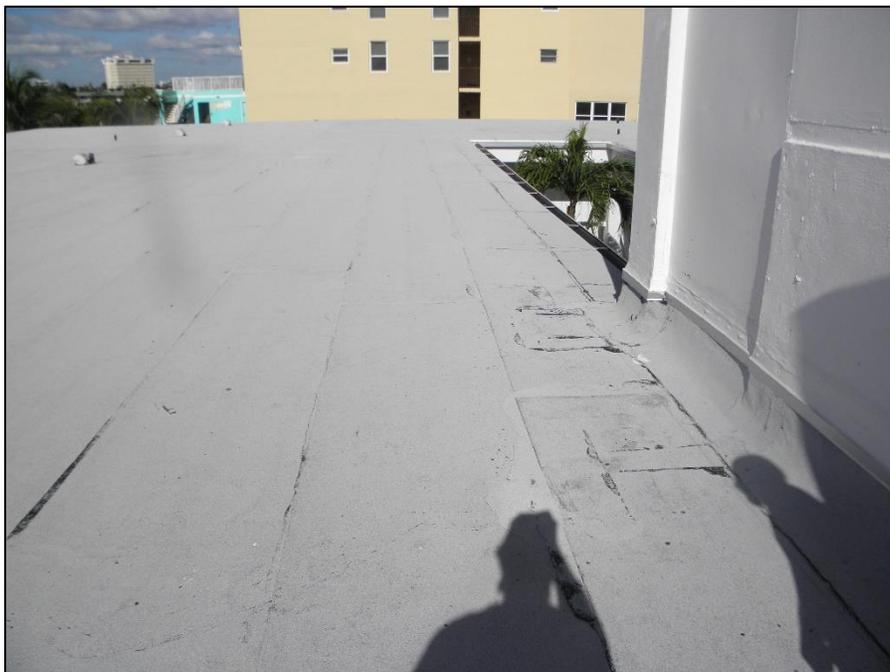
Photograph 23

The roof was in good condition.



Photograph 24

The roof was in good condition.



Photograph 25

Typical view exterior gutter with adjacent interior roof drain.



Photograph 26

Typical view exterior gutter.



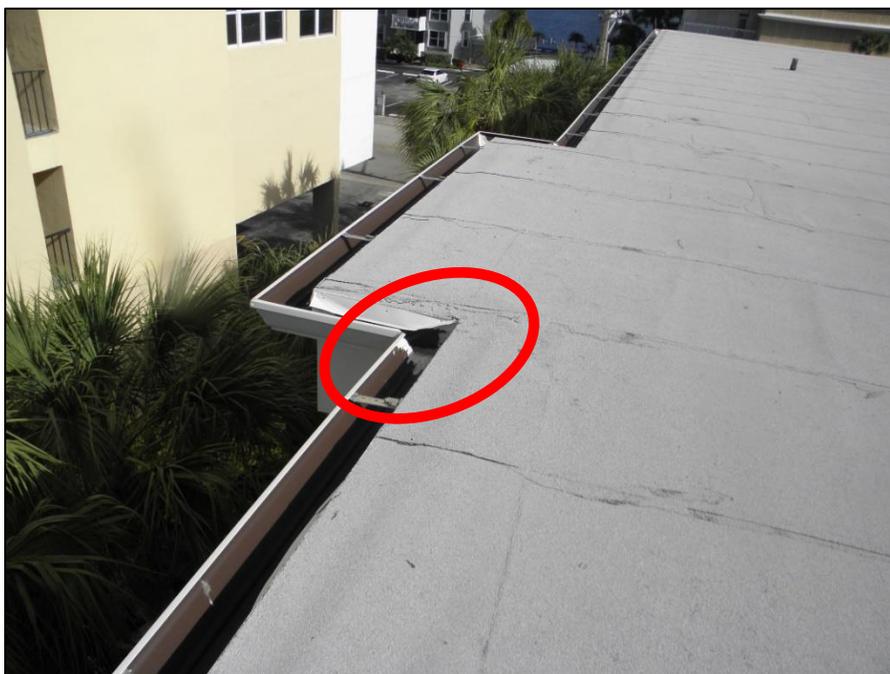
Photograph 27

The roof edge flashing was bent at gutter corners.



Photograph 28

The roof edge flashing was bent at gutter corners.



Section V
ATTACHMENT B

Opinions of Probable Costs



OPINIONS OF COSTS TO REMEDY PHYSICAL DEFICIENCIES

The Carallton Isles Condominium
 419 Golded Isles Drive, Hallandale Beach, FL 33009
 Consultants Project No. #100181085

2-15-2023

STRUCTURE

Item No.	Recommendation	EUL	Age	RUL	Quantity	Unit	Unit Cost	Immediate (0 - 6 Months)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10-Year Totals	Other
1	Repair the cracked concrete patches on several columns and the minor concrete spalls on the soffit of the front and back exterior walkways.	100	60	40	10	EA	\$500		\$5,000											
2	Clean and repaint the peeling paint and corroded metal elements at the central stair/elevator tower exterior walls.	8	Unknown	0	1,680	SF	\$3.00		\$5,040											
Subtotal								\$0	\$10,040	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	

