

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE PROJECT MANAGEMENT ADMINISTRATION



SPECIFICATIONS

INVITATION NO. DCKA-2013-B-0156

PROJECT: REHABILITATION/REPAIR OF SIX (6) BRIDGES OVER WATTS BRANCH (BRIDGE NO'S. 0129 (44TH STREET NE), 0132 (58TH STREET NE), 0196 (55TH STREET NE), 0199 (44TH PLACE NE), 0204 (DIVISION AVENUE NE), AND 0222 (GAULT PLACE NE))

F.A.P. NO.: BH # 8888 (427) AND STP # 8888 (427)

Bids Will Be Publicly Opened by The Office Of Contracting and Procurement Bid Room located at DDOT, 55 M Street, S.E., 4th Floor, Washington, D.C. 20003

Bids Will Be Opened On October 11, At 2:00 P.M.

This page is intentionally left blank

**GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION**

TITLE PAGE - SPECIFICATIONS

ISSUING OFFICE:

Office of Contracting and Procurement-Bid Room
Located at DDOT
55 M Street, S.E., 4th Floor
Washington, D.C. 20003

REQUESTS FOR CLARIFICATION OR INTERPRETATION OF BID DOCUMENTS

PRIOR TO DATE OF BID OPENING SHOULD BE ADDRESSED TO:

Chief Transportation Engineer
Infrastructure Project Management Administration
Department of Transportation
55 M Street, S.E.
Washington DC 20003

PROSPECTIVE BIDDERS:

To bid this contract, detach the Bid Form package which is bound to the back of this book, fill out all forms along with Bid Guaranty as required, and submit it to the Issuing Officer prior to the time of bid opening.

TABLE OF CONTENTS

<u>S.P. NO.</u>	<u>TITLE</u>	<u>PAGE NO.</u>
1.	SCOPE OF WORK	2
2.	CONTRACT TYPE	3
3.	SPECIFICATIONS AND DRAWINGS	3
4.	COORDINATION WITH OTHERS	3
5.	DDOT TITLE VI ASSURANCE	4
6.	CONTRACTOR IDENTIFICATION	5
7.	EQUITABLE ADJUSTMENT OF CONTRACT TERMS	5
8.	BID GUARANTY	6
9.	PROTESTS	6
10.	DISPUTES	6
11.	APPLICABLE WAGE DECISION/WAGE RATES	7
12.	PRE-AWARD APPROVAL	8
13.	CONSTRUCTION COMPLETION TIME	8
14.	CONSTRUCTION SCHEDULING	9
15.	WORK AND STORAGE SPACE	10
16.	UTILITY PROTECTIVE ALERT	10
17.	COOPERATION WITH UTILITY RELOCATION	10
18.	UTILITY STATUS	11
19.	CONTRACTOR'S SUBMITTALS	12
20.	FAILURE TO COMPLETE ON TIME	13
21.	WORK HOURS	13
22.	NIGHT WORK	14
23.	PROJECT SECURITY	15
24.	INSURANCE	15
25.	CONTRACT ADMINISTRATION DATA	17

TABLE OF CONTENTS

(Continued)

26.	RECORDS OF MATERIALS, SUPPLIES AND LABOR (FHWA 47 SUBMISSION)	20
27.	UNDERGROUND VAULTS	20
28.	SALVAGED MATERIALS	21
29.	PUBLIC SAFETY AND CONVENIENCE	21
30.	REFERENCE DRAWINGS (INFORMATIONAL DRAWINGS)	21
31.	VALUE ENGINEERING CHANGE PROPOSALS	21
32.	PRE-BID CONFERENCE	22
33.	ADDITIONAL LABORATORY/FIELD EQUIPMENTS	22
34.	EMPLOYEE TRAINING, ITEM 000 003	23
35.	PROGRESS PHOTOGRAPHS, ITEM 108 002	23
36.	OPTIONAL MATERIALS	23
37.	SPECIALTY ITEMS	24
38.	CONSTRUCTION SURVEY	24
39.	CONTRACT PLANS	24
40.	COMMON EXCAVATION, ITEM 202 002	24
41.	STRUCTURE EXCAVATION, ITEM 205 002	25
42.	DEMOLITION, ITEM 205 008	25
43.	REMOVE VEGETATION, ITEM 201 005	27
44.	AGGREGATE BASE COURSE, ITEM 209 002	28
45.	CONVERT FIRE HYDRANTS, ITEM 307 010	28
46.	D.C. WATER, ITEMS: 307 010, 310 008, 310 004, 311 026, 311 028, 315 002	28
47.	CLEAN SEWER STRUCTURE, ITEM 311 063	29
48.	REPLACE EXISTING BASIN WITH WATER QUALITY BASIN, ITEM 311 027	29
49.	CLEAN PCC PIPE, ITEM 311 065	30
50.	SAW CUTTING	31
51.	ANTI-STRIP ADDITIVE – BITUMINOUS MIXTURE	31

b

TABLE OF CONTENTS

(Continued)

52.	SUPERPAVE SURFACE COARSE 12.5 MM, ITEM 402 012	31
53.	ARCHITECTURAL TREATMENT, ITEM 601 003	32
54.	SIMULATED STONE MASONRY, ITEM 601 005	35
55.	TEMPORARY FENCE, ITEM 607 005	36
56.	DETECTABLE WARNING PAVERS OF NEW WHEELCHAIR/BICYCLE RAMPS	37
57.	ROOT PRUNING, ITEM 611 005	39
58.	TREE PROTECTION AND REPLACEMENT, ITEM 611 151	40
59.	REFLECTIVE MARKERS AND DELINEATORS	41
60.	MAINTENANCE OF TRAFFIC	41
61.	STREET LIGHTING: REMOVE ARM FROM STEEL POLE UP TO 8FT IN LENGTH, ITEM 618 669, FURNISH AND INSTALL 135W LIGHT EMITTING DIODE (LED) LUMINAIRE, ITEM 618 765	45
62.	EROSION AND SEDIMENT CONTROL, ITEM 628 002	54
63.	SILT FENCE, ITEM 628 003	55
64.	ENGINEERS FIELD FACILITIES, ITEM 624 002	56
65.	CONCRETE REPAIR	56
66.	PCC ABUTMENT-BACKWALL, ITEM 703 006	58
67.	STRUCTURAL STEEL, ITEM 706 007	59
68.	STEEL FABRICATOR	59
69.	STONE MASONRY, CLASS A, ITEM 708 002, RESET STONE MASONRY, ITEM 708 011, REPOINT STONE MASONRY, ITEM 708 013	59
70.	CLEAN EXISTING STONE MASONRY, ITEM 708 014	60
71.	CLEAN AND RESEAL EXPANSION JOINTS FOR ABUTMENTS, WALLS AND CURBS, ITEM 708 015	61
72.	PEDESTRIAN RAILING, ITEM 709 003	62
73.	REMOVE BRIDGE RAILING, ITEM 709 020	62

TABLE OF CONTENTS

(Continued)

74.	LATEX MODIFIED CONCRETE OVERLAY, ITEM 714 004	63
75.	PCC STRUCTURE FOR JOINT REPAIRS, ITEM 715 003	68
76.	CONCRETE DECK REPAIR - PARTIAL DEPTH WITHOUT EXPOSED REINFORCEMENT, ITEM 715 011	68
77.	CONCRETE DECK REPAIR - PARTIAL DEPTH WITH EXPOSED REINFORCEMENT, ITEM 715 013	69
78.	CONCRETE DECK REPAIR – FULL DEPTH, ITEM 715 015	70
79.	RESEAL KEYWAY JOINTS, ITEM 715 017	72
80.	REPAIR-REPLACE PCC SUBSTRUCTURE- TYPE 1 REPAIR, ITEM 716 003 REPAIR-REPLACE PCC SUBSTRUCTURE- TYPE 2 REPAIR, ITEM 716 005 REPAIR-REPLACE PCC SUBSTRUCTURE- TYPE 3 REPAIR, ITEM 716 007	73
81.	PRESSURE CLEAN EXPANSION JOINTS, ITEM 717 007	73

TABLE OF CONTENTS

(Continued)

APPENDICES

SUBCONTRACTOR APPROVAL REQUEST FORM	(1 PAGE)
CONSTRUCTION ZONE TRAFFIC CONTROL DEVICE INSPECTION LOG	(2 PAGES)
DDOT STANDARD DRAWINGS	(53 PAGES)
TRENCH REPAIR DETAILS	(1 PAGE)
TRAFFIC FIRE HYDRANT INSTALLATION	(1 PAGE)
MANHOLE ADAPTER RING	(1 PAGE)
CATCH BASIN CONNECTION PIPE TENCH LAYING CONDITION	(1 PAGE)
WATER SEAL (COMBINED SYSTEM ONLY)	(1 PAGE)
DUAL THROAT WATER QUALITY BASIN	(3 PAGES)
PCC PAVEMENT REPAIR METHOD	(5 PAGES)
12" PCC BUS PAD TYPICAL SECTION	(1 PAGE)
W / THRIE BEAM GUARDRAIL DETAILS	(8 PAGES)
TYPICAL SIDEWALK SECTIONS	(1 PAGE)
PCC CURB AND GUTTER DETAILS	(1 PAGE)
WHEELCHAIR/BICYCLE RAMP DETAILS	(5 PAGES)
PRECAST TEMPORARY CONCRETE BARRIER DETAILS	(6 PAGES)
TYPICAL PAVEMENT MARKING AND SIGNING	(1 PAGE)
TCP GENERAL NOTES	(1 PAGE)
WORK ZONE CHANNELIZING DEVICES	(1 PAGE)
TRAFFIC LANE CLOSURES DETAILS, CITY STREETS	(8 PAGES)
CONSTRUCTION ZONE CRASH CUSHION AND TMA DETAIL	(1 PAGE)
CRASH CUSHION INERTIAL SYSTEM	(1 PAGE)
DETAILS OF BICYCLE SYMBOLS AND SIGNS	(1 PAGE)
TRAFFIC CALMING SPEED HUMP DETAILS	(1 PAGE)
TREE PROTECTION DETAILS	(2 PAGES)

STEEL DRIVE POST DETAIL	(1 SHEET)
DCMR 20 – ENVIRONMENT – AIR QUALITY (CHAPTERS 6-7)	(10 PAGES)
REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS	(20 PAGES)
APPENDIX A: SPECIAL PROVISIONS	(X PAGES)
APPENDIX B: TRAINING-SPECIAL PROVISIONS	(3 PAGES)
APPENDIX C: D.C. WATER AND SEWER AUTHORITY SPECIFICATIONS	(X PAGES)
DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION REQUIREMENTS	(3 PAGES)
EQUAL EMPLOYMENT OPPORTUNITY/AFFIRMATIVE ACTION REQUIREMENTS	(2 PAGES)
MONTHLY EMPLOYMENT UTILIZATION REPORT	(2 PAGES)
GENERAL WAGE DECISION NO. DCXXXXXX	(12 PAGES)
EMPLOYEE TRAINING REQUIREMENTS	(2 PAGES)

The “STANDARD SPECIFICATIONS FOR HIGHWAYS AND STRUCTURES, 2009” is incorporated herein by reference and is made a part of the requirements of this contract.

SPECIAL PROVISIONS

This document contains provisions, requirements, and instructions pertaining to this contract:

REHABILITATION/REPAIR OF SIX (6) BRIDGES OVER WATTS BRANCH (BRIDGE NO'S. 0129 (44TH STREET, NE), 0132 (58TH STREET, NE), 0196 (55TH STREET, NE), 0199 (44TH PLACE, NE), 0204 (DIVISION AVENUE, NE), AND 0222 (GAULT PLACE, NE))

INVITATION NO.: **DCKA-2013-B-0156**

F.A.P. NO. : BH # 8888 (427) AND STP # 8888 (427)

This document consists of:

- **SPECIFICATIONS:** Pages a thru f, pages 1 thru 74 and Appendices (with number of pages in parentheses) listed on page e and f.
- **BID FORMS AND PROPOSALS:** Pages XX thru XX and pages XX thru XX, including **PAY ITEM SCHEDULE.**
- **CONTRACT PLANS:** Consisting of pages 1 thru 196

Bidders should satisfy themselves that they have a complete document. Missing pages will not constitute the basis for a valid claim.

This is a Federal-Aid Contract; **FEDERAL-AID PROJECT PROVISIONS, apply.**

ADDENDA, issued prior to bid opening date, further supplement and modify the proposed contract.

This document supplements and modifies **STANDARD CONTRACT PROVISIONS** for use with specifications for District of Columbia Government Construction Projects, and District of Columbia, Department of Transportation, **STANDARD SPECIFICATIONS FOR HIGHWAYS AND STRUCTURES, 2009**, and **STANDARD DRAWINGS, 2009** incorporated herein by reference.

Reference to Division Numbers, Section Numbers, and Article Numbers refers to the **STANDARD SPECIFICATIONS FOR HIGHWAYS AND STRUCTURES, 2009.**

In **PAY ITEM SCHEDULE**, the first three-digit portion for each pay item number refers to the section of the **STANDARD SPECIFICATIONS** in which the item is described. The S.P. number refers to the section of these **SPECIAL PROVISIONS** in which the item is further described.

Reference made to the DC Department of Public Works (DCDPW) in the contract plans and in this document is one and the same as the District of Columbia Department of Transportation (DDOT).

1. SCOPE OF WORK:

Work under this contract consists of the rehabilitation/repair of Six (6) bridges over Watts Branch (Bridge Nos. 0129 (44th Street, NE), 0132 (58th Street, NE), 0196 (55th Street, NE), 0199 (48th Place, NE), 0204 (Division Ave, NE), 0222 (Gault Place, NE). All work on the bridge and roadways shall be performed within the existing right-of-way.

The following list provides a general description of the work for this project. The individual Special Provisions provide a detailed description of the work. The work includes, but is not limited to, the following items:

Superstructure and substructure elements to be replaced or modified as discussed in the following.

1. New superstructure on Bridge Nos. 0129, 0132, 0204 and 0222.
2. New wearing Surface for Bridge Nos. 0196 and 0199.
3. New deck joints for six bridges.
4. Rehabilitation of backwalls for deck extension details.
5. New approach slabs at south and north abutments of the 58th Street and Division Ave bridges.
6. New railing on all the Bridges and new guard rail on approach roadway.
7. Repairs of existing substructure concrete and masonry.
8. New approach roadway.
9. New sidewalk and ADA ramps in some areas.
10. Improved lighting near bridge.
11. Installation, maintenance and removal of temporary support systems and protection shields under the bridge during all phases of construction and demolition.
12. Mobilization, performance of field layout, employee training, provision and maintenance of Engineer's field facilities, and the proper maintenance of vehicular and pedestrian

traffic including temporary signage and temporary sign for pedestrians during all phase of construction.

Work also includes all other work and various incidentals required as shown in the contract plans and/or as specified in the Specifications and Special Provisions.

The contractor shall obtain all necessary permits and approvals of all agencies and/or utility companies towards obtaining their permits, approvals and inspections.

The contractor shall obtain necessary permits related to the removal and disposal of lead and asbestos materials in the project at no additional cost to the district.

The contractor is also required to produce design calculations and shop drawings in connection with his chosen systems for temporary support structures or devices, protection shields, and other significant temporary work affecting the safety of the traveling public or workers on the project.

The contractor shall be fully responsible for protection against damage for the duration of the contract of all the utility structures within the contract limits and adjacent thereto. The utilities include but are not limited to public and/or private water, sewer, electricity, gas, electric and communication lines. No separate measurement or payment will be made. Cost of this protective work will be covered and distributed among the contract pay items.

2. CONTRACT TYPE:

In accordance with Title 27 DCMR, Chapter 24, the contract type shall be a fixed-price contract.

3. SPECIFICATIONS AND DRAWINGS:

The District of Columbia Department of Transportation Standard Specifications for Highways and Structures 2009, and amendments thereto are incorporated by referenced into this contract.

Any adjustment by the Contractor without a prior determination by the Contracting Officer shall be at his own risk and expense. The Contracting Officer will furnish from time-to-time, such detail drawings and other information as he may consider necessary, unless otherwise provided.

4. COORDINATION WITH OTHERS:

This S.P. supplements 103.01, Article 18 of the Standard Specifications.

The Contractor is alerted that other contracts either associated with this project or of different scope either have been, will be, or may be let for work in, or in the vicinity of the project area.

The Contractor shall coordinate his work and cooperate fully with all others in order to eliminate or curtail delays and interference of any kind. Particular attention shall be made with regard to proper maintenance of vehicular and pedestrian traffic through the project areas. The Contractor shall perform his lane closings and openings so as not to cause interference with others or to be in conflict with performance of traffic maintenance by others.

The District assumes no liability, other than authorized time extensions, for contract delays or damages resulting from delays or lack of progress by others.

5. DDOT TITLE VI ASSURANCE:

During the performance of this Contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the “contractor”) agrees as follows:

(1) COMPLIANCE WITH REGULATIONS

The contractor shall comply with the Regulations relative to Non-Discrimination in Federally Assisted Programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, (hereinafter referred to as the “Regulations”), as they may be amended from time to time, which are incorporated by reference and made a part of this contract.

(2) NON-DISCRIMINATION

The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, gender or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. A contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

(3) SOLICITATIONS FOR SUBCONTRACTORS, INCLUDING PROCUREMENTS OF MATERIALS AND EQUIPMENT

In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor’s obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, gender, or national origin.

(4) INFORMATION AND REPORTS

The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts and other sources of information, and its facilities as may be determined by DDOT or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations, orders and

instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to DDOT, or the Federal Highway Administration, as appropriate, and shall set forth what efforts it has made to obtain the information.

(5) SANCTIONS FOR NON-COMPLIANCE

In the event of the contractor's non-compliance with non-discrimination provisions of this contract, DDOT shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

- withholding of payments to the contractor under the contract until the contractor complies, and/or
- cancellation, termination, or suspension of the contract, in whole or in part.

