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Contract Number: WO6365170

Project Description: U.S. 113 (Phase 3) - From North of Massey Branch to Five Mile Branch Road

FORM A-1

PROPOSED KEY STAFF INFORMATION

Name of Proposer: David A. Bramble, Inc.

Position	Name	Years of Experience ¹	Education/ Registrations	Name of Employer
Project Design Manager	James W. Smith, PE	24/37	<ul style="list-style-type: none"> ▪ BSCE/1983/Civil Engineering ▪ Maryland Registered Professional Engineer No. 17314 	Johnson, Mirmiran & Thompson, Inc.
Hydrological/ Hydraulics Design Engineer	Paul F. Clement, PE, CPESC	25 / 37	<ul style="list-style-type: none"> ▪ MS/1982/Water Resources ▪ BSCE/1977/Civil Engineering ▪ Maryland Registered Professional Engineer No. 15466 ▪ Certified Professional in ESC No. 3716 ▪ SHA ESC Yellow Card No. 06-134 ▪ MDE ESC Green Card No. 1002 ▪ Rosgen Training Levels I-IV ▪ MDE Certified Reviewer ▪ Dale Carnegie Management Training 	Johnson, Mirmiran & Thompson, Inc.
Geotechnical Design Engineer	Michael E. Leffler, PE	7 / 34	<ul style="list-style-type: none"> ▪ MSCE/1984//Civil Engineering ▪ BSCE/1979/Civil Engineering ▪ Maryland Registered Professional Engineer No. 13725 	Johnson, Mirmiran & Thompson, Inc.

¹ Present Firm/Total

Position	Name	Years of Experience ¹	Education/ Registrations	Name of Employer
Landscape Architect	Jon S. Conner, PLA, LEED AP	20 / 28	<ul style="list-style-type: none"> ▪ MLA/1994/Landscape Architecture ▪ BS/1984/Horticulture ▪ Maryland Registered Landscape Architect #2088 ▪ Part of the National Speaker's Bureau for the National Complete Streets Coalition 	Johnson, Mirmiran & Thompson, Inc.
Highway Engineer	Randall C. Bryan, PE	12 / 13	<ul style="list-style-type: none"> ▪ BS/2000/Civil Engineering ▪ Maryland Registered Professional Engineer No. 33931 	Johnson, Mirmiran & Thompson, Inc.
Traffic Engineer	Matthew J. Wolniak, PE, PTOE	27 / 32	<ul style="list-style-type: none"> ▪ MBA/1987/Business Administration ▪ BSCEE/1981/Civil and Environmental Engineering ▪ Maryland Registered Professional Engineering No. 14719 ▪ Professional Traffic Operations Engineer (PTOE) No. 086 	Johnson, Mirmiran & Thompson, Inc.
Structural Engineer	Frederick F. Braerman, PE	27 / 33	<ul style="list-style-type: none"> ▪ BSCE/1981/Civil Engineering ▪ Maryland Registered Professional Engineering No. 14756 ▪ SHA Federal Aid Technical Review Engineer 	Johnson, Mirmiran & Thompson, Inc.

¹ Present Firm/Total

i. Key Staff Experience

James W. Smith, PE (JMT) - Project Design Manager

Education

BSCE/1983/Civil Engineering

Registration(s)

1988/Maryland Registered Professional Engineer #17314

Mr. Smith has more than 37 years of experience designing and constructing complex roadway and infrastructure projects, many on expedited schedules.

He has extensive experience addressing issues such as pedestrian and ADA compliant access, as well as the complex nature of the ancillary issues related to roadway design such as public involvement, MOT, various permits and approvals, and preparation of quality contract documents. He has worked extensively addressing civil engineering issues on public works projects requiring effective communication and coordination with a multi-disciplined team. He has also provided both construction management and administration services on utility, roadway, site development, urban park and streetscape and public transportation projects.

Mr. Smith served as a member of SHA's Special Projects Guidelines Team which was comprised of SHA and consultant representatives who are committed to developing consistent project standards for use on SHA Special Projects. The Team introduced the "SHA Special Projects Guidelines" which are now used in the development of District projects. Mr. Smith's involvement with the team also includes his participation in the development of the "Concept Development Guidelines" for Fund 76, Fund 87, and Fund 30 projects.

SHA - U.S. 113 (DB), Goody Hill Road to South of Massey Branch, Worcester County, MD (WO6245270) – Project Design Manager.

Oversaw the design for this DB project consisting of two additional lanes adjacent to the existing U.S. 113 for approx. 2.5 miles. Additionally design included new service roads to consolidate access to residential and commercial properties. Participated in partnering meetings with the contractor, SHA District 1, and SHA Office of Highway Design.

SHA - Intersection of MD 2/4 (DB), Solomons Island Road and MD 263 (Plum Point Road), Calvert County, MD (CA3015176) – Project Design Manager. Managed this DB project to add a "Maryland T" type intersection, traffic signal, roadway widening and other improvements along a 0.75 length of MD 2/4. Work included roadway design, traffic design, SWM & ESC permitting through MDE and coordinate with OOTS for approval of the signal design, signing and pavement marking.

DDOT - 11th Street Corridor Design-Build Project (DCKA-2008-R-0146), Washington, DC – JMT Project Design Manager. Oversaw the design of a 2,800 lf 8-inch diameter water main extension as part of the new bridge design. The main included appurtenances such as fire hydrants, air release valves, valves, thrust blocks and two large water meter vaults with services sized at 3- and 4-inches. Because of the location of the proposed main, special design considerations were incorporated regarding difficult geotechnical characteristics and adequate offset distances between the new water line and existing sewer lines.

DDOT - H Street - Benning Road Streetcar Implementation (DB) Washington, DC (DCKA-2010-Q-0220) - JMT Project Design Manager. Responsible for all civil/site work which consisted of 2.4 miles of streetcar infrastructure installation including related roadway, streetscape, pedestrian and utility design. Work included roadway/site design coordinated with new trackwork, car barn and maintenance facility. Required extensive utility design work for multiple traction power ductbanks, PEPCO, fiber optics, signal, lighting and communication.

SHA - Open-End Survey and Engineering Services - District 1, Dorchester, Somerset, Worcester and Wicomico Counties, MD (BCS 2000-22B) - Project Manager. Performed engineering services under this open-end contract for District 1 Special Projects. Design services have included highway & bridge design, horizontal and vertical geometry, H/H analysis, storm drain design, SWM, ESC, Metes & Bounds ROW plats, MOT plans and topo and field surveys.

A. Lead Design Firm Experience/ Qualifications and Past Performance



Paul F. Clement, P.E., CPESC (JMT) – Hydrological / Hydraulics Design Engineer

Education

MS/1982/Water Resources
BSCE/1977/Civil Engineering
Levels I-IV Rosgen Training
Dale Carnegie Management Training

Registration(s)

1987/Maryland Registered Professional Engineer No. 15466
Certified Professional in Erosion and Sediment Control (CPESC) No. 3716
SHA ESC Yellow Card No. 06-134
MDE ESC Green Card No. 1002
MDE Certified Reviewer

Mr. Clement has more than 36 years of experience in water resources engineering including numerous design-build projects. His experience includes the analysis and review of stream channel design and improvements; stormwater management (SWM) design; storm drainage design; culvert design; bridge hydrology/hydraulics (H/H); stream and floodplain elevation modeling; bridge scour; erosion and sediment control (ESC) design; stormwater pollution prevention plans; MDE - ESC, SWM and Nontidal Wetlands and Waterway permits, watershed H/H modeling, and environmental reviews. Having worked 12 years for MDE, he is intimately familiar with the preparation of comprehensive SWM and ESC plans, including review of plans for compliance and issuance of NPDES, wetland, and environmental permits. His experience includes geomorphology, wetland hydrology and bio-engineering design. He has prepared studies and technical reports using TR-20, TR-55, GIS-Hydro, HEC-2, HECRAS, WSPRO, HY-8, HY-9, HEC-18 and preliminary and final designs using SHA criteria.

SHA – U.S. 113 (DB) from North of Goody Hill Road to South of Massey Branch, Worcester County, MD (WO6245270) – Chief H/H Design Engineer. Project entailed the design/construction two additional lanes adjacent to the existing U.S. 113 for approximately 2.5 miles. H/H design included multiple culvert analyses, storm drain design, SWM analysis and design in accordance with the 2000 Maryland Stormwater Design Manual and the 2001 Maryland SWM for State and Federal Projects, and multi-phase ESC and maintenance of stream flow design. Used TR-55 and TR-20 for design of five wet detention ponds and one surface sand filter, and HY-8 hydraulic modeling and report preparation.

SHA – U.S. 113 (DB) from Hayes Landing Road to North of Goody Hill Road, Worcester County, MD (WO6345170) - Chief H/H Design Engineer. Responsibilities included drainage design, SWM design, box culvert extension hydrology, ESC design to work in conjunction with the sequence of construction and MOT, and associated construction plan sheets. A drainage report and SWM report were compiled to facilitate the SHA review process. Additionally, the project required coordination for the modifications to the MDE, ESC and SWM approval, and the USACE/MDE wetland and waterway joint permit.

SHA – U.S. 113 (DB) from Market Street to North of MD 365 (Public Landing Road), Worcester County, MD (WO7675170) - Chief H/H Design Engineer. Responsibilities in this fast track DB project included the design of drainage, SWM, plate pipe arch extension hydrology, ESC design to work with the sequence of construction and MOT, and associated construction plan sheets. Additionally, the project required coordination for the modifications to the MDE, ESC and SWM approval, and the USACE/MDE wetland and waterway joint permit.

SHA – U.S. 113 (DB) from North of Jarvis Road to Delaware Line, Worcester County, MD (WO7475170) - Chief H/H Design Engineer. Responsible for the design of drainage, ESC; MDE/USACE Joint Permit; and SWM for U.S. 113, service roads and access to adjacent properties. ESC design included controls in accordance with the MDE 1994 Standards and Specifications for ESC.

