



U.S. Department
of Transportation

Federal Highway
Administration

Eastern Federal Lands
Highway Division

U.S. Department
of the Interior

National Park
Service

Final Construction Report

Project No.: PRA/NPS-GWMP 1A75,77

Location: George Washington Memorial Parkway

Description: The project consisted of the rehabilitation of the bridges over Dead Run and Turkey Run, including total replacement of the existing bridge deck with precast deck panels, a latex modified concrete overlay, and replacing the railing on the southbound Dead Run bridge, and on the north and southbound Turkey Run bridges. The project also included placement of Hot Asphalt Concrete Pavement at the approaches to the bridges, Loop Road, and one parking lot, stone masonry construction, and other miscellaneous work.

Submitted by: Jorge F. Alvarez AUG - 9 1999
Project Engineer Date

Approved by: /s/ Ricky L. Meyer AUG - 9 1999
Construction Operations Engineer Date

Approved by: /s/ Donald W. Miller AUG - 10 1999
Construction Engineer Date

FINAL CONSTRUCTION REPORT
PROJECT PRA/NPS-GWMP 1A75,77
GEORGE WASHINGTON MEMORIAL PARKWAY

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FINAL CONSTRUCTION REPORT
Project PRA-NPS-GWMP 1A75,77
George Washington Memorial Parkway

I. PROJECT DESCRIPTION

- A. Project Number** - Project PRA-NPS-GWMP 1A75,77, is located on the George Washington Memorial Parkway, Arlington, Virginia.
- B. Description of Work** - The project consisted of the rehabilitation of the bridges over Dead Run and Turkey Run, including total replacement of the existing bridge deck with precast deck panels, a latex modified concrete overlay, and replacing the railing on the southbound Dead Run bridge, and on the north and southbound Turkey Run bridges. The project also included placement of Hot Asphalt Concrete Pavement at the approaches to the bridges, Loop Road, and one parking lot, stone masonry construction, and other miscellaneous work.
- C. Environmental Considerations** - The project was determined by the Federal Highway Administration to be a Categorical Exclusion in accordance with 23 CFR 771.117, dated March 7, 1997.

II. PROJECT DATA

- A. Specifications** - Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-96.
- B. Termini** - The project was located within the limits of the George Washington Memorial Parkway. Work began on Dead Run Bridge at Station 13+315 and ended at Station 13+712, and on Turkey Run Bridge at Station 1+660 and ended at Station 2+095.

C. Length -

Dead Run Bridge - 0.09 km
Turkey Run Bridge - 0.12 km

D. Width -

Bridge over Dead Run Northbound:	10.975 meters
Bridge over Dead Run Southbound:	10.670 meters
Bridge over Turkey Run Northbound:	10.970 meters
Bridge over Turkey Run Southbound:	10.970 meters

E. Pavement Structure -

Asphalt pavement rehabilitation at bridge approaches, an average of 2 inches of asphalt concrete pavement was placed on all eight approaches.

F. Structure -

The project included the removal and replacement of three reinforced concrete decks, and the resurfacing of the fourth deck. The two bridges over Dead Run Creek were 92.91 meters long and 10.97 meters wide (Northbound) and 10.67 meters wide (Southbound). The bridges over Turkey Run were 122.53 meters long and 10.97 meters wide.

G. Contract Number and Date -

DTFH71-97-C-00028
September 30, 1997

H. Contracting Officers -

Gary L. Klinedinst, Division Engineer
Donald W. Miller, Construction Engineer
Ricky L. Meyer, Construction Operations Engineer

I. Contract Bid Amount - \$4,224,857.50

J. Engineer's Estimate - \$4,200,000.00

K. Final Contract Amount - \$4,504,909.97

L. Contract Time -Schedule A

Notice to Proceed:	November 6, 1997
Original Completion Date:	August 15, 1998
Total Extension Granted:	55 days
Revised Completion Date:	October 9, 1998
Date Substantially Complete:	October 8, 1998
Date All Work Complete:	October 8, 1998
Liquidated Damages Assessed:	None

Schedule B

Notice to Proceed:	November 6, 1997
Original Completion Date:	August 15, 1998
Total Extension Granted:	48 calendar days
Revised Completion Date:	October 9, 1998
Date Substantially Complete:	October 8, 1998
Date All Work Complete:	October 8, 1998
Liquidated Damages Assessed:	None

M. Contractor -

Shirley Contracting Corporation
8435 Backlick Road
Lorton, VA 22079

N. Subcontractors -

A-Annandale, Inc. P. O. Box 249 Dumfries, VA 22026 Temporary pavement markings	\$46,632.00	SBC
CCS Special Structures, Inc. 14221-A Willard Road, Suite No. 400 Chantilly, VA 20151 Post Tensioning	\$75,000.00	SBC\DBE\WBE
Central Atlantic Contracting Company 1550 South Philadelphia Boulevard P. O. Box A Aberdeen, MD 21001-0016 Bridge deck grooving	\$12,267.00	DBE
Colburn and Associates, Inc. 5205-B Lyngate Court Burke, VA 22015 Surveying	\$11,780.00	SBC
DMI, Inc. 7110 Kit Kat Road Elkridge, MD 21227 Existing bridge rail demolition	\$19,596.00	SBC

East Coast Concrete Cutting Company, Inc. 1008 Leslie Avenue Catonsville, MD 21228 Concrete deck saw cutting	\$41,134.32	SBC
Flippo Construction Company, Inc. 3820 Penn-Belt Place Forestville, MD 20747 Structural concrete work	\$197,900.00	
Geotechnical & Material Testing, Inc. (GMTI) 22446 Davis Drive, Suite 127 Sterling, VA 20164 Quality control inspection and materials testing	\$21,600.00	
The Kalen Corporation 8245 Beechcraft Avenue Gaithersburg, MD 20879 Turf establishment and sodding	\$17,685.00	SBC\WBE
Mount Vernon Asphalt and Paving, Inc. P. O. Box 70 Newington, VA 22122 Hot Asphalt Concrete Pavement	\$196,354.00	
Potomac Rebar, Inc. 61 England Run Lane Fredericksburg, VA 22406 Re-inforcing steel	\$20,106.93	SBC\WBE
Roane Trucking, Inc. 15211 Wetherburn Drive Centreville, VA 20120 Onsite trucking of concrete bridge deck slabs	\$35,000.00	SBC\DBE
Seara Stone Corporation P. O. Box 237 Lorton, VA 22199-0237 Rubble masonry and Stone masonry guard walls		

Speidel Construction, Inc. \$17,517.10 SBC\DBE\WBE
 58 Lee-Way Drive
 Fredericksburg, VA 22406
 Permanent Paving Markings

Sunrise Safety Services, Inc. \$16,800.00 SBC\WBE
 527 Chesapeake Avenue
 Baltimore, MD 21225
 Temporary construction signs

Tavares Concrete Company, Inc. \$96,160.00 SBC\DBE
 7805 Cinder Bed Road
 Lorton, VA 22079
 PCC curbs and sidewalks

G. A. & F. C. Wagman, Inc. \$218,616.00
 3290 Susquehanna Trail North
 P. O. Box 15076
 York, PA 17405-7076
 Structural concrete bridge overlay

O. Construction Engineering Costs -

EFLHD CE Costs:	\$420,415.51
CI Costs:	<u>\$73,580.89</u>
Total Costs:	\$493,996.40

Percent of Final Contract Amount: 11.1 percent

P. Maintaining Agency -

National Park Service
 George Washington Memorial Parkway

III. CONSTRUCTION

A. Materials -

Item 30101, Aggregate Base, Grading C or D (optional VA Grading No. 21-A)
 Gradation: Meeting the Virginia Department of Transportation specifications.
 Supplier: Chantilly Crushed Stone, Chantilly, VA
 Maximum Dry Density: 158.9 pcf
 Optimum Moisture content: 4.4 percent

Item 40101AE, Hot Asphalt Concrete Pavement
 Supplier: Newton Asphalt Company, Alexandria, VA
 Type: SM-2B/RAP
 50 percent 7/16 Traprock, Vulcan Materials, Manassas, VA
 15 percent RAP, Newton Asphalt Company, Inc., Alexandria, VA
 20 percent Grading A, Solite Sand, Fredericksburg, VA
 15 percent No. 10 Screening, Vulcan Materials, Manassas, VA
 Asphalt Content: 5.2 percent with an allowable deviation of +/- 0.5 percent
 Asphalt Binder Grade: PG 64-22, by Citgo, Dumphries, VA
 Antistripping Additive: 0.6 percent AD-here HP Plus
 ARR-MAZ Products, Winter Haven, FL
 Maximum Theoretical Density: 162.9 pcf at design asphalt content of 2.610 g/cc
 Dust Asphalt Ratio: 5.0/5.2 = 0.96

Item 40101AE, Hot Asphalt Concrete Pavement, Class A, Grading E
 Supplier: Newton Asphalt Company, Inc., Alexandria, VA
 Type: SM-2B
 Cold Feed Proportions and Aggregate Sources:
 50 percent 7/16 Traprock, Vulcan Materials Company, Manassas, VA
 20 percent Grading A, Solite Sand, Fredericksburg, VA
 30 percent No. 10 screening, Vulcan Materials Company, Manassas, VA
 Asphalt Content: 4.9 percent with an allowable deviation of +/- 0.5 percent
 Asphalt Binder Grade and Source: PG 64-22, Citgo, Dumfries, VA
 Antistripping Additive: 0.6 percent AD-here HP Plus,
 ARR-MAZ Products, Inc., Winter Haven, FL
 Maximum Theoretical Density: 163.6 pcf at the design asphalt content of
 2.622 g/cc

Item 55201D, Structural Concrete, Class D (AE)
 Item 55206DU, Structural Concrete, Class D (DA), for Bridge Curbs
 Supplier: Cardinal Concrete Company, Arlington, VA or Washington, DC
 Mix No.: 42-1254
 Maximum Water/Cement Ratio: 0.40

Maximum Water/Cement Ratio: 0.40
Minimum Cement Content: 360 Kg
Slump: 25 to 75 mm
Air Content: 4 to 10 percent
Compressive Strength: 28 Mpa Minimum at 28 Days
Cement: Type I/II, Lehigh Portland Cement Company, Union Bridge, MD
Blast Furnace Slag: NEWCEM
Blue Circle Cement Company, Sparrows Point, MD
Fine Aggregate: Sand, Goose Bay Materials, Inc., Indian Head, MD
Coarse Aggregate: No. 57 Stone, Vulcan Materials Company, Manassas, VA
Water: WSSC

Admixtures: Air Entraining, Daravair-1000
W. R. Grace & Company, Cambridge, MA
Water Reducer/Retarder: WRDA-35, W. R. Grace & Company, Cambridge, MA

Item 55201D, Structural Concrete, Class D(AE)
Supplier: Cardinal Concrete Company of Arlington, VA or Washington DC
Mix No.: 43-125
Maximum Water/Cement Ratio: 0.40
Minimum Cement Content: 360 Kg
Slump: 25 to 75 mm
Air Content: 4 to 10 percent
Compressive Strength: 28 MPa minimum in 28 days
21 MPa minimum in 24 hours
Cement: Type I/II, Lehigh Portland Cement Company, Union Bridge, MD
Fine Aggregate: Sand, Goose bay Aggregates, Inc., Indian Head, MD
Course Aggregate: No. 57 Stone, Vulcan Materials Company, Manassas, VA
Water: WSSC
Admixtures: Air-Entraining: Daravair-1000
W. R. Grace & Company, Cambridge, MS
Water Reducer/Retarder: WRDA-35, W. R. Grace & Company, Cambridge, MS

Item 55207EE, Structural Concrete, Class E (AE), for Bridge Deck Overlay
Supplier: G. A. & F. C. Wagman Inc., York, PA.
Class: A(AE)
Maximum Water/Cement Ratio: 0.40
Minimum Cement Content: 360 Kg/cubic yard
Slump: 100 to 150 mm
Air Content: 3 to 10 percent
Compressive Strength: 28 Mpa Minimum at 28 days
Cement: Type III, Hercules Cement, Stockertown, PA
Latex Modifier: Latex Modifier A, Dow Chemical, Midland, MI

Fine Aggregate: Silver Hill Aggregates, Silver Hill, MD

Course Aggregate: No. 57 Stone

Vulcan Materials Company, Edsall Road Plant, Springfield, VA

Water: Public Water Supply

Item 55228, Replace Bridge Decks

Supplier: Bayshore Concrete Products Corporation, Cape Charles, VA

Class D(AE) Concrete

Maximum Water/Cement Ratio: 0.40

Minimum Cement Content: 360 Kg/cubic meter

Slump: 25 to 75 mm

Maximum Slump of 200 mm With High Range Water Reducer

Air Content: 4 to 10 percent

Compressive Strength: 38 Mpa Minimum in 28 days

Cement: Type III, Blue Circle Cement, Ravena, NY

Blast Furnace Slag: Newcem, Blue Circle Cement, Sparrows Point, MD

Fine aggregate: Sand, Solite Corporation, Rappahannock Farm Plant

Coarse Aggregate: No. 67 stone, Vulcan Materials Company, Stafford Quarry

Admixtures: Air-Entraining: Daravair-1000

W. R. Grace & Company, Cambridge, MS

Water Reducer: WRDA with HYCOL

W. R. Grace & Company, Cambridge, MS

High Range Water Reducer: DARACEM 19

W. R. Grace & Company, Cambridge, MS

Item 55402, Epoxy Coated Reinforcing Steel

Supplier: Steel Supply Company, 2000 Eddystone Company, Inc., Eddystone, PA

Yield Strength: 452 Mpa

Tensile Strength: 734 Mpa

Elongation: 12.0 percent

Bend: 3.5D

Coating: Morton Coating Powder

Temperature: 440 Degrees

Coating thickness: 10 +/- 2 miles

Curing time: 30 Seconds

Item 55601BC, Steel Bridge Railing

Supplier: M & J Materials, Inc., P. O. Box 428, Trussville, AL 35173

125 mm in diameter x-strong pipe railing conforming with ASTM A53

PL 38x270x860 Posts conforming with ASTM A588

Two PL20x300x200 plates

Four 25 diameter hilty epoxy anchor bolts hot dipped galvanized

Three coats of paint to be applied as follows:

Primer: Inorganic Zinc-rich Primer, 90E-92 TNEME-ZINC

Intermediate: Epoxy-Polyamide Coating, SERIES 66 EPOXOLINE

Final: High-Build Acrylic Polyurethane Enamels, SERIES 75 ENDURA-SHIELD

Item 60201M, 600 mm Pipe culvert

Supplier: CSR Hydro Conduit, 6800 Loisdale Road, Springfield, VA 22079

Materials: Reinforced Concrete Pipe

Conforming to ASTM C-76M & AASHTO M 170M

Class 3, Tongue and Groove

Item 60403FB, Inlets, Type 6B

Supplied by: AMERICAST, Harrisonburg Plant

210 Stone Spring Road, Harrisonburg, VA 22801

Materials: Precast reinforced concrete Type 4500PSI

No. 5 reinforcing bars, Grade 60 conforming with ASTM A-615

Frame and Grates supplied by: East Jordan Iron Works, Inc.