(6) INCORPORATION OF PROVISIONS

The Contractor shall include the provisions of paragraphs (1) through (6) of this Assurance in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The contractor shall take such action with respect to any subcontract or procurement as DDOT or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of this direction, the contractor may request DDOT to enter into such litigation to protect the interests of DDOT, and in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

6. CONTRACTOR IDENTIFICATION:

All contractors doing business with the District of Columbia Government shall have a Federal Tax Identification Number.

Please refer any question regarding this matter to Office of the Chief Financial Officer, 202-671-2300, of the DC Department of Transportation.

7. EQUITABLE ADJUSTMENT OF CONTRACT TERMS:

Provisions of 103.01, Article 4, Significant Changes In The Character Of Work, paragraph 4(b), replace 125 percent with 200 percent and replace 75 percent with 50 percent.

8. BID GUARANTY:

This S.P. supplements Article 12.A of the **INSTRUCTION TO BIDDERS, STANDARD CONTRACT PROVISIONS.**

The bid guaranty period shall be **ninety (90) calendar days** after bid opening. An Irrevocable Letter of Credit or United States government securities that are assigned to the District which pledge the full faith and credit of the United States are acceptable.

9. PROTESTS:

Any actual or prospective bidder, offeror or contractor who is aggrieved in connection with the solicitation or award of a contract, must file with the DC Contract Appeals Board (Board) a protest no later than ten (10) business days after the basis of protest is known or should have been known, whichever is earlier. A protest based on alleged improprieties in a solicitation which are apparent prior to bid opening or the time set for receipt of initial proposals shall be filed with the Board prior to bid opening or the time set for receipt of initial proposals. In procurements in which proposals are requested, alleged improprieties which do not exist in the initial solicitation, but which are subsequently incorporated into this solicitation, must be protested no later than the next closing time for receipt of proposals following the incorporation. The protest shall be filed in writing, with the Contract Appeals Board, 441 4th Street, N.W., Suite 350N, Washington, D.C. 20001. The aggrieved person shall also mail a copy of the protest to the Contracting Officer for the solicitation.

10. DISPUTES:

This S.P. supplements and modifies Article 7 of the General Provisions 103.01.

Claims by the District against a Contractor

- (a) Claim as used in Section A of this clause, means a written demand or written assertion by the District seeking, as a matter of right, the payment of money in a sum certain, the adjustment of contract terms, or other relief arising under or relating to this contract. A claim arising under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant.
- (b) (1) All claims by the District against a Contractor arising under or relating to a contract shall be decided by the Contracting Officer.
- (2) The Contracting Officer shall send written notice of the claim to the Contractor. The Contracting Officer's written decision shall do the following:
 - a) Provide a description of the claim or dispute;

- b) Refer to the pertinent contract terms;
 - c) State the factual areas of agreement and disagreement;
 - d) State the reasons for the decision, including any specific findings of fact, although specific findings of fact are not required and, if made, shall not be binding in any subsequent proceeding;
 - e) If all or any part of the claim is determined to be valid, determine the amount of monetary settlement, the contract adjustment to be made, or other relief to be granted;
 - f) Indicate that the written document is the Contracting Officer's final decision; and
 - g) Inform the Contractor of the right to seek further redress by appealing the decision to the Contract Appeals Board.
- (3) The decision shall be supported by reasons and shall inform the Contractor of his or her rights as provided herein.
 - (4) The authority contained in this clause shall not apply to a claim or dispute for penalties or forfeitures prescribed by statute or regulation which another District agency is specifically authorized to administer, settle, or determine.
 - (5) This clause shall not authorize the Contracting Officer to settle, compromise, pay, or otherwise adjust any claim involving fraud.
- (c) The decision of the Contracting Officer shall be final and not subject to review unless an administrative appeal or action for judicial review is timely commenced by the District as authorized by D.C. Official Code §2-309.04.
 - (d) Pending final decision of an appeal, action, or final settlement, the Contractor shall proceed diligently with performance of the contract in accordance with the decision of the Contracting Officer.

11. APPLICABLE WAGE DECISION/WAGE RATES:

In accordance with the applicable provisions of 29 CFR, Part 1, which requires that the correct wage determination and the appropriate wage rates therein be incorporated into this contract,

General Decision No. DCXXXXXX is bound herein and contains the specific applicable wage rates, which are:

Heavy Construction (Including Sewer and Water Lines)

Further, as set forth in 29 CFR, Part 1, Section 1.6(c)(3)(IV), if the intent to award letter is not issued within ninety (90) days of bid opening, all intervening modifications (or new wage decision) are made a part of this contract. The Contractor will be reimbursed this added labor cost.

12. PRE-AWARD APPROVAL:

Pursuant to Title XXII of the "Fiscal Year 2003 Budget Support Amendment Act of 2002", D.C. Law 14-307, effective June 5, 2003, the Mayor must submit to the Council for approval any contract action over one million dollars.

13. CONSTRUCTION COMPLETION TIME:

This S.P. supplements 108.03 and 108.06 of the Standard Specifications and is referenced to the S.P. entitled "Construction Scheduling."

The completion of the entire project and final acceptance by the District shall be accomplished in **283 consecutive calendar days** from the Notice to Proceed date. No one bridge, under this contract, shall exceed **150 consecutive calendar days** for completion. Failure to Complete on Time, as shown elsewhere in these SPECIAL PROVISIONS, shall apply to the completion of the project as specified below.

Because time is important in completing the contract work in this project, the payment provisions set forth in this project in the contract documents are supplemented by the following:

The Contractor shall, fifteen (15) calendar days prior to the start of construction, submit to the Engineer for approval a detailed plan for accomplishing the work specified.

As a minimum, the plan shall identify in narrative, graphic and tabular form all major tasks necessary to complete the work, and the number of calendar days required to complete that portion of the contract. The plan shall also indicate the time for each contract element.

In order to complete construction within the contract stipulated time, the Contractor may have to utilize multiple shifts and/or overtime work (including Saturdays and Sundays). The cost of multiple shifts and/or overtime work shall be included in the bid prices for the various items of work on the project and no additional compensation will be allowed.

In developing the plan, the Contractor shall consider time lost due to inclement weather and during the period between December 1 and April 1. The District will not consider any requests

for partial suspension or time extension for time lost due to inclement weather or the limitations of working over the stream.

An evaluation of progress is to be completed after each 10 percent increment of the contract time has elapsed. Whenever performance falls behind the approved plan schedule by 10% or more, the Contractor shall within 15 calendar days submit to the District for review a revised plan for completing the project within the remaining time.

The Contractor must be aware that part of his/her work may include coordination with various Government agencies. Delay by any outside sources will not constitute grounds for waiving of this S.P.

In determining contract time, the Contractor shall consider the location of existing utilities. The Contractor is warned that delays of a minor nature encountered through required utility adjustments by others or imprecise utility location information has been considered, and delays resulting therefrom are not a basis for time extensions.

14. CONSTRUCTION SCHEDULING:

This S.P. supplements 108.03 of the Standard Specifications and is referenced to the S.P. entitled "Construction Completion Time".

The Contractor shall submit a construction schedule at least fifteen (7) calendar days prior to the start of construction. CPM Scheduling shall be required, as described in 108.03(B), for this project. Contractor shall use Primavera or the latest version of Microsoft Project to develop the baseline and subsequent schedules. A hard copy of the schedule, as well as a CD-ROM containing the data files used to develop the schedule, shall be provided with each submittal.

A Two Week Look Ahead activity schedule (Gantt chart) should be submitted every two (2) weeks to the Engineer prior to regularly scheduled progress meetings. Activities should be measureable and Activity ID Nos. should match those in the accepted CPM construction schedule.

The Contractor shall schedule his work so that the requirements of MAINTENANCE OF TRAFFIC are satisfied.

Construction sequencing must be accomplished in accordance with the stages as shown in the contract plans. Scheduling shall include ordering of materials, preparation of shop and working drawings and all other work as indicated on the contract plans and as directed by the Engineer.

The Contractor shall schedule his work in accordance with the prioritized work site list provided by the Engineer. To avoid excessive traffic delays, work shall not begin at any location until submittals have been approved and sufficient materials have been obtained.

The Contractor shall furnish to the Engineer the names, addresses and phone numbers of two key staffs (principals) in the firm who shall be experienced in this type of work as described in these

Special Provisions and who can be contacted by the Engineer in event of emergency. One of the two key staff shall be available at all times to be contacted within a maximum time period of two (2) hours. Approval of these key staffs by the Engineer is required.

15. WORK AND STORAGE SPACE:

This S.P. supplements 103.01 Article 17.B. of the Standard Specifications.

No work and storage area is being designated. The Contractor shall be fully responsible for seeking necessary space and undergoing all required negotiations with the owner of the property to secure its use and for restoring the area to its original condition and to the satisfaction of the Engineer.

Certain work of this contract may require the Contractor to work in the Watts Branch Stream. The US Army Corps of Engineers, DDOE and the National Park Service shall be contacted to obtain the necessary permits to occupy portions of the stream. The Contractor shall be responsible for any fees that are required to obtain the permits. The Contractor shall be responsible for repairing any damage that might occur to the stream bottom, the stream banks, and any structures that are in the stream at his own expense.

The Contractor shall arrange for employee parking and storage space, if necessary, at no additional expense to the District. Inability of the Contractor to obtain additional parking and/or storage space will not serve as a basis of claim for delay. Street parking in public, business or residential areas adjacent to the project site is subject to local regulations.

16. UTILITY PROTECTIVE ALERT:

This S.P. supplements and modifies 107.16.

<u>NAME</u>	<u>TELEPHONE NO.</u>	<u>FACILITIES</u>
“Miss Utility” for Wash, Gas Light Co., Verizon, PEPCO, AT&T	800-257-7777	Gas lines; telephone, electric and communication conduits and cables.
DC Water	612-3400	Water mains and Sewers
DDOT	442-4549 671-2710 (day) 727-6161 (night)	Fire Alarm electrical systems Street lighting inspection

17. COOPERATION WITH UTILITY RELOCATION:

This S.P. supplements 105.05 of the Standard Specifications.

For any underground utility or vault encountered, the Contractor shall immediately notify the Engineer and take necessary measures to protect the utility or vault and maintain its service until if necessary relocation by owner is accomplished.

18. UTILITY STATUS:

The District of Columbia Department of Transportation maintains coordination with the public utility companies during the preliminary engineering and the construction phases of the project. The Contractor shall be required to maintain and continue this coordination throughout the construction of the project. Construction delays as a result of inadequate coordination shall be the Contractor's responsibility.

Except for PEPCO, no utility company work outside the scope of the project is anticipated. However, it will be necessary for utility companies to perform work during construction related to the contract work being performed. Such work consists of inspection of furnished materials and utility supports installed by the Contractor and being present during any demolition or concrete placement in the vicinity of their facilities.

The Contractor's involvement and coordination with utility companies includes, but is not restricted to, the following:

DC Water

- a. Adjustment and resetting of utility manholes and manhole frames, respectively, to new grades.
- b. Location and verification of existing utility lines (as shown on the plans).
- c. Within project limits, remove the existing utility lines to the limits necessary for placement of new utility lines, while ensuring proper alignment between the new utility line segment and the remaining existing utility lines, as per details on the plans for:
 1. Proposed 160' min. long for 12" D.I. water main on 44th Street, NE.
 2. Proposed 110' min. long for 12" D.I. water main on Division Avenue, NE.
 3. Proposed 105' min. long 8" D.I. water main on Gault Place, NE.

This work includes but is not limited to placement according to the survey alignment, trench excavation for pipe bedding and manholes/ inlets, trench shoring.

Additional work includes curb cut for new double catch basins, etc.

- d. Maintenance, protection and assurance of continuous service for the duration of the project within the project limits.

- e. Furnishing and conversion of existing fire hydrants.

Washington gas

The existing gas lines shall be permanently abandoned by Washington Gas prior to bridge rehabilitation construction. The abandonment shall occur only after obtaining Permits from the proper authorities for:

1. Existing gas line of 130' of 4" WRPD-20# and 48' of 4" STL-20# including the connection devices and caps on 44th Street, NE.
2. Existing gas line of 178' of 4" WRPD-20# including the connection devices and caps on Division Ave, NE.

The Contractor shall not proceed with work until utility facilities involved have been located, disconnected or otherwise adjusted by utility representatives.

19. CONTRACTOR'S SUBMITTALS:

This Special Provision supplements 105.02 (B)

Shop and working drawings and calculations of working drawings shall be submitted to the Engineer. Every effort will be made to respond to these submittals within twenty one (21) days of receipt of the submittal by the Contractor. All other submittals shall be transmitted to the DC DDOT office responsible for their approval. The Contractor shall transmit six (6) copies and one (1) reproducible copy of the shop and working drawings and calculations of working drawings submittals to the following office:

1. **Mr. Dawit Muluneh, P.E., Program Manager, Team 4
Infrastructure Project Management Administration
D. C. Department of Transportation
55 M Street, S.E., 4th Floor
Washington, D.C. 20003**
2. **D.C. Department of Transportation
Field Engineer's Office**

Materials certifications and laboratory test reports shall be submitted to:

1. **Chief, Quality Assurance/Quality Control Division
Infrastructure Project Management Administration
D. C. Department of Transportation
55 M Street, S.E., 4th Floor
Washington, D.C. 20003**

**2. D.C. Department of Transportation
Field Engineer's Office**

Shop and working drawings and calculations of working drawings for sewers and water mains shall be submitted to:

- 1. Chief, Office of Engineering Services
D.C. Water
5000 Overlook Avenue, S.W.
Washington, D.C. 20032**
- 2. D.C. Department of Transportation
Field Engineer's Office**

Catalog cuts for roadway lighting shall be submitted to:

- 1. Mr. Dawit Muluneh, P.E., Program Manager, Team 4
Infrastructure Project Management Administration
D. C. Department of Transportation
55 M Street, S.E., 4th Floor
Washington, D.C. 20003**
- 2. D.C. Department of Transportation
Field Engineer's Office**

20. FAILURE TO COMPLETE ON TIME:

Replace 108.07 of the Standard Specifications with the following:

For each calendar day that contract works, or main part thereof, remains incomplete after expiration of the specified construction completion time, the sum of \$1,100.00 per calendar day has been set by the Contracting Officer to be deducted as liquidated damages from any money due the Contractor.

The Contractor's operation after expiration of construction completion time as extended will in no way waive the District's rights under the contract.

21. WORK HOURS:

This S.P. supplements and modifies 105.10, 105.11 and Article 17.C of the Standard Specifications.

Work may be performed outside of the following hours only when required or allowed by contract specifications or with the advanced notice to and approval by the Contracting Officer or his technical representative:

Monday through Friday 7:00 AM to 7:00 PM

An extension of this time period may be granted with written approval by the Contracting Officer or his technical representative. However, work hours beyond these limits may be granted for only maintenance of traffic activities, emergencies, work stipulated to be performed at night and other activities specifically granted in writing by the Contracting Officer or his technical representative.

22. NIGHT WORK:

This S.P. supplements 105.11 of the Standard Specifications.

A. DESCRIPTION

The Contractor shall be subjected to area noise ordinances for night work from 7 P.M. to 5 A.M. and to the restrictions on equipment as indicated below except as permitted by a variance. The Department will support the Contractor's efforts in applying for a variance permitting reasonable day and nighttime noise levels. The Department gives no guarantee concerning the noise levels granted in any waiver, nor whether or not a variance will be granted.

D.C. MAXIMUM PERMITTED NOISE LEVEL*

<u>Zone</u>	<u>Maximum Noise Level, dBA</u>	
	<u>Daytime</u>	<u>Nighttime</u>
Residential, Special Purpose or Waterfront Zone	60	55
Commercial or Light Manufacturing Zone	65	60
Industrial Zone	70	65

* D.C. Law 2-53, District of Columbia Noise Control Act of 1977.

For this project, the area will be classified as residential. The Contractor shall also maintain sufficient light illumination levels for safe operations in all active work areas during evening and night work. Temporary lighting for the Contractor's operations shall comply with OSHA regulations, Section 1926.56, task requirements.

B. RESTRICTIONS

The use of all mechanical impact demolition equipment will be absolutely prohibited between the hours of 10:00 PM and 7:00 AM.

C. MEASURE AND PAYMENT

No separate measure or additional payment will be made for Night Work or Night Lighting.

23. PROJECT SECURITY:

A. DESCRIPTION

Portions of the general project site will be open to the public during construction. The Contractor shall be responsible for adequate protection of the entire project site during performance of his contract. The Contractor shall take the necessary measures to prevent vandalism and theft of materials, equipment and tools as well as the completed work on the project site. The D.C. Department of Transportation shall not be held liable for any loss or damage resulting therefrom.

B. MEASURE AND PAYMENT

No direct measures or payment will be made. The cost of project security shall be reflected, and distributed among the various contract Pay Items.

24. INSURANCE:

This Special Provision modifies Section 107.13 of the Standard Specifications for Highways and Structures, 2005

A. GENERAL REQUIREMENTS

The Contractor shall procure and maintain, during the entire period of performance under this contract, the types of insurance specified below. The Contractor shall have its insurance broker or insurance company submit a Certificate of Insurance to the Contracting Officer giving evidence of the required coverage prior to commencing performance under this contract. In no event shall any work be performed until the required Certificates of Insurance signed by an authorized representative of the insurer(s) have been provided to, and accepted by, the Contracting Officer. All insurance shall be written with financially responsible companies authorized to do business in the District of Columbia or in the jurisdiction where the work is to be performed and have an A.M. Best Company rating of A-VIII or higher.

The Contractor shall require all of its subcontractors to carry the same insurance required herein. The Contractor shall ensure that all policies provide that the Contracting Officer shall be given thirty (30) days prior written notice in the event the stated limit in the declarations page of the policy is reduced via endorsement or the policy is canceled prior to the expiration date shown on the certificate. The Contractor/Insurance Company shall provide the Contracting Officer with ten (10) days prior written notice in the event of non-payment of premium.

