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Header 2

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Procurement Type: Central Contract - Fixed Amt

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Responded By User ID: leylascott

Total of Header Attachments: 2

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Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

**State of West Virginia
 Solicitation Response**

Proc Folder: 925952
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Solicitation Closes	Solicitation Response	Version
2021-10-14 13:30	SR 0211 ESR10142100000002415	1

VENDOR
 VS0000000330
 WDP & ASSOCIATES CONSULTING ENGINEERS INC

Solicitation Number: CEOI 0211 GSD2200000001
Total Bid: 0
Response Date: 2021-10-14
Response Time: 13:09:39
Comments:

FOR INFORMATION CONTACT THE BUYER
 Melissa Pettrey
 (304) 558-0094
 melissa.k.pettrey@wv.gov

Vendor Signature X **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	EOI: Building 36 EIFS and Granite Assessment				0.00

Comm Code	Manufacturer	Specification	Model #
81101508			

Commodity Line Comments: WDP & Associates Consulting Engineers, Inc., (WDP) is pleased to present our proposal to the State of West Virginia for the Building 36 EIFS and Granite Assessment- Solicitation No: CEOI 0211 GSD2200000001.

Extended Description:

EOI: Building 36 EIFS and Granite Assessment



Expression of Interest (EOI): State of West Virginia

BUILDING 36 EIFS AND GRANITE ASSESSMENT

Solicitation No: CEOI 0211 GSD2200000001

Due Date: October 14, 2021



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- Additional Terms and Conditions (Architectural and Engineering Contracts Only)
- State of West Virginia Purchasing Affidavit
- West Virginia Centralized Expression of Interest

October 14, 2021



Department of Administration
Purchasing Division
2019 Washington Street E
Charleston, West Virginia 25305-0130

Attention: Ms. Melissa Petry

Reference: EOI: Building 36 EIFS and Granite Assessment

Hinton, WV

Manassas, VA

Charlottesville, VA

Blacksburg, VA

Myrtle Beach, SC

New York, NY

Dear Ms. Petry:

WDP & Associates Consulting Engineers, Inc., (WDP) is pleased to submit our expression of interest to provide professional engineering services for Building 36 EIFS and Granite Assessment.

WDP's staff has worked closely with the West Virginia General Services Division (GSD) on multiple successful projects since 2015. We have investigated water intrusion issues at the West Virginia State Capitol Dome as well as designed structural repairs for the GSD's Building 13 precast parking garage. Our ongoing projects at the Capitol Complex for the West Virginia General Services Division and our completed project at the Public Service Commission Headquarters building have brought us to Charleston on a weekly basis for the last six years. Our experience in the state began over 19 years ago with a project at West Virginia University in Morgantown, and we remain dedicated to serving the needs of our West Virginia clients.

WDP is a certified small business consulting engineering firm with a proven history of investigating existing EIFS, masonry, and structural related issues as well as designing repairs to remedy those problems. The work required for this study is not just something that we have done, it is at ***the core of our business***. Companywide, WDP has completed 400 structural and building envelope investigation and repair projects in the past 5 years, and nearly all of our completed façade evaluation projects have been undertaken on occupied buildings.

The WV GSD remains one of our most important clients, and we are committed to providing quality services in a timely manner and in accordance with the State's values, ideals, and goals. We hope that our expertise and commitment come through in the enclosed materials. Should questions arise regarding our qualifications or our experience, please feel free to reach out to us at your convenience.

Sincerely,

WDP & Associates Consulting Engineers, Inc.

A handwritten signature in blue ink, appearing to read 'RAC', written over a light blue horizontal line.

Rex A. Cyphers, P.E.
Principal | COO

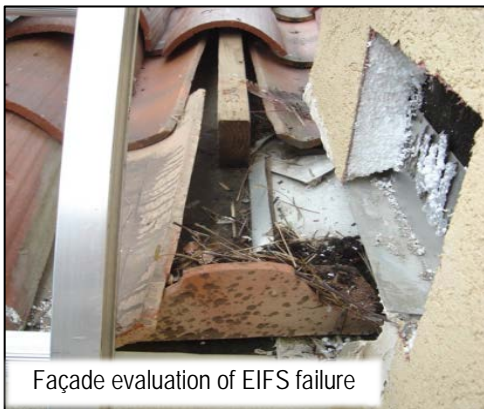
Firm Overview

WDP & Associates Consulting Engineers, Inc., (WDP) is an SBA-certified (1KZR5) consulting engineering firm specializing in building façade investigations and repair, building envelope consulting and testing, structural engineering, and historic preservation. *Creating lasting engineering solutions is at the heart of our business.*

WDP's staff has worked closely with the West Virginia General Services Division (GSD) on multiple successful projects since 2015. We have investigated water intrusion issues at the West Virginia State Capitol Dome as well as designed structural repairs for the GSD's Building 13 precast parking garage. Our ongoing projects at the Capitol Complex for the West Virginia General Services Division and our completed project at the Public Service Commission Headquarters building have brought us to Charleston on a weekly basis for the last 6 years. Our experience in the state began over 19 years ago with a project at West Virginia University in Morgantown, and we remain dedicated to serving the needs of our West Virginia clients. In the last five years alone, we have worked on more than 12 projects from Charleston to Morgantown to Snowshoe; our services on those projects have included evaluating the structural stability of existing building components, investigating air and water infiltration issues, evaluating the hygrothermal properties of existing wall assemblies, and providing recommendations for repairs. **In 2020, we officially opened an office in Hinton to better serve the needs of our clients throughout the State of West Virginia.**

WDP performs around 100 façade assessments, building envelope, and structural investigation and repair projects every year. **Most of WDP's repair projects involve facilities that must remain occupied and operating "business as usual" throughout the investigation and repair process.** Our investigative strategies and value-based repair designs have addressed countless issues, such as building envelope problems manifested through air/water leakage, occupant comfort issues, structural deficiencies caused by moisture infiltration, differential movement, general deterioration of building materials, biological growth, and aesthetic deficiencies, among others.

