

IFB No. #1103283
MCDHCA Project No. #0F7701G
Montclair Manor Community
Lighting and Site Improvements

IFB No. 1103283



MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF HOUSING & COMMUNITY AFFAIRS

INVITATION FOR BIDS #1103283

MCDHCA PROJECT NO. #0F7701G

**MONTCLAIR MANOR
COMMUNITY LIGHTING AND
SITE IMPROVEMENTS**

Issued: May 30, 2019

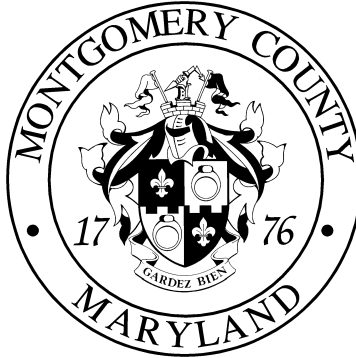
Pre-Bid Meeting: June 13, 2019 at 10:30 AM

Pre-Bid Location: 1401 Rockville Pike, 4th fl, Rockville, MD 20850

Bid Opening: July 11, 2019 at 2:00 PM

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MCDHCA PROJECT NO. #0F7701G

**MONTCLAIR MANOR
COMMUNITY LIGHTING AND
SITE IMPROVEMENTS**

**THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE
HIGHWAY ADMINISTRATION'S
STANDARD SPECIFICATIONS FOR CONSTRUCTION AND
MATERIALS DATED *JULY 2018*
AND REVISIONS THEREOF OR ADDITIONS THERETO
GOVERNS THIS CONTRACT DEVELOPMENT**

**MINORITY BUSINESS ENTERPRISES ARE
ENCOURAGED TO RESPOND TO THIS
SOLICITATION NOTICE**

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TABLE OF CONTENTS

	<u>Page Number</u>
INVITATION FOR BIDS FORM	Front Cover
TITLE SHEET	2
TABLE OF CONTENTS.....	4
BIDDERS INFORMATION	10
BID REQUIREMENTS.....	12
MANDATORY SUBMISSIONS	14
OPTIONAL SUBMISSIONS	16
NOTICE TO BIDDERS – MONTGOMERY COUNTY PROCUREMENT REGULATIONS / BID PROTESTS	17
NOTICE TO BIDDERS – NO DAMAGES FOR DELAYS / EXTENSION OF TIME....	18
NOTICE TO BIDDERS – COMMUNICATIONS AND INTERPRETATIONS PRIOR TO BID OPENING	19
NOTICE TO BIDDERS – REVISIONS TO CONTRACT PLAN SHEETS	20
NOTICE TO BIDDERS –PEDESTRIAN SAFETY	21
NOTICE TO BIDDERS – TREE PRESERVATION	22
NOTICE TO BIDDERS – MATERIAL SAMPLES / AWARD CONTINGENT ON FUNDING	23
NOTICE TO BIDDERS – PERMIT STREAM RESTRICTIONS / TRAFFIC BARRIER / MCDHCA PRE-CONSTRUCTION MEETING	24
NOTICE TO BIDDERS – PROCEDURE FOR REQUESTING PAYMENT	25
MCDHCA INFORMATION FOR BIDDERS.....	27
MANDATORY INSURANCE REQUIREMENTS.....	32

TABLE OF CONTENTS

	<u>Page Number</u>
MINORITY BUSINESS PROGRAM AND OFFEROR'S REPRESENTATION	34
MINORITY – OWNED BUSINESS ADDENDUM TO GENERAL CONDITIONS OF CONTRACT BETWEEN COUNTY AND CONTRACTOR	36
MINORITY, FEMALE, DISABLED PERSONS SUBCONTRACTOR PERFORMANCE PLAN.....	37
DELEGATION OF CONTRACT ADMINISTRATION.....	41
CONTRACT PROVISIONS	42
OCCUPYING WETLANDS	44
NOTICE TO ALL HOLDERS OF THIS CONTRACT DOCUMENT – NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 350 IMPLEMENTATION SCHEDULE FOR DEVICES USED IN THE MAINTENANCE OF TRAFFIC	45
TRAFFIC CONTROL PLAN CERTIFICATION.....	47
NOTICE TO ALL HOLDERS OF THIS CONTRACT DOCUMENT – HIGH VISIBILITY SAFETY APPAREL POLICY	48
FEDERAL LABOR STANDARD ATTACHMENTS for CDBG/ESG	50
FEDERAL WAGE RATES	63
SPECIAL CONTRACT PROVISIONS – PROJECT DESCRIPTION	85
SPECIAL CONTRACT PROVISIONS – SPECIFICATIONS	86

TABLE OF CONTENTS

	<u>Page Number</u>
SPECIAL PROVISIONS – RIGHT-OF-WAY STATUS	
– APPROVAL OF MATERIALS	87
– REQUIRED PERMITS	88
GENERAL PROVISIONS	90
SP-GP-SECTION 1 – DEFINITIONS AND TERMS	
MCDHCA Modification	91
SP-GP-SECTION 2 – BIDDING REQUIREMENTS AND CONDITIONS	
MCDHCA Modification	98
SP-GP-SECTION 3 – AWARD AND EXECUTION OF CONTRACT	
MCDHCA Modification	101
SP-GP-SECTION 4 – SCOPE OF WORK	
MCDHCA Modification	102
SP-GP-SECTION 5 – CONTROL OF WORK	
MCDHCA Modification	103
SP-GP-SECTION 7 – LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC	
MCDHCA Modifications.....	104
SP -GP-SECTION 8 – PROSECUTION AND PROGRESS	
MCDHCA Modification	112
SP -GP-SECTION 9 – PAYMENT	
MCDHCA Modification	114
TERMS AND CONDITIONS	116
SP-TC SECTION 1 – REFERENCES AND DEFINITIONS;	
MCDHCA Modifications.....	117

TABLE OF CONTENTS

	<u>Page Number</u>
SP-TC SECTION 2 – BIDDING REQUIREMENTS AND CONDITIONS; MSHA & MCDHCA Modification	119
SP-TC SECTION 3 – SCOPE OF WORK; MCDHCA Modification	120
SP-TC SECTION 4 – CONTROL OF WORK; MSHA & MCDHCA Modification	121
SP-TC-SECTION 5 – LEGAL RELATIONS AND PROGRESS; MCDHCA Modification	123
SP-TC SECTION 6 – RESTRICTIONS AND PERMITS; MCDHCA Modification	124
SP-TC SECTION 7 – PAYMENT; MSHA & MCDHCA Modification	126
<u>TECHNICAL REQUIREMENTS</u>	128
TABLE OF CONTENTS SPECIAL PROVISIONS, TECHNICAL REQUIREMENTS	130
01100 MEASUREMENT AND PAYMENT; MCDHCA Requirements	131
02050 TEMPORARY FACILITIES; MCDHCA Requirements	139
02100 SITE PREPARAION; MCDHCA Requirements	141
02200 EARTHWORK; MCDHCA Requirements	144

TABLE OF CONTENTS

	<u>Page Number</u>
02600 SITE UTILITIES; MCDHCA Requirements	147
02920 TURF AND GRASSES; MCDHCA Requirements	149
02930 EXTERIOR PLANTS; MCDHCA Requirements	155
03300 CONCRETE; MCDHCA Requirements	166
07900 JOINTS AND SEALANTS; MCDHCA Requirements	170
SHA, CATEGORY 100 – 101 CLEARING AND GRUBBING MSHA Requirements	174
SHA, CATEGORY 100 – 104.20 TEMPORARY ORANGE CONSTRUCTION FENCE MSHA Requirements	177
SHA, CATEGORY 100 – 120 TREE PRESERVATION MSHA Requirements	178
SHA, CATEGORY 600 – 600 6’ WOOD FENCE Special Provisions	181
SHA, CATEGORY 700 – 701 SUBSOIL AND TOPSOIL MSHA Requirements	183
SHA, CATEGORY 700 – 705 TURFGRASS ESTABLISHMENT MSHA Requirements	188
SHA, CATEGORY 700 – 710 TREE, SHRUB AND PERENNIAL INSTALLATION AND ESTABLISHMENT MSHA Requirements	194
SHA, CATEGORY 700 – 712 TREE BRANCH PRUNING MSHA Requirements	207
SHA, CATEGORY 700 – 713 BRUSH REMOVAL MSHA Requirements	209

TABLE OF CONTENTS

	<u>Page Number</u>
SHA, CATEGORY 800, 806 & 808 – STREETLIGHT, LUMINAIRES AND LIGHTING STRUCTURES MDSA & MCDOT Special Provisions.....	211
SHA, CATEGORY 820 – GENERAL ELECTRICAL WORK AND TESTING MSHA Requirements	212
SHA, CATEGORY 900 - MATERIALS; SECTION 902 PORTLAND CEMENT MSHA & MCDHCA Requirements.....	214
BID AND SCHEDULE OF PRICES	264
INVITATION FOR BIDS TO MONTGOMERY COUNTY	266
SCHEDULE OF PRICES – TOTAL BASE BID PRICE	268
SCHEDULE OF PRICES	269
MCDHCA EXPERIENCE AND EQUIPMENT CERTIFICATION.....	276
CONTRACT AND BONDS	282
STANDARD FORM OF AGREEMENT.....	283
PERFORMANCE BOND.....	287
LABOR AND MATERIAL PAYMENT BOND.....	289

BIDDERS

INFORMATION

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**MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF HOUSING & COMMUNITY AFFAIRS
DIVISION OF COMMUNITY DEVELOPMENT
MCDHCA PROJECT NO. #0F7701G
IFB NO. #1103283**

BID REQUIREMENTS

Sealed Bids addressed to the Department of General Services, Office of Procurement, Montgomery County, Maryland, for the **MONTCLAIR MANOR COMMUNITY LIGHTING AND SITE IMPROVEMENTS**, designated as MCDHCA Project No. #0F7701G as shown on drawings for sale by the Office of Procurement and on file in the Montgomery County Department of Housing and Community Affairs (MCDHCA) will be received until the time and date shown on the attached Notice to Vendors at which time they will be publicly opened and read in the Office of Procurement for Montgomery County, 255 Rockville Pike, Suite 180, Rockville, Maryland, 20850-4166.

All Bids must be made in ink upon the Schedule of Prices, must give the unit price and extension for each item of the proposed work, and must be signed in ink by the bidder with his/her name and address on pages (266), (267) and (268). Each Bid must be enclosed in a sealed envelope marked:

INVITATION FOR BIDS NO. #1103283

The IFB must be delivered, either by mail or otherwise by the time and date shown in the Notice to Vendors. Bids received after the time specified will not be considered and will be returned unopened to the Bidder.

INVITATION FOR BIDS MADE ON ANY OTHER THAN THE ATTACHED FORMS WILL NOT BE CONSIDERED. CHANGES IN THE PHRASEOLOGY OF THE INVITATION FOR BIDS, ADDITIONS OR LIMITING PROVISIONS, OMISSION OF REQUIRED SIGNATURES MAY RENDER THE BID NON-RESPONSIVE AND MAY CAUSE ITS REJECTION.

The County reserves the right to accept or reject any or all Bids and to waive minor irregularities; and to award the contract in the best interest of the County.

The successful bidder will be required to be bonded to the County for a sum of 95 percent of the total amount of his/her Bid, for performance bond and labor and material payment bond according to the form of bond(s) hereto attached.

1. BID GUARANTEE

A Bid Guarantee (Bid Bond, Certified Treasurer's Check, or Irrevocable Letter of Credit), **must be enclosed and accompany each Bid in the amount of five percent (5%) of the Total Base Bid**, and be duly executed by the Bidder as a principle, and made payable to Montgomery County. Bid Guarantees, other than Bid Bonds, will be returned to all except the three (3) lowest bidders within fifteen (15) days after the formal opening of Bids, and the remaining Guarantees will be returned to the three lowest bidders within five (5) days after the County and the accepted Bidder(s) have executed the contract(s). If no contract has been executed within the time specified herein, the Bidder may request the return of the Bid Guarantee. The County reserves the right of approval of any instrument offered as a Bid Guarantee.

PERFORMANCE BOND

The Contract is not valid until and unless the County receives a duly executed Performance Bond (or Certified Treasurer's Check or Irrevocable Letter of Credit) that is in an approved form, in the amount of ninety-five percent (95%) of the Total Base Bid, and is made payable to Montgomery County, as security for the faithful performance of the Contract and having as surety thereon such surety company or companies as are acceptable to the County and as are authorized to transact business in the State of Maryland. The Contractor must maintain the Performance Bond in full force and effect until the termination of the Contract. The County has the right to approve, disapprove, or require changes to any instrument offered as a Performance Bond. If the County does not approve the Performance Bond, the Contractor has until close of business ten (10) calendar days from the date of disapproval to furnish an acceptable Performance Bond. If not corrected, the County has the option to rescind the recommended award and to commence negotiations with the next highest rated offeror. The Performance Bond must provide assurance of the Contractor's faithful performance and discharge of all duties and responsibilities required by law and/or as provided by the Contract.

PAYMENT BOND

The Contract is not valid until and unless the County receives a duly executed Payment Bond for labor, materials, equipment and services (or Certified Treasurer's Check or Irrevocable Letter of Credit) that is in an approved form, in the amount of ninety-five percent (95%) of the Total Base Bid and is made payable to Montgomery County, as security that guarantees payment to suppliers and subcontractors of the prime contractor of the Contract and having as surety thereon such surety company or companies as are acceptable to the County and as are authorized to transact business in the State of Maryland. The Contractor must maintain the Payment Bond in full force and effect until the termination of the Contract. The County has the right to approve, disapprove, or require changes to any instrument offered as a Payment Bond. If the County does not approve the Payment Bond, the Contractor has until close of business ten (10) calendar days from the date of disapproval to furnish an acceptable Payment Bond. If not corrected, the County has the option to rescind the recommended award and to commence negotiations with the next highest rated offeror. The Payment Bond must provide assurance of the Contractors guaranteed payment to its suppliers and subcontractors of the prime contractor.

MANDATORY SUBMISSIONS

I. BID SUBMISSIONS:

 X The following checked items are required to be submitted with your bid reply:

 One complete copy of this IFB, fully executed and complete in all details. Complete copy includes entire IFB beginning with the front cover sheet and includes pages through .

 Installation Schedules

 Descriptive Literature

 X Bid Guarantee 5% As described on page 12

 Plans or Drawings

 X Bid Forms Page Nos. 267 through 268

 X Schedule of Prices Page Nos. 269 through 275

Failure to submit the mandatory Bid Submission may be cause for your Bid to be deemed non-responsible.

II. PRE-AWARD SUBMISSIONS

The following checked items are required to be submitted within ten (10) working days after the date of the County's written request:

 X Experience and Equipment Certification Pages 276 through 281

Failure to submit information in a timely manner as indicated may be cause to consider the Bidder non-responsive.

III. AWARD SUBMISSIONS

The following checked items are required to be submitted within ten (10) working days after the date of the County's written notification of Intent to Award a Contract.

Send the following to the Office of Procurement:

- Performance Bond (Required only for bids in excess of \$50,000), see Page No. 13 and Pages 287 through 288
- Labor & Material Payment Bond (Required only for bids in excess of \$50,000), see Page No. 13 and Pages 289 through 291
- Installation Schedules
- Certificate of Insurance, see Page No. 32
- Plans or Drawings
- MCDOT MFD Performance Plan, see pages 37 through 40 (if requested in the Intent to Award Memorandum).

Send the following to the Division of Community Development:

- TCP Certification, see Page No.

Failure to submit information in a timely manner as indicated may be cause to consider the Bidder non-responsible.

IV. FUNDING SOURCE(S)

The following checked items will be the source of funding to construct this project. The contractor must therefore comply with all requirements as per funding source and as noted in these documents.

SPECIFY:

- Federal – Community Development Block Grant (CDBG)
- State - _____
- Local- _____
- Other- _____

OPTIONAL SUBMISSIONS

The following checked items (each of which is described in detail in the Mandatory, General and Special terms and/or Specifications or Scope of Work Sections of the IFB), you are requested to submit with your bid reply.

- Minority Business Program & Offerors Representation, page **34**.
- Minority, Female, Disabled Persons Subcontractor Performance Plan, pages **37** through **40**.

****NOTICE TO BIDDERS****

MONTGOMERY COUNTY PROCUREMENT REGULATIONS

The Montgomery County Procurement Regulations are applicable to this solicitation and any contracts awarded pursuant to this solicitation. Of particular importance is the fact that the notice of a decision to make an award will be accomplished by a posting of the proposed contract awardee on a public list in the Department of General Services, Office of Procurement, Rockville Center, 255 Rockville Pike, Suite 180, Rockville, Maryland. The time period for appeal contained in Section 11B-36 of the Montgomery County Code commences THE DAY FOLLOWING the date of the posting.

It is the responsibility of the offerors to keep informed of the current status of any proposed awardees for contracts in which they are interested as per Section 3.2.2 of the Procurement Regulations.

For information regarding the proposed awardee posted under this bid or any bid issued by the Montgomery County Department of General Services, Office of Procurement, please call 240-777-9907 for a recorded message or send a self-addressed stamped envelope with the bid number if known or a description of the requirement being solicited to: Montgomery County Department of General Services, Office of Procurement, 255 Rockville Pike, Suite 180, Rockville, Maryland 20850-4166.

BID PROTESTS

All protests made pursuant to this solicitation must be in writing and delivered to the Director, Department of General Services: (a) within ten (10) days after the Director, Department of General Services, Office of Procurement, publicly posts the proposed contract award, if the bidder seeks as a remedy the award of the contract or costs under 11B-36(h) of the Montgomery County Code, or (b) before the submission date for bids, if the bidder seeks as a remedy the cancellation or amendment of the solicitation. **Each protest must contain a protest filing fee in the amount of \$500 (US currency); if the fee is paid by check, then the check must be made out to “Montgomery County Government”. The Director, Department of General Services, may return the filing fee to the protesting bidder, if the protest is sustained.** The Director, Department of General Services, must dismiss any protest not timely received.

Only a bidder who is “aggrieved” may file a protest. Aggrieved means that the bidder who is filing the protest may be eligible for an award of the contract if the protest is sustained (e.g., a fourth ranked bidder is not aggrieved unless the grounds for a protest, if sustained, would disqualify the top three ranked bidders or would require that the solicitation be reissued).

Each protest must contain the following: identification of the solicitation; the name, address and telephone number of the protesting offeror; a statement supporting that the bidder is aggrieved; and specification of all grounds for the protest, including submission of detailed facts and all relevant documents, citation to relevant language in the solicitation, regulations, or law relied upon; and, all other matters which the bidder contends supports the protest. The burden of production of all relevant evidence, data, and documents, and the burden of persuasion, to support the protest is on the bidder making the protest.

****NOTICE TO BIDDERS****

NO DAMAGES FOR DELAYS

1. No charges or claims for damages may be made by the Contractor or paid to the Contractor for any delay, disruption, inefficiency, interference or hindrance from any cause whatsoever, whether foreseeable or not, including (i) acts or omissions by the County, its agents, employees or consultants, (ii) contract documents that are negligently prepared or contain inaccurate statements, or (iii) force majeure and circumstances beyond the Contractor's control. The sole remedy for delays, disruptions or hindrances will be non-compensable time extensions for completion of the work.
2. The provisions of Paragraph 1, above, do not apply to claims that meet all of the following conditions:
 - (i) The claim arises under a contract awarded under a competitive sealed bid;
 - (ii) The claim is for actual and direct damages incurred as a result of a delay in completing the construction project which is the subject of this contract;
 - (iii) The contract establishes a specific time limit for completing the construction project and the claim is for critical path delays that prevent achievement of substantial completion of the contract within that time limit;
 - (iv) The delay for which damages are claimed is caused by the County; and
 - (v) The delay is not caused by actions taken by the County to protect the public health or safety or to conform to law.

EXTENSION OF TIME

A time extension may be granted only for an excusable delay that is beyond the Contractor's control and occurs without the Contractor's fault or negligence. No time extension will be granted in the absence of a written claim for the time extension. The claim must be received by the Department within 15 days after the date of the alleged cause for extension of time occurred. All claims for a time extension must state specifically the amount of delay that the Contractor believes to have been incurred and must include an analysis of how the delay affects completion of the project. If a claim for a time extension, including the facts and analysis specified above, is not received by the Department within the prescribed time, the claim is waived. No compensation must be paid for any time extensions.

****NOTICE TO BIDDERS****

Prospective bidders shall note that Montgomery County will adhere to the Maryland State Highway Administration Specification GP-2.09 as modified herein:

**GP-2.09 COMMUNICATIONS AND INTERPRETATIONS
PRIOR TO BID OPENING**

Any information regarding the requirements or the interpretation of any provision of the General Provisions, Special Provisions, Special Provision Inserts, Specifications or any part of the bidding documents shall be requested, in writing, from the Construction Section and delivered no later than 10 days prior to the scheduled date of bid opening. Responses to questions or any inquiries having any material effect on the bids shall be made by written amendments, or by written notice sent to all prospective bidders. **DO NOT MAKE VERBAL INQUIRIES.**

All inquiries shall be sent only to:

Cynthia Butler
Montgomery County
Department of Housing and Community Affairs (MCDHCA)
1401 Rockville Pike, 4th Floor
Rockville, Maryland 20852

Fax number 240-777-3653
Email Cynthia.Butler@montgomerycountymd.gov

Inquiries shall include the date of the inquiry, IFB No. 1103283, MCDHCA Project No. 0F7701G and all information pertinent to the inquiry.

