



Education
Bachelor of Science
Civil Engineering
Carnegie Mellon University

Master of Science Civil Engineering (Structures) University of Texas at Arlington

# **Professional Registrations**

Professional Engineer Pennsylvania, 1993

Professional Engineer Texas, 1997

Professional Engineer North Carolina, 2004

Professional Engineer South Carolina, 2005

Professional Engineer Mississippi, 2006

Professional Engineer Tennessee, 2007

Professional Engineer Florida, 2007

Professional Engineer Minnesota, 2010

# Domenic A. Coletti, PE

Principal Professional Associate

# **Professional Experience**

Domenic Coletti is a structural engineer with over 30 years of experience, including the design of highway, railroad, pedestrian, and automated people mover bridges, as well as simple and complex bridge rating analysis, curved steel girder research, retaining wall design, and the design of culverts, cut-and-cover reinforced concrete tunnels, and depressed roadway structures. He has served in Project Engineer, Lead Engineer, Senior Technical Advisor, and Project Manager roles for both traditional design/bid/build and design/build projects. He also has experience in the design of lightweight structures for aerospace applications.

Mr. Coletti is an expert in complex steel girder bridge design. He has authored and presented numerous papers on bridge design and has been a member or chair of technical committees of several national professional organizations.

The following project represents Mr. Coletti's experience:

# **HDR Project Experience**

Streamlined Design of Routine Steel I-Girder Bridges (for AISC) Project involves the review of the provisions of the AASHTO LRFD Bridge Design Specifications and identification of which are applicable or not applicable to the design of "routine steel I-girder bridges" (generally categorized as straight bridges with little or no skew and reasonable span lengths). The project will produce a guideline document listing these "Applicable/Not Applicable" determinations, along with explanatory commentary and practical suggestions and simplifying assumptions appropriate for applying the applicable provisions.

U-2579AB, Winston-Salem Beltway, Forsyth County, NC (for NCDOT) Project involves design of new location freeway. HDR is responsible for the design of four bridges and six reinforced concrete box culverts. Structure 3 is a two-span precast, prestressed girder grade separation bridge. Structures 4, 5, and 6 are multiple-span continuous curved steel plate girder flyover ramp bridges, with total lengths of 1883', 1219', and 1717' respectively. The bridges are configured as a four-level interchange. The flyover ramp bridges will feature single column hammerhead piers over 90' tall, in some cases with post-tensioned integral bent caps, and span lengths up to 280'. HDR previously completed the roadway, drainage, and conceptual MOT design under a separate contract. Mr. Coletti is the Project Manager and Engineer of Record for the structure design project.

**US 421 Emergency Response Services, New Hanover County, NC (for NCDOT Division 3)** HDR provided structural design of dual, eight-span, 560' long precast, prestressed girder bridges and associated approach roadway design, hydraulic analysis, drainage design, and geotechnical design, on a highly-accelerated basis in response to a 400'+ washout of US 421 north of Wilmington, NC during Hurricane Florence. 90% complete plans for the right lanes bridge were provided 24 days after NCDOT's initial call for assistance, and 95% complete plans for both bridges and the approach roadway were provided 9 days later. Mr. Coletti is the Project Manager for this effort, supervising all disciplines.

FHWA IDIQ Task Order 693JJ318F000317, Intersecting Welds in Steel Bridges (for FHWA Office of Bridges and Structures) Under an Indefinite Delivery Indefinite Quantity (IDIQ) contract, HDR was assigned a Task Order associated with identifying and clarifying misconceptions about the use of intersecting welds in steel bridges as related to constraint-induced fracture and other issues. The scope of work included conducting a Literature Review and Survey of Current Research and Practices, facilitating a "Consensus Meeting" of industry experts, and writing a report which will include guidance for designers, fabricators, and inspectors. Mr. Coletti is the Task Order Manager and Principal Investigator.

**Figure "8" Island Bridge Studies, New Hanover County, NC (for Figure "8" Island Homeowners Association)** HDR performed a conceptual bridge type study for the replacement of a privately-owned swing-span truss bridge with precast, prestressed concrete girder approach spans. The study included development of a conceptual roadway alignment and comparison of various concepts for the replacement bridge. Mr. Coletti was the Project Manager and Engineer of Record for the study report.

National Cooperative Highway Research Program (NCHRP) Research Project 20-07, Task 355, Guidelines for Reliable Fit-Up of Steel Girder Bridges (for NCHRP) HDR was a subconsultant to the Georgia Institute of Technology for a research project focused on evaluation of steel I-girder fit-up, including control of constructed geometry, estimation of fit-up forces, and evaluation of various cross-frame detailing methods (No Load Fit, Steel Dead Load Fit, Total Dead Load Fit). HDR was directly responsible for conducting a Survey of Current Industry Practice, and for preparing all drawings of the bridges studied during the analytical modeling phase of the project. HDR also participated in all team technical meetings to provide input from the perspective of design and erection engineers, helped develop the findings and recommendations, and conducted detailed reviews of all research reports. Mr. Coletti was a Senior Technical Advisor involved in review of the entire project including the final report.

I-4 Ultimate Reconstruction, Orlando, FL (with HDR-Jacobs Design Joint Venture and Skanska-Granite-Lane Construction Joint Venture for FDOT District 5) Project involves reconstruction of 20+ miles of I-4 through downtown Orlando, FL and multiple Attractions areas (such as Universal Studios Orlando Theme Park). Overall project involves design of approximately 150 bridges, nearly 90 of which designed by HDR. Mr. Coletti was a Bridge Design Squad Leader and EOR for the Bridge Concept Reports and Final Design of six complex curved and/or skewed steel plate girder bridges with span lengths up to 230' and skews as sharp as 60 deg and for three straight slightly skewed plate girder bridges with span lengths over 200'. He also led the preparation of a preliminary Bridge Concept Report for a 1710' long, 8-span steel box girder bridge with one variable width unit and one curved unit. Mr. Coletti was also responsible for all interdisciplinary coordination associated with 9 bridges on the project, as well as being involved in the development of several design criteria documents, design methodologies, and design tools.

**IH-35E Managed Lanes Phase 1, Dallas, TX (for TxDOT Dallas District)** Project involved reconstruction of IH-35E in Dallas, TX, including improvement of existing interstate highway lanes, construction of continuous frontage roads, and construction of new, reversible managed toll lanes along a 28 mile stretch of IH-35E from IH-635 north to US 380. Phase 1 had a construction value of \$1B. Mr. Coletti performed Independent Design Calculations for Bridge 22/23 (IH-35E mainline), Span 10, a 240' single span steel plate girder superstructure with a 60 deg skew and a width of 132', built with phased

construction, and for Bridge 36.1 (IH-35E frontage road), Span 7, a 150' single span steel plate girder superstructure with a 50 deg skew and a width of 74'.

**PennDOT DM-4 Revisions (for PennDOT)** Project involved revising and updating PennDOT's Design Manual DM-4 and associated BD standard drawings to incorporate findings of NCHRP Research Project 12-79 (NCHRP Report 725). Updates included providing guidance on when 2D vs. 3D analysis is appropriate, providing explanation of "enhanced" 2D analysis (incorporating Jeq to model warping stiffness of I-girders, and incorporating Timoshenko shear-deformable elements for cross-frame modeling), updating BD-619M which outlines cross-frame design procedures, providing guidance on skewed bridge design and analysis, and providing guidance on cross-frame detailing ("fit condition"). Mr. Coletti was a Senior Technical Advisor, performing QC on all tasks, and personally updating BD-619M.

**U-2519CB, Fayetteville Outer Loop, Cumberland County, NC (for NCDOT)** Project involved design of new location freeway. HDR was responsible for the design of four bridges. Structures 4L and 4R were five-span straight steel plate girder bridges with variable skew. Structure 5 was a six-span straight steel plate girder bridge with variable skew. Structure 6 was a 1600' long, ten-span curved steel plate girder bridge with integral post-tensioned concrete bent caps and span lengths up to 196'. Mr. Coletti was the Project Manager and engineer of record for the project, and personally performed or checked much of the superstructure design, and the integral bent cap hinge design, for the curved girder flyover, and personally checked some of the superstructure design for the straight girder bridges, in addition to managing the efforts of as many as 15 engineers in up to 6 different offices working to complete this project on a short six-month schedule..

**U-0071, Durham East End Connector, Durham County, NC (for NCDOT)** Project involved design of new location freeway. HDR was responsible for the design of two bridges. Structure 10 was a P/C P/S girder "scissors" bridge (extra wide rectangular bridge to carry severely skewed roadway alignment above). Structure 11 was a 916' long curved steel plate girder flyover bridge on a 643' radius with span lengths up to 175'. Mr. Coletti was the bridge design lead and engineer of record for Structure 11 and personally performed or checked much of the superstructure design and some of the substructure design.

B-2500, Replacement of the Herbert C. Bonner Bridge on NC 12 over the Oregon Inlet, Dare County, NC (with PCL Civil Constructors for NCDOT) Project encompassed design and construction (Design-Build) of a replacement for the 2.3 mile long Herbert C. Bonner Bridge on NC 12 over the Oregon Inlet. The replacement bridge was a 2.8 mile long structure, featuring a 3550' long continuous precast, post-tensioned segmental concrete box girder unit with multiple 350' long spans, and 11,249' of P/C P/S concrete girder approach structures. Low level approach spans were founded on pile bents with precast bent caps and precast 54" cylinder piles. Transition spans were founded on two-column bents with precast bent caps and post-tensioned precast columns on multiple 36" square pile foundations with cast-in-place pile caps. High level segmental spans were founded on single, hollow precast, post-tensioned columns on multiple 36" square pile foundations with cast-in-place pile caps. Design and construction challenges included deep sandy soils, severe scour (up to 83' deep), wave forces, vessel collision forces, a 2400' wide navigation zone requiring 70' vertical clearance and 200' horizontal clearance, all occurring within an extremely environmentally sensitive project site including a national wildlife refuge and a national seashore. HDR was the lead design firm, responsible for structure, geotechnical, roadway, MOT, signing, pavement marking, and drainage design, environmental permitting, and design services during construction, and oversight of 2D

hydraulic analysis and scour engineering, utility coordination, survey, and subsurface investigations. Mr. Coletti was the Design Manager responsible for the direction of the entire design and permitting team. The project has won at least eight local, regional, or national awards for design excellence.

U-4438, Bridge on US 158 over the Pasquotank River Bascule Span Field Splice Design, Pasquotank County, NC (for Prospect Steel) Mr. Coletti was the engineer of record for design of an optional bolted field splice for the bascule span steel plate girders for a double-leaf bascule span bridge replacement.