1. Commercial General Liability Insurance. The Contractor shall provide evidence satisfactory to the Contracting Officer with respect to the services performed that it carries \$1,000,000 per occurrence limits; \$2,000,000 aggregate; Bodily Injury and Property Damage including, but not limited to: premises-operations; broad form property damage; Products and Completed Operations; Personal and Advertising Injury; contractual liability and independent contractors. The policy coverage shall include the District of Columbia as an additional insured, shall be primary and non-contributory with any other insurance maintained by the District of Columbia, and shall contain a waiver of subrogation. The Contractor shall maintain Completed Operations coverage for five (5) years following final acceptance of the work performed under this contract.
2. Automobile Liability Insurance. The Contractor shall provide automobile liability insurance to cover all owned, hired or non-owned motor vehicles used in conjunction with the performance of this contract. The policy shall provide a \$1,000,000 per occurrence combined single limit for bodily injury and property damage.
3. Workers' Compensation Insurance. The Contractor shall provide Workers' Compensation insurance in accordance with the statutory mandates of the District of Columbia or the jurisdiction in which the contract is performed.
4. Employers' Liability Insurance. The Contractor shall provide employers' liability insurance as follows: \$500,000 per accident for injury; \$500,000 per employee for disease; and \$500,000 for policy disease limit. If projects hereunder include water operations, the U.S. Longshoremen and Harbor Workers' Compensation Act and Maritime endorsements must be purchased and attached to employers' liability insurance policy.
5. Installation-Floater Insurance. For projects not involving structures, the contractor shall provide an installation floater policy with a limit equal to the full contract value. The policy shall cover property while located at the project site, at temporary locations, or in transit; deductibles will be the sole responsibility of the contractor; and name the District of Columbia as the loss payee on the policy, as its interests may appear. A waiver of subrogation in favor of the District of Columbia shall be included.
6. Umbrella or Excess Liability Insurance. The Contractor shall provide umbrella or excess liability (which is excess over employer's liability, general liability, and automobile liability) insurance as follows: \$10,000,000 per occurrence, including the District of Columbia as additional insured.
7. Environmental Liability Insurance. The Contractor shall provide a policy to cover costs associated with bodily injury, property damage and remediation expenses associated with pollution incidents including, but not limited to, mold, asbestos or lead removal. The policy shall provide a minimum of \$1,000,000 in coverage per incident and \$2,000,000 aggregate.

B. DURATION

The Contractor shall carry all required insurance until all contract work is accepted by the District, and shall carry the required General Liability; and any required Professional Liability for five (5) years following final acceptance of the work performed under this contract.

C. LIABILITY

These are the required minimum insurance requirements established by the District of Columbia. HOWEVER, THE REQUIRED MINIMUM INSURANCE REQUIREMENTS PROVIDED ABOVE, WILL NOT IN ANY WAY LIMIT THE CONTRACTOR'S LIABILITY UNDER THIS CONTRACT.

D. CONTRACTOR'S PROPERTY

Contractor and subcontractors are solely responsible for any loss or damage to their personal property, including but not limited to tools and equipment, scaffolding and temporary structures, rented machinery, or owned and leased equipment. A waiver of subrogation shall apply in favor of the District of Columbia.

E. MEASURE OF PAYMENT

The District shall not make any separate measure or payment for the cost of insurance and bonds. The Contractor shall include all of the costs of insurance and bonds in the contract price.

F. NOTIFICATION

The Contractor shall immediately provide the Contracting Officer with written notice in the event that its insurance coverage has or will be substantially changed, canceled or not renewed, and provide an updated certificate of insurance to the Contracting Officer.

G. CERTIFICATES OF INSURANCE

The Contractor shall submit certificates of insurance giving evidence of the required coverage as specified in this Insurance Section prior to commencing work. Evidence of insurance shall be submitted to:

Jerry M. Carter, Contracting Officer,
DDOT,
55 M Street SE 7th Floor
Washington, DC 20003.

25. CONTRACT ADMINISTRATION DATA:

Contracting Officer: Contracts may be entered into and signed on behalf of the District

Government only by contracting officers. The Contracting Officer is the only District official authorized to contractually bind the District. The Contracting Officer is the Agency Chief Contracting Officer (ACCO), Department of Transportation, 55 M Street Washington D.C. 20003, telephone number (202) 671-2200.

AUTHORIZED CHANGES BY THE CONTRACTING OFFICER:

- a. The Contracting Officer is the only person authorized to approve changes in any of the requirements of this contract.
- b. The Contractor shall not comply with any order, directive or request that changes or modifies the requirements of this contract, unless issued in writing and signed by the Contracting Officer.
- c. In the event the Contractor effects any change at the discretion of any person other than the Contracting Officer, the change will be considered to have been made without authority and no adjustment will be made in the contract price to cover any cost increase incurred as a result thereof.

CONTRACTING OFFICERS TECHNICAL REPRESENTATIVE (COTR): The term COTR is synonymous with the term District's Engineer. The District's Engineer for this contract is:

Name: Mr. Dawit Muluneh, P.E.
Title: Program Manager
Agency: District Department of Transportation
Address: 55 M Street, S.E., 4th Floor
Washington DC 20003
Telephone: (202) 671-4556

The COTR will have the responsibility of ensuring that the work conforms to the requirements of this contract and such other responsibilities and authorities as may be specified in the contract. The COTR will act as the Contracting Officer's representative for technical matters, providing technical direction and discussion, as necessary with respect to the specifications or statement of work, and monitoring the progress and quality of the Contractor's performance. Other responsibilities include the following:

- a. Keeping the CO fully informed of any technical or contractual difficulties encountered during the performance period and advising the ACCO of any potential problem areas under the contact;
- b. Coordinating site entry for Contractor personnel, if applicable;
- c. Reviewing and approving invoices for fixed-price deliverables to ensure receipt of goods

and services. This includes the timely processing of invoices and vouchers in accordance with the District's Payment provisions; and

- d. Maintaining a file that includes all contract correspondence, modifications, records of inspections (site, data, equipment) and invoices/vouchers.

It is understood and agreed, in particular, that the COTR is not a contracting officer and does not have the authority to:

- a. Award, agree to, or sign any contract, delivery order or task order. Only the ACCO shall make contractual agreements, commitments, or modifications;
- b. Grant deviations from or waive any of the terms and conditions of the contract;
- c. Direct the accomplishment of effort, which is beyond the scope of the statement of work in the contract;
- d. Increase the dollar limits of the contact or authorize work beyond the dollar limit of the contract, or authorize the expenditure of funds by the Contractor;
- e. Change the period of performance; and
- f. Authorize the furnishing of District property, except as specified under the contract.

When in the opinion of the Contractor, the COTR requests effort outside the existing scope of the contract, the Contractor shall promptly notify the Contracting Officer in writing. The Contractor under such direction shall take no action until the Contracting Officer has issued a modification to the contract or until the issue has been otherwise resolved.

ORDERING AND PAYMENT

The contractor shall not accept orders for items under this contract unless a purchase order has been issued. The participating agency shall be the District of Columbia Department of Transportation.

Invoices shall be submitted in duplicate to the District Department of Transportation, Office of the Chief Financial Officer, Customer Care Division, 55 M Street Washington D.C. 20003, Telephone (202) 671-2300.

Each invoice must provide the following minimum information:

1. Contractor's name, address, invoice number and date;
2. Contract line item number (CLIN) being billed for payment and total amount due;
3. Purchase order and contract number;
4. Addressee's name and address;
5. Period of service;

6. Description of services and deliverables provided;
7. Name, title, signature and phone number of preparer; and
8. Name of the contracting officer's technical representative.

Payment may be delayed for improperly prepared invoices.

26. RECORDS OF MATERIALS, SUPPLIES AND LABOR (FHWA 47 SUBMISSION):

This S.P. supplements REQUIRED CONTRACT PROVISIONS, FEDERAL AID CONSTRUCTION CONTRACTS.

Under Section VI, Record of Materials, Supplies and Labor, delete the first paragraph and replace it with:

The provisions of this section are applicable to all contracts for Federal-aid primary, urban and Interstate highway projects involving construction performed under contract awarded by competitive bidding, except projects for which the total final construction cost of roadway and bridge is less than \$1,000,000, and projects consisting primarily of:

- a. The installation of protective devices at railroad grade crossings, or
- b. Highway beautification

For contracts of \$1,000,000.00 or more, the completion and submission of the FHWA 47 report is a contract requirement. The form must be completed and submitted as soon as field work is completed. Final payment will not be made until the contractor files this report.

27. UNDERGROUND VAULTS:

This S.P. supplements Article 17(E) of the General Provisions 103.01 of the Standard Specifications.

The Contractor shall take necessary measures to prevent damage to existing underground vaults within or adjacent to the project. It shall be the Contractor's responsibility to determine exact locations for all underground vaults in the field.

In case of damage to underground vaults by the Contractor, the Contractor shall restore such underground vaults to a condition equivalent to that which existed prior to the damage by repairing, rebuilding, waterproofing or as may be directed by the Engineer, at the Contractor's expense.

28. SALVAGED MATERIALS:

Existing light standards and other appurtenances designated to be removed and replaced shall be delivered by the Contractor to a designated DDOT storage yard. Prior to delivery, the Contractor shall contact the Traffic Operations at (202) 671-2700 to make arrangements. Payment for delivery of this salvaged material shall be included in the various bid items for electrical work.

Any salvaged materials considered by the Engineer to be useful to the District shall be delivered to a designated storage yard. All other materials shall be removed from the job site and be disposed of properly by the Contractor. No direct measure will be made for this work. Payment for this work shall be reflected in the unit prices for the appropriate pay items for removal.

29. PUBLIC SAFETY AND CONVENIENCE:

The Contractor shall take every measure necessary to ensure the protection of personnel and property. When in the opinion of the Engineer, construction operations constitute a hazard to traffic in any area, the Contractor may be required to suspend operations during certain hours to remove equipment from the roadway.

30. REFERENCE DRAWINGS (INFORMATIONAL DRAWINGS):

A full set of plans for the six project structures (Bridge Nos. 0129, 0132, 0196, 0199, 0204 and 0222), within the limits of the contract are available for examination in the office of IPMA Program Manager, Team 4, District Department of Transportation, 55 M Street, SE, 4th Floor, Washington, D.C. 20003 during normal business hours.

Subsequent to the plan construction, undocumented modifications or additions may have been made to the facility. It is the Contractor's responsibility to verify the actual configuration of the facility.

Prior to demolition and preparation of shop drawings, the Contractor shall check the dimensions of the existing structure. If these dimensions do not agree with those shown on the contract plans, the Contractor shall make the necessary adjustment to dimensions and profile grades shown on the contract plans to insure that new construction will properly fit the existing environs. The District assumes no expense or liability for the accuracy of or interpretations made from the contract plans or from the inspection survey report.

31. VALUE ENGINEERING CHANGE PROPOSALS:

This S.P. modifies 104.03 of the Standard Specifications.

A. GENERAL

This contract allows the use of Value Engineering Change Proposals (VECP's) which are initiated and developed by the Contractor to change the Contract plans and specifications, or

other requirements of this Contract for the purpose of reducing the total cost of construction without reducing design capacity or quality of the finished product.

32. PRE-BID CONFERENCE:

Prospective bidders are invited to attend a meeting to discuss the proposed work under this contract. The meeting will be held at 55 M Street S.E. 4th Floor, Washington DC 20003. Bidders will be notified of the room number, date and time by Addendum.

Representatives of the Department will be available to answer questions relative to the work. Bidders who expect to attend should inform the Department prior to the meeting date. Any pertinent date or change resulting from the conference will be included in any addendum issued to all perspective bidders after the conference; however, the importance of attending the meeting is stressed. Any questions or conflicts identified prior to bid should be brought out during this meeting.

33. ADDITIONAL LABORATORY/FIELD EQUIPMENTS:

This S.P. supplements requirements of Article 106.02 and 106.06 of the Standard Specifications.

The Contractor shall provide the Project Engineer with supply containers and molds to obtain samples (specimen) for the duration of the contract.

Examples of containers and molds are cure boxes, molds for beams and concrete cylinders, jars for tack coat sampling, labels and other miscellaneous supplies. The Project Engineer may request some special containers and molds at his discretion. The Quality Assurance/ Quality Control Division may request additional containers and molds.

The Contractor should schedule the delivery of these containers and molds to the Project Engineer to insure that this delivery will not disrupt the work in progress.

No measure and payment will be made. The cost of providing containers and molds shall be included in the unit price of the material sampled.

For the concrete phase of the contract, the Contractor shall also furnish, maintain and replace as necessary, the following equipment.

<u>No.</u>	<u>Description</u>
1	Air Meter, Type B, for regular, conforming to requirements of AASHTO T-152-86 Test Method (Air Content of Freshly Mixed Concrete by the Pressure Method), including all necessary accessories.

- 1 Roller Meter for air content of fresh Lightweight Concrete.
- 2 Mold and Tamping Rod for testing the slump of plastic concrete, conforming to requirements of AASHTO T-119-82 (Slump of Portland Cement Concrete).
- 1 Pressure Pot for Air Entrainment Testing.
- 2 Concrete Thermometers.

The above air meters shall be properly calibrated by an independent laboratory and their certification furnished to the Engineer.

All equipment included under this item shall become the property of the Contractor at the end of the contract.

No separate measure will be made for this work. Payment for Additional Laboratory Equipment will be included under ENGINEERS' FIELD FACILITIES, Item 624 002.

34. EMPLOYEE TRAINING, Item: 000 003

Requirements of 103.04 of the Standard Specifications apply.

35. PROGRESS PHOTOGRAPHS, Item: 108 002

This S.P. supplements and modifies 108.08 of the Standard Specifications.

A. GENERAL

Ninety (90) original photographs will be required per each Bridge. Approximately thirty (30) photographs shall be taken prior to beginning of any work and thirty (30) photographs will be required after construction. In addition, Photographs shall be taken of the adjacent properties including walls, copings, concrete stairs, foundations, or any other related items prior to construction. The remainder shall be taken throughout the construction work on a monthly basis. The Contractor shall submit the photographs in digital format on.

B. MEASURE AND PAYMENT

The requirements of 108.08 apply.

36. OPTIONAL MATERIALS

The District will not consider any alternate to the following items, and the materials or items involved shall be supplied by the Contractor exactly as shown on the plans and as described in the Standard Specifications and these SPECIAL PROVISIONS:

Electrical Conduits

Lighting Standards (Fluted poles and bases)

For all other finished or semi-finished materials or items, an optional equivalent will be permitted by the accepted bidder only, provided this alternate meets in all respects the requirements of the pertinent ASTM, AASHTO, District of Columbia or Federal Specifications and results in no additional cost to the District nor additional Contract time. The proposal for an equivalent item shall be submitted for review by the District immediately after bids have been opened in order that approval or rejection can be determined.

37. SPECIALTY ITEMS

The following items as listed in the PAY ITEM SCHEDULE are designated SPECIALTY ITEMS.

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
617	Traffic Signal Work
618	Electrical Work – Street Lighting

38. CONSTRUCTION SURVEY

This S.P. replaces the first paragraph of Section 108.11 - PRECONSTRUCTION SURVEY with the following:

Prior to starting and after completion of any work, and during the progress of both concrete and asphalt operations, the contractor shall make a detailed inspection of buildings, structures, roadways, sidewalks, retaining walls, landscaping and related surface improvements adjacent to and in the vicinity of the proposed work, wherever located. The inspection shall include notes, measurements and DVD recording, or any other approved method by the Engineer with audio soundtrack of all facilities. The audio description of the inspection shall include the date, time, weather conditions, address/stationing/location, brief description of the facility with contract name and number and description of physical conditions encountered.

39. CONTRACT PLANS

Certain detail drawings for specific items are included in the SPECIAL PROVISIONS, and these detail drawings may not be included in the PLANS.

40. COMMON EXCAVATION, Item: 202 002

This S.P. supplements 202.02 of the Standard Specifications.

A. GENERAL

Work under this item shall include excavation of all materials described in 202.03 to the lines and grades indicated in the contract plans or within the limits prescribed by the Engineer.

Work under this item also includes undercutting to remove soft and/or unsuitable material, which may be encountered within the limits directed by the Engineer. Also included shall be special or hand excavation, as necessary, over, around and under support for existing or new utility lines and related appurtenances uncovered from such base undercutting.

The replacement of the undercut material shall be furnished, placed and compacted under Item 209 002, Aggregate Base Course.

B. MEASURE AND PAYMENT

Supplementing 202.05, payment will be made to include performance of work specified herein.

41. STRUCTURE EXCAVATION, Item: 205 002

This S.P. supplements 205.01 of the Standard Specifications.

A. GENERAL

The Contractor shall take all necessary precautions to avoid damage to existing utilities during excavation. Any portion of remaining structure or existing facilities damaged as a result of negligence on the part of the Contractor shall be repaired or replaced by the Contractor at his expense.

B. MEASURE AND PAYMENT

The requirements of 205.04 and 205.05, respectively, shall apply.

42. DEMOLITION, Item: 205 008

This S.P. supplements 205.02 of the Standard Specifications.

A. GENERAL

Work under this item consists of removal, salvage and disposal of various materials from the existing structures that are not specified otherwise. Prior to commencement of this work the Contractor shall comply with the requirements of Section 626 of the Standard Specifications for Protection Shield, Item 626 002. The demolition work shall comply with Sections 205 of the Standard Specifications.

In addition, the existing steel girders and other related steel with lead paint shall be demolished and removed from the job site in compliance with EPA requirements. If lead-based paint particles and dust are encountered, work shall be completed in conformance with section 707.04 of the Standard Specifications.

Work under this item includes, but is not limited to the following items:

1. Removal and disposal of existing asphalt overlay, reinforced concrete bridge deck slab, steel beams, sidewalks and approach slabs for Bridge Nos 0129, 0132, 0204 and 0222.
2. Removal and disposal of metalwork, including expansion joints, drainage, lighting standards, wires, hand boxes, bridge railings and traffic barriers of all the bridges.
3. Removal and disposal of portions of reinforced substructure concrete including abutment backwalls as shown on the contract plans or as directed by the Engineer.
4. Demolition of all or portions of the reinforced concrete deck.
5. Clearing of existing debris from the project site.