Verbal explanations or instructions given by a Montgomery County Employee to an offeror in regard to this solicitation will not be binding on the County. Any information given to an offeror in response to a request will be furnished to all offerors as an amendment to this solicitation, if such information is deemed necessary for the preparation of bids, or if the lack of such information would be detrimental to the uniformed offerors. Such amendments only, when issued by THE DIRECTOR, DEPARTMENT OF GENERAL SERVICES, will be considered as being binding on the County.

****NOTICE TO BIDDERS****

REVISIONS TO CONTRACT PLANS

There have been no revisions to the contract plans to date.

**** NOTICE TO BIDDERS ****

PEDESTRIAN SAFETY

Maintaining safe pedestrian traffic around the Limits of Construction and outside of any active work zones is of paramount importance. At no time shall pedestrian traffic be denied travel through areas that are designated as pedestrian access around the project work zone. The Contractor shall provide:

- Alternative pedestrian access around active work zones.
- Barriers of sufficient strength and durability to keep all pedestrian traffic out of harms way.
- This work shall be as specified in the Contract Documents or as directed by the Engineer.

****NOTICE TO BIDDERS****

TREE PRESERVATION

Tree Preservation shall be as specified in Section 120 of the Maryland Department of Transportation, State Highway Administration's *Standard Specifications for Construction and Materials* as modified by this Contract Document and as directed by the Engineer.

*****NOTICE TO BIDDERS*****

MATERIAL SAMPLES

On this project, material samples, which are to be tested and approved for use on the project, are to be submitted and delivered to:

Montgomery County
Department of Housing and Community Affairs
1401 Rockville Pike, 4th Floor
Rockville, Maryland 20852

Attn: Ms. Cynthia Butler
Telephone Number: 240-777-3652

between the hours of 8:00 AM and 3:30 PM, Monday through Friday. Each sample must be accompanied by the appropriate form with all necessary information provided. The sample must be handled and delivered in accordance with appropriate specifications. No material shall be introduced into the work until approval of has been obtained. The Montgomery County Department of Transportation and the State Highway Administration reserve the right to completely or partially test any materials for specification compliance.

Sampling shall conform to the MSHA Sample Testing and Frequency Guide unless otherwise directed by the Engineer. All source approvals are made subject to the continuing production of materials conforming to these Specifications. Material sources may be rejected where it is evident that the material tends to be of marginal quality when compared to the Specification limits in any of its specified properties.

THERE SHALL BE NO PAYMENT FOR ANY ITEM THAT HAS UNAPPROVED MATERIAL(S) INCORPORATED INTO THE CONSTRUCTION OF THAT ITEM.

AWARD CONTINGENT ON FUNDING

The award of this contract is contingent on the availability of funds for construction. The project may be delayed or cancelled if construction funding is not available.

*****NOTICE TO BIDDERS*****

PERMIT STREAM RESTRICTIONS

Not Applicable at this time.

MCDHCA PRE-CONSTRUCTION MEETING

Forty-eight (48) hours prior to the commencement of any construction or any land disturbing activity, the Contractor shall conduct a pre-construction meeting with the following member(s):

<u>NAME</u>	<u>TITLE</u>	<u>PHONE NO.</u>	<u>EMAIL</u>
Cynthia Butler	Project Manager	240-777-3652	Cynthia.Butler@montgomerycountymd.gov

****NOTICE TO BIDDERS****

PROCEDURE FOR REQUESTING PAYMENT

The Contractor shall be required to adhere to the following procedure for requesting payments from the Montgomery County Department of Transportation.

- (1) The following sample format or one similar to it shall be used.
- (2) The estimate shall be typed on company letterhead.
- (3) The original and four copies shall be submitted directly Cynthia Butler, DHCA, Division of Community Development, 1401 Rockville Pike, 4th Floor, Rockville, Maryland 20852.
- (4) The Contractors name, MCDHCA CIP Project number, project name, and estimate number shall appear on the top of each page of the estimate; including the signature page.
- (5) Signature page shall include total amount due on the estimate.
- (6) Estimates shall list all items as they appear in the contract documents including change orders.
- (7) Field orders shall appear on the estimates separate from contract items and change orders, and shall have no retention withheld.
- (8) Should you have any questions, call Roselyn Mordecai at (240)777-3640 or Frances Snetter-Carey at (240) 777-3646 of the Community Development Division.

SAMPLE OF FORMAT TO BE USED:

CONSTRUCTION COMPANY NAME
STREET ADDRESS
CITY - STATE - ZIP CODE
PHONE NO.

Date _____

Montgomery County, Maryland
Department of Housing and Community Affairs
Community Development Division
1401 Rockville Pike, 4th Floor
Rockville, Maryland 20852

Attn: Ms. Cynthia Butler

Re: MCDOT Project No. _____
Project Name _____

Final Estimate (Use when applicable)
Final Payment (Use when applicable)

Estimate No. _____

ITEM NO.	ITEM DESCRIPTION	CONTRACT QUANTITY	UNIT PRICE	COMPLETED QUANTITY	TOTAL AMOUNT
101	Clearing and Grubbing	Lump Sum	\$00.00	_____ %	\$00.00
201	Class 1 Excavation	XXX CY	\$00.00	XXX	\$00.00

*Refer with Contract Document for
Amount retained.

Total _____
Less (*) Retainage _____
Balance _____
Less Previous Estimates _____
AMOUNT DUE _____

(Use this certification on all estimates but Final Payment)

I hereby certify this invoice is correct for all work performed and all materials furnished and that payment as indicated is due

I hereby certify that payment is due the Contractor for the above items and the quantities in accordance with the Specifications and Contract.

(And the following sentence on Final Payment).

(Use this certification on the Final Payment only).

I further certify that all sub-contractors and suppliers have been paid or will be paid with the proceeds from this Final Payment.

I hereby certify the quantities as shown herein are correct and that construction has been completed in accordance with the Plans and Specifications. I recommend Final Payment as indicated and acceptance of the work performed under this contract.

Construction Company Name

Area Engineer Date

Representative's Name - Title

Date

Construction Engineer Date

MCDHCA INFORMATION FOR BIDDERS

If the bidder whose name is placed on the public award list, fails to execute the contract and/or fails to submit any of the mandatory award submissions hereafter attached, and as herein provided within ten (10) calendar days after the date of the County's written notification of intent to award a contract, the bidder may be ruled non-responsible. The name of the second lowest responsible bidder who submitted a responsible bid, may be placed on the public list and such bidder shall fulfill every stipulation embraced herein as if he/she were the original party whose name was placed on the public list, or the Director of the Department of General Services, may reject all the bids whichever is in the best interest of the County.

Bidders must be prepared to complete the work within the time fixed in the Bid.

Bidders must examine the drawings and specifications carefully and must make a personal examination as to the location and nature of the proposed work. If there is doubt about the meaning or intent of anything shown on the plans or proposed in the specifications, inquiry should be made to Cynthia Butler at cynthia.butler@montgomerycountymd.gov before the bid is submitted. The submission of a bid shall indicate that the bidder thoroughly understands the drawings and the terms of the specifications.

Bidders are especially instructed to fill out the "Extended Price" column and total their bid so that the results to the bidding, barring possible arithmetical errors, will be at once known. Any errors in computations will be corrected by the Department of General Services, Office of Procurement when the bids are received.

The quantities given under the various items of the bid are approximate only and subject to increase or decrease, as provided in the contract, without the changing of the unit prices to be paid for the work, except as provided in GP-4.04 (Variations in Estimated Quantities).

PROOF OF QUALIFICATIONS FOR CONTRACTORS AND SUBCONTRACTORS

(Required for amounts of \$20,000 or more only.)

Bidders and subcontractors who have not previously successfully qualified with Montgomery County Division of Transportation Engineering for work comparable to that contemplated in this bid or who have not performed comparable work for the County within the last two years shall furnish under oath on forms furnished by the County the following proof of qualifications to perform the work specified:

1. Legal Title, Address and Phone Number of Organization.
2. Maryland Representatives Name, Title and Address.
3. Experience of organization and members.
4. Principal comparable projects completed by your organization within the last five years.
5. Answers to questions relating to government work and work performance.
6. Equipment owned, rented or intended to be bought for this project.
7. Answers to questions relative to subletting any portion of the contemplated work.
8. Work presently under contract.
9. Certification of bonding capacity from a reputable bonding agency.

Such proof shall be submitted at the request of the County in the event your organization is low bidder or subcontractor for the low bidder on this solicitation. Failure to submit such proof shall be sufficient cause to reject said bid to perform work as a subcontractor. Bidders and their subcontractors may be required to furnish additional information from that specified above to substantiate proof of qualifications.

The Owner may make such investigation as Owner deems necessary to determine the ability of the Bidder to perform the Work and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner may visit any of the prospective Contractor's places of business to determine the Contractor's ability, capacity, reliability, financial stability, or other factors necessary to perform the Work. The Owner reserves the right to reject the Bid of a Bidder who has previously failed in contracts of a similar nature to perform properly or to complete work in a timely manner; whose proposed subcontractors, suppliers, or sureties have similarly failed to perform properly or timely; or, if investigations show that the Bidder is unable to perform the requirements of the Contract.

LAWS TO BE OBSERVED

The Contractor shall at all times observe and comply with all Federal, State and local laws, ordinances and regulations in any manner affecting the conduct of the work, and shall indemnify and save harmless the County and all of its officers, agents and servants against any claim or liability arising from or based on the violation of any such law, by-law, ordinance, regulation, order or decree whether by the Contractor or his/her subcontractors.

The Contractor shall be cognizant of safety procedures required for working in "Confined Spaces." A "Confined Space" has any or all of the following characteristics: Limited openings for entry and exit, unfavorable natural ventilation, subject to accumulation of toxic or combustible agents and to oxygen deficiency, not designed for continuous worker occupancy. Examples of commonly encountered confined spaces are inlets, manholes, dam risers, pipes and culverts.

The Contractor shall at all times observe and comply with the Safety Code under the provisions of the MARYLAND OCCUPATIONAL SAFETY AND HEALTH ACT, §5-101, *et seq.*, Labor and Employment Article of the Annotated Code of Maryland (2011) and amendments thereto.

ENVIRONMENTAL PROTECTION

The Contractor will be required to comply with all regulations of the County pertaining to environmental control such as Dust Control and Open Fire restrictions adopted under the Air Quality Control Law, Chapter 3 of the Montgomery County Code (2004) as amended, the Erosion and Sediment Control Provisions, both outlined in the General Provisions of this Solicitation; and, the Noise Control Law, Chapter 31B of the Montgomery County Code (2004) as amended. It shall be the responsibility of the Contractor to be knowledgeable and comply with all environmental regulations affecting the conduct of the work.

SPECIFICATION AND STANDARD PLANS

Although this proposed project will be a totally financed and regulated County Project, the specifications governing construction, unless otherwise indicated will be the "Standard Specifications For Construction and Materials", Maryland Department of Transportation State Highway Administration dated July, 2008 and revisions thereof or additions thereto.

All applicable Standard drawings will be those of the Maryland State Highway Administration as amended by Montgomery County, or on occasion, the Federal Government, whichever is specified in the Special Provisions.

INDEMNIFICATION

The Contractor is responsible for any loss, personal injury, death and any other damage (including incidental and consequential) that may be done or suffered by reason of the Contractor's negligence or failure to perform any contractual obligations. The Contractor must indemnify and save the County harmless from any loss, cost, damage, and other expenses, including attorney's fees and litigation expenses, suffered or incurred due to the Contractor's negligence or failure to perform any of its contractual obligations. If requested by the County, the Contractor must pay to defend the County in any action or suit brought against the County arising out of the Contractor's negligence, errors, acts or omissions under this

Contract. The negligence of any agent, subcontractor or employee of the Contractor is deemed to be negligence of the Contractor. For purposes of this paragraph, the County requires that the Contractor's indemnification extend to the Contractor's boards, agencies, agents, officials, and employees.

SALES TAX REQUIREMENT

Bidders are reminded to include sales tax as required under §11-220 of the Tax-General Article of the Annotated Code of Maryland (2011):

§11-220. State or political subdivision

(a) Exemption. -- The sales and use tax does not apply to a sale to the State or a political subdivision of the State.

(b) Limitation. -- The exemption under subsection (a) of this section may not be construed to exempt any sale of tangible personal property, otherwise taxable under this title, to a contractor to be used under a contract with the State or a political subdivision of the State for construction, repair, or alteration of real property.

CONTINGENT ITEMS

The Contractor's attention is directed to the items in the Schedule of Prices marked with an asterisk (*). The items so marked are to be considered contingent items, and the quantity may be increased or decreased, or any or all may be deleted in their entirety from the Contract, at the discretion of the Engineer.

Any increase or decrease in the quantity of these items, or their deletion will not be considered justifiable claim for compensation in addition to the Contract unit prices bid in the Bid.

AWARD OF CONTRACT & BID WITHDRAWAL

By submission of an offer under this solicitation, the offeror agrees that the County has 150 days from bid opening in which to determine whether the County will award a contract for the Work. The County reserves the right to reject as non-responsive any offer that specifies less than 150 days of acceptance time.

PERFORMANCE BOND

The low responsive, responsible bidder shall submit Performance Bond and Labor and Material Payment Bond within ten (10) calendar days after receipt of Notice to Award.

STARTING OF PROJECT

The Contractor may not start work under this contract until a Notice to Proceed has been issued by the Montgomery County Department of Housing and Community Affairs (MCDHCA) and a Purchase Order has been executed by the Department of General Services, Office of Procurement.

Also the Contractor must give the MCDHCA forty eight (48) hours advance notice before starting work so that inspection may be accomplished prior to and during the completion of the Work.

CERTIFICATION OF PAYMENT TO SUBCONTRACTORS AND SUPPLIERS

The contractor at the time of request for final payment under a contract covered hereunder shall certify in writing that he/she has made payment from proceeds of prior payments, and that he/she will make timely payment from the proceeds of the final payment then due him/her, to his/her subcontractors and suppliers in accordance

with his/her contractual arrangements with them and will obtain lien releases from them in conformance with § 9-114 of the Real Property Article of the Annotated Code of Maryland (2011).

TIME IS OF THE ESSENCE

Time is of the essence with respect to the Contractor's performance hereunder.

LIQUIDATED DAMAGES

The contractor hereby acknowledges and agrees that liquidated damages are Six Hundred Dollars (\$600) per Calendar Day for unauthorized extensions of time needed by the Contractor to complete the Work beyond the contracted time of completion for the Work.

MANDATORY INSURANCE REQUIREMENTS

MANDATORY MINIMUM INSURANCE REQUIREMENTS

Montclair Manor Community Lighting and Site Improvements Project – Wheaton

Remove & Replace Light poles and Luminaries, Remove and Install New Fencing, Tree Branch Pruning and Brush Removal

Prior to the execution of the contract by the County, the proposed awardee/contractor and their contractors (if requested by County) must obtain, at their own cost and expense, the following *minimum* (not maximum) insurance coverage with an insurance company/companies licensed to conduct business in the State of Maryland and acceptable to the Division of Risk Management. This insurance must be kept in full force and effect during the term of this contract, including all extensions. The insurance must be evidenced by a certificate of insurance, and if requested by the County, the proposed awardee/contractor shall provide a copy of the insurance policies and additional insured endorsements. The minimum limits of coverage listed below shall not be construed as the maximum as required by contract or as a limitation of any potential liability on the part of the proposed awardee/contractor to the County nor shall failure to request evidence of this insurance in any way be construed as a waiver of proposed awardee / contractor's obligation to provide the insurance coverage specified. The Contractor's insurance shall be primary. Coverage pursuant to this Section shall not include any provision that would bar, restrict, or preclude coverage for claims by Montgomery County against Contractor, including but not limited to "cross-liability" or "insured vs insured" exclusion provisions.

Commercial General Liability

A minimum limit of liability of ***one million dollars (\$1,000,000), per occurrence and two million (\$2,000,000) aggregate***, for bodily injury, personal injury and property damage coverage per occurrence including the following coverages:

- Contractual Liability
- Premises and Operations
- Independent Contractors & Subcontractors
- Products and Completed Operations

Business Automobile Liability Coverage

A minimum limit of liability of ***one million dollars (\$ 1,000,000)***, combined single limit, for bodily injury and property damage coverage per occurrence including the following:

- owned automobiles
- hired automobiles
- non-owned automobiles
- loading and unloading

Worker's Compensation/Employer's Liability

Meeting all statutory requirements of the State of Maryland Law and with the following minimum Employers' Liability limits:

- Bodily Injury by Accident - \$100,000 each accident***
- Bodily Injury by Disease - \$500,000 policy limits***
- Bodily Injury by Disease - \$100,000 each employee***

Additional Insured

Montgomery County, Maryland, its elected and appointed officials, officers, consultants, agents and employees, must be included as an additional insured on an endorsement to Contractor's commercial general, automobile insurance, and contractor's excess/umbrella insurance policies if used to satisfy the Contractor's minimum insurance requirements under this contract, for liability arising out of contractor's products, goods and services provided under this contract. The stipulated limits of coverage above shall not be construed as a limitation of any potential liability of the contractor.

Policy Cancellation

Should any of the above policies be cancelled before the expiration date thereof, written notice must be delivered to the County in accordance with the policy provisions.

Certificate Holder

Montgomery County, MD
Housing and Community Affairs / Neighborhood Revitalization
1401 Rockville Pike, 4th floor
Rockville, MD 20852

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MINORITY BUSINESS PROGRAM & OFFEROR'S REPRESENTATION

It is the policy of the County to recruit actively, minority-owned businesses to provide goods and services to perform governmental functions pursuant to Section 11B-57 of the County Code. Minority-owned businesses are described in County law as Minority/Female/Disabled Person owned businesses (MFD). MFD businesses include certain non-profit entities organized to promote the interests of persons with a disability demonstrating (on a contract by contract basis) that at least 51% of the persons used by the non-profit entity to perform the services or manufacture the goods contracted for by the County, are persons with a disability. MFD firms also include those firms that are 51% owned, controlled and managed by one or more members of a socially or economically disadvantaged minority group, which include African Americans who are not of Hispanic origin, Hispanic Americans, Native Americans, Asian Americans, Women and Mentally or Physically Disabled Persons.

Section 7 - "Minority Contracting", Montgomery County Procurement Regulations specifies the procedure to be followed and will govern the evaluation of offers received pursuant to this solicitation. A copy of Section 7 of the Procurement Regulations is available upon request.

Prior to awarding contracts with a value of \$50,000 or more, a prospective Contractor must demonstrate that a minimum percentage of the overall contract value as set by the County, will be subcontracted to certified MFD businesses. A decision as to whether the prospective Contractor has demonstrated a good faith effort to meet this subcontracting requirement will be made by the Director, Office of Procurement, or his/her designee, who may waive this requirement.

A sample of the MFD Report of payment Received is attached. This form is mailed to the MFD Subcontractor to complete for documentation of payment by the Prime Contractor. It is not to be completed by the Prime Contractor nor submitted with the MFD Subcontractor Performance Plan.

The Director, Office of Procurement, or his /her designee determines whether a waiver of MFD subcontracting would be appropriate, under Section 7.3.3.5 of the Procurement Regulations.

For further information regarding the MFD Business Program, please contact the MFD Program Manager, Division of Business Relations and Compliance at (240) 777-9912.

Offerors are encouraged (but not required) to complete the following:

I hereby represent that this is a Minority Business firm as indicated below (CIRCLE ONE):

AFRICAN AMERICAN	ASIAN AMERICAN	DISABLED PERSON
FEMALE	HISPANIC AMERICAN	NATIVE AMERICAN

Attach one of the following certification documents from: Maryland Department of Transportation (MDOT); Federal SBA 8(a); MD/DC Minority Supplier Development Council, Women's Business Enterprise National Council; or City of Baltimore.

PMMD-90 08/17



**Montgomery County MFD Report Of Payments Received For Office Use
Office of Business Relations and Compliance**

SAMPLE ONLY! NOT TO BE USED BY PRIME

MFD Subcontractor Company Name: _____

Prime Contractor Company Name: _____

Contract Number/Title: _____

Project Location: _____

MFD Subcontract Amount: \$: _____

PLEASE READ CAREFULLY BEFORE SIGNING

This certifies that for the month of _____, my company received \$ _____ for work performed, services rendered and/or materials supplied on the above contract.

TOTAL AMOUNT OF SUBMITTED INVOICES TO DATE: \$ _____

TOTAL PAYMENTS RECEIVED TO DATE: \$ _____

Are you experiencing any contract problems with the prime contractor and/or the project? Yes ___ No ___

Comments:

I certify that the above information is true and accurate to the best of my record documentation and knowledge.

(TYPED/PRINTED COMPANY NAME)

(TYPED/PRINTED NAME OF COMPANY OFFICIAL)

(TITLE)

(SIGNATURE OF COMPANY OFFICIAL)

(DATE)

TELEPHONE FAX E-MAIL

Return by: Email – MFD@montgomerycountymd.gov or FAX – 240-777-9952. For assistance, contact the MFD Office at 240-777-9912

Minority-Owned Business Addendum to General Conditions of Contract Between County and Contractor

A. This contract is subject to the Montgomery County Code and the Montgomery County Procurement Regulations regarding participation in the Minority-Female-Disabled Person (MFD) procurement program.