East Jordan, MI

Material: Heavy Duty, conforming with ASTM A48 CL 35

Item 60109X, Portland Cement Concrete Curb, 600-mm depth

Supplied by: Cardinal Concrete Company, Arlington, VA or Washington, DC Plant

Maximum Water/Cement Ratio: 0.40

Minimum Cement Content: 360 Kg

Slump: 25 to 75mm

Air Content: 4 to 10 percent

Compressive Strength: 28 Mpa minimum at 28 days

Item 61501B, Portland Cement Concrete Sidewalk

Supplied by: Cardinal Concrete Company, Arlington, VA or Washington DC Plant

Maximum Water/Cement Ratio: 0.40

Minimum Cement Content: 360 Kg

Slump: 25 to 75mm

Air Content: 4 to 10 percent

Compressive Strength: 28 MPa minimum At 28 days

Cement Type I/II

Lehigh Portland Cement Company

Union Bridge, MD

Blast Furnace Slag
NEWCEM
Blue Circle Cement Company
Sparrows Point, MD

Fine Aggregate, Sand
Goose Bay Aggregates
Indian Head, MD

Water: WSSC, Washington, DC

Admixtures: Air Entraining
Daravair-1000
W. R. Grace & Company
Cambridge, MA
Water Reducer/Retarder: WRDA-35
W. R. Grace & Company
Cambridge, MA

Item 62001CE, Rubble Masonry, Rock Face Finish

Item 62002A, Stone Masonry Guard wall, Type I

Materials: Stone from:

Stoneyhurst Quarries, 8101 River Road, Bethesda, MD 20817

Tri-State Stone Company, 8200 Seven Locks Road, Bethesda, MD 20817

Cement Type for Type S mortar

Allentown Type S, Masonry Cement

Allentown Cement Company, Inc., Evansville, PA

Complying with ASTM C-91 and Federal SS-C-1960/1

Item 62509, Turf Establishment

Type: SHA No. 1 Lespediza

Newsom Seed, 14 Deerwood Circle, Rockville, MD 20850

10-22-22 Fertilizer, Newsom Seed, 14 Deerwood Circle, Rockville, MD 20850

Lime, Newsom Seed, 14 Derwood Circle, Rockville, MD 20850

Fiber Mulch, Newsom Seed, 14 Derwood Circle, Rockville, MD 20850

Straw Mulch, The Strawman, 14021 Scheaffer Road, Boyds, MD 20841

Item 62701A, Solid Sod
Supplied by: Green Max Turf
Produced by: Virginia Beef Corporation, Agricultural Enterprises Division,
1215 James Madison Highway, Haymarket, VA 20169

Certified Tall Fescue Mixture
90 percent Montauk Tall Fescue
10 percent Ram I Kentucky Bluegrass

Item 63401HA, Pavement Markings, Type H, Solid
Manufactured by: Cetaphote, P. O. Box 2369, Jackson, MS 39225

Item 63401HB, Pavement Markings, Type H, Broken
Manufactured by: Cetaphote, P. O. Box 2369, Jackson, MS 39225

Item 63501, Temporary Traffic Control
Pavement markings, Temporary
Orange Tape, Type III
Glass Beads Reflective Sheeting
Sunrise Safety Services, 527 Chesapeake Avenue, Baltimore, MD 21225

Temporary Traffic Control Signs
Type III, High Intensity Signs, Aluminum
Sunrise Safety Services, Inc., 527 Chesapeake Avenue, Baltimore, MD 21225

B. Experimental or New Features -

None.

C. Changes and Problems -

1. Changes -

Contract Modification (CM) No. 1, deleted all reference to Section 155, Schedules for Construction Contracts, allowing the Contractor to do the construction scheduling in accordance with Section 155 of the Standard Specifications (FP-96). This CM also extended the Interim and Final Completion dates by 7-calendar days because of the conflict with Easter Weekend, making the Interim Completion date June 29, 1998, and the Final Completion date August 22, 1998. No additional costs were incurred with this CM.

CM No. 2, created a new item to compensate for the installation, maintenance and removal of silt fence, and to apply temporary seed and mulch to the stockpiled material in the medians. This CM also created two new items to compensate for the installation, maintenance, and removal of temporary concrete barriers and the installation and resetting of temporary crush cushions (GREAT System). This CM also created a new pay item to compensate the contractor for providing a 12'x60' construction trailer. The following items were deleted by this CM: Asphalt pavement milling, 100-mm depth, and Paving geotextile, Type VI. Item quantities that were decreased by this CM are Hot Asphalt Concrete Pavement, Class A, Grading E, Asphalt pavement milling, 50-mm depth and stone masonry Guard wall, Type I. This CM also amended Section 555 to require that all welding be performed and tested according to Bridge Welding Code D1.1. This CM had a net decrease of \$35.71.

CM No. 3, created a new item to compensate the Contractor for direct costs for the 3 weekends that were lost because of inclement weather (April 17-20, May 1-4 and May 8-11). The CM also extended the interim completion date from June 29 to July 27, 1998, for the 3 weekends lost to weather, and for the weekend that was lost to the fourth of July holiday. This extended the final completion date from August 22 to September 19, 1998, and included a net increase of \$72,000.00. The net time increase was 28 days.

CM No. 4, created new item 10801, DBE compensation. This allowed compensation for the use of DBE contractors.

CM No. 5, increased quantities of items which overran the original engineer's estimated quantities. In addition, new pay items were created to provide and place additional grout for the haunches for the three new bridge decks and to resurvey initial reference lines and vertical control points, and to make repairs to the existing sidewalk and deck at Dead Run northbound bridge. The Final Completion date was revised from September 19 to September 24, 1998, for the work required to construct the additional length of guardwall in the medians at Turkey Run Bridge. Net increase to the contract was \$124,004.09. Net increase to contract time was 5-calendar days.

CM No. 6, adjusted quantities of items which differed from the original engineer's estimate. This CM also created new items to install compression seals at both Turkey and Dead Run Bridges, to perform deck repair work at the Northeast corner of Turkey Run northbound bridge which included the installation of two larger inlets than what was specified in the Contract

Drawings. This CM also created new items to install and remove temporary pavement markings, and amended Section 635.26(k), to measure broken lines from end to end, not including the gaps. This CM revised the final completion date from September 24 to October 9, 1998, the time required for the additional sod work at both Turkey Run and Dead Run Bridges. Net decrease to the contract amount of \$90.45. Net increase of time was 15-calendar days.

CM No. 7, provided compensation for the additional latex modified concrete used to overlay the Dead Run northbound bridge. Net decrease of \$16,275.46.

2. Problems -

The Contractor had problems placing the grout in the haunches. The preformed material was not strong enough to keep the grout in place. At the second bridge, the methods of keeping the grout in place were changed by placing galvanized angles together with the original foam. This second method worked very well allowing the Contractor to accomplish this part of the work much faster.

The latex overlay placed on Turkey Run Bridge northbound developed cracking on the surface. With time these cracks became more severe. The Federal Highway Administration Research Laboratory was called to run tests on the deck to see if the latex had bonded to the concrete slab. The results showed that the latex overlay had poor bonding to the deck on the inside lane and poor bonding in some areas on the outside lane. The Contractor was required to remove these areas and place the latex overlay again.

D. Recommendations -

None

E. Claims -

None

IV CONSTRUCTION ENGINEERING

A. Project Personnel -

Jorge E. Alvarez, Project Engineer
Ramnik Kotadia, Assistant Project Engineer
Rajan Patel, Inspector
Darcel Williams, Inspector
Mark Brooks, Inspector
Bonnie Dubose, Inspector
Kathie Weisner, Inspector (trainee)
Brian McCormick, Inspector (trainee)

B. Contract Inspection -

Kenneth Gast, PCS Consultant Inspector (Level III)

C. Other Contacts

Alice McLarty, Liaison for the National Capitol Region
Audrey Calhoun, Superintendent, National Park Service GWMP
Dottie Marshall, Assistant Superintendent, National Park Service GWMP
Officer McGovern, U. S. Park Police

D. Partnering -

Informal partnering was successfully implemented on this project.

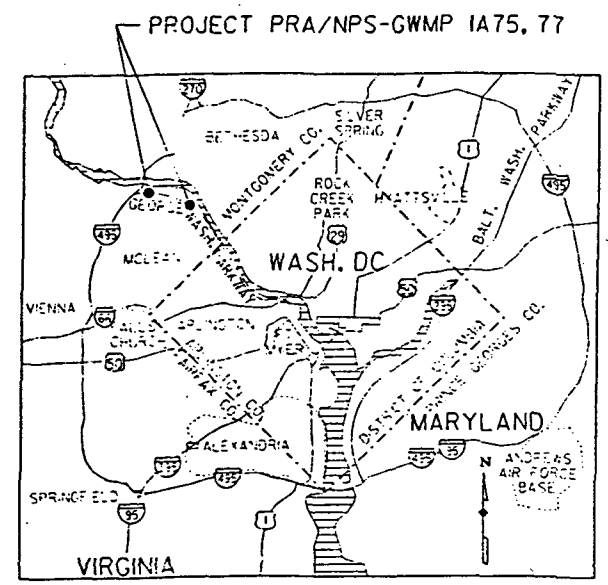
NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
850 41,937	NC	VA	GWMP IA75,77	1	143

U.S. DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

GEORGE WASHINGTON MEMORIAL PARKWAY

PLANS FOR PROPOSED PROJECT PRA-NPS-GWMP IA75, 77 REHABILITATION OF BRIDGES OVER DEAD RUN AND TURKEY RUN

FAIRFAX COUNTY
VIRGINIA



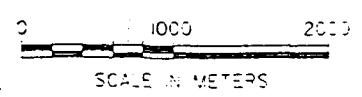
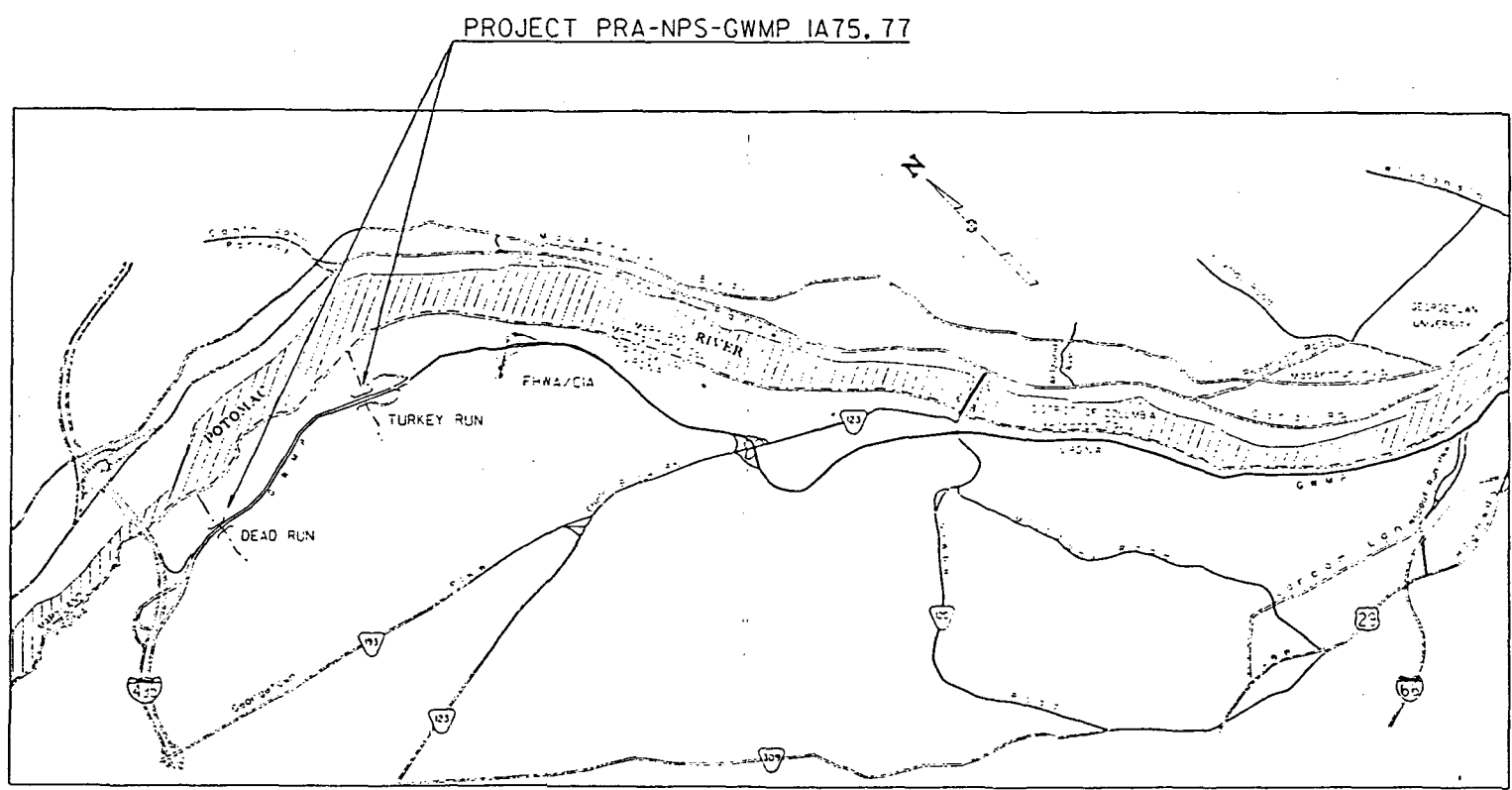
KEY MAP
WASHINGTON DC AND METROPOLITAN AREA

INDEX TO SHEETS

SHEET NO	DESCRIPTION
1	TITLE SHEET
2	LOCATION MAP
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62-73	CROSS SECTIONS
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CONVENTIONAL SIGNS

STATE BOUNDARY	---
INTERSTATE ROUTE	— [Shield] —
U.S. ROUTE	— [Shield] —
STATE ROUTE	— [Shield] —
EXISTING RIGHT-OF-WAY	— [Line] —
PROPOSED RIGHT-OF-WAY	— [Line] —
EXISTING ROADWAY	— [Line] —
RIVERS	— [Wavy Line] —
CREEKS AND PERMANENT DRAINAGE	— [Dotted Line] —
MARSH OR SWAMP	— [Stippled Area] —
TREE-LINE	— [Dotted Line] —
TREES	— [Circle] —
PIPE CULVERT WITH INLET	— [Symbol] —
SINGLE OR MULTIPLE PIPE CULVERT WITH HEADWALL AND WINGWALL	— [Symbol] —
SINGLE OR MULTIPLE PIPE CULVERT WITH END SECTION	— [Symbol] —
SINGLE OR MULTIPLE BOX CULVERT WITH HEADWALL AND WINGWALL	— [Symbol] —
GUARDRAIL	— [Line] —



PLANS PREPARED BY
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA
June 1997

DESIGN DESIGNATION
GEORGE WASHINGTON MEMORIAL PARKWAY

ADT(1996)	42,800
ADT(2016)	53,500
DHV	7000
D	60%
T	1%
V	80 km/h
C/A	FULL
e _{max}	8%

TOTAL PROJECT LENGTH
(Inventory No.)