NCDOT Bridge Management Unit Fiber Reinforced Polymer (FRP) Repair Design Examples (for NCDOT Bridge Management Unit) Mr. Coletti was the Project Manager for the development of two sets of example design calculations for bonded Fiber Reinforced Polymer (FRP) repairs of a P/C, P/S girder. The examples illustrated design of a flexure strengthening/repair and a shear strengthening/repair. The project also included detailed comparison of several available design methodologies (ACI 440.2R-08, NCHRP Reports 655 and 678, ICC AC125, and proposed AASHTO LRFD guide specifications presented for ballot by AASHTO in 2010), and recommendations regarding the preferred design methodology. A full report was prepared, documenting the comparison of design methodologies, the design examples, application recommendations, and a draft Special Provision.

**I-3803B, I-85 Reconstruction Design-Build, Cabarrus County, NC (with Lane Construction Corporation for NCDOT)** Project encompassed design and construction (Design-Build) of 7.0 miles of total reconstruction and widening of I-85 in Cabarrus County, NC. Mr. Coletti was the Lead Bridge Engineer for the design of two PCG creek crossing bridges carrying I-85 over Rocky River and Coddle Creek, each involving phased construction and bridge widths up to 181', two sets of dual PCG grade separation bridges (at Diverging Diamond Interchanges carrying Poplar Tent Road and NC 73 over I-85, a temporary steel girder bridge for construction access, a culvert extension, a soldier pile retaining wall, and a nonstandard sound barrier wall with P/C concrete piles.

**R-2248E, I-485 Design-Build, Mecklenburg County, NC (with Barnhill Contracting and English Construction for NCDOT)** Project encompassed structural design and preliminary quantity estimates for 5.1 miles of new location interstate highway with 15 bridges in Charlotte, NC. Mr. Coletti was Senior Technical Advisor for the preliminary bridge design and also personally performed preliminary bridge design for a bridge carrying Mallard Creek Road over I-485 at a Diverging Diamond Interchange (DDI).

NCDOT Rail Division Piedmont & Northern Railway Inspection and Load Rating, Catawba County, NC (for NCDOT) Project involved bridge inspections and load rating analyses for three railroad bridges on a rail line running from Mt. Holly, NC to Gasontia, NC, with a spur running from Belmont Junction to Belmont, NC. Bridge #1 (1959 vintage) at MP SFF 1.8 crosses over I-85 with four simple spans of ballasted concrete deck on rolled steel beams. Bridge #2 (1911 vintage) at MP SFC 16.3 crosses over the South Fork of the Catawba River with two open deck 80' riveted steel deck plate girder approach spans and two open deck 150' steel deck truss main spans. Bridge #3 (1962 vintage) at MP SFC 21.6 crosses over I-85 with five simple spans of ballasted concrete deck on rolled steel beams. HDR performed hands-on bridge inspections of all three structures, including using rope access climbing techniques to inspect Bridge #2. HDR also performed detailed load rating analyses of all three bridges, including full ratings of the truss spans. Mr. Coletti was QC Reviewer for all load rating calculations.

NHI Course No. 130095, LRFD and Analysis of Skewed and Curved Steel Bridges (for NHI) Project involved the development and delivery of a five day course of instruction covering the behavior and analysis of horizontally curved and skewed steel girder bridges using the LRFD method. Mr. Coletti assisted in the development of multiple training modules, particularly Topics 3.3 Approximate Methods of Analysis and 3.4 2D Refined Methods of Analysis, presented various modules at the preliminary course walkthrough, and presented Topic 5.1 Fabrication Issues at the Pilot Course in Raleigh, NC in April 2010.

**R-2633AA&AB, I-140** Wilmington Bypass Design-Build, Brunswick County, NC (with Barnhill Contracting for NCDOT) Project encompassed design and construction (Design-Build) of 8.0 miles of new location US highway (future I-140 corridor), including 3 new highway grade separation bridges and 11 new creek crossing and wildlife crossing bridges. Mr. Coletti was a senior project engineer responsible for checking the design of a 2-span skewed PCG grade separation bridge, and was also the assistant Lead Bridge Engineer providing technical guidance to all bridge leads.

**R-2633AA&AB, I-140 Wilmington Bypass Design-Build, Brunswick County, NC** (with Barnhill Contracting for NCDOT) Project encompassed design and construction (Design-Build) of 8.0 miles of new location US highway (future I-140 corridor), including 3 new highway grade separation bridges and 11 new creek crossing and wildlife crossing bridges. Mr. Coletti was a senior project engineer responsible for checking the design of a 2-span skewed PCG grade separation bridge, and was also the assistant Lead Bridge Engineer providing technical guidance to all bridge leads.

I-15 CORE Design-Build, Salt Lake City, UT (with Fluor for UDOT) HDR was the lead designer on the design-build team for the I-15 CORE project that extends over a 23.5-mile stretch of the major north-south commuter route between Salt Lake City and the Provo/Orem region of Utah County, one of the fastest growing counties in the U.S. The \$1.7 billion project will expand the freeway by two lanes in both directions from Lehi Main Street to Spanish Fork Main Street; extend the express lane from University Parkway in Orem to Spanish Fork; rebuild and reconfigure ten freeway interchanges; replace and restore 55 bridges; and provide additional improvements that will meet or exceed travel demands through the year 2030. Mr. Coletti was a Senior Technical Advisor for bridge design, providing oversight for the design of three temporary bridge widenings and two permanent P/C P/S girder bridges.

NCDOT Bridge Maintenance Unit 2010 Municipal Bridge Inspections, Various Locations in NC (for NCDOT BMU) Mr. Coletti was a Senior Technical Advisor and QC reviewers for bridge rating calculations for numerous municipally-owned steel and concrete bridge structures in various locations in North Carolina.

US 75 Plattsmouth to Bellevue, Bridge on US 75 over UPRR, Plattsmouth, NE (for NDOR) Project involved the design of a 3-span severely skewed steel plate girder bridge. The design featured a relatively long center span (130'-193'-139') utilizing a very shallow girder (58" web depth) to achieve required vertical clearance over the UPRR track below. A hybrid HPS 50/70 design was used. Mr. Coletti was the Lead Bridge Engineer and personally performed all of the steel superstructure design and supervised the substructure design.

**Fremont Bridge Redesign, Fremont, NE (for NDOR)** Project involved the redesign of a 427m (1400') long bridge over the Platte River. The plans feature a steel plate girder superstructure option with 8 spans and a P/C P/S superstructure option with 9 spans. The

redesign involved total redesign of the interior bents using a wider configuration to allow for future superstructure widening. Mr. Coletti was a Bridge Design Team Leader who supervised design squads in two offices to complete this project on an accelerated schedule.

Portsmouth-Kittery Movable Bridge Rating, Piscataqua River, NH (for NHDOT) Project involved full inspection and detailed load rating analysis for two movable bridges. The Memorial Bridge over the Piscataqua River between Portsmouth, NH and Kittery, ME features three truss spans (299'-303'-299'), one of which is a vertical lift span, built in 1920. The Sarah Long Bridge over the Piscataqua River between Portsmouth, NH and Kittery, ME features five truss spans (227'-226'-224'-226'-227'), one of which is a vertical lift span, built in 1939. Mr. Coletti was a senior technical advisor and QC reviewer for the load rating efforts.

**B-4030 Detour Bridge, Brunswick County, NC (with Sanford Contractors for NCDOT)** Project involved the design of a 3-span temporary detour bridge featuring full depth P/C deck panel with rolled steel beam superstructure with steel pile bents. All calculations and plans were reviewed and approved by the NCDOT. Mr. Coletti was the Lead Bridge Engineer and EOR.

**B-3655 Detour Bridge, Harnett County, NC (with Sanford Contractors for NCDOT)** Project involved the design of a 3-span temporary detour bridge featuring full depth P/C deck panel with rolled steel beam superstructure with steel pile bents. All calculations and plans were reviewed and approved by the NCDOT. Mr. Coletti was the Lead Bridge Engineer and EOR.

Lafayette Bridge, St. Paul, MN (for Mn/DOT) Project involved the peer review of the design of dual 3000' long haunched steel tub girder bridges over the Mississippi River in St. Paul, MN. The bridges feature extensive aesthetic detailing and 362' main spans over the river. The peer review includes detailed independent numerical analysis calculations to verify the EOR's design. During the 30% review, line girder analysis was performed on all six units of the bridges, along with separate global buckling stability calculations. During the 60% review, line girder analysis was again performed on all six units, along with detailed 3D FEM analysis of three units and detailed independent design calculations for girder flanges and webs, internal intermediate diaphragms, internal and external pier and end diaphragms, top flange lateral bracing, field splices, shear connectors, deck stresses, and associated details. Mr. Coletti was the Lead Superstructure Engineer and personally performed or directed all superstructure analysis efforts.

**I-4744, I-40 Widening Design-Build, Raleigh, NC (with Lane Construction Corporation for NCDOT)** Project involved the preliminary design of two severely skewed 3-span steel plate girder bridge widenings and two 5-span rolled steel beam bridge widenings, along with preliminary sound barrier wall design as part of a Design/Build pursuit effort. Mr. Coletti was the Lead Bridge Engineer and personally performed all preliminary design calculations and delivered part of the project presentation.

**B-3615 Detour Bridge, Bladen and Sampson Counties, NC (with Sanford Contractors for NCDOT)** Project involved the design of a 5-span temporary detour bridge featuring full depth P/C deck panel with rolled steel beam superstructure with steel pile bents. Standard superstructure design calculations were developed for future reference and use. All calculations and plans were reviewed and approved by the NCDOT. Mr. Coletti was the Lead Bridge Engineer and EOR.

Hungry Neck Boulevard Bridge, Town of Mt. Pleasant, SC (for Town of Mt. Pleasant and SCDOT) Project involved the design for a four span curved steel plate girder bridge over a Single-Point Urban Interchange (SPUI), along with approach roadway and retained fill design. Project includes significant aesthetic features. Mr. Coletti was Senior Technical Advisor, Senior Project Engineer, and QC Reviewer for superstructure He performed preliminary steel tub girder type studies during the TS&L phase of the project, and also delivered a presentation on steel tub girder design issues to SCDOT. Later he performed a detailed QC of the proposed curved steel plate girder superstructure design calculations and plans.