Façade and Building Envelope Evaluations



Façade evaluation of EIFS failure

WDP provides a variety of services related to building facades and enclosure systems, including facade assessments, leakage investigations, peer review of architectural design, development of repair and restoration documents, mockup and field performance testing, enclosure commissioning and construction administration services. Our expertise in the diagnosis and correction of exterior envelope systems includes extensive knowledge of brick and natural stone masonry (both veneer and adhered systems), fenestration systems, roofing, stucco, exterior insulation and finish systems (EIFS), precast concrete wall panels, architectural metal panel systems, concrete, and steel structures. WDP's professional team of envelope specialists are experienced in performing hands-on inspections with particular care given to original construction materials and evaluation of pre-existing repairs. No matter the age of the facility, from historic 18th and 19th century structures to newly constructed buildings experiencing post-occupancy problems, WDP has experience

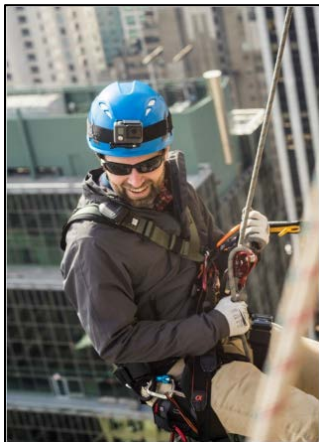
in preservation and improving the value of existing facility assets through tailored engineering solutions. Our investigative strategies and cost-effective design approaches have addressed countless façade issues, such as cracking, facade instability, air and water leakage, mold growth, and aesthetic deficiencies.

In addition to developing designs for numerous envelope repair projects each year, WDP has served as the Engineer of Record for the investigation, design, and construction phase of over 15 full façade replacement projects to restore the structural performance and weather resistance of EIFS, stone, concrete, brick masonry, and metal panel facades. We routinely transition from the evaluation of problems into the production of repair and restoration design documents, bid solicitation, bid evaluation, construction administration, and quality assurance inspection. More often than not, our clients must maintain occupancy and use of their building throughout the course of the repair project. WDP has experience developing construction phasing that minimizes disruption and considers egress routes through the building to ensure occupant safety is held paramount through the construction phase of the project.



Temporary protection for façade replacement project of occupied building

Façade Evaluation Access



To effectively evaluate the building façade, you have to be able to get to it. WDP assists owners and property managers with cost-effective and expeditious ways to perform facade inspection programs for all types of exterior walls and façades. WDP’s professional engineers and architects perform close-up inspections and evaluate conditions observed based on technical experience and comprehensive understanding of wall and window systems. Access is typically provided from scaffold, aerial lifts, or suspended platforms, which can take time to assemble and relocate to different portions of the building.

For difficult access conditions, WDP routinely utilizes industrial rope access for façade evaluations with our SPRAT-certified and professionally licensed personnel thus limiting the time and impact of using a traditional scaffolding system. Rope access allows our staff to evaluate multiple areas of a building façade with relatively little setup time or costs. WDP also has capabilities to perform diagnostic testing and non-destructive testing from rope access when more than just visual observations are required.



Proposed Staffing Plan

The following chart illustrates the roles and experience of our key personnel who will be assigned to this project:

REX CYPHERS, P.E. – Principal COO	Project Role: PRINCIPAL IN CHARGE
<p>Rex’s project role will include:</p> <ul style="list-style-type: none"> ▪ Providing expertise and guidance for the project team during the evaluation, design, and construction phase ▪ Maintaining client communication and satisfaction ▪ Ensuring compliance with project delivery dates and milestones <p>Professional Qualifications Professional Engineer – WV, VA, WA, PA, TN</p>	
JODI KNOROWSKI, P.E. – Senior Engineer I	Project Role: PROJECT MANAGER
<p>Jodi’s project role will include:</p> <ul style="list-style-type: none"> ▪ Developing project specific investigation plan in coordination with the State’s expectations and project goals ▪ Overseeing execution of investigation and development of repair strategies ▪ Leading development of repair design and providing on-site construction phase services <p>Professional Registration Professional Engineer – VA</p>	
SHANNON SCOLFORO, E.I.T – Staff Engineer II	Project Role: ROPE ACCESS FAÇADE EVALUATION
<p>Shannon’s project role will include:</p> <ul style="list-style-type: none"> ▪ Providing support during field investigation, design development, and construction administration services ▪ Utilizing experience with rope access to support project needs during the façade evaluation <p>Professional Registration Civil Engineer in Training</p>	

Rex A. Cyphers, P.E., Principal, COO | Principal-in-Charge



Mr. Rex Cyphers, P.E., is a Principal and Chief Operating Officer with WDP & Associates Consulting Engineers working primarily out of the Hinton, West Virginia, and Charlottesville, Virginia, offices. He is responsible for overseeing the work of all WDP divisions, WDP's hiring process, staff development, and company operational decisions. Mr. Cyphers

specializes in the design and repair of masonry structures, historic preservation, and nondestructive testing. He performs forensic field and laboratory investigations, façade and building envelope investigations, structural inspection/ analysis and design, architectural retrofit and repair, roofing and waterproofing investigations, and development of design documents and repair recommendations. Mr. Cyphers regularly presents and co-authors for various technical publications.