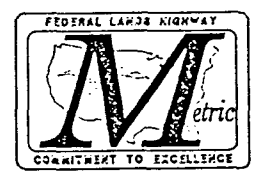
BRIDGE 1 (Dead Run) 3300-001P	0.09 Kilometers
BRIDGE 2 (Turkey Run) 3300-002P	0.12 Kilometers
TOTAL	0.21 Kilometers

DESCRIPTION OF PROJECT

IMPROVEMENT : Replacing deck and railing on Southbound Dead Run and Northbound & Southbound Turkey Run bridges. Constructing stone masonry guardwalls, and other miscellaneous work.

ROADWAY : George Washington Memorial Parkway

Specifications:
Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-96.



RECOMMENDED: Ray L. K. Anderson DATE: 2/7/97
DIVISION ENGINEER, EASTERN FEDERAL LANDS HIGHWAY DIVISION
FEDERAL HIGHWAY ADMINISTRATION

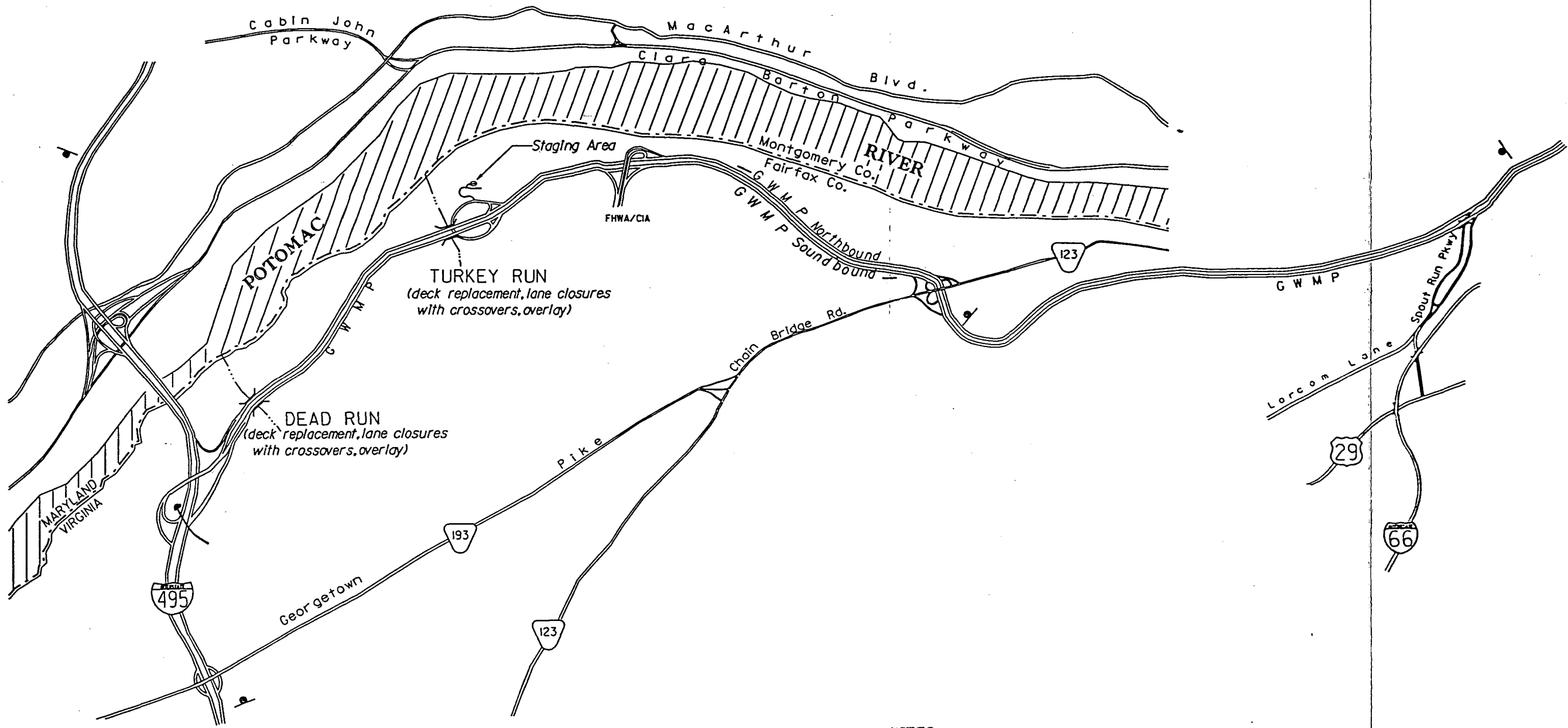
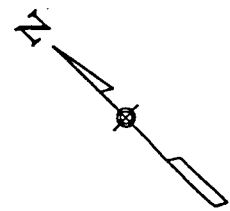
These drawings have been prepared in compliance with preliminary design drawings approved by:
W. J. Harlow DATE: 2/19/97
SUPERINTENDENT, GEORGE WASHINGTON MEMORIAL PARKWAY, NATIONAL PARK SERVICE

Terry R. Carleton DATE: 2/19/97
FIELD DIRECTOR, NATIONAL CAPITAL AREA
NATIONAL PARK SERVICE

APPROVED: Michael J. Payne DATE: 2/14/97
PROJECT MANAGER, DENVER SERVICE CENTER
NATIONAL PARK SERVICE

PROJECT MANAGER	DESIGNERS
KEN ATKINS	ANN DO / BOB BEUCLER

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
850 41,937	NC	VA	GWMP 1A75.77	2	143



NOTES:

- Variable message signs
- Variable message signs will be as directed by the CO.
- All access to the project will be via I-495. The Turkey Run ramps can be used as a turn around.

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION
 STERLING, VIRGINIA

LOCATION MAP

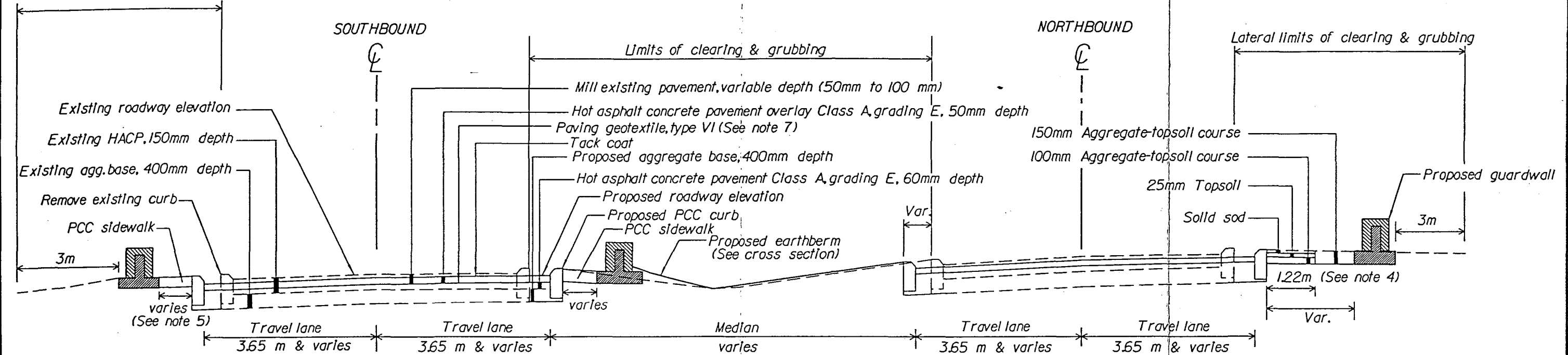
SCALE IN METERS

NPS NO.	REC	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
850	NC	VA	GWMP IA75,77	3	143
41,937					

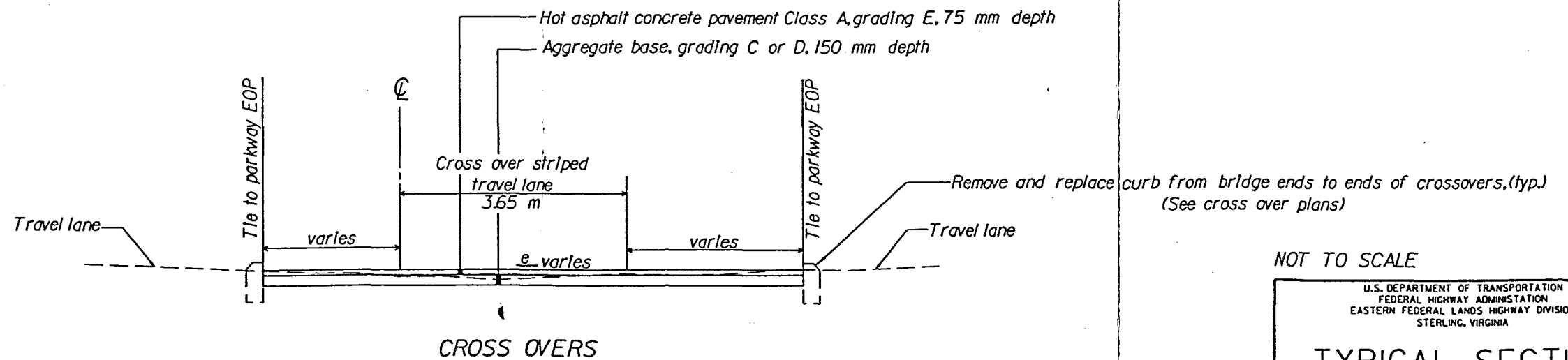
Notes:

1. Transition pavement from existing roadway grade to bridge grade. (See bridge approach plan sheets and Det. M40I-IA)
2. Place topsoil and seed all disturbed areas according to Sections 624 and 625.
3. See bridge approach plan sheets for limit of remove and replace curb.
4. When distance from back of curb to the stone masonry guardwall is 2.44m or less, sod the entire shoulder.
5. When distance from back of curb to the stone masonry guardwall is 1.22m or less, it will be PCC sidewalk (see Bridge approach plan sheets).
6. See cross over plans and cross sections for cross over locations.
7. Place fabric under 50mm HACP overlay areas within 15m of all bridge ends.

Lateral limits of clearing & grubbing



GEORGE WASHINGTON MEMORIAL PARKWAY BRIDGE APPROACHES



CROSS OVERS

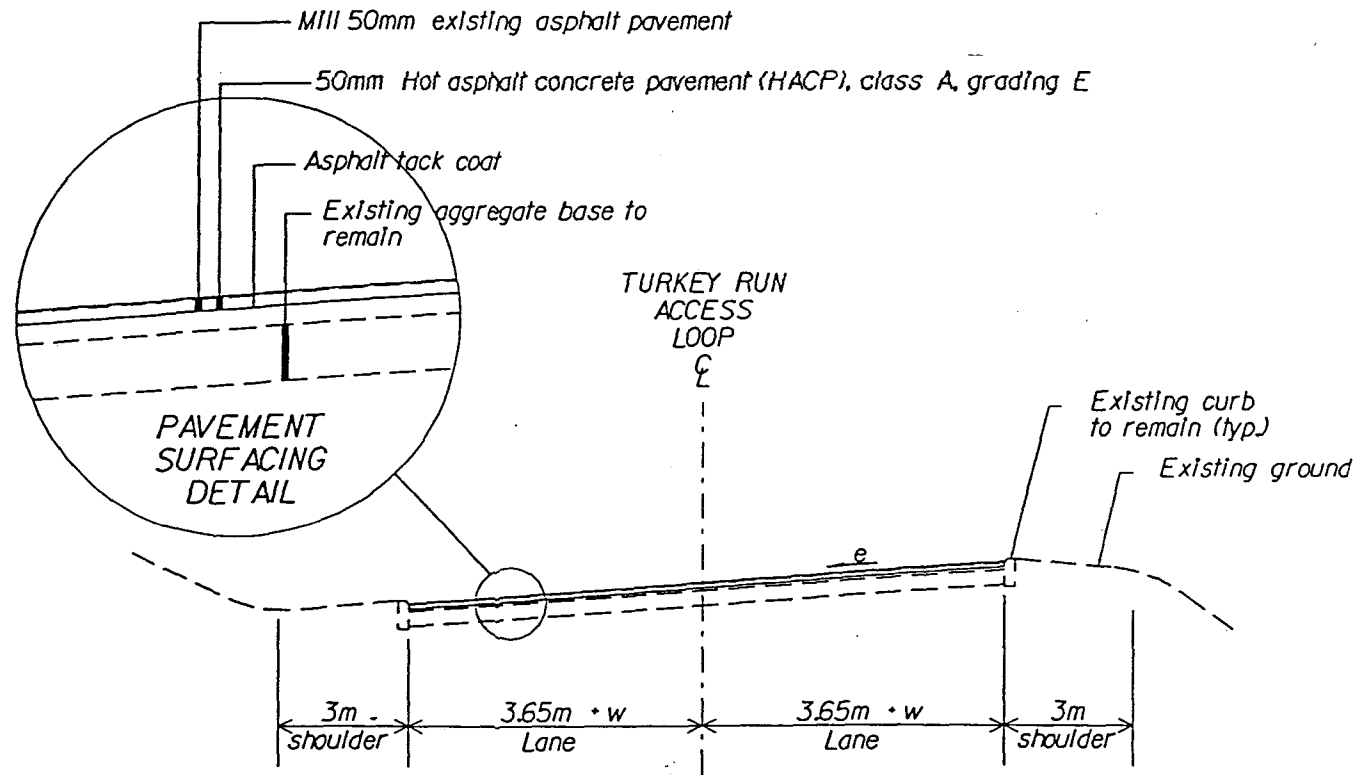
NOT TO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