B. Contractor must subcontract a percentage goals listed below of the total dollar value of the contract, including all modifications and renewals, to certified minority owned businesses. The MFD subcontracting goal may be waived under appropriate circumstances by submission of a letter to the Minority Business Program Manager. The letter must explain why a waiver is appropriate. The Director of the Office of Procurement or designee may waive, in whole or in part, the MFD subcontracting goal if the Director determines that a waiver is appropriate under Section 7.3.3.5 of the Montgomery County Procurement Regulations. In determining if a waiver should be granted, the Director may require the Contractor to submit additional information; the Director may require the Contractor to submit some or all of this information on forms approved by the Director.

For Goals by each purchasing category, please refer to www.montgomerycountymd.gov/mfd

C. The attached MFD Subcontractor Performance Plan, which must be approved by the Director, is an integral part of the contract between County and Contractor. In a multi-term contract, Contractor must submit a MFD Subcontract Performance Plan to be in effect for the life of the contract, including any renewal or modification.

D. Contractor must include in each subcontract with a minority owned business a provision that requires the use of binding arbitration with a neutral arbitrator to resolve disputes between the Contractor and the minority owned business subcontractor. This arbitration provision must describe how the cost of dispute resolution will be apportioned; the apportionment must not, in the judgment of the Director, attempt to penalize a minority owned business subcontractor for filing an arbitration claim.

E. County approval of the MFD Subcontractor Performance Plan does not create a contractual relationship between the County and the minority owned business subcontractor.

F. Contractor must notify and obtain prior written approval from the Director regarding any change in the MFD Subcontractor Performance Plan.

G. Before receiving final payment under this contract, Contractor must submit documentation showing compliance with the MFD Subcontracting Performance Plan. Documentation may include, at the direction of the Director, invoices, copies of subcontracts with minority owned businesses, cancelled checks, affidavits executed by minority owned business subcontractors, waivers, and arbitration decisions. The Director may require Contractor to submit periodic reports on a form approved by the Director. The Director may conduct an on-site inspection for the purpose of determining compliance with the MFD Subcontractor Performance Plan. If this is a multi-term contract, final payment means the final payment due for performance rendered for each term of the contract.

If the Contractor fails to submit documentation demonstrating compliance with the MFD Subcontractor Performance Plan, to the satisfaction of the Director, after considering relevant waivers and arbitration decisions, the Contractor is in breach of this contract. In the event of a breach of contract under this addendum, the Contractor must pay to the County liquidated damages equal to the difference between all amounts the Contractor has agreed under its Plan to pay minority owned business subcontractors and all amounts actually paid minority owned business subcontractors with appropriate credit given for any relevant waiver or arbitration decision. Contractor and County acknowledge that damages which would result to the County as a result of a breach under this addendum are difficult to ascertain, and that the liquidated damages provided for in this addendum are fair and reasonable in estimating the damage to the County of a breach of this addendum by Contractor. In addition, the County may terminate the contract. As the result of a breach under this addendum, The Director of the Office of Procurement must find the Contractor non-responsible for purposes of future procurement with the County for the ensuing three years.

MONTGOMERY COUNTY, MARYLAND
MINORITY, FEMALE, DISABLED PERSON SUBCONTRACTOR
PERFORMANCE PLAN

Contractor's
Name: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone Number: _____ Fax Number: _____ Email: _____

CONTRACT NUMBER/PROJECT DESCRIPTION: _____

A. Individual assigned by Contractor to ensure Contractor's compliance with MFD Subcontractor Performance Plan:

Name: _____
Title: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone Number: _____ Fax Number: _____ Email: _____

B. This Plan covers the life of the contract from contract execution through the final contract expiration date.

C. The percentage of total contract dollars, including modifications and renewals, to be paid to all certified minority owned business subcontractors, is _____% of the total dollars awarded to Contractor.

D. Each of the following certified minority owned businesses will be paid the percentage of total contract dollars indicated below as a subcontractor under the contract.

I hereby certify that the business(s) listed below are certified by one of the following: Maryland Department of Transportation (MDOT); Federal SBA (8A); MD/DC Minority Supplier Development Council (MSDC); Women's Business Enterprise National Council (WBENC); or City of Baltimore.

A Certification Letter must be attached.

For assistance, call 240-777-9912.

1. Certified by: _____
Subcontractor Name: _____
Title: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone Number: _____ Fax Number: _____ Email: _____

CONTACT PERSON: _____

Circle MFD Type:

AFRICAN AMERICAN	ASIAN AMERICAN	DISABLED PERSON
FEMALE	HISPANIC AMERICAN	NATIVE AMERICAN

The percentage of total contract dollars to be paid to this subcontractor :

This subcontractor will provide the following goods and/or services: _____

2. Certified by: _____

Subcontractor Name: _____

Title: _____

Address: _____

City: _____

State: _____

Zip: _____

Phone Number: _____

Fax Number: _____

Email: _____

CONTACT PERSON: _____

Circle MFD Type:

AFRICAN AMERICAN

ASIAN AMERICAN

DISABLED PERSON

FEMALE

HISPANIC AMERICAN

NATIVE AMERICAN

The percentage of total contract dollars to be paid to this subcontractor: _____

This subcontractor will provide the following goods and/or services: _____

3. Certified by: _____

Subcontractor Name: _____

Title: _____

Address: _____

City: _____

State: _____

Zip: _____

Phone Number: _____

Fax Number: _____

Email: _____

CONTACT PERSON: _____

Circle MFD Type:

AFRICAN AMERICAN

ASIAN AMERICAN

DISABLED PERSON

FEMALE

HISPANIC AMERICAN

NATIVE AMERICAN

The percentage of total contract dollars to be paid to this subcontractor: _____

This subcontractor will provide the following goods and/or services: _____

4. Certified By: _____

Subcontractor Name: _____

Title: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ Fax Number: _____ Email: _____

CONTACT PERSON: _____

Circle MFD Type:

- | | | |
|------------------|-------------------|-----------------|
| AFRICAN AMERICAN | ASIAN AMERICAN | DISABLED PERSON |
| FEMALE | HISPANIC AMERICAN | NATIVE AMERICAN |

The percentage of total contract dollars to be paid to this subcontractor: _____

This subcontractor will provide the following goods and/or services: _____

E. The following language will be inserted in each subcontract with a certified minority owned business listed in D above, regarding the use of binding arbitration with a neutral arbitrator to resolve disputes with the minority owned business subcontractor; the language must describe how the costs of dispute resolution will be apportioned:

F. Provide a statement below, or on a separate sheet, that summarizes maximum good faith efforts achieved, and/or the intent to increase minority participation throughout the life of the contract or the basis for a full waiver request.

G. A full waiver request must be justified and attached.

Full Waiver Approved:

Partial Waiver Approved:

MFD Program Officer Date: _____

MFD Program Officer Date: _____

Full Waiver Approved:

Partial Waiver Approved:

Date: _____

Date: _____

Director
Avinash G. Shetty
Office of Procurement

Director
Avinash G. Shetty
Office of Procurement

The Contractor submits this MFD Subcontractor Performance Plan (Plan Modification No. _____) in accordance with the Minority Owned Business Addendum to General Conditions of Contract between County and Contractor.

CONTRACTOR SIGNATURE

USE ONE:

1. TYPE CONTRACTOR'S NAME: _____

Signature

Typed Name

Date

2. TYPE CORPORATE CONTRACTOR'S NAME: _____

Signature

Typed Name

Date

I hereby affirm that the above named person is a corporate officer or a designee empowered to sign contractual agreements for the corporation.

Signature

Typed Name

Title

Date

APPROVED:

Avinash G. Shetty, Director, Office of Procurement

Date

Section 7.3.3.4(a) of the Procurement Regulations requires:

The Contractor to notify the Director, Department of General Services of any proposed change to the Subcontractor Performance Plan.

DELEGATION OF CONTRACT ADMINISTRATION

Delegation of Contract Administrator Responsibility and Authority. The Director of the Montgomery County Department of General Services hereby delegates to the person identified below the responsibility and authority to perform the functions of the Contract Administrator for this particular agreement

Name: Rogers Stanley, Chief

Telephone Number: 240-777-3633

Organizational Element: Division of Community Development, MCDHCA

This delegation authorizes the Contract Administrator to perform the following functions, in accordance with applicable regulations and procedures commencing on the date that the contract is signed by the Contracting Officer and terminating on the date contractor performance is completed (including final payment) or terminated:

- serve as liaison between the County and Contractor;
- give direction to the Contractor to ensure satisfactory and complete performance, including issuance of field orders;
- monitor and inspect the Contractor's performance to ensure acceptable timeliness and quality;
- serve as records custodian for this contract, including wage requirements;
- accept or reject the Contractor's performance;
- furnish timely written notice of the Contractor's performance failures to the Director, Department of General Services, and to the County Attorney, as appropriate;
- prepare required reports;
- approve or reject invoices for payment;
- recommend contract modifications or terminations to the Director, Department of General Services;
- issue notices to proceed; and
- monitor and verify compliance with any MFD Performance Plan.

The contract administrator is NOT authorized to make determinations (as opposed to recommendations) that alter, modify, terminate or cancel the contract, interpret ambiguities in contract language, or waive the County's contractual rights.

Unless the Director, Department of General Services changes this delegation of authority in writing, no other person is authorized to perform the functions of the Contract Administrator for this particular AGREEMENT.

CONTRACT

PROVISIONS

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Maryland Department of Transportation
State Highway Administration

CONTRACT PROVISIONS OCCUPYING WETLANDS

1 of 1

OCCUPYING WETLANDS

The Contractor is hereby alerted to the importance of preserving wetland areas. The Administration, in conjunction with the various environmental agencies, has developed these Contract Documents so as to minimize or eliminate disturbance and damage to existing wetland areas. In order to accomplish this, the following must be rigidly adhered to:

- (a) Prior to performing any work on the project, the areas of wetland will be identified and marked as directed by the Administration. All personnel of the Contractor or sub-contractors shall be alerted to these designated areas.
- (b) The Contractor or sub-contractors shall not impact any wetland or waterway, whether it be permanently or temporarily unless otherwise stipulated in the permit application and approved as an authorized action by the appropriate regulatory agency. No fill shall be placed in these areas without a permit.
- (c) If a Contractor or sub-contractor has to impact a wetland or waterway that is not covered by an existing wetland permit, they shall immediately notify the Engineer. The Engineer will notify the Environmental Programs Division of the State to determine the extent of any permit modification. At that time the Environmental Programs Division will request a permit modification or submit a permit application.
- (d) If the Contractor impacts any wetland or waterway for which they do not have a wetland permit, they shall be responsible for restoring the wetland areas and possibly mitigating the wetland impacts to the full satisfaction of the environmental agencies, which could include monetary compensation.
- (e) The cost of restoration and mitigation of the impacted areas shall be at no additional cost to the County.

The importance of not abusing the wetland areas cannot be overemphasized. Abuse of wetland areas could jeopardize the operation of the total Contract and could be cause for a shut-down. If a shut-down occurs because of the Contractor's failure to secure the required permits (i.e. the Contractor's method of work includes impacts not approved by previously acquired permits), the Contractor's negligence or operations, all costs and damages to the Contractor and to the County will be at no additional cost to the County. Noncompliance with these requirements will not be considered for an extension of Contract time.



Maryland Department of Transportation
State Highway Administration

CONTRACT PROVISIONS

(NCHRP) REPORT 350 IMPLEMENTATION SCHEDULE

1 of 2

NOTICE TO ALL HOLDERS OF THIS CONTRACT DOCUMENT

NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 350 IMPLEMENTATION SCHEDULE FOR DEVICES USED IN THE MAINTENANCE OF TRAFFIC

Except as otherwise specified in this Section, all items for the maintenance of traffic, including those listed under the following categories, shall be crashworthy in conformance with Level 3 or other Level as specified by the Engineer in conformance with the safety crash testing and performance criteria published in the National Cooperative Highway Research Program (NCHRP) Report 350, "Recommended Procedures for the Safety Performance Evaluation of Highway Features." When conformance with NCHRP Report 350 is required, the Contractor shall provide the Engineer with the manufacturers' certifications that the devices comply with the specified criteria.

Unless specifically waived by an attachment to these Contract Provisions, devices must be approved by the Office of Traffic and Safety.

Category 1 Devices

These devices are cones, tubular markers, flexible delineator posts, and drums, all without any accessories or attachments, which are used for channelization and delineation.

Category 2 Devices

These devices are Type I, II, and III barricades; portable sign supports with signs; intrusion alarms; and drums, vertical panels, and cones, all with accessories or attachments.

Category 3 Devices

- (a) Truck Mounted Attenuators (TMAs).
- (b) Temporary Barrier.
 - (1) Concrete Barrier.
 - (2) Traffic Barrier W Beam and Water Filled Barrier.
- (c) Temporary End Treatments.

Category 4 Devices

These devices are area lighting supports, arrow panels, and portable variable message signs that are usually portable or trailer-mounted.



CONTRACT PROVISIONS
(NCHRP) REPORT 350 IMPLEMENTATION SCHEDULE

WORK ZONE DEVICES	IMPLEMENTATION SCHEDULE TO CONFORM TO NCHRP REPORT 350 CRITERIA
<p>CATEGORY 1 Cones, tubular markers, flexible delineator posts, and drums (all without any accessories or attachments)</p>	<p>All devices shall conform to NCHRP Report 350 criteria.</p>
<p>CATEGORY 2 Type I, II, and III barricades; portable signs supports with signs; intrusion alarms; and drums, vertical panels, and cones (all with accessories or attachments)</p>	<p>All devices shall conform to NCHRP Report 350 criteria.</p>
<p>CATEGORY 3 (a) Truck Mounted Attenuators (TMA) (b) Temporary Barriers (1) Concrete Barrier (2) Traffic Barrier W Beam and Water Filled Barrier (c) Temporary End Treatments</p>	<p>All devices shall conform to NCHRP Report 350 criteria.</p>
<p>CATEGORY 4 Portable trailer mounted devices including area lighting supports, arrow panels, and changeable message signs</p>	<p>The Contractor may use devices that do not conform to NCHRP Report 350 criteria, until compliance dates are established. Use of these devices shall comply with the provisions of Part 6 of the MUTCD.</p>



Maryland Department of Transportation
State Highway Administration

CONTRACT PROVISIONS
TRAFFIC CONTROL PLAN CERTIFICATION

1 of 1

TRAFFIC CONTROL PLAN CERTIFICATION

PRIOR TO THE COMMENCEMENT OF WORK ON THIS PROJECT, THE SUCCESSFUL BIDDER WILL BE REQUIRED TO COMPLETE A TRAFFIC CONTROL PLAN CERTIFICATION, CONTAINING THE INFORMATION SHOWN BELOW. THE CERTIFICATION FORM WILL BE PROVIDED TO THE SUCCESSFUL BIDDER UPON AWARD OF THE CONTRACT.

The County's Traffic Control Plan (TCP) has been reviewed and the following course of action shall be followed (check one):

_____ **Option 1**
The TCP is accepted and shall be used on this project.

_____ **Option 2**
The TCP is accepted; however, revisions and/or additions shall be submitted for approval in conformance with the Contract Document's Specifications 104.01.

_____ **Option 3**
The TCP is not accepted and revision shall be submitted for approval in accordance with the Contract Document's Specifications 104.01.

It is understood that the effective implementation of the approved TCP is the responsibility of the Contractor. Minor modifications may be made by the Traffic Manager if field conditions warrant and prior concurrence is obtained from the Engineer. Significant changes to the TCP will be submitted to the Engineer in writing, for approval, in conformance with the Contract Document's Specifications 104.01.

(DATE)

(SIGNATURE)

(PRINTED SIGNATURE)

(TITLE)

CONTRACT PROVISIONS
HIGH VISIBILITY SAFETY APPAREL POLICY

1 of 2

NOTICE TO ALL HOLDERS OF THIS CONTRACT DOCUMENT

HIGH VISIBILITY SAFETY APPAREL POLICY

BACKGROUND. Research indicates that high visibility garments have a significant impact on the safety of employees who work on highways and rights-of-way. In addition, high visibility garments may help to prevent injuries and accidents and to make highway workers more visible to the motoring public, which ultimately improves traffic safety.

STATEMENT OF POLICY.

- (a) The High Visibility Safety Apparel Policy provides a standardized apparel program.
- (b) The program seeks to improve the visibility of all persons who work on County roadways and rights-of-way.
- (c) All apparel shall contain the appropriate class identification label.
- (d) Compliance with this policy is retroactive and becomes effective immediately. All affected employees shall receive high visibility apparel awareness training.

APPLICABILITY. This policy applies to all County employees and all other persons who work on County roadways and rights-of-way. All workers shall wear, at a minimum, Class 2 ANSI/ISEA 107/2004 apparel.

- (a) For County employees, this apparel shall have a fluorescent yellow-green background material color and be the outermost garment worn.
- (b) Retro-reflective material color for County employee apparel shall be silver or white and be visible at a minimum distance of 1,000 feet. The retro-reflective safety apparel shall be designed to clearly recognize and differentiate the wearer from the surrounding work environment. The retro-reflective material may be contrasted by fluorescent orange background material not exceeding one and one half inches on either side of the retro-reflective material.
- (c) For non-County employees, this apparel shall be either fluorescent orange-red or fluorescent yellow-green background material color and be the outermost garment worn.

CONTRACT PROVISIONS
HIGH VISIBILITY SAFETY APPAREL POLICY

2 of 2

- (d) Retro-reflective material color for non-County employee apparel shall either be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and be visible at a minimum distance of 1,000 feet. The retro-reflective safety apparel shall be designed to clearly recognize and differentiate the wearer from the surrounding work environment.

REFERENCES.

- (a) ANSI/ISEA 107/2004 standard – American National Safety Institute/International Safety Equipment Association
- (b) MUTCD 2003 – Manual for Uniform Traffic Control Devices - Sections 6D.03B and 6E.02
- (c) Visibility Research – The VCTR 1989 report concludes that fluorescent colors, when compared with non-fluorescent colors, enhance the daytime conspicuity of worker clothing.

DEFINITIONS.

- (a) Apparel – The outermost high-visibility garment worn by employees who work on Administration highways and rights-of-way.
- (b) Highways – All roads owned by the Maryland Department of Transportation and maintained by the Administration.
- (c) High Visibility – The ability for workers to be distinguishable as human forms to be seen, day and night, at distances that allow equipment operators and motorists to see, recognize, and respond.

THIS POLICY HAS BEEN ADOPTED BY THE MONTGOMERY COUNTY DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS (MCDHCA) FOR THIS PROJECT AND WILL BE STRICTLY ENFORCED ON ALL PERSONS WHO WORK ON AND WITHIN THE LIMITS OF MONTGOMERY COUNTY ROADWAYS, RIGHTS-OF-WAY

FEDERAL REQUIREMENTS

(SECTION IV)

(TO BE INCLUDED IN ALL TIERS OF SUBCONTRACTS)

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PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: **1103283**

FEDERAL LABOR STANDARDS PROVISIONS ATTACHMENTS (DAVIS BACON)
(5/2018)

This packet of Attachments must be included with, applies to, and must be complied with for every federally funded construction related contract and subcontract (with the exceptions noted below). There are a number of requirements for all federally funded construction-based contracts which are listed or synopsised in this document. The full text of these documents is available via the internet from HUD at www.hud.gov. or through your Contract Monitor.

This packet is not intended to replace any of these applicable statutes, regulations or documents. Neither is it intended to provide a “legal interpretation” of them, some of which are fairly complex. It is, instead, designed to assist in identifying, and placing parties on notice of, these requirements in a “plain language” context.

If you are new to, and unfamiliar with, any of these requirements, there are additional step-by-step guides available. These include several Power Point presentations, an illustrated “Davis-Bacon How-To Guide” and other resources. Please contact your Contract Monitor or call 240-777-3685 to get or view these guides. You can also ask any specific questions or get individual training on these requirements by calling the same phone number.

A very brief overview of some of these requirements follows:

“DAVIS BACON WAGE REQUIREMENTS”

This is a term that broadly covers a number of federal requirements that apply to all federally funded construction related projects whose total cost exceeds \$2,000. More detail is included below (please see HUD-4010), but basically you must:

- Submit a weekly certified payroll form (see **FORM A**: Form WH-347 and Form WH-347 Instructions);
- Pay workers on a weekly (not bi-weekly) schedule;
- Pay workers a minimum hourly rate based on their activities that may or not include benefits based on a job-specific Wage Determination included below;
- Pay workers time-and-a-half for all hours over 40 worked in a week;
- Post the Wage Determination and a poster describing workers rights on all job sites;
- Ensure compliance with, and include these requirements in agreements with all, subcontractors;
- Provide weekly signed certified payrolls for all workers on covered jobs; and
- Provide additional reporting information (see **FORM B**: Form 4710 and Form 4710 instructions).

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

MINORITY BUSINESS ENTERPRISE (MBE) REQUIREMENTS

This data is reported on Form HUD-2516 (attached). You must gather and report data for the general contractor and all subcontractors on the project. This data includes:

- The dollar amount and date of the contract or subcontract;
- The type of trade for the contract or subcontract (based on one of ten specific category codes),
- The racial/ethnic data for the contractor or subcontractor (based on one of six specific category codes);
- Whether the contractor or subcontractor is a woman-owned business;
- Whether the listed contractor is a prime contractor or a subcontractor;
- The subcontractor ID number for each prime and subcontractor (usually the federal tax ID number of the business);
- The address of each contractor and subcontractor; and
- Whether the contractor or subcontractor is a Section 3 Business Entity (see immediately following section).