Education

- Master of Science, Civil Engineering, West Virginia University, 2003
- Graduate Certificate, Cultural Resource Management, West Virginia University, 2003
- Bachelor of Science in Engineering, Civil Engineering, West Virginia University, 2002

Professional Qualifications

- Professional Engineer – VA, WV, WA, PA, TN

Professional Memberships/Committees

- ASTM Committee E06 Performance of Buildings – Subcommittees:
 - E06.24 Preservation and Rehabilitation Technology
 - Task Chair, ASTM E3069 –19 “Standard Guide for Evaluation and Rehabilitation of Mass Masonry Walls for Changes to Thermal and Moisture Properties of the Wall”
 - Task Chair, WK 70955, “Standard Guide for Evaluation of Changes to the Thermal, Moisture, and Ventilation Performance of Existing Roof Enclosures (with Vented or Sealed Attic or Rafter Spaces)”

Relevant Experience

Harbour View Grande, Suffolk, Virginia. *Senior Engineer:* WDP was hired to perform an investigation of the exterior EIFS façade and clay tile roofs of the movie theatre and two adjacent buildings of a retail center in Suffolk, Virginia. Water penetration into the building interior had plagued the facility since completion. WDP was retained to perform a comprehensive survey of the existing facility and to perform diagnostic testing to provide performance information to define a complete and effective repair program. The

restoration program included complete replacement of the EIFS façade and clay tile roofs, installation of supplemental light gage framing members at select locations, and installation of new structural steel framing around the storefront and curtain wall window systems of the theatre.

Studio Movie Grill, Dallas, Texas. *Senior Engineer:* WDP performed a field investigation to evaluate the condition of the adhered manufactured-stone veneer installed on the complex and the cause of failure when a large section of the adhered veneer debonded and fell. A direct shear bond test apparatus was designed and fabricated to evaluate the stability of the remaining adhered veneer since no standard field test method was available for shear bond testing of adhered masonry veneer units. WDP developed contract documents to repair the envelope and also performed construction administration services to oversee the repairs.

Metro Lofts Apartments, St. Louis, Missouri. *Senior Engineer:* WDP directed an investigation to determine the causes and responsibility of the excessive water leakage experienced in all three buildings of Metro Lofts, especially in regard to operable aluminum windows that were leaking under minor wind-driven rain events. The exteriors were primarily comprised of EIFS, brick masonry, and several different window and sliding glass door systems. As part of the investigation, WDP tested over 100 different windows using standard and non-standard water tests, made exploratory openings, and conducted a document review of all available construction documents. Non-standard water tests were developed to simulate natural rain events to replicate and determine the source of the leaks. WDP worked closely with the contractor implementing the repairs through mock-ups and onsite observations of construction activities.

Highland District Hospital, Hillsboro, Ohio. *Senior Engineer:* WDP performed a façade evaluation of the hospital that was plagued with EIFS failures and interior water leakage. Through the field evaluation, it was determined that the failures observed were a result of a poorly designed wall assembly which featured an interior vapor barrier that trapped moisture within the wall assembly and construction defects in the barrier EIFS. This caused the wood sheathing to deteriorate, leaving the EIFS system unsupported in many locations which ultimately led to failures in the EIFS that caused water infiltration that further exacerbated the moisture issues within the wall assembly. Following the evaluation, WDP developed a summary report with findings and repair recommendations for the Owner to evaluate options moving forward.

Jodi M. Knorowski, P.E. | Senior Engineer



Ms. Knorowski joined WDP in 2013 and has over 9 years of experience providing professional design, building condition assessments, and construction administration services for post-occupancy failures of existing buildings related to the building envelope. She has performed diagnostic field investigations to determine the root

cause of these failures in order to develop repair recommendations. In this process, she has utilized hygrothermal modeling techniques to analyze the long-term effects of heat and moisture movement through a wall or roof assembly. Jodi has also provided clients with construction monitoring services for new construction and performed quality assurance testing and observations of the structural, material, and architectural elements of the building envelope.

Education

- Master of Science, Civil Engineering, Old Dominion University, 2012
- Bachelor of Science, Civil Engineering, Old Dominion University, 2010

Professional Registration

Professional Engineer – VA

Certifications

WUFI-ORNL 5.3 / WUFI-Pro 5.3 & Weather Analyzer 1.0
 NFRC Certified Simulator

Professional Memberships / Committees

ASTM, C16 Committee, Thermal Insulation
 ASTM E06 Committee, Performance of Buildings
 ASHRAE TC 4.4, Building Materials and Building Envelope Performance

Relevant Experience

Virginia Commonwealth University, Children's Hospital Addition, Richmond, VA. *Senior Engineer.* WDP provided building envelope consulting services for a comprehensive addition to a Children's Hospital, including a design review and construction administration services. Ms. Knorowski reviewed shop drawings for EIFS walls within the new construction and performed periodic site visits to observe installation.