SHA – U.S. 40 at MD 715 Interchange and Improvements, Harford County, MD (HA2705171) – Chief H/H Design Engineer. Responsible for drainage design, SWM design, watershed management, pollution control design, permitting, geomorphic stream assessment, relocation design and design plan preparation for the relocation of an Unnamed Tributary to Cranberry Run. Performed geomorphic assessment, peak discharge analysis, shear stress computations, existing and proposed conditions H/H studies, culvert design, natural channel relocation design, channel mobility assessment, ESC design, stream diversion plans, and landscaping plan coordination.



Michael E. Leffler, PE (JMT) - Geotechnical Design Engineer

Education

MSCE/1984/Civil Engineering
BSCE/1979/Civil Engineering

Registration(s)

1984/Maryland Registered Professional
Engineer #13725

Mr. Leffler has more than 34 years of experience in geotechnical engineering and construction inspection and testing services. His geotechnical engineering experience includes management of hundreds of projects. He develops field investigation programs, including test boring and test pits to obtain soil and groundwater samples for geotechnical and corrosivity engineering analysis.

He also prepares reports to provide geotechnical recommendations and design information for low to high-rise structures, parking garages, sheet-pile bulkheads, piers, wharfs, slopes, site consolidation/stabilization, reinforced slopes, utilities, retaining wall systems and corrosion potential. Mr. Leffler has provided geotechnical services on numerous design-build projects for clients throughout the eastern U.S. including SHA.

SHA – U.S. 113 (DB) from North of Goody Hill Road to South of Massey Branch, Worcester County, MD (WO6245270) – Senior Geotechnical Design Engineer. Responsible for geotechnical and pavement engineering evaluation and analysis for this 2.5 mile project consisting of the design and construction of two additional lanes along the existing U.S. 113 alignment to create a dual divided highway. Geotechnical services included performing over 200 borings on land and in the Anacostia River, design recommendations for stormwater management ponds, foundation systems including driven H-Pile foundations and large diameter belled drilled shafts, large approach embankments over soft ground and adjacent to existing structures, design of reinforced soil slopes, ground improvement systems to mitigate settlement as global stability issues including wick drains and surcharge, geo-concrete and steel columns, lightweight aggregate and Geofoam block and geotechnical instrumentation including piezometers, inclinometers and settlement plates.

DDOT - 11th Street Corridor (DB), Bridges and Interchange Improvements I-295 and I-695 (DCKA-2008-R-0146), Washington, DC - Senior Geotechnical Design Engineer. Responsible for managing and providing interpretation of the subsurface exploration including geotechnical evaluation for roadway construction, pre-cast arch structure, bridge foundations, culvert crossings, slope stability and retaining wall design. During construction, was responsible for providing consultation related to roadway construction, bridge foundations, slopes and retaining wall. The project includes close coordination with DDOT-TSA, FHWA-EFLHD, DDOT, Advisory Neighborhood Commissions and the United States Postal Service.

FHWA-EFLHD/VDOT - Fairfax County Parkway (DB), Phases I/II and IV, Springfield, VA (R000-029-249/DTFH71-08-R-00007) - Senior Geotechnical Design Engineer. Responsible for QA and value engineering for geotechnical design of this DB project, which includes roadways; interchanges; 6 new bridges including Fullerton and EPG Access Roads; 1 bridge widening and multipurpose trail alongside a portion of the road; retaining walls; and sound walls. The project includes a multi-disciplined design effort that includes geotechnical, roadway, structural, traffic, SWM, drainage, ESC, extensive environmental coordination and planning to meet requirements of existing Fort Belvoir Land Use Controls multipurpose trail, lighting, utility coordination. Responsible for managing and providing interpretation of the subsurface exploration of this task including geotechnical evaluation for roadway construction, bridge foundations, culvert crossings, slope stability and retaining wall designs.

A. Lead Design Firm Experience/ Qualifications and Past Performance



Jon S. Conner, PLA, LEED AP (JMT) - *Landscape Architect*

Education

MLA/1994/Landscape Architecture
BS/1984/Horticulture

Registration(s)

1995/Maryland Registered Landscape Architect #2088
2009/Leadership in Energy and Environmental Design (LEED) AP

Mr. Conner has more than 28 years of experience in landscape architecture and environmental planning for transportation improvement projects. He has experience at all levels of project development from conceptual engineering alternatives through final construction documents including plans, specifications and estimates in accordance with SHA, FHWA and AASHTO standards and policies. He has significant experience with transportation improvement projects including engineering alternatives, typical sections using parkway design concepts, land use analysis, and transportation planning with a multi-modal approach and the incorporation of pedestrian and bicycle facilities. He has prepared various environmental documents under the NEPA/MEPA process including EA, FONSI and CE documents. He is experienced with SHA's Stages I, II and III project planning process including the MD Streamlined Environmental Regulatory Process. In addition, he has conducted wetland and forest stand delineations and processed applicable permits through the MD DNR, MDE and the USACE and local counties. He is certified by the MD DNR to prepare Forest Conservation Plans.

Mr. Conner is a member of the Association of Pedestrian and Bicycle Professionals and is JMT's liaison to the National Complete Streets Coalition (NCSC). He is serving on the Coalition's National Speaker's Bureau.

SHA – U.S. 113 (DB) from North of Goody Hill Road to South of Massey Branch, Worcester County, MD (WO6245270) – Senior Landscape Architect. Responsible for the preparation of landscape plans for roadside areas and SWM facilities for this DB project with SHA for a distance of approximately 2.5 miles. SWM facility planting plans were designed to the SHA's Guidelines for visual quality for SWM facilities. Coordinated with DNR and SHA for *compliance with Section 5-103 of the State Reforestation Law*. Responsible for the preparation of reforestation plans for impacts within SHA ROW.

SHA – U.S. 113 (DB) from Hayes Landing Road to North of Goody Hill Road, Worcester County, MD (W06345170) - Senior Landscape Architect. Responsible for the preparation of landscape plans for roadside areas and SWM facilities for this DB project with SHA for a distance of approx. 2.5 miles. SWM facility planting plans were designed to the SHA's *Guidelines for Visual Quality for SWM Facilities*. Coordinated with DNR and SHA for *compliance with Section 5-103 of the State Reforestation Law*. Responsible for the preparation of reforestation plans for impacts within SHA ROW.

SHA – U.S. 113 (DB) from Market Street to North of MD 365 (Public Landing Road), Worcester County, MD (W07675170) - Senior Landscape Architect. Responsible for the preparation of landscape plans for roadside areas and SWM facilities for this DB project with SHA for a distance of approximately 4.0 miles. SWM facility planting plans were designed to the SHA's *Guidelines for Visual Quality for SWM Facilities*. Coordinated with DNR and SHA for compliance with Section 5-103 of the State Reforestation Law. Responsible for the preparation of Reforestation plans for impacts within SHA ROW.

SHA – U.S. 113 (DB) from North of Jarvis Road to Delaware Line, Worcester County, MD (W07475170) - Landscape Architect / Environmental Specialist. As part of the DBT, prepared landscape and reforestation plans for this DB project in Worcester County for a distance of approximately 2.3 miles. Plans included reforestation within SHA right-of-way and planting designs for roadside areas and SWM facilities.

SHA - Open-End Landscape Architecture Services, Statewide, MD (BCS 2002-02A) - Deputy Project Manager. JMT has worked with the Landscape Architecture Division of SHA's Office of Environmental Design on more than 25 tasks including: MD 528 (Philadelphia Avenue), Ocean City (context sensitive pedestrian improvements, landscaping, lighting, and irrigation design for the improvements to this heavily traveled arterial); and U.S. 50/MD 450 Interchange Improvements (landscape design, reforestation).



Randall C. Bryan, PE (JMT) - Highway Engineer

Education

BS / 2000 / Civil Engineering

Registration(s)

2007/Maryland Registered Professional Engineer #33931

Mr. Bryan has more than 13 years of experience in civil, site and transportation related projects. His broad based design expertise encompasses all facets of civil engineering design including geometric design, site design, stormwater management, drainage and erosion and sediment control design and construction phasing.

Mr. Bryan has been the Highway Engineer for the past four U.S. 113 projects. Additionally, Mr. Bryan has worked extensively with SHA District 1 projects and is familiar with the challenges of the flat terrain and soil conditions.

SHA - U.S. 113 (DB) from North of Goody Hill Rd to South of Massey Branch, Worcester County, MD (WO6345270) – Highway Engineer. Design for the addition of two lanes adjacent to existing U.S. 113 for approximately 2.5 miles. New service roads consolidated access to residential and commercial properties. Mr. Bryan coordinated between the various design groups and oversaw the assimilation and distribution of plans for review and construction. He also participated in partnering meetings with the contractor, SHA District 1, and SHA Office of Highway Design and implemented requirements from each.

SHA - U.S. 113 (DB) from Hayes Landing Road to North of Goody Hill Road, Worcester County, MD (WO6345170) – Highway Engineer. Responsible for the dualization of 2.5 miles of design. Intersection improvements included left and right turn lanes including acceleration and deceleration lanes. The typical section consisted of 2, 24' roadways with 10' outside shoulders. The NB and SB traffic were separated by a 34' median, which included 4' paved shoulders, a 26' grass median and median w-beam traffic barrier. Access management roads were constructed to provide access to local businesses and residences. The existing 9' x 5' single cell box culvert carrying Beaverdam Creek/ Poplartown Branch was extended under the new roadway.

SHA - U.S. 113 (DB) from Market Street to North of MD 365 (Public Landing Road), Worcester County, MD (WO6245270) – Highway Engineer. Responsible for the design of a 4-mile section of U.S. 113 from an undivided, two-lane highway to a median divided, four-lane highway. Checked and refined horizontal and vertical alignments developed by the planning team, as well as implemented and refined the typical sections. Designed a truck check weigh station including on-ramp and off-ramp design; lighting and signing; inspection facility requirement; and vehicle storage requirements. Participated in partnering meetings with the contractor, SHA District 1, and SHA Office of Highway Design and implemented requirements from each.