**R-2606B** (US 311) Design-Build, Randolph County, NC (with Barnhill Contracting Company for NCDOT) Project encompasses design and construction (Design-Build) of 6.9 miles of new location US highway (future I-74 corridor), including nine new highway grade separation bridges, one railroad grade separation bridge and several culverts. Mr. Coletti was a bridge design team leader responsible for leading the design of two bridges: a severely skewed single span P/C P/S girder bridge on Ramp 3CA over US 311 and a slightly skewed two span P/C P/S girder bridge on Plainfield Road over US 311.

Fred D. Alexander Boulevard, Section C, Charlotte, NC (for City of Charlotte) Project involved the design of an 8'x8'x208' reinforced concrete box culvert on a severe skew with 20' fill height. Mr. Coletti was the lead structural engineer.

NCDOT Bridge Maintenance Unit 2008 Municipal Bridge Inspections, Various Locations in NC (for NCDOT BMU) Mr. Coletti was a Senior Technical Advisor and QC reviewers for bridge rating calculations for numerous municipally-owned steel and concrete bridge structures in various locations in North Carolina.

**B-4691, Bridge on SR 1324 over Tucker Creek, Transylvania County, NC (for NCDOT Bridge Management Unit)** Project involved the design of a single span 55' P/C P/S cored slab bridge on a 105° skew. The bridge replaced an existing single span timber joist bridge with timber deck and timber piles. Mr. Coletti was Lead Bridge Engineer and EOR.

**B-4692, Bridge on SR 1334 over Wesley Creek, Haywood County, NC (for NCDOT Bridge Management Unit)** Project involved the design of a single span 70' long P/C P/S box beam bridge on a 120° skew. The bridge replaced an existing single span steel beam bridge with timber deck and concrete end bents. Mr. Coletti was Lead Bridge Engineer and EOR.

National Cooperative Highway Research Program (NCHRP) Project 12-79, Guidelines for Analytical Methods and Erection Engineering of Curved and Skewed Steel Deck-Girder Bridges (for the Transportation Research Board of the National Academies) - HDR was a major subconsultant to the Georgia Institute of Technology for a \$600,000 research project to investigate various methods for the analysis of curved and/or skewed steel girder bridges. The project involved analysis of over 100 bridges using a variety of Approximate (1D) Analysis Methods, 2D Grid Analysis Methods, and 3D FEA Methods. The results of the various analysis methods were compared for each bridge to determine when simplified 1D and 2D analysis methods are sufficient and when 3D methods may be more appropriate for prediction of constructability and of final constructed geometry. The final report included recommendations on appropriate analysis methods for various types and configurations of steel girder bridges as well as recommendations on the level of erection analysis, plan detail, and submittals for steel

girder bridge erection plans. Mr. Coletti was the Co-Principal Investigator and HDR's Project Manager for the research project. HDR was responsible for performing the majority of the 1D and 2D analyses as well as writing the erection engineering guidelines and contributing to the overall final report. The findings and recommendations were published as NCHRP Report 725.

NCTA Western Wake Freeway (R-2635A, B, and C), Wake County, NC (with S.T. Wooten and Barnhill Contracting Company for the North Carolina Turnpike Authority) Mr. Coletti was the lead bridge engineer for preliminary structural design and preliminary quantity estimates for 21 P/C P/S girder bridges (with HDR directly responsible for 14 bridges and a subconsultant responsible for 7), along with over 60 overhead sign and toll collection gantry structures (by HDR) and 7 reinforced concrete box culverts (by a subconsultant), as part of a Design-Build Pursuit. Most of the bridges and all of the sign structures included significant aesthetic details. The overall project included 12 miles of new location interstate highway and 35 bridges and HDR was the lead design firm for approximately half of the project (section R-2635C). The preliminary design was performed in accordance with NCDOT guidelines. Mr. Coletti supervised all structural design activities and personally developed most of the structure aesthetic details. The structural design team included as many as 10 HDR bridge staff in two offices, plus several bridge staff working for our subconsultant.

R-2823 (Rocky Mount Northern Connector), Nash County, NC (with Barnhill Contracting Company for NCDOT) Mr. Coletti was the lead bridge engineer for the preliminary structural design and preliminary quantity estimates for two sets of dual creek crossing bridges and two sound barrier walls. The bridges over Hornbeam Branch were single span 100' long P/C P/S girder bridges with integral end bents. The bridges over Compass Creek were three span (98'-100'-98') P/C P/S girder bridges with integral end bents. The sound barrier wall preliminary design was done by a subconsultant but coordinated by HDR. The overall project includes 3.4 miles of new location highway, with HDR as the lead design firm.

**B-4538, Bridge on SR 1103 over Conoconnara Swamp, Halifax County, NC (for NCDOT Bridge Management Unit)** Mr. Coletti was the lead bridge engineer for the design of a 3-span (30'-55'-50') P/C P/S cored slab bridge on a 75° skew with steel pile bents. The bridge replaced an existing 3-span steel beam bridge with timber deck and timber piles.

**B-4540, Bridge on SR 1315 over Tributary to Little Fishing Creek, Halifax County, NC (for NCDOT Bridge Management Unit)** Mr. Coletti was the lead bridge engineer for the design of a 3-span (30'-50'-30') P/C P/S cored slab bridge on a 90° skew with drilled pier bents. The bridge replaced an existing 1-span steel beam bridge with concrete deck and timber piles.

Bridge 160, Bridge on SR 1250 over Walkers Creek, Harnett County, NC (for NCDOT Bridge Management Unit) Mr. Coletti was the lead bridge engineer for the design of a 3-span (30'-45'-30') P/C P/S cored slab bridge on a 90° skew with drilled pier bents. The bridge replaced an existing 3-span steel beam bridge with timber deck and timber piles.

**Hambright Rail Relocation, Charlotte, NC (for AAC Developers)** Mr. Coletti was a project engineer responsible for the checking of a nonstandard barrier rail design and for checking of nonstandard integral end bent design performed using a simplified full bridge model. The design was performed in full accordance with AASHTO LRFD requirements.

I-75 Design/Build, Lee and Collier Counties, FL (with ACCI/API Joint Venture, for FDOT) Mr. Coletti was the lead bridge engineer for the design of dual bridge widenings at two interchange sites, I-75 over Daniels Parkway and I-75 over Bonita Beach Road. The existing Daniels Parkway bridges were 4-span P/C P/S beam grade separation structures while the Bonita Beach Road bridges were 3-span P/C P/S beam grade separation structures. Both were being widened to the inside by adding two or more P/C P/S beam lines and single column hammer head piers. All structures were being designed to full FDOT standards using the AASHTO LRFD bridge design specifications. The overall project involved the widening of 30 miles of I-75 and included widening or replacement of 24 bridges.

**Southwest Parkway (SH 121 – IH-20 Interchange), Dallas, TX (for North Texas Turnpike Authority, NTTA)** Mr. Coletti was a senior project engineer responsible for checking the final design of a three span curved steel plate girder unit. The span arrangement was 195' – 236' – 195', with a radius of 1562'. The overall project included numerous curved steel plate girder ramps, P/C P/S girder bridges totaling 9 direct connectors, 15 slip ramps, main lain bridges, with complex substructures including very tall columns and long span straddle bents, as well as significant aesthetic features. Estimated construction cost > \$260M.

Confidential Client Project, Various Sites, TX (for Confidential Client) Mr. Coletti was the Lead Bridge Engineer for the preliminary design of several railroad bridges at various site locations, and was also the Lead Bridge Engineer for final detailed design of one railroad bridge and a channel realignment. The bridge was designed using UPRR/BNSF standard two-cell precast box girders and standard pile bents. The bridge was a two span structure designed using standard 28' span details. The standards conformed to AREMA specifications.

Bridge on Wade Park Boulevard over Medfield Creek, Raleigh, NC (with Barnhill Contracting for Preston Development) Mr. Coletti was the Project Manager and Lead Bridge Engineer for the design of a three span P/C P/S concrete girder bridge with aesthetic bridge railings and other aesthetic treatments, carrying carrying Wade Park Boulevard and associated sidewalks over Medfield Creek. He personally designed the interior bents and a custom bridge barrier rail with significant aesthetic features as well as supervising or checking all other aspects of the bridge design.

**President George Bush Turnpike / IH-30 Interchange, Dallas, TX (for TxDOT Dallas District)** Mr. Coletti was a senior project engineer responsible for checking the preliminary design of eight multiple-span curved composite steel tub girder superstructure units as part of a multi-level interchange project. He also helped develop several design tools used in the final steel tub girder design and performed complete design checks of three different 2-span, curved steel tub girder units. The structures were typically two- or three-span continuous units with span lengths ranging up to 220' and radius of curvature as tight as 890'. He also helped develop design tools used for the design of steel box girder straddle bent caps. Estimated construction cost > \$160 M.

**TXU Oak Grove 11 Mile, Phase II, Robertson County, TX (for TXU)** Mr. Coletti was the Lead Bridge Engineer for the design of two railroad bridges over small creeks. Each bridge was designed using UPRR/BNSF standard two-cell precast box girders and standard pile bents. The bridges were designed using standard 34' span details; one bridge was a four span structure, while the other was a three span structure. The standards conformed to AREMA specifications.

**Duke Energy Marshall Steam Plant, Haul Road over NSR and CSX, Catawba County, NC (with Dane for Duke Energy)** Mr. Coletti was the Lead Bridge Engineer for the design of a three-span P/C P/S girder bridge over seven railroad tracks in a small rail yard. Project was completed on an accelerated schedule. Tall piers required P-Delta analysis.

**CSXT Mobile River Bridge Repairs, Mobile River, AL (for CSXT)** Mr. Coletti was a Project Engineer responsible for the design of a repair to a swing span truss bottom chord damaged by an errant barge strike.

Hambright Rail Relocation, Charlotte, NC (for AAC Development) Mr. Coletti was a Bridge Team Leader for preliminary design concepts (TS&L) for a crossing of a stream by up to three RR tracks. Options explored included culverts, retained fill options, and bridge options including through plate girders with spans up to 100' in length, with total bridge lengths of up to 400' and pier heights of up to 50'.

NCDOT Bridge Maintenance Unit 2006 Municipal Bridge Inspections, Various Locations in NC (for NCDOT BMU) Mr. Coletti was a Project Engineer performing bridge rating calculations for numerous municipally-owned steel and concrete bridge structures in various locations in North Carolina.

WB E-W Connector over I-88 Tub Girder Concept Study, Chicago, IL (for ISHTA) Mr. Coletti was a Project Engineer responsible for a steel tub girder concept study for a curved, severely skewed, five-span continuous composite steel tub girder grade separation bridge. Tub girders were considered as a possible solution to construction staging and maintenance of traffic issues.