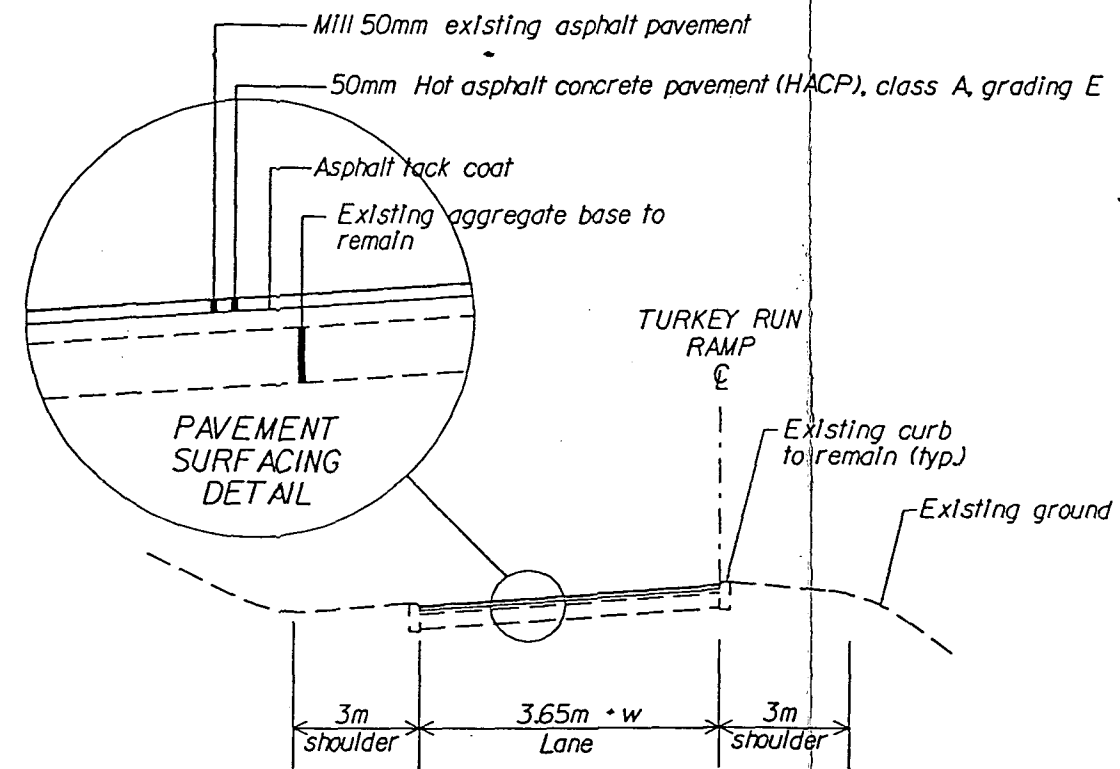
TYPICAL SECTION

GEORGE WASHINGTON MEMORIAL PARKWAY

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
850 1,937	NC	VA	NPS-GWMP IA75,IA77	4	143



TURKEY RUN ACCESS LOOP ROAD
 * 7+154 - 8+040

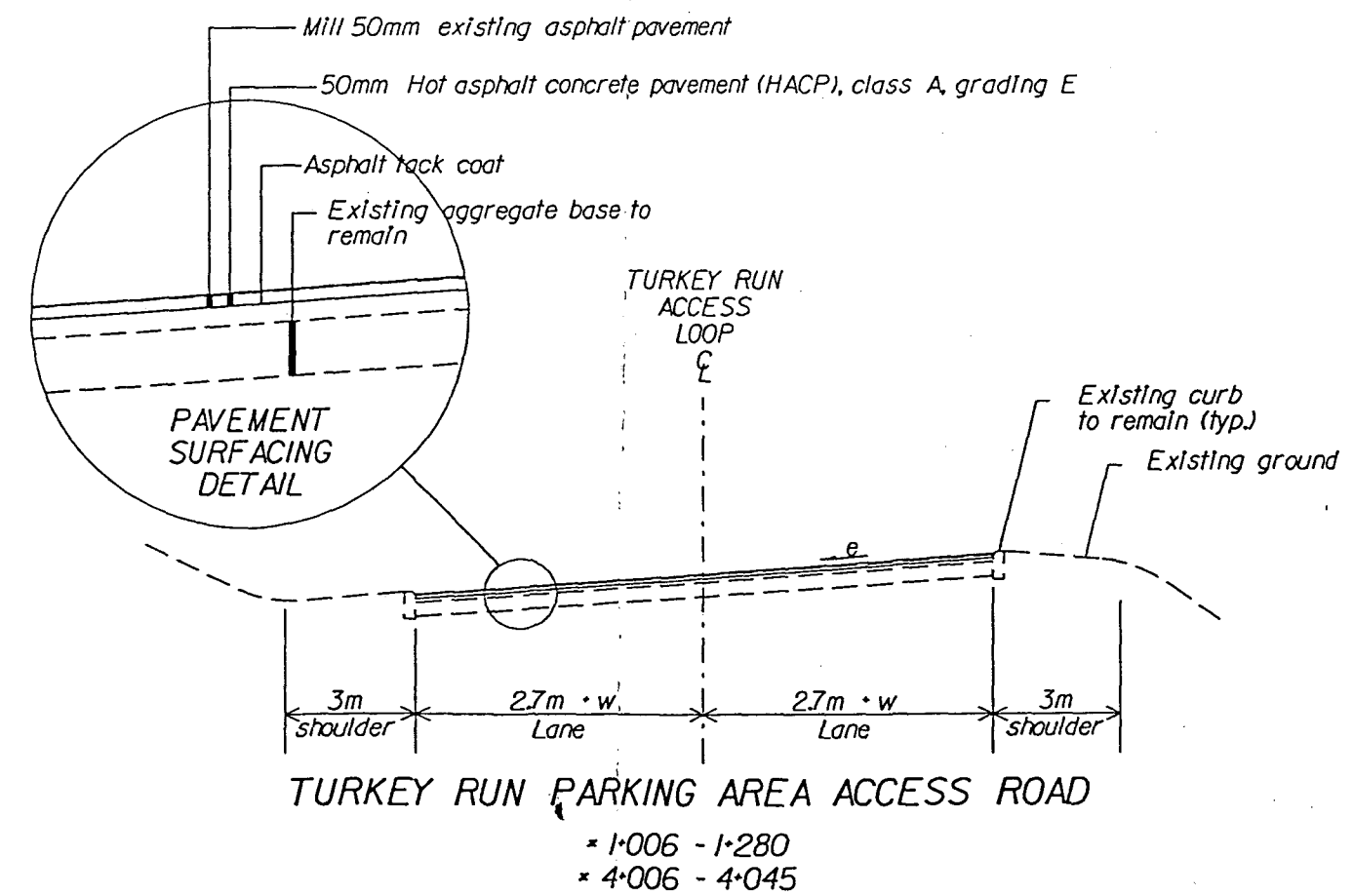
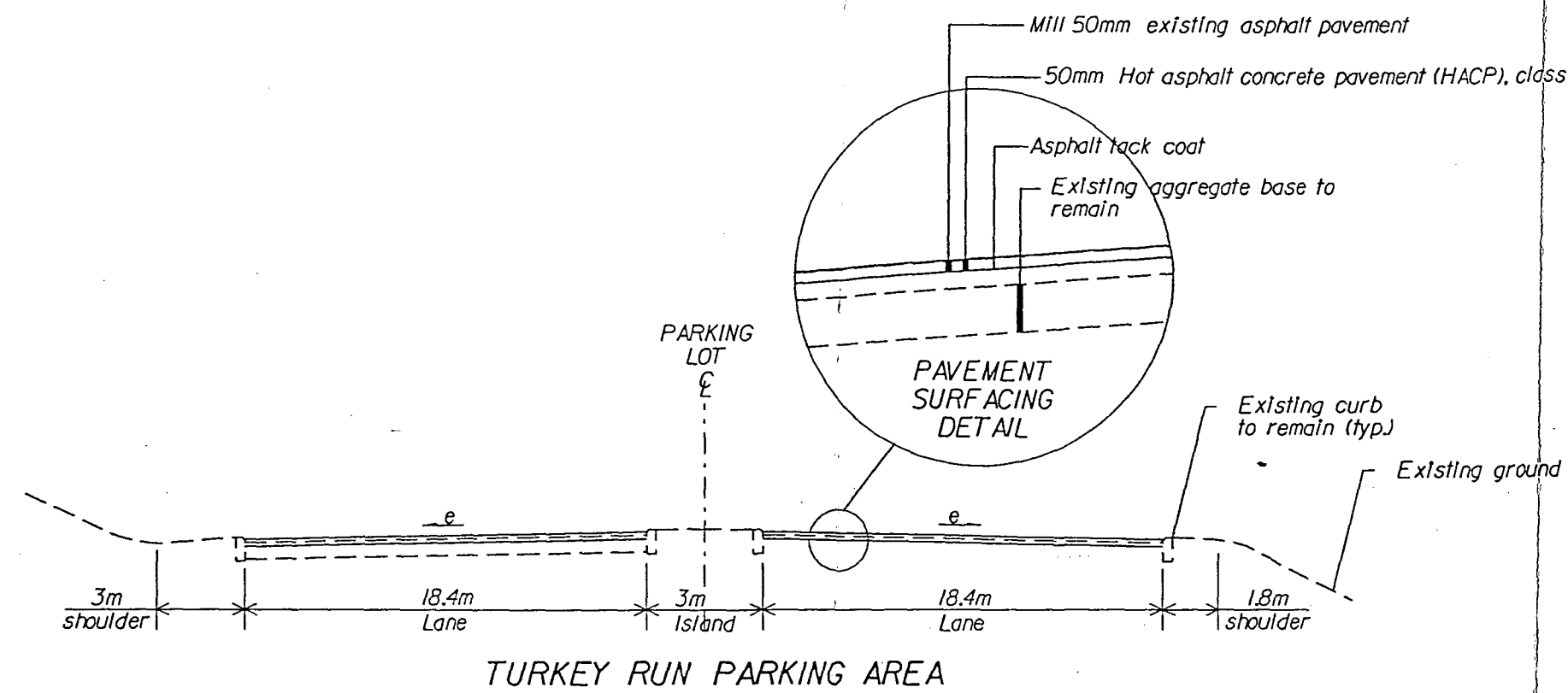


TURKEY RUN ACCESS LOOP RAMPS
 * 7+013 - 7+154, 8+040 - 8+242, 8+000 - 8+092, 9+000 - 9+112

* SEE OVERVIEW SHEET FOR STATIONING

Not to Scale
 U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION
 STERLING, VIRGINIA
 GEORGE WASHINGTON MEMORIAL PARKWAY
TYPICAL SECTION
 TURKEY RUN ACCESS LOOP

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
850 41,937	NC	VA	NPS-GWMP 1A75.77	5	143



* SEE OVERVIEW SHEET FOR STATIONING

Not to Scale

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

GEORGE WASHINGTON MEMORIAL PARKWAY

TYPICAL SECTION
TURKEY RUN PARKING AREA

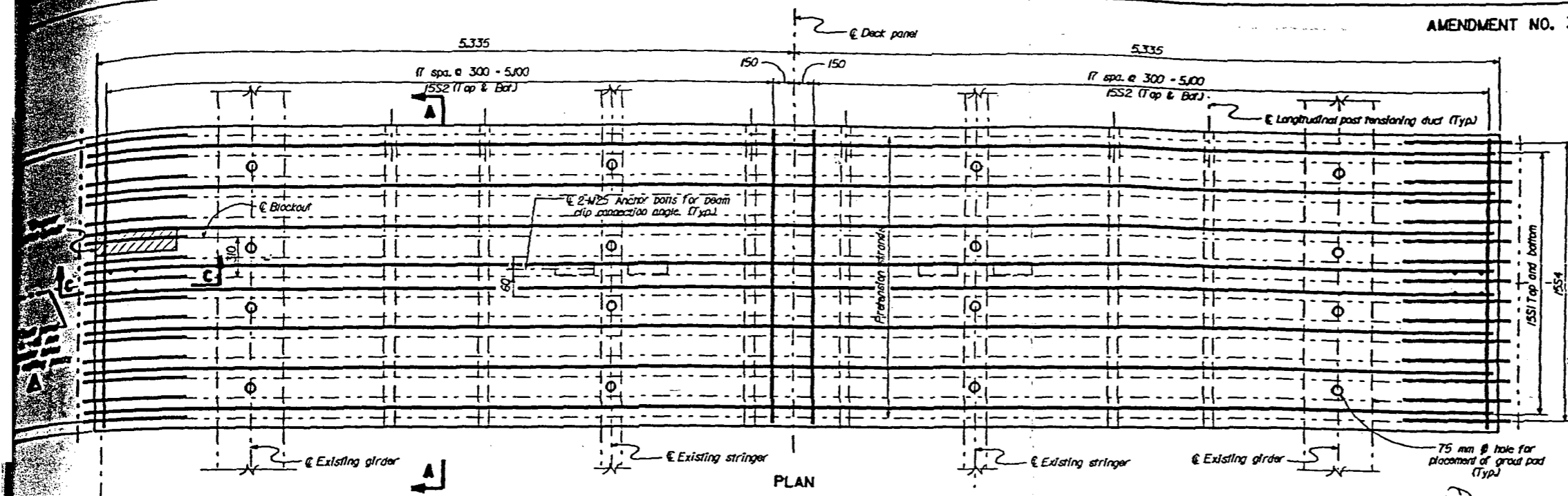
* 1+006 - 1+280
* 4+006 - 4+045

AMENDMENT NO. 3

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
NC	VA	NPS-GWMP IATS, T7	104	

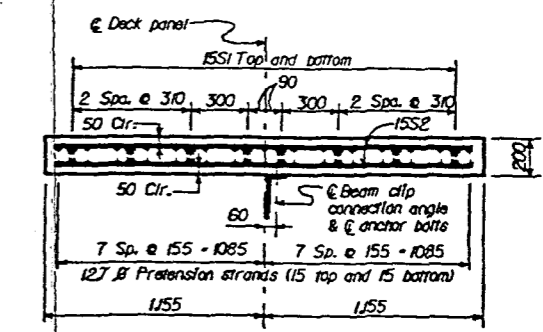
Notes:

1. Provide 25 cover unless otherwise noted.
2. Position of reinforcement may be adjusted slightly to accommodate strands, inserts, holes, etc.
3. Clip bar 1551 as needed to permit installation of scupper at panels DS17 and DS23.
4. For longitudinal prestressing details see "Longitudinal Post Tensioning" and "Built-up and Shear Keys" sheets.
5. Rough broom finish top surface of panel to an amplitude of 3.
6. For panel lifting and leveling support locations see "Miscellaneous Details" sheet.
7. For scupper locations see "Deck Layout" sheet.
8. For "Beam Clip Detail", see "Miscellaneous Details" sheet.
9. Pretension each strand to a force of 138 kN.