SHA - U.S. 113 (DB) from North of Jarvis Road to Delaware Line, Worcester County, MD (W07475170) – Highway Engineer. Responsible for a 2.5 mile DB project in Worcester County for the SHA. He was in charge of checking horizontal and vertical alignments from the planning team, implementing and refining the typical sections, and coordinating between the various support groups, including water resources, environmental, traffic and landscaping. Attended progress meetings with the contractor and SHA District 1, and coordinated requirements from each. Performed site visits to inspect compliance of construction with contract drawings and specifications. Created as-built drawings from on-site inspection and contractor's notes.

Matthew J. Wolniak, PE, PTOE (JMT) - Traffic Engineer

Education

MBA/1987/Business Administration
BSCEE / 1981 / Civil and Environmental
Engineering

Registration(s)

1986/Maryland Registered Professional
Engineer #14719
1999 / Professional Traffic Operations
Engineer #086

Mr. Wolniak has over 32 years of traffic engineering, planning and forecasting experience. This includes the preparation of design plans for MOT, traffic signals, telemetry systems, signing, marking, lighting and ITS. He has performed numerous traffic studies including signal warrant, parking, traffic calming, origin-destination, corridor analysis, bicycle and pedestrian studies, safety studies and capacity analysis using VISSIM, Synchro, HCS and Sidra.

Mr. Wolniak has developed travel demand forecasts using regional MPO models, plus he has developed a multi-state travel demand model. For 15 years, Mr. Wolniak has taught a university course on the Highway Capacity Manual and traffic engineering.

SHA - U.S. 113 (DB) from North of Goody Hill Rd to South of Massey Branch, Worcester County, MD (WO6345270) – Chief Traffic Engineer. This 2.5-mile project consisted of the design and construction of two additional lanes along the existing U.S. 113 alignment to create a dual divided highway. The typical section of dualized highway included two 12-foot lanes, ten foot outside shoulders and a 34-foot median with double-faced W-beam traffic barrier.

SHA - U.S. 113 (DB) from Hayes Landing Road to North of Goody Hill Road, Worcester County, MD (WO6345170) – Chief Traffic Engineer. Responsible for the dualization of 2.5 miles of design. Intersection improvements included left and right turn lanes including acceleration and deceleration lanes. The typical section consisted of 2, 24' roadways with 10' outside shoulders. The NB and SB traffic were separated by a 34' median, which included 4' paved shoulders, a 26' grass median and median w-beam traffic barrier.

SHA - U.S. 113 (DB) from Market Street to North of MD 365 (Public Landing Road), Worcester County, MD (W06345170) – Chief Traffic Engineer. This 4-mile project consisted of dualization of U.S. 113 from an undivided, two-lane highway (one lane in each direction) to a median divided, four-lane highway (two lanes in each direction). This fast tracked DB project included the design of vertical and horizontal alignments for the mainline and intersecting roads, as well as a weigh and inspection station pull-off site.

SHA - U.S. 113 (DB) from North of Jarvis Road to Delaware Line, Worcester County, MD (W07475170) – Chief Traffic Engineer. Responsible for a 2.3 mile section of U.S. 113 starts north of Jarvis Road and ends at the Delaware state line. As part of this project, Mr. Wolniak was responsible for the design of traffic signal, signing, and pavement marking plans and MOT plans. Coordinated with TEDD, the District office and the Highway Development Division in the preparation of plans. Conducted field inventories of all signing and existing signals. Developed equipment lists and quantity sheets.

SHA – U.S. 40 at MD 715 Interchange and Improvements, Harford County, MD (HA2705171) – Traffic Engineer. Performed the design of traffic signals, signing, pavement markings and maintenance of traffic plans. This included the development of a transportation management plan. Signal plans included the development of both temporary and permanent signals. Pedestrian signals including ADA improvements were included. Performed Synchro analysis to develop signal timing. Performed an origin-destination traffic study and prepared MOT and transportation management plans.

Frederick F. Braerman, PE (JMT) - Structural Engineer

Education

BSCEE / 1981 / Civil Engineering

Registration(s)

1986/MD Registered Professional Engineer
#14756
SHA Federal Aid Technical Review
Engineer

Mr. Braerman has more than 32 years of experience in the rehabilitation, widening and design of highway bridges and foundations as well as the design of pedestrian bridges, retaining walls, noise abatement walls, box culverts, and sign structures. He has been responsible for and coordinated tasks such as site inspection, analysis/recommendations, and final design for various types of structures, laboratory testing, environmental studies and reports, and the obtaining of construction permits. He is extremely familiar with SHA and AASHTO policies. Mr. Braerman has been involved in numerous SHA design-build projects including the most recent U.S. 113 projects.

SHA - U.S. 113 (DB) from North of Goody Hill Rd to South of Massey Branch, Worcester County, MD (WO6345270) – Sr. Structural Engineer. This 2.5-mile project consisted of the design and construction of two additional lanes along the existing U.S. 113 alignment to create a dual divided highway. The typical section of dualized highway included two 12-foot lanes, ten foot outside shoulders and a 34-foot median with double-faced W-beam traffic barrier. The existing 14' x 6' single cell box culvert carrying Goody Hill Branch was extended under the new roadway, and a new 14' x 6' box culvert carrying Massey Branch was constructed. As well, the dual cell, 54 inch reinforced concrete pipe culvert carrying Porter Creek was extended under the new roadway.

SHA - U.S. 113 (DB) from Hayes Landing Road to North of Goody Hill Road, Worcester County, MD (W06345170) - Sr. Structural Engineer. Responsible for the design of a precast 9'-0" x 5'-0" box culvert extension on a cast in place foundation over timber piles beneath U.S. 113. Work involved the complete design and plan preparation for this structure including the maintenance of stream flow details, coordination with SHA Office of Bridge and Bramble.

SHA - U.S. 113 (DB) from Market Street to North of MD 365 (Public Landing Road), Worcester County, MD (W07675170) - Sr. Structural Engineer. Responsible for the design of an 8'-10" by 6'-1" structural plate pipe arch extension beneath U.S. 113. Work involved the complete design and plan preparation for this structure including the maintenance of stream flow details, coordination with SHA Office of Bridge and Bramble.

SHA - U.S. 113 (DB) from North of Jarvis Road to Delaware Line, Worcester County, MD (W07475170) - Sr. Structural Engineer. Responsible for the design of a precast concrete 10'-6" by 6'-3" single cell box culvert carrying Carey Branch beneath U.S. 113. Effort included a complete red line revision to plans that were originally prepared for a cast-in-place concrete box culvert by another consultant for SHA. Box culvert was founded on a timber pile mat foundation with reinforced concrete pile cap. Work included structural design and detailing, revisions to the maintenance of stream flow details, coordination with SHA Office of Bridge and Bramble.

SHA - Open-End Bridge Design Services, Statewide, MD (Current Contract BCS 2009-03) (5 Consecutive Contracts) - Project Manager. Responsible for the design and preparation of plans and specifications, contract documents, and shop drawing review for new and rehabilitated bridges, deck replacements, culverts, and incidental structures. Work included foundation design, approach roadway design, lighting, signalization, preparation of MOT plans and coordination with environmental agencies.


Contract Number: Project Number W06365170

Project Description: U.S. 113 Phase 3 - North of Massey Branch to Five Mile Branch Road

FORM A-2

PROJECT DESCRIPTION

Name of Proposer: David A. Bramble, Inc.

Name of Firm: <u>Johnson, Mirmiran & Thompson, Inc.</u>	
Project Role: <u>Lead Designer</u>	
Designer: <input checked="" type="checkbox"/> Contractor: <input type="checkbox"/> Other (Describe): _____	
Years of Experience: Roads/Streets: <u>43</u> Bridges/Structures: <u>43</u> Environmental: <u>43</u>	
Project Name, Location, Description and Specific Nature of Work for which Company was responsible: U.S. 113 (DB) from Hayes Landing Road to North of Goody Hill Road, Worcester County, MD	
<p>JMT was the lead designer for the contractor, David A. Bramble, Inc. The project, located in Worcester County, begins at north of Goody Hill Road (southern limit) and ends at just north of Hayes Landing Road (northern limit), a distance of about 2.5 miles. The improvements included constructing U.S. 113 as a dual divided highway. The two additional lanes were constructed on the west side of the existing U.S. 113 roadway, ultimately becoming a southbound roadway. The existing U.S. 113 become the northbound roadway. Intersection improvements included left and right turn lanes with acceleration and deceleration lanes. The proposed typical section consisted of 2, 24-foot roadways with 10-foot outside shoulders. The northbound and southbound traffic is separated by a 34-foot median which includes 4-foot paved shoulders, a 26-foot grass median and median w-beam traffic barrier. Access management roads were constructed to provide access for the local traffic. Also included on this project was drainage and SWM facilities design, intersection lighting design, landscaping, and reforestation.</p>	<p>U.S. 113 Hayes Landing Road Personnel Proposed for this U.S. 113 Phase 3 Project</p> <ul style="list-style-type: none"> • Randall Bryan, PE • Fred Braerman, PE • Matt Wolniak, PE • Paul Clement, PE • Jon Conner, PLA • David Stickles, LS 
List any awards and/or commendations received for the project: N/A	
Name of Client (Owner/Agency, Contractor, etc.): Maryland State Highway Administration	
Address: 707 N. Calvert Street, Mail Stop C-102 Baltimore, MD 21202	
Contact Name: David Phillips	Telephone: 410-545-8823
Owner's Project or Contract No.: WO6345170	Fax No.: 410-209-5001
Contract Value (U.S.\$): \$14,000,000 constr. cost	Final Value (U.S. \$): \$14,000,000 constr. cost
Percent of Total Work Performed by Company: 100% of Design	
Commencement Date: 11/2007	Original Completion Date As Defined in IFB: 9/3/2009
Actual Completion Date: 2/31/2010	
Any disputes taken to arbitration or litigation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Contract Number: Project Number W06365170

Project Description: U.S. 113 Phase 3 - North of Massey Branch to Five Mile Branch Road

FORM A-2

PROJECT DESCRIPTION

Name of Proposer: David A. Bramble, Inc.