SECTION 3 REQUIREMENTS

“Section 3” (of the Housing and Urban Development Act of 1968) mandates that federally funded construction and related activities take affirmative action to provide employment, training and business opportunities for low-income project area residents and businesses. This data is also reported on Form HUD-2516 (attached). There are specific dollar thresholds that trigger Section 3 but you should assume your project is covered if it is federally funded unless your Contract Monitor advises you otherwise. You are required to report specific information for all covered contracts, and to take specific additional affirmative actions if the dollar value of your contract exceeds \$100,000. If the federal funding is a portion of the overall project cost, the ENTIRE project, regardless of funding sources, is covered.

Generally, the government entity awarding the covered funds, and you as the contractor if the contract value exceeds \$100,000, must:

COMPLIANCE THRESHOLDS:

- Award a minimum of 10% of the total dollar amount of construction contracts or subcontracts to Section 3 Businesses (defined below);
- Award a minimum of 3% of the total dollar amount of non-construction contracts or subcontracts to Section 3 Businesses (defined below); and
- Hire a minimum of 30% of NEW hires on the contract or subcontract that are Section 3 residents (defined below):

OTHER REQUIREMENTS:

- Notify Section 3 Businesses and Residents about business and training opportunities;
- Notify Section 3 Businesses about available contracting opportunities;

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

- Notify all contractors and subcontractors on covered project of their Section 3 responsibilities;
- Include the Section 3 clause and requirements in all contracts and subcontracts;
- Facilitate training of Section 3 Residents and awarding of contracts to Section 3 Businesses;
- Cooperate with local government and HUD to achieve compliance by contractors and subcontractors;
- Ensure all contractors and subcontractors you use are not in violation of Section 3 requirements [**Make sure the contractors you are considering using are eligible – check on <https://www.epls.gov/>**];
- Document compliance activities; and
- Provide data and documentation for reports.

DEFINITIONS:

- **Section 3 Business** (certified to have)
 - At least 51% owned by Sec 3 resident, or
 - At least 30% full time employees Sec 3 residents (or were within 3 years of date of first employment), or
 - Evidence of a commitment to subcontract at least 25% of the dollar award to Sec 3 Business Concerns.
- **Section 3 Resident** (certified to be)
 - Sec 3 Resident – a public housing resident or low or very-low income person within the covered assistance area
- **New Hire**
 - A full time employee for a new permanent, temporary or seasonal position created during the expenditure of Sec 3 covered assistance.

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

Many of the applicable regulations are referenced or described in a particular section of the Code of Federal Regulations (CFR) at 24 CFR 570: Community Development Block Grants. The following list is directly from the Table of Contents of that regulation. Items that appear in bold type are directly relevant to ALL federally funded construction contracts, unless otherwise noted.

§ Part 35 Lead-based paint. **[Do not disturb surfaces without following appropriate specific safety protocols. Test where required.]**

see [24 CFR 570 Subpart K Table of Contents] Subpart K — Other Program Requirements

§ 570.600 General

§ 570.601 Public Law 88-352 [Title VI of the Civil Rights Act of 1964]; Public Law 90-284 [the Fair Housing Act]; Executive Order 11063 [Equal Opportunity in Housing] **[there is an affirmative mandate to further the Fair Housing Act as amended]**

§ 570.602 Section 109 of the Act [**“requiring that no person in the United States shall on the ground of race, color, religion, national origin, sex, age, or handicap be excluded from participation in, be denied the benefits of, or be subjected to discrimination under, any program or activity funded in whole or in part with community development funds made available pursuant to the Act.”**]

§ 570.603 Labor standards. **[all workers on construction projects must be paid at least the hourly Wage Rate specified for the specific project, must be paid at least weekly, and must be paid overtime for hours worked above 40 per week -**

§ 570.604 Environmental standards.

§ 570.605 National Flood Insurance Program.

§ 570.606 Displacement, relocation, acquisition, and replacement of housing.

§ 570.607 Employment and contracting opportunities. **[contractors and subcontractors on federally funded construction contracts must take AFFIRMATIVE ACTION and avoid discrimination in “employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rate of pay, or other forms of compensation and selection for training and apprenticeship.” You MUST ensure minority participation in the bidding process and actual contract AWARD phases; mere gestures are NOT ADEQUATE]**

[Section 3] For projects whose total cost exceeds \$100,000 - You are required to make opportunities available for jobs and small local businesses owned by low- moderate-income area residents to participate in the project. This can include such things as hiring and/or providing training to local residents or contractors to work on the project and purchasing materials from local merchants. If your project is located in an area in which this is infeasible, you can also fulfill this requirement by providing these opportunities to such individuals and businesses located elsewhere within Montgomery County. Please contact your contract manager for additional details. Included with this packet is a summary sheet on 24 CFR 135, Section 3 Clause which describes this general requirement.

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

§ 570.608 **LEAD BASE PAINT (For Construction or Rehabilitation)** The use of all lead-base paint is prohibited, and the disturbance of certain existing surfaces which may potentially contain lead paint is subject to HUD Lead-Base Paint Regulations described at 24 C.F.R. §570.608. DHCA and HUD consider reduction of exposure to lead paint hazards a priority. Appropriate certification of all contractors is required. Grantees that disturb, or cause to be disturbed, surfaces potentially containing lead paint products must follow the specific protocols mandated by the state of Maryland and by HUD. Testing, notification and/or abatement may be required. Additional information may be obtained by calling 1-800-424-LEAD.

§ 570.609 Use of debarred, suspended or ineligible contractors or subrecipients.

§ 570.610 Uniform administrative requirements and cost principles.
§ 570.611 Conflict of interest.
§ 570.612 Executive Order 12372. [Intergovernmental Review of Federal Programs]
§ 570.613 Eligibility restrictions for certain resident aliens.
§ 570.614 Architectural Barriers Act and the Americans with Disabilities Act.

Attached please also find:

“**FEDERAL LABOR STANDARDS PROVISIONS**” – [HUD-4010] - document prepared by HUD: overview of the contracting and employment requirements.

“**SECTION 3 CLAUSE**” - from [24 CFR 135] - Employment Opportunities for Businesses and Lower Income Persons In Connection With Assisted Projects.

The **SPECIFIC WAGE RATE** That Applies to **THIS** Project.

FORM A: WH-347

FORM B: HUD 4710

FORM C: HUD 2516

FORM D: HUD-60002

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

Federal Labor Standards Provisions U.S. Department of Housing and Urban Development
Office of Labor Relations (HUD-4010)

(Note: Highlights added for emphasis)

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) Minimum Wages. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and **not less often than once a week**, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

PROJECT NAME: Montclair Manor Community Lighting and Site Improvements

PROJECT NUMBER: 1103283

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part Previous editions are obsolete Page 2 of 5 form **HUD-4010** (06/2009) ref. Handbook 1344.1 of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. **Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid.** Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor **shall submit weekly for each week in which any contract work is performed a copy of all payrolls** to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

PROJECT NAME: Montclair Manor Community Lighting and Site Improvements

PROJECT NUMBER: 1103283

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5 (a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete; Previous editions are obsolete Page 3 of 5 form **HUD-4010** (06/2009) ref. Handbook 1344.1 (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage

PROJECT NAME: Montclair Manor Community Lighting and Site Improvements

PROJECT NUMBER: 1103283

rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by Previous editions are obsolete Page 4 of 5 form **HUD-4010** (06/2009) ref. Handbook 1344.1 the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract

6. Subcontracts. The contractor or subcontractor **will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require**, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a **rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.**

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be

PROJECT NAME: Montclair Manor Community Lighting and Site Improvements

PROJECT NUMBER: 1103283

computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in sub paragraph (1) of this paragraph. Previous editions are obsolete Page 5 of 5 form **HUD-4010** (06/2009) ref. Handbook 1344.1

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

SECTION 3 CLAUSE

(24 CFR Part 135-38)

All Section 3 covered contracts shall include the following clause (referred to as the Section 3 clause):

- A. The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701 u (Section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall to the greatest ex-tent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implements section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.
- C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers's representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
- D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriated action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.
- E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.
- F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of the contract for default, and debarment or suspension from future HUD assisted contracts.
- G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract Section 7(b) requires that to the greatest extent feasible (i) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contract and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

GENERAL WAGE DECISION

(for **THIS** project) :

This is the specific listing of minimum wage rates applicable to **THIS** project. (It is not applicable to, and may not be used for, any other project). All pages of this Wage Decision must be prominently displayed in a location readily accessible to all workers on covered projects at all times, and accompanied by the posters previously referenced. **Please carefully review the work classifications listed to ensure there is a category for all persons who will be performing work at the site.** Contact the Contract Monitor administering this grant with any questions or to obtain missing classifications. **If additional classifications are required, it is important to notify the Contract Monitor IMMEDIATELY so that construction is not delayed.**

THERE SHOULD BE A DATED PROJECT-SPECIFIC WAGE RATE DETERMINATION FOR THIS PROJECT ATTACHED IMMEDIATELY FOLLOWING THIS PAGE - IF NOT, CONTACT THE CONTRACT MONITOR IMMEDIATELY

PROJECT NAME: Montclair Manor Community Lighting and Site Improvements
PROJECT NUMBER: 1103283

General Decision Number: MD190073 01/04/2019 MD73

Superseded General Decision Number: MD20180088

State: Maryland

Construction Type: Highway

County: Montgomery County in Maryland.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date
0 01/04/2019

SUMD2018-015 07/20/2018

	Rates	Fringes
CARPENTER		
Carpenter.....	\$ 28.36	11.59
Shoring Scaffold Builder....	\$ 26.66	14.70
CEMENT MASON.....	\$ 22.00	2.69
ELECTRICIAN.....	\$ 36.10	16.98
IRONWORKER (Fence Erector).....	\$ 26.38	16.44
IRONWORKER, REINFORCING.....	\$ 31.00	14.96
IRONWORKER, STRUCTURAL.....	\$ 31.50	3.45

PROJECT NAME: Montclair Manor Community Lighting and Site Improvements
PROJECT NUMBER: 1103283

LABORER

Air Tool Operator.....	\$ 20.00	7.26
Asphalt Paver.....	\$ 20.00	7.26
Asphalt Raker.....	\$ 21.45	5.05
Blaster-Dynamite.....	\$ 20.00	7.26
Burner.....	\$ 20.00	7.26
Common.....	\$ 21.45	5.05
Concrete Puddler.....	\$ 21.45	5.05
Concrete Surfacer.....	\$ 20.00	7.26
Concrete Tender.....	\$ 21.45	5.05
Concrete Vibrator.....	\$ 21.45	5.05
Density Gauge.....	\$ 21.45	5.05
Fireproofers-Mixer.....	\$ 21.45	5.05
Flagger.....	\$ 21.45	5.05
Grade Checker.....	\$ 21.45	5.05
Hand Roller.....	\$ 21.45	5.05
Hazardous Material Handler..	\$ 20.00	7.26
Jackhammer.....	\$ 21.45	5.05
Landscaping.....	\$ 21.45	5.05
Layout.....	\$ 21.45	5.05
Luteman.....	\$ 21.45	5.05
Mason Tender.....	\$ 20.00	7.26
Mortar Mixer.....	\$ 21.45	5.05
Pipelayer.....	\$ 20.00	7.26
Plasterer-Handler.....	\$ 21.45	5.05
Scaffold Builder.....	\$ 20.00	7.26
Tamper.....	\$ 21.45	5.05

MILLWRIGHT.....\$ 30.06 15.30

PAINTER: Bridge.....\$ 36.13 11.49

PILEDRIVERMAN.....\$ 29.94 10.98

POWER EQUIPMENT OPERATOR

Asphalt Distributor.....	\$ 21.35	2.37
Backhoe.....	\$ 30.65	7.60
Boom Truck.....	\$ 26.55	7.60
Broom/Sweeper.....	\$ 22.84	7.90
Bulldozer.....	\$ 24.00	0.46
Concrete Curb and Gutter		
Pan.....	\$ 28.71	a
Concrete Pump.....	\$ 42.55	3.05
Crane.....	\$ 36.92	7.60+a
Drill-Rig.....	\$ 33.19	20.13
Excavator.....	\$ 19.50	3.51+a
Forklift.....	\$ 30.69	20.13
Gradall.....	\$ 32.11	7.60
Guard Rail Post Driver.....	\$ 24.85	5.58
Loader.....	\$ 29.00	7.77
Mechanic.....	\$ 27.40	7.40
Milling Machine.....	\$ 26.55	7.60
Paver.....	\$ 27.00	7.60
Roller-Asphalt.....	\$ 22.84	7.60
Roller-Earth.....	\$ 20.00	3.94
Screed.....	\$ 20.20	6.53
Skid Steer (Bobcat).....	\$ 27.00	4.77
Trencher.....	\$ 30.00	4.02
Vacuum Truck.....	\$ 26.27	

TRUCK DRIVER

Concrete Pump.....	\$ 26.75	6.15
Dump.....	\$ 19.60	4.36
Dump-Articulating.....	\$ 17.50	3.51
Flatbed.....	\$ 22.36	6.27
Lowboy.....	\$ 23.70	2.52

PROJECT NAME: Montclair Manor Community Lighting and Site Improvements
PROJECT NUMBER: 1103283

Tack/Tar Truck.....	\$ 19.81	6.53
Tandem.....	\$ 21.70	2.52
Tractor Trailer.....	\$ 20.14	6.53
Water.....	\$ 19.67	6.53

- a. PAID HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day.
- b. PAID VACATIONS: Employees with 1 year service-1 week paid vacation; 2 years service-2 weeks paid vacation; 10 years service-3 weeks paid vacation.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing

PROJECT NAME: Montclair Manor Community Lighting and Site Improvements
PROJECT NUMBER: 1103283

the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.)

PROJECT NAME: Montclair Manor Community Lighting and Site Improvements
PROJECT NUMBER: 1103283

and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

FORM A – FORM WH-347



U.S. Wage and Hour Division

Rev. Dec. 2008

OMB No.: 1215-0149
 Expires: 12/31/2011

PAYROLL
 (For Contractor's Optional Use; See Instructions at www.dol.gov/esai/whd/forms/wh347instr.htm)

U.S. Department of Labor
 Employment Standards Administration
 Wage and Hour Division

Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

NAME OF CONTRACTOR OR SUBCONTRACTOR ADDRESS

PAYROLL NO. PROJECT AND LOCATION PROJECT OR CONTRACT NO.

(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER OF WORKER	(2) EXEMPTIONS OR EXEMPTIONS	(3) WORK CLASSIFICATION	(4) DAY AND DATE	(5)		(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS			(9) NET WAGES FOR WEEK	
				HOURS WORKED EACH DAY	TOTAL HOURS			FICA	WITH- HOLDING TAX	OTHER		TOTAL DEDUCTIONS

While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to report to the information collection contained in 29 C.F.R. § 3.355(b). The Cost-Benefit Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "submit weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 3.356(a)(2)(i) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are complete and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

Public Burden Statement
 We estimate that it will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, ESA, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W., Washington, D.C. 20210

(over)

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

— Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION
REMARKS:	
NAME AND TITLE	SIGNATURE
THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1007 OF TITLE 16 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE.	

Date _____
 I, _____ (Name of Signatory Party) _____ (Title)
 do hereby state:

(1) That I pay or supervise the payment of the persons employed by _____ (Contractor or Subcontractor) _____ on the _____ (Building or Work) _____, that during the payroll period commencing on the _____ day of _____, and ending the _____ day of _____, all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said _____ (Contractor or Subcontractor) _____ from the full weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part 3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. 967; 40 U.S.C. § 3145), and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete, that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract, that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That: (b) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS
 — in addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in section 4(c) below.

PROJECT NAME: Montclair Manor Community Lighting and Site Improvements

PROJECT NUMBER: 1103283

FORM A – FORM WH-347 INSTRUCTIONS

Instructions For Completing Payroll Form, WH-347

General: Form WH-347 has been made available for the convenience of contractors and subcontractors required by their Federal or Federally-aided construction-type contracts and subcontracts to submit weekly payrolls. Properly filled out, this form will satisfy the requirements of Regulations, Parts 3 and 5 (29 C.F.R., Subtitle A), as to payrolls submitted in connection with contracts subject to the Davis-Bacon and related Acts.

While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) requires contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) Regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

Under the Davis-Bacon and related Acts, the contractor is required to pay not less than prevailing wage, including fringe benefits, as predetermined by the Department of Labor. The contractor's obligation to pay fringe benefits may be met either by payment of the fringe benefits to bona fide benefit plans, funds or programs or by making payments to the covered workers (laborers and mechanics) as cash in lieu of fringe benefits.

This payroll provides for the contractor to show on the face of the payroll all monies to each worker, whether as basic rates or as cash in lieu of fringe benefits, and provides for the contractor's representation in the statement of compliance on the payroll (as shown on page 2) that he/she is paying for fringe benefits required by the contract and not paid as cash in lieu of fringe benefits. Detailed instructions concerning the preparation of the payroll follow:

Contractor or Subcontractor: Fill in your firm's name and check appropriate box.

Address: Fill in your firm's address.

Payroll No.: Beginning with the number "1", list the payroll number for the submission.

For Week Ending: List the workweek ending date.

Project and Location: Self-explanatory.

Project or Contract No.: Self-explanatory.

Column 1 - Name and Individual Identifying Number of Worker: Enter each worker's full name and an individual identifying number (e.g., last four digits of worker's social security number) on each weekly payroll submitted.

Column 2 - No. of Withholding Exemptions: This column is merely inserted for the employer's convenience and is not a requirement of Regulations, Part 3 and 5.

Column 3 - Work Classifications: List classification descriptive of work actually performed by each laborer or mechanic. Consult classification and minimum wage schedule set forth in contract specifications. If additional classifications are deemed necessary, see Contracting Officer or Agency representative. An individual may be shown as having worked in more than one classification provided an accurate breakdown or hours worked in each classification is maintained and shown on the submitted payroll by use of separate entries.

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

Column 4 - Hours worked: List the day and date and straight time and overtime hours worked in the applicable boxes. On all contracts subject to the Contract Work Hours Standard Act, enter hours worked in excess of 40 hours a week as "overtime".

Column 5 - Total: Self-explanatory

Column 6 - Rate of Pay (Including Fringe Benefits): In the "straight time" box for each worker, list the actual hourly rate paid for straight time worked, plus cash paid in lieu of fringe benefits paid. When recording the straight time hourly rate, any cash paid in lieu of fringe benefits may be shown separately from the basic rate. For example, "\$12.25/.40" would reflect a \$12.25 base hourly rate plus \$0.40 for fringe benefits. This is of assistance in correctly computing overtime. See "Fringe Benefits" below. When overtime is worked, show the overtime hourly rate paid plus any cash in lieu of fringe benefits paid in the "overtime" box for each worker; otherwise, you may skip this box. See "Fringe Benefits" below. Payment of not less than time and one-half the basic or regular rate paid is required for overtime under the Contract Work Hours Standard Act of 1962 if the prime contract exceeds \$100,000. In addition to paying no less than the predetermined rate for the classification which an individual works, the contractor must pay amounts predetermined as fringe benefits in the wage decision made part of the contract to approved fringe benefit plans, funds or programs or shall pay as cash in lieu of fringe benefits. See "FRINGE BENEFITS" below.

Column 7 - Gross Amount Earned: Enter gross amount earned on this project. If part of a worker's weekly wage was earned on projects other than the project described on this payroll, enter in column 7 first the amount earned on the Federal or Federally assisted project and then the gross amount earned during the week on all projects, thus "\$163.00/\$420.00" would reflect the earnings of a worker who earned \$163.00 on a Federally assisted construction project during a week in which \$420.00 was earned on all work.

Column 8 - Deductions: Five columns are provided for showing deductions made. If more than five deduction are involved, use the first four columns and show the balance deductions under "Other" column; show actual total under "Total Deductions" column; and in the attachment to the payroll describe the deduction(s) contained in the "Other" column. All deductions must be in accordance with the provisions of the Copeland Act Regulations, 29 C.F.R., Part 3. If an individual worked on other jobs in addition to this project, show actual deductions from his/her weekly gross wage, and indicate that deductions are based on his gross wages.

Column 9 - Net Wages Paid for Week: Self-explanatory.

Totals - Space has been left at the bottom of the columns so that totals may be shown if the contractor so desires.

Statement Required by Regulations, Parts 3 and 5: While the "statement of compliance" need not be notarized, the statement (on page 2 of the payroll form) is subject to the penalties provided by 18 U.S.C. § 1001, namely, a fine, possible imprisonment of not more than 5 years, or both. Accordingly, the party signing this statement should have knowledge of the facts represented as true.

Items 1and 2: Space has been provided between items (1) and (2) of the statement for describing any deductions made. If all deductions made are adequately described in the "Deductions" column above, state "See Deductions column in this payroll." See "FRINGE BENEFITS" below for instructions concerning filling out paragraph 4 of the statement.

Item 4 FRINGE BENEFITS - Contractors who pay all required fringe benefits: If paying all fringe benefits to approved plans, funds, or programs in amounts not less than were determined in the applicable wage decision of the Secretary of Labor, show the basic cash hourly rate and overtime rate paid to each worker on the face of the payroll and check paragraph 4(a) of the statement on page 2 of the WH-347 payroll form to indicate the payment. Note any exceptions in section 4(c).