B. DESCRIPTION

The existing concrete deck, steel beams in (4) Bridges, and portions of substructure shall be demolished by the Contractor to the limits shown in the contract plans or as laid out in the Special Provisions. When required for construction, stone masonry units shall be carefully removed as a whole to clear the limits of removal for the concrete. Any material removed beyond authorized limits, or any portion of remaining structure damaged as a result of negligence on part of the Contractor, shall be replaced or repaired by the Contractor at his own expense. All existing reinforcing steel shall be protected and left in place to be reused in the reconstruction of the various bridge elements unless noted otherwise in the contract plans and/or special provisions.

When portions of existing bridge are removed, care shall be taken that the remaining utilities and the remaining parts of the structure are not damaged. The Contractor is responsible for any and all damages to the structure during construction/demolition. Should the bridge be allowed to fail due to the Contractor's negligence, the Contractor, at his expense, shall remove the fallen structure and replace it according to the contract plans.

Removal of the existing expansion joints on bridge 0196 (55th Street) shall be accomplished in a manner that will preserve the existing reinforcing. All reinforcing damaged during removal will be replaced at the expense of the Contractor.

All material permanently removed except lighting standards and parapet railings shall become the property of the contractor and shall be disposed of away from the site.

REINFORCING STEEL - All reinforcing steel encountered shall be removed and disposed of unless otherwise shown on the contract plans, which shall be cleaned, and repositioned as called for on the contract plans. New steel shall be spliced to existing steel as per AASHTO LRFD Bridge Design Specifications, 6th Ed. 2012, requirements.

When existing reinforcing steel to remain is damaged during demolition, the Contractor shall, at his own expense, substitute a bar of equal size drilled in and grouted to the required lap as per AASHTO LRFD Bridge Design Specifications, 6th Ed. 2012, requirements.

Where projecting bars are not to extend into the new construction, they shall be cut off flush with the surface to which the concrete has been removed. Cleaning reinforcing steel and removal of excessive length of bars shall be included as part of this work. All material removed shall be disposed of outside the construction area.

PROTECTION OF UTILITIES - The Contractor shall be responsible for the maintenance, protection, safety and continuation of service of all existing utilities on the bridge for the life of the contract.

C. MEASURE AND PAYMENT

The unit of measure will be the job. No actual measure will be made. Payment for Demolition will be made at the contract lump sum price, which payment will include removal and disposal of all materials and furnishing all labor, tools, equipment and incidentals needed to complete all the above specified work.

43. REMOVE VEGETATION, Item: 201 005

This S.P. supplements 201.

A GENERAL

This work is the removal of the existing excess vegetation along the wingwalls of the bridge abutments, as indicated on the plans at the location indicated on the plans. The work will also include seeding of the areas which have been left bare due to the removal of the excess vegetation. Seeding will be per section 610 of the specifications.

B. MATERIALS

None.

C. MEASURE AND PAYMENT

No measure will be made for this work. Payment for REMOVE VEGETATION will be made at the contract lump sum price, which will include all materials, labor, equipment, tools, disposal of materials away from the site, and, incidentals required for completing the work as required herein.

44. AGGREGATE BASE COURSE, Item: 209 002

This S.P. modifies and supplements 209.

A. GENERAL

Supplementing 209.01, work under this item shall also include special or hand compaction, if necessary, under, around and over existing or new utility lines and appurtenances uncovered during excavation. The work **does not include** furnishing, placing and compacting the replacement material at locations where undercutting was performed as approved by a Geotechnical Engineer, to remove soft and unsuitable material from below the proposed aggregate base course as described in 202.02.

Modifying 209.02, materials for this work shall be Crushed Stone meeting requirements of 804.04(A).

B. MEASURE AND PAYMENT

Supplementing 209.07, payment will be made to include performance of work specified herein.

45. CONVERT FIRE HYDRANTS, Item: 307 010

This S.P. supplements 307.01(E) as follows:

A. GENERAL

Work under this item also includes furnishing and installation of necessary tees, elbows, other fittings, and other incidental materials to complete the work.

B. MEASURE AND PAYMENT

The requirements of 307.05 shall apply.

46. D.C. WATER, Items: 307 010, 310 008, 310 004, 311 026, 311 028, 315 002

The DC Water Specifications shall be used only for the items listed below. Specifications are included in the Appendix of these Special Provisions. These Specifications supersede the District of Columbia Standard Specifications for Highways and Structures 2009 and amendments

thereto:

<u>DESCRIPTION / ITEM NO.</u>	<u>SECTION</u>
Convert Fire Hydrant, Item 307 010	02642
Double Type S Basin, Item 310 018	02720
Basin Connect PCC Pipe, Class III, 15 Inch Item 310 008	02720
Replace Existing Basin with Dual Throat Water Quality Basin, Item 311 027	
Pipe Sewer Television Inspection, Item 315 002	02732

47. CLEAN SEWER STRUCTURE, Item: 311 063

A. GENERAL

Work consists of cleaning selected sewer structure (storm sewer) within the limits of the project, when directed by the Engineer.

The sewer structures shall be cleaned of all silt and deposits (leaves, trash, etc.) by either manual or mechanical means. Work shall also include removing debris to a distance of 2 ft. into the attached connecting pipe. Debris extracted from the inlet must be removed from the work site by the end of the workday.

B. MEASURE

The unit of measure for Clean Sewer Structure will be each and this measure shall include the elongated section, catchment chamber and the connecting pipe as specified.

C. PAYMENT

Payment for Clean Sewer Structure will be made at the contract unit price per each, which payment will include all labor, equipment, tools, materials, and incidentals necessary to complete the work as specified herein.

**48. REPLACE EXISTING BASIN WITH WATER QUALITY BASINS, Item: 311 027 –
Replace Existing Basin With Dual Throat Water Quality Basin**

This S.P. modifies and supplements 311.

A. GENERAL

Work consists of complete removal of existing standard or elongated basins, excavation and backfill, disposal of excess excavated material, furnishing all materials and constructing triple and quadruple water quality catch basins at the same location according to the details shown in the contract documents or as directed by the engineer.

B. SUBMITTALS

The requirements of 310.02 apply.

C. MATERIALS

The requirements of 310.03 apply.

D. CONSTRUCTION REQUIREMENTS

The requirements of 310.04 apply.

E. MEASURE AND PAYMENT

The unit of measure for **Replace Existing Basin With Dual Throat Water Quality Basin** will be each.

Payment for **Replace Existing Basin With Dual Throat Water Quality Basin** will be made at the Contract unit price per each, for which payment will include all labor, excavation and backfill, materials, tools, equipment and incidentals needed to complete the work specified.

49. CLEAN PCC PIPE, Item: 311 065

A. GENERAL

Work consists of cleaning PCC Pipe (inlet connection pipe) within the project limits, when directed by the Engineer.

If, during the sewer structure cleaning process, the Engineer determines that a connecting pipe is clogged or requires cleaning, he shall direct the Contractor to clean the connecting pipe.

The connecting pipe shall be cleaned of all debris and thoroughly flushed by use of high-pressure hose. All work to be performed must meet the requirements of Water and Sewer Authority.

Any material extracted from the pipe during cleaning operations must be removed from the site by the end of the working day.

B. MEASURE

The unit of measure for Clean PCC Pipe will be Linear Foot and this measure shall be the horizontal distance, along the surface from the attached wall of the inlet to the center of the connecting sewer structure minus 2 feet.

C. PAYMENT

Payment for Clean PCC Pipe will be made at the contract unit price per Linear Foot, for which payment will include all labor, equipment, tools, materials and incidentals necessary to complete the work as specified herein.

50. SAW CUTTING:

This S.P. modifies and supplements 202.03 and applies to all excavation and Repair/Replace Items.

A. CONSTRUCTION METHODS

During removal of existing roadways, sidewalks, curbs, gutters, alleys, driveways, concrete traffic barriers and wheelchair ramps, the portion to be removed shall be saw cut one-third (1/3) depth or as directed and/or approved by the Engineer, such that the existing materials can be removed to a neat line with minimum damage to adjacent structures that are to remain in place. Any excessive damage done at these locations shall be repaired and restored by the Contractor at no cost to the District.

B. MEASURE AND PAYMENT

No measure and payment shall be made; the cost of saw cutting shall be reflected and distributed among the various bid pay items.

51. ANTI-STRIP ADDITIVE - BITUMINOUS MIXTURE:

A. GENERAL

All bituminous mixtures shall include an anti-strip additive.

B. MEASURE AND PAYMENT

No measure or payment will be made. Cost for **Anti-Strip Additive - Bituminous Mixtures** shall be included in the prices bid per ton of asphalt.

52. SUPER PAVE SURFACE COURSE 12.5 MM, Item: 402 012

This S.P. supplements 401.14

The Contractor shall constantly check the surface with a straightedge parallel to the center line while the pavement is being placed and rolled. Straightedging and backpatching shall be done immediately after initial compaction and while the material is still workable.

53. ARCHITECTURAL TREATMENT, Item: 601 003

A. GENERAL

This work shall consist of providing architectural treatment on structures such as bridge facades and parapets. The type of architectural treatment shall be as specified in the Contract Documents. Form release agents, form stripping methods, patching materials, and construction procedures shall be mutually compatible with the surface finish and concrete stain to be applied. Architectural treatments not requiring form liners or stain shall conform to all applicable requirements including sample panels.

Contractor Uniformity Responsibility. When a project specifies that the same architectural treatment be applied to multiple structures and portions of various structures such as parapets, abutments, piers, retaining walls, and noise barriers that will be in close proximity of each other, the Contractor shall be responsible for ensuring that the same architectural treatment or manufacturer's form liner is used by all subcontractors and that any staining requirements are uniform throughout those structures. The district's form liner approval process ensures that the specific form liner produces a product that conforms to the specified results; it does not relieve the Contractor of the responsibility for uniformity throughout the project. When exposed aggregate is specified as the architectural treatment, the same coarse aggregate shall be used in the production of these elements. Supplying all plants with the same coarse aggregate shall be at no additional cost to the district.

Form Liner. The form liner finish shall match the textured finish specified in the Contract Documents.

The form liner shall attach easily to the forming system, and shall not compress more than 0.021 ft when poured vertically at a rate of 10 ft/hr. The liners shall be capable of withstanding anticipated concrete pour pressures without leakage causing physical or visual defects. The liners shall be removable without causing concrete surface deterioration or weakness in the substrate.

Form liner butt joints shall be carefully blended into the approved pattern and finished off the final concrete surface. There shall be no visible vertical or horizontal seams or conspicuous form marks created by butt joining form liners. The finished texture, pattern, and color shall conform to the approved sample panel, and shall be continuous without visual disruption. The Engineer may reject portion of the structure for failure to comply with these requirements. Rejected portions of the structure shall be completely removed from the project at no additional cost to the district.

Prior to each pour, the form liners shall be cleaned and free of build-up. Each liner shall be visually inspected for blemishes and tears. Repairs shall be made in conformance with the manufacturer's recommendations, and shall not change the appearance of the final product.

Form liners shall be securely attached to forms in conformance with the manufacturer's recommendations, and with less than a 1/4 in. seam.

Form or Wall Ties. When form or wall ties are used that result in a portion of the tie permanently embedded in the concrete, the Contractor shall submit the type of form ties to the Engineer for approval prior to use in this work.

Form Release Agent. The release agent shall be compatible with the surface finish and concrete stain to be applied. The release agent shall be applied in conformance with the manufacturer's recommendations.

Concrete Stain. The color of the concrete stain shall conform to Federal Standard 595, for the Color No. specified in the Contract Documents. The coloring agent shall be a penetrating stain mix, compatible color finish designed for exterior application on new or old concrete with field evidence of resistance to moisture, alkali, acid, mildew, mold and fungus discoloration or degradation. The coloring agent shall be breathable, allowing moisture and vapor transmission. Concrete stain shall be selected from a list of prequalified concrete stains that is maintained by the Quality Assurance/Quality Control Division. Unless otherwise specified, two coats of concrete stain shall be applied in conformance with the manufacturer's recommendations and as directed by the Engineer.

When the concrete is at least 28 days old, surfaces to be stained shall be pressure washed with a pressure washer set at 3000 psi to remove laitance. The fan nozzle shall be held perpendicular to the surface at a distance of 1 to 2 ft. Abrasive blasting is prohibited. The completed surface shall be free of blemishes, discolorations, surface voids, latency, efflorescence, dirt, other foreign material, and conspicuous form marks as approved by the Engineer. The Contractor shall correct any surface problems at no additional cost to the district.

Expansion Joint Material. When the Contract Documents include expansion joints, the joint material shall be finished so as to visually continue the simulated stone pattern uninterrupted. A sample of the colored expansion joint material shall be included in the sample panel for approval.

Sample Panels. The Contractor's workmanship shall be demonstrated by constructing an approved sample panel for the form liner type specified using approved form lining materials and surface coloring. Formwork including form or wall ties proposed for use and concrete placement for the sample panel shall be the same as that used for the finished structure.

The form liner used shall produce the same pattern that is intended for use on the finished structure. When the finished structure will contain vertical or horizontal form liner seams/joints, the sample panel shall include the same appropriate seams/joints. The sample panel shall be unreinforced concrete cast in the same position (vertically or horizontally) as will be the finished product to determine the surface texture resulting by use of the form liner. The minimum size of concrete sample panel shall be 6 in. thick, 2 ft wide and 2 ft high.

The sample panel approved by the Engineer shall remain on the site as a basis for comparison to the structure. Samples rejected by the Engineer shall be removed from the project and a new sample be submitted at no additional cost to the district.

Samples. Form ties, sample and description, showing method of separation when forms are removed shall be provided by the Contractor.

Sample Panel Digital Photograph Inspection. The Contractor shall provide digital photographs of the small sample panel (24 x 24 in. or 4 x 4 ft as specified in the Contract Documents). The photographs shall be supplied by e-mail or CD Rom at the time the Quality Assurance/Quality Control Division is notified of panel delivery to the project site. The photographs will be used in evaluating the acceptance of the finish, but will not replace or supersede the delivery of sample panels as required in the Specifications. The district reserves the right to make an onsite inspection at any time, or to request additional photographs.

The digital camera shall have a minimum resolution of 3.1 megapixels, and all photographs shall be taken without the use of the camera's zoom features. All photographs shall be taken with the camera's line of sight being approximately perpendicular on the horizontal to the surface of the sample panel. This requirement shall be heeded throughout this procedure regardless of the orientation of the sunlight. Multiple photographs shall be taken with variations in the angle of the sunlight shining on the sample panel. This may be accomplished by rotating the sample panel so that the sunlight shines from almost directly behind the camera (90 degrees from the sample panel face), to a side lighting view where the sunlight shines on the surface from about 170 degrees from the sample panel face. Photographs shall be taken in approximately 15 degree increments, and be free of shadows from the camera and other foreign objects. The camera may be required to be plus or minus perpendicular to accomplish this requirement when the sun is shining on the sample panel at a 90 degree angle.

Additional photographs depicting the relief, colors, etc., may also be submitted provided that they conform to these requirements.

Photographs shall be taken so that the top and bottom of the sample panel takes up the full top and bottom of the camera's view screen without the use of the zoom feature. Included in each photograph shall be a card placed adjacent to the sample panel identifying the district's Contract Number, the supplier, the casting date for each panel; and a 1 x 6 in. black bar, a ruler, or other means of showing scale that is legible when viewing the photograph.

All photographs shall be taken in the presence and at the direction of the district's Inspector, and electronic copies made directly from the camera's memory device shall be submitted to them at the time of the inspection (enhancing or modifying the photographs in any way is prohibited). The Inspector will forward the information to the Quality Assurance/Quality Control Division. The certification with the photographs shall contain the following information:

- (a) Casting date.
- (b) Contract Number.
- (c) Description of the sample with file names for each sample.

- (d) Number of images sent.
- (e) Date and time the images were shot.
- (f) Panel serial numbers, or other identifying markings.
- (g) A certification that the panel has not been used on a previous project, that the panel is uniquely marked, and that the photographs were taken in their presence.

Failure to produce legible electronic photographs in conformance with these requirements will be cause to delay the evaluation of sample panels/posts, which shall be at no additional cost to the district on or any Contract time extension.

Architectural Treatment Type and Location. The type of architectural treatment and its location shall be as follows:

ARCHITECTURAL TREATMENT			
STRUCTURE	TREATMENT	COLOR	LOCATION
Concrete Façade	Match Existing Stone Pattern	†	Outside Face
Concrete Parapet	Match Existing Stone Pattern	†	Outside and Inside face

† Color shall match the natural material of existing stone subject to approval of the Engineer.

Shop Drawings. Plan, elevation, and details to show overall pattern, joint locations, form tie locations, and end, edge and other special conditions shall be submitted by the Contractor.

B. MEASURE AND PAYMENT

No measurement or payment will be made for this item.

54. SIMULATED STONE MASONRY, Item: 601 005

A. GENERAL

This work shall consist of constructing a simulated stone surface on the concrete locations specified in the Contract Documents. This work shall include developing, furnishing and placing form liners and applying a color system to the finished concrete surface as shown on the Plans or directed by the Engineer.

B. PATTERNS

The form liner shall replicate the actual existing stone pattern; the completed colored and formed concrete surface shall match the natural material of existing stone as closely as possible. Patterning of simulated stone masonry shall appear natural and non-repeating. Seam lines or match lines caused from two of more molds coming together will not be apparent when viewing final surface. Final coloration of cast stone concrete surface shall accurately simulate the appearance of existing real stone including the multiple colors, shades, flecking, and veining that is apparent in real stone. It shall also demonstrate the colors that may be apparent from aging, such as staining from oxidation, rusting and/or organic staining from soil and /or vegetation. Note that in Item 601 003, a sample is required. Upon approval by the Quality Assurance/Quality Control Division, mockup shall serve as quality standard for the project.

C. MATERIALS.

Refer to 601 003.

D. CONSTRUCTION

Refer to 601 003.