Name of Firm: <u>Johnson, Mirmiran & Thompson, Inc.</u>	
Project Role: <u>Lead Designer</u>	
Designer: <input checked="" type="checkbox"/> Contractor: <input type="checkbox"/> Other (Describe): _____	
Years of Experience: Roads/Streets: <u>43</u> Bridges/Structures: <u>43</u> Environmental: <u>43</u>	
Project Name, Location, Description and Specific Nature of Work for which Company was responsible: U.S. 40 at MD 715 (DB) Interchange and Improvements, Harford County, MD	
<p>JMT was the Lead Designer for this project to accommodate additional personnel being relocated to the U.S. Army's Aberdeen Proving Ground (APG) facility as part of the BRAC initiative. The work included widening of MD 715 in both directions between south of Amtrak Bridge to the APG entrance under Phase 1. The Phase 2 work included upgrading the interchange including widening the bridge on MD 715 over U.S. 40. JMT designed improvements to connecting ramps, and adjoining roadways and intersection improvements, for a total project length of approximately 2.40 miles. All design work included: Utility Relocation and Design - Provided extensive utility coordination with utility agencies; H/H Design & Stream Restoration - The storm drain system consists of approximately 20,000 LF of new pipe, four (4) SWM ponds and associated ESC design; Roadway Design - Prepared design plans to address the roadway widening required along EB U.S. 40, along NB and SB MD 715 leading into APG and along Old Philadelphia Rd.; Structural Design - Prepared the design plans for the widening of the existing 203' long, 2-span Bridge carrying MD 715 over U.S. 40 and a 300 ft. MSE retaining wall; Traffic Engineering and Lighting - Design included two new traffic signals, updates to an existing traffic signal, interconnect plans and lighting design. Detailed MOT and detour plans were prepared; Geotechnical Investigations - Consists of deflectometer testing of the pavements, and engineering for earthwork stability, pavement sections, bridge foundations/retaining wall; and Extensive Public Relations and Partnering - Attended public meetings, prepared flyers, and established a toll free info number.</p>	<p>U.S. 40/MD 715 Personnel Proposed for this U.S. 113 Phase 3 Project</p> <ul style="list-style-type: none"> • Matt Wolniak, PE • Paul Clement, PE • Jon Conner, PLA • Mike Leffler, PE • Timothy Schott • David Stickles, LS • Bill Schaub, PE
List any awards and/or commendations received for the project: N/A	
Name of Client (Owner/Agency, Contractor, etc.): Maryland State Highway Administration	
Address: 707 N. Calvert Street, Mail Stop C-102 Baltimore, MD 21202	
Contact Name: David Phillips	Telephone: 410-545-8823
Owner's Project or Contract No.: HA2705171	Fax No.: 410-209-5001
Contract Value (U.S.\$): \$17,777,000	Final Value (U.S. \$): \$17,777,000
Percent of Total Work Performed by Company: 100% of Design	
Commencement Date: 7/15/2010	Original Completion Date As Defined in IFB: 7/31/2013
Actual Completion Date: 7/31/2013	
Any disputes taken to arbitration or litigation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	




Contract Number: Project Number W06365170

Project Description: U.S. 113 Phase 3 - North of Massey Branch to Five Mile Branch Road

FORM A-2

PROJECT DESCRIPTION

Name of Proposer: David A. Bramble, Inc.

Name of Firm: <u>Johnson, Mirmiran & Thompson, Inc.</u>	
Project Role: <u>Lead Designer</u>	
Designer: <input checked="" type="checkbox"/> Contractor: <input type="checkbox"/> Other (Describe): _____	
Years of Experience: Roads/Streets: <u>43</u> Bridges/Structures: <u>43</u> Environmental: <u>43</u>	
Project Name, Location, Description and Specific Nature of Work for which Company was responsible: MD 924 (Main Street) Streetscape Improvements (DB) from MD 22 to Maulsby Avenue, Harford County, MD Modifications to MD 924 were sought to encourage visitors and improve flow along this central corridor for county activities. JMT and our D-B partner were selected to provide a 3/4-mile streetscape project that would not only enhance the town's nostalgic look and feel while applying traffic safety improvements but would also minimize construction impacts on local businesses. JMT performed all design including civil, structural, utility, traffic, drainage, and electrical engineering; landscape architecture; permit acquisition; right-of-way services; and surveying. Some of the complex design components JMT encountered included reconfiguration of on-street parking, elimination of the existing sidewalk bifurcation of over 2' in vertical height, upgrades of pedestrian facilities to meet ADA requirements, pedestrian-scale lighting that minimized light pollution, and replacement of water line service connections and the main line. These elements needed to be constructed while maintaining traffic lanes and continuing water service. Additional attention was required for the courthouse, police station, and county office complex. JMT used the DB delivery method to best advantage by segmenting the project into three phases, each of which would ensure vehicular flow at peak times, no disruptions to access for Main Street businesses, and constant utility service, while delivering the project on a fast track basis.	
<div style="float: right; background-color: #e0e0e0; padding: 5px;"> <p>MD 924 Personnel Proposed for this U.S. 113 Phase 3 Project</p> <ul style="list-style-type: none"> • Matt Wolniak, PE • Paul Clement, PE • Jon Conner, PLA • David Stickle, LS </div> 	
List any awards and/or commendations received for the project: DBIA Regional D-B Merit Awards Transportation Projects: Under \$25 million; ACEC/MB Honor Award for Special Projects; MdQI Awards of Excellence – Context Sensitive Project Development and Partnering; and Bel Air Economic & Community Development Commission – Archer-Bull Award.	
Name of Client (Owner/Agency, Contractor, etc.): Maryland State Highway Administration	
Address: 707 N. Calvert Street, Mail Stop C-102 Baltimore, MD 21202	
Contact Name: Jeffrey Folden	Telephone: 410-545-8814
Owner's Project or Contract No.: HA1865184	Fax No.: 410-209-5001
Contract Value (U.S.\$): \$8,671,472	Final Value (U.S. \$): \$8,671,472
Percent of Total Work Performed by Company: 100% of Design	
Commencement Date: 9/14/2006	Original Completion Date As Defined in IFB: 9/25/2008
Actual Completion Date: 11/1/2008	
Any disputes taken to arbitration or litigation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

ii. Past Performance

Environmental Past Performance

JMT appreciates that design-build projects afford multiple opportunities for reducing environmental impacts as well as reducing waste and pollution through the use of innovative techniques, products and practices over the life of the project. As lead designer of multiple design-build projects within the state of Maryland as well as throughout the mid-Atlantic, JMT identifies these opportunities early in the design phase and collaborates with the contractor to ensure that the approaches proposed are both reasonable and feasible from a construction standpoint. JMT continues to work with the contractor throughout the construction phase to ensure compliance with permit requirements and further identify opportunities for avoidance and minimization of impacts.

For all design-build pursuits, JMT provides an environmental briefing to the entire team (including JMT designers and the prime contractor) that identifies the sensitive environmental features throughout the project area, permits required to complete the work and specific commitments that must be upheld as recorded in the environmental approval documents for the project. The purpose of the environmental briefing is to calibrate the entire team to environmental stewardship opportunities.

For design build projects JMT also develops a compliance matrix that can be used to track compliance with permit conditions and environmental commitments associated with the project. In some cases the matrix development is a client requirement; however, JMT has proactively implemented this practice even when not required per the contract. JMT also develops and implements project-specific Environmental Compliance Awareness Training modules that is given to all construction workers prior to entering the project site. We find that this is an effective means by which to both inform and empower all personnel to incorporate environmental stewardship not only while on the job but also in their everyday lives. JMT provided this training to over 1,200 construction personnel on the 11th Street Bridge project in Washington, DC; this project was the largest construction project undertaken by the District Department of Transportation and there were no environmental violations or shut-downs over the five year construction period.



Where possible, minor shifts in alignment can significantly reduce impacts. JMT explores the potential for alignment shifts early in the process to determine whether or not such an approach is feasible with respect to overall project schedule and budget. Some modifications have only beneficial impacts such as revising the vertical alignment within Phases 2A and 2B of US 113 to minimize amount of fill necessary as well as reducing the LOD; this modification resulted in reductions of impacts project-wide. JMT designers modified slopes on the Fairfax County Parkway project in order to completely avoid impacts to known populations of small whorled pogonia (*Isotria medeoloides*), a federally-listed threatened plant species, as well as the supporting habitat.

If warranted, JMT can either perform or support the sponsor in a re-evaluation of NEPA decisions as required by the Federal Highway Administration and the Council of Environmental Quality.

JMT works with contractors to evaluate materials, means and methods with respect to construction that could further minimize impacts to environmental resources. For example, impacts to the bottom of the Anacostia River were reduced below the authorized amount through modification of the pier foundations. Additionally, impacts to aquatic biota from vibrations associated with driving of piles were reduced to *de minimis* levels due to use of hollow concrete piles and vibratory hammers. JMT coordinated with the District Department of the Environment, the US Army Corps of Engineers and National Oceanographic and Atmospheric Administration's National Marine Fisheries Service to receive authorization for in-stream construction to continue through the Time-of-Year restrictions imposed for the Anacostia River. Continuous monitoring of underwater vibrations confirmed that vibratory thresholds were not exceeded and there were no reports or observations of fish mortalities during the project.