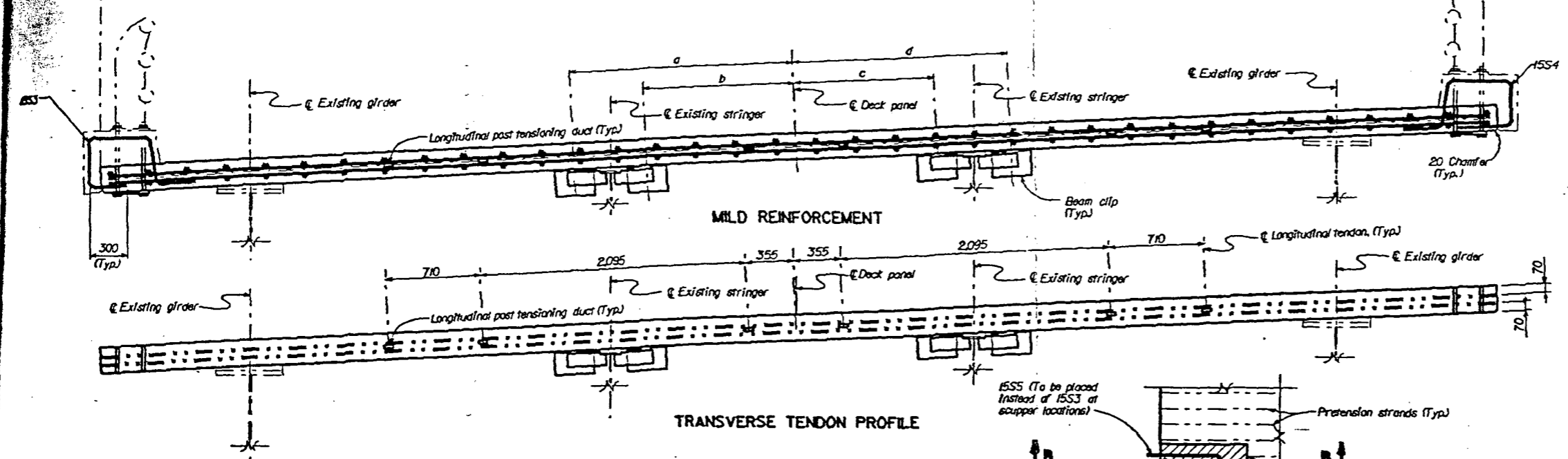


Panels	* Dimension			
	a	b	c	d
DS16, DS25	1,725	885	1,015	1,860
DS4, DS37	1,820	980	920	1,765
DS7, DS34	1,905	1,065	840	1,680
DS10, DS31	1,915	1,075	825	1,670
DS19, DS22	1,790	945	955	1,800

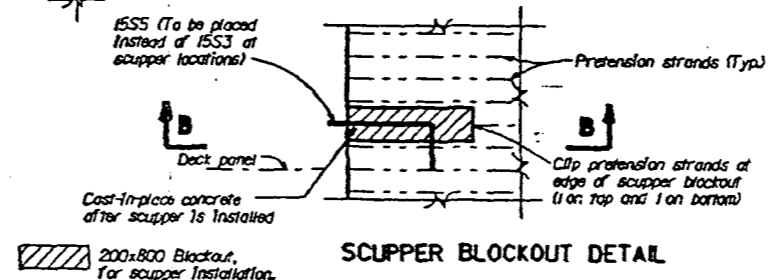
* Dimensions are parallel to panel surface.



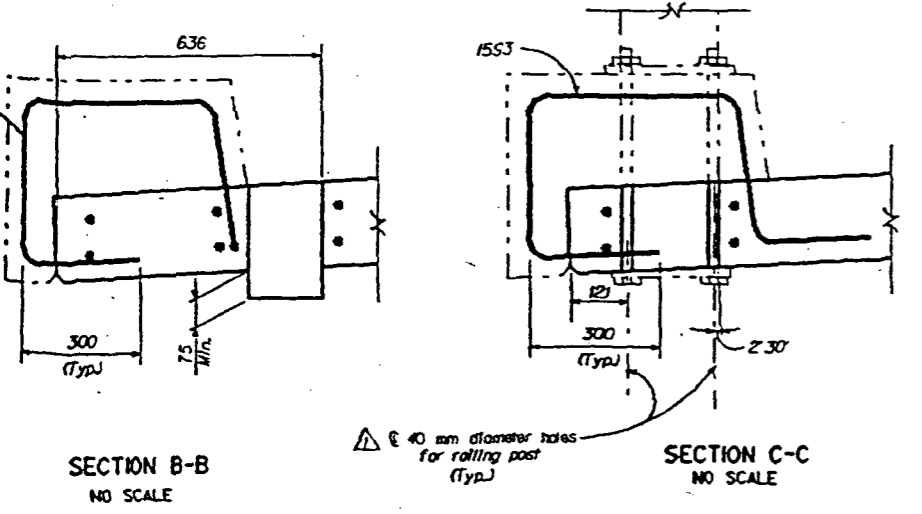
SECTION A-A



TRANSVERSE TENDON PROFILE



SCUPPER BLOCKOUT DETAIL

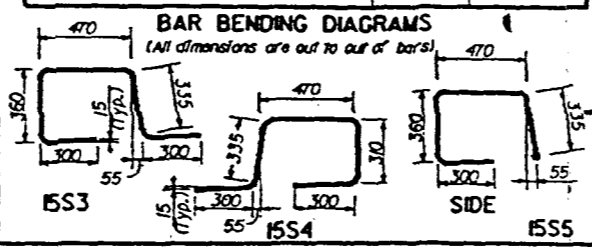


SECTION B-B
NO SCALE

SECTION C-C
NO SCALE

ITEM	UNIT	QUANTITY
Reinforcement steel (Epoxy coated)	kilograms	598
Prestressed steel	kilograms	250
Class D/AE Concrete	cubic meters	4.93

BAR NO.	LENGTH	BENT	STR.
1551	16	1,0570	•
1552	72	2,210	•
1553	15	1,765	•
1554	15	1,715	•
1555	1	1,465	•



Number preceding letter denotes bar size.
For one typical deck panel
Panels DS 17 and DS 23 only

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
GEORGE WASHINGTON MEMORIAL PARKWAY
BRIDGE OVER DEAD RUN
SOUTHBOUND

TYPICAL DECK PANEL

REVISION 9/11/97

TEAM LEADER	Gary Jankovich	DATE	July 1995
DESIGNED BY	HHP	CHECKED BY	GSJ
DRAWN BY	HHP/MGG	SCALE	No scale
			Br. Dwg. No. 8 of 47

FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION
 STERLING, VIRGINIA
 TABULATION OF BIDS

DTFH71-97-R-00003

09/19/97

GEORGE WASHINGTON MEMORIAL PARKWAY PROJECT

PRA/NPS-GWMP 1A75,77

BEST AND FINAL OFFERS

```

    +-----+
    + SHIRLEY CONTRACTING CORPORATION + CORMAN CONSTRUCTION, INC. + FLIPPO CONSTRUCTION CO., INC +
    + 8435 BACKLICK ROAD + 12001 GUILFORD ROAD + 3820 PENN BELT PLACE +
    + LORTON, VA 22079 + ANNAPOLIS JCT, MD 20701 + FORESTVILLE, MD 20747 +
    + + + +
    + + + +
    +-----+
    
```

Item No.	Item Description	Unit	Quantity	Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
15101	Mobilization	LPSM	ALL	420,000.00	420,000.00	362,000.00	362,000.00	272,000.00	272,000.00
15201	Construction survey and staking	LPSM	ALL	30,000.00	30,000.00	10,000.00	10,000.00	61,827.00	61,827.00
15401	Contractor testing	LPSM	ALL	30,000.00	30,000.00	13,000.00	13,000.00	24,156.00	24,156.00
20102	Clearing and grubbing	LPSM	ALL	20,000.00	20,000.00	5,000.00	5,000.00	20,900.00	20,900.00
20301AP	Removal of pipe end section	Each	3	300.00	900.00	190.00	570.00	461.00	1,383.00
20301F	Removal of inlets	Each	1	400.00	400.00	450.00	450.00	531.00	531.00
20302RB	Removal of portland cement concrete curb	m	1,480	14.00	20,720.00	3.30	4,884.00	10.00	14,800.00
20303AB	Removal of concrete	m2	10	520.00	5,200.00	60.00	600.00	353.00	3,530.00
20303K	Removal of bridge deck	m2	3,708	75.00	278,100.00	54.00	200,232.00	123.00	456,084.00
20303PPG	Removal of bridge pavement, 65 mm depth (Dead Run Northbound)	m2	795	3.50	2,782.50	4.80	3,816.00	13.00	10,335.00
20304AL	Removal of miscellaneous items	LPSM	ALL	3,400.00	3,400.00	3,000.00	3,000.00	4,450.00	4,450.00
20309AB	Removal of concrete	m3	80	325.00	26,000.00	540.00	43,200.00	410.00	32,800.00
20401	Roadway excavation	m3	900	22.00	19,800.00	25.00	22,500.00	20.00	18,000.00
20405	Select borrow	m3	1,100	11.00	12,100.00	18.00	19,800.00	10.00	11,000.00
21101	Roadway obliteration	m2	4,000	5.40	21,600.00	7.00	28,000.00	4.00	16,000.00

Item No.	Item Description	Unit	Quantity	Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
25102B	Placed riprap, class 2	t	675	50.00	33,750.00	60.00	40,500.00	80.00	54,000.00
25102C	Placed riprap, class 3	t	225	60.00	13,500.00	65.00	14,625.00	76.00	17,100.00
30101	Aggregate base	t	1,625	18.00	29,250.00	24.00	39,000.00	30.52	49,595.00
30501	Aggregate-topsoil course	t	500	32.00	16,000.00	30.00	15,000.00	68.62	34,310.00
40101AE	Hot asphalt concrete pavement, class A, grading E	t	2,700	53.00	143,100.00	44.00	118,800.00	49.00	132,300.00
40101AE	Hot asphalt concrete pavement, class A, grading E (Temporary pavement for crossovers)	t	700	65.00	45,500.00	44.00	30,800.00	49.01	34,307.00
41301F	Asphalt pavement milling, 50 mm depth	m2	20,000	2.50	50,000.00	2.10	42,000.00	2.29	45,800.00
41301K	Asphalt pavement milling, 100 mm depth	m2	1,750	3.50	6,125.00	2.70	4,725.00	3.00	5,250.00
41501	Paving geotextile, Type VI	m2	900	5.75	5,175.00	1.60	1,440.00	3.30	2,970.00
55201D	Structural concrete, class D (AE)	m3	70	900.00	63,000.00	600.00	42,000.00	740.00	51,800.00
55206DU	Structural concrete, class D (AE), for bridge curb	m	670	85.00	56,950.00	150.00	100,500.00	162.00	108,540.00
55207	STRUCTURAL CONCRETE, FOR OVERLAY	m2	4,070	65.00	264,550.00	36.00	146,520.00	64.00	260,480.00
55209	Repair concrete (for abutment breastwall and backwall)	m2	11	1,600.00	17,600.00	600.00	6,600.00	1,371.00	15,081.00
55209	Repair concrete (for Dead Run northbound bridge deck)	m2	10	1,200.00	12,000.00	240.00	2,400.00	196.00	1,960.00
55228	Replace bridge deck (Turkey Run, Northbound)	m2	1,307	385.00	503,195.00	485.00	633,895.00	368.00	480,976.00
55228	Replace bridge deck (Turkey Run, Southbound)	m2	1,307	385.00	503,195.00	485.00	633,895.00	368.00	480,976.00
55228	Replace bridge deck (Dead Run, Southbound)	m2	992	385.00	381,920.00	485.00	481,120.00	368.00	365,056.00
55402	Epoxy coated reinforcing steel (excluding bridge decks)	kg	10,900	1.25	13,625.00	1.30	14,170.00	1.79	19,511.00
55502	Bridge expansion joints	m	76	275.00	20,900.00	560.00	42,560.00	240.00	18,240.00
55601BC	Steel bridge railing, three rail	m	690	608.00	419,520.00	650.00	448,500.00	555.00	382,950.00

Item No.	Item Description	Unit	Quantity	Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
60201M	600 mm pipe culvert	m	10	300.00	3,000.00	165.00	1,650.00	276.00	2,760.00
60206M	End section for 600 mm pipe culvert	Each	3	750.00	2,250.00	500.00	1,500.00	1,180.00	3,540.00
60403FB	Inlet, type 6B	Each	8	2,000.00	16,000.00	1,500.00	12,000.00	1,856.00	14,848.00
60406	Inlet adjustment	Each	37	500.00	18,500.00	500.00	18,500.00	842.00	31,154.00
60407	Capping inlets and manholes	Each	10	600.00	6,000.00	200.00	2,000.00	714.00	7,140.00
60409FB	Metal frame and grate, type 6B	Each	7	800.00	5,600.00	300.00	2,100.00	660.00	4,620.00
60901X	Portland cement concrete curb, 400 mm depth	m	1,480	50.00	74,000.00	50.00	74,000.00	37.50	55,500.00
61501B	Portland cement concrete sidewalk	m2	200	40.00	8,000.00	45.00	9,000.00	32.00	6,400.00
62001CE	Rubble masonry, rock face finish, 1.50 R.F.	m3	29	1,000.00	29,000.00	1,000.00	29,000.00	987.00	28,623.00
62002A	Stone masonry guardwall, type 1	m	560	525.00	294,000.00	540.00	302,400.00	591.00	330,960.00
62404B	Placing conserved topsoil, 25 mm depth	m2	1,500	4.00	6,000.00	1.20	1,800.00	5.09	7,635.00
62509	Turf establishment	ha	0.5	9,000.00	4,500.00	8,000.00	4,000.00	8,482.00	4,241.00
62701A	Solid sod	m2	1,500	5.50	8,250.00	5.00	7,500.00	5.30	7,950.00
63401HA	Pavement markings, type H, solid	m	7,200	2.25	16,200.00	2.10	15,120.00	2.35	16,920.00
63401HB	Pavement markings, type H, broken	m	1,200	1.00	1,200.00	1.10	1,320.00	1.12	1,344.00
63501	Temporary traffic control	LPSM	ALL	233,000.00	233,000.00	175,000.00	175,000.00	410,000.00	410,000.00
63701	Field office	Each	1	9,500.00	9,500.00	10,000.00	10,000.00	14,430.00	14,430.00

TOTALS

4,224,857.50

4,242,992.00

4,457,063.00

(01)

(02)

(03)

Small Business Concern?

NO

NO

NO

Small Disadvantaged Business Concern?

NO

NO

NO

Woman Owned Business Concern?