Concrete Stain. The concrete stain colors shall include the required base color, surface color and highlight colors to achieve a finished look that will simulate the existing natural stone. The base color shall be applied to the entire surface (stones and grout pattern joints) and may be sprayed. The surface color shall be applied to 80 percent of the surface of simulated stones (front face and edges). Each highlight color shall be applied to 2 to 5 percent of the surface of the simulated stones (front face only). The surface and highlight colors shall be applied to the front face of the simulated stones using a sponge. The surface color shall be applied by brush to the edges of the simulated stones. The surface and highlight colors shall not be applied to the grout pattern joints.

E. MEASURE AND PAYMENT

Development and preparation of working drawings, the development and furnishing of all form liners, the construction and finishing of all sample panels, the application of the rustic coursed ashlar stone form liner finish including application of colors, and all material, labor, equipment, tools, and incidentals necessary to complete the work will not be measured but the cost will be incidental to the Contract price for the pertinent Concrete or Structure item.

55. TEMPORARY FENCE, Item: 607 005

A. GENERAL

The requirements of 607.05 apply. Use DDOT standard material such as Snow Fence or other DDOT standard temporary fence material.

B. MEASURE AND PAYMENT

The requirements of 607.05 (E) apply.

56. DETECTABLE WARNING PAVERS OF NEW WHEELCHAIR/BICYCLE RAMPS

This S.P. supplements 609

A. DESCRIPTION

This work shall consist of furnishing and installing **Detectable Warning Pavers on Construction of New Wheelchair/Bicycle Ramps** or other locations as indicated and in accordance with the details shown on the plans and/or as directed/approved by the Engineer.

Furnishing and placing of materials of **Detectable Warning Pavers on Construction of New Wheelchair/Bicycle Ramps** will be paid for under the pay item for the wheelchair/bicycle ramps.

B. DETECTABLE WARNING PAVERS/TRUNCATED DOMES.

General - Detectable warning pavers shall consist of a surface of truncated domes aligned in a square grid pattern. Contrasting color shall be used and approved by the engineer.

Dome Size - Truncated domes in a detectable warning paver surface shall have a base diameter of 0.9 inches minimum to 1.4 inches maximum, a top diameter of 50% of the base diameter minimum to 65% of the base diameter maximum, and a height of 0.2 inches.

Size - Detectable warning pavers surfaces shall extend 24 inches in the direction of travel from the back of the curb for the entire width of the wheelchair ramp, landing or blended transition.

Rail Crossings - The detectable warning paver surface shall be located so that the edge nearest the rail crossing is 6 inches minimum and 8 inches maximum from the vehicle dynamic envelope.

C. MATERIALS

Pavers will meet Americans with Disabilities Act (ADA) requirements for detectable warning pavers (truncated domes) either ASTM C 902 Pedestrian and Light Traffic Paving Block, Class SX, Type I; or ASTM C 936 Solid Concrete Interlocking Paving Units; or ASTM C 1272 Heavy Vehicular Paving Brick, Type R.

Listed herein are the acceptable manufacturers and products or approved equal for detectable warning pavers and truncated domes pavers.

Manufacturers	Products
Whitacre-Greer Fireproofing Company, 1400 S. Mahoning Ave., Alliance, OH, 44601	ADA Paver, 4"x8"x2-1/4" Clear Red (Rustic) #30.
Hanover Architectural Products 240 Bender Rd., Hanover, PA,17331	Detectable Warning Paver, 11-3/4"x11-3/4"x2" Red or Quarry Red
Endicott Clay Products, PO Box 17, Fairbury, NE, 68352	Handicap Detectable Warning Paver, Nominal 4"x8"x2-1/4" Red Blend

Pavers will be laid on top of a 4" non-reinforced concrete base. Setting bed and joints are to be mortared in accordance with manufacturer's instructions or with a maximum 1/2" thick setting bed of latex modified cement mortar. Mortar the joints to a width not greater than 5/32" and not less than 1/16". Pavers shall not be directly touching each other unless they have spacing bars. Portion of concrete ramp that is thickened to 6" shall be extended such that a minimum 4" of concrete shall be beneath the brick pavers.

Joints are to be flush with top surface and struck so as to give a smooth surface. Pavers shall be laid such that joints are level with adjoining joints so as to provide a smooth transition from brick to brick and brick to concrete surface. The top surface of any two adjacent units should not differ by more than 1/8" in height for mortared brick paving. Bricks shall be placed in a running bond pattern. Pavers that do not conform to the smoothness requirement shall be removed and replaced at the expense of the contractor as determined by the Engineer. Face of all brick shall be clean of cement and protected so as to avoid chipping during construction.

Stamping or imprinting system when used must be capable of uniformly providing the specified texture and pattern, using the Department's standard class of concrete for sidewalks. The minimum dry static coefficient of friction, as defined by ASTM C-1028, shall be 0.80.

D. CONSTRUCTION

The Contractor shall submit literature describing the following to the Engineer at least 30 days prior to the proposed installation.

- The detectable warning paving material
- All associated materials
- Preparation requirements
- In addition, a minimum 12" x 12" sample of the detectable warning paver material shall be submitted.

The manufacturer shall demonstrate in writing and by providing references that the detectable warning paver materials have been satisfactorily used for roadway, path or flooring applications, in high pedestrian use and under weather conditions similar to those experienced in the District, for minimum period of five years.

In no case shall the Contractor permit the application of any materials by the untrained personnel or non-approved installers. The material manufacturer's certification of compliance with this requirement shall be provided to the Engineer.

Prior to the start of work, the Contractor shall show evidence of successful completion of similar installations and provide a job site sample for the approval of the Engineer. The sample size shall be 4' x 2', minimum, and constructed at a location selected by the Engineer.

As many test panels will be constructed as are necessary to achieve a sample panel that meets the satisfaction of the Engineer. All work shall conform to the appearance of the approved sample to the satisfaction of the Engineer. The sample shall not be incorporated into the work and will be removed when ordered by the Engineer.

Follow all applicable manufacturer's requirements for the environmental conditions, surface preparation, installation procedures, curing procedures, and materials compatibility. The Contractor is responsible for removing any material spatters from areas. The Contractor shall repair any damage that should arise from the installation or the clean-up effort.

E. MEASURE

Detectable Warning Pavers on Construction of New Wheelchair/Bicycle Ramps: No separate measurement will be made for the **Detectable Warning Pavers on Construction of New Wheelchair/Bicycle Ramps.**

F. PAYMENT

Payment for the **Detectable Warning Pavers on Construction of New Wheelchair/Bicycle Ramps** will be included in the contract unit price for the Wheelchair/Bicycle Ramp which payment will include furnishing and placing all materials, tools, equipment, all labor and incidentals necessary to complete the work. No payment will be made for job site samples and clean-up.

57. ROOT PRUNING, Item: 611 005

This S.P. modifies and supplements 107.12, 609.01 (E)(3) and 611.08.

A. GENERAL

This work consists of root pruning of existing trees within the project limits during construction operations as directed by the Chief Engineer and/or designated representatives of the Urban Forestry Administration.

B. CONSTRUCTION METHODS

The requirement for 611.08 (B) apply.

C. MEASURE AND PAYMENT

The unit of measure for root pruning will be per each. Payment will be made at the contract unit price per each, which payment will include all labor, materials, tools, equipment, and incidentals necessary to complete the work.

58. TREE PROTECTION AND REPLACEMENT, Item: 611 151

A. GENERAL

This S.P. supplements and modifies 611.07.

- Tree protection shall be installed prior to and throughout construction. Fencing shall be removed at the end of the project.
- Install six (6) foot high chain link fencing to protect existing street trees to remain within the limits of disturbance or directly adjacent to.
- For trees within continuous planting strips, protection should extend to the critical root zone which equals one foot of tree protection for every inch in tree diameter (e.g. a tree with a 12-inch DBH, or diameter at breast height, would require 12 ft. of tree protection on every side measured from the base of the tree.)
- For tree boxes, a tree protection frame should be installed and consist of four posts 6 ft. high placed at the four corners of the box with a minimum delineated area of the existing tree box (e.g. 4' x 9', 6' x 10', etc.). The posts shall not extend into the ground.
- If construction cannot be avoided within the critical root zone, the existing tree must be protected with fencing at minimum 2 ft. on all sides from the root flare (crown) and all other unpaved areas must be covered with a protective 10" layer of wood chips.
- None of the following shall occur within the critical root zone: trenching, alteration or disturbance to existing grade; staging/storage of construction materials, equipment, soil, or debris; disposal of any liquids e.g. concrete, gas, oil, paint, and blacktop.
- Trees that are protected must be watered every 10 days from April through September.

- Section 611.07 Tree Protection and Replacement of the DDOT Standard Specifications April 2009 shall apply should any damage occur to the existing street trees.
- Should there be any questions regarding tree protection the Contractor shall contact the UFA Team 1 Arborist at 202-671-5133.

B. MEASURE AND PAYMENT

The requirements of 611.07(C) apply.

59. REFLECTIVE MARKERS AND DELINEATORS

- 4 Inch Solid, Item 616040**
- 6 Inch Solid, Item 616044**
- 12 Inch Solid White, Item 616050**
- 4 Inch Double Yellow, 4 Inch Apart, Item 616051**
- 24 Inch Solid, Item 616053**
- Symbol, Item 616057**

This special provision supplements 616.11.

A. DESCRIPTION

Supplementing 616.11 (A). Work under these items consists of furnishing all materials for and installation of permanent reflective marker lane for the project as depicted in the contract drawings or as directed by the Engineer. If the roadway is to be immediately opened to traffic, then the pavement marking shall be installed within 24 hours after placement of the final roadway surface.

C. CONSTRUCTION REQUIREMENTS

Supplementing 616.11 (C). The newly applied markings shall be protected by traffic cones, or other approved measures, until such time as the material have dried sufficiently to bear traffic.

D. MEASURE AND PAYMENT

Supplementing 616.11 (D). Reflective markers and delineators, INCH DASH, will be measured and paid for based on the length of the marking stripe only.

60. MAINTENANCE OF TRAFFIC, Items: 407 002, 614 012, 614 013, 616 004, 616 006, 616 008, 616 012, 616 014, 616 016, 616 020, 616 022, 616 024, 616 028, 616 060, 616 062, 616 071, 616 073, 616 075, 616 080, 616 090, 616 100, 616 110, 616 122, 616 150

This S.P. supplements and modifies 104.02.

Supplementing first paragraph of 104.02, reference to the MUTCD shall be to the 2009 edition,

with latest revisions or latest edition.

Traffic Flow Restrictions - First paragraph of 104.02(A) is modified as follows:

All traffic lanes shall be a minimum of 10' – 0" wide, except as shown on the plans.

Vehicular and pedestrian access to all properties shall be maintained at all times during construction. No on-street parking will be allowed within the construction zone. The construction work zone shall be protected with portable precast PCC barriers with attenuators and safety drums as shown on the Contract Plans. The Contractor shall maintain proper construction signage during the construction period. The Contractor shall maintain access to existing driveways, residential and commercial entrances at all times.

Important Note:

Refer to the Contract Plans for details of the construction sequence, detours and maintenance of traffic.

- A. Traffic Flow Restrictions** - The actual duration of construction shall be minimized to reduce exposure to potential hazards. The Contractor's operation shall present no interference to traffic during the peak traffic hours of 6:30 A.M. to 9:30 A.M. and 3:30 P.M. to 7:00 P.M., Monday thru Friday, except holidays. Weekend and holiday work requires DDOT approval.
- B. Flaggers** - The Contractor shall furnish all necessary flaggers that may be required during the course of construction activities. It is the responsibility of the Contractor, utilities and agencies to ensure that trained personnel administer flagging. Flaggers shall be equipped with safety vests, 24" stop/slow paddles and helmets as per Section 6E of the MUTCD.
- C. Traffic Control Devices** - Approved warning signs, channelizing drums, cones, arrow panels, etc. shall be provided to insure motorists of positive guidance in advance of and through the work zone. Erection of regulatory signs such as stop, speed limit and no parking signs must be specifically authorized. Advance Warning signs shall have face sheeting that shall be Fluorescent Orange High Performance Wide Angle Retroreflective material or equal. All temporary traffic control devices shall meet NCHRP-350 testing requirements. Note: Mesh roll-up signs are not approved. Sign Supports shall be of a spring-loaded type or equivalent. Tripod or A-frame sign stands are not approved.

The temporary signs and markings placed in or adjacent to the work zone shall be consistent and visible at all times. The existing signs and markings may be covered and/or removed temporarily if the intended functions of these signs and markings will not be applicable during construction. However, they shall be replaced promptly when work is completed. All temporary signs no longer applicable to the work zone shall be removed or turned away from traffic. The Contractor shall document all existing

pavement markings and signage that is removed due to their work. The Contractor shall place temporary pavement markings at the end of each workday. DDOT-IPMA shall approve all temporary and permanent markings.

- D. Pedestrian Safety** - The Contractor shall provide pedestrians with a minimum of 4' walkway. This walkway should be safe, convenient and replicate as nearly as possible the most desirable characteristics of sidewalks or footpaths. Pedestrians should not be led into direct conflict with the work site operations or mainline traffic moving through or around the work site. All pedestrians including blind, hearing impaired and physically challenged need protection. All necessary signs and supports for closing sidewalks and detouring pedestrians shall be the contractor responsibility. Temporary ADA compliant handicap ramps and or protective walkways are also the responsibility of the contractor and shall not be paid for separately and cost shall be distributed among the various pay items.
- E. Night Work** - During night time hours, the work site shall be made safe for traffic and installing electronically illuminated traffic control devices such as Flashing Arrow Panels and warning lights shall provide warning. These devices shall be used in conjunction with other traffic control devices, and their flashing sequence and light intensity shall meet the requirements cited in the MUTCD. All traffic control devices shall be reflectorized during night time hours.
- F. Traffic Safety Officer** - The Contractor shall provide a competent, full-time, Traffic Safety Officer in accordance with the requirements of 616.02(B)(1).
- G. Traffic Controls** - 104.02(C) applies.
- H. Temporary AC, Superpave Surface Course, 12.5 mm, Item 407 002:**

This S. P. supplements 407 as follows:

Work includes removal and disposal of the asphalt as necessary. Temporary Asphalt shall be per 407.02.

- I. Portable Precast PCC Barrier:**
Portable Precast PCC Barrier, Item 614 012
Move Portable PCC Barrier, Item 614 013

The requirements of 614.02 apply

- J. Sequential Arrow Boards, Item 616 020:**

This S.P. modifies 616.08.

In the first paragraph on page 422, first line, insert the word “between” between

“provide” and “25”.

K. MEASURE:

Unit of measure will be that as required for the following pay items, which will constitute the payment for Maintenance of Highway Traffic. Estimated quantities will be as listed in the Pay Item Schedule.

DESCRIPTION	UNIT
Temporary AC, Superpave Surface Course, 12.5 mm, Item 407 002	Tons
Portable Precast PCC Barrier, Item 614 012	L.F.
Move Portable PCC Barrier, Item 614 013	L.F.
Construction Lane Closing, Item 616 004	LS
Remove Lane Marking, Item 616 006	S.F.
Temporary Construction Sign Supports, Item 616 008	Each
Construction Warning and Detour Signs, Item 616 012	S.F.
Reflectorized Traffic Cones, Item 616 014	Each
Flashing Amber Warning Lights, Type (B), Item 616 016	Each
Sequential Arrow Boards, Item 616 020	Each
Construction Sign Warning Flags, Item 616 022	Each
Type III PVC Barricade, Item 616 024	Each
Traffic Drums, Item 616 028	Each
Painted Lane Marking, 4 Inch, Item 616 060	L.F.
Painted Lane Marking, 6 Inch, Item 616 062	L.F.
Removable Preformed Pavement Marking Letter, Item 616 071	L.F.
Removable Preformed Pavement Marking Arrow, Item 616 073	L.F.
Removable Preformed Pavement Marking, 12 Inch, Item 616 075	L.F.
Truck Mounted Attenuator, Item 616 080	Each
Construction Zone Attenuator, Item 616 090	Each
Sand-Filled Impact Attenuator Module, Item 616 100	Each
Portable Changeable Message Sign, Item 616 110	Each
Steel Protection Plate, Item 616 122	Each
Repair of Damaged Major Traffic Control Devices, Item 616 150	LS

L. PAYMENT:

1. Payment for pay items listed in (K) above will be made as specified in the Standard Specifications, as modified elsewhere in these Special Provisions and as follows:

Except as provided in the following paragraph, payment will be made at the contract unit price. When the number of a particular traffic control device required for any single phase of work exceeds the quantity specified in the Pay

Item Schedule for that device, the Contractor will be paid for additional devices at the contract unit price.

2. Failure to Maintain Traffic - Failure on the part of the Contractor, at any time, to respond to the provisions of 104.02 and 616, will result in the Engineer immediately notifying the Contractor to comply with required maintenance of traffic provisions. In the event that the Contractor fails to proceed with corrections to Maintenance of Traffic deficiencies so as to conform to the provisions of 104.02 and 616.01 within 4 hours after receipt of such notice, the Engineer may notify the Contractor to suspend all other work on the contract until such time that the Maintenance of Traffic deficiencies are corrected.

In the event that the Contractor fails to respond to a notice of Maintenance of Traffic deficiencies within 4 hours after receipt of such notice, the Engineer will immediately proceed with adequate forces and equipment to maintain the project and the entire cost of this maintenance will be deducted from monies due the Contractor on the next monthly estimate.

An appropriate deduction will be made from the Contractor's next Progress Estimate for each day, or portion thereof, that Maintenance of Traffic deficiencies exist and will continue until the deficiencies are corrected and accepted by the Engineer. Any portion of a day will be considered a full day deduction. The amount prorated will be the per diem amount established by using the Calendar Days (based upon Calendar Dates when required) divided into the total value of the bid item. The amount of monies deducted will be a permanent deduction and will not be recoverable. Upon satisfactory correction of the deficiencies, payment of the Maintenance of Traffic items will resume.

In the event that sufficient funds are not available under the lump sum bid item for Maintenance of Traffic the funds will be deducted from the contract value.