West Virginia Capitol Dome Moisture Intrusion, Charleston, WV. *Project Engineer.* Oversaw the investigation and subsequent design and construction to address chronic water leakage of the 1930s-structure designed by architect Cass Gilbert. WDP performed diagnostic water tests, exploratory openings, installation of sensors and instrumentation, and review of prior design documentation to determine the root cause of interior damage. Developed report of findings and recommendations for consideration for the State to develop repair scope of work. Developed comprehensive repair documents to address bulk water leakage by removing and reinstalling over 200 limestone cornice elements to install through wall flashing, coating failures, internal stormwater drainage failures, and repairs to interior ornamental paint and plaster surfaces. During construction, structural deficiencies identified in the cast-plaster inner dome and hollow clay tile support walls required detailed evaluation, analysis, and coordination to repair and preserve the historic structure. Provided construction administration services as the Designer of Record for the construction phase of the project.

Public Service Commission of West Virginia, Façade Replacement Project, Charleston, WV.

Project Engineer: Oversaw the design and construction of a façade replacement as part of a Design-Build effort to remove and replace the brick masonry veneer and improve the overall performance of the wall assembly. WDP performed a field investigation to identify existing conditions contributing to the issues observed within the building that dictated the repair solutions that were developed. WDP served as the Engineer of Record for the design development and construction administration services. Repairs included new high-performance punched windows, new glazing installed at existing curtain wall assemblies, new continuous air/water barrier, and new thermal insulation in the exterior wall cavity. Executed the repairs while the building was fully occupied and developed unique ways to provide occupant protection as work progressed.

The University of Virginia, John Paul Jones Arena, Façade Evaluation and Partial Replacement, Charlottesville, VA.

Project Engineer: WDP performed a comprehensive façade evaluation that included evaluation of stucco assemblies, fenestration integrations, metal panels, and brick veneer. Developed a comprehensive report outlining findings and recommendations and coordinated with the University to perform a value engineering exercise to develop the final scope of work. Developed repair documents for comprehensive replacement of cladding components to provide continuity of air and water barrier to mitigate water leakage and air leakage issues throughout the building. Provided construction administration services as the Engineer of Record for the project.

Shannon Scolforo, E.I.T. | Staff Engineer II



Ms. Shannon Scolforo joined WDP in 2019 as a Staff Engineer after graduating from the University of Florida. Ms. Scolforo assists senior and project engineers in a myriad of tasks including hygrothermal analysis, field investigations and testing, project document review and development, and construction oversight. Ms. Scolforo is also trained in rope access. Ms. Scolforo is also trained in the use of Industrial Rope Access techniques on otherwise difficult to access building facades and unique structures.

Education

- BS, Civil Engineering, University of Florida, 2019

Professional Registration

- Civil Engineer in Training

Organizations

- American Society of Civil Engineers – Member

Relevant Experience

George Washington University, International House Leakage Investigation, Washington, D.C. Staff Engineer: Ms. Scolforo performed a partial building survey for existing delamination and spalls using rope access. Delamination and spalls that were deemed an immediate safety risk were removed from the façade in an effort to stabilize the building.

General Services Administration (GSA), Byrne-Green Federal Complex, Façade Study, Philadelphia, PA. Staff Engineer: WDP completed review of documents provided by the GSA, including previous reports and repair programs, and assisted with a two-phased field survey. The Phase 1 survey included an aerial drone survey of all building elevations performed by WDP's subconsultant. The drone survey was followed by a Phase 2 close-up visual survey of façade areas accessible via the ground and roofs as well as via rope access. Ms. Scolforo worked on the visual and tactile survey of the two facades via rope access and assisted with document review and development of a report outlining findings and recommendations for repair.

General Services Administration (GSA), Joseph F. Weis Jr. Courthouse, Pittsburgh, PA. Staff Engineer: The Weis Courthouse is a ten-story building that spans an entire city block. Ms. Scolforo performed a detailed crack survey of the limestone façade and a general exterior condition assessment of the historic windows via rope access. Additionally, Ms. Scolforo performed a general condition survey of the steel and concrete structure for the building's loading dock located directly above a railway via an arial lift. She also assisted in the development of a report outlining findings and recommendations for repairs.

General Services Administration (GSA), Erie Federal Courthouse Complex, Erie, PA. Staff Engineer: WDP performed a comprehensive on-site survey and investigation at the GSA Federal Complex to document relevant dimensions for the development of repair drawings and to assess existing conditions and known façade and building enclosure issues with three of the four buildings at the complex, all of which are listed on the National Register for Historic Places. Ms. Scolforo assisted the project manager in developing structural engineering calculations for retaining walls at two discrete locations within the complex.

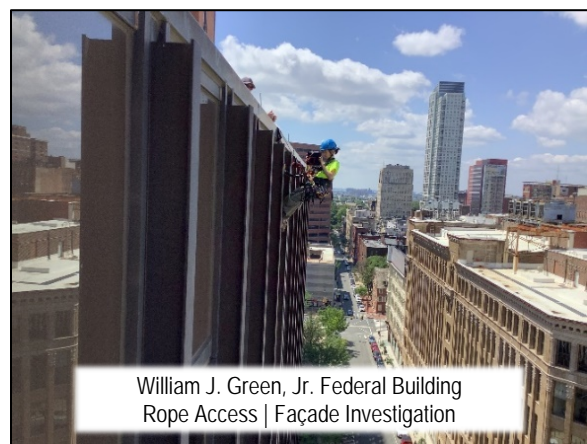
3TWENTY3 Building, Charlottesville, VA, Staff Engineer: WDP provided building envelope consulting services for the construction of a condominium building featuring an EIFS façade. Ms. Scolforo performed hygrothermal analysis of the wall assemblies to verify long-term performance and make recommendations for material properties. She reviewed submittals during the construction phase and performed periodic site visits to review installation of the EIFS.