**Palmetto Parkway Design-Pursuit, SC (with Flatiron for SCDOT)** Mr. Coletti was a Bridge Team Leader for preliminary design of a single span, severely skewed grade separation bridge as part of a Design-Build pursuit. Steel and P/C P/S concrete girder options were evaluated.

NS Railway over Red Clay Road, Howardville, TN (for Northfolk Southern Railway) Mr. Coletti was the Lead Bridge Engineer for design of a three span rolled steel beam railroad bridge with a steel plate ballasted deck and concrete filled steel pipe pile bents. The bridge was designed to full AREMA and Norfolk Southern standards as part of a 5.2 mile long double-tracking project on a mainline track. Project was completed on an accelerated schedule with two months total design time, with approximately 3 weeks from 30% to 90% bid plans.

**NSBA Steel Bridge Design Handbook (for National Steel Bridge Alliance)** Mr. Coletti was coauthor of Chapter 10, Structural Analysis, and coauthor of Chapter 19, Substructure Design, of the new NSBA Steel Bridge Design Handbook.

**R-2510B** (US 17 Washington Bypass), Beaufort County, NC (with Tidewater for NCDOT) Mr. Coletti was Lead Bridge Engineer for preliminary design of dual 153' span skewed steel plate girder grade separation bridges with integral end bents in support of a Design-Build pursuit. He personally performed preliminary geometric layout, superstructure design, and integral end bent pile design.

R-2552C (Clayton Bypass), Little Creek Work Bridge, Johnston County, NC (for ST Wooten) Mr. Coletti was Lead Bridge Engineer for design of a 52' span temporary work

bridge on a temporary haul road. The bridge used rolled beams with a timber deck. One end bent was constructed of concrete, other used steel piles and a steel cap. Project was completed on an accelerated one week schedule.

**R-2404A** (Windsor Bypass), Bertie County, NC (with Barnhill Contracting Co. for NCDOT) Project encompassed design and construction (Design-Build) of 9.6 miles of new location US highway, including six bridges and one culvert extension. Mr. Coletti was a Bridge Design Team Leader on this project which involved the design of four new grade separation bridges and dual river crossing bridges. Mr. Coletti personally designed, checked, or supervised the design of the bridge carrying SR 1300 over US 17, a two span (141'-141') precast, prestressed concrete I-girder bridge on a severe skew. Mr. Coletti also lead the design team which designed most of the bridge carrying Wakelon Road over US 17, another two span (132' - 132') precast, prestressed concrete I-girder bridge on a severe skew. Mr. Coletti was also a technical advisor and the QC reviewer on the dual 1,700' bridges carrying US 17 over the Cashie River.

**Bridge A7188, Route 72 over the Castor River (for MoDOT)** Mr. Coletti was a Project Engineer for the full detailed design checking of a four span (138' – 185' – 143' – 138') severely skewed steel plate girder bridge. The design was performed using a detailed grid analysis model and was carried out to full MoDOT standards.

**Bridge A7190, Route 364 at Harvester Road (for MoDOT)** Mr. Coletti was a Project Engineer for the full detailed design checking of a two span (104' – 130') severely curved and skewed steel plate girder bridge. The radius of curvature was 306' on the inside girder. The design was performed using a detailed 3D FEM analysis model and was carried out to full MoDOT standards.

Brier Creek Elementary School Bridge, Raleigh, NC (for S&G Prestress) Mr. Coletti was the Project Manager and Lead Bridge Engineer for the superstructure design for a 60' span cored slab bridge.

Round Rock Turnaround Bridges (for City of Round Rock and TxDOT Austin District) Mr. Coletti was a Bridge Design Team Leader on a project involving the design of two new grade separation bridges carrying frontage road turnaround lanes over IH-35 and the widening of an existing grade separation bridge carrying a local road over IH-35 in Round Rock, TX. One of the new bridges was a four span (60' - 108' - 120' - 60') precast, prestressed concrete I girder bridge. The other new bridge was a four span (27' - 94' - 80' - 41') precast, prestressed concrete box girder bridge. The widened bridge was a four span (41' - 80' - 80' - 41') precast, prestressed concrete box girder bridge. The bridge widening also involved the design of a 9514 square foot soil nail wall with a maximum height of 21' and a length of 964'. Mr. Coletti personally supervised, signed, and sealed the design of the new bridges and the soil nail wall, and personally designed much of the precast I girder bridge.

**U-3311B** (Bingham Drive), Fayetteville, NC (with Barnhill Contracting Co., for NCDOT) Mr. Coletti was the Lead Bridge Engineer for the preliminary and final structural design for a four-span Cored Slab bridge built using top-down construction methods over a tributary of Beaver Creek as part of a Design-Build project. The bridge was designed to full NCDOT standards. Mr. Coletti personally performed, checked, or supervised the entire structure design.

Ohio River Bridge at Mountaineer Resort, Hancock Co., WV, (for WVDOH) Mr. Coletti was the QC Reviewer for navigation impact design calculations for the main river

piers of a new crossing of the Ohio River with a main span of 885', located between Hancock County, WV and Jefferson County, OH.

**I-2304AA/AB, I-85 (Yadkin River), Davidson and Rowan Counties, NC (Joint Venture with Fru-Con, for NCDOT)** Mr. Coletti was the Lead Bridge Engineer for the preliminary structural design and preliminary quantity estimates of seven bridges, including a pair of dual 2900' long river crossings, a third 872' river crossing, a pair of dual railroad grade separation bridges, and two highway grade separation bridges, as part of a Design-Build Pursuit. The preliminary design was performed in accordance with NCDOT guidelines.

SH 6 over FM 2154, College Station, TX (for Texas Department of Transportation) Mr. Coletti was a Bridge Design Team Leader for design and quantity checking for a four span pre-cast, pre-stressed concrete girder bridge carrying SH 6 over FM 2154 and the UPRR

**R-2641, I-540 (East Wake Expressway), Raleigh, NC (with Barnhill Contracting Company, for NCDOT)** Project involved design and construction of 2.6 km (1.5 miles) of new location interstate highway delivered through Design-Build contracting. HDR was the lead design firm. The project involved six bridges, three of which were designed by HDR. The HDR bridges included one three-span precast, prestressed concrete beam grade separation bridge made continuous for live load (43.6 m – 43.9 m 43.6 m) and two elevenspan "twin" precast, prestressed concrete beam creek crossing bridges made continuous for live load (38 m – 39.5 m – 38 m – 27.3 m – 28.8 m – 35.6 m). Mr. Coletti was a Project Engineer, responsible for checking of superstructure design and performing substructure design (including P-Delta analysis of tall columns), for the creek crossing bridges.

**Old Lexington Road, Winston-Salem, NC (for City of Winston-Salem)** Project involved widening of an existing roadway and replacement of an existing concrete and masonry culvert with a new three-barrel reinforced concrete box culvert on a 130 degree skew as well as a small soil nail wall. Mr. Coletti was the Lead Structural Engineer and personally designed the culvert.

# US 377 Underpass at UPRR, Denton, TX (for City of Denton and TxDOT Dallas District)

Project involved the design of a replacement for an existing single span railroad bridge (railroad over highway) on a 45 degree skew. The replacement is a four span railroad bridge (55' – 85' – 85' – 55'). Spans 1 and 4 use rolled beams and a concrete deck, while Spans 2 and 3 use through plate girders. The through plate girder spans are constructed on a 30 degree skew. The rolled beam spans are skewed 30 degrees at the interior bent ends and have no skew at the abutment ends. Rail traffic will be routed onto a temporary shoofly track and the existing bridge will be relocated for use as the shoofly bridge during construction of the permanent bridge on the original track alignment. Mr. Coletti was the Lead Bridge Engineer and personally designed all of the permanent bridge structures.

**Rector Road at Clear Creek, Denton, TX (for TxDOT Dallas District)** Project involved the replacement of an existing Off-System through truss bridge with a three span (40' - 65' - 40') precast, prestressed concrete beam bridge using TxDOT Standards for Type C beams. Mr. Coletti was a Project Engineer responsible for checking the bridge design. The bridge design included column design with P-Delta analysis of tall columns as the bridge is subject to both scour and overtopping

**TxDOT Fort Worth District Off-System Bridge Replacements (for TxDOT Fort Worth District)** Project involved design of five off-system bridge replacements. Mr. Coletti was the Lead Bridge Engineer for two bridges. The Elm Street creek crossing replacement used TxDOT Concrete Slab and Girder Standard details for a three span (30' -30'-30') bridge with a 26 degree skew. The Tin Top Road creek crossing used Type A precast, prestressed concrete beams for a three span (25' -40'-25') bridge with a severe 60 degree skew. Both projects were scrapped after completion of preliminary bridge layouts. Elm Street will be redesigned to accommodate a bike trail under the bridge. Tin Top will be redesigned to limit ROW acquisition.

IH-35 Aerial Pipeline Crossing over No Name Creek (for TxDOT San Antonio District) Mr. Coletti was a Project Engineer for the design of substructures to support the aerial crossing of two 24" diameter water lines. Two abutments and two interior bents were involved in the 41' - 56' - 27 crossing.

US 90 at 36<sup>th</sup> Street Retaining Walls, San Antonio, TX (for TxDOT San Antonio District) Mr. Coletti was the QC Reviewer for drilled shaft retaining wall designs as part of a diamond interchange design for US90 @ 36th Street, San AntonioTexas.

West Dodge Road, 129th To I-680, Omaha, NE (for NDOR) Engineer Staff. Project involves 1.8 miles of complex urban roadway and viaduct bridge design. Mr. Coletti was a Project Engineer performing independent superstructure design of a three span steel plate girder bridge on an S-alignment with reversing curvature. Performed 3D FEM analysis using the proprietary BSDI3D System, as well as all subsequent independent design of superstructure details.

SR 75 Interchange at I-15, Mountain Springs, UT (for Utah Department of Transportation) Project involved the design of a two span precast, prestressed concrete beam bridge replacement and associated roadway work. The beams were made continuous for live load using a cast in place diaphragm at the interior bent and were also made integral with the abutments using cast in place diaphragms with full moment connection to the abutment. Retaining wall abutments were used to maximize space available for future widening of I-15 under the SR 75 bridge. Design was completed per the AASHTO LRFD Bridge Design Specifications. Extensive seismic design was required as the site featured saturated soils subject to liquifaction and since UDOT required design for A=0.60g horizontal acceleration. Mr. Coletti was a Project Engineer responsible for substructure design, including detailed seismic analysis using SEISAB and design of the retaining wall abutments, abutment and bent pile caps, and interior bent columns.