Contractors who pay no fringe benefits: If not paying all fringe benefits to approved plans, funds, or programs in amounts of at least those that were determined in the applicable wage decision of the Secretary of Labor, pay any remaining fringe benefit amount to each laborer and mechanic and insert in the "straight time" of the "Rate of Pay" column of the payroll an amount not less than the predetermined rate for each classification plus the amount of fringe

PROJECT NAME: Montclair Manor Community Lighting and Site Improvements

PROJECT NUMBER: 1103283

benefits determined for each classification in the application wage decision. Inasmuch as it is not necessary to pay time and a half on cash paid in lieu of fringe benefits, the overtime rate shall be not less than the sum of the basic predetermined rate, plus the half time premium on basic or regular rate, plus the required cash in lieu of fringe benefits at the straight time rate. In addition, check paragraph 4(b) of the statement on page 2 the payroll form to indicate the payment of fringe benefits in cash directly to the workers. Note any exceptions in section 4(c).

Use of Section 4(c), Exceptions

Any contractor who is making payment to approved plans, funds, or programs in amounts less than the wage determination requires is obliged to pay the deficiency directly to the covered worker as cash in lieu of fringe benefits. Enter any exceptions to section 4(a) or 4(b) in section 4(c). Enter in the Exception column the craft, and enter in the Explanation column the hourly amount paid each worker as cash in lieu of fringe benefits and the hourly amount paid to plans, funds, or programs as fringe benefits. The contractor must pay an amount not less than the predetermined rate plus cash in lieu of fringe benefits as shown in section 4(c) to each such individual for all hours worked (unless otherwise provided by applicable wage determination) on the Federal or Federally assisted project. Enter the rate paid and amount of cash paid in lieu of fringe benefits per hour in column 6 on the payroll. See paragraph on "Contractors who pay no fringe benefits" for computation of overtime rate.

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

FORM B – FORM - 4710

Agency Name:	Agency Type: [e.g., CDBG, PHA, TDHE/IHA]	State:	LR2000 Agency ID #: (HUD Use Only)
Period Covered: Check One and Enter Year(s)			
<input type="checkbox"/> Period 1: October 1, _____ to March 31, _____		<input type="checkbox"/> Period 2: April 1, _____ to September 30, _____	
Agency Contact Person:		Agency Contact Phone/E-mail:	

PART I - CONTRACTING ACTIVITY*
Pertains ONLY to projects awarded during the reporting period.

- Number of prime contracts subject to the Davis-Bacon and Related Acts (DBRA) and/or the Contract Work Hours and Safety Standards Act (CWHSSA) awarded this period
Note: Do not include contracts included in previous semi-annual reports
- Total dollar amount of prime contracts reported in item 1 above \$
- List for each contract awarded this period:

Project	Contract	Wage Decision Number	Wage Decision Lock-In Date
<i>Name/Number</i>	<i>Amount</i>		
<i>EXAMPLE:</i> "Boy's Club Renovation # CD54005-65"	"\$0,000,000.00"	"FL040001/Mod 3, 6/25/04, Building"	"07/02/04 bid open date" ◀Lock

*Use additional pages if necessary

WHAT IS THE LOCK-IN DATE? For contracts entered into pursuant to competitive bidding procedures, the bid opening date "locks-in" the wage decision **provided** that the contract is awarded within 90 days. If the contract is awarded more than 90 days after bid opening, the contract award date 'locks-in' the wage decision. For contracts, purchase orders or other agreements for which there is no bid opening or award date, use the construction start date as the lock-in date. However, for projects receiving assistance under Section 8 of the U.S. Housing Act of 1937 or contracts involving a *project* wage determination, the lock-in rules may vary from above. See Department of Labor Regulations, 29 CFR, Part 1, Section 1.6 and/or HUD Handbook 1344.1, or consult the HUD Labor Relations staff.

WHAT IT ISN'T: Do not use the wage decision publication date, unless that happens to correspond to one of the trigger events described above. If you are not sure about any of this, please feel free to contact the Labor Relations staff in your state or region.

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvments**
PROJECT NUMBER: 1103283

Agency Name:	Agency Type: [e.g., CDBG, PHA, TDHE/IHA]	State:	LR2000 Agency ID #: (HUD Use Only)
Period Covered: Check One and Enter Year(s)			
<input type="checkbox"/> Period 1: October 1, _____ to March 31, _____		<input type="checkbox"/> Period 2: April 1, _____ to September 30, _____	
Agency Contact Person:		Agency Contact Phone/E-mail:	

PART II - ENFORCEMENT ACTIVITY*
Pertains to all projects, not just contract(s) awarded during the reporting period.

4. Number of employers against whom **complaints** were received (list employers and projects involved below):

Employer	Project(s)
-----------------	-------------------

5. (a) Number of cases (employers) referred to HUD Labor Relations for investigation or §5.11 hearing (list referrals below):

(b) Number of cases (employers) referred to the Department of Labor (DOL) for investigation or §5.11 hearing (list referrals below):

Employer	Project	HUD or DOL	Invest. Or Hearing
-----------------	----------------	-------------------	---------------------------

6. (a) **Number of workers for whom wage restitution was collected/disbursed:**
Report only once; if you previously reported workers for whom restitution was collected, do not report the same workers when funds are disbursed. Include workers to whom restitution was paid directly by the employer.

(b) **Total amount of straight time wage restitution collected/disbursed during this period:**
Report only once; if you report funds collected, do not report the disbursement. Include restitution amounts paid directly by the employer as reported on correction certified payrolls.

(c) **Total amount of CWHHSA overtime wage restitution collected/disbursed during this period:**
Report only once; if you report funds collected, do not report the disbursement. Include restitution amounts paid directly by the employer as reported on correction certified payrolls.

(d) **Total amount of liquidated damages collected:**

* Use additional pages if necessary

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

FORM B – FORM 4710 INSTRUCTIONS

Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining data needed, and completing and reviewing the collection of information. The information is considered non-sensitive and does not require special protection. This information is required to obtain benefits. This agency may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB control number.

All Federal agencies administering programs subject to Davis-Bacon wage provisions are required by Department of Labor (DOL) regulations (29 CFR Part 5, Section 5.7(b)) to submit a report of all new covered contracts/projects and all enforcement activities each six months. In order for HUD to comply with this requirement, it must collect contract and enforcement information from local agencies that administer HUD-assisted programs subject to Davis-Bacon requirements. HUD requests that local agencies complete and submit a Semi-annual Enforcement Report each six months.

Local agencies and HUD must retain a copy of the Semi-annual Enforcement Report in its files.

*Please follow these instructions while compiling the **Semi-Annual Labor Standards Enforcement Report for Local Contracting Agencies (HUD Programs) (form HUD-4710)**.*

Introduction

Department of Labor (DOL) Regulations 29 CFR §5.7(b) require Federal agencies administering programs subject to Davis-Bacon and Related Act (DBRA) and Contract Work Hours and Safety Standards Act (CWHSSA) labor standards to furnish a Semi-Annual Labor Standards Enforcement Report to the Administrator of the Wage and Hour Division. Some HUD programs are administered by state and local agencies for labor standards compliance. HUD must collect information from such agencies in order to capture enforcement activities for all HUD programs in its reports to DOL.

Reporting Periods: **Period 1 October 1 through March 31**

Period 2 April 1 through September 30

Report Format: Each agency report consists of two parts:

Part I concerns contracting activity for work awarded during the reporting period;

Part II concerns enforcement activity for all contracts, regardless of the award date.

The HUD Labor Relations staff for your area will send a courtesy reminder shortly before the due date about preparing the report and will remind you of the date your report is due. However, you should maintain accurate records throughout the year of relevant contract information so that you can submit the report timely.

Definitions and Guidance

Part I - Contracting Activity - This part concerns only contracts that were **awarded** during this period. *Do not* include contracts that were awarded prior to this period even though the contracts may still be underway. *Do* include work subject to purchase order or other form of agreement, even if there is no formal contract award.

Item 1. Enter the total number of prime contracts subject to DBRA/CWHSSA awarded during this period. Track contracts by award or start of construction - **do not** track by bid opening date. Public Housing Authorities (PHAs), Tribally-designated Housing Entities (TDHEs)/Indian Housing Authorities (IHAs): Include force account work that is subject to DBRA/CWHSSA.

Item 2. Enter the total dollar amount of the contracts and/or PHA/TDHE/IHA force account work reported in Item 1.

Item 3. List each project/contract name, brief descriptive information, number or unique identifier, dollar amount, the wage decision and modification number in the contract, bid opening date, contract award date, and construction start date. Identify which milestone date triggered the wage decision "lock-in" (bid opening date, contract award date or start of construction date, as appropriate). If the project was not subject to sealed bids, indicate "NA" for bid opening date and proceed to identify the other dates.

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

Part II - Enforcement Activity - This part concerns *all* enforcement activity no matter when the contract was awarded or construction began.

- Item 4.** Enter the number of **employers** (contractors, subcontractors, lower-tier subcontractors) against whom complaints were received during the report period. List the names of the employers against whom complaints were received and the projects involved.
- Item 5.** Enter the number of employers that were referred to HUD Labor Relations or DOL staff for investigations, for hearings on appeal and/or debarment hearings. List the employer, project, and agency (HUD or DOL) to which the case was referred, and the reason for referral - investigation, appeal hearing (DOL Regulations 29 CFR Part 5, Section §5.11) and/or debarment (DOL Regulations 29 CFR Part 5, Section §5.12) hearing.
- Item 6.** Enter information relative to wage restitution that was **collected and/or disbursed** during the report period. This includes restitution disbursed by the agency; restitution reported on certified payroll correction reports, amounts collected but not disbursed because workers could not be found. Report straight time wage restitution separate from Contract Work Hours and Safety Standards Act (CWHSSA) overtime wage restitution. Also list liquidated damages collected for CWHSSA overtime violations.

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

FORM C – HUD 2516 (with instructions)

NOTE: The data and instructions for this form are provided below. The format has been modified to enhance readability on letter size paper. A copy of the form follows.

1. Grantee/ProjectOwner/Developer/Sponsor/Builder/Agency
2. Location (City, State, Zip Code)
3. Name of Contact Person & Phone Number (including Area Code)
4. Reporting Period Oct 1 – Sep 30 (Annual –FY).
5. Program Code (for Public and Indian Housing Only) (see “5. Program Codes” below)
6. Date Submitted to Field Office.
7. (Tabular Format)
 - 7a. Grant/Project Number or HUD Case Number or other identification of property, subdivision, dwelling unit, etc.
 - 7b. Amount of Contract or Subcontract
 - 7c. Type of Trade Code (see “7c. Type of Trade Codes: Housing/Public Housing below)
 - 7d. Contractor or Subcontractor Business Racial/Ethnic (See “7d: Racial/Ethnic Codes” below)
 - 7e. Woman Owned Business (Yes or No)
 - 7f. Prime Contractor Identification (ID) Number
 - 7g. Section 3 (Yes or No) for Prime Contractor
 - 7h. Subcontractor Identification (ID Number)
 - 7i. Section 3 (Yes or No) for Subcontractor
 - 7j. Contractor/Subcontractor Names and Address

5. Program Codes (Complete for Housing and Public and Indian Housing Programs only):

- 1= All insured, including Section 8
- 2= Flexible Subsidy
- 3= Section 8 Noninsured, Non-HFDA
- 4= Insured (Management)
- 5= Section 202
- 6= HUD-Held (Management)
- 7= Public/India Housing
- 8= Section 811

7c Type of Trade Codes: Housing/Public Housing

- 1= New Construction
- 2= Substantial Rehab
- 3= Repair
- 4= Service
- 5= Project Management
- 6= Professional
- 7= Tenant Services
- 8= Education/Training
- 9= Arch/Engrg. Appraisal
- 0= Other

7d: Racial/Ethnic Codes

- 1= White Americans
- 2= Black Americans
- 3= Native Americans
- 4= Hispanic Americans
- 5= Asian/Pacific Americans
- 6= Hasidic Jews

PROJECT NAME: Montclair Manor Community Lighting and Site Improvements

PROJECT NUMBER: 1103283

This report is to be completed by grantees, developers, sponsors, builders, agencies, and/or project owners for reporting contract and subcontract activities of \$10,000 or more under the following programs: Community Development Block Grants (entitlement and small cities); Urban Development Action Grants, Housing Development Grants; Multifamily Insured and Noninsured; Public and Indian Housing Authorities,; and contracts entered into by recipients of CDBG rehabilitation assistance.

Contracts/subcontracts of less than \$10,000 need be reported only if such contracts represent a significant portion of your total contracting activity. Include only contracts executed during this reporting period.

This form has been modified to capture Section 3 contract data in columns 7g and 7i. Section 3 requires that the employment and other economic opportunities generated by HUD financial assistance for housing and community development programs shall, to the greatest extent feasible, be directed towards low- and very low-income persons, particularly those who are recipients of government assistance for housing. Recipients using this form to report Section 3 contract data must also use Part I of form HUD-60002 (see **Form D** Attached) to report employment and training opportunities data.

Form HUD-2516 is to be completed for public and Indian housing and most community development programs. Form HUD-60002 is to be completed by all other HUD programs including State administered community development programs covered under Section 3. A Section 3 Contractor/subcontractor is a business concern that provides economic opportunities to low and very low-income residents of the metropolitan area (or nonmetropolitan county), including a business concern that is 51 person or more owned by low-income residents; or provides subcontracting or business development opportunities to businesses owned by low or low-income residents. Low and very low-income residents; include participants in Youth build programs established under Subtitle D of Title IV of the Cranston-Gonzalez National Affordable Housing Act.

The terms "low-income persons" and "very-low-income persons" have the same meanings given the terms in section 3(b)(2) of the United States Housing Act of 1937. Low-income persons means families (including single persons) whose incomes do not exceed 80 per centum of the median income for the area, as determined by the Secretary, with adjustments for smaller and larger families, except that the Secretary may establish income ceilings higher or lower than 80 per centum of the median for the area on the basis of the Secretary's findings that such variations are necessary because of prevailing levels of construction costs or unusually high or low-income families. Very low-income families (including single persons) whose incomes do not exceed 50 per centum of the median family income for the area, as determined by the Secretary with adjustments for smaller and larger families, except that the secretary may establish income ceilings higher or lower than 50 per centum of the median for the area on the basis of the Secretary's findings that such variations are necessary because of unusually high or low family incomes.

Submit two (2) copies of this report to your local HUD Office within ten (10) days after the end of the reporting period you checked in item 4 on the front. Complete item 7h. Only once for each contractor/subcontractor on each semi-annual report.

Enter the prime contractor's ID in items 7f. for all contacts and subcontracts. Include only contracts expected during this reporting period. PHAs/IHAS are to report all contracts/subcontracts.

Community Development Programs Instructions:

1. **Grantee:** Enter the name of the unit of government submitting this report.

3. **Contact Person:** Enter name and phone of person responsible for maintaining and submitting contract/subcontract data.

7a **Grant Number:** Enter the HUD Community Development Block Grant Identification Number (with dashes) For example: B-32-MC-25-0034. For Entitlement Programs and Small City multi-year comprehensive programs, enter the latest approved grant number.

7b. **Amount of Contract/Subcontract:** Enter the dollars amount rounded to the nearest dollar. If subcontractor ID number is provided in 7f, the dollar figure would be for the subcontract only and not for the prime contract.

7c. **Type of Trade:** Enter the numeric codes which best indicates the contractor's/subcontractor's service. If subcontractor ID number is provided in 7f., the type of trade code would be for the subcontractor only and not for the prime contractor.

7d. **Business Racial/Ethnic/Gender Code:** Enter the numeric code which indicates the racial/ethnic/gender character of the owner(s) and controller(s) of 51% of the business. When 51% or more is not owned and controlled by any single racial/ethnic/gender category, enter the code which seems most appropriate. If the subcontractor ID number is provided, the code would apply to the subcontractor and not to the prime contractor.

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

7e. **Woman Owned Business:** Enter Yes or No.

7f. **Contractor Identification (ID) Number:** Enter the Employer (IRS) Number of the Prime Contractor as the unique identifier for prime recipient of HUD funds. Note that the Employer (IRS) Number must be provided for each contract/subcontract awarded.

7g. **Section 3 Contractor:** Enter Yes or No.

7h. **Subcontractor Identification (ID) Number:** Enter the Employer (IRS) Number of the subcontractor as the unique identifier for each subcontract awarded from HUD funds. When the subcontractor ID Number is provided, the respective Prime Contractor ID Number must also be provided.

7i. **Section 3 Contractor:** Enter Yes or No.

7j. **Contractor/Subcontractor Name and Address:** Enter this information for each firm receiving contract/subcontract activity only one time on each report for each firm

(FORM FOLLOWS)

SUBGRANTEE FEDERAL LABOR STANDARDS ATTACHMENTS for CDBG/ESG (5/2018) Page 25 of 28

PROJECT NAME: Montclair Manor Community Lighting and Site Improvements
PROJECT NUMBER: 1103283

Contract and Subcontract Activity

U.S. Department of Housing and Urban Development

OMB Approval No.: 2535-0117 (exp. 11/30/2009)

Public Reporting Burden for this collection of information is estimated to average .50 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This information is voluntary. HUD may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB Control Number.

Executive Order 12421 dated July 14, 1983, directs the Minority Business Development Plans shall be developed by each Federal Agency and that these annual plans shall establish minority business development objectives. The information is used by HUD to monitor and evaluate MBE activities against the total program activity and the designated minority business enterprise (MBE) goals. The Department requires the information to provide guidance and oversight for programs for the development of minority business enterprise concerning Minority Business Development. If the information is not collected HUD would not be able to establish meaningful MBE goals nor evaluate MBE performance against these goals. While no assurances of confidentiality is pledged to respondents, HUD generally discloses this data only in response to a Freedom of Information request.

Privacy Act Notice - The United States Department of Housing and Urban Development, Federal Housing Administration, is authorized to solicit the information requested in this form by virtue of Title 12, United States Code, Section 1701 et seq., and regulations promulgated thereunder at Title 12, Code of Federal Regulations. It will not be disclosed or released outside the United States Department of Housing and Urban Development without your consent, except as required or permitted by law.

1. Grantee/Project Owner/Developer/Sponsor/Builder/Agency		Check if: PHA <input type="checkbox"/> IHA <input type="checkbox"/>	2. Location (City, State, ZIP Code)		
3a. Name of Contact Person			3b. Phone Number (including Area Code)		3c. Reporting Period <input type="checkbox"/> Oct. 1 - Sept. 30 (Annual-FY)
5. Program Code (Not applicable for CPD programs.) See explanation of codes at bottom of page. Use a separate sheet for each program code.					6. Date Submitted to Field Office

7a. Grant/Project Number or HUD Case Number or other identification of property, subdivision, dwelling unit, etc.	7b. Amount of Contract or Subcontract	7c. Type of Trade Code (See below)	7d. Contractor or Subcontractor Business Racial/Ethnic Code (See below)	7e. Woman Owned Business (Yes or No)	7f. Prime Contractor Identification (ID) Number	7g. Sec. 3 Subcontractor Identification (ID) Number	7h. Sec. 3 Subcontractor Identification (ID) Number	7j. Contractor/Subcontractor Name and Address						
								Name	Street	City	State	Zip Code		

- | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>7c: Type of Trade Codes:</p> <p>CPD:
 1 = New Construction
 2 = Education/Training
 3 = Other</p> <p>Housing/Public Housing:
 1 = New Construction
 2 = Substantial Rehab.
 3 = Repair
 4 = Service
 5 = Project Managt.</p> <p>6 = Professional
 7 = Tenant Services
 8 = Education/Training
 9 = Arch./Engrg. Appraisal
 0 = Other</p> | <p>7d: Racial/Ethnic Codes:</p> <p>1 = White Americans
 2 = Black Americans
 3 = Native Americans
 4 = Hispanic Americans
 5 = Asian/Pacific Americans
 6 = Hasidic Jews</p> | <p>5: Program Codes (Complete for Housing and Public and Indian Housing programs only):</p> <p>1 = All insured, including Section 8
 2 = Flexible Subsidy
 3 = Section 8 Noninsured, Non-HFDA
 4 = Insured (Management)</p> <p>5 = Section 202
 6 = HUD-Held (Management)
 7 = Public/Indian Housing</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Previous editions are obsolete. form HUD-2516 (8/98)

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

Part II: Contracts Awarded

1. Construction Contracts:

A. Total dollar amount of all contracts awarded on the project	\$
B. Total dollar amount of contracts awarded to Section 3 businesses	\$
C. Percentage of the total dollar amount that was awarded to Section 3 businesses	%
D. Total number of Section 3 businesses receiving contracts	

2. Non-Construction Contracts:

A. Total dollar amount all non-construction contracts awarded on the project/activity	\$
B. Total dollar amount of non-construction contracts awarded to Section 3 businesses	\$
C. Percentage of the total dollar amount that was awarded to Section 3 businesses	%
D. Total number of Section 3 businesses receiving non-construction contracts	

Part III: Summary

Indicate the efforts made to direct the employment and other economic opportunities generated by HUD financial assistance for housing and community development programs, to the greatest extent feasible, toward low- and very low-income persons, particularly those who are recipients of government assistance for housing. (Check all that apply.)