University of Virginia, Bryan Hall, Water Leakage and Masonry Investigation, Charlottesville, VA. Staff Engineer: Ms. Scolforo reviewed existing design documents to assist in the evaluation of reported brick cracking and water infiltration. She assisted in a site investigation including diagnostic water testing, brick veneer evaluation, and observation of probe openings. She also compiled findings into a comprehensive report with a tiered recommendation approach. WDP is currently serving as the Engineer of Record in the development of repair documents and will provide construction administration services.

The College of William & Mary, One Tribe Place, Façade Survey, Williamsburg, VA. Staff Engineer: Ms. Scolforo performed testing utilizing an infrared camera to further understand the performance of the exterior wall assembly from a thermal and moisture standpoint. She performed window air and water infiltration testing to assess the performance of the existing windows and conducted an overall brick condition survey including the documentation of probe openings.

Goal #1: Investigation

WDP will develop an investigation plan that is coordinated with the State and incorporates the goals and objectives of all project stakeholders. To develop an investigation plan, WDP would perform a site visit with the GSD and project stakeholders to ensure a thorough understanding of the observed concerns and evaluate any constraints in performing an evaluation. WDP would review any available project records, including original drawings and specifications, subsequent repair projects, or maintenance reports, to get a general understanding of the building history and operation. Then a façade evaluation would be performed and would generally consist of a visual and tactile survey for as much of the building façade as feasible. Access to the building façade would be coordinated with the State to evaluate options for use of an aerial lift at all elevations of the building or to see if our internal rope access team would be necessary. Where access is not feasible within the duration of the field investigation, WDP would utilize binoculars, spotting scopes, and high-resolution cameras to visually inspect the remaining building façade.



William J. Green, Jr. Federal Building
Rope Access | Façade Investigation

In addition to the visual survey, exploratory openings would be necessary to verify existing construction. These exploratory openings would also include an evaluation of the adhesion of the EIFS and adhered granite tiles. WDP has developed in-house testing equipment that is capable of evaluating both the adhesion of these systems in addition to the shear bond strength. WDP would also perform diagnostic water testing to evaluate the root cause of the water leakage that is noted in the freight elevator. This effort would be coordinated with building occupants to limit disruptions on the interior of the building during the testing.

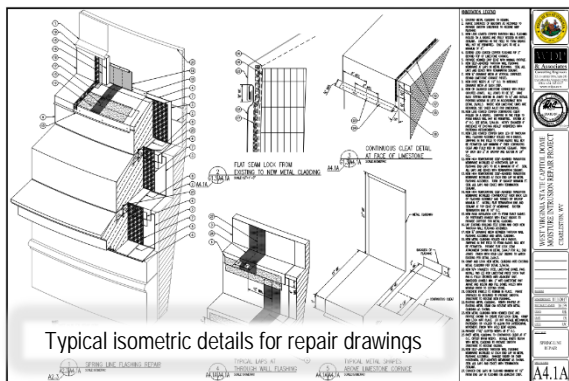
Goal #2: Repair Recommendations

WDP understands that building Owners have different variables that must be considered when evaluating repair approaches to maintain their buildings. As such, we aim to provide repair options that will meet different goals for the building that typically range from a maintenance level option to a comprehensive repair option. We develop our repair recommendations such that each repair strategy is conveyed clearly and effectively through the use of photographs and figures within our reports. We can provide anticipated costs for each repair option such that the value of the repair can also be assessed. WDP can cater our repair recommendations to include the level of detail that is necessary for the State. We have developed specifications for repairs that are attached to our summary reports to provide the Client with a greater understanding of what the repair might entail, which also provide greater accuracy when developing a cost estimate. In addition to providing a written report, WDP would attend a follow up meeting with the project stakeholders to present our findings and recommendations and to allow for discussion and questions to ensure the State has a full understanding of the repair options. While the decision for the final scope of work is ultimately with the State, WDP can provide assistance as needed to clarify recommendations and potential risks associated with each repair approach to help outline the scope of work for a repair project.

Goal #3: Design and Construction

WDP has extensive experience generating Contract Documents to include both drawings and project manuals for repair projects, including for EIFS and adhered masonry. We are familiar with the requirements in West Virginia State building codes, the process for reviewing the Contract Documents with the State Fire Marshal, and supporting the State through the bid process. When developing Contract Documents, WDP takes pride in developing a set of details and specifications that are unique to the project. Typically, the

integration details between a plan view and section view are the most critical for a repair; as such, WDP routinely incorporates isometric details into our drawing packages to clearly convey the repair design at these intersections. Our project specifications are also unique to the project and are often written by the same engineer that is developing the details in the drawings to ensure coordination between the drawings and specifications for the project. We also recognize the need to perform repairs while the building remains fully occupied and operational. We would work with the project stakeholders to understand any limitations with door closures and evaluate egress routes through the building to determine proper pedestrian protection and safeguards during construction. Phasing requirements and temporary protection measures would be incorporated into the Contract Documents to



Typical isometric details for repair drawings

clearly convey these requirements to potential bidders. With repairs to existing buildings, unforeseen conditions are likely to arise during construction. As such, we understand the importance of being actively engaged throughout the construction phase and having a consistent presence on the project site to ensure repairs are executed in accordance with the Contract Documents. With the proximity of our Hinton, WV, and Charlottesville, VA, offices to Charleston, we are able to be responsive to issues that may arise on site and can work closely with the project team to quickly address them.