City of Dallas, Churchill Way Improvements, Dallas, TX (for City of Dallas and TxDOT Dallas District) Project included a design of a new three span (138'-132'-100') continuous trapezoidal steel box girder (steel tub girder) bridge on a 34 degree skew across US 75 North Central Expressway immediately south of the High Five Interchange and associated approach roadway work. Concrete substructures were designed with aesthetic detailing to match the rest of the North Central Expressway corridor. Mr. Coletti was the Lead Bridge Engineer and performed or checked all of the bridge design calculations. Mr. Coletti performed barrier rail analysis for the nonstandard bridge railing in accordance with the AASHTO LRFD bridge design specifications. This project has won a national award for design excellence from the American Road and Transportation Builders Association (ARTBA).

US 77/83 Soil Nail Walls, San Benito, TX (for Zachry Construction Co.) Project

involves 6.1 miles of reconstruction and widening of existing 4 lane expressway to 6 lanes, designed to full interstate highway standards. HDR designed three soil nail walls for the contractor to be used as temporary shoring during phased construction. Wall NB B was 585 long with a maximum height of 29, Wall SB B was 457 long with a maximum height of 28, and Wall SB C was 218 long with a maximum height of 22. Wall lengths totaled to 1260. Wall areas totaled to 27,810 SF. Plans were completed in 4 weeks from NTP to mylars to support construction schedule. Mr. Coletti was the Design Team Leader, supervising 2 engineers and 2 technicians and preparing or checking all calculations.

US77/83 Expressway Widening Rancho Viejo, TX (for TxDOT Pharr District) This project involved 3.0 miles of interior widening to convert the existing controlled access US 77/83 Expressway from 4 lanes to 6 lanes and bring the roadway up to current interstate design standards. HDR worked directly for the Pharr District to prepare bridge layouts and full PS&E plans for three interior bridge widenings. All three interior bridge widenings used concentional precast, prestressed concrete beam construction but were complicated by horizontal curvature, superelevation, and split PGL roadway geometry. Two included highly unusual tied back drilled shaft retaining wall abutments to address complex existing site conditions. HDRs effort in preparing bridge layouts and PS&E was completed on a highly accelerated schedule, with PS&E details completed in one month to accommodate advancing of the project letting date by one month. Mr. Coletti was the Lead Bridge Engineer, performing design calculations, checking designs, and coordinating all aspects of bridge design, detailing, and drafting. Mr. Coletti performed barrier rail analysis for the nonstandard bridge railing in accordance with the AASHTO LRFD bridge design specifications.

US 77/83 Expressway Reconstruction, Brownsville, TX (for TxDOT Pharr **District**) This project involved design of 3.5 miles of full reconstruction and 2.2 miles of interior widening to convert the existing controlled access US 77/83 Expressway from 4 lanes to 6 lanes and bring the roadway up to current interstate design standards. HDR was a sub-consultant for developing bridge layouts and full PS&E plans for four full reconstruction bridges and two interior bridge widenings on this complex urban highway reconstruction project. The full reconstruction bridges all featured staged construction and widths up to 150 and used precast, prestressed concrete beams, inverted-T bent caps, and rectangular columns with aesthetic detailing. One bridge was built on a 34 degree skew, with both NB and SB flares, horizontal curvature, and superelevation. Two other bridges included flares and one was skewed. The two interior widenings used precast, prestressed concrete beams. One included highly unusual tied back drilled shaft retaining wall abutments to address complex existing site conditions. This project was completed on a highly accelerated ten month total schedule, with bridge layouts and detailed completed in five months. Mr. Coletti was the HDR Project Manager and Lead Bridge Engineer, performing design calculations, checking designs, and coordinating all aspects of bridge design, detailing, and drafting.

**Pedestrian Bridge over Interstate 29, Sioux Falls, SD** (for SDDOT) Mr. Coletti was a Project Engineer performing shop drawing review of a prefabricated 2 span, 234'-2" long though truss pedestrian bridge as part of the design of a spiral pedestrian bridge to provide access over Interstate 29 for pedestrians and bicyclists traveling along a future bike route to be located in the vicinity of the Southeast Technical Institute.

**DFW Airport Terminal D Roadways, DFW Airport, TX (for DFW Airport as sub to Carter+Burgess)** Project included the design of roadways, slab structures, and 10 new bridges for DFW Airport's new International Terminal D. HDR performed preliminary design studies on the slab structures and subsequently performed final design on seven

cast-in-place, post-tensioned concrete box girder bridges with fully integral substructures. The bridge geometry was quite complex as all seven bridges intertwined to connect to existing roadways, new roadways, and the arrivals and departures levels of the terminals. Many of the bridges were built on horizontal curves with radii as tight as 105', and with spans up to 140. Substructures included single column bents, multi-column straddle bents, C bents (offset single column bents with a cantilever cap), and unique frame bents which supported two upper level bridges directly over two lower level bridges with two other bridges supported by outrigger framing. Mr. Coletti was the Lead Bridge Engineer, developing design methodologies, coordinating bridge staff work efforts, and performing design and checking of superstructures and substructures, as well as personally signing, and sealing plans for two of HDRs seven bridges.

County Road 8 and County Road 26, Collin County, Texas (for Collin County) Mr. Coletti was the Lead Bridge Engineer for the design of two concrete slab and girder ("pan girder") bridges. CR 8 over Little Elm Creek was a three span structure (30.3' - 30.3' - 30.3'), as was CR 26 over Parvin Creek (40' - 40' - 40'). Mr. Coletti performed or checked all structural analysis, geometry calculations, and estimated quantity calculations. Mr. Coletti also performed foundation design of drilled shaft following design recommendations of the geotechnical subconsultant.

SH 204 at Caney Creek and Mars Branch, TX (for TxDOT Tyler District) Project included the replacement of two existing creek crossing bridges and the reconstruction of 1.33 miles of associated roadway to current design standards including adding shoulders and improving design speed. This involved changes to the existing profile of up to 15'. Mr. Coletti was the Project Manager and the Lead Bridge Engineer. The two replacement bridges both utilized precast, prestressed concrete beam superstructures. The substructure design included column design with P-Delta analysis of tall columns as the bridges are subject to deep scour. Mr. Coletti performed or checked all of the bridge design calculations.

**CR 3689 at Big Sandy Creek, TX** (**for TxDOT Tyler District**) Project covered the replacement of an existing Off-System truss bridge with a TxDOT Concrete Slab and Girder Bridge along with associated approach roadway reconstruction and widening. Mr. Coletti was the Project Manager and the Lead Bridge Engineer. The bridge design included column design with P-Delta analysis of tall columns as the bridge is subject to both deep scour and overtopping.

SH 31 Reconstruction, Longview, TX (for TxDOT Tyler District) Project covered reconstruction of 5.4 miles of SH 31 between I-20 and Longview, TX. Project included preparation of Bridge Layouts and PS&E for the replacement of four existing Sabine River relief bridge structures with TxDOT Concrete Slab and Girder Span bridges, railing retrofits for another four existing Sabine River Concrete Slab & Girder Span relief bridges, widening under traffic of the main Sabine River Bridge (including widening in kind of 18 Concrete Slab & Girder Spans and a three span continuous steel plate girder unit - total bridge length 995'), and railing and expansion joint retrofits for two grade separation overpasses at Loop 281. Mr. Coletti was the Bridge Task Leader on this project, responsible for coordinating all bridge work. In addition, Mr. Coletti was directly responsible for leading the design of the Sabine River Bridge widening and the Loop 281 Overpass railing and expansion joint retrofits. Mr. Coletti designed, checked, or was directly responsible for the design of superstructure widening, substructure widening, and retrofit details.

**U.S. 75 Modifications, Kansas (for KDOT)** Mr. Coletti was a Bridge Design Team Leader for design of a five span precast, prestressed concrete beam creek crossing bridge (20.0 m - 22.3 m - 22.3 m - 20.0 m) on a horizontally curved alignment.. The superstructure was made continuous for live load. The interior bent columns required P-Delta analysis to account for slender column effects in tall columns subject to scour. Mr. Coletti designed or checked all structural analysis, geometry calculations, and estimated quantity calculations. The design was performed using Metric (SI) units and was done to KDOT standards.

**I-435/Route 350 Interchange Reconstruction, Kansas City, MO (for MoDOT)** Mr. Coletti was Project Engineer for a TS&L study of three steel plate girder bridges associated with this interchange.. Two bridges were tangent girder grade separation bridges on a 56-degree skew. One was a four span (120' - 170' - 170' - 120') and the other a three span (190'- 250' - 190') continuous plate girder bridge. The third bridge was a four span continuous plate girder bridge on a horizontally curved alignment (50' - 91.5' - 101.5' - 60') with variable bent skews. All work was done to MoDOT standards. Mr. Coletti subsequently also participated in the PS&E phase of the project.

Union Pacific Railroad Yuma Subdivision Capacity Improvement, Fingal to Thousand Palms, California (for Union Pacific Railroad, UPRR). Mr. Coletti was a project engineer for checking of a prestressed concrete slab bridge widening designed to full UPRR standards.

**Howard Engineers Inc., FM 1626 Hays County, TX** Project Manager. Mr. Coletti was Project Manager and Lead Bridge Engineer for the bridge layout and PS&E design of a three span (85' - 108' - 85') Type IV precast, prestressed concrete beam bridge.. The bridge had a 104' total deck width and a 21 degree skew. The interior bent columns required P-Delta analysis to account for slender column effects in tall columns required to obtain adequate clearance over the UPRR track. Mr. Coletti performed or checked all structural analysis, geometry calculations, and estimated quantity calculations. The design was performed to full TxDOT standards.

SH 6 Over the Bosque River, Erath County, Texas (for TxDOT Fort Worth District). Mr. Coletti was a Project Engineer for the final design of a 10 span, precast, prestressed concrete beam bridge crossing the Bosque River. The bridge is to replace an existing functionally obsolescent structure. Mr. Coletti checked the design of the beams and abutments using the PSTRS14 and CAP18 programs. Mr. Coletti also checked design of the columns for interior bents, including P-Delta analysis of slender columns when appropriate. Mr. Coletti also created the RDS geometry model of the project, which was used to calculate all final bridge geometry. Project requirements dictated completion of PS&E plans on an accelerated schedule.