NO

NO

NO

Type of Bid Guarantee:

Bond

Bond

IND. SURETY

Bid Considered Responsive?

YES

YES

YES

OPENED AT STERLING, VA

BY ROBERT SPARROW

DATE 09/19/97

I CERTIFY THAT THIS BID TABULATION ACCURATELY REFLECTS THE

BIDS RECEIVED AND PUBLICLY OPENED FOR THIS SOLICITATION.

SIGNED -----

CONTRACT AWARDED TO -----

TITLE -----

DATE -----

FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION
 STERLING, VIRGINIA
 TABULATION OF BIDS

DTFH71-97-R-00003 09/19/97
 GEORGE WASHINGTON MEMORIAL PARKWAY PROJECT
 PRA/NPS-GWMP 1A75,77

BEST AND FINAL OFFERS

+++++
 + ENGINEER'S ESTIMATE +
 + 4,200,000.00 +
 +
 +++++

Item No.	Item Description	Unit	Quantity	Unit Estimate	Estimate
15101	Mobilization	LPSM	ALL	146,817.50	146,817.50
15201	Construction survey and staking	LPSM	ALL	54,600.00	54,600.00
15401	Contractor testing	LPSM	ALL	67,200.00	67,200.00
20102	Clearing and grubbing	LPSM	ALL	5,000.00	5,000.00
20301AP	Removal of pipe end section	Each	3	300.00	900.00
20301F	Removal of inlets	Each	1	500.00	500.00
20302RB	Removal of portland cement concrete curb	m	1,480	13.00	19,240.00
20303AB	Removal of concrete	m2	10	165.00	1,650.00
20303K	Removal of bridge deck	m2	3,708	125.00	463,500.00
20303PFG	Removal of bridge pavement, 65 mm depth (Dead Run Northbound)	m2	795	13.00	10,335.00
20304AL	Removal of miscellaneous items	LPSM	ALL	10,000.00	10,000.00
20309AB	Removal of concrete	m3	80	700.00	56,000.00
20401	Roadway excavation	m3	900	20.00	18,000.00
20405	Select borrow	m3	1,100	20.00	22,000.00
21101	Roadway obliteration	m2	4,000	3.00	12,000.00

Item No.	Item Description	Unit	Quantity	Unit Estimate	Estimate
25102B	Placed riprap, class 2	t	675	55.00	37,125.00
25102C	Placed riprap, class 3	t	225	60.00	13,500.00
30101	Aggregate base	t	1,625	25.00	40,625.00
30501	Aggregate-topsoil course	t	500	20.00	10,000.00
40101AE	Hot asphalt concrete pavement, class A, grading E	t	2,700	50.00	135,000.00
40101AE	Hot asphalt concrete pavement, class A, grading E (Temporary pavement for crossovers)	t	700	50.00	35,000.00
41301F	Asphalt pavement milling, 50 mm depth	m2	20,000	3.00	60,000.00
41301K	Asphalt pavement milling, 100 mm depth	m2	1,750	10.00	17,500.00
41501	Paving geotextile , Type VI	m2	900	5.00	4,500.00
55201D	Structural concrete, class D (AE)	m3	70	550.00	38,500.00
55206DU	Structural concrete, class D (AE), for bridge curb	m	670	100.00	67,000.00
55207	STRUCTURAL CONCRETE, FOR OVERLAY	m2	4,070	75.00	305,250.00
55209	Repair concrete (for abutment breastwall and backwall)	m2	11	1,000.00	11,000.00
55209	Repair concrete (for Dead Run northbound bridge deck)	m2	10	220.00	2,200.00
55228	Replace bridge deck (Turkey Run, Northbound)	m2	1,307	415.00	542,405.00
55228	Replace bridge deck (Turkey Run, Southbound)	m2	1,307	415.00	542,405.00
55228	Replace bridge deck (Dead Run, Southbound)	m2	992	415.00	411,680.00
55402	Epoxy coated reinforcing steel (excluding bridge decks)	kg	10,900	1.30	14,170.00
55502	Bridge expansion joints	m	76	550.00	41,800.00
55601BC	Steel bridge railing, three rail	m	690	360.00	248,400.00

Item No.	Item Description	Unit	Quantity	Unit Estimate	Estimate
60201M	600 mm pipe culvert	m	10	170.00	1,700.00
60206M	End section for 600 mm pipe culvert	Each	3	500.00	1,500.00
60403FB	Inlet, type 6B	Each	8	2,000.00	16,000.00
60406	Inlet adjustment	Each	37	750.00	27,750.00
60407	Capping inlets and manholes	Each	10	600.00	6,000.00
60409FB	Metal frame and grate, type 6B	Each	7	500.00	3,500.00
60901X	Portland cement concrete curb, 400 mm depth	m	1,480	40.00	59,200.00
61501B	Portland cement concrete sidewalk	m2	200	30.00	6,000.00
62001CE	Rubble masonry, rock face finish, 1.50 R.F.	m3	29	1,000.00	29,000.00
62002A	Stone masonry guardwall, type 1	m	560	540.00	302,400.00
62404B	Placing conserved topsoil, 25 mm depth	m2	1,500	1.00	1,500.00
62509	Turf establishment	ha	0.5	4,500.00	2,250.00
62701A	Solid sod	m2	1,500	4.00	6,000.00
63401HA	Pavement markings, type H, solid	m	7,200	2.00	14,400.00
63401HB	Pavement markings, type H, broken	m	1,200	1.00	1,200.00
63501	Temporary traffic control	LPSM	ALL	245,797.50	245,797.50
63701	Field office	Each	1	10,000.00	10,000.00

TOTALS

4,200,000.00
(EE)

Small Business Concern?
 Small Disadvantaged Business Concern?
 Woman Owned Business Concern?
 Type of Bid Guarantee:
 Bid Considered Responsive?

OPENED AT STERLING, VA
 BY ROBERT SPARROW
 DATE 09/19/97

I CERTIFY THAT THIS BID TABULATION ACCURATELY REFLECTS THE
 BIDS RECEIVED AND PUBLICLY OPENED FOR THIS SOLICITATION.

SIGNED

Gay L Brown

CONTRACT AWARDED TO

SHAWLEY CONTRACTING 9/30/97

PUBLIC VOUCHER FOR PURCHASES AND SERVICES OTHER THAN PERSONAL

VOUCHER NO. 27

U.S. DEPARTMENT, BUREAU, OR ESTABLISHMENT AND LOCATION

DATE VOUCHER PREPARED

SCHEDULE NO.

U. S. Department of Transportation
Federal Highway Administration
Eastern Federal Lands Highway Division
400 Ridgetop Circle
Sterling, Virginia 20166-6511

January 27, 1999

CONTRACT NUMBER AND DATE

DTFH71-97-C-00028 September 30, 1997

REQUISITION NUMBER AND DATE

PAID BY

PAYEE'S NAME AND ADDRESS

Shirley Contracting Corporation
8435 Backlick Road
Lorton, Virginia 22079

DATE INVOICE RECEIVED

DISCOUNT TERMS

PAYEE'S ACCOUNT NUMBER

SHIPPED FROM

TO

WEIGHT

GOVERNMENT B/L NUMBER

NUMBER AND DATE OF ORDER

DATE OF DELIVERY OR SERVICE

ARTICLES OR SERVICE
(Enter description, item number of contract or Federal supply schedule, and other information deemed necessary)


QUANTITY

UNIT PRICE
COST PER

AMOUNT

(1)

This is final settlement of construction of PRA/NPS-GWMP 1A75,77, George Washington Memorial Parkway Project, and final closeout is specifically conditioned upon the execution of the Contractor's Release attached hereto and incorporated herein.

By: C.A. BUCHER - 

Title: VICE PRESIDENT Date: 2/23/99

(Use continuation sheet (s) if necessary)

(Payee must NOT use the space below)

TOTAL

\$24,294.67

PAYMENT:

APPROVED FOR

EXCHANGE RATE

DIFFERENCES

PROVISIONAL

COMPLETE

= \$ 24,294.67

= \$1.00

PARTIAL

BY

FINAL

Gary L. Klinedinst

Date: 3/12/99

PROGRESS

TITLE

Amount verified; correct for

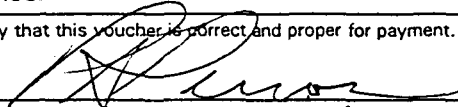
ADVANCE

Division Engineer

(Signature or initials)

Pursuant to authority vested in me, I certify that this voucher is correct and proper for payment.

3/17/99
(Date)


(Authorized Certifying officer)²

Executive Officer
(Title)

ACCOUNTING CLASSIFICATION

2597C71970280001 X15R-633-15-0-15R031-155110D~2511644054P0 PM

PAID BY

CHECK NUMBER

ON ACCOUNT OF U.S. TREASURY

CHECK NUMBER

ON (Name of bank)

CASH

DATE

PAYEE³

1 When stated in foreign currency, insert name of currency.

2 If the ability to certify and authority to approve are combined in one person, one signature only is necessary; otherwise the approving officer will sign in the space provided, over his official title.

3 When a voucher is received in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Doe, Secretary", or "Treasurer", as the case may be.

PER

TITLE

PRIVACY ACT STATEMENT

The information requested on this form is required under the provisions of 31 U.S.C. 82b and 82c, for the purpose of disbursing Federal money. The information requested is to identify the particular creditor and the amounts to be paid. Failure to furnish this information will hinder discharge of the payment obligation.

DEPARTMENT OF TRANSPORTATION CONTRACTOR'S RELEASE		CONTRACT NO. DTFH71-97-C-00028
CONTRACTOR (Name and address) Shirley Contracting Corporation 8435 Backlick Road Lorton, Virginia 22079		SUM OF Twenty Four Thousand, Two Hundred and Ninety Four Dollars, and Sixty Seven Cents
		DOLLARS (\$ 24,294.67)

In consideration of the sum stated above, which has been paid or is to be paid to the Contractor, or his assignees, the Contractor, upon payment of the said sum by the UNITED STATES OF AMERICA (hereinafter called the Government), does remise, release, and discharge the Government, its officers, agents, and employees, of and from all liabilities, obligations, claims, and demands whatsoever under or arising from the said contract, except:

1. Specified claims in stated amounts or in estimated amounts where the amounts are not susceptible of exact statement by the Contractor, as follows:
2. Claims, together with reasonable expenses incidental thereto, based upon the liabilities of the Contractor to third parties arising out of the performance of this contract, which are not known to the Contractor on the date of the execution of this release and of which the Contractor gives notice in writing to the Contracting Officer within the period specified in the said contract: and
3. Claims for reimbursement of costs (other than expenses of the Contractor by reason of his indemnification of the Government against patent liability), including reasonable expenses incidental thereto, incurred by the Contractor under any provisions of the said contract relating to patents.

The Contractor agrees, in connection with patent matters and with claims which are not released as set forth above, that he will comply with all provisions of the said contract, including without limitation those provisions relating to notifications to the Contracting Officer and relating to the defense or prosecution of litigation.

IN WITNESS WHERE OF, this release has been executed this 23rd day of February, 1999.

WITNESSES

Sandra J. Mann
Patricia Doshier

SHIRLEY CONTRACTING CORP.
(Contractor)

BY C.A. BUCHER

TITLE VICE PRESIDENT & SECRETARY

NOTE: In the case of a corporations, witnesses are not required, but the certification below must be completed.

CERTIFICATE

I, _____, certify that I am the _____ secretary of the corporation named as Contractor in the foregoing release; that _____ who signed said release on behalf of the Contractor was then _____ of said corporation; that said release was duly signed for and in behalf of said corporation by authority of its governing body and is within the scope of its corporate powers.

(CORPORATE SEAL)

Schedule finance

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
21400 RIDGETOP CIRCLE
STERLING, VIRGINIA 20166

batch #
cntrl # 03969

PRANDS-GWMP 1A75,77 - GEORGE WASHINGTON MEMORIAL PARKWAY

Replacing decks and railings on southbound Dead Run and north & southbound Turkey Run bridges.
Constructing stone masonry guardwalls, and other miscellaneous work.

TO: SHIRLEY CONTRACTING CORPORATION
8435 BACKLICK ROAD
LORTON,, VA 22079

CONSTRUCTION SUMMARY

For work performed up to and including October 15, 1998

ESTIMATE # 11, FINAL
PERIOD THROUGH 10/15/98

TOTAL AMOUNT EARNED TO DATE \$4,504,909.97

CONTRACT NUMBER DTFH71-97-C-00028
AWARD DATE September 30, 1997

ADJUSTMENTS: penalty, late lane closure \$1,250.00

ADVICE TYPE 10

TOTAL PAYMENTS APPROVED TO DATE \$4,503,659.97

FIRST UNION NATIONAL BANK
CHARLOTTE, NC 28288
0550 0320 1

TOTAL PAYMENTS PREVIOUSLY PAID \$4,479,365.30

STATE Virginia
COUNTIES Fairfax
FOREST OR PARK George Washington Memorial Parkway

AMOUNT TO BE PAID THIS ESTIMATE \$24,294.67

LENGTH 0.21 km

(2079920047897) SHIRLEY CONTRACTING CORPORATION
*DTFH71-97-C-00028
ESTIMATE # 11, FINAL

TIN # 54-0962289

date:
JORGE ALVAREZ, PROJECT ENGINEER
Quantities incorporated and meet specifications