Evaluation of Exterior Insulation and Finish Systems (EIFS)

WDP has extensive experience evaluating failures of Exterior Insulation and Finish Systems (EIFS). Concerns with EIFS typically originate with water infiltration into the building, with the root cause ranging from cracking in the EIFS, poor integrations at fenestration and other building components, or improperly designed walls that trap moisture which leads to structural failures and mold growth. WDP evaluates each building with a unique approach, knowing that the design and installation of EIFS varies for each project.



Damaged sheathing behind EIFS

WDP performed a façade evaluation of the **Highland District Hospital in Hillsboro, Ohio**. This active acute care facility was plagued with barrier EIFS failures and interior water leakage. Through the field evaluation, it was determined that the failures observed were a result of a poorly designed wall assembly which featured an interior vapor barrier that trapped moisture within the wall assembly. This caused the wood sheathing of the building to deteriorate, leaving the EIFS unsupported in many locations which ultimately led to failures in the EIFS that caused water infiltration, further exacerbating the moisture issues within the wall assembly. Following the evaluation, WDP developed a summary report with findings and repair recommendations for the Owner to evaluate options moving forward.

The method for which the EIFS manages bulk water is critical to the long-term performance of the wall assembly. WDP has experience with EIFS designed as a drainage system and designed as a barrier system, and an understanding of how design and construction defects can lead to failures in both systems. WDP performed a field investigation of the **Metro Lofts in St. Louis, Missouri**, which featured drainable EIFS. However, during construction, the “grooves” within the adhesive for the insulation were not properly installed, creating a system that did not drain properly. This defect was highlighted around fenestration systems because of the lack of proper end dams at flashings and missing internal seals within the windows. Following the evaluation, WDP served as the Engineer of Record for the design and construction phase of the project which required isolated removal of the EIFS around windows to permit repairs to the fenestration itself, installation of flashings, and proper drainage provisions incorporated behind the repaired sections of EIFS.

A barrier EIFS was the focus of a façade investigation and replacement at **Harbor View in Suffolk, Virginia**. The project began by conducting an investigation that included a review of the original design documents, standard and non-standard water testing, exploratory openings in the facade to document as-built conditions, analysis of facade movements, and structural analysis of the existing exterior framing. Numerous defects in the façade, exterior light gage steel framing, and structural steel supports around the windows were identified. The stud framing system was under-designed which was causing cracks to form within the EIFS that created a direct path for water infiltration into the building. This not only caused interior water leakage but also significant corrosion of the steel stud framing. WDP worked with the Owner to develop a scope of work that ultimately required the entire EIFS to be removed to retrofit the stud framing. The EIFS was then reinstalled as a drainage system with a continuous water barrier to mitigate the risk of future water infiltration should the EIFS crack over time. With the drainage system, new flashings and integrations were required around the existing window systems throughout the building. WDP served as the Engineer of Record for this project and provided both design and construction phase services following the initial field evaluation.



Harbor View EIFS replacement project

Evaluation of Adhered Stone Masonry

WDP staff are experienced in the design and construction of adhered stone masonry veneer, including tile, brick, and stone. We have observed failures as a result of poor surface preparation and improper detailing for flashing and drainage provisions, and we have also observed failures to install setting mortar in accordance with industry standards and manufacturer's requirements. These failures have led to debonding of the installed system, creating life-safety concerns for pedestrians around the building and interior water infiltration.

WDP provided building envelope consulting services at the **Mondavi Center for the Performing Arts at the University of California, Davis**. This building was experiencing water infiltration in addition to failures of an adhered ceramic tile. WDP performed a detailed façade evaluation of these conditions and determined the cause of the adhesion failures to be a result of shrinkage cracks in the mortar joints,

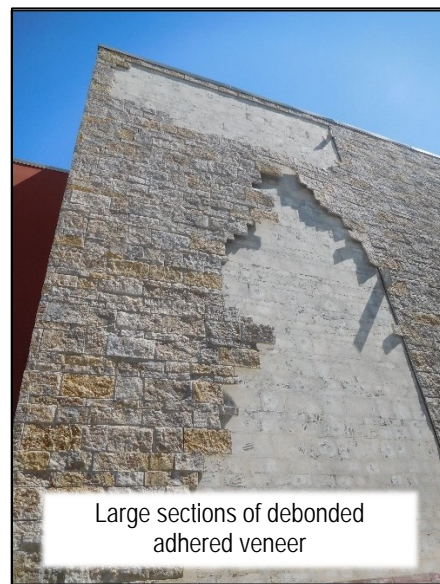


Mondavi Center for the Performing Arts

improper installation of the setting bed for the tile, and defects in the water barrier and flashing assemblies behind the tile. Water was able to penetrate through the tile façade and became retained within the system. The retained water caused efflorescence where it leached out between joints in the tile, or it migrated down to window and door openings where it penetrated to the interior of the building. WDP provided design assistance and construction monitoring services to oversee repairs that required portions of the adhered veneer to be removed and replaced.



Partially interconnected voids in setting bed retain water



Large sections of debonded adhered veneer

The surface preparation for the installation of a new adhered veneer system during a retrofit project ultimately led to significant failures when the adhered stone veneer began to fall off the building at the **Studio Movie Grill in Dallas, Texas**. WDP performed a field investigation to determine the cause of the failures, developed a repair design, and provided construction administration services. The field investigation to evaluate the condition of the adhered manufactured-stone veneer included visual surveys, sounding to identify delaminated stone units, and shear and tensile bond testing. A direct shear bond test apparatus was designed and fabricated to evaluate the stability of the remaining adhered veneer since no standard field test method was available for shear bond testing of adhered masonry veneer units. WDP also performed tensile bond strength testing to evaluate the adhesion of the veneer to the substrate. WDP developed a comprehensive report of findings with various repair options and associated approximate costs. As part of the design and construction process, WDP incorporated a detailed mockup protocol to evaluate various methods of surface preparation. Each mockup panel was

constructed, and the mortar was allowed to cure before performing quality assurance testing with bond shear tests to verify the surface preparation was adequate. WDP provided construction administration services for the repair project to ensure procedures that had been outlined during the mockup process were implemented throughout the project.