US 259 Kilgore Bypass, Kilgore, Texas (for TxDOT Tyler District). Mr. Coletti was a project engineer for the final design of nine precast, prestressed concrete beam bridge structures, including both grade separations and creek crossings, for a 7.8 mile limited access highway on a new alignment. The highway is to serve as a reliever route on US 259 around Kilgore, TX. Plans for future widening of the main lanes from 44' to 84' utilizing phased construction had to be considered. Mr. Coletti prepared bridge layouts for six of these bridges and designed and detailed numerous beams, abutments, and interior bents using the PSTRS14 and CAP18 programs. Mr. Coletti also performed design of the columns for interior bents, including P-Delta analysis of slender columns when appropriate. He also checked the RDS geometry model of the entire project, which was used to calculate all final bridge geometry.

James D. Pfluger Pedestrian/Bicycle Bridge, Austin, Texas (for City of Austin). Mr. Coletti was a Bridge Design Team Leader for final design of a 1385 long multiple span steel plate girder pedestrian bridge across the Colorado River (Town Lake) in Austin, TX with numerous aesthetic design features. He performed final design and detailing of steel plate girder superstructures including those for the highly complex three span continuous main river crossing which has one tangent interior girder and two exterior girders curved in opposite directions (hourglass plan). He also performed bearing and substructure design and detailing. He coordinated the efforts of as many as 15 engineers and drafters in four separate offices to complete this complex design on a very schedule. Previously, he participated in preliminary layout and preliminary design and construction cost estimates for several alternate design. The bridge is to be located adjacent to the existing South Lamar Boulevard Bridge in Austin, Texas, a reinforced concrete arch bridge built in 1940 and listed in the National Register of Historic Places. The James D. Plunger Bridge has won several local and national design awards, including local awards from the Texas Council of Engineering Companies (CEC), the Austin Section of the Associated General Contractors (AGC), and the Texas Downtown Association, as well as national awards from the American Council of Engineering Companies (ACEC) and the American Road and Transportation Builders Association (ARTBA).

**Bass Pro Boulevard Bridge, Grapevine, TX (for City of Grapevine)**. Mr. Coletti was a project engineer for checking of a 105' (32 m) simple span steel unit chosen to achieve shallow structure depth for a widening of a grade separation bridge carrying Bass Pro Blvd over SH 121.

West Texas & Lubbock Railroad Relocation, Lubbock, Texas (for City of Lubbock). Mr. Coletti was a project engineer for the design of a "buried" conventionally reinforced concrete slab bridge spanning a 56" diameter water line. The pipe was isolated from bridge loading effects by compressible stay-in-place form designed to carry the weight of the uncured slab, but able to compress under live load.

IH-35 Guadalupe River Bridges, New Braunfels, Texas (for TxDOT San Antonio District). Mr. Coletti was a Project Engineer performing final design, detailing, and checking of reinforced concrete bridge substructures and slabs. The project involved the PS&E design of five separate bridge replacement structures of up to seven spans with maximum span lengths approaching 150' carrying the IH-35 mainlanes, frontage roads, and exit ramps across the Guadalupe River. Traffic was maintained during construction, so the project involved complicated traffic control and phased construction issues. Numerous aesthetic details were used since this project crosses a prime recreation area on the Guadalupe River. The superstructure was constructed using Type VI (Mod) precast, prestressed concrete beams, unique in that this type of beam is seldom used for such long spans. The single column bents were analyzed by hand while the multicolumn bents were analyzed using 3D finite element frame models. P-Delta effects were considered in slender columns when appropriate.

Roma - Ciudad Miguel Aleman International Suspension Bridge, PS&E Rehabilitation Design, Roma, Texas (for TxDOT Pharr District). Mr. Coletti was the Project Manager and Lead Bridge Engineer for final PS&E rehabilitation design of a 192 m (630' span suspension bridge across the Rio Grande that was originally constructed in 1928. The bridge is listed in the National Register of Historic Places. Prepared rehabilitation plans for repairs to the suspension cable system, deck, and approach spans, including the addition of a controlled access system. Two separate, coordinated PS&E

packages were required for work on the Mexico and USA sides of the bridge. Project requirements dictated completion of the Mexico PS&E package on an extremely tight, three-week schedule.

Newark Airport NEC Connector Extension, Newark, New Jersey (for ADTranz). Mr. Coletti was a Bridge Design Team Leader for the design of approximately 1.6 km (1 mile) of twin steel box beam bridge structures to support a monorail automated people mover (APM) train system. The project involved the extension of the existing APM system from the Newark International Airport to a station connecting the APM system to a regional transit rail system. He designed steel box beam superstructures, including design of bolted field splices, access manholes, and conduit penetrations, for several multiple span units. He also designed all open section and box section steel hammerhead pier caps for the project. The steel superstructure and substructure members were all fracture-critical and their design involved extensive fatigue analysis and special attention to developing connection details with good fatigue performance characteristics.

**U.S. 281 Through-Truss Bridge, Brown County, South Dakota (for South Dakota Department of Transportation, SDDOT)**. Mr. Coletti was a project engineer for the design of a traveling inspection platform suspended below the truss bottom chords, as part of the design of a 97.4 m (319'-6") single span through truss highway bridge over the BNSF rail yard. A tube steel truss structure was used for the inspection traveler.

Addison Airport Toll Tunnel, Addison, Texas (for North Texas Tollway Authority). Mr. Coletti was the project engineer for the redesign of the northeast retaining wall following a rockslide, which occurred during construction of the tunnel transition-tograde approaches. This project involved the design of remediation for the rockslide as well as redesign of the precast concrete retaining wall systems and was executed on an extremely tight schedule in order to support continuation of construction work.

Roma - Ciudad Miguel Aleman International Suspension Bridge, Inspection and Evaluation, Roma, Texas (for TxDOT Pharr District). Mr. Coletti was the Project Manager and Lead Bridge Engineer for the in-depth inspection and load rating analysis of a 192 m (630') span suspension bridge across the Rio Grande that was originally constructed in 1928. The bridge is listed in the National Register of Historic Places. The project included in-depth structural inspection and field survey of the bridge, development of construction record drawings of the bridge, load rating analysis of the bridge including non-linear finite element analysis of the main suspension cables, conceptual repair recommendations, public meeting presentations, final PS&E rehabilitation design, and detailed reports documenting the project efforts, results, and recommendations. He participated in, performed, or checked all tasks associated with the project.

**Llano River Bridge Utility Relocation, Llano, Texas (for City of Llano)**. Mr. Coletti was a Project Engineer for preliminary design investigation for options to relocate several water and sewer lines to be installed on an 267 m (876') long bridge which includes four 60 m (198') span Parker trusses originally designed in 1935.

**Moore's Crossing Bridge, Travis County, Texas (for Travis County)**. Mr. Coletti was the Project Manager for construction cost estimates for rehabilitation of a 162 m (533') long bridge composed of one 25 m (82') and three 46 m (150') Pratt truss spans. The bridge was originally used as a railroad bridge crossing the Colorado River near Austin, Texas and was subsequently relocated to serve as a pedestrian/bicycle bridge in a Travis County park. The bridge is listed in the National Register of Historic Places.

US 190 Copperas Cove Bypass, Copperas Cove, Texas (for TxDOT Waco District). Mr. Coletti was a project engineer performing or coordinating the preliminary design of several alternate concepts for an 800 m (2600') bridge and for a 1200 m (3900') bridge/terraced roadway, including prestressed concrete beam, steel plate girder, post-tensioned concrete trapezoidal box girder alternates, as well as a terraced roadway alternates which included a retaining wall and cantilever bridge deck concept. In addition, he performed detailed preliminary roadway and bridge construction cost estimates for all of the alternates. The project involved the major investment study and environmental impact statement (MIS/EIS) and preliminary schematic design of a major bypass for US Route 190 around the City of Copperas Cove, Texas.

**US59 Diboll Bypass, Diboll, Texas (for TxDOT Lufkin District)**. Mr. Coletti was a project engineer supporting the schematic bridge layouts for nine bridge structures associated with a bypass for US Route 59 around the town of Diboll, Texas. The project was associated with a major investment study (MIS) of the bypass.

Route 581 Over Trindle Road Forensic Investigation, Harrisburg, Pennsylvania, (for PennDOT). Mr. Coletti was a project engineer supporting the analysis of the failure of a steel plate girder that was being removed during the replacement of a highway overpass bridge.

**Federal Highway Administration Curved Steel Bridge Research Project.** Mr. Coletti was a Project Engineer for the development and documentation of a computer program that calculates the nominal bending strength of a curved I-girder beam. He also contributed to the development of a plan to perform laboratory structural testing of a full-scale model of a three-girder curved bridge and performed extensive design and analysis of the full scale, 27 m (90') span three-girder curved bridge test frame including preparation of the test frame construction plans.

**South Boston Interchange (D001A), Boston, Massachusetts, (for Massachussetts Turnpike Authority).** Mr. Coletti was a Lead Structural Design Engineer for the design of reinforced concrete cut-and-cover tunnel and transition-to-grade (boat) sections, developing design procedures, performing preliminary design and detailed final design of non-typical structures, preparing structural drawings, and coordinating the efforts of several design engineers and drafters. In addition, he developed or aided in the development of several new seismic analysis and design procedures for both the boat and tunnel portions of the project based on free-field strain and soil-structure interaction theories. The project involved the design of an approximately 671 m (2,200') long section of the I-90 tunnel as part of the I-90/I-93 Boston Central Artery/Tunnel Project, and included design of tunnel sections with up to five bores and total width of over 61 m (200'), as well as numerous associated ramp tunnels and boat sections.

### Non-HDR Project Experience

From October 2016 to October 2017, Mr. Coletti worked for Michael Baker International as a Technical Manager-Structures. During this time he participated in the design of NCDOT Project R-5703, C.F. Harvey Parkway, in Kinston, NC, where he was Engineer of Record for dual single-span steel plate girder bridges with curved deck, straight (chorded) girders, 20 degree skew, served as a Project Engineer for other bridges on project, and developed various structure design criteria, tools, and guideline documents. He was served as one of the Instructors for the National Highway Institute (NHI) Course 130081, LRFD for Highway Bridge Superstructures, hosted by Mississippi DOT in Jackson, MS Jan 31-Feb 3, 2017, where he taught concrete and steel superstructure topics.

Before joining HDR, Mr. Coletti gained nearly six years of experience performing detailed structural analysis of major aircraft modifications, which included providing structural analysis support to design and liaison engineers, writing detailed technical reports, conducting structural engineering tests, and maintaining accountability of project budgets and schedules. He worked on projects ranging from simple interior equipment installations to major modifications of flight critical, primary aircraft structure. He regularly used both traditional engineering techniques as well as numerous computer tools, including extensive use of NASTRAN finite element modeling software.