ACCOUNT NUMBER

771P-E50-15-0-71P054-155110-D**2 51 3300 003H0
X15R-633-15-0-15R031-155110-D**2 51 1644 054P0

EXPEND	LIQUIDATE
\$0.00	\$0.00
\$24,294.67	\$24,294.67

date:
RICK MEYER, CONSTRUCTION OPERATIONS ENGINEER
Concur in estimate

Donald W. Miller date: 3/16/99
DONALD W. MILLER, CONSTRUCTION ENGINEER

Peter A. Ferros date: 3/17/99
PETER A. FERROS, EXECUTIVE OFFICER
Approve for payment

cc: NPS

Certify funds available

U. S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY ADMINISTRATION

PRA/NPS-GWMP 1A75,77 - GEORGE WASHINGTON MEMORIAL PARKWAY ESTIMATE # 11, FINAL

ITEM NO.	DESCR.	CONTRACTED						ESTIMATED				PROBABLES		OVERRUN
		QUANTITY	CM	AMENDED	UNIT	UNIT PRICE	AMOUNT	CURRENT	PREVIOUS	TO DATE	AMOUNT	QUANTITY	AMOUNT	QUANTITY
10801	<i>DBE Compensation, see CM #4, dtd 08/11/9, and CM #7, dtd 03/08/99</i>	100.000	-50.9951	49.005	LPSM	\$100,000.00	\$49,004.90	0.000	49.0049	49.0049	\$49,004.90	49.0049	\$49,004.90	0
15101	<i>Mobilization</i>	100.000		100.000	LPSM	\$420,000.00	\$420,000.00	0.000	100.000	100.000	\$420,000.00	100.000	\$420,000.00	0
15201	<i>Construction survey and staking</i>	100.000		100.000	LPSM	\$30,000.00	\$30,000.00	0.000	100.000	100.000	\$30,000.00	100.000	\$30,000.00	0
15401	<i>Contractor testing</i>	100.000		100.000	LPSM	\$30,000.00	\$30,000.00	0.000	100.000	100.000	\$30,000.00	100.000	\$30,000.00	0
15703	<i>CM #2, dtd 06/01/98, Silt fence 1,100 each; quantity decrease 221.391 per CM #7, dtd 03/08/99</i>	0.000	878.609	878.609	Each	\$10.44	\$9,172.68	0.000	878.609	878.609	\$9,172.68	878.609	\$9,172.68	0
20102	<i>Clearing and grubbing</i>	100.000		100.000	LPSM	\$20,000.00	\$20,000.00	0.000	100.000	100.000	\$20,000.00	100.000	\$20,000.00	0
20301AP	<i>Removal of pipe end section</i>	3.000		3.000	Each	\$300.00	\$900.00	0.000	3.000	3.000	\$900.00	3.000	\$900.00	0
20301F	<i>Removal of inlets; quantity per CM #7, dtd 03/08/99</i>	1.000	-1	0.000	Each	\$400.00	\$0.00	0.000	0.000	0.000	\$0.00	0.000	\$0.00	0
20302RB	<i>Removal of portland cement concrete curb; quantity per CM #7, dtd 03/08/99</i>	1480.000	-28	1,452.000	m	\$14.00	\$20,328.00	0.000	1452.000	1452.000	\$20,328.00	1,452.000	\$20,328.00	0
20303AB	<i>Removal of concrete; quantity per CM #7, dtd 03/08/99</i>	10.000	1.92	11.920	m2	\$520.00	\$6,198.40	0.000	11.920	11.920	\$6,198.40	11.920	\$6,198.40	0
20303K	<i>Removal of bridge deck</i>	3708.000		3,708.000	m2	\$75.00	\$278,100.00	0.000	3708.000	3708.000	\$278,100.00	3,708.000	\$278,100.00	0
20303PFG	<i>Removal of bridge pavement, 65 mm depth (Dead Run Northbound); quantity per CM #7, dtd 03/08/99</i>	795.000	-1.3	793.700	m2	\$3.50	\$2,777.95	0.000	793.700	793.700	\$2,777.95	793.700	\$2,777.95	0
20304AL	<i>Removal of miscellaneous items</i>	100.000		100.000	LPSM	\$3,400.00	\$3,400.00	0.000	100.000	100.000	\$3,400.00	100.000	\$3,400.00	0
20309AB	<i>Removal of concrete; quantity per CM #7, dtd 03/08/99</i>	80.000	4.78	84.780	m3	\$325.00	\$27,553.50	0.000	84.780	84.780	\$27,553.50	84.780	\$27,553.50	0
20401	<i>Roadway excavation; increase quantity 450 per CM #5, dtd 09/21/98; increase quantity additional 98.464 per CM #7, dtd 03/08/99</i>	900.000	548.464	1,448.464	m3	\$22.00	\$31,866.21	0.000	1448.464	1448.464	\$31,866.21	1,448.464	\$31,866.21	0

U. S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY ADMINISTRATION

PRA/NPS-GWMP 1A75,77 - GEORGE WASHINGTON MEMORIAL PARKWAY ESTIMATE # 11, FINAL

ITEM NO.	DESCR.	CONTRACTED						ESTIMATED				PROBABLES		OVERRUN QUANTITY
		QUANTITY	CM	AMENDED	UNIT	UNIT PRICE	AMOUNT	CURRENT	PREVIOUS	TO DATE	AMOUNT	QUANTITY	AMOUNT	
20405	Select borrow; decrease quantity 1,000 per CM #6, dtd 09/24/98; decrease quantity additional 100 per CM #7, dtd 03/08/99	1100.000	-1100	0.000	m3	\$11.00	\$0.00	0.000	0.000	0.000	\$0.00	0.000	\$0.00	0
21101	Roadway obliteration; quantity per CM #7, dtd 03/08/99	4000.000	220.8	4,220.800	m2	\$5.40	\$22,792.32	0.000	4220.800	4220.800	\$22,792.32	4,220.800	\$22,792.32	0
25102B	Placed riprap, class 2; decrease quantity 100 per CM #6, dtd 09/24/98; reduce quantity additional 77.42 per CM #7, dtd 03/08/99	675.000	-177.42	497.580	t	\$50.00	\$24,879.00	0.000	497.580	497.580	\$24,879.00	497.580	\$24,879.00	0
25102C	Placed riprap, class 3; decrease quantity 175 per CM #6, dtd 09/24/98; decrease quantity additional 2.15 per CM #7, dtd 03/08/99	225.000	-177.15	47.850	t	\$60.00	\$2,871.00	0.000	47.850	47.850	\$2,871.00	47.850	\$2,871.00	7.10543E-15
30101	Aggregate base; increase quantity 1,340 per CM #5, dtd 09/21/98; increase quantity additional 380.41 per CM #7, dtd 03/08/99	1625.000	1720.41	3,345.410	t	\$18.00	\$60,217.38	0.000	3345.410	3345.410	\$60,217.38	3,345.410	\$60,217.38	0
30501	Aggregate-topsoil course; adjust quantity per CM #6, dtd 09/24/98	500.000	-500	0.000	t	\$32.00	\$0.00	0.000	0.000	0.000	\$0.00	0.000	\$0.00	0
40101AE	Hot asphalt concrete pavement, class A, grading E; decrease quantity 360 per CM #2, dtd 06/01/98; increase quantity 96.39 per CM #7, dtd 03/08/99	2700.000	-263.61	2,436.390	t	\$53.00	\$129,128.67	0.000	2436.390	2436.390	\$129,128.67	2,436.390	\$129,128.67	0
40101AE	Hot asphalt concrete pavement, class A, grading E (Temporary pavement for crossovers); increase quantity 300 per CM #5, dtd 09/21/98; decrease quantity 4.03 per CM #7, dtd 03/08/99	700.000	295.97	995.970	t	\$65.00	\$64,738.05	0.000	995.970	995.970	\$64,738.05	995.970	\$64,738.05	0
41301F	Asphalt pavement milling, 50 mm depth; decrease quantity 13,200 per CM #2, dtd 06/01/98; increase 1,621.83 per CM #7, dtd 03/08/99	20000.000	-11578.17	8,421.830	m2	\$2.50	\$21,054.58	0.000	8421.830	8421.830	\$21,054.58	8,421.830	\$21,054.58	0

U. S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY ADMINISTRATION

PRA/NPS-GWMP 1A75,77 - GEORGE WASHINGTON MEMORIAL PARKWAY ESTIMATE # 11, FINAL

ITEM NO.	DESCR.	CONTRACTED						ESTIMATED				PROBABLES		OVERRUN
		QUANTITY	CM	AMENDED	UNIT	UNIT PRICE	AMOUNT	CURRENT	PREVIOUS	TO DATE	AMOUNT	QUANTITY	AMOUNT	QUANTITY
41301K	Asphalt pavement milling, 100 mm depth; delete item per CM #2, dtd 06/01/98	1750.000	-1750	0.000	m2	\$3.50	\$0.00	0.000	0.000	0.000	\$0.00	0.000	\$0.00	0
41501	Paving geotextile, Type VI; delete item per CM #2, dtd 06/01/98	900.000	-900	0.000	m2	\$5.75	\$0.00	0.000	0.000	0.000	\$0.00	0.000	\$0.00	0
55201D	Structural concrete, class D (AE); quantity per CM #7, dtd 03/08/99	70.000	2.42	72.420	m3	\$900.00	\$65,178.00	0.000	72.420	72.420	\$65,178.00	72.420	\$65,178.00	0
55206DU	Structural concrete, class D (AE), for bridge curb; quantity per CM #7, dtd 03/08/99	670.000	8.88	678.880	m	\$85.00	\$57,704.80	0.000	678.880	678.880	\$57,704.80	678.880	\$57,704.80	0
55207	Structural concrete, for overlay; quantity per CM #7, dtd 03/08/99	4070.000	7.34	4,077.340	m2	\$65.00	\$265,027.10	0.000	4077.340	4077.340	\$265,027.10	4,077.340	\$265,027.10	0
55209	Repair concrete (for abutment breastwall and backwall); quantity per CM #7, dtd 03/08/99	11.000	4.9	15.900	m2	\$1,600.00	\$25,440.00	0.000	15.900	15.900	\$25,440.00	15.900	\$25,440.00	0
55209	Repair concrete (for Dead Run northbound bridge deck); adjust quantity per CM #5, dtd 09/21/98	10.000	1.92	11.920	m2	\$1,200.00	\$14,304.00	0.000	11.920	11.920	\$14,304.00	11.920	\$14,304.00	0
55228	Replace bridge deck (Turkey Run, Northbound); quantity per CM #7, dtd 03/08/99	1307.000	0.142	1,307.142	m2	\$385.00	\$503,249.67	0.000	1307.142	1307.142	\$503,249.67	1,307.142	\$503,249.67	0
55228	Replace bridge deck (Turkey Run, Southbound)	1307.000		1,307.000	m2	\$385.00	\$503,195.00	0.000	1307.000	1307.000	\$503,195.00	1,307.000	\$503,195.00	0
55228	Replace bridge deck (Dead Run, Southbound); adjust quantity per CM #5, dtd 09/21/98	992.000	12.09	1,004.090	m2	\$385.00	\$386,574.65	0.000	1004.090	1004.090	\$386,574.65	1,004.090	\$386,574.65	0
55402	Epoxy coated reinforcing steel (excluding bridge decks); quantity per CM #7, dtd 03/08/99	10900.000	-4057.8999	6,842.100	kg	\$1.25	\$8,552.63	0.000	6842.100	6842.100	\$8,552.63	6,842.100	\$8,552.63	-1E-04
55502	Bridge expansion joints; adjust quantity per CM #6, dtd 09/24/98	76.000	-76	0.000	m	\$275.00	\$0.00	0.000	0.000	0.000	\$0.00	0.000	\$0.00	0
55502	CM #6, dtd 09/24/98, Bridge expansion joint (compression seal)		1	1.000	m	\$18,079.02	\$18,079.02	0.000	1.000	1.000	\$18,079.02	1.000	\$18,079.02	0

U. S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY ADMINISTRATION

PRA/NPS-GWMP 1A75,77 - GEORGE WASHINGTON MEMORIAL PARKWAY ESTIMATE # 11, FINAL

ITEM NO.	DESCR.	CONTRACTED						ESTIMATED				PROBABLES		OVERRUN
		QUANTITY	CM	AMENDED	UNIT	UNIT PRICE	AMOUNT	CURRENT	PREVIOUS	TO DATE	AMOUNT	QUANTITY	AMOUNT	QUANTITY
55601BC	Steel bridge railing, three rail; quantity per CM #7, dtd 03/08/99	690.000	1.62	691.620	m	\$608.00	\$420,504.96	0.000	691.620	691.620	\$420,504.96	691.620	\$420,504.96	0
60201M	600 mm pipe culvert; quantity per CM #7, dtd 03/08/99	10.000	-5.1	4.900	m	\$300.00	\$1,470.00	0.000	4.900	4.900	\$1,470.00	4.900	\$1,470.00	0
60206M	End section for 600 mm pipe culvert	3.000		3.000	Each	\$750.00	\$2,250.00	0.000	3.000	3.000	\$2,250.00	3.000	\$2,250.00	0
60403FB	Inlet, type 6B; quantity per CM #7, dtd 03/08/99	8.000	-3	5.000	Each	\$2,000.00	\$10,000.00	0.000	5.000	5.000	\$10,000.00	5.000	\$10,000.00	0
60406	Inlet adjustment	37.000		37.000	Each	\$500.00	\$18,500.00	0.000	37.000	37.000	\$18,500.00	37.000	\$18,500.00	0
60407	Capping inlets and manholes; adjust quantity per CM #5, dtd 09/21/98	10.000	5	15.000	Each	\$600.00	\$9,000.00	0.000	15.000	15.000	\$9,000.00	15.000	\$9,000.00	0
60409FB	Metal frame and grate, type 6B	7.000		7.000	Each	\$800.00	\$5,600.00	0.000	7.000	7.000	\$5,600.00	7.000	\$5,600.00	0
60901X	Portland cement concrete curb, 400 mm depth; quantity per kCM #7, dtd 03/08/99	1480.000	-28	1,452.000	m	\$50.00	\$72,600.00	0.000	1452.000	1452.000	\$72,600.00	1,452.000	\$72,600.00	0
61501B	Portland cement concrete sidewalk; quantity per CM #7, dtd 03/08/99	200.000	26.39	226.390	m2	\$40.00	\$9,055.60	0.000	226.390	226.390	\$9,055.60	226.390	\$9,055.60	0
62001CE	Rubble masonry, rock face finish, 1.50 R.F.; quantity per CM #7, dtd 03/08/99	29.000	6.83	35.830	m3	\$1,000.00	\$35,830.00	0.000	35.830	35.830	\$35,830.00	35.830	\$35,830.00	0
62002A	Stone masonry guardwall, type 1; adjust quantity (decrease 53) per CM #2, dtd 06/01/98; further adjust quantity (increase 32) per CM #5, dtd 09/21/98; quantity decrease 5.84 per CM #7, dtd 03/08/99	560.000	-28.84	531.160	m	\$525.00	\$278,859.00	0.000	531.160	531.160	\$278,859.00	531.160	\$278,859.00	0
62404B	Placing conserved topsoil, 25 mm depth; quantity per CM #7, dtd 03/08/99	1500.000	-1500	0.000	m2	\$4.00	\$0.00	0.000	0.000	0.000	\$0.00	0.000	\$0.00	0
62509	Turf establishment; quantity per CM #7, dtd 03/08/99	0.500	-0.1	0.400	ha	\$9,000.00	\$3,600.00	0.000	0.400	0.400	\$3,600.00	0.400	\$3,600.00	0
62701A	Solid sod; adjust quantity per CM #6, dtd 09/24/98	1500.000	225	1,725.000	m2	\$5.50	\$9,487.50	0.000	1725.000	1725.000	\$9,487.50	1,725.000	\$9,487.50	0
62701A	CM #6, dtd 09/24/98, Solid sod (overrun); quantity decrease per CM #7, dtd 03/08/99		7053.12	7,053.120	m2	\$5.00	\$35,265.60	0.000	7053.120	7053.120	\$35,265.60	7,053.120	\$35,265.60	0