Failure to remove existing coating prior to installation contributed to failures

Evaluation of Water Infiltration

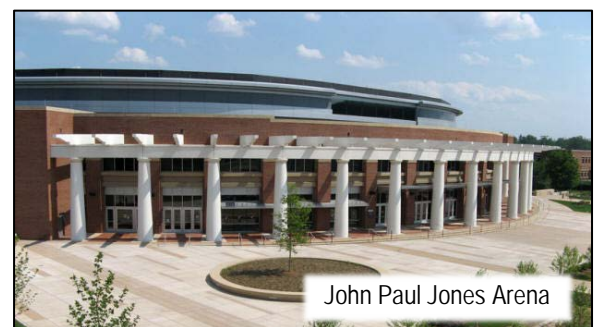
The evaluation of building facades to identify the source of water infiltration is at the heart of our business. WDP staff not only perform standardized diagnostic water tests but are also involved in the development of the standards that are used throughout the industry. Our knowledge goes beyond just understanding what is written within testing standards as we are actively engaged in the discussions to determine why and how such testing should be performed. This intimate knowledge of the standardized diagnostic tests allows WDP staff to apply this understanding to each unique condition and perform non-standardized testing when necessary to be able to pinpoint the root cause of an issue. We are able to combine this knowledge with our understanding of the design and construction of various building envelope systems to identify and verify leakage paths through the building enclosure.

WDP had the privilege to perform a field investigation into water infiltration of the **West Virginia State Capitol Building Dome in Charleston, West Virginia**. Damage to the interior plaster finishes within the central rotunda were observed by the State, but the root cause of this damage was unknown. Through performing a comprehensive document review to understand the existing conditions, performing isolated exploratory openings to verify existing construction, and performing diagnostic water testing to evaluate various building envelope systems, WDP was able to identify the entry point for water leakage and travel paths through the building that led to the interior damage that was observed. WDP provided a comprehensive report outlining the observations and findings along with a tiered approach for repairs to mitigate the water infiltration. WDP



served as the Engineer of Record for a comprehensive repair project that included the removal of over 200 limestone units around the base of the sheet metal clad dome to install through wall flashing and drainage to manage water that was penetrating to the interstitial space between the inner and outer dome. The repairs also included replacement of an internal gutter and stormwater drainage system that had failed and ultimately caused the damage to the plaster finishes below. WDP provided construction administration services through the construction phase of the project and carefully monitored the installation of new building envelope components to mitigate the risk of future water infiltration.

The **John Paul Jones Arena in Charlottesville, Virginia**, is a 360,000 square foot multipurpose arena that is home to the University of Virginia basketball team as well as numerous concerts, shows, and other live events. Since the time of construction, water leakage occurred at various locations throughout the building. WDP was hired to perform a comprehensive field investigation and identified discontinuities in the water barrier, missing flashing and cavity closures, and structural deficiencies in stud framing that supported a stucco cladding. WDP worked closely with the University to determine a scope of work that added the most value, with prioritizing repairs that were the most problematic to building operations, occupant comfort, and long-term durability of building materials. WDP developed a repair design that included removal and replacement of portions of the façade components to repair the water barrier, flashings, and integrations. At the stucco assembly, supplemental framing and connections were designed in addition to designing the new stucco assembly to perform as a drained wall system. WDP provided construction administration services to oversee the execution of the repairs for the project.



REFERENCES



References

WDP has provided building envelope and structural failure consulting services throughout the United States for a wide variety of clients including educational institutions, government, private developers, insurance companies, lending institutions, condominium associations, contractors, attorneys and federal agencies. Below are several references for projects presented in this proposal as relevant experience.

Acumen Development, LLC, Studio Movie Grill, Dallas, TX & Harbour View Grande, Suffolk, VA

Contact Name: Rich Krause
Owner's Representative
Telephone No.: (303)-799-8300
Email Address: richkraus@acumendev.com

University of Virginia, John Paul Jones Arena, Charlottesville, VA

Contact Name: Taryn Spence
Project Manager
Telephone No.: (434)-243-5329
Email Address: tsh2n@virginia.edu

West Virginia General Services Division, West Virginia State Capitol, Charleston, WV

Contact Name: Bill Barry
Director
Telephone No.: (304)-352-5532 /
Email Address: William.D.Barry@wv.gov

**ADDITIONAL TERMS AND CONDITIONS
(Architectural and Engineering Contracts Only)**

1. PLAN AND DRAWING DISTRIBUTION: All plans and drawings must be completed and available for distribution at least five business days prior to a scheduled pre-bid meeting for the construction or other work related to the plans and drawings.