Mr. Coletti also served for eight years in the Corps of Engineers, US Army Reserve, in various capacities with troop units and with the US Army Corps of Engineers Little Rock District office, attaining the rank of Captain during that time.

#### **Awards**

Recipient of a 2017 AISC Special Achievement Award for leading the AASHTO/NSBA Steel Bridge Collaboration's Task Group 13 in developing and publishing the first two editions of Guidelines for Steel Girder Bridge Analysis. These guidelines present a framework of information in a concise, single source to provide designers with insight into the expected behavior of steel girder bridges and the relative merits of different analysis techniques with the intention of helping designers make the most effective use of the analysis methods they chose. The educational benefits of these documents are especially beneficial for less experienced designers. Moreover, this work is representative of Domenic Coletti's volunteer spirit throughout the bridge design community.

Recipient of the 2014 Fred R. Beckmann Award in recognition and appreciation for contributions to the AASHTO/NSBA Steel Bridge Collaboration.

#### **Professional Activities**

Transportation Research Board (TRB) Committee AFF20, Steel Bridges: Member, January 2008 – February 2014, Chairman, April 2014 – Present.

American Association of State Highway Transportation Officials (AASHTO) / National Steel Bridge Alliance (NSBA) Steel Bridge Collaboration: Member of multiple Task Groups, 2006 – Present; Vice Chairman, Task Group 11 – Design, 2019 – Present. Chairman, Task Group 13 – Analysis of Steel Bridges, 2006 – April 2014. Mr. Coletti led the development of both the 1<sup>st</sup> and 2<sup>nd</sup> Editions of a 145 page guideline document, G13.1 Guidelines for Steel Girder Bridge Analysis, (1<sup>st</sup> Edition, 2011; 2<sup>nd</sup> Edition, 2014).

American Council of Engineering Companies (ACEC) / NCDOT Bridge Subcommittee: Member, 2006-2008, 2013-2015. Mr. Coletti initiated and managed a highly successful quarterly bridge design workshop series.

North Carolina State University, Guest Lecturer: CE 421 Senior Bridge Design Project Class, fall 2007 – fall 2010.

American Society of Civil Engineers (ASCE): Associate Editor, *ASCE Journal of Bridge Engineering*, 2002 – 2010.

#### Publications/Presentations:

#### Books:

Domenic A. Coletti (lead author and editor), et al, <u>G13.1</u>, <u>Guidelines for Steel Girder Bridge Analysis</u>, 2<sup>nd</sup> Edition, American Association of State Highway Transportation Officials /National Steel Bridge Alliance (AASHTO/NSBA) Steel Bridge Collaboration, November 2014.

Domenic A. Coletti (contributing author), et al, <u>S10.1</u>, <u>Steel Bridge Erection Guide Specification</u>, 2<sup>nd</sup> Edition, American Association of State Highway Transportation Officials /National Steel Bridge Alliance (AASHTO/NSBA) Steel Bridge Collaboration, November, 2014.

Domenic A Coletti (Co-Principal Investigator), Donald White (Principal Investigator), Brandon Chavel, Roberto Leon, Andres Sanchez, Cagri Ozgur, Juan Manuel Jimenez Chong, Ronnie Medlock, Robert Cisneros, Theodore Galambos, John Yadlosky, Walter Gatti, Gary Kowatch, Guidelines for Analytical Methods and Construction Engineering of

<u>Curved and Skewed Steel Girder Bridges</u>, NCHRP Report 725, Transportation Research Board, National Research Council, Washington, D.C., 2012.

Domenic A. Coletti (lead author and editor), et al, <u>G13.1</u>, <u>Guidelines for Steel Girder Bridge Analysis</u>, 1<sup>st</sup> Edition, American Association of State Highway Transportation Officials /National Steel Bridge Alliance (AASHTO/NSBA) Steel Bridge Collaboration, August 2011.

Domenic A. Coletti (lead author of Chapter 7, Box Girders), et al (contributing co-authors), Ronald D. Ziemian, Editor, <u>Guide to Stability Design Criteria for Metal</u> Structures, 6<sup>th</sup> Edition, John Wiley & Sons, 2010.

Domenic A. Coletti (lead author), John Holt, John Vogel, Tom Fan, and Walter Gatti, Practical Steel Tub Girder Design, National Steel Bridge Alliance, April 2005.

# Refereed Journal Papers:

Domenic Coletti, Donald White, Thanh Nguyen, Brandon Chavel, Michael Grubb, Calvin Boring, "Reliable Fit-Up of Steel I-Girder Bridges," *Transportation Research Record: Journal of the Transportation Research Board, No. 2642*, Washington, DC, 2017, pp. 1-8.

Domenic Coletti and Michael Grubb, "Practical Implementation of Stability Bracing Strength and Stiffness Criteria for Steel I-Girder Bridges," *Transportation Research Record: Journal of the Transportation Research Board, No. 2592*, Washington, DC, 2016, pp. 9-16.

Domenic Coletti, Brandon Chavel, Donald White, Andres Sanchez, Cagri Ozgur, Juan Manuel Jimenez Chong, "Construction Engineering Recommendations for Curved and Skewed Steel Girder Bridges – NCHRP Report 725 Appendix B," *Transportation Research Record: Journal of the Transportation Research Board, No. 2347*, Washington, DC, 2013, pp. 99-106.

Domenic A. Coletti, John M. Yadlosky, "Analysis of Steel Girder Bridges - New Challenges," *Transportation Research Record, Journal of the Transportation Research Board, No. 2050*, Structures - 2008.

Domenic A. Coletti, "Analytical and Field Investigation of the Roma Suspension Bridge," *American Society of Civil Engineers (ASCE) Journal of Bridge Engineering*, May/June, Vol. 7, No. 3, pp. 156-165, 2002.

#### Conference Proceedings (Paper and Presentation):

Domenic Coletti, R. Dominick Amico, Nicholas J. Burdette, Phil Dompe, Elizabeth C. Howey, John Jamison, "Bonner Bridge – Innovation, Economy, and Durability in a Challenging Environment," *Proceedings of the 2018 International Bridge Conference*, National Harbor, MD, June 11-14, 2018.

Domenic Coletti, Donald White, Thanh Nguyen, Brandon Chavel, Michael Grubb, Calvin Boring, "Reliable Fit-Up of Steel I-Girder Bridges," *Proceedings of the 2018 World Steel Bridge Symposium, at the North American Steel Construction Conference*, Baltimore, MD, April 11-13, 2018.

Domenic Coletti, R. Dominick Amico, Nicholas J. Burdette, Phil Dompe, Elizabeth C. Howey, John Jamison, "Bonner Bridge – Miles of Precast Concrete Provide Economy and

Durability," *Proceedings of the 2018 Annual Meeting of the Transportation Research Board*, Washington, DC, January 7-11, 2018.

Domenic Coletti, Donald White, Thanh Nguyen, Brandon Chavel, Michael Grubb, Calvin Boring, "Reliable Fit-Up of Steel I-Girder Bridges," *Proceedings of the 2017 Annual Meeting of the Transportation Research Board*, Washington, DC, January 8-12, 2017.

Domenic Coletti and Michael Grubb, "Practical Implementation of Stability Bracing Strength and Stiffness Requirements for Steel I-Girder Bridges," *Proceedings of the 2016 World Steel Bridge Symposium, at the North American Steel Construction Conference*, Orlando, FL April 14, 2016.

Domenic Coletti and Michael Grubb, "Practical Implementation of Stability Bracing Strength and Stiffness Requirements for Steel I-Girder Bridges," *Proceedings of the 2016 Annual Meeting of the Transportation Research Board*, Washington, DC January 10-14. 2016.

Domenic Coletti, Brandon Chavel, Donald White, Andres Sanchez, Cagri Ozgur, Juan Manuel Jimenez Chong, "Construction Engineering Recommendations for Curved and Skewed Steel Girder Bridges – NCHRP Report 725 Appendix B," *Proceedings of the 2013 Annual Meeting of the Transportation Research Board*, Washington, DC, January 13-17, 2013.

Domenic A. Coletti, "AASHTO/NSBA Guideline G13.1 – A Synopsis," *Proceedings of the 2012 Annual Meeting of the Transportation Research Board*, Washington, DC, January 22-26, 2012.

Domenic A. Coletti, Brandon W. Chavel, Walter Gatti, "The Challenges of Skew," *Proceedings of the 2011 Annual Meeting of the Transportation Research Board*, Washington, DC, January 23-27, 2011.

Domenic A. Coletti, Brandon W. Chavel, Walter Gatti, "The Problems of Skew," *Proceedings of the 2009 World Steel Bridge Symposium*, San Antonio, TX, November 2009.

Domenic A. Coletti, John M. Yadlosky, "Analysis of Steel Girder Bridges - New Challenges," *Proceedings of the 2008 Annual Meeting of the Transportation Research Board*, Washington, DC, January 13-17, 2008.

Domenic A. Coletti, John M. Yadlosky, "Analysis of Steel Girder Bridges - New Challenges," *Proceedings of the 2007 World Steel Bridge Symposium*, New Orleans, LA, December, 2007.

Domenic A. Coletti, John M. Yadlosky, "Behavior and Analysis of Curved and Skewed Steel Girder Bridges," *Proceedings of the 2007 Annual Meeting of the Transportation Research Board*, TRB Workshop 160, Washington, DC, January 25, 2007.

Domenic Coletti, Zhanfei "Tom" Fan, John Holt, John Vogel, "Practical Steel Tub Girder Design," *Proceedings of the 2006 Annual Meeting of the Transportation Research Board*, Washington, DC, January 24, 2006.

Domenic A. Coletti, John M. Yadlosky, "Behavior and Analysis of Curved and Skewed Steel Girder Bridges," *Proceedings of the 2005 World Steel Bridge Symposium*, Orlando, FL, December 1, 2005.

Domenic A. Coletti, John M. Yadlosky, "Analysis Techniques for Curved and Skewed Steel Girder Bridges," *Proceedings of the 2005 New York City Bridge Conference*, New York, NY, September 13, 2005.

Domenic Coletti, Greg Creamer, Bob Fish, Gerry Godzwon, and Victor Kimm, "Extreme Geometry Leads to Extreme Bridges at DFW Airport," *Proceedings of the 2004 Concrete Bridge Conference* (presentation and publication in the conference proceedings), sponsored by the National Concrete Bridge Council, Charlotte, NC, May 17-18, 2004.

Domenic Coletti, Zhanfei "Tom" Fan, John Holt, John Vogel, "Practical Steel Tub Girder Design," *Proceedings of the 2003 World Steel Bridge Symposium*, sponsored by the National Steel Bridge Alliance and the Federal Highway Administration, Orlando, FL, November 19-21, 2003.