U. S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY ADMINISTRATION

PRA/NPS-GWMP 1A75,77 - GEORGE WASHINGTON MEMORIAL PARKWAY ESTIMATE # 11, FINAL

ITEM NO.	DESCR.	CONTRACTED						ESTIMATED				PROBABLES		OVERRUN
		QUANTITY	CM	AMENDED	UNIT	UNIT PRICE	AMOUNT	CURRENT	PREVIOUS	TO DATE	AMOUNT	QUANTITY	AMOUNT	QUANTITY
63401HA	Pavement markings, type H, solid; quantity per CM #7, dtd 03/08/99	7200.000	2602	9,802.000	m	\$2.25	\$22,054.50	0.000	9802.000	9802.000	\$22,054.50	9,802.000	\$22,054.50	0
63401HB	Pavement markings, type H, broken; quantity per CM #7, dtd 03/08/99	1200.000	636	1,836.000	m	\$1.00	\$1,836.00	0.000	1836.000	1836.000	\$1,836.00	1,836.000	\$1,836.00	0
63501	Temporary traffic control	100.000		100.000	LPSM	\$233,000.00	\$233,000.00	0.000	100.000	100.000	\$233,000.00	100.000	\$233,000.00	0
63511	CM #2, dtd 06/01/98 , Temporary concrete barrier(800 m); adjust quantity(decrease 170) per CM #6, dtd 09/24/98; quantity decrease additional 4.52 per CM #7, dtd 03/08/99	0.000	625.48	625.480	m	\$59.00	\$36,903.32	0.000	625.480	625.480	\$36,903.32	625.480	\$36,903.32	0
63514	CM #6, dtd 09/24/98 , 5,400 m, Temporary pavement markings; quantity decrease 1,695 per CM #7, dtd 03/08/99		3705	3,705.000	m	\$1.22	\$4,520.10	0.000	3705.000	3705.000	\$4,520.10	3,705.000	\$4,520.10	0
63519	CM #6, dtd 09/24/98 , 2,000 m, Pavement marking removal; quantity decrease 101 per CM #7, dtd 03/08/99		1899	1,899.000	m	\$3.04	\$5,772.96	0.000	1899.000	1899.000	\$5,772.96	1,899.000	\$5,772.96	0
63526	CM #2, dtd 06/01/98 , Moving temporary concrete crash cushion (GREAT System) (quantity 8); quantity change (decrease 1) per CM #6, dtd 09/24/98; quantity decrease 1 additional per CM #7, dtd 03/08/99	0.000	6	6.000	Each	\$1,166.16	\$6,996.96	0.000	6.000	6.000	\$6,996.96	6.000	\$6,996.96	0
63529A	CM #2, dtd 06/01/98, Temporary concrete crash cushion (GREAT System)	0.000	1	1.000	Each	\$17,177.89	\$17,177.89	0.000	1.000	1.000	\$17,177.89	1.000	\$17,177.89	0
63701	Field office	1.000		1.000	Each	\$9,500.00	\$9,500.00	0.000	1.000	1.000	\$9,500.00	1.000	\$9,500.00	0
66601	CM #2, dtd 06/01/98, Contract modification work (12' X 60' field office trailer)	0.000	100	100.000	LPSM	\$4,479.00	\$4,479.00	0.000	100.000	100.000	\$4,479.00	100.000	\$4,479.00	0
66601	CM #5, dtd 09/21/98 , Contract modification work (additional grout for haunches)	0.000	100	100.000	LPSM	\$23,418.00	\$23,418.00	0.000	100.000	100.000	\$23,418.00	100.000	\$23,418.00	0

U. S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY ADMINISTRATION

PRA/NPS-GWMP 1A75,77 - GEORGE WASHINGTON MEMORIAL PARKWAY ESTIMATE # 11, FINAL

ITEM NO.	DESCR.	CONTRACTED						ESTIMATED				PROBABLES		OVERRUN
		QUANTITY	CM	AMENDED	UNIT	UNIT PRICE	AMOUNT	CURRENT	PREVIOUS	TO DATE	AMOUNT	QUANTITY	AMOUNT	QUANTITY
66601	CM #5, dtd 09/21/98, Contract modification work (additional survey)	0.000	50	50.000	LPSM	\$4,010.62	\$2,005.31	0.000	50.000	50.000	\$2,005.31	50.000	\$2,005.31	0
66601	CM #5, dtd 09/21/98, Contract modification work (sidewalk repairs at DRNB)	0.000	100	100.000	LPSM	\$16,296.82	\$16,296.82	0.000	100.000	100.000	\$16,296.82	100.000	\$16,296.82	0
66601	CM #6, dtd 09/24/98, Contract modification work (check wall repair at TRNB)	0.000	100	100.000	LPSM	\$3,785.03	\$3,785.03	0.000	100.000	100.000	\$3,785.03	100.000	\$3,785.03	0
66601	CM #6, dtd 09/24/98, Contract modification work (install larger inlists)	0.000	100	100.000	LPSM	\$2,361.16	\$2,361.16	0.000	100.000	100.000	\$2,361.16	100.000	\$2,361.16	0
66601	CM #7, dtd 03/08/99, Contract modification work (latex overlay overruns)	0.000	100	100.000	LPSM	\$24,294.67	\$24,294.67	100.000	0.000	100.000	\$24,294.67	100.000	\$24,294.67	0
66603	CM #3, dtd 06/19/98, Contract modification work (weekend direct cost)	0.000	3	3.000	Each	\$24,000.00	\$72,000.00	0.000	3.000	3.000	\$72,000.00	3.000	\$72,000.00	0
66608	CM #2, dtd 06/01/98, Contract modification work (16 kg, temporary seed/musch); quantity increase 10.35 per CM #7, dtd 03/08/99	0.000	26.35	26.350	kg	\$159.32	\$4,198.08	0.000	26.350	26.350	\$4,198.08	26.350	\$4,198.08	0
99955228	STOCKPILE: Replace bridge deck (Turkey Run, Northbound)	300,000.00		300,000.000	Each	\$1.00	\$300,000.00	0.000	0.000	0.000	\$0.00	0.000	\$0.00	0
99955228	STOCKPILE: Bridge deck post-tension materials	27,550.10		27,550.100	Each	\$1.00	\$27,550.10	0.000	0.000	0.000	\$0.00	0.000	\$0.00	0
99955228	STOCKPILE: Replace bridge deck	437,777.48		437,777.480	Each	\$1.00	\$437,777.48	0.00	0.000	0.000	\$0.00	0.000	\$0.00	0
99955228	STOCKPILE: Railing M&J materials	116,874.82		116,874.820	Each	\$1.00	\$116,874.82	0.00	0.000	0.000	\$0.00	0.000	\$0.00	0

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DATE TIME BEGIN:	April 6, 1998
DATE CONTRACT COMPLETE:	August 15, 1998; October 9, 1998 by CM#6
	SCHED A
DAYS ALLOWED:	132
EXTENSIONS GRANTED, CM #3, 5 & 6	55
EXTENSIONS GRANTED FOR DBE	
TOTAL DAYS ALLOWED	187
DAYS USED TO DATE	188
TIME USED	100.53%
to date/allowed	
WORK COMPLETE	100.00%
to date/probable	
CONSTR FUNDS USED	99.65%
to date/allotted	
CE FUNDS USED	111.35%
to date/allotted	
CE BUDGET USED (INCL. "T")	98.80%
TOTAL INCREASE DUE TO CMS	\$390,604.24
TOTAL DECREASE DUE TO CMS	(\$210,551.77)
NET CMs	\$180,052.47
TOTAL INCREASE DUE TO OVERRUNS	\$0.00
TOTAL DECREASE DUE TO OVERRUNS	\$0.00
NET O/R	\$0.00
03/11/98, CM #1 =	\$0.00
06/01/98, CM #2 =	(\$35.71)
06/19/98, CM #3=	\$72,000.00
08/11/98, CM #4=	\$0.00
09/21/98, CM #5=	\$124,004.09
09/24/98, CM #6=	(\$90.45)
03/08/99, CM #7, final quantities	(\$15,825.46)
NET CMs	\$180,052.47
award	\$4,324,857.50
new contract total	\$4,504,909.97

CONSTRUCTION	BID	TO DATE	PROBABLE
CONTRACT	\$4,224,857.50	\$4,455,905.07	\$4,455,905.07
DBE INCENTIVE	\$100,000.00	\$49,004.90	\$49,004.90
QUALITY INCENTIVE		\$0.00	\$0.00
SMOOTHNESS INCENTIVE		\$0.00	\$0.00
TOTAL	\$4,324,857.50	\$4,504,909.97	\$4,504,909.97
ADJUSTMENTS: penalty, late lane closure		(\$1,250.00)	(\$1,250.00)
FUNDS AUTHORIZED			
771P-E50-15-0-71P054-155110-	\$1,981,999.81	\$1,897,534.47	\$1,897,534.47
X15R-633-15-0-15R031-155110	\$2,342,857.69	\$2,623,200.96	\$2,606,125.50
X180-050-14-0-180054-155110-	\$0.00	\$0.00	
TOTAL	\$4,324,857.50	\$4,520,735.43	\$4,503,659.97
BALANCE OR DEFICIT	\$0.00	\$17,075.46	(\$0.00)

Use 71P first per R.Sparrow telecon 1/6/98
 REIMBURSES 15R

CONSTRUCTION ENGINEERING	AUTHORIZED	TO DATE	PROBABLE	PROBABLE CE/CN
TOTAL NOT INCLUDING "T"	\$377,577.40	\$420,415.51	\$426,419.10	11.10%
TOTAL OF "T" ONLY	\$122,422.60	\$73,580.90	\$73,580.90	
TOTAL-ALL WORK CODES	\$500,000.00	\$493,996.41	\$500,000.00	

C E BREAKDOWN	FUNCTION C	FUNCTION I	FUNCTION M	FUNCTIONS B&J	FUNCTION T	TOTAL
*TO DATE AUTHORIZED	\$135,000.00	\$166,000.00	\$50,000.00	\$26,577.40	\$122,422.60	\$500,000.00
EXPENDED	\$136,689.90	\$213,094.83	\$37,693.81	\$32,936.97	\$73,580.90	\$493,996.41
PROBABLE	\$140,387.30	\$213,094.83	\$40,000.00	\$32,936.97	\$73,580.90	\$500,000.00

EXPENDED THROUGH 02/28/99 & PP 4 PER PROMISYS REPORTS
 *CE AUTH. PER PROMISYS

ACCOUNT NUMBER FOR PYRL CHARGES: GWMP 1A75,77 -CE*-15R (SUBSTITUTE APPROPRIATE WORK CODE FOR *)
 DAFIS ACCOUNT NUMBER: X15R-633-15-0-15R031-155110-D**2 51 1644 052PC (BACKED UP BY 180=\$308,000 PER 09/22/98 09 98 E 3
 DAFIS ACCOUNT NUMBER FOR INSPECTION CONTRACT ONLY: 771P-E50-150-71P055-155110-D-2 51 3300 003CI

981211-00-026

ATRM 37
GWMP 1A75.77

(15)
(12/11/98)



United States Department of the Interior

NATIONAL PARK SERVICE
DENVER SERVICE CENTER
12795 W. ALAMEDA PARKWAY
P.O. BOX 25287
DENVER, COLORADO 80225-0287

IN REPLY REFER TO:

D30 (DSC-PM)
GWMP 461D-12

DEC 03 1998

Gary Klinedinst, Division Engineer
Federal Highway Administration
Eastern Federal Lands Highway Division
21400 Ridgetop Circle
Sterling, Virginia 20166-6511

Dear Mr. Klinedinst:

Reference: George Washington Memorial Parkway, Pkg. 461D (GWMP 1A75,77),
Turkey Run and Dean Run Bridges, PT 12

Subject: Letter of Acceptance

The National Park Service is pleased to accept the project referenced above. A final inspection was held October 7, 1998, and the project was found to be very well done. There was a short punch list which has now been completed.

We would especially like to commend Rick Meyer, COE, and Jorge Alvarez, Project Engineer, for their work on this project. It was a difficult project made more difficult by the extreme time sensitivity, restricted work areas, and heavy traffic volumes. However, Rick and Jorge worked together to anticipate potential difficulties, to create a winning environment for the contractor and the government, and to solicit and respect National Park Service concerns.

Sincerely,

Michael LeBorgne
Project Manager

CC:
WASO-FMD, McLarty
Reg. Dir., National Capital Region
Dave Hammers, National Capital SO
Supt., George Washington Memorial Parkway
Chief of Maintenance, George Washington Mem. Pkwy.

1998 DEC -7 PM 3:14

RECEIVED
FH/FHD
11/11/98

MATERIALS CERTIFICATION

Date: 12/21/98

Project: GWMP 1A75, 77

TO: Division Engineer

This is to certify:

- 1. The results of the tests on acceptance samples indicate that the materials incorporated in the construction work and the construction operations verified by sampling and testing were in reasonably close conformity with the approved plans and specifications.

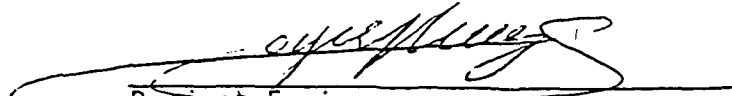
(Justification for accepting any nonspecification material has been documented in the project's Materials Register.)

- 2. The results of Verification Tests validate the results of corresponding project acceptance testing: Yes No

(If no, resolution of discrepancies has been documented in the project's Materials Register.)


- 3. Copies of test results and/or certifications covering the materials used on the project are contained in the Materials Register, which is on file with other project records in the Eastern Federal Lands Highway Division files.

Recommended:



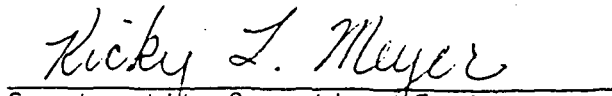
 Project Engineer

Certified:

ACTING 

 Materials Engineer

Concurred:



 Construction Operations Engineer



Turkey Run Bridge, before construction



Turkey Run Bridge, after construction



Dead Run Bridge, before construction



Dead Run Bridge, after construction



Bridge Approach, *before construction*



Bridge Approach, *after construction*



Guard walls , before construction



Guard walls, after construction



Bridge railing, before construction



Bridge railing, after construction



Removal of old deck slabs



Cleaning of Girders



Placing new Bridge deck slabs



Placing new Bridge deck slabs



Bridge deck overlay with Latex



Removal of Bridge Railing and temporary barriers



Median at approach, before construction



Median at approach, after construction



Condition of loop road, before construction



Condition of loop road, after construction



Construction of Guard walls



Rip-Rap under Turkey Run Bridge