2. PROJECT ADDENDA REQUIREMENTS: The Architect/Engineer and/or Agency shall be required to abide by the following schedule in issuing construction project addenda. The Architect/Engineer shall prepare any addendum materials for which it is responsible, and a list of all vendors that have obtained drawings and specifications for the project. The Architect/Engineer shall then send a copy of the addendum materials and the list of vendors to the State Agency for which the contract is issued to allow the Agency to make any necessary modifications. The addendum and list shall then be forwarded to the Purchasing Division buyer by the Agency. The Purchasing Division buyer shall send the addendum to all interested vendors and, if necessary, extend the bid opening date. Any addendum should be received by the Purchasing Division at least fourteen (14) days prior to the bid opening date.

3. PRE-BID MEETING RESPONSIBILITIES: The Architect/Engineer shall be available to attend any pre-bid meeting for the construction or other work resulting from the plans, drawings, or specifications prepared by the Architect/Engineer.

4. AIA DOCUMENTS: All construction contracts that will be completed in conjunction with architectural services procured under Chapter 5G of the West Virginia Code will be governed by the attached AIA documents, as amended by the Supplementary Conditions for the State of West Virginia, in addition to the terms and conditions contained herein. The terms and conditions of this document shall prevail over anything contained in the AIA Documents or the Supplementary Conditions.

5. GREEN BUILDINGS MINIMUM ENERGY STANDARDS: In accordance with West Virginia Code § 22-29-4, all new building construction projects of public agencies that have not entered the schematic design phase prior to July 1, 2012, or any building construction project receiving state grant funds and appropriations, including public schools, that have not entered the schematic design phase prior to July 1, 2012, shall be designed and constructed complying with the ICC International Energy Conservation Code, adopted by the State Fire Commission, and the ANSI/ASHRAE/IESNA Standard 90.1-2007: Provided, That if any construction project has a commitment of federal funds to pay for a portion of such project, this provision shall only apply to the extent such standards are consistent with the federal standards.

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

Rex A. Cyphers, P.E., Principal, COO

(Name, Title)
Rex A. Cyphers, P.E., Principal, COO

(Printed Name and Title)
P.O. Box 99, Hinton, West Virginia 25951

(Address)
(304) 660-0400 / (434) 245-6117

(Phone Number) / (Fax Number)
RCyphers@wdpa.com

(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

WDP & Associates Consulting Engineers, Inc.

(Company)



P.E., Principal, COO

(Authorized Signature) (Representative Name, Title)

Rex A. Cyphers, P.E., Principal, COO

(Printed Name and Title of Authorized Representative)

October 11, 2021

(Date)

(304) 660-0400 / (571) 292- 9842

(Phone Number) (Fax Number)

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: WDP & Associates Consulting Engineers, Inc.

Authorized Signature:  Date: October 11, 2021

State of Virginia


County of Prince William, to-wit:

Taken, subscribed, and sworn to before me this 11th day of October, 2021.

My Commission expires October 31, 2023.



AFFIX SEAL HERE

NOTARY PUBLIC 



Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
Centralized Expression of Interest
Service - Prof

Proc Folder: 925952			Reason for Modification:
Doc Description: EOI: Building 36 EIFS and Granite Assessment			
Proc Type: Central Contract - Fixed Amt			
Date Issued	Solicitation Closes	Solicitation No	Version
2021-09-21	2021-10-14 13:30	CEOI 0211 GSD2200000001	1

BID RECEIVING LOCATION


BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Customer Code:
Vendor Name : WDP & Associates Consulting Engineers, Inc.
Address : 335 Greenbrier Drive, Suite 205, Charlottesville, VA 22901
Street : 335 Greenbrier Drive, Suite 205
City : Charlottesville
State : Virginia **Country :** United States **Zip :** 22901
Principal Contact : Rex A. Cyphers, P.E., Principal, COO
Vendor Contact Phone: (434) 245-6117 **Extension:** 202

FOR INFORMATION CONTACT THE BUYER

Melissa Pettrey
 (304) 558-0094
 melissa.k.pettrey@wv.gov

Vendor Signature X  **FEIN#** 54-1763349 **DATE** 10/13/2021

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION

Central Expression of Interest

The West Virginia Purchasing Division, for the agency, the West Virginia Department of Administrations, General Services Division, ("Agency"), is soliciting Expressions of Interest from qualified firms to provide architectural/engineering services for Building 36, 321 Capitol St., Charleston, WV (aka One Davis Square) per the bid requirements, project specifications and terms and conditions as attached hereto..

INVOICE TO	SHIP TO
DEPARTMENT OF ADMINISTRATION GENERAL SERVICES DIVISION 112 CALIFORNIA AVENUE, 5TH FLOOR CHARLESTON WV 25305 US	STATE OF WEST VIRGINIA JOBSITE - SEE SPECIFICATIONS No City WV 99999 US

Line	Comm Ln Desc	Qty	Unit Issue
1	EOI: Building 36 EIFS and Granite Assessment		

Comm Code	Manufacturer	Specification	Model #
81101508			

Extended Description:

EOI: Building 36 EIFS and Granite Assessment

SCHEDULE OF EVENTS

Line	Event	Event Date
1	Vendor Q&A by 3:00 PM	2021-10-06

	Document Phase	Document Description	Page
GSD220000001	Final	EOI: Building 36 EIFS and Granite Assessment	3

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

WDP & Associates Consulting Engineers, Inc.

P.O. Box 99
Hinton, West Virginia 25951
(304) 660-0400 |
www.wdpa.com



WVU – Health Sciences Bldg



West Virginia Public Service Commission



West Virginia DGS Piedmont Parking
Garage (Bldg. 13)



West Virginia Capitol Dome



West Virginia Morgantown City Hall



WVU – South Agricultural Science Bldg



West Virginia Cooling Tower



WVU – Mountainlair Parking Garage