Additional innovations used on past projects have including use of retaining walls, slope stabilization, fan walls, median/ROW width reductions via innovative SWM, and geometry improvements to reduce impacts. Others have included phased roadway construction to minimize ESC bump-outs, top-down construction of structures, foot-print reduction using alternative construction techniques, ESC BMPs that reduce width (such as fence diversions instead of berm diversions), lengthening of bridge spans to avoid floodplain impacts, early construction of noise walls and perimeter fencing to prevent wildlife interactions, use of lined concrete washout pits, use of rock/fabric blankets to convey seeps and maintain wetland hydrology, SWM BMPs that reduce thermal loading to streams, use of stabilization methods and perimeter controls for geotechnical work near wetlands/waterways, and creation of vernal pools or floodplain wetlands under bridges.

For the Montrose Parkway Project, JMT successfully implemented many of the above innovations to reduce the limits of disturbance and minimize impacts. By siting sand filters and other water quality treatment practices beneath or directly adjacent to the roadway, significant reductions were realized with respect to both wetland and forest resources, including habitat for Forest Interior Dwelling Species of birds. In design of the Woodrow Wilson Bridge and the I-495 interchange in Prince George's County, Maryland, JMT designers incorporated a retaining wall to reduce impacts to Smoots Cove and existing populations of submerged aquatic vegetation. The innovations implemented on both Montrose Parkway and the Woodrow Wilson Bridge were proposed by JMT.

One of JMT's goals on all design build projects is to minimize fish mortality during stream relocation or permitted in-stream work, and prevent the injury or death of any animals during construction. Prior to stream work, we seek to relocate fish and other aquatic organisms downstream of any impacted areas using hand nets if possible, and install netting to prevent re-entry to the impacted reach. Also, prior to clearing and grubbing, we conduct intensive ground searches focusing on slow-moving animals such as reptiles and amphibians, and relocate them to nearby locations outside of the construction zone. We conduct periodic monitoring of the site and perimeter controls to prevent re-entry of specimens.

i. Key Staff Experience

Contract Number: Project Number W06365170

Project Description: US 113 Phase 3 - North of Massey Branch to Five Mile Branch Road

FORM A-1

PROPOSED KEY STAFF INFORMATION

Name of Proposer: David A. Bramble, Inc.

Position	Name	Years of Experience ¹	Education/ Registrations	Name of Employer
Design-Build Project Manager	Richard B. Murphy	14 / 36	<ul style="list-style-type: none"> ▪ University of Maryland / 1976-78 ▪ MDE Green Card #10314 ▪ OSHA Training and Certificate 	David A. Bramble, Inc.
Construction Manager	Robert H. Bramble, Jr.	29 / 36	<ul style="list-style-type: none"> ▪ Navy Sea Bees ▪ SHA Sediment/Erosion Certified Program ▪ ATSSA - Certified Traffic Control Supervisor #53893 ▪ Safety First, Inc. – Competent Person Training ▪ MDE Green Card Certification #31830 ▪ SHA Erosion and Sediment Control Certification #14-08 	David A. Bramble, Inc.

¹ Present Firm/Total

i. Key Staff Experience

Richard B. Murphy (Bramble) - Design-Build Project Manager

Education

University of Maryland / 1976-78

Registration(s)

MDE Green Card #10314

OSHA Training and Certifications

Mr. Murphy attended the University of Maryland between 1976 and 1978 while serving in the United States Air Force. He graduated from the U.S.AF Security Police Academy and the U.S.AF Tactical Ground Combat School. During his 36-year career in highway and site construction he has attended numerous industry and trade association seminars and courses in management, cost control, scheduling, safety, claims, and contract law. From 1980 to 1998 Mr. Murphy served as Chief Estimator and Project Manager for IA Construction Corp. During this time period he bid and managed hundreds of SHA projects as well as numerous commercial and industrial site development projects ranging in size from \$100,000.00 to \$30,000,000.00. From 1998 to 2000 Mr. Murphy served as Delmarva Area Manager for IA Construction Corp responsible for all operations on the Delmarva Peninsula. Duties included overseeing daily operations, supervising the estimating staff, developing budgets and forecasts, and insuring that manpower and resources were allocated efficiently to ongoing projects in Maryland and Delaware. In 2000 Mr. Murphy joined American Paving Corp., a sister company of David A. Bramble, Inc. since 2005, as Chief Estimator and Project Manager. He performed the quantity takeoffs, bidding, and project management for paving on all the U.S. 113 corridor projects that have been constructed to date. Mr. Murphy currently performs bidding and project management for all jobs on the lower Eastern Shore of Maryland

SHA - U.S. 113 (Design-Build) from Market Street to North of MD 365 (Public Landing Road), Worcester County, MD (WO7675170) - Estimator/Project Manager, Paving. Worked closely with the lead construction firm and design build managers to generate final bid quantities, unit prices for paving, scheduling and performing paving operations, and material clearance in this design-build job.

SHA - U.S. 113 (Design Build) from North of Jarvis Road to the Delaware Line, Worcester County, MD (WO7475170) - Estimator/Project Manager, Paving. Worked closely with the lead construction firm and design build managers to generate final bid quantities, unit prices for paving, scheduling and performing paving operations, and material clearance in this design-build job.

SHA - U.S. 113 (Design Build) from North of Goody Hill Road to South of Massey Branch, Worcester County, MD (WO6345270) - Estimator/Project Manager, Paving. Worked closely with the lead construction firm and design build managers to generate final bid quantities, unit prices for paving, scheduling and performing paving operations, and material clearance in this design-build job.

SHA - MD 589 (Racetrack Road) at Showell Elementary School, Worcester County, MD (WO4155130) - Estimator/Project Manager. This project added a travel lane and shoulder to MD 589 in the vicinity of Showell Elementary School. Work consisted of full depth pavement construction, realignment/reconstruction of open and closed drainage systems, and safety improvements. Phased construction was necessitated in order to insure uninterrupted access to the school and to accommodate beach-going traffic.

SHA - Geometric Improvements at U.S. 50 Business and Tilghman Road, Wicomico County, MD (WI3775176) - Estimator/Project Manager. This project was for the geometric realignment of Tilghman Road where it intersects with U.S. 50 East bound and West bound in Salisbury, Maryland. Work consisted of the reconstruction of an active intersection and approach roads under traffic. Phased construction necessitated concurrent day/night operations.

Robert H. Bramble, Jr. (Bramble) - Construction Manager / Project Superintendent

Education

High School Diploma
Navy Sea Bees

Registration(s)

ATSSA - Certified Traffic Control Supervisor
#53893
Safety First, Inc. – Competent Person
Training (05/17/13)
MDE Green Card Certification #31830
SHA Erosion and Sediment Control
Certification # 14-08

Mr. Bramble has 36 years of experience in civil works projects. He worked as a laborer for David A. Bramble, Inc. during the summers as a high school student eventually being promoted to operator. He enlisted in the Navy in 1981, and was assigned to the Navy Sea Bees Naval Construction Battalion. As a foreman on construction projects, Mr. Bramble went to various locations including Puerto Rico, Guam, Texas, and Spain. In 1986 he resumed his position with Bramble. By 1990, he was the fine grade foreman and was in charge of doing all the fine grading. Mr. Bramble became a project superintendent in 1998. He has worked on major projects for the company and won numerous awards for his work. He has extensive experience with highway construction, drainage construction, environmental sensitivity, utility coordination, and maintenance of traffic, including management of DB projects.

SHA - Dualization of U.S. 113 on Existing Alignment from North of Goody Hill Road to South of Massey Branch Road, Phase 2B in Worcester County, MD (WO6345270) - Construction Manager/Project Superintendent. This was a design build project which included construction of two additional lanes for approximately 2.5 miles along the West side of existing U.S. 113.

SHA – Dualization of U.S. 113 on Existing Alignment from Hayes Road to North of Goody Hill Road – Phase 2A Worcester County, MD (WO6345170) - Construction Manager/Project Superintendent: This was a design build project which included construction of two additional lanes for approximately 2.5 miles along the West side of existing U.S. 113, South of Berlin, MD.

SHA – U.S. 113 Design Build; Market Street to North of MD 365, Worcester County, MD (W07675170) - Construction Manager/Project Superintendent. This project dualized 4+/- miles of U.S. 113 from Market Street to North of MD 365 (Public Landing Road). This project consisted of the preparation and final plans and the construction of U.S. 113 on existing alignment. The southern limit of work was the end of the dualization just north of Market Street. This project received monetary compensation for saving .91 acre of wetlands. It was also nominated for four awards from MDQI for Partnering, Major Construction Project, Environmental, and DBE (guardrail's, etc.) participation.

SHA - Community Safety and Enhancements on MD 16/MD 14, East New Market, MD (D05815184) - Construction Manager/Project Superintendent. This job was MD 16 from west of Linkwood Road to Corporate Town Limits, MD 14 from Creamery Road to east of MD 392 in East New Market. This project consisted of full depth reconstruction of MD 14 and MD 16 within the project limits. This project was nominated for two awards from MDQI for Partnering and Streetscape Project.

SHA – U.S. 50 Salisbury Bypass from West of White Lowe Road to East of West Road, Salisbury, MD (W16415170) – Construction Manager/Project Superintendent. This project was Phase II of the Salisbury Bypass, which included construction of a four-lane dual highway along existing U.S. 50 with alignment on a new location, and included a two lane flyover ramp, two span bridge structures, full diamond interchange, a bridge structure for Jersey Road, and a 350 foot long bridge structure over the North Prong of the Wicomico River. This job received an Environmental Award from the Army Corps of Engineers for preserving wetlands at the Wicomico River.

Contract Number: Project Number W06365170

Project Description: U.S. 113 Phase 3 - North of Massey Branch to Five Mile Branch Road

FORM A-2

PROJECT DESCRIPTION

Name of Proposer: David A. Bramble, Inc.