61. STREET LIGHTING: REMOVE ARM FROM STEEL POLE UP TO 8FT IN LENGTH, ITEM 618 669, FURNISH AND INSTALL 135W LIGHT EMITTING DIODE (LED) LUMINAIRE, ITEM 618 765

This Special Provision revises and supplements Sections 618 STREET LIGHTING and 820 STREET LIGHTING AND ELECTRICAL MATERIALS

The following paragraphs are applicable to work indicated on the contract plans and are part of this contract:

618.01 DESCRIPTION

Remove existing High Pressure Sodium (HPS) roadway lighting fixtures and arms where indicated on plans and present to District Inspector for evaluation. If deemed suitable for reuse

by the district, deliver fixtures and arms to DDOT at a location designated by the Department. Refer to Standard Specifications 618.29 (A) for details.

Furnish and install new Light Emitting Diode (LED) fixtures and arms as indicated on plans.

Furnish and install new fixture grounding system where indicated on plans and inspect existing grounding systems.

Repair existing grounding systems where required and as directed by the department.

Arrange with PEPCO for the disconnection of existing roadway lighting fixtures from the utility company secondary system.

Arrange with PEPCO for the connection of new roadway lighting fixtures to utility company secondary system.

Clean and refinish existing round fluted steel poles where indicated on plans.

618.02 CODES AND STANDARDS

This paragraph is applicable to all work under this contract.

618.03 MATERIALS

This paragraph is applicable to all work under this contract.

618.04 CONTRACT PLANS AND MANUFACTURER'S DRAWINGS

This paragraph is applicable to all work under this contract.

618.22 INSTALL COPPER GROUND WIRE

A. GENERAL.

This subparagraph is applicable to all work under this contract.

B. CONSTRUCTION REQUIREMENTS

The contractor shall install the ground wire in continuous lengths. All connections to ground rods shall be made with approved connectors. Grounding conductors shall be of the size indicated on plans and installed simultaneously with current carrying conductors. The contractor shall ensure that the ground wire is not damaged or kinked during installation. All damaged wire shall be removed and replaced at no additional cost to the district. The grounding system shall be installed, connected and tested before energizing the current carrying conductors.

C. MEASURE AND PAYMENT.

This subparagraph is applicable to all work under this contract.

618.31 CLEAN AND PAINT STREETLIGHT POLES

This paragraph is applicable to all work under this contract.

618.32 INSTALL ARM ON STREETLIGHT POLE

This paragraph is applicable to all work under this contract.

618.35 INSTALL LUMINAIRES

A. GENERAL.

The contractor shall furnish all labor, materials and equipment necessary to remove the existing fixture and arm and install a new Light Emitting Diode (LED) luminaire of the wattage and type as specified in the contract documents.

Materials shall be as per the contract documents, Section 800 and Special Provisions.

Care must be taken during the installation of the luminaire so that the conductors are not damaged. All conductors damaged by the contractor will be replaced at no cost to the district. The new luminaire shall be attached securely to the supporting arm in accordance with the manufacturer's instructions. All luminaires installed must be leveled during the installation, in accordance with the manufacturer's instructions to level the luminaire.

In the case of luminaires installed on wood poles, the contractor shall provide a new arm of the length and rise required to locate the luminaire at the mounting height and overhang as specified on the plans for each specific location.

All conductors that terminate on the luminaire terminal block will be installed to ensure a good connection without damaging the conductors.

The photoelectric control shall be oriented so that the word NORTH is directed towards true north. The contractor shall check to assure that the eye of the control is not facing a foreign light source and shall cover the photoelectric control and check that the light is operating properly.

B. MEASURE AND PAYMENT

This subparagraph is applicable to all work under this contract.

618.37 REMOVAL OF LUMINAIRES AND ARMS

REMOVE ARM FROM STEEL POLE UP TO 8FT IN LENGTH (ITEM 618 669)

A. DESCRIPTION.

The contractor shall remove luminaires and arms where indicated on the plans using a bucket truck, after the disconnection of the luminaire from the utility company secondary system by PEPCO.

B. MEASURE AND PAYMENT

This subparagraph is applicable to all work under this contract.

618.38 INSTALL SCHEDULE 40 PVC U-GUARD

A. GENERAL

The contractor shall furnish all labor, materials and equipment necessary to furnish and install PVC u-guard on a wood pole owned by the District or any other utility company as shown in the contract documents or when the Contractor receives a work order from the District. The size to be installed will be as indicated in the contract documents or as stated on the work order.

When required by the contract documents or the work order, the Contractor shall install a u-guard (starting from grade level) on each pole, in order to protect grounding conductors. The cost of all mounting hardware shall be included as part of this work.

B. MEASURE AND PAYMENT

This subparagraph is applicable to all work under this contract.

618.39 INSTALL GROUND ROD

A. DESCRIPTION

EXISTING WOOD POLES: This subparagraph is applicable to all work under this contract.

B. MEASURE AND PAYMENT

This subparagraph is applicable to all work under this contract.

618.41 PAYMENT TO PEPCO FOR CONNECTION, DISCONNECTION AND INSPECTION OF SERVICE TO STREETLIGHTS

A. GENERAL.

This subparagraph is applicable to all work under this contract.
After the second subparagraph add a third subparagraph as follows:

In general the scope of PEPCO work will include the disconnection of service to existing roadway luminaires mounted on wood and steel poles as indicated in the contract documents and the connection of new luminaires following installation by the Contractor.

B. MEASURE AND PAYMENT

This subparagraph is applicable to all work under this contract.

820 STREET LIGHTING AND ELECTRICAL MATERIALS

This S.P. revises and supplements 820, only the paragraphs and subparagraphs listed below are included in item 820.

820.01 GENERAL

A. Light Emitting Diode (LED) luminaires, arms, ground rods, PVC U-Guard, wire, and other necessary street lighting and electrical materials for complete systems shall meet the requirements herein and as shown on the plans.

B. This subparagraph is applicable to all work under this contract.

820.02 LIGHTING STANDARDS AND ARMS

Arms shall meet the requirements of ASHTO Specifications for the Design and Construction of Structural Supports for Highway Luminaires, shall conform to the District of Columbia Commissioners' order 60-1090 and be steel or aluminum as specified and shown on Traffic Services Administration Department of Transportation Drawings, and installed at locations in accordance with details shown on the plans.

820.03 LUMINAIRES LAMPS AND GLOBES

A. GENERAL

Luminaires shall be suitable for use in a multiple circuit and shall provide for use of a Light Emitting Diode (LED) light source as indicated in the plans. Luminaires shall consist of housing, reflectors, refractors, slip fitters, LEDs, photocell and socket, and constant current LED driver.

B. DESCRIPTION

The materials for luminaires, LEDs and drivers shall be in accordance with the following:

1. Streetlights

FURNISH AND INSTALL 135W LIGHT EMITTING DIODE (LED) LUMINAIRE (ITEM 618 765)

Provide luminaires as indicated and complete with LED light source and power supply unit. Details, shapes, and dimensions are indicative of the general type desired, but are not intended to restrict selection to luminaires of a particular manufacturer. Luminaires of similar designs, light distribution and brightness characteristics, and of equal finish and quality will be acceptable.

LED Light Source and Optical Requirements

1. Luminaire shall be full cutoff or fully shielded as defined by IESNA RP-8.
2. Correlated color temperature (CCT) $\geq 4500^{\circ}$ K.
3. Color rendering index (CRI): ≥ 70 .
4. Light Distribution shall be Type II, III or IV. It will be as specified in the contact document.
5. Lumen Depreciation of LED Light Source - Must comply with IESNA LM-80. LED module shall deliver at least 70% of initial lumens, when installed for a minimum of 50,000 hours.
6. Minimum Light Output shall be functionally one-to-one replaceable to up to 150, 250, and 400 watt (threshold may change in future) equivalent HPS Cobrahead producing the equal illuminance (fc) and uniformity ratio on the alleyway.
7. Minimum Luminaire Efficacy - 70 lm/W
8. LM-79 Test - Provide Independent Testing according to IES LM-79 that provides efficacy, output, color, and photometric distribution of your product. An Integrating Sphere Test will be required to provide color information. A Goniophotometer test by itself is not adequate.
9. Lifetime - Provide written explanation of how L70 Lifetime of Product is determined using the LM-80 and In-situ temperature tests referenced below.
 - a. LM-80 Test - Provide LED Package Manufacturer IES LM-80 Test Report with results showing relative (%) light output over time at 55°C, 85°C and X°C (a third temperature at the manufacturer's choice).
 - b. In-Situ Temperature Test - Provide test report indicating the Temperature of the hottest LED In-Situ in ANSI/UL 1598-04 (hardwired) or ANSI/UL 153-05 (corded) environments. This temperature measurement will be used with LM-80 data to validate lumen maintenance and useful life of product. Note that this temperature measurement should be specially requested by the manufacturer as they are getting their UL testing.
10. Where LEDs are connected in series and a single LED failure results in greater than 5% light loss of the overall luminaire output, a bypass circuit shall be

utilized. This bypass circuit shall allow the remaining LEDs in the series circuit to remain powered.

11. The light must appear to be a single source (regardless of the number of drivers) to the road users.
12. The luminaire for alleyway application shall be equivalent to LSG-LSR1 and LSR2 or approved equal. The luminaire for roadway application shall be equivalent to Philips 135W80LED4K and Philips 270W160LED4K or approved equal.

Hardware Requirements

1. Housing assembly:
 - a. Shall be primarily constructed of metal.
 - b. Finish shall be grey or black in color, polyester powder coated and resists rust.
 - c. Driver must be internally mounted and replaceable.
 - d. Captive screws are needed on any components that require maintenance after installation.
 - e. No parts shall be constructed of polycarbonate unless it is UV stabilized (Lens Discoloration shall be considered a failure under warranty).
 - f. The luminaire must have a self leveling mechanism.
 - g. The luminaire shall be filtered against entry of insects, rain, dust, and other offending foreign matter.
 - h. The luminaire shall be marked, using standard EE-1 NEMA marking, showing the lamp type and wattage. The marking shall be affixed to the underside of the luminaire housing and to the rear of the reflector.
2. Mounting arm connection (for Cobrahead only)
 - a. Luminaire shall mount on 1-1/4-inch to 2-inch arm and shall have not more than 8 inch long nor less than 5 inch horizontal insertion length on the 2 inch bracket arms and shall be adequately equipped with clamping and leveling devices or a similar mechanism to allow proper clamping and positioning of the luminaire on the bracket arms.
 - b. The clamping mechanism shall contain 4 bolts that do not pass through the housing. Clamping with only two bolts is not acceptable. The clamp must be able to accept a 1 1/4 to 2 inch pipe bracket without having to rearrange the clamp.
3. Photoelectric (PE) Cell Receptacle
 - a. Shall have a 3-prong twist locking ANSI C136.10 photocell receptacle (for Cobrahead).
 - b. Photocell adapter must be built into the housing and be directionally adjusted without the use of tools.
4. House Shield - Shall provide option for house side light control
5. Luminaire shall not weigh more than 35 lbs.
6. Dimensions (Approx.) (For Cobrahead) -Luminaire shall not be larger than 30-inch long x 16-inch wide x 6-inch tall.

7. Operating Environment - Luminaire shall be able to operate normally in temperatures from -40°F to 120°F
8. Cooling System - Thermal management shall be passive by design and shall consist of heat sinks with no fans, pumps, or liquids and must be resistant to debris buildup.
9. Luminaires shall be fully assembled and electrically tested prior to shipment from factory.
10. The fixture must not contain any moving parts.
11. The driver must be located inside the housing, but should be easily accessible.
12. For all mast-arm-mounted luminaires, a wildlife shield shall be included on the fixture to prevent wildlife access.
13. Optical system for roadway luminaires, including the driver, shall be sealed and rated for IP65 as defined in IEC 60529. Wiring compartments shall be IP20 compliant, but individual internal electronic components must be rated at a minimum of IP54.
14. The coating shall be capable of surviving ASTM B117 salt fog environment for 500 hours minimum without blistering or peeling.
15. The coating shall demonstrate gloss retention of greater than or equal to 90% for 1000 hours' exposure QUV test per ASTM G53 UVB313, 4 hour UV-B 60°C/4 hour condensation 50 °C.
16. The luminaire shall have been certified compliant with ANSI C136.31 having been subjected to 100,000 cycles of 2G at the resonant frequency of the luminaire applied at the center of gravity of the luminaire on three primary axes without damage to the luminaire. The luminaire shall be fully functional upon completing the test.
17. The luminaire shall be fully functional after testing for thermal shock according to IEC 60068-2-14.
18. The luminaire shall be fully functional after testing for damp heat, steady state, high humidity, and high temperatures according to IEC 60068-2-78.
19. If a lens not integral to the luminaire is used, optical enclosure (lens/window) shall be constructed from clear and UV-resistant acrylic or tempered glass.
20. At least 80% of the luminaire material by weight shall be recyclable at manufacturer's stated end of life.
21. Luminaires shall incorporate modular electrical connections and constructed to allow replacement of all or part of the optics, heat sinks, power supply units, and electrical components using only a simple tool, such as a screwdriver.
22. Luminaires shall have a nameplate bearing the manufacturer's name, 125address, model number, date of manufacture, and serial number securely affixed in a conspicuous place; the nameplate of the distributing agent will not be acceptable.
23. The luminaire fixture weight and effective projected area shall not exceed the poles requirements for wind loading.
24. Roadway and area mast-arm-mounted luminaires shall have an integral tilt adjustment of $\pm 6^\circ$, ANSI C136.3.
25. Driver shall be protected against damage due to either an open circuit or short circuit fault condition on the driver output. The driver shall resume normal operation when the fault is removed.

26. Over-temperature protection shall be provided and cut-off output power if case temperature limit is exceeded.
27. Reduction of hazardous substances (RoHS) compliant.

Power Supply and Driver Requirements

1. Off State Power Consumption - The power draw of the luminaire including PE devices must be zero watts when in the off state.
2. On State Power Consumption - The luminaire must use at least 40% less energy compared to its commercially available High Pressure Sodium counterpart.
3. Power Factor (PF): $\geq 90\%$
4. Operating Voltage - 120-240 volts
5. Operating Temperature - Shall operate between -40°F and 120°F
6. Frequency - Output operating frequency must be ≥ 120 Hz and input operating frequency of 60 Hz.
7. Interference - Shall meet FCC 47 CFR Part 15/18
8. Startup - Must be instant restart
9. The maximum drive current to the LEDs shall not exceed that recommended by the LED manufacturer. Documentation from the LED manufacturer shall be provided showing maximum current allowed and where the current output from the driver is not what is flowing into the LEDs. A schematic with calculations shall be provided to show what driver current does flow to the LEDs.
10. Maximum case temperature and measurement location shall be clearly marked on the driver case.
11. Fluctuations in line voltage up to 15% shall have no visible effect on the luminous output.
12. Operating frequency: $60\text{ Hz} \pm 5\%$.
13. Total current harmonic distortion (THD) for current: $\leq 15\%$.
14. Drivers shall be UL 8750 compliant.

Wiring Requirements

1. All factory electrical connections shall be made using crimp, locking, or latching style connectors. Twist-style wire nuts and tap-style stripless connectors are not acceptable.
2. Local area network (LAN), wireless, radio, modem, power line carrier, and other communication methods other than hard-wired switches for LED light fixture control shall be non-proprietary and compatible with control monitoring system available in the market.

Surge Protection Requirements

1. The luminaire manufacturer shall provide surge protection on each luminaire and certify that it has been tested in accordance with ANSI/IEEE C62.41.2 guidelines. Surge rating 10 kV, 10 kA.

Warranties

LED fixture warranties shall be provided in accordance with Specifications and the following:

1. Luminaire must have a minimum five (5) Year warranty due to any failure. The Warranty shall provide for the repair or replacement of defective electrical parts including but not limited to the light source and power supplies and driver for a minimum of eight (8) years. Shipping shall be included.
2. The LED luminaire warranties shall begin on the date of final acceptance of the installation by the DDOT officer or designated representative.
The contractor shall install luminaires in accordance with the design engineer's and manufacturer's requirements and shall obtain written concurrence from the luminaire manufacturer that the installation is compliant with their requirements. The signed memo, including post-installation field measurements, shall become part of the warranty package and be included in the final deliverables to the DDOT.
3. The contractor shall provide to the DDOT contracting officer written documentation of its ability to satisfy a worst-case, catastrophic warranty claim. The documentation shall clearly disclose the country in which the factory of fixture origin is located and the name of the company or organization that owns the factory (including all parent companies and/or organizations and their respective countries of corporate citizenship).

820.10 GROUND RODS

This subparagraph is applicable to all work under this contract.

820.11 WIRES

This subparagraph is applicable to all work under this contract.

820.12 ELECTRICAL CONDUIT AND U-GUARD

Conduit, fittings and U-Guard where specified in Special Provisions and where shown on the plans shall conform to the following:

(B) NON-METALLIC CONDUIT AND U-GUARD

(1) Heavy wall PVC conduit and u-guard, type II or schedule 40, shall conform to Federal Specification 1094A and UL 651 and bear the UL label.

62. EROSION AND SEDIMENT CONTROL, Item: 628 002

This S.P. supplements 628 of the Standard Specifications.

A. DESCRIPTION

Work under this item includes furnishing all materials for and the application of measures throughout the life of the project to control erosion and to minimize siltation of storm sewer facilities, as directed by the Engineer. Refer to the erosion and sediment control notes and details in the contract plans for information concerning this work. Erosion and sediment control measures shall be coordinated with the construction of the permanent drainage facilities, such as pipes, culverts, etc., which shall be constructed concurrent with the commencement of the grading operation to assure economical, effective and continuous erosion and sediment control.

This item shall also include all erosion and sediment control measures taken during the construction of the protection shield, demolition, bridge and approach roadway construction, improvement under the bridge, and other related construction activities.

Work also includes removal and disposal of all materials required for erosion and sediment control when no longer required.

B. MEASURE AND PAYMENT

The unit of measurement will be the job. No actual measure will be made.

Payment for EROSION AND SEDIMENT CONTROL will be made at the contract lump sum price, which payment will include all labor, materials, disposal of materials, tools, equipment and incidentals necessary to complete the work.

63. SILT FENCE, Item: 628 003

This S.P. supplements and modifies Section 628.