- Attempted to recruit low-income residents through: local advertising media, signs prominently displayed at the project site, contracts with the community organizations and public or private agencies operating within the metropolitan area (or nonmetropolitan county) in which the Section 3 covered program or project is located, or similar methods.
- Participated in a HUD program or other program which promotes the training or employment of Section 3 residents.
- Participated in a HUD program or other program which promotes the award of contracts to business concerns which meet the definition of Section 3 business concerns.
- Coordinated with Youthbuild Programs administered in the metropolitan area in which the Section 3 covered project is located.
- Other, describe below.

Public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This agency may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB number.

Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u, mandates that the Department ensures that employment and other economic opportunities generated by its housing and community development assistance programs are directed toward low- and very-low income persons, particularly those who are recipients of government assistance housing. The regulations are found at 24 CFR Part 135. The information will be used by the Department to monitor program recipients' compliance with Section 3, to assess the results of the Department's efforts to meet the statutory objectives of Section 3, to prepare reports to Congress, and by recipients as self-monitoring tool. The data is entered into a database and will be analyzed and distributed. The collection of information involves recipients receiving Federal financial assistance for housing and community development programs covered by Section 3. The information will be collected annually to assist HUD in meeting its reporting requirements under Section 808(e)(6) of the Fair Housing Act and Section 916 of the HCDA of 1992. An assurance of confidentiality is not applicable to this form. The Privacy Act of 1974 and OMB Circular A-108 are not applicable. The reporting requirements do not contain sensitive questions. Data is cumulative; personal identifying information is not included.

PROJECT NAME: **Montclair Manor Community Lighting and Site Improvements**

PROJECT NUMBER: 1103283

Form HUD-60002, Section 3 Summary Report, Economic Opportunities for Low- and Very Low-Income Persons.

Instructions: This form is to be used to report annual accomplishments regarding employment and other economic opportunities provided to low- and very low-income persons under Section 3 of the Housing and Urban Development Act of 1968. The Section 3 regulations apply to any *public and Indian housing programs* that receive: (1) development assistance pursuant to Section 5 of the U.S. Housing Act of 1937; (2) operating assistance pursuant to Section 9 of the U.S. Housing Act of 1937; or (3) modernization grants pursuant to Section 14 of the U.S. Housing Act of 1937 and to recipients of housing and community development assistance in excess of \$200,000 expended for: (1) housing rehabilitation (including reduction and abatement of lead-based paint hazards); (2) housing construction; or (3) other public construction projects; and to *contracts and subcontracts in excess of \$100,000* awarded in connection with the Section-3-covered activity.

Form HUD-60002 has three parts, which are to be completed for all programs covered by Section 3. Part I relates to *employment and training*. The recipient has the option to determine numerical employment/training goals either on the basis of the number of hours worked by new hires (columns B, D, E and F). Part II of the form relates to *contracting*, and Part III summarizes recipients' *efforts* to comply with Section 3.

Recipients or contractors subject to Section 3 requirements must maintain appropriate documentation to establish that HUD financial assistance for housing and community development programs were directed toward low- and very low-income persons.* A recipient of Section 3 covered assistance shall submit one copy of this report to HUD Headquarters, Office of Fair Housing and Equal Opportunity. Where the program providing assistance requires an annual performance report, this Section 3 report is to be submitted at the same time the program performance report is submitted. Where an annual performance report is not required, this Section 3 report is to be submitted by January 10 and, if the project ends before December 31, within 10 days of project completion. *Only Prime Recipients are required to report to HUD. The report must include accomplishments of all recipients and their Section 3 covered contracts and subcontractors.*

HUD Field Office: Enter the Field Office name.

1. Recipient: Enter the name and address of the recipient submitting this report.
2. Federal Identification: Enter the number that appears on the award form (with dashes). The award may be a grant, cooperative agreement or contract.
3. Dollar Amount of Award: Enter the dollar amount, rounded to the nearest dollar, received by the recipient.
- 4 & 5. Contact Person/Phone: Enter the name and telephone number of the person with knowledge of the award and the recipient's implementation of Section 3.
6. Reporting Period: Indicate the time period (months and year) this report covers.
7. Date Report Submitted: Enter the appropriate date.

8. Program Code: Enter the appropriate program code as listed at the bottom of the page.
9. Program Name: Enter the name of HUD Program corresponding with the "Program Code" in number 8.

Part I: Employment and Training Opportunities

Column A: Contains various job categories. Professionals are defined as people who have special knowledge of an occupation (i.e. supervisors, architects, surveyors, planners, and computer programmers). For construction positions, list each trade and provide data in columns B through F for each trade where persons were employed. The category of "Other" includes occupations such as service workers.

Column B: (Mandatory Field) Enter the number of new hires for each category of workers identified in Column A in connection with this award. New hire refers to a person who is not on the contractor's or recipient's payroll for employment at the time of selection for the Section 3 covered award or at the time of receipt of Section 3 covered assistance.

Column C: (Mandatory Field) Enter the number of Section 3 new hires for each category of workers identified in Column A in connection with this award. Section 3 new hire refers to a Section 3 resident who is not on the contractor's or recipient's payroll for employment at the time of selection for the Section 3 covered award or at the time of receipt of Section 3 covered assistance.

Column D: Enter the percentage of all the staff hours of new hires (Section 3 residents) in connection with this award.

Column E: Enter the percentage of the total staff hours worked for Section 3 employees and trainees (including new hires) connected with this award. Include staff hours for part-time and full-time positions.

Column F: (Mandatory Field) Enter the number of Section 3 residents that were trained in connection with this award.

Part II: Contract Opportunities

Block 1: Construction Contracts

Item A: Enter the total dollar amount of all contracts awarded on the project/program.

Item B: Enter the total dollar amount of contracts connected with this project/program that were awarded to Section 3 businesses.

Item C: Enter the percentage of the total dollar amount of contracts connected with this project/program awarded to Section 3 businesses.

Item D: Enter the number of Section 3 businesses receiving awards.

Block 2: Non-Construction Contracts

Item A: Enter the total dollar amount of all contracts awarded on the project/program.

Item B: Enter the total dollar amount of contracts connected with this project awarded to Section 3 businesses.

Item C: Enter the percentage of the total dollar amount of contracts connected with this project/program awarded to Section 3 businesses.

Item D: Enter the number of Section 3 businesses receiving awards.

Part III: Summary of Efforts – Self -explanatory

Submit one (1) copy of this report to the HUD Headquarters Office of Fair Housing and Equal Opportunity, at the same time the performance report is submitted to the program office. The Section 3 report is submitted by January 10. Include only contracts executed during the period specified in item 8. PHAs/IHAs are to report all contracts/subcontracts.

* The terms "low-income persons" and very low-income persons" have the same meanings given the terms in section 3 (b) (2) of the United States Housing Act of 1937. *Low-income persons* mean families (including single persons) whose incomes do not exceed 80 percent of the median income for the area, as determined by the Secretary, with adjustments for smaller and larger families, except that

The Secretary may establish income ceilings higher or lower than 80 percent of the median for the area on the basis of the Secretary's findings such that variations are necessary because of prevailing levels of construction costs or unusually high- or low-income families. *Very low-income persons* mean low-income families (including single persons) whose incomes do not exceed 50 percent of the median family income area, as determined by the Secretary with adjustments for smaller and larger families, except that the Secretary may establish income ceilings higher or lower than 50 percent of the median for the area on the basis of the Secretary's findings that such variations are necessary because of unusually high or low family incomes.

SPECIAL CONTRACT PROVISIONS
PROJECT DESCRIPTION

1 of 1

PROJECT DESCRIPTION

The project is located just north of Wheaton, Maryland near the Connecticut Estates neighborhood. Work under this Contract shall include all labor and materials necessary to complete the Montclair Manor Community Lighting and Site Improvements as described in these specifications and the drawings. This Contract requires removal of existing light poles and fencing and the installation of new lighting, fencing and some landscaping. The types, quantities, and characteristics of the various items of equipment are defined in the specifications and details for their installation are included in the drawings.

**SPECIAL CONTRACT PROVISIONS
SPECIFICATIONS**

SPECIFICATIONS

All work on this project shall conform to PART I – GENERAL PROVISIONS, PART II – TERMS AND CONDITIONS AND PART III – TECHNICAL REQUIREMENTS of the Maryland Department of Transportation, State Highway Administration's Specifications entitled, "Standard Specifications for Construction and Materials" dated July 2018, revisions thereof, or additions thereto, and the Special Provisions included in this Invitation For Bid.

The following also form a part of these specifications to the extent required by the reference thereto and are included in this Invitation for Bid:

- (a) Maryland State Highway Administration Book of Standards for Highway and Incidental Structures effective July 2018, and all additions and revisions thereto.
- (b) Montgomery County Department of Public Works and Transportation, "Design Standards, Revised June 2012" and all additions and revisions thereto.
- (c) "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control".
- (d) The U.S. Department of Transportation, Federal Highway Administration, "Manual on Uniform Traffic Control Devices for Streets and Highways, 2009 Dated May 2012", including all addenda, additions, and revisions thereto.
- (e) "Montgomery County Road Construction Code and Standard Specification, 1967", and all addenda thereto.
- (f) "AASHTO Standard Specifications for Highway Bridges" dated 2002 for design including all interim specifications through 2003.
- (g) Sediment Control Handbook – Montgomery County Department of Permitting Services, Water Resources Management Section.

NOTE: The Book of Standards for Highway and Incidental Structures is now available only on the Administration's Internet Site at www.marylandroads.com. The Book of Standards can be located by clicking on Business with SHA: Business Standards and Specifications: and Book of Standards for Highway and Incidental Structures. Hard copies of the Book of Standards will no longer be sold in the Cashiers Office and hard copy distributions of the Standard updates will no longer be made.

SPECIAL CONTRACT PROVISIONS
RIGHT-OF-WAY STATUS
APPROVAL OF MATERIALS

RIGHT-OF-WAY STATUS

The right-of-way and /or easements, required for the area occupied by the subject project to be constructed under this contract, will be available to the Contractor prior to award.

Any and all additional rights-of-way or easements not provided herein but required by the Contractor for operations, plant, equipment, storage of materials, access to disposal areas, etc., must be obtained and paid for by the Contractor at his/her own expense.

APPROVAL OF MATERIALS

The Contractor is reminded that he/she shall notify the Engineer in writing of the proposed sources and supplies from which he plans to obtain all materials required for completion of the project **as soon as possible after receiving the contracts for bonding**. No asbestos or asbestos-like material will be permitted in materials used in unbound surfaces such as surface treatment, stone shoulders, maintenance of traffic stone, etc., where vehicular or pedestrian traffic will be maintained.

THERE SHALL BE NO PAYMENT FOR UNAPPROVED MATERIALS.

SPECIAL CONTRACT PROVISIONS
REQUIRED PERMITS

REQUIRED PERMITS

The following permits are required for this project:

- **Building/Electrical Permit**

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GENERAL PROVISIONS

SPECIAL PROVISIONS
GP – SECTION 1
DEFINITIONS AND TERMS

1 of 7

GENERAL PROVISIONS

GP – SECTION 1
DEFINITIONS AND TERMS

GP-1.04 ABBREVIATIONS

1 **ADD:** following to the end of the list:

MSHA	Maryland State Highway Administration.
MCDOT	Montgomery County Department of Transportation
MCDPWT	Montgomery County Department of Public Works and Transportation
MCDGS	Montgomery County Department of General Services
MCDHCA	Montgomery County Department of Housing and Community Affairs
MNCPPC	Maryland National Capital Park and Planning Commission
WSSC	Washington Suburban Sanitary Commission
MOSH	Maryland Occupational Safety and Health
OSHA	Occupational Safety and Health Administration

GP-1.05 DEFINITIONS

2 **ADD:** The following:

Whenever used in these General Provisions or in other contract documents the following terms or abbreviations are used, the meaning shall be as follows:

"ADDENDUM" An addendum is a written or graphic instrument issued prior to the opening of Bids or Proposals, which clarifies, corrects or changes the solicitation.

"AUDIT PROVISIONS" Montgomery County shall have the right to examine the contractor's records pertaining to work performed under the contract to determine and verify the compliance with all contractual conditions. The County shall be granted access to such records at all reasonable times during the contract period and for three (3) years thereafter.

SPECIAL PROVISIONS
GP – SECTION 1
DEFINITIONS AND TERMS

2 of 7

"BORING LOGS" Subsurface soil and geological information is based upon test borings. Such information concerning the character of subsurface material has been obtained for the exclusive use of the County to aid in the project design. This information is not part of the plans, Bid, or contract. Bidders or Contractors should not consider any of the data supplied by the County or its authorized agents as positive representations of any conditions you will encounter in the field nor should this information be considered as a basis for the computation of the unit prices used for bidding purposes. There is no expressed or implied agreement that uniformity of material exists between the explored locations.

The County will not consider any claims for damages because of the Contractor's reliance upon the boring information and will not pay additional compensation beyond unit prices stipulated. This information does not relieve prospective bidders of the responsibility for making their own site investigation.

"CLAIMS FOR DAMAGE" Reference is herein made to Section 13 (Claims) and Section 14 (Disputes) of the Montgomery County Procurement Regulations.

If the Contractor shall claim compensation for any damage sustained by reason of the acts of the County, he shall within ten (10) days after sustaining the alleged damage, make a written statement to the Engineer (defined on the following page). The written statement shall contain:

1. An explanation of the claim, including reference to all Contract provisions upon which it is based;
2. The amount of the claim;
3. The facts upon which the claim is based;
4. All pertinent data and correspondence that the Contractor relies upon to substantiate the claim; and
5. A certification by a senior official, officer, or general partner of the Contractor, that, to the best of the person's knowledge and belief, the claim is made in good faith, supporting data are accurate and complete, and the amount requested accurately reflects the Contract adjustment for which the person believes the County is liable.

SPECIAL PROVISIONS
GP – SECTION 1
DEFINITIONS AND TERMS

3 of 7

The claim shall also contain itemized supporting data for the elements of cost the Contractor claims to have incurred or will incur. This data shall be in sufficient detail to permit analysis by the Engineer of material, labor, equipment, subcontract and overhead costs as well as profit and shall include all work covered by the claim, whether deleted, added or changed.

Whenever it shall appear to the Contractor that due to the exigencies of the work, he is about to incur damage, he shall at once notify the Engineer or his representative in writing of such fact and state the nature of his possible claim. Such notification shall not take the place of, but shall be in addition to, the written statement herein above required to be submitted within ten (10) days after the occurrence of an alleged cause for damage.

MERE PRESENTATION TO THE ENGINEER OF CHANGE IN CONSTRUCTION SCHEDULE EITHER GRAPHICALLY OR NARRATIVELY DOES NOT MEET THE NOTIFICATION REQUIREMENTS OF "CLAIMS FOR DAMAGE". IF THE CONTRACTOR INTENDS TO FILE A CLAIM, THE ENGINEER MUST BE FORMALLY NOTIFIED BY A LETTER SEPARATE FROM ANY PRESENTATION(S) ON THE CONSTRUCTION SCHEDULE OR SUBSEQUENT UPDATES.

"CONSTRUCTION DOCUMENTS TO SUCCESSFUL BIDDER" The successful bidder of the Contract will receive, upon award of the Contract, five sets of Plans and five Invitation for Bid books free of charge. Any additional Plan sets required by the Contractor may be purchased at the price noted in the Notice to Contractors. Individual Plan sheets may be purchased at the prevailing price as set by the County.

"COUNTY" - Shall mean Montgomery County, Maryland.

"DHCA" – The words "DHCA" (Department of Housing and Community Affairs) and "MCDHCA", also "MC-DHCA" (Montgomery County Department of Housing and Community Affairs) shall mean one and the same organization – namely, Montgomery County Department of Housing and Community Affairs

"ENGINEER" Shall mean the Director of the Montgomery County Department of Housing and Community Affairs (MCDHCA), acting directly or through a duly authorized representative within the scope of the particular duties assigned.

SPECIAL PROVISIONS
GP – SECTION 1
DEFINITIONS AND TERMS

4 of 7

The duly authorized representative shall be the MC-DHCA Construction Manager or Inspector.

"ETHICS PROVISIONS" Pursuant to the requirements of the Montgomery County Code 2004, as amended, Chapters 11B and 19A, notice is hereby given as follows:

a. GIFTS and KICKBACKS

Gifts. A bidder, offeror, or contractor must not make or offer to make a gift to a public employee which the public employee is prohibited from accepting under Chapter 19A. (§11B-51).

Kickbacks. A person must not:

- (1) provide, attempt to provide, or offer to provide a kickback;
- (2) solicit, accept, or attempt to accept a kickback;
- (3) include, directly or indirectly, the amount of a kickback in the price charged by the subcontractor to the contractor, or by the prime contractor in the price charged by the prime contractor, to the County; or
- (4) claim that the unlawfully induced contract or subcontract fulfills any legal, regulatory, or contractual requirement. (§11B-51).

b. COVENANT AGAINST CONTINGENT FEES

A person must not retain another to secure a contract from the County under an agreement that in exchange for the contract, the person will pay another a commission, percentage of the contract, or a contingent fee. (§11B-53).

SPECIAL PROVISIONS
GP – SECTION 1
DEFINITIONS AND TERMS

5 of 7

c. RESTRICTIONS IN EMPLOYMENT

Unless authorized by law or the Ethics Commission under Chapter 19A, a person while engaged in a procurement matter with the County must not employ or offer to employ a public employee if the duties of the public employee include significant participation in the procurement matter. Public employee, employ, and significant participation, as used in this section, are defined in Chapter 19A. (§11B-52).

No public employee or official may engage in outside employment unless approved by the ethics commission as not violating the provisions of the Charter of Chapter 19A. (§19A-12). The ethics commission may approve outside employment by granting a waiver authorized by Chapter 19A, and such approval shall be subject to the conditions of the waiver (§ 19A-8(a)).

Except as permitted by the ethics commission, an employee may not be employed by, or have a financial interest in, any entity subject to the authority of or contracting (including negotiations) with the government agency with which the employee is affiliated (§ 19A-11).

d. NON-DISCRIMINATION IN EMPLOYMENT

The Contractor agrees to comply with the non-discrimination in employment policies as required by §27-19, Montgomery County Code as well as all other applicable State and Federal laws and regulations regarding employment discrimination.

The Contractor assures the County that, in accordance with applicable law, it does not, and agrees that it will not, discriminate in any manner on the basis of race, color, religious creed, ancestry, national origin, age, sex, marital status, sexual orientation, gender identity, family responsibilities, or genetic status of any individual or disability of a qualified individual, or because of any reason that would not have been asserted but for the race, color, religious creed, ancestry, national origin, age, sex, marital status, disability, sexual orientation, gender identity, family responsibilities, or genetic status.

"EVIDENCE OF PAYMENT" – The Contractor shall furnish the Engineer with satisfactory evidence that all persons who have done work or furnished materials under the Contract and who have given written notices to the County before or within ten (10) days after the final completion and acceptance of the whole work done under the

SPECIAL PROVISIONS
GP – SECTION 1
DEFINITIONS AND TERMS

6 of 7

Contract, that any balance for such work or materials is due and unpaid, have been fully paid or satisfactorily secured. In case such evidence is not furnished as aforesaid, such amount as may be necessary to meet the claim of the said persons may be retained from any monies due to the Contractor under the Contract, until the liabilities aforesaid shall be fully discharged or such notices withdrawn.

"HAZARD AND TOXIC SUBSTANCES" As required by the "Federal Hazard Communication Standard" (29 CFR 1910.1200), and the Maryland "Access to Information about Hazard and Toxic Substances" law (including the requirements of Code of Maryland Regulations (COMAR) 09.12.33.02(2011)) to label each hazardous material or chemical container, and to provide Material Safety Data Sheets to the purchaser. Deliveries to Montgomery County must comply with these requirements.

"MCDPWT" The word MCDPWT (Montgomery County Department of Public Works and Transportation) shall mean MCDOT (Montgomery County Department of Transportation).

"M-NCPPC" The word M-NCPPC or MNCPPC shall mean the Maryland National Capital Park & Planning Commission.

"M-NCPPC Construction Manager", **"M-NCPPC Site Plan Enforcement Inspector"** and **"M-NCPPC Arborist Construction Manager"** shall mean M-NCPPC Construction Manager or Inspector as well as MC-DHCA Construction Manager or Inspector.

"MSHA" or **"ADMINISTRATION"** The word "MSHA" (Maryland State Highway Administration) or "Administration" shall mean MCDOT (Montgomery County Department of Transportation).

"NAME AND SIGNATURE REQUIREMENTS FOR BIDS AND CONTRACTS" The correct and full legal business name of the entity involved must be used on bids received and on contract(s) issued as a result of this solicitation. A trade name, i.e., a shortened or different name under which the firm does business, must not be used when the full legal name is different. All business entities must have names that comply with State law, which requires a suffix indicating the business entity status of that business (e.g., Inc., incorporated, LLC, LP, etc.). Trade names may be indicated by individuals or business entities with the individual or business entity name followed by "t/a" (trading as) or "d/b/a" (doing business as), respectively.

The signature on the bid, contract, amendment, or related correspondence must conform to the following: All signatures must be made by an authorized officer, partner, manager, member, or employee. The signing of an offer or a contract is a representation by the person signing that the person signing is authorized to do so on behalf of the offeror or contractor.