Name of Firm: David A. Bramble, Inc.	
Project Role: <u>Lead Contractor</u>	
Designer: ___ Contractor: <u>X</u> Other (Describe): _____	
Years of Experience: Roads/Streets: <u>55</u> Bridges/Structures: <u>55</u> Environmental: <u>55</u>	
Project Name, Location, Description and Specific Nature of Work for which Company was responsible: Dualization of U.S. 113 (Worcester Highway) from Market Street to North of MD 365 (Public Landing Road), Worcester County, MD This was a design build project which included dualization of U.S. 113 from Market Street to North of MD 365 (Public Landing Road) in Worcester County, MD (approximately 4 miles). This project consisted of the preparation and final plans and the construction of U.S. 113 on existing alignment. The southern limit of work was the end of the Dualization just north of Market Street. This project received monetary compensation for saving .91 acres of wetlands. It was also nominated for four awards from MDQI for Partnering, Major Construction Project, Environmental and DBE (Guardrails, Etc., Inc.) participation.	
<p>U.S. 113 Public Landing Road Personnel Proposed for this U.S. 113 Phase 3 Project</p> <ul style="list-style-type: none"> • Robert H. Bramble, Jr. • Richard Murphy • Tom Balcerak • Scott Hite 	
List any awards and/or commendations received for the project:	
Name of Client (Owner/Agency, Contractor, etc.): Maryland State Highway Administration	
Address: 707 N. Calvert Street, Mail Stop C-102 Baltimore, MD 21202	
Contact Name: Donnie Drewer, District 1	Telephone: 410-677-4000
Owner's Project or Contract No.: WO7675170	Fax No.: 410-542-6598
Contract Value (U.S.\$): \$15,427,400.00	Final Value (U.S. \$): \$15,773,701.73
Percent of Total Work Performed by Company: 69%	
Commencement Date: 5/31/2005	Original Completion Date As Defined in IFB: 5/25/2007
Actual Completion Date: 9/30/2007	
Any disputes taken to arbitration or litigation? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	


Contract Number: Project Number WO7675170

Project Description: U.S. 113 from Market Street to North of MD 365 (Public Landing Road), Worcester County.

FORM A-2

PROJECT DESCRIPTION

Name of Proposer: David A. Bramble, Inc.

Name of Firm: David A. Bramble, Inc.	
Project Role: <u>Lead Contractor</u>	
Designer: ____ Contractor: <u>X</u> Other (Describe): _____	
Years of Experience: Roads/Streets: <u>55</u> Bridges/Structures: <u>55</u> Environmental: <u>55</u>	
Project Name, Location, Description and Specific Nature of Work for which Company was responsible: Dualization of U.S. 113 on Existing Alignment from Hayes Road to North Goody Hill Road – Phase 2A, Worcester County, MD	
<p>This was a DB project that David A. Bramble, Inc. and Johnson, Mirmiran & Thompson designed and built for SHA. This project consisted of preparation and final plans and the construction of U.S. 113 on existing alignment as a dual divided highway. This project began at the southern limit of U.S. 113 dualized section South of Berlin, MD. It included the construction of two additional lanes for approximately 2.5 miles along the west side of existing U.S. 113. This project also included the design and construction of new service roads to maintain access to residential and commercial properties. Roadway improvements included new full depth construction, wedge and leveling and resurfacing of the existing roadway and shoulders, reforestation, intersection lighting, closed/open drainage systems and SWM quality and quantity facilities. A box culvert extension was also included.</p>	
<p>U.S. 113 Hayes Road Personnel Proposed for this U.S. 113 Phase 3 Project</p> <ul style="list-style-type: none"> • Robert H. Bramble, Jr. • Richard Murphy • Tom Balcerak • Scott Hite 	
	
List any awards and/or commendations received for the project:	
Name of Client (Owner/Agency, Contractor, etc.): Maryland State Highway Administration	
Address: 707 N. Calvert Street, Mail Stop C-102 Baltimore, MD 21202	
Contact Name: Donnie Drewer, District 1	Telephone: 410-677-4000
Owner's Project or Contract No.: WO6345170	Fax No.: 410-542-6598
Contract Value (U.S.\$): \$14,290,843.00	Final Value (U.S. \$): \$14,343,313.44
Percent of Total Work Performed by Company: 66%	
Commencement Date: 6/23/2008	Original Completion Date As Defined in IFB: 9/3/2009
Actual Completion Date: 2/31/2010	
Any disputes taken to arbitration or litigation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	


Contract Number: Project Number W06365170

Project Description: U.S. 113 Phase 3 - North of Massey Branch to Five Mile Branch Road

FORM A-2

PROJECT DESCRIPTION

Name of Proposer: David A. Bramble, Inc.

Name of Firm: David A. Bramble, Inc.	
Project Role: <u>Lead Contractor</u>	
Designer: ___ Contractor: <u>X</u> Other (Describe): _____	
Years of Experience: Roads/Streets: <u>55</u> Bridges/Structures: <u>55</u> Environmental: <u>55</u>	
Project Name, Location, Description and Specific Nature of Work for which Company was responsible: Dualization of MD 404, from east of Tuckahoe Creek to East of MD 480 – Phase 1A, Caroline County, MD This was a bid/build project that David A. Bramble, Inc. constructed for SHA. This project consisted of construction of the dualization of a 1.3 mile portion of MD 404 from East of Tuckahoe Creek to East of MD 480, construction of two westbound lanes, the rubbilization and reconstruction of the existing roadway, the addition of a 34 ft. median and the provision of extended left turn storage lanes in both direction. Drainage ditches, cross culverts and stormwater management facilities were also constructed. The demolition of the railroad bridge on MD 404 and site vertical clearance problem were also a part of this project.	
	
List any awards and/or commendations received for the project:	
Name of Client (Owner/Agency, Contractor, etc.): Maryland State Highway Administration	
Address: 707 N. Calvert Street, Mail Stop C-102 Baltimore, MD 21202	
Contact Name: Norris Embert, District 2	Telephone: 410-778-3061
Owner's Project or Contract No.: CO3235168	Fax No.: 410-778-0851
Contract Value (U.S.\$): \$6,963,338.04	Final Value (U.S. \$): \$7,851,053.08
Percent of Total Work Performed by Company: 86%	
Commencement Date: 9/28/2009	Original Completion Date As Defined in IFB: 426 WD
Actual Completion Date: 3/31/2012	
Any disputes taken to arbitration or litigation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

ii. Past Performance

Environmental Past Performance

David A. Bramble, Inc. has typically been an “A” rated performer on all of its projects and specifically on our 113 projects. We have received an “A” rating well over 90% of the times that we have been rated on projects. Every foreman in our company is required to obtain an Erosion and Sediment Control (ESC) green and yellow card. To prepare for the new erosion and sediment control emphasis this past spring, Bramble requested that SHA present to all of our superintendents and foremen, a program on what the new ESC requirements would mean on SHA contracts.



In all five jobs on U.S. 113 that Bramble constructed, there has only been one instance where we received an unsatisfactory rating and that was due to a miscommunication on U.S. 113 from Hayes Road to North of Goody Hill Road – Phase 2A. Our project manager had requested a change to the sequence of construction and had our designer submit it to MDE and SHA. Once the changes had been submitted and verbally approved, the design-build team proceeded with the construction, as submitted. The SHA ESC inspector made an inspection. Since he had not been provided with updated plans or any approval, he placed the project in non-compliance due to the sequence of construction. The approval was received two days later and the project was placed back in compliance with the contract documents. No sediment laden water left the site as a result of being out of sequence. We have consistently received the quarterly and final sediment control incentives on all of the U.S. 113 projects with this one exception on U.S. 113 from Hayes Road to North of Goody Hill Road – Phase 2A. One of the reasons that we have received these incentives is that we make it a point to perform pre-storm inspections of the site and its sediment controls prior to all predicted storm events.

Bramble has made it a point to make pre-storm inspections of the job site and the ESC measures to make sure that they are in good condition for the storm. If upon inspection we felt it was necessary, we added extra measures to the existing controls that we felt would not adequately control sediment in a storm event. This pre-storm inspection has helped us receive sediment control incentives and minimized the sediment control damage, even when the storm event is greater than the storm and sediment control devices were designed to control. Pre-storm inspections will continue to be a part of our storm response plan on all jobs and will be used to construct this project if we are accepted as a qualified bidder, and are deemed to provide the best value.

The DBT will develop a Storm Response Plan to respond to severe weather events comprising 3” of rainfall over a 24-hour period. The key element in our Storm Response Plan will be the Severe Weather Action Team (SWAT). This will be a dedicated work group with the sole responsibility of inspecting and repairing ESC facilities installed throughout the project whenever a severe storm event is forecast. The SWAT will inspect and clean all ESC facilities and drainage facilities including ditches, storm drains, culverts, and outfalls in preparation for the storm. Any disturbed areas will be stabilized to the maximum extent possible. Following the storm, the SWAT will repair and/or restore the ESC facilities and drainage facilities within 48 hours of the end of the event but prior to the next storm. The SWAT will consist of a dedicated foreman, work crew, and equipment necessary to inspect, maintain and repair ESC and drainage facilities. The SWAT will be expanded as needed to service multiple EDAs. When not acting in response to severe weather events, the SWAT will be used to provide maintenance of ESC facilities on a daily

basis, including removal of sediment, containment of sediment spills and restoration of sediment contaminated areas. The DBT is committed to ensuring that the required ESC devices are maintained in operable and effective conditions at all times.

The innovative technologies that we have used on the U.S. 113 corridor for environmental benefit are as follows:

- Using sod for same day stabilization
- Using wood chips in conjunction with super silt fence to keep sediment inside the silt fence.
- Using slope drains both before and after soil cementing the subgrade.
- Using recycled concrete in lieu of GAB.



In areas where same day stabilization was called for, we have used sod to perform the soil stabilization. Bramble has found that while this is more expensive than seed and curlexing, the fact that there are no failures after storm events when you do this makes the final cost competitive with a cheaper original expense, but higher maintenance costs for seeding and curlexing. Bramble now proactively implements this practice to not only reduce costs but also to minimize the potential for any water quality impacts.