A GENERAL

This work is the construction of silt barrier fences at locations and to lengths as directed by the Engineer.

B MATERIALS

The material for the silt fence shall be as indicated on Standard Drawing No. 628.04 that is included in the Appendix to these specifications.

C. CONSTRUCTION REQUIREMENTS

The construction requirements for the silt fence shall be as indicated on Standard Drawing No. 628.04. If the silt fence is damaged, a replacement section of stakes and geotextile shall be inserted at no additional cost to the district.

When the silt fence is no longer needed, the silt fence shall be removed and the location of the silt fence shall be restored to nearly the original condition.

The silt fence and the material collected by the silt fence shall be disposed of off-site at an approved location.

D. MEASURE

The unit of measure will be the number of linear feet of silt fence installed with the approval of the Engineer.

E. PAYMENT

Payment for SILT FENCE will be made at the contract unit price, which price will include all material, labor, equipment, tools, disposal of materials away from the site, restoration of the area where the silt fence was installed, and incidentals required for completing the work as required herein.

64. ENGINEER'S FIELD FACILITIES, Item: 624 002

This S.P. supplements the requirements of 624.01:

The Contractor shall provide and maintain a suitable field office within two blocks of any of the six project sites.

65. CONCRETE REPAIR

This S.P. modifies and supplements 703.

A. GENERAL

The materials and methods specified below apply to the applicable types of structure repairs as shown on the Contract Drawings and specified elsewhere in these SPECIAL PROVISIONS.

The Contractor shall expect that this work may require man-lift equipment and/or scaffolding for high-level access.

All of this work shall be done at the direction of the Engineer. The District does not guarantee the exact locations and quantities (either more or less) of repairs.

Due to the time interval between the field survey and Notice to Proceed, further deterioration may have occurred which would not be reflected in the quantities for the particular bid item; the Engineer will be the sole judge of the extent and total quantity of repairs that are to be made.

B. MATERIALS

1. **Repair Concrete** - Concrete shall conform to Class C (High early strength with compressive strength not less than 3000 psi after 24 hours) with Low Alkali Portland Cement, but shall contain aggregate no greater than 1/2" nominal size.
2. **Non-Shrink Grout** - A proprietary formulation with a minimum bond strength of 1500 psi per ASTM C 882, compressive strength of 3000 psi after 24 hours per ASTM C 579, non-shrink per ASTM C 827 and satisfy the requirements of ASTM C 1107. This material is to be used for concrete spall repairs.
3. **Non-Shrink Mortar** - Mortar shall be cement base non-shrink type meeting the requirements of ASTM C 109 for 3500 psi, 28-day strength. It shall be non-sag, stiff consistency for vertical surfaces, and capable of adhering to damp concrete surfaces. Mortar is to be used for re-pointing of masonry.
4. **Epoxy resin adhesive (bonding agent)** - Epoxy adhesive shall conform to ASTM C 881, Type IV pr V.
5. **Low Viscosity Epoxy Grout for pressure injection grouting** - high-modulus, moisture insensitive, low-viscosity, for application at not less than 40 degrees F, fast setting, rigid, for grouting both damp and dry cracks. ASTM C 881, Type I, Grade 1, Class B or C. If recommended by the epoxy manufacturer, provide a compatible surface sealer. Pressure injection shall be carried out in strict accordance with manufacturer's instructions.
6. **Surface Sealant** - Epoxy resin used to seal cracks and ports before injection. ASTM C 881, Type I, Grade 3.
7. **Caulking compound** - A one-component, non-sag (gun grade) urethane sealant, color gray, meeting ASTM C 920, Type S, Grade NS.
8. **Non-Shrink Epoxy Grout** - A proprietary formulation, rapid set, flowable epoxy grout (self leveling), for tight clearances meeting applicable AASHTO Specifications for epoxy and cement components, non-shrink per ASTM C 827, compressive strength not less than 3000 psi in 24 hours and satisfy the requirements of ASTM C 1107. This material is to be used for grout pads.
9. **Zinc-Rich Spray Paint** – A commercial grade aerosol paint that may be used as a cold-galvanizing repair material.
10. **Seal Coat** – A clear, water-based acrylic protective coating, such as Sikagard 670W, for concrete that prevents moisture ingress and is water vapor permeable, and can be applied to vertical, overhead and horizontal surfaces.

C. SUBMITTALS

1. Submit certification for all materials.
2. Submit the materials and methods proposed for repair no later than thirty (30) days prior to commencement of work.
3. Submit construction drawings and calculations showing temporary shoring and support systems (if applicable).
4. Shop drawings and construction drawings shall be certified by a Professional Engineer registered in the District of Columbia.
5. As-built drawings shall indicate the type, location and extent of the repairs and the products and methods actually used.

D. CONSTRUCTION METHODS

For concrete repairs, the following is recommended for determining the limits of deterioration:

The extent for removal of deficient concrete shall be as indicated by sounding with a steel hammer. A hollow sound indicates deficiency. Where sounding indicates a deficient area has increased beyond that indicated on Contract Drawings, obtain the Engineer's approval before commencing work. After removing unsound concrete or mortar, clean the affected area free of all laitance and dust using brushes, pressure wash with potable water, and dry with oil-free compressed air. Use bonding agents as specified or as recommended by the manufacturer of the repair material to be used.

E. MEASURE AND PAYMENT

No measurement or payment will be made for this item.

66. PCC ABUTMENT-BACKWALL, Item: 703 006

This S.P. supplements 703 of the Standard Specifications.

A. GENERAL

Work under this item consists of, but is not limited to constructing new concrete backwalls at the six Watts Bridges (Bridge Nos. 129, 132, 196, 199, 204 and 222) required for joint replacement to the limits shown on the contract plans or as directed by the Engineer. If additional concrete repairs are required and approved by the Engineer, the removal and resetting of stone masonry required to provide this work will be paid under item 708 011.

B. DESCRIPTION

Anchor bolts for this work shall be installed according to Section 703.20(B) of the Standard Specifications. The Contractor is warned that reinforcing steel or utilities may be encountered while drilling anchor holes or dowels in concrete. Diamond drilling or other special procedures necessary to construct anchorages shall be included as part of this work. The Contractor shall assume responsibility for all damage to utilities or the structure.

Concrete removal and use of existing reinforcing required for new work shall be performed in accordance with 716.04(D) of the Standard Specifications.

C. MEASURE AND PAYMENT

The unit of measurement for PCC Abutment Backwall will be the cubic yard, complete in place. The number of cubic yards will be the actual number taken in the field. PAYMENT will be made at the contract unit price per cubic yard and will include all materials, tools, equipment, labor and incidentals necessary to complete the work as shown on the contract plans and as directed by the Engineer. The cost of drilling and grouting new anchor bolts and reinforcing steel is included in this item. The material cost for anchor bolts will be paid under item 706 004 – Structural Steel.

67. STRUCTURAL STEEL, Item: 706 007

Refer to 706 of the Standard Specifications.

68. STEEL FABRICATOR, Item: 706 009

The Contractor shall submit the name and location of the steel fabricator at the time of signing the contract.

69. STONE MASONRY, CLASS A, Item: 708 002 , RESET STONE MASONRY, Item: 708 011 REPOINT STONE MASONRY, Item: 708 013

This S.P. supplements 708 of the Standard Specifications.

A. GENERAL

Work includes raking and repointing of existing stone masonry joints on the parapets and retaining walls at the six Watts Branch Bridges (Bridge Nos. 129, 132, 196, 199, 204 and 222). Work also includes removal and resetting stone masonry and sealing of open cracks as shown on the contract plans and/or as directed by the Engineer in accordance with Standard Specifications Section 708 and this Special Provision. New stone panels to be replaced on the south ends of Bridge 199 and be installed in accordance with Standard Specifications Section 708 and this Special Provision.

B. MATERIALS

New stone shall be similar in size, color, texture, pattern and appearance, etc., to the stone facing on existing construction. The selected stone shall be approved by the Engineer before placement.

Caulking compound used to seal open cracks shall conform to Section 807.02(B) of the Standard Specifications. Color used shall match the existing stone mortar and shall be approved by the Engineer prior to performing any work.

C. BEDS AND JOINTS

Shall match the existing average width of beds and joints or otherwise shall be 3/4 inch. The finished beds and joints shall be raked out squarely to a depth of 1/2 inch, except across the top of pedestal, these joints shall be struck flush.

D. REPOINT EXISTING STONE MASONRY

The existing stone masonry walls shall be raked and repointed following the methods specified in 708.10(D) of the Standard Specifications.

E. MEASURE AND PAYMENT

Payment for RESET STONE MASONRY will be made at the contract unit price per cubic feet which payment will include setting of stone masonry, anchors, cramps, dowels and other anchoring devices and all labor, tools, equipment materials and incidentals required to complete the specified work.

Payment for REPOINT STONE MASONRY and SEALING CRACKS will be made at the contract unit price per linear foot which payment will include all material, labor, tools, equipment and incidentals required to complete the specified work.

Payment for STONE MASONRY, CLASS A will be made at the contract unit price per cubic foot which payment will include all labor, materials, equipment and incidentals required to install in place.

70. CLEAN EXISTING STONE MASONRY, Item: 708 014

A. GENERAL

Work consists of the cleaning of stone facing on the bridge parapets and walls on the six Watts Branch Bridges (Bridge Nos. 129, 132, 196, 199, 204 and 204).

B. DESCRIPTION

The Contractor is responsible for the method chosen, with respect to both achieving the required results and adhering to environmental regulations in the governing jurisdiction.

The sequence, objective and suggested method of cleaning shall be as follows:

1. Remove vegetative materials growing in wall cracks and joints. Remove water deposits – calcium/minerals by water-jet blast or water-wash with non-ionic soap or detergents.
2. Remove atmospheric soiling, rust stains and oily deposits using micro-blasting with fine glass powder or chemical methods diluted to the extent that will still be effective. The Contractor's chosen method shall not damage the color or texture of the existing stone.
3. Spot cleaning using abrasive methods shall only be used in localized areas of severe staining.

C. MEASURE AND PAYMENT

The unit of measure will be the job. CLEANING EXISTING STONE MASONRY will be paid for at the contract lump sum price. Payment will include all preparation and cleaning operations, and furnishing all labor, materials, tools, equipment and incidentals necessary to complete the work as specified herein.

71. CLEAN AND RESEAL EXPANSION JOINTS FOR ABUTMENTS, WALLS AND CURBS, Item: 708 015

A. GENERAL

Work consists of removing and cleaning existing joint material and furnishing and installing new joint filler material, for the six Watts Branch Bridges (Bridge Nos. 129, 132, 196, 199, 202 and 222) at locations shown on the contract plans. The existing joint material shall be removed and the joint shall be blast cleaned with potable water to remove dirt and debris from the joint cavity. Work shall also include resealing longitudinal joints at curbs at Bridge No. 199.

B. MATERIALS

The preformed joint filler to be used for the vertical expansion joints in the walls shall conform to the requirements of 807.01 of the Standard Specifications. The color shall be approved by the Engineer.

The material used for the longitudinal joints at the curbs shall be a ½ inch, One-Component moisture cured Polyurethane Sealant. The Joints shall be installed per manufacturer's recommendations.

Material shall conform to the following specifications:

1. Tensile strength shall be a minimum of 240 psi and a tensile elongation of 800%.
2. Durometer Hardness, Shore A 38.
3. Modulus @ 100% elongation shall be a minimum of 95 psi.
4. Peel strength shall be 35 pli.
5. Dynamic joint movement of (+/-) 25%.
6. Application temperature 40deg. F to 110 deg F.
7. Service temperature of -40deg. F to 200 deg F.
8. Volatile Organic Content 3.37% by weight.

C. MEASURE AND PAYMENT

The unit of measure will be the linear foot. Payment for CLEAN AND RESEAL EXPANSION JOINTS will be made at the contract unit price per linear foot, complete in place, which payment will include removing existing filler material and cleaning existing joint, furnishing and placing new joint filler material and all labor, tools, materials, equipment and incidentals needed to complete the specified work.

72. PEDESTRIAN RAILING, Item: 709 003

This S.P. supplements 709 of the Standard Specifications.

A. DESCRIPTION

Work consists of installing a pedestrian railing in lengths detailed on the contract drawings for the six Watts Branch Bridges (Bridge Nos. 129, 132, 196, 199, 204 and 222). Also included under this work is the grounding of the pedestrian railing as shown in the contract plans.

B. MEASURE AND PAYMENT

The unit of measure for Pedestrian Railing will be the linear foot. Payment will be made at the contract unit price per linear foot, for which payment will include all material, labor, tools, equipment and incidentals necessary to complete the work including the grounding of the railing.

73. REMOVE BRIDGE RAILING, Item: 709 020

This S.P. supplements 709 of the Standard Specifications.

A. DESCRIPTION

Work consists of removing sections of both traffic and pedestrian railing on Bridge 196, 199 and 222 as detailed on the contract drawings.

B. MEASURE AND PAYMENT

The unit of measure for Remove Bridge Railing will be the linear foot of railing removed with measurement made along the railing from out to out of end posts or end details excluding any opening exceeding 6 inches. Payment will be made at the contract unit price per linear foot, which payment will include removal, dismantling, stockpiling, disposal of unusable elements, backfill and compaction of post holes, furnishing of all additional required materials, anchoring, shop drawings, galvanizing, field drilling and all labor, tools, equipment and incidentals necessary to complete the work

74. LATEX-MODIFIED CONCRETE OVERLAY, Item: 714 004

This S.P. supplements 714.03, 714.05 and 715.

A. GENERAL

Delete the second sentence of 714.03(A).

This work is the placement of new latex-modified overlay on the existing concrete deck.

Also included shall be the removal and disposal of all existing overlay materials including bituminous overlays, membranes, coatings, and traffic markings in a manner such that the underlying sound concrete can be prepared to receive the necessary treatment, scarifying the top ¼” of the concrete bridge deck surface by micro milling and abrasive shot blasting of the finished milled concrete surface to achieve a surface ready for visual inspection prior to deck repair operations. Also included is work required to locate areas of deck deterioration and saw cutting around the perimeter of the deteriorated areas.

For the purpose of this S.P., concrete deck refers to the concrete deck of the bridge.

The Latex-Modified Concrete (LMC) overlay shall be placed by an applicator that is approved by the Latex Modifier manufacturer.

B. MATERIALS

As specified in the Section 714.03(B) with the following exceptions

The Contractor shall prepare and submit an LMC mix design using the indicated mix components which may be modified with the approval of the Engineer. The proposed design mix shall be prepared and tested prior to the initial approval by the Engineer.

A trial batch of a minimum of 3 cubic yards of the proposed LMC mix design shall be prepared and tested prior to the start of the LMC overlay operations and prior to the final approval of the mix by the Engineer. The trial batch shall be placed using the same construction methods to be used on the bridge at a location to be proposed by the Contractor and approved by the Engineer.

A representative of the LMC supplier shall attend the placement of the trial batch and the entire LMC placement on the bridge deck.

C. CONSTRUCTION REQUIREMENTS

The Contractor shall propose a schedule for the entire deck overlay construction procedure from the removal of the existing asphalt to curing of the LMC and opening to traffic. This schedule and production detail shall be submitted to the Engineer for review and approval a minimum of twenty one (21) days before this work begins.

The production schedule that is submitted shall include a proposal for the traffic pattern requirements during the placement and curing of the LMC overlay and allowing for additional curing time if the ambient temperature is expected to fall below 55 °F during the curing of the LMC. The additional curing time shall be accounted for by ending the placement at a time adequate to allow the required longer curing time of the LMC. No additional closure time beyond what is allowed in the S.P. for WORK HOURS shall be allowed to account for the required longer curing time.

This work shall be performed with the continual flow of traffic as the utmost concern. If traffic is allowed on the work zone between the time of existing asphalt removal to the time of placement of the LMC, special procedures are required to allow traffic to ride on the existing concrete surface after the removal of the existing asphalt and transition to the final overlay surface and the existing asphalt surface.

The Contractor shall submit detail drawings, proposed procedure, and equipment information and catalog cuts to the Engineer for approval. The existing asphalt wearing surface shall be saw-cut at the existing expansion joint armoring.

Prior to the start of the scarifying operation, the asphalt wearing surface shall be visually inspected for evidence of surface cracks, multi-crack locations (spider webs), and holes. These areas shall be outlined with a light-colored spray paint. A map of these areas shall be prepared by the Contractor to within one-half foot of the exact location.

Three inch deep saw cuts shall outline these deck deteriorations. After the asphalt has been removed, a minimum of one-quarter inch of the existing deck concrete surface shall be scarified. If there are isolated areas of contamination below the top of the scarified surface, additional concrete shall be removed without damaging the adjacent concrete surface. The scarified surface shall then be abrasive shot blasted.

After the deck has been scarified and shot blast operations are completed, the Contractor will notify the Engineer that the deck is ready for inspection. The Contractor will give the Engineer full access to the areas of the prepared deck. The entire concrete deck shall be tested by the contractor using non-destructive chain drag and other methods to locate areas of deteriorated and delaminated concrete prior to all concrete removal. Chain drag testing shall be performed in the

presence of the engineer. The Engineer will perform visual inspection and material testing of the bridge deck in order to identify concrete repair types and locations.

Areas marked by the saw cut operations and areas determined by the chain drag operation to possibly have deteriorated and/or delaminated concrete shall be sounded by the Contractor to search for deteriorated concrete in the presence of the Engineer. Sounding shall be performed with a hammer with a minimum weight of one pound. Boundaries of the areas of concrete removal marked by the Engineer will be saw cut ½” deep by the Contractor. The Contractor will remove all deteriorated concrete in the marked areas using lightweight pneumatic jackhammer and inform the Engineer when those removal areas are ready for inspection. This process will continue until only sound concrete remains or full depth removal is directed by the Engineer. A map of all deck areas requiring repairs shall be prepared by the Contractor to within one-half foot of the exact location and submitted to the Engineer.

The waste from the scarifying operation shall be collected and removed from the site. The entire exposed concrete deck surface shall be blast cleaned after removal of the waste from the scarifying and removal of deteriorated concrete. After the blast cleaning is completed, the debris shall be vacuumed, collected and removed from the site.