SPECIAL PROVISIONS
GP – SECTION 1
DEFINITIONS AND TERMS

7 of 7

No bids will be accepted unless submitted in ink or typewritten. Changes made to the prices bid prior to the opening must be done legibly and initialed by the offeror making the changes.

"OWNER" shall mean Montgomery County, Maryland.

"PROCUREMENT REGULATION" The Montgomery County Procurement Regulations and the Maryland State Highway Administration (MSHA), General Provisions, are incorporated by reference and made a part of this contract. In the case of any inconsistency between this contract, the Montgomery County Procurement Regulations and the MSHA General Provisions, the Montgomery County Procurement Regulations shall govern.

"PURCHASING AGENT" Shall mean the Director, Department of General Services for Montgomery County, or a duly authorized representative.

"ROCK" - Where rock is shown on the plans, it has been so shown from the best information available, and it is shown for the information of all parties concerned; however, the County assumes no responsibility for the accuracy of such information. Should the bidder or Contractor rely on such information in preparing the bid or in the performance of the work, the Bidder / Contractor does so at their own risk.

Whether or not rock is shown on the plans, or noted in the Special Provisions, the Contractor is not relieved of the responsibility of making an investigation to determine if rock is present. **THE PRESENCE OF ROCK SHALL NOT ENTITLE THE CONTRACTOR TO ADDITIONAL COMPENSATION BEYOND THE UNIT PRICES STIPULATED OR BID FOR ANY CLASS EXCAVATION, PIPE AND STRUCTURE IN PLACE.**

"SIGNATURE DOCUMENTATION ON OFFERS OR A CONTRACT" Signatures of offerors and contractors must be in their correct legal form and must not be abbreviated to common usage or trade name form. All signatures must be made by an authorized officer, partner, manager, member or employee. The signing of an offer or a contract is representation by the person signing that the person signing is authorized to do so on behalf of the offeror or contractor. Contracts that are not signed in compliance with these requirements are voidable at the option of the County.

"STATE" The word state shall mean Montgomery County Government – the changing from MSHA to County shall not be to the exclusion of MSHA and FHWA Reviews.

SPECIAL PROVISIONS
GP – SECTION 2
BIDDING REQUIREMENTS AND CONDITIONS

1 of 3

GENERAL PROVISIONS

GP-SECTION 2
BIDDING REQUIREMENTS AND CONDITIONS

- 3 **DELETE:** GP-2.01 "BID IRREVOCABLE" in its entirety.
- 4 **DELETE:** GP-2.06 "PREPARATION OF BID" bold type "On Administration Contracts....Preparation of Bid."
- 5 **DELETE:** GP-2.07 "PROPOSAL GUARANTY" in its entirety.
- 6 **DELETE:** GP-2.08 "DELIVERY OF BIDS" in its entirety.
- 7 **DELETE:** GP-2.09 "COMMUNICATIONS AND INTERPRETATION-PRIOR TO BID OPENING" in its entirety. See NOTICE TO BIDDERS titled ~~A~~COMMUNICATIONS AND INTERPRETATION-PRIOR TO BID OPENING".
- 8 **DELETE:** GP-2.10 "AMENDMENTS TO INVITATION FOR BIDS" in its entirety.
9. **INSERT:** the following:

GP-2.10 SOLICITATIONS AMENDMENTS (ADDENDA)

Addenda will be mailed to all who are known by the Owner to have received a complete set of Bidding Documents.

SPECIAL PROVISIONS
GP – SECTION 2
BIDDING REQUIREMENTS AND CONDITIONS

2 of 3

In the event that an amendment to this solicitation is issued, all solicitation terms and conditions will remain in effect unless they are specifically changed by the amendments. Offeror's must acknowledge receipt of such solicitation amendments to the place designated, and prior to the hour and date specified in the solicitation (as amended) for receipt of offers. **UNLESS A WAIVER IS GRANTED, OFFEROR'S THAT DO NOT TIMELY ACKNOWLEDGE RECEIPT OF SOLICITATION AMENDMENTS BY ONE OF THE FOLLOWING METHODS WILL BE REJECTED:**

- (a) By returning one signed copy of the amendment.
- (b) By acknowledging receipt of the amendment an at least one signed copy of the offer that is submitted.
- (c) By stating that the amendment is acknowledged in a signed letter that refers to the solicitation and amendment numbers.

A waiver may be granted by the Director, Department of General Services, if deemed to be in the County's best interest. No waiver may be granted, however, until the offeror's states in writing that the offeror will be bound by any substantive changes made by the amendment to the terms of the solicitation.

If an offeror desires to change an offer that has already been submitted, the change may be made by a signed letter that refers to the solicitation and amendment numbers, and which is received at the place designated and prior to the hour and date specified in the solicitation (as amended) for receipt of offers.

- 10 **DELETE:** **GP-2.11 "PRE-OPENING MODIFICATIONS OR WITHDRAWAL OF BIDS"** in its entirety.
- 11 **DELETE:** **GP-2.12 "LATE BIDS, LATE WITHDRAWAL, AND LATE MODIFICATION"** in its entirety.
- 13 **DELETE:** **GP-2.13 "OPENING AND RECORDING OF BIDS"** in its entirety.

SPECIAL PROVISIONS

GP – SECTION 2

BIDDING REQUIREMENTS AND CONDITIONS

3 of 3

- 14 **DELETE:** **GP-2.14 "MISTAKES IN BIDS"** in its entirety.
- 15 **DELETE:** **GP-2.15 "MINOR IRREGULARITIES OR INFORMALITIES"** in its
entirety.
- 16 **DELETE:** **GP-2.16 "CANCELLATION OF INVITATIONS FOR BIDS"** in its
entirety.
- 16 **DELETE:** **GP-2.17 "REJECTION OF INDIVIDUAL BIDS OR PROPOSALS"** in
its entirety.
- 17 **DELETE:** **GP-2.18 "REJECTION OF ALL BIDS"** in its entirety.
- 18 **DELETE:** **GP-2.19 "BID EVALUATION AND AWARD"** in its entirety.
- 19 **DELETE:** **GP-2.20 "TIE BIDS"** in its entirety.
- 20 **DELETE:** **GP-2.22 "MULTIPLE OR ALTERNATE BIDS"** in its entirety.
- 21 **DELETE:** **GP-2.23 "BID PROTESTS"** in its entirety.

SPECIAL PROVISIONS

GP – SECTION 3

AWARD AND EXECUTION OF CONTRACT

1 of 1

GENERAL PROVISIONS

GP - SECTION 3

AWARD AND EXECUTION OF CONTRACT

- 22 **DELETE:** **GP-3.01 "AWARD OF CONTRACT"** in its entirety.

- 23 **DELETE:** **GP-3.02 "RETURN OF PROPOSAL GUARANTY"** in its entirety.

- 24 **DELETE:** **GP-3.03 "PERFORMANCE BOND AND PAYMENT BOND
REQUIREMENTS"** in its entirety.

- 25 **DELETE:** **GP-3.04 "EXECUTION OF CONTRACT"** in its entirety.

- 26 **DELETE:** **GP-3.05 "FAILURE TO EXECUTE CONTRACT"** in its entirety.

SPECIAL PROVISIONS
GP – SECTION 4
SCOPE OF WORK

1 of 1

GENERAL PROVISIONS

GP-SECTION 4
SCOPE OF WORK

25 **GP-4.09 FINAL CLEAN UP**

25 **ADD:** As the first paragraph.

The Contractor shall at all times during the Work keep the premises clean and orderly. All waste materials and rubbish shall be promptly removed. All directions from authorized public officials having jurisdiction over health and safety shall be observed.

Upon completion of the Work, all materials, equipment and appurtenances not required as a part of the completed project shall be completely removed from the site. All waste from concrete and asphalt operations and scattering of unused aggregate shall be removed.

GP-4.10 WARRANTY OF CONSTRUCTION

25 **DELETE:** The first paragraph in its entirety.

INSERT: The following:

The warranty as defined under paragraphs "A" through "G" does apply to this Contract and is hereby specified in this Invitation For Bids. The Contractor's Performance Bond shall remain in full force and effect during the warranty period as defined above.

SPECIAL PROVISIONS
GP – SECTION 5
CONTROL OF WORK

1 of 1

GENERAL PROVISIONS

GP-SECTION 5
CONTROL OF THE WORK

GP-5.05 COOPERATION WITH UTILITIES

28 **ADD:** After the last paragraph:

During the Site Investigation as required under GP-2.04, the Bidder shall be cognizant of all utility and appurtenances in their original, temporary, or final locations that may cause interference to his operations or final construction. If probable interference is determined, the Bidder shall immediately notify the County of such interference.

If the Bidder fails to notify the County of possible interference, no damages, additional time, or additional compensation of any kind shall be provided during the term of the contract.

34 **DELETE:** GP-5.14 "FILING OF CLAIM BY CONTRACTOR" in its entirety.

35 **DELETE:** GP-5.15 "DISPUTES" in its entirety

SPECIAL PROVISIONS

GP – SECTION 7

LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

1 of 8

GENERAL PROVISIONS

GP-SECTION 7

LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

GP-7.02 PERMITS AND LICENSES

39 **GP-7.02(a)**

ADD: After the first paragraph.

In accordance with the requirements of State and County law, the Contractor must obtain permits and/or approvals from the Montgomery County Department of Permitting Services for any off-site work which includes borrow pits, waste areas, and the treatment of the water/sediment. A copy of the permits and/or approvals shall be furnished to the Engineer prior to the starting of any work in those areas.

In the event of conflict between these requirements and sediment/erosion control laws or regulations of other Federal or State agencies, the more restrictive rules or regulations shall apply.

The Engineer reserves the right to inspect sediment and erosion control measures in off-site borrow pits and waste areas and to report violations of permit requirements to the appropriate agency.

42 **DELETE:** **GP-7.11 "PRESERVATION AND RESTORATION OF PROPERTY"**
in its entirety.

INSERT: The following:

GP-7.11 PRESERVATION AND RESTORATION OF PROPERTY

(a) The Contractor shall not enter upon private property for any purpose without obtaining permission and he/she shall be responsible for the preservation of all

SPECIAL PROVISIONS

GP – SECTION 7

LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

2 of 8

public and private property, trees, monuments, highway signs and markers, fences along and adjacent to the work, and shall use every precaution necessary to prevent damage or injury thereto. The highway signs and markers shall be carefully removed when grading operations begin, stored in a manner to keep them clean and dry and shall be re-erected at such new locations as may be directed by the Engineer. Any items damaged due to the Contractor's negligence will be replaced at no cost to the County. No separate pay item will be included for this work; costs shall be included in prices bid for other items. The Contractor shall take suitable precaution to prevent damage to underground or overhead public utility structures. The cost of maintaining any underground or overhead structures encountered in the prosecution of this work will not be paid for. Costs for this work shall be included in the prices bid for other items. Normally the maintenance of such underground or overhead structures is cared for by the utility company to whom they belong.

- (b) It shall be the Contractor's responsibility to carefully protect from disturbances or damages all land monuments and property markers until the Engineer has witnessed or otherwise referenced their location. Removal, if required will be performed under the direction and supervision of the Engineer. Normally the Engineer will be responsible for resetting all monuments and markers to insure accuracy. However, costs for resetting monuments and markers not witnessed by the Engineer or destroyed by the Contractor's negligence will be deducted from monies due him under terms of this contract.
- (c) The Contractor shall be responsible for all damages or injury to property of any character during the prosecution of the work, resulting from any act, omission, neglect or misconduct in his manner or method of executing said work satisfactorily, or due to his non execution of said work, or at any time due to defective work or materials, and said responsibility shall not be released until the work shall have been completed and accepted. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, neglect or misconduct in the execution of the work or in consequence of the non execution thereof on the part of the Contractor, he shall restore, at his own expense, such property to a condition similar or equal to the condition existing before such damage or injury was done by repairing, rebuilding or otherwise restoring as may be directed, or he shall make good such damage or injury in an acceptable manner. In case of the failure on the part of the Contractor to restore such property or make good such damage or injury or otherwise restore such property as may be deemed necessary, the cost thereof will be deducted from any monies due or which may become due the Contractor under this contract.

SPECIAL PROVISIONS

GP – SECTION 7

LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

3 of 8

- (d) Special attention shall be given to the landscape features of the work and special care taken to protect the natural surroundings. The Contractor shall not deface, injure or destroy trees nor remove or cut them without first obtaining a Maryland Forest Service Permit. The roots of trees or shrubbery will not be cut unnecessarily, and the Contractor will be required to handwork or otherwise prevent damage to roots of trees, which extend into grading limits and/or from trees intended to be left in an undamaged state, within the construction limits. No road machinery of any description which might throw off gas or smoke in such volume as to damage vegetation shall be allowed to stand under such trees or shrubbery.
- (e) Selected trees, that, in the opinion of the Engineer, may be defaced, bruised, injured or otherwise damaged by the Contractor's construction equipment or operations shall be protected by boards or planks.
- (f) Any timber, trees, or landscape features scarred or damaged by the Contractor's operations shall be removed, neatly trimmed up or restored as nearly as possible to the original condition, as required by the Engineer and at the Contractor's expense. All scars made on trees by construction operations or the removal of limbs shall be painted as soon as possible with an approved paint. No ropes, cables or guys are to be fastened to or attached to any existing nearby trees for anchorages, or in lieu of placing of dead men, unless specifically authorized by the Engineer. In a special emergency the Contractor will first wrap the trunk with a sufficient thickness of burlap or rags, over which soft wood cleats shall be tied, before any wire, cable or rope is placed. The Contractor shall in any event be responsible for any damage to any trees so used and shall repair any such damage due to this use of the trees, if any occurs.
- (g) The Engineer may direct the Contractor to protect trees against blasting and dumping operations by placing lumber or poles around such trees. These precautions will be at the expense of the Contractor.
- (h) Where it is necessary to set or reset the curb along an existing concrete sidewalk and the pavement is disturbed in doing so, it shall in all cases, be restored by the removal of the damaged portions to a straight line parallel to the curb and the pavement replaced. Where necessary in order to obtain a workmanlike finish, the Contractor will be required to take up and replace the pavement to the nearest joint back of the curb. All sidewalk or pavement areas broken or cracked through carelessness or negligence on the part of the Contractor shall be restored by the Contractor at his own expense, to comply with these specifications.

SPECIAL PROVISIONS

GP – SECTION 7

LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

4 of 8

GP-7.12 LAND AIR AND WATER POLLUTION

44 **ADD:** The following:

(e) Control of Air Pollution

Air pollution is regulated by the County's Department of Environmental Protection (DEP) under State and County Law.

All trucks will be covered, consistent with the Maryland Motor Vehicle Laws.

Reasonable precautions, as determined by DEP, must be taken to prevent particulate matter from becoming airborne. This includes, but is not limited to, dust from site preparation, road usage, and materials in handling.

Burning of trash, refuse or construction debris is strictly prohibited.

Permits for open burning of land clearing debris will be issued only if all of the following conditions are met:

DEP is convinced that there is no practical alternative disposal method

The material being burned originated on the site (e.g., no hauling of materials from elsewhere)

Burning can be conducted at least 1500 feet (497 meters), in any direction, from an occupied building or publicly maintained roadway

Burning will take place in an "air curtain destructor" approved for design and operation by DEP

If all the above conditions can be met, burning pit applications can be obtained from the Division of Environmental Policy and Compliance, DEP, by calling 240-777-7770.

Take notice that, as a matter of law and policy, County Agencies and their contractors, enjoy no immunity from compliance with applicable laws and regulations. Therefore, violators will be subject to civil citation and other remedies as allowed by law, including Stop Work Orders.

If there are any questions, contact the Division of Environmental Policy and Compliance, DEP, at 240-777-7770.

SPECIAL PROVISIONS

GP – SECTION 7

LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

5 of 8

(a) Noise Control

The Montgomery County has a comprehensive Noise Control Ordinance (Chapter 31B of the Montgomery County Code), including provisions concerning noise from construction activities.

GENERAL ORDINANCE STANDARDS (Non-construction related)

Maximum allowable sound levels, measured at the nearest receiving property line, are 65dBA (A-weighted decibels) during daytime hours and 55 dBA during nighttime hours, for residential receiving properties (67 dBA daytime and 62dBA nighttime for non-residential receiving property). Mixed Use Zones are considered residential.

"Daytime" means from 7 am to 9 pm weekdays and 9 am and 9 pm weekends and holidays.

"Nighttime" means from 9 pm to 7 am weekdays and 9 pm to 9 am weekends and holidays.

"Receiving Property" means any property where people live or work and where noise is heard.

CONSTRUCTION EXEMPTION AND STANDARDS

"Construction" means temporary activities directly associated with site preparation, assembly, erection, repair, alteration, or demolition of structures or roadways. Construction Noise levels must be measured on a receiving property, but no closer than 50 feet from the noise source.

From 7 am to 5 pm Weekdays, Construction Noise Levels must not exceed:

75 dBA without a "Noise Suppression Plan"

85 dBA with a "Noise Suppression Plan"

"Noise Suppression Plan" means a written plan to use the most effective noise suppression equipment, materials, and methods appropriate and reasonable available for a particular type of construction.

At all times other than 7 am to 5 pm weekdays, the general standards specified must be met.

SPECIAL PROVISIONS

GP – SECTION 7

LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

6 of 8

For example: Assuming a residential or mixed use receiving property, construction levels from 5 pm to 9 pm weekdays and from 9 am to 9 pm on weekdays and holidays must not exceed 65 dBA. From 9 pm to 7 am weekdays and 9 am on weekends and holidays, the standard is 55 dBA.

Construction activities are also subject to the "Noise Disturbance" provisions of the Ordinance. Examples of Noise Disturbances are delivering materials or equipment or loading or unloading in a residential area or operating construction equipment with audible back-up warning devices during Nighttime Hours.

Summary - Construction Noise

Measured at nearest receiving property, but no closer than 50' from the noise source.

Weekdays (Monday - Friday), 7 am to 5 pm Without Suppression Plan	75 dBA
With Suppression Plan	85 dBA
Weekdays (Monday - Friday) 5 pm to 9 pm	65 dBA
Weekdays (Monday - Friday) 9 pm to 7 am	55 dBA
Saturday, Sunday, Holidays 9 am to 9 pm	55 dBA
9 pm to 9 am	55 dBA

In the majority of circumstances in the County, the Receiving Property will be considered residential. In cases where the nearest receiving properties are non-residential, the standards will be 67 dBA/Daytime and 62 dBA/Nighttime, except from 7 am to 5 pm weekdays, when the higher construction exemption prevails.

While a Noise disturbance, as defined by the Ordinance, could conceivably occur at any time, it is most likely to happen during Nighttime hours. The most common complaint involves back-up beepers, and can be avoided by employing lawful alternatives to audible devices.

SPECIAL PROVISIONS

GP – SECTION 7

LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

7 of 8

The Department of Environmental Protection is currently developing Regulations for Noise Suppression Plans, as required by the revised Ordinance. In general, such plans will involve equipment selection and maintenance, scheduling and reasonable care in planning and conduction operations. Often, noise suppression measures can be fabricated on-site using materials at hand.

As a point of reference, two people speaking in "normal" tones of voice at a distance of three feet, will generate about 63 dBA between them. Therefore, normal, fully intelligible conversation would be possible at the receiving property line of a site generating 65 dBA or less. By comparison, for normal, intelligible speech at a distance of about ten feet between speakers, the background wound would have to be 55 dBA or less.

Most equipment manufacturers will have detailed noise performance specifications for their products. Many also provide silencing packages, both design and retrofit.

Copies of the revised Ordinance will be mailed upon request. Contact the Office of Environmental Policy and Compliance at 240-777-7770.

- 45 **DELETE:** GP-7.14 "LIABILITY INSURANCE" in its entirety.

Refer to **MANDATORY INSURANCE REQUIREMENTS.**

**GP-7.17 CONTRACTOR'S RESPONSIBILITY FOR
UTILITY PROPERTY AND SERVICES**

- 47 **ADD:** The following after the second paragraph.

All expenses incurred by the Contractor as a result of working around and protecting utilities, as well as cooperating with the owners of same will be included in the Contract unit prices for other items.

- 48 **DELETE:** GP-7.20 "NONDISCRIMINATION IN EMPLOYMENT" in its entirety.

SPECIAL PROVISIONS

GP – SECTION 7

LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

8 of 8

- 49 **DELETE:** **GP-7.22 "NONHIRING OF EMPLOYEES"** in its entirety.
- 50 **DELETE:** **GP-7.23 "CHOICE OF LAW"** in its entirety.
- 50 **DELETE:** **GP-7.25 "MULTI-YEAR CONTRACTS CONTINGENT UPON APPROPRIATIONS"** in its entirety.
- 51 **DELETE:** **GP-7.26 "COST AND PRICE CERTIFICATION"** in its entirety.
- 52 **DELETE:** **GP-7.29 "MINORITY BUSINESS ENTERPRISE AND AFFIRMATIVE ACTION"** Paragraphs (a) and (b) in their entirety.
- 53 **DELETE:** **GP-7.30 "PREVAILING WAGE CONTRACTS FOR PUBLIC WORKS"** in its entirety.
- 53 **DELETE:** **GP-7.32 "FINANCIAL DISCLOSURE"** in its entirety.
- 53 **DELETE:** **GP-7.33 "POLITICAL CONTRIBUTION DISCLOSURE"** in its entirety.
- 54 **DELETE:** **GP-7.34 "CONFLICT OF INTEREST LAW"** in its entirety.
- 54 **DELETE:** **GP-7.35 "PRE-EXISTING REGULATIONS"** in its entirety.