ROOFING

Item No.	Recommendation	EUL	Age	RUL	Quantity	Unit	Unit Cost	Immediate (0 - 6 Months)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10-Year Totals	Other	
3	Repair the bent roof flashing at gutter corners.	20	Unkown	NA	28	EA	\$50		\$1,400										\$1,400		
Subtotal								\$0	\$1,400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,400	
TOTALS:								\$0	\$11,440	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,400	
OVERALL TOTAL (IMMEDIATE AND 10-YEAR):																				\$11,440	

IMMEDIATE COSTS

Immediate costs are intended to be completed as soon as possible and no later than six months from the date of the PCA Report. These costs include potentially unsafe conditions, building or fire code violations, or physical deficiencies that if left uncorrected would be expected to result in or contribute to critical element or system failure or a significant escalation of cost.

10-YEAR COSTS

The 10-year costs are spread over a 10-year evaluation period. These costs include physical deficiencies that may not warrant immediate attention, repairs/replacements that should be undertaken on a priority basis, and replacements based on Remaining Useful Life (RUL).

OTHER COSTS

These cost items include recommendations for aesthetic improvements, energy efficiencies, or operational upgrades. These cost items do not materially affect the property over the 10-year evaluation period if the cost recommendation is not completed.

Our opinions of probable cost are related to the recommendations noted in the Rimkus report for the predominately residential use buildings . The budget estimates are calculated in today's dollars (escalation and inflation costs have not been calculated). Costs are preliminary in nature and based on visual observations from representative areas, counting units from photographs, unit cost data, available construction drawings for the property, and experience by Rimkus for similar projects. The probable costs are not intended to be a comprehensive assessment of costs. The actual cost may vary, based on economic factors and unforeseen conditions, such as the extent of damage related to suspect moisture intrusion. The purpose of this probable cost is to establish an order of magnitude for budgetary consideration.

Section V
ATTACHMENT C

Curriculum Vitae



John H. Stewart, P.E.

Principal Structural Engineer
Structural Engineering Services
AEC Services Group

1752 West 1180 South, Suite 8
Woods Cross, UT 84087



(404) 545-0003

jestewart@rimkus.com

Background

Mr. John Stewart has over 35 years of consulting engineering experience and is a registered professional engineer in fifteen states. He earned his B.S. and M.S. degrees in Civil/Structural Engineering at the University of Minnesota and the University of Colorado. He also has an M.B.A. in International Finance from Georgia State University.

Mr. Stewart's extensive professional structural engineering experience includes design, analysis, and construction administration of projects including nuclear power plants, airport facilities, mass transit stations, parking deck structures, pulp and paper mills, highway bridges, light industrial facilities, light commercial buildings, residential structures, retaining walls, and drainage structures. He has acted as the Engineer of Record for a diverse number of structural engineering projects ranging from green field design to investigation, evaluation, renovation, and repair of damaged existing structural systems.

Mr. Stewart has also testified in court as an expert experienced in investigating and analyzing failures in civil and structural engineering disciplines related to residential, commercial, municipal, and industrial buildings. His experience includes investigating and repair of foundation failures, structural deficiencies, drainage problems, roof damage, and storm damage, and verifying construction compliance with applicable building codes, premise liability claims, slip and falls, and contract specifications.

Representative Design Engagements

• Multi-Family

- Apartment Building – Repair of an 8-story masonry wall and precast concrete core slab apartment building that was damaged due to severe settlement problems. Project involved cutting two new expansion joints through all eight floors and reinforcing the masonry bearing walls with epoxy-bonded steel straps to take the additional stresses from cutting of the expansion joints. Also provided temporary shoring design such that the majority of apartment building was kept operational during the two-year construction period. Estimated construction cost was \$3.0M.
- 12-Unit Apartment Building – DeKalb County, GA. Fire-damaged repairs of 7,500-sq-ft, two-story, wood-framed structure included half of the roof structure and half of the second-floor units. In addition, two of the units were reconfigured to be handicap accessible.

• Transportation

- Aerial Mass Transit Station and Parking Deck – Atlanta, GA., \$25M elevated aerial structures included pre-cast concrete members and post-tensioned concrete members. The three-level parking deck was a combination of pre-cast and cast-in-place concrete construction.
- Underground Mass Transit Station and Associated Subway Tunnel – Sandy Springs, GA. \$30M project that included cut and cover methods used to construct the reinforced concrete structures with rock-bolts added to resist overturning and uplift loads in the basemat.
- Aerial Bridge Bearing Pad Retrofit Project– Atlanta, GA. For mass transit authority, active bridge structures were lifted and the elastomeric bearing pads were changed out while keeping trains in operation.
- Long-Span Steel Pipe Bridges for a Paper Mill – Longview, OR. Design of 100-ft long by 12-ft wide by 10-ft high steel-tubed trusses that supported numerous large and small pipes over active roadways.

• Municipal

- \$2M Waste Water Treatment Plant – South Blue River, CO. Designed pre-cast concrete roof members and load-bearing masonry walls for a 10-foot deep snow load.