Domenic A. Coletti and Charles Walker, "The Historic Roma International Suspension Bridge," *Proceedings of the Third National Congress on Civil Engineering History and Heritage as part of the ASCE National Civil Engineering Conference and Exposition*, Houston TX, October 10-13, 2001.

Domenic A. Coletti, Jeff Curren, and Kalpana Sutaria, "James D. Pfluger Pedestrian and Bicycle Bridge," *Proceedings of the 2001 World Steel Bridge Symposium*, sponsored by the National Steel Bridge Alliance and the Federal Highway Administration, Chicago, II, October 2-5, 2001.

#### Theses:

Domenic A. Coletti, "Thesis: Comparison of Analytical Techniques and Experimental Data for the Roma Suspension Bridge", May 1999.

#### Articles:

Domenic Coletti, R. Dominick Amico, Nicholas Burdette, Phil Dompe, Mohit Garg, Elizabeth Howey, and John Jamison, "Designed for Durability," ASCE *Civil Engineering Magazine*, September, 2019.

Domenic Coletti, R. Dominick Amico, Nicholas Burdette, and Mohit Garg, "Economy and Durability Achieved through Precast Concrete – The New Marc Basnight Bridge," *Aspire – the Concrete Bridge Magazine*, Fall 2019.

Domenic Coletti, Dominick Amico, and Elizabeth Howey, "Into the Deep," *Bridge Design and Engineering*, Issue No. 96, Third Quarter 2019.

Domenic Coletti, Donald White, "Building a Better Grid – Proposed Improvements to 2D Steel I-Girder Bridge Analysis," *Modern Steel Construction*, September 2013, Vol. 53, No. 9, pp 46-51.

Domenic Coletti, Martin Krueger, and Rich Renton, "A Triple Effect – Designers Create a Unique Context-Sensitive Bridge in Dallas," *Roads & Bridges*, Vol. 45, No. 8, August 2007, pp. S10-S13.

Domenic A. Coletti, Greg Creamer, Bob Fish, Gerry Godzwon, and Victor Kimm "The Roads to Terminal D," ASCE *Civil Engineering Magazine*, Vol. 75, No. 4, April 2005.

Domenic A. Coletti, John Holt, TxDOT, John Vogel, TxDOT, Tom Fan, TxDOT, "Bridge Tips: Top Flange Lateral Bracing for Steel Tub Girders," *HDR BridgeLine*, Volume 13, Number 2, June 2004.

Greg Creamer, Amer Jamaleldine, Victor Kimm, and Domenic Coletti, "Geometric Gymnastics, Roadway Configuration Challenges at Dallas/Fort Worth International Airport," *Structural Engineer*, Volume 5, No. 2, March 2004, pp. 30-32.

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Domenic A. Coletti, Jeff L. Curren, Kalpana Sutaria (City of Austin), "Cool Curves - The James D. Pfluger Pedestrian Bicycle Bridge," *Modern Steel Construction*, September 2002, Vol. 42, No. 90, pp. 47-50, 2002.

Domenic A. Coletti, Jeff L. Curren, Kalpana Sutaria (City of Austin), "Pfluger Bridge Combines Aesthetics, Functionality," *NSBA Steel Bridge News*, April, Vol. 3, No. 2, 2002.

Domenic A. Coletti, Jeff L. Curren, Kalpana Sutaria (City of Austin, Texas), "Pfluger Bridge Combines Aesthetics, Functionality," *HDR BridgeLine*, Vol. 11, No. 1, October 2001.

Domenic A. Coletti, "Historic Suspension Bridge Presents Unique Challenges," *Public Works*, On-line Edition, February 23, 1999.

Domenic A. Coletti, "The Historic Roma International Suspension Bridge," *TR News* (Transportation Research Board/National Research Council newsletter, July-August, No. 203, 1999.

Domenic A. Coletti, "Historic Suspension Bridge Presents Unique Challenges," *HDR BridgeLine*, Vol. 9, No. 1, October 1998.

## Conference and Seminar Presentations (No Paper):

Domenic Coletti, "Bonner Bridge – Why are We Building a Bridge Between Two Sand Bars?" North Carolina Association of Flood Plain Managers 30<sup>th</sup> Annual Conference, Wrightsville Beach, NC, May 8, 2019.

Domenic Coletti, Nick Amico, Beth Howey, Mohit Garg, Nick Burdette, John Jamison, Phil Dompe, "Why are We Building a Bridge Here? Replacement of the Herbert C. Bonner Bridge by the New Marc Basnight Bridge," ASCE Structures Congress, Orlando, FL, April 26, 2019.

Domenic Coletti, "Steel Bridge Design Resources – Application," World Steel Bridge Symposium at the North American Steel Construction Conference, St. Louis, MO, April 4, 2019.

Domenic Coletti, "Bonner Bridge – Innovation, Economy, and Durability in a Challenging Environment," ASHE March Dinner Meeting, Raleigh, NC, March 19, 2019.

Domenic Coletti, "Bonner Bridge – Precast Solutions for a Challenging Bridge Site," PCI North Carolina 2018 Bridge Design Seminar, Raleigh, NC, November 14, 2018.

Domenic Coletti, "Bonner Bridge – Innovation, Economy, and Durability in a Challenging Environment," ASCE Student Chapter Meeting at NC State University, Raleigh, NC, November 6, 2018.

Domenic Coletti and Nick Amico, "Bonner Bridge – Innovation, Economy, and Durability in a Challenging Environment," ACEC-NC/NCDOT Bridge Subcommittee Workshop, Raleigh, NC, October 4, 2018.

Domenic Coletti, Ronnie Medlock, "Effects of Curvature and Skew," *AISC Live Webinars* – *Intro to Steel Bridge Design* (nationally broadcast webinar), October 26, 2017.

Domenic Coletti, Don White, Thanh Nguyen, Brandon Chavel, Michael Grubb, Calvin Boring, "Fit-Up Considerations for Steel I-Girder Bridges," NSBA Steel Bridge Forum, Raleigh, NC, October 3, 2017.

Domenic Coletti, Don White, Thanh Nguyen, Brandon Chavel, Michael Grubb, Calvin Boring, "Steel I-Girder Bridge Fit Research," Western Bridge Engineers' Seminar, Portland, OR, September 7, 2017.

Domenic Coletti, Michael Grubb, "Steel I-Girder Bridge Cross-Frame Strength and Stiffness Requirements," Western Bridge Engineers' Seminar, Portland, OR, September 6, 2017.

Domenic Coletti, Ronnie Medlock, "Session 7: Effects of Curvature and Skew," *AISC/NSBA Night School* (nationally broadcast webinar), July 25, 2016.

Domenic Coletti, Anna Teague, and Joanne Shaner, "Session 1: Introduction to Steel Bridge Design," *AISC/NSBA Night School* (nationally broadcast webinar), June 6, 2016.

Domenic Coletti and Michael Grubb, "Practical Implementation of Stability Bracing Strength and Stiffness Requirements for Steel I-Girder Bridges," American Council of Engineering Companies, North Carolina (ACEC/NC) and North Carolina Department of Transportation (NCDOT) – NC Steel Bridge Forum, February 17, 2016.

Domenic Coletti, et al, NCHRP Report 725 Guidelines for Analysis Methods and Construction Engineering of Curved and Skewed Steel Girder Bridges," 3<sup>rd</sup> Annual Bridge Seminar Day, Kentucky Society of Professional Engineers and ACEC of Kentucky, February 4, 2014.

Domenic Coletti, et al, "NCHRP Report 725 Guidelines for Analysis Methods and Construction Engineering of Curved and Skewed Steel Girder Bridges," ACEC/NY PDH Webinar, January 9, 2014.

Domenic Coletti, Brandon Chavel, Donald White, Andres Sanchez, Cagri Ozgur, "Analysis of Curved and Skewed Steel Girder Bridges during Construction," Western Bridge Engineers Seminar, Bellevue, WA, September 5, 2013.

Domenic Coletti, Donald White, "Design for Construction of Curved and/or Skewed I-Girder Bridges," North American Steel Construction Conference Session B4, St. Louis, MO, April 18, 2013.

Domenic Coletti, Brandon Chavel, Donald White, Andres Sanchez, Cagri Ozgur, Juan Manuel Jimenez Chong, "NCHRP Report 725 Guidelines for Analysis Methods and Construction Engineering of Curved and Skewed Steel Girder Bridges," National Steel Bridge Alliance (NSBA) Steel Bridge Forum, Raleigh, NC, January 24, 2013.

Brandon Chavel, Andres Sanchez, Domenic Coletti, Don White, Cagri Ozgur, Juan-Manual Jimenez, "Erection Engineering Analysis for Curved and Skewed Steel Girder Bridges", 2012 Structures Congress, Chicago, IL, March 28, 2012.

Domenic A. Coletti, "A Synopsis of G13.1, Guidelines for Steel Girder Bridge Analysis and Related Steel Bridge Design Topics," 90 minute presentation as part of the NSBA/NCDOT Steel Bridge Forum, McKimmon Center, Raleigh, NC September 14, 2011.

Domenic Coletti, "Practical Steel Tub Girder Design," Workshop for the SCDOT, Columbia, SC, May 5, 2009.

Domenic Coletti, Michael Grubb, Tom Saad, Bill McEleney, "FHWA/NSBA LRFD Steel Bridge Design Workshop," Raleigh, NC, March 20, 2006.

Domenic A. Coletti, John M. Yadlosky, "Analysis Techniques for Curved and Skewed Steel Girder Bridges," 2005 New York City Bridge Conference, New York, NY, September 13, 2005.

Domenic A. Coletti, John Holt, John Vogel, Zhanfei "Tom" Fan, "Practical Steel Tub Girder Design," National Steel Bridge Alliance (NSBA) Steel Bridge Showcase, Lancaster, PA, April 19, 2005.

Domenic A. Coletti, John Holt, John Vogel, Zhanfei "Tom" Fan, "Practical Steel Tub Girder Design," American Society of Civil Engineers (ASCE) Chicago Section Biennial Structures Lecture Series, Chicago, IL March 17, 2005.

Domenic A. Coletti, John Holt, John Vogel, Zhanfei "Tom" Fan, "Practical Steel Tub Girder Design," Western Bridge Engineers Seminar, Sparks/Reno, NV, October 5, 2003.

Domenic A. Coletti, Luis Ybanez, "Lamar Boulevard Pedestrian Bridge," Biennial TxDOT Bridge Designer's Conference, Austin, TX, February, 2001.