After clearing and grubbing the project, we re-purpose the removed tree material into wood chips that are then utilized on-site to stabilize slopes in conjunction with super silt fence. The wood chips are heavier than straw and act to hold the slope in place better than mulch or curlex. If the wood chips do get to the super silt fence, they slow the rate of water flow through the fence, enhancing the effectiveness of the ESC device.

Additionally, we have increased the frequency of slope drains on the roadway once the paving subgrade is established and continued to use them once we soil cemented the subgrade. In both instances this decreased the amount of repair work required for the roadway side slopes. Especially, after the soil cement is incorporated, the increased number of slope drains helped reduce the velocity of rain water coming down the slope and increased the probability that we could control the water from the roadway.



One other change that we have made to help the environment is to use recycled concrete (RC-6) for a base material on all of the secondary roads and entrances. We suggested the use of RC-6 in lieu of GAB as base material and upon approval from SHA made this change on the last two phases of the U.S. 113 dualization projects (WO6345170 and WO6345270). This resulted in substantial savings to the project and the environment due to the difference in cost between RC-6 and GAB, as well as having recycled a product that would have gone to a landfill.

In summary, we feel that the ability of the DB team to collaborate and coordinate how they want to design and build the project is a significant advantage over having just the designer design the project and hand it over to the owner to bid. Input from the contractor always provides improved constructability.

The Bramble/JMT Design-Build Team (DBT) draws upon our documented body of experience in DB construction on the Route 113 corridor for our pre-bid/pre-design analysis of this project. Based on our history of DB construction, including Contract Number WO6345270 abutting the north end of this project, we have a DBT in place that has intimate knowledge of the scope of work, risks, and significant issues associated with the construction of a project of this magnitude. This project extends for approximately 4.2 miles from north of Massey Branch south to Five Mile Branch Road. The northern end of the project will tie into the previous section designed and constructed by the DBT under contract WO6345270. The DBT are very familiar with the area and the construction issues the project presents.

We see the project scope for this contract being controlled by a logical sequence of construction that is focused on minimizing the project's impact on environmentally sensitive areas while insuring that work can be performed concurrently in separate drainage areas. As with any new construction, installation and daily monitoring of perimeter controls and implementation of best practices for control of storm water runoff will be of highest priority before and during construction.

Our team fully understands the degree of difficulty in constructing a four-lane, median-divided highway while maintaining safe access to and usability of an existing undivided, two-lane, full access highway within the same alignment as the work area. Based on our review of the conceptual drawings for this project, we see the scope of work being similar to Phase 2B of the dualization effort for U.S. 113 that was most recently designed and constructed by the DBT.

We anticipate the construction and installation of both open and closed drainage systems in conjunction with excavation and embankment operations to accomplish an orderly flow of work while minimizing the need to disturb embankment materials once they are placed.

The DBT has extensive experience addressing the issues associated with designing and constructing roadways on the lower Eastern Shore including addressing flat terrain and native soil conditions. Located on the Eastern shore of MD, Bramble understands the concerns of the local communities, because its employees are a part of that community. This allows for enhanced communication for public outreach and coordination.

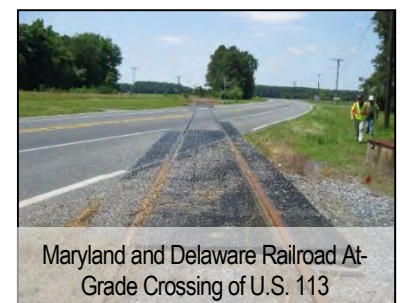


Understanding of Project Scope, Issues and Risks

The project will dualize the current two lane roadway similar to the 4 other projects designed and constructed by the Bramble/JMT DBT. A description of the Scope/Issues and Risks associated with this project are briefly described as follows:

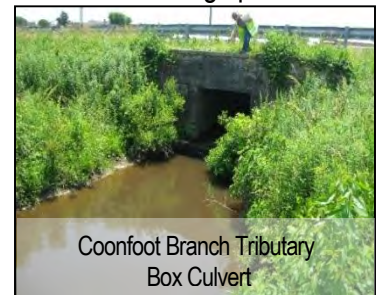
Scope/Issues

- Northern Terminus - The tie-in at the northern end of the limits of WO6345270 contract will require some reconstruction and adjustment of the previously installed pavement markings. A 'J-Turn' is also provided for at the northern terminus of the project to allow northbound vehicles to return to the southbound roadway. This may include vehicles that will no longer be able to make left turns from the NB roadway to destinations along the SB roadway. Sequencing of this work will need to consider the installation of the J-turn to allow for turnaround of emergency vehicles and local residents.
- A new intersection configuration will be provided for Langmaid Road in the form of a 'Maryland T' allowing NB left turns to westbound Langmaid and providing for left turning vehicles to turn left and accelerate onto NB U.S. 113. Through movements will be prohibited across U.S. 113 along Langmaid. The current traffic signal is to be eliminated based on signal warrants assessment by SHA. New access will be provided to the Newark Station Sunoco and other private property via Langmaid Road. Thus the construction of the island and turn lanes need to be sequenced to allow for removal of the traffic signal while maintaining thru traffic on Langmaid Road.
- In the vicinity of Sta. 1573±, private driveway access along both NB and SB will be reconfigured to control access including providing and maintaining access to the existing Newark Water Treatment plant.
- Roadway Sta. 1525± to Sta. 1565± presents some of the more complex issues and



risk along the project including relocation of Newark Road and Newark Road South and re-alignment of U.S. 113 where it crosses the **Maryland and Delaware Railroad (M&DRR)** tracks. Additionally, a ‘Railroad Embargo’ (track outage) will occur to allow for the construction of the new U.S. 113 railroad crossing, removal of the existing U.S. 113 and South Newark Road railroad crossing. All work within 100 feet of the railroad crossing must be completed by the deadline established in the contract. SHA will enforce a daily disincentive for every day the work affecting the railroad operation is not completed. The M&DRR will perform the construction of the track related components of the at-grade railroad crossing. We are fully aware of the need for additional Railroad Liability Insurance for work conducted within the railroad R.O.W. and the need to coordinate with the M&DRR to accommodate the safe and orderly passage of railroad traffic through the work zone. The DBT will develop a detailed phased sequence for this work that allows for construction of the re-aligned northbound and southbound roadways while considering the realignment of Newark Road. Development of roadway grades that address the railroad tracks and the close proximity of the existing U.S. 113 roadway/ re-aligned roadways will be an important item that the DBT will address so that safe and efficient construction phasing for this work can proceed within the railroad embargo period.

- Roadway Sta. 1510± to Sta. 1525± will be challenging due to the narrow right-of-way (ROW). The DBT will assess options for working within the limited ROW.
- The U.S. 113 and Basket Switch Road intersection will be reconstructed as a ‘Maryland T’. The concept plans indicate that roadway reconstruction will extend to within 100 feet of the **M&DRR** at-grade track crossing, thus the phasing of this work will need to consider the Railroad Embargo period.
- South of Basket Switch Road to Sta. 1430± (approximately southern limit of work) – No named roadway intersections occur in the stretch of roadway. Primary issues will be construction/reconstruction of private access roadways to replace existing driveway connections. Additionally, the crossing of a Coonfoot Branch tributary occurs at Sta. 1481± and will require the replacement of a box culvert as well as a culvert crossing for the proposed driveway access road.



Coonfoot Branch Tributary Box Culvert

Risks – the following risk register identifies some of the DBT and Administration risks that will need to be mitigated:

Risk Item	Level	Description	Mitigation
U.S. 113 /MD & DE RR Crossing and Newark Road realignment	High	Work associated with RR must be completed within embargo period and intersection realignment needs to be coordinated with this work	Developing detailed staging and schedule to insure the work associated with the RR is completed within the embargo
SWM and ESC Phasing and Approval	High	MOT, construction and ESC phasing all need to be coordinated and then approved by MDE in the proposed order	Early and proactive coordination with SHA – Highway Hydraulics and the MDE reviewer
Environmental Permitting	Medium	Numerous waters of the US and wetlands will be impacted along the corridor including the Coonfoot Branch crossing	First preference will be to minimize or reduce the impacts, then early and proactive coordination with the MDE and ACOE to address issues quickly
Right-of-way (ROW) Phased Clearance	High	SHA has proposed a phased clearance that will need to be considered in the construction phasing	ROW clearance, ESC sequence and MOT will all need to fully coordinate. SHA needs to maintain acquisition schedule.
Narrow ROW	Medium	Basket Switch Rd to Sta 1520±, NB roadway is close to the proposed ROW	Assess alignment adjustments or typical section adjustments
Concurrent Utility Relocations	High	Relocation of aerial utilities along various areas of the project	Work with utility owners & SHA to coordinate relocations w/ construction sequencing
Deficient Geometry	Medium	Concept plans show deficient geometry at Newark Road, “J- Turns” & accel lanes	Develop updated geometry to improve or eliminate deficiencies with SHA approval

Erosion and Sediment Control (ESC) - On a linear project like this it is important for the DB team to think about working on multiple parts of the project at one time and designing the Sequence of Construction with this in mind. For example, there are at least seven (7) separate drainage areas over the length of the project and the sequence of construction should reflect a separate sequence for each one so the contractor can be in step 4 or 5 in one drainage area while only being in step 1 in another drainage area. ESC will be designed in accordance with *MDE criteria (2011 Standards and Specifications for Soil Erosion and Sediment Control and the ESC Guidelines for State and Federal Projects)* to minimize any sediment from leaving the project site. The key to addressing the ESC for this project is effective coordination of the ESC phasing with the maintenance of traffic (MOT) phasing, ROW acquisition sequence, environmental time of year restrictions, community events, utility relocations and addressing the Railroad Embargo period for construction of the roadway areas adjacent to the M&DRR. The DBT will work closely with SHA Highway Hydraulics Division (SHA-HHD) and the MD Dept. of the Environment (MDE) to develop a phased plan that addresses effective ESC while having a plan that is well coordinated with the rail related construction, MOT and other constraints. Bramble will request the SHA-HHD schedule a Pre-Permitting Meeting with the MDE soon after notice of award to begin coordination between the DBT, SHA-HHD, SHA-OHD and MDE reviewer. Bramble will work closely with the permitting team throughout the project to insure that design and construction ESC issues are given immediate attention. Base paving operations will be conducted as soon as possible in order to minimize the amount of temporarily stabilized areas. .