• Aviation

- Concourse A Three-Story Expansion, Hartsfield International Airport – Atlanta, GA. \$30M three-story steel structure was located directly on top of the existing underground tunnel. The underground tunnel had to be reinforced with post-tensioned beams to support the additional loads of the new structure.
- Underground Vehicle Access Tunnel, Hartsfield International Airport – Atlanta, GA. The top slab of the 200-ft long, \$5M tunnel was subjected to a 1-million pound aircraft load from a 747 aircraft traversing an active taxiway.

• Commercial

- Two-Story Precast Concrete Parking Deck – Doraville, GA. Design and construction defects of two-story parking deck required extensive repairs to spandrel beams and replacement of all bearing pads under double-tee floor slabs.
- Grocery Store – Oakland, CA. Designed masonry bearing wall and wood-framed roof for high earthquake forces of 22,500-sq-ft structure.

• Industrial

- Chrome Plating Facility – Fort Collins, CO. Designed open web steel bar joists and metal decking subject to high corrosive elements on a 25,000-sq-ft building.
- Steel Black Liquor Boiler Plant – Natchez, MS. Severe corrosion had degraded numerous steel columns and beams of six-story plant that required temporary shoring of the members and replacement or strengthening of the members.
- Elevated Conveyor System for Pulp Mill – Ketchikan, AK. Design of long-span steel trusses and towers of 500-ft system to handle heavy earthquake loadings and extreme temperature changes.
- Pre-engineered Metal Industrial Building Rebuild – Houston, TX. Interior of fire damaged 10,000-sq-ft building included a 400-sq-ft office area and a 2,000-sq-ft hazardous materials storage area with 3-hour fire-rated walls and doors. Existing undamaged foundations were re-used in the final rebuild. Estimated construction cost was \$1.0M.

- **Residential**

- High-end, Two-story Residence – Lyons, CO. Damaged by flooding, rebuilt 3,000-sq-ft, residence was designed for new FEMA flood-resistant regulations and ASCE flood loads. Residence was located within the 100-year flood zone and the relatively high river flow velocity of 9.0 feet per second generated large debris impact forces on the foundations.

Professional Experience

- **Rimkus**

2000 – Present

- Principal Structural Engineer (2017-Present)

Prepare repair and remediation drawings for building damages for permit submittal to local building authorities. Building types include residential, commercial, municipal, and industrial buildings. Investigate and design repair for foundation failures, structural deficiencies and failures, drainage problems, roof damage, storm damage, verify construction compliance with applicable building codes, and contract specifications. Prepare and evaluate schematic repair alternative and generate final design repair documents.

- National Design Group Manager (2000-2017)

Investigate and analyze failures in civil/structural engineering disciplines related to residential, commercial, municipal, and industrial buildings. Prepare repair and remediation drawings for building damages for permit submittal to local building authorities. Investigate foundation failures, structural deficiencies and failures, drainage problems, roof damage, and storm damage; and verify construction compliance with applicable building codes, premise liability claims, slip and falls, and contract specifications. Prepare and evaluate schematic repair alternative and generate final design repair documents.

- **Parsons Brinkerhoff Tudor-Turner Associates**

1992 – 2000

- Chief Structural Engineer/Senior Project Engineer

Performed personnel management, project management, manpower forecasts, and structural design of new mass transit facilities. Investigated, evaluated, and implemented renovation projects for mass transit facilities including damaged steel and concrete aerial structures and deteriorating precast concrete parking decks.

- **Stewart Environmental Consultants, Inc.**

1985 – 1988

- Civil-Structural Engineer

Prepared contract documents and acted as owner's representative during construction for a chrome plating facility, a wastewater pump station, and an underground diesel storage tank removal.

- **Bechtel Power Corp.**

1981 – 1985

- Structural Designer

Performed structural design for nuclear power plant facility and pipe stress analysis for nuclear waste verification plant.

Education and Certifications

- **Civil Engineering, B.S.:** University of Minnesota (1979)
- **Civil Engineering, M.S.:** University of Colorado (1981)
- **International Finance, M.B.A.:** Georgia State University (1993)

- **Registered Professional Engineer:** Alabama (28117), Arizona (73213), Colorado (23681), Florida (42970), Georgia (17831), Kansas (25394), Kentucky (29705), Louisiana (45090), New Jersey (G54163), New York (093088), North Carolina (044347), North Dakota (PE28195), Maryland (57316), Massachusetts (57245), Minnesota (54993), Mississippi (31482), South Carolina (33790), Tennessee (119468), Texas (1289503), Utah (10474830-220), Virginia (0402063450), and Wyoming (16353)
- **Memberships:** American Society of Civil Engineers (ASCE)

Publications

- **“Fire Damage Evaluation for Residential and Commercial Buildings.”**, James W. Jordan, SE, PE, M.ASCE, Marc A. Sokol, PE, and John H. Stewart, PE, M.ASCE, 2012.
- **“Evaluation and Repair of Fire Damaged Metal Plate Connected Wood Roof Trusses.”** John H. Stewart, PE, M.ASCE, 2018.