The appropriate method of repair shall be applied to the area of deck deterioration as directed by the Engineer. It should also be noted that the bridge on 55th Street, N.E. is a voided slab superstructure bridge with pre-stressing elements. These elements should be located and avoided prior to any concrete repair work.

The three types of concrete deck repair are described and will be paid for under the Items: CONCRETE DECK REPAIR - PARTIAL DEPTH WITH EXPOSED REINFORCEMENT, CONCRETE DECK REPAIR - PARTIAL DEPTH WITHOUT EXPOSED REINFORCEMENT and CONCRETE DECK REPAIR - FULL DEPTH.

On 55th Street, N.E., the longitudinal keyway joints between voided slabs will need to be resealed prior to placing the overlay. The description of this work will be under item: RESEAL KEYWAY JOINTS.

For partial depth deck repairs directed by the Engineer where the reinforcing bars are not exposed, the cavity shall be prepared the same as the scarified deck. These repairs shall be under the item for “CONCRETE DECK REPAIR - PARTIAL DEPTH WITHOUT EXPOSED REINFORCEMENT”

For partial depth deck repairs directed by the Engineer where reinforcing bars are exposed during the preparation and cleaning, the repair of these deeper cavities shall be under the item for ”CONCRETE DECK REPAIR - PARTIAL DEPTH WITH EXPOSED REINFORCEMENT”

Concrete deck repairs directed by the Engineer where the full depth of the deck is removed and replaced, the repairs shall be under the item for “CONCRETE DECK REPAIR - FULL DEPTH”

Asphalt wedges are permitted to allow traffic to drive from one riding surface level to another riding surface level. The slope of the asphalt wedges shall be as directed by the Engineer in the field. Multiple work zones in the same traffic or travel lane shall not be permitted. The cost of supplying, installing, removing and disposing of asphalt wedges needed after placement of the LMC, or sections of thereof, shall be incidental to the work described herein.

Due to the height of the expansion joints above the top of the exposed existing concrete surface, the work zone shall not be permitted to exist on both sides of an expansion joint such that only one level transition may exist at an expansion joint location at any given time.

A system of transition between the two surface levels shall be required for the full length of the construction work zone where different riding surface levels exist.

These transverse and longitudinal transitions shall conform to the requirements of the DDOT's standard traffic plans and as approved by the Engineer.

Traffic shall not be permitted on the scarified existing concrete surface after the final cleaning of the existing concrete surface prior to LMC overlay placement.

The ends of each length of LMC overlay placement shall be saw cut prior to the next adjoining length of LMC overlay placement. A bond breaker shall be placed under the end portion of the LMC overlay that will be removed.

A form shall be placed along the longitudinal edge of the LMC overlay between adjacent placements of the LMC overlay. If necessary the longitudinal overlay formwork may remain in place to keep the roadway surface level and be removed at the time the adjacent LMC placement.

The joints between adjacent LMC longitudinal placements may be near the mid-width of the permanent lane stripping traffic lanes or as proposed by the Contractor and approved by the Engineer. The proposed LMC placement locations shall be detailed with the proposed schedule and production details.

During the construction time for the preparation, placement, and curing of the LMC overlay for each construction zone, the Contractor shall adhere to the requirements of the S.P. for WORK HOURS. Temporary lane marking shall be used to channelize the operating traffic lanes through the open lanes in the LMC construction area.

The surface of the LMC shall be tested for flatness using a 14 ft long straightedge while the overlay is still workable. The Contractor shall be required to provide the straight edge at no cost to the District.

Wet curing of the LMC overlay is mandatory for 24 hours or until a minimum cylinder compressive strength of 3000 psi is attained, whichever is the longest. At a minimum cylinder compressive strength of 3000 psi or after 24 hours of wet curing, whichever is the longest, the curing can cease and the lane may be opened to traffic.

Three LMC cylinders shall be broken twelve hours after the completion of the delivery of the last delivery vehicle. Three more cylinders shall be broken every six hours thereafter until a minimum cylinder compressive strength of 3000 psi is attained for the cylinders taken from the last delivery truck for each section of each lane of LMC overlay that is placed.

The Contractor shall keep a log of the time of arrival of each concrete mixer truck at the project site, the start of LMC placement from each mixer truck, the completion of the delivery of each concrete mixer truck, and the length of the concrete overlay placement from each truck. The Contractor shall add a plastic sheeting 6 mils in thickness. The plastic sheeting shall be placed on the bridge deck for the LMC mobile mixer to back up and protect the surface from foreign materials.

D. MEASURE

The unit of measurement for LATEX-MODIFIED CONCRETE OVERLAY will be the square yard, as measured on the surface.

E. PAYMENT

Payment for this work will be made at the Contract unit price for the items above, which price will include furnishing all materials, labor, equipment, tools, disposal of materials away from the site, and, incidentals to accomplish the work specified and shown.

Cost of preparing and testing of all LMC samples, producing, placing and, if required by the Engineer, removing and disposing of the LMC trial batch, and, supplying, installing, removing and disposing of asphalt wedges, LMC areas to be saw-cut at the end of each placement shall be considered incidental to the LATEX-MODIFIED CONCRETE OVERLAY.

Extra LMC needed to fill the cavities left after removing unsound deck concrete will be placed and paid for under the S.P. for CONCRETE DECK REPAIR - PARTIAL DEPTH WITHOUT EXPOSED REINFORCEMENT

The removal of the existing asphalt overlay and disposing of the removed overlay, lane markings and underlying membrane, chain drag and sounding the deck, scarification of the existing concrete surface, disposing of the debris from the scarification away from the site, blast cleaning of the entire deck area after scarifying the deck and after the removal of the deteriorated concrete, cleaning the deck after blast cleaning, saw cutting around the deck areas requiring repairs, and, supplying, installing, removing and disposing of asphalt wedges between existing wearing surface removal and the placement of the new LMC shall be incidental to the placement of the LMC overlay.

75. PCC STRUCTURE FOR JOINT REPAIRS, Item: 715 003

A. GENERAL

Work under this item consists of reconstructing the concrete portions of the bridge deck slab after replacement of the existing expansion joints as shown in the contract plans. Work includes all labor, materials, equipment and incidentals necessary to complete the work.

B. MATERIALS

PCC Concrete shall be Class B with a 28 day compressive strength of 4500 psi. Reinforcing steel shall be Grade 60 epoxy coated.

C. DESCRIPTION

Existing reinforcing steel shall be left in place, cleaned and prepared or replaced per 715.04(D) of the Standard Specifications. Any drilling and grouting to replace unsuitable reinforcing steel is incidental to this item. Demolition of joints is paid under item for Demolition 205 008.

D. MEASURE AND PAYMENT

The unit of measurement for PCC Structure for Joint Repairs will be the cubic yard, complete in place. PAYMENT will be made at the contract unit price per cubic yard and will include all materials, tools, equipment, labor and incidentals necessary to complete the work as shown on the contract plans and as directed by the Engineer.

76. CONCRETE DECK REPAIR - PARTIAL DEPTH WITHOUT EXPOSED REINFORCEMENT, Item: 715 011

This S.P. supplements 715

A. GENERAL

The work covered by this item includes concrete deck repairs and patching of shallow spalls discovered after the asphalt wearing surface has been removed. This item covers the removal of deteriorated concrete from areas of the deck where the depth of the deteriorated concrete is shallower than the concrete cover over the existing deck reinforcement. It also covers the cleaning of such areas, the disposal of the removed concrete away from the site and the LMC required to replace the removed concrete.

B. MATERIALS

As specified in the LMC For Concrete Overlay, as repair concrete.

C. METHODS

Submit detail drawings and the procedure specified in the S.P. for CONCRETE REPAIR and on the Contract Drawings. Application temperature shall not be less than 50 deg. F or as recommended by the Latex Modifier manufacturer.

The deteriorated concrete at repair locations that are determined during the scarifying operations shall be removed to sound concrete using small jack hammers and the deteriorated concrete shall be disposed of properly. The repair areas shall be cleaned using oil-free compressed air. These areas shall be filled with LMC overlay concrete during the LMC placement operation.

The Engineer shall be asked to verify the area of deck slab repairs before the start of the removal of the deteriorated concrete. Only areas verified by the engineer shall be measured for payment.

D. MEASURE

The unit of measurement for CONCRETE DECK REPAIR - PARTIAL DEPTH WITHOUT EXPOSED REINFORCEMENT to be done at the direction of the Engineer will be the square foot, as measured on the surface of the exposed scarified concrete deck.

E. PAYMENT

Payment for this work will be made at the Contract unit price for the items above, which price will include furnishing all materials, labor, equipment, tools, disposal of materials away from the site, and, incidentals to accomplish the work specified and shown.

77. CONCRETE DECK REPAIR - PARTIAL DEPTH WITH EXPOSED REINFORCEMENT, Item: 715 013

This S.P. supplements 715.

A. GENERAL

The work covered by this item includes concrete deck repairs and patching of deep spalls discovered after the asphalt wearing surface has been removed. This item covers the removal of deteriorated concrete from areas of the deck where the depth of the deteriorated concrete is such that the existing deck reinforcement is exposed. It also covers the cleaning of such areas, the disposal of the removed concrete away from the site and the repair concrete used to patch these areas and the surface preparation of the repair concrete.

B. MATERIALS

Repair Concrete as specified in the S.P. for CONCRETE REPAIR – and approved bonding adhesive.

C. METHODS

The Contractor shall submit detail drawings and the procedure specified in the S.P. for CONCRETE REPAIR and on the Contract Drawings. Deteriorated concrete shall be removed to sound concrete and the removed concrete shall be disposed of away from the site. All exposed reinforcement shall be blast-cleaned to remove all rust and scale. The repair areas shall be cleaned using oil-free compressed air. Paint existing reinforcement with a zinc-rich spray coating per the manufacturer's recommendations. Apply bonding agent and repair concrete. Application temperature shall not be less than 50 deg.F or as recommended by the bonding agent manufacturer.

The repair locations that are prepared during the scarifying operations shall be filled with the Repair Concrete to the level of the scarified existing concrete deck. The surface of the repair concrete shall be finished to provide a rough surface for the concrete overlay placement. Repair Concrete shall be wet-cured for 12 hours or until the repaired areas reach a compressive strength of 2500 psi, whichever is longer. If it is necessary to allow traffic on the repaired areas before the Repair Concrete reaches a compressive strength of 2500 psi, an approved temporary steel deck plate shall be placed over the repaired areas. The temporary steel deck plate shall be anchored on the approaching traffic side of the temporary plate. The approaching traffic side of the temporary steel deck plate shall be tapered from a minimum one quarter inch thickness to the full thickness at a slope of one inch rise per foot. After the removal of the temporary steel deck plate, patch the anchor holes with approved non-shrink grout.

Do not use this repair procedure unless reinforcing bars are exposed during the preparation and cleaning work.

D. MEASURE

The unit of measurement for CONCRETE DECK REPAIR - PARTIAL DEPTH WITH EXPOSED REINFORCEMENT to be done at the direction of the Engineer will be the square foot, as measured on the surface of the exposed existing concrete deck.

E. PAYMENT

Payment for this work will be made at the Contract unit price for the items above, which price will include furnishing all materials, labor, equipment, tools, disposal of materials away from the site, and, incidentals to accomplish the work specified and shown. Cost associated with the use of temporary steel deck plates shall be considered incidental to this item.

78. CONCRETE DECK REPAIR – FULL DEPTH, Item: 715 015

This S.P. supplements 715

A. GENERAL

This work is the removal, forming, placement of new reinforcement bars and placement and curing of full depth repairs of the concrete bridge deck in areas as determined and approved by the Engineer, the disposal of the removed concrete away from the site and the surface preparation of the repair concrete.

B. MATERIALS

Repair Concrete as specified in the S.P. for CONCRETE REPAIR – and approved bonding adhesive.

Reinforcing bars shall be in accordance with Section 704.02.

Splicing of new and existing reinforcing steel shall be in accordance with Section 704.07 and shall also be approved by the Engineer.

C. METHODS

The Contractor shall submit detail drawings and the procedure specified in the S.P. for CONCRETE REPAIR and on the Contract Drawings. Deteriorated concrete shall be removed and the removed concrete shall be disposed of away from the site. All exposed reinforcement shall be blast-cleaned to remove all rust and scale. The interface between the repair areas and existing concrete shall be cleaned using oil-free compressed air. Paint existing reinforcement with a zinc-rich spray coating per the manufacturer's recommendations. Install new reinforcing bars as required by the Engineer. Apply bonding agent and repair concrete. Application temperature shall not be less than 50 deg. F or as recommended by the bonding agent manufacturer.

The repair locations shall be filled with the Repair Concrete to the level of the scarified existing concrete deck. The surface of the repair concrete shall be finished to provide a rough surface for the LMC overlay placement. Repair Concrete shall be wet-cured for 12 hours or until the repaired areas reach a compressive strength of 3000 psi, whichever is longer. If it is necessary to allow traffic on the repaired areas before the Repair Concrete reaches a compressive strength of 3000 psi, an approved temporary steel deck plate shall be placed over the repaired areas. The temporary steel deck plate shall be anchored on the approaching traffic side of the temporary plate. The approaching traffic side of the temporary steel deck plate shall be tapered from a minimum one quarter inch thickness to the full thickness at a slope of one inch rise per foot. After the removal of the temporary steel deck plate, patch the anchor holes with approved non-shrink grout.

D. MEASURE

The unit of measurement for CONCRETE DECK REPAIR – FULL DEPTH to be done at the direction of the Engineer will be the square foot, as measured on the surface of the exposed existing concrete deck.

E. PAYMENT

Payment for this work will be made at the Contract unit price for the items above, which price will include furnishing all materials, labor, equipment, tools, disposal of materials away from the site, and, incidentals to accomplish the work specified and shown. Cost associated with the use of temporary steel deck plates shall be considered incidental to this item.

79. RESEAL KEYWAY JOINTS, Item: 715 017

A. GENERAL

This work is on 55th street N.E. and includes resealing with grout the keyway joints between voided slabs.

B. MATERIALS

This section supplements Section 806.05 (E) of the specifications.

The grading of sand for use in the grout when the width or depth of the void to be filled is less than 0.75 in. shall be modified so that all material passes the No. 8 sieve.

Type 1A, air-entraining, Portland cement shall be used when air entrainment is required for the concrete against which the grout is to be placed.

Unless otherwise specified in the contract documents or ordered by the Engineer, the proportion of cement to sand for the grout shall be one to one. Proportioning shall be by loose volume.

A non-shrink admixture or expansive hydraulic cement conforming to ASTM C845 of a type approved by the Engineer shall be used.

Only sufficient water shall be used to permit placing and packing.

Mixing shall be done by either hand methods or with rotating paddle-type mixing machines and shall be continued until all ingredients are thoroughly mixed. Once mixed, grout shall not be retempered by the addition of water and shall be placed within 1 h.

C. METHODS

Concrete areas to be in contact with the grout shall be scarified to provide a rough surface to allow for adherence to the existing keyway grout. The concrete surfaces shall be flushed with water and allowed to dry to a surface dry condition immediately prior to placing the grout.

The grout shall completely fill and shall be tightly packed into keyway opening between the slab segments. After placing, the grout shall be wet cured until the grout has achieved a compressive strength of 3000psi.

D. MEASURE AND PAYMENT

There is no separate measurement and payment for this item. The cost to reseal keyway joints shall be included in the cost of LATEX-MODIFIED CONCRETE OVERLAY.

80. REPAIR-REPLACE PCC SUBSTRUCTURE –TYPE 1 REPAIR, Item: 716 003
REPAIR-REPLACE PCC SUBSTRUCTURE –TYPE 2 REPAIR, Item: 716 005
REPAIR-REPLACE PCC SUBSTRUCTURE –TYPE 3 REPAIR, Item: 716 007

This S.P. supplements 716 of the Standard Specifications.

A. GENERAL

Work under this item consists of but is not limited to the repair of abutment backwalls and stemwalls of the six Watts Branch bridges to the limits shown on the contract plans or as directed by the Engineer.

B. DESCRIPTION

Due to the time interval between the field survey and notice to proceed, further deterioration may have occurred which would not be reflected in the quantities for the particular bid item; the Engineer will be the sole judge of the extent and total quantity of the repairs that are to be made. The limits of deterioration and concrete removal will be in accordance with 716.04 of the Standard Specifications. Repairs will be Repair Type 1, Type 2 or Type 3 as specified in 716 of the Standard Specifications and as shown on the contract plans.

C. MEASURE AND PAYMENT

The unit of measurement for Repair-Replace PCC Substructure Repair Type 1 and Type 2 will be the square foot, complete in place. PAYMENT will be made at the contract unit price per square foot and will include all materials, tools, equipment, labor and incidentals necessary to complete the work as shown on the contract plans and as directed by the Engineer.

The unit of measurement for Repair-Replace PCC Substructure Repair Type 3 will be the linear foot of crack repaired. PAYMENT will be made at the contract unit price per linear foot and will include all materials, tools, equipment, labor and incidentals necessary to complete the work as shown on the contract plans and as directed by the Engineer.

81. PRESSURE CLEAN EXPANSION JOINTS, Item: 717 007

This S.P. supplements 717.

A. GENERAL

This work is the pressure cleaning of bridge expansion joints at the 48th Place bridge's south and north abutments. Cleaning of other expansion joints shall be incidental to the repair work of respective joints.

B. MATERIALS

Section 822.01.

C. MEASURE

The unit of measure will be the number of linear feet of bridge expansion joint pressure cleaned.

D. PAYMENT

Payment for PRESSURE CLEAN EXPANSION JOINTS will be made at the contract unit price, which price will include all materials, labor, equipment, tools, disposal of materials away from the site, and, incidentals required for completing the work as required herein.

APPENDICES

Rehabilitation/Repair of Six (6) Bridges Over Watts
Branch (Bridge No's. 0129 (44TH Street NE), 0132
(58TH Street NE), 0196 (55TH Street NE), 0199
(48TH Place NE), 0204 (Division Avenue NE) and
0222 (Gault Place NE))