Stormwater Management - SHA has developed a Stormwater Management (SWM) concept level design for the project based on the MDE's 2000 Stormwater Design Manual and the SWM Guidelines for State and Federal Projects. The DB team will review the SHA's SWM concept and discuss the DB Team's understanding and approach for SWM at the Pre-Permitting Meeting. This project is ideally suited for incorporating linear, ESD type facilities, such as water quality grass swales, bio-swales and submerged gravel wetlands. The DB team will investigate designs to maximize the use of ESD facilities wherever possible. SWM facilities will be designed to address the SHA's SWM Site Development Criteria Review Guidelines and will incorporate native landscaping that is appropriate for the SWM practice as well as providing a sustainable, low maintenance, facility with a pleasing visual appearance.

Storm Drainage - Drainage design will be in accordance with the SHA-HHD, requirements and the Highway Drainage Manual. It is assumed the drainage systems will primarily be open drainage. Existing cross culverts along the roadway will be checked for capacity and compliance with SHA cross culvert criteria. Several of the culverts including the ones for the Marshall Branch and Coonfoot Branch Tributies will need to be replaced and will require MDE, Nontidal Wetlands and Waterway Construction Permits. The DBT will develop detailed hydrologic and hydraulic (H/H) analysis for each culvert and coordinate permitting for all culverts that convey Waters of the U.S. We will work closely with the SHA, Office of Structures (SHA-OOS) and the SHA-HHD in addressing the hydraulic modeling and sizing for all culvert crossings. This may include incorporation of geomorphological designs for the stream channels upstream or downstream of the culverts.



U.S. 113 Cross Culvert

Maintenance of Traffic and Sequencing - Maintenance of traffic and sensitivity to the needs and concerns of the traveling public, as well as the residents and businesses in close proximity to the limit of work, are issues of the highest importance. Experienced, certified Traffic Managers will be assigned to this project. Maintenance of traffic will be performed in accordance with the SHA Book of Standards for Highways, Incidental Structures, and Traffic Control Applications. MOT control plans specific to this project will be developed and implemented. Should our construction operations be shown to adversely impact residents or businesses at any time during this project, we will work with them to gain SHA approval for a plan that tailors our operations to insure the least possible inconvenience to them. Our MOT plan will also reflect sequencing issues associated with the phase ROW acquisition, the ESC sequence, the M&DRR embargo and concurrent utility relocations.



Overhead Utilities along U.S. 113

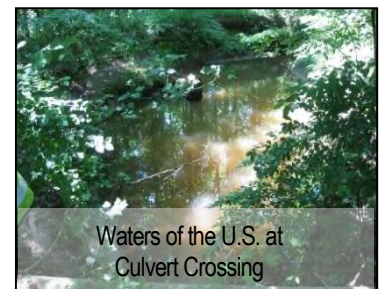
Utilities - The DBT conducted a field visit of the project site and identified overhead electric and telephone facilities that will be

impacted by the project. At various locations along the proposed roadway alignment, Choptank Electric and Verizon lines appear to be in conflict with proposed construction. The DBT will coordinate closely with the respective utility owners and with the District 1 Utility Engineer to ensure utility coordination, submittals, and utility agency reviews and relocations do not delay the overall project schedule. By implementing a pro-active and partnering approach with the utility companies, the DB team will minimize the effects on the overall schedule and properly sequence the work to better accommodate the utility company relocations. As part of the Team's utility efforts and at each submittal stage, we will review the construction plans with the utility owners to make sure that conflicts, if any, with the proposed roadway improvements are identified early to the utility owner.

The key to successful coordination with utility companies is through early, consistent and effective communication with the utility owners. The DB team will include the utilities submittals and reviews in the development of the project schedule that will identify key milestone dates and submittal dates to ensure timely coordination and securing of utility relocations. By closely monitoring the schedule, the DBT will be able to quickly identify any particular reviews, additional data needs, such as test pits, or approvals that may become problematic or begin to have an adverse impact to the project schedule. If any particular utility relocation creates adverse situations, the DB team will quickly devote the resources required to manage and expedite resolution.

A distinct benefit of our team is the fact that JMT has an in-house utility locating division that has extensive experience performing utility locating, including multiple contracts with SHA. This gives the DB team significant schedule and quality advantages in our utility coordination efforts and the ability to designate and test pit underground utilities that could be affected.

Permitting and Environmental - The DB team takes a proactive approach to environmental stewardship as well as compliance with permit conditions. As such, the DB team will comply with the conditions of the permits that SHA has acquired for the project and apply for those necessary to construct the project. The DB team performed a field review of the project area and does not anticipate that there would be additional impacts to wetlands, waters of the U.S. or forest resources; opportunities for further avoidance were identified and the DB team will make every effort to further reduce impacts to sensitive resources..



Compliance begins by conveying a thorough understanding of the environmental resources that exist in the project area. Our team has already created a comprehensive Environmental Summary Table for project and educated our design and construction leads on all resources, issues, and requirements associated with this project including time-of-year restrictions for in-stream construction and forest clearing. This information is incorporated into the project schedule to ensure that construction can be phased efficiently with no unanticipated delays that may affect successful delivery of the project.

We will perform environmental design reviews of all major project elements to ensure that compliance and stewardship measures are carried forward. To ensure boots-on-the-ground implementation, we will conduct environmental sensitivity training for all construction workers and implement pre-activity meetings addressing environmentally sensitive features. This will include information about cultural resources and indicators to look for during excavation and earth-moving activities. During construction, the DB team will collaborate with the Environmental Monitor on a regular basis to ensure that all reasonable and feasible opportunities for minimization of impacts are exhausted.

Landscape Architecture - The landscape design will reflect the Roadside Landscape and Reforestation Design Performance Specifications in the contract. Our team includes an ISA Certified Arborist who will assist DBT in minimizing tree and forest impacts. A Tree Impact and Minimization Report will be prepared by our arborist and DBT will always seeks to avoid impacts to or removal of trees along the roadway. Our construction sequencing will account for the restriction periods for removal and disturbance of forest habitat described in the Draft RFP.

Approach to Design-Build Contracting

Bramble and JMT feel that the DB method of project contracting allows both the builder and the designer to have input and make contributions early in the design process that will directly affect the project life-cycle. The DB project delivery method infuses a higher degree of urgency on the design process by linking design performance with the contractor's purse. Effective

management of the project, both during design and construction is crucial to the successful delivery of all DB projects. Our team focus on process, planning, and scheduling make DBT an excellent team for this project.

Both organizations are well integrated into the DB process. The DB team have qualified personnel experienced in design/construction of highways. Our team has the distinct advantage of having constructed four (4) projects by the DB method on the U.S. 113 corridor so we have a good sense of what is required and what has worked. In addition, JMT and Bramble are comfortable in seeking each other's opinion and in questioning why something is being done in a certain way. The working processes of plan review and open communication to seek the opinion of the contractor during the design phase is key to having a constructible set of plans that results in an easily buildable project.

On a linear project such as this, it is important for the DBT to consider working on multiple sections of the project simultaneously. The ability of the DBT to work out the sequencing is a significant advantage to doing a project as a DB project because the designer gets to design the project in a manner that the contractor feels he can build. This is especially critical in today's construction projects due to the emphasis on following the approved sequence of construction. The collaboration between Bramble and JMT on sequence of construction will help alleviate problems that commonly arise such as what to do with the excavation that you remove in the early stages of the project

To further optimize the DB contracting approach, Brambles DB PM and CM will provide over the shoulder reviews of design work during the development of each phase. The DBT has a formal program in which Bramble Managers participate in constructability reviews during every stage of design development. Items addressed by the constructability reviews include:

- Verification that design is compatible with construction sequencing and schedule and any special project requirements (MOT/ESC plans will be checked in this regard);
- Verification of conformance with SHA standards, special provision inserts and performance specifications ;
- Confirm the accuracy of plan details and typical sections and verify/coordinate utility conflicts;
- Review easements/LOD to verify the work can be constructed within the project LOD and ROW;
- Endeavor to minimize impacts to wetlands or other environmentally sensitive areas.

During construction, JMT design staff will regularly visit the project site, attend progress meetings, answer questions and resolve field issues as they arise. The DB team's proven working relationship will expedite the RFI process, often resulting in same day resolution. All changes to approved construction documents/final plans will be submitted to SHA for approval prior to implementation.

To further take advantage of DB contracting, the DBT will use its extensive experience in construction scheduling to successfully manage the design/approval process. A phased construction sequence will ensure a timely/coordinated project start and successful completion within the time allotted. The DBT will use a variety of project management software programs (ProjectWise and Primavera) as tools for collaboration and coordination. The DB team have established proven methods, procedures, processes and relationships that will ensure that the DB team hits the ground running and meets the Project goals. Long lead time materials can be identified and that portion of the design can take priority so construction materials will be on-site when the contractor is ready to break ground. Due to the integration of the contractor into the design process there is an opportunity to accelerate construction by releasing elements of design for approval prior to complete plan development. Issues are resolved during the design process as our DB team of designers/ contractors are all actively reviewing/incorporating better, more economical ways of designing and constructing the project.

In summary, we feel that the ability of the DBT to collaborate and coordinate how they want to design and build the project is a significant advantage over having just the designer design the project and hand it over to owner to bid. The core of success in DB projects is bringing the right team together that will plan, design, construct and address the goals and needs of the project to the ultimate satisfaction the owner. Bramble brings more than 55 years of experience working on the eastern shore of MD and has been the lead DB contractor for four DB contracts, with JMT as the designer of record, along the U.S. 113 corridor and our team focus on process, planning, and scheduling make Bramble/JMT an excellent team for this project.