SPECIAL PROVISIONS
GP – SECTION 8
PROSECUTION AND PROGRESS

1 of 2

GENERAL PROVISIONS

GP-SECTION 8
PROSECUTION AND PROGRESS

55 **DELETE:** GP-8.01 "SUBCONTRACTING" in its entirety.

INSERT: The following.

GP-8.01 SUBCONTRACTING

The Contractor may utilize the services of specialty Subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty Subcontractors.

The Contractor shall perform at least fifty (50) percent of the actual construction work with its own forces. "Its own forces" is defined as actual employees of the Contractor (not subcontractors or contract workers). Verification interviews may be conducted and/or certified payrolls may be required. "Fifty (50) percent of the actual construction work" is defined as one half of the total Contract Price excluding the cost of prefabricated items that become a permanent part of the construction. This requirement does not alter or waive any other provision or clause of this contract.

No portion of the Contract shall be subcontracted, assigned or otherwise disposed of except with the written consent of the Owner. Any assignment, subcontract or other disposition of all or part of this Contract without the express written consent of the Owner shall be null and void. The Contractor shall submit all Subcontractor names and qualifications for approval by the Owner prior to award of any subcontracts. Subcontractors may not initiate any work on the project prior to approval by the Owner. Consent to subcontract, assign or otherwise dispose of any portion of the Contract shall not be construed to relieve the Contractor or surety of any responsibility for the fulfilling of all the requirements of the Contract.

The Contractor shall incorporate by reference or otherwise include these General Provisions in every subcontract issued pursuant to or under this Contract, and shall require the same reference or inclusion be contained in every subcontract entered into by and of its subcontractors.

Nothing contained in this Contract shall create any contractual relation between any Subcontractor and the Owner.

SPECIAL PROVISIONS
GP – SECTION 8
PROSECUTION AND PROGRESS

2 of 2

GP-8.07 SUSPENSION OF WORK

59 **ADD:** To the end of the Section:

Work of an emergency nature ordered by the Engineer for the convenience of the traveling public or for the production or delivery of materials for storage, if performed during the period of suspension, shall not be charged to the Contract time.

"Unreasonable period of time" shall be defined as any suspensions, delays, or interruptions communicated in writing to the Contractor by the Engineer **greater than** ten percent (10%) of the Contract term that fall completely within any continuous six (6) month period during the term of the Contract.

59 **DELETE:** **GP-8.08 "TERMINATION FOR DEFAULT-DAMAGES FOR DELAY-TIME EXTENSIONS"** in its entirety.

61 **DELETE:** **GP-8.10 "TERMINATION FOR CONVENIENCE OF THE STATE"** in its entirety.

SPECIAL PROVISIONS
GP – SECTION 9
PAYMENT

1 of 1

GENERAL PROVISIONS

**GP - SECTION 9
PAYMENT**

**On Montgomery County Contracts, GP-9 does not apply;
TC-Section 7 Payment shall apply**

- 68 **DELETE:** 9.01 "SCOPE OF PAYMENT" in its entirety.
Refer to TC-7.04 Scope of Payment.
- 69 **DELETE:** 9.02 "FORCE ACCOUNT WORK" in its entirety.
Refer to TC-7.03 Force Account.
- 71 **DELETE:** 9.03 "PROGRESS PAYMENTS" in its entirety.
Refer to TC-7.05 Progress Payments.
- 74 **DELETE:** 9.04 "FINAL ACCEPTANCE AND FINAL PAYMENT" in its entirety.
Refer to TC-7.06 Final Acceptance and Final Payment.
- 76 **DELETE:** 9.05 "LATE PAYMENTS" in its entirety.
Refer to TC-7.07 Late Payments.

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SPECIAL PROVISIONS

TERMS

AND

CONDITIONS

SPECIAL PROVISIONS
T C – SECTION 1 REFERENCES AND DEFINITIONS

1 of 2

TERMS AND CONDITIONS

T C SECTION 1
REFERENCES AND DEFINITIONS

TC-1.02 DEFINITIONS

83 **DELETE:** **Holidays** - In the State of Maryland, If a legal holiday falls on a Saturday, the Friday immediately preceding shall be deemed and treated as a holiday.

INSERT: The following.

Holidays - In Montgomery County, holidays occur on:

January 1	New Year's Day
3 rd Monday in January	Martin Luther King's Birthday
3 rd Monday in February	President's Day
4 th Monday in May	Memorial Day
July 4	Independence Day
1 st Monday in September	Labor Day
November 11	Veteran's Day
4 th Thursday in November	Thanksgiving Day
December 25	Christmas Day

If a legal holiday falls on a Sunday, the following Monday shall be deemed and treated as a holiday.

If a legal holiday falls on a Saturday, the Friday immediately preceding shall be deemed and treated as a holiday.

SPECIAL PROVISIONS

T C – SECTION 1 REFERENCES AND DEFINITIONS

2 of 2

83 **DELETE:** **Laboratory** - The testing laboratory of the State Highway Administration (or other Administrations) or any other testing laboratory designated by the procurement officer.

INSERT: The following.

Laboratory - The Montgomery County Materials Control Center or any other testing laboratory designated by the Montgomery County Materials Control Center.

86 **ADD:** After "Working Drawings"

Subgrade Soil Requirements - The top 12 inches of subgrade in cuts and fills shall comply with the following requirements:

- (a) The Liquid Limit shall not exceed 40.
- (b) The Plastic Limit shall not exceed 12.
- (c) The maximum dry weight shall not be less than 105 pounds per cubic foot as determined by A.A.S.H.T.O. Designation listed below:

CONSTRUCTION MATERIAL TOP 12 INCHES OF SUBGRADE	A.A.S.H.T.O. REQUIREMENTS		MINIMUM COMPACTION REQUIREMENTS
	DESIGNATION	METHOD	
ROADWAY – SOIL	T99	C	100%
ROADWAY – AGGREGATE	T180	D	95%
SHOULDERS – SOIL	T99	C	95%
SHOULDERS – AGGREGATE	T180	D	92%
SIDEWALK – SOIL	T99	C	95%
SIDEWALK – AGGREGATE	T180	D	92%

SPECIAL PROVISIONS

T C – SECTION 2 BIDDING REQUIREMENTS AND CONDITIONS

1 of 1

TERMS AND CONDITIONS

**T C SECTION 2
BIDDING REQUIREMENTS AND CONDITIONS**

87 **DELETE:** TC-2.01 PROJECT CLASSIFICATION in its entirety.

INSERT: The following.

TC-2.01 PROJECT CLASSIFICATION

The County will estimate the cost of the Contract and classify it within one cost group and letter designation as follows:

COST GROUP ESTIMATE	COST GROUP LETTER CLASS
Up to \$100,000	A
\$100,001 to \$500,000	B
\$500,001 to \$1,000,000	C
\$1,000,001 to \$2,500,000	D
\$2,500,001 to \$5,000,000	E
\$5,000,001 to \$10,000,000	F
\$10,000,001 to \$15,000,000	G
\$15,000,001 to \$30,000,000	H
\$30,000,001 to \$50,000,000	I
\$50,000,001 to \$75,000,000	J
\$75,000,001 to \$100,000,000	K
Over \$100,000,000	L

The letter designation for this project will be made available upon request.

87 **DELETE:** TC-2.02 "PREPARATION OF BID" in its entirety.

91 **DELETE:** TC-2.06 "PARTNERING" in its entirety.

SPECIAL PROVISIONS
T C – SECTION 3 SCOPE OF WORK

1 of 1

TERMS AND CONDITIONS

**TC SECTION 3
SCOPE OF WORK**

TC SECTION 3.03 CONTINGENT ITEMS

- 93 **DELETE:** The last sentence in the 2nd paragraph: "The requirements of GP-4.04 (Variations in Estimated Quantities) and TC-7.08 (Eliminated Items) shall apply.

INSERT: The following:

The Requirements of GP-4.04 (Variations in Estimated Quantities) will **NOT** apply and TC-7.08 (Eliminated Items) shall apply.

TC SECTION 3.06 WARRANTY OF CONSTRUCTION

- 94 **ADD:** The following:

TC SECTION 3.06 WARRANTY OF CONSTRUCTION

The warranty as defined under paragraphs "A" through "G" in GP-4.10 does apply to this Contract and is hereby specified in this Invitation For Bids. The Contractor's Performance Bond shall remain in full force and effect during the warranty period as defined above.

SPECIAL PROVISIONS
T C – SECTION 4 CONTROL OF WORK

1 of 2

TERMS AND CONDITIONS

TC SECTION 4
CONTROL OF WORK

TC-4.01 WORKING DRAWINGS.

(a) General.

94 **ADD:** After the last paragraph:

SHOP PLANS AND WORKING DRAWINGS

All shop plans and working drawings for the subject structure shall be sent to:

Johnson, Mirmiran & Thompson, Inc. (JMT)
40 Wight Avenue
Hunt Valley, Maryland 21030

ATTN: Jennifer J. Ray, Senior Associate

Phone: 410-316-2231

With a copy to:

Montgomery County DHCA
1401 Rockville Pike, 4th Floor
Rockville, MD 20852

ATTN: Ms. Cynthia Butler

Phone: 240-777-3652

To expedite the checking and distribution of working drawings, fabricators or suppliers may send prints directly to the above address with copies of all correspondence to the Contractor and the MCDHCA. If the Contractor requests that all plans be routed through his office then the establishment of such a procedure should be the first order of work so as to avoid possible misunderstandings as to the processing. Contractor shall be aware that this plan of action will delay the turn around time and will not therefore be a reason for delay claims.

The Contractor, fabricator, or supplier shall furnish to Johnson, Mirmiran & Thompson, Inc. (JMT) ten (10) prints each of all working drawings, etc., for primary review.

SPECIAL PROVISIONS

T C – SECTION 4 CONTROL OF WORK

2 of 2

Once primary review is complete, the Contractor, Fabricator, or Supplier shall furnish to the above address ten (10) additional prints for stamping and forwarding to the MCDHCA for distribution.

All shop plans and working drawings for the subject structures(s) will not be considered approved until they bear the approval stamps of the Design Engineer of Johnson, Mirmiran and Thompson, Inc. (JMT).

The Contractor shall be required to submit erection procedures no less than 30 days prior to the scheduled date of fabrication.

TC-4.02 FAILURE TO ADEQUATELY MAINTAIN PROJECT.

98 **ADD:** To the second paragraph.

Additionally, 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 satisfactorily corrected and accepted by the Engineer. Any portion of a day will be assessed a full day deduction. The deduction will be equal to a prorata share of the lump sum price bid for Maintenance of Traffic or an amount prorated from the Engineer's estimate, whichever is more. The amount prorated will be the per diem amount established by using the working days (based upon calendar dates when required) divided into the total value of the bid item or the Engineer's estimate of that item, whichever is more.

The above noted deduction will be assessed on the next progress estimate if:

The Contractor does not take action to correct the deficiencies and properly assume the responsibilities of maintaining the project (as determined by the Engineer) within four hours of receiving a notice to comply with the required maintenance provisions.

The deduction will be equal to the daily prorated share of the lump sum price bid for Maintenance of Traffic or \$ 50.00 per day, whichever is more for each day or portion thereof that the deficiencies exist, and will continue until the deficiencies and proper assumption of the required maintenance provisions are satisfactorily corrected and accepted by the Engineer. The amount of monies deducted will be a permanent deduction and are not recoverable. Upon satisfactory correction of the deficiencies, payment of the Maintenance of Traffic lump sum item will resume.

SPECIAL PROVISIONS

T C – SECTION 5 LEGAL RELATIONS AND PROGRESS

1 of 1

TERMS AND CONDITIONS

**TC SECTION 5
LEGAL RELATIONS AND PROGRESS**

99 **DELETE:** TC -5.01 INSURANCE in its entirety.

INSERT: See "MANDATORY INSURANCE REQUIREMENTS" for this contract.

TC -5.03 SUBCONTRACTING AND SUBCONTRACTORS

101 **DELETE:** Subcontractors Prompt Payment section in its entirety.



Maryland Department of Transportation
State Highway Administration

SPECIAL PROVISIONS INSERT

TC 6.10 — RECYCLED OR REHANDLED MATERIAL

1 of 1

TERMS AND CONDITIONS

**TC SECTION 6
RESTRICTIONS AND PERMITS**

112 **DELETE:** TC 6.10 – RECYCLED OR REHANDLED MATERIAL
in its entirety.

INSERT: The following.

TC 6.10 – RECYCLED OR REHANDLED MATERIAL.

Refer to 900.03 in the Contract Documents.

SPECIAL PROVISIONS

T C – SECTION 6 RESTRICTIONS AND PERMITS

1 of 1

TERMS AND CONDITIONS

TC SECTION 6 RESTRICTIONS AND PERMITS

115 **DELETE:** TC-6.14 STORING MATERIALS AND EQUIPMENT ON/AGAINST STRUCTURES RESTRICTIONS in its entirety.

INSERT: The following.

TC-6.14 RESTRICTIONS FOR PLACING AND USING EQUIPMENT ON STRUCTURES, OR STORING MATERIALS ON/OR AGAINST STRUCTURES

Materials, and waste shall not be stored on or against any structure or structure element and equipment shall not be placed or used on any structure during the construction phase or finished or final configuration unless the written permission is obtained from the Administration's District Office and the Office of Structures for each type of material or equipment to be stored.

Loads, vehicle or other weight (materials etc.) that exceeds the bridge posted weight limit, if posted, or exceeds Maryland's legal vehicle loads on bridges, (with no posted bridge weight limits), are prohibited on the structure at any time, except as modified by the following. If the Contractor's intended operations will impose loads on the structure that exceed the weights listed above, the Contractor shall submit to the Engineer the type of material, its weight, the area that will be affected by the load, and its location on the structure. No stock pile of material regardless of unit weight shall be more than 4 ft high. If equipment is to be used, submit the maximum gross weight, axle spacing, load per axle, and proposed location on the structure. The maximum gross weight must include the vehicle weights in the most critical load position, i.e. front axle on crane with boom extended and element hanging. A special Hauling Permit is a requirement anytime equipment is moved over a structure that is over legal weight limit.

If any load requires evaluation, then a professional engineer registered in the State of Maryland and experienced in bridge design shall perform a load analysis to ensure that the load on the structure will not create an overstress condition on any bridge element. This analysis also includes effects of legal loads crossing the structure, if applicable. Analyses shall be submitted for review and loading cannot be imposed until written approval is received. Such submission does not guarantee acceptance by the Office of Structures, which reserves the sole right to accept or reject the proposed loading.

For structures under construction or rehabilitation, the Contractor shall also submit information pertaining to the phase of construction, such as which members have been modified or separated from the remainder of the structure, or have been newly constructed.

Any materials or equipment that would have a detrimental affect to the structure such as aluminum products placed against concrete surfaces shall be adequately protected to prohibit them from coming in contact with each other. Any discoloration or damage to the structure as a result of material or equipment being stored on/against the structure shall be removed or repaired.

SPECIAL PROVISIONS
T C – SECTION 7 PAYMENT

1 of 2

TERMS AND CONDITIONS

TC SECTION 7
PAYMENT

TC-7.04 SCOPE OF PAYMENT

123 **DELETE:** The sixth, seventh, and eighth paragraphs, respectively.

TC-7.05 PROGRESS PAYMENTS

(a) **Current Estimate.**

(2) **Monthly Estimates.**

124 **DELETE:** The first sentence: "Each month the Administration will pay the Contractor for the Contract Value of the work satisfactorily performed during the preceding calendar month, including authorized additions less variable Retainage specified in (3) "Variable Retainage."

INSERT: The following as the first sentence in its place:

Each month the County will pay the Contractor for the Contract value of the work satisfactorily performed during the preceding calendar month, including authorized additions less Retainage specified in (3) Retainage.

125 **DELETE:** (3) **Variable Retainage** in its entirety.

INSERT: The following:

(3) **Retainage.** Each Monthly Estimate will be subject to a Retainage of 10% of the actual work completed on the project for that month.

126 **DELETE:** (4) **Escrow Accounts for Retained Funds** in its entirety.

SPECIAL PROVISIONS
T C – SECTION 7 PAYMENT

2 of 2

TC-7.06 FINAL ACCEPTANCE AND FINAL PAYMENT

128 **DELETE:** (b) in its entirety.

INSERT: The following.

- (b) The Contractor shall then have a period of 30 days, dating from the date upon which he/she received the aforementioned tabulation from the County, in which:
- (1) To decide whether or not he/she will accept final payment upon such a basis, and
 - (2) To notify the County, in writing, of his/her decision. The Contractor may request an additional period up to 30 days in which to notify the County of his/her decision. In the event the Contractor notifies the County that he/she protests final payment on such a basis, that notification shall outline the reasons for said protest.

SPECIAL PROVISIONS

TECHNICAL
REQUIREMENTS

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TABLE OF CONTENTS

MONTCLAIR MANOR COMMUNITY LIGHTING AND SITE IMPROVEMENTS

<u>SPECIAL PROVISIONS, TECHNICAL REQUIREMENTS,</u>		PAGE NO.
01100	MEASUREMENT AND PAYMENT	131-138
02050	TEMPORARY FACILITIES	139-140
02100	SITE PREPARATION	141-143
02200	EARTHWORK	144-146
02600	SITE UTILITIES	147-148
02920	TURF AND GRASSES	149-154
02930	EXTERIOR PLANTS	155-165
03300	CONCRETE	166-169
07900	JOINTS AND SEALANTS	170-172
-----	CATAGORY 100	
	101 – CLEARING AND GRUBBING	174-176
	104.20 – TEMPORARY ORANGE CONSTRUCTION FENCE	177
-----	120 – TREE PRESERVATION	178-180
-----	CATAGORY 600	
	6’ WOOD FENCE	181-182
	CATAGORY 700 - LANDSCAPING	
	701 – SUBSOIL AND TOPSOIL	183-187
-----	705 – TURFGRASS ESTABLISHMENT	188-193
	710 – TREE, SHRUB AND PERENNIAL INSTALLATION	194-206
	712 – TREE BRANCH PRUNING	207-208
	713 – BUSH REMOVAL	209-210
	CATAGORY 800	
	800 - STREETLIGHT	211
-----	820 – GENERAL ELECTRICAL WORK AND TESTING	212
-----	CATEGORY 900	
	902 - PORTLAND CEMENT CONCRETE AND RELATED CEMENT PRODUCTS	214-263

NOTE: Additional documents related to this work include a set of detailed construction plans. Bidders are to familiarize themselves thoroughly with this information in preparing bids.

SECTION 01100 – MEASUREMENT AND PAYMENT

PART 1 – GENERAL

The following subsection describes the measurement of and payment for the work to be done under the items listed in the PROPOSAL FORM.

Each unit or lump sum price stated in the PROPOSAL shall constitute full compensation as herein specified for each item of work completed in accordance with the Drawings and Specifications, including Contractor’s overhead and profit, temporary facilities, insurance, permit fees, and all other costs of operations.

The items listed herein make certain specific references to portions of work included in that item; but no effort is made to list every facet of cost which is included. Each and every item shall be understood to include full compensation for all work, including that which is incidental to that item, except that work specifically included under another item.

Each unit or lump sum price is for a complete item or work, fully operational and ready for use by the County, unless specifically mentioned otherwise. Unless otherwise noted, all items are paid for after they have been installed, made complete and operational.

NOTE: Reference to the “MSHA Standard Specifications” is to the Maryland Department of Transportation *MSHA Standard Specification for Construction and Materials, July, 2018, and as amended.*

PART 2 – ITEMS

DEMOLITION

ITEM 1. REMOVAL AND DISPOSAL OF EXISTING LIGHTING STRUCTURE AND LUMINAIRE

1. This item shall constitute full compensation for removal and disposal of lighting structures, removal of existing concrete foundations and all incidentals necessary to complete the work. Removal of Existing Lighting Structure shall be done in accordance with the plans and specifications and with Sections 823 of the MD SHA Standard Specifications.
2. The quantity to be paid shall be the *number* of structures removed and disposed of.

ITEM 2. REMOVE AND DISPOSE OF EXISTING FENCE

1. The unit price shall constitute full compensation for removal and disposal of fence as noted on the plans and/or as directed by the County.
2. The quantity to be paid shall be the linear feet of split rail fence removed and disposed.

ITEM 3. REMOVE AND DISPOSE OF EXISTING ELECTRICAL SERVICE PANEL

1. This item shall include the removal and disposal of the existing electrical service panel as noted on the plans and/or as directed by the County.
2. The quantity to be paid shall be for each electrical service panel removed and disposed.

FENCING

ITEM 4. FURNISH AND REPLACE WOOD SLATS IN EXISTING FENCE (CONTINGENT)

1. This is a contingent item. The total number of replacement wood slats to be replaced will be determined in the field. The unit price shall constitute full compensation for furnishing and replacing wood slats in the existing fence.
2. The quantity to be paid shall be for *each* wood slat installed.

ITEM 5. FURNISH AND INSTALL 6' WOOD FENCE

1. This item shall constitute full compensation for furnishing and installing 6' wood fence as noted on the plans and/or as directed by the County. This item shall constitute full compensation in accordance with Section 600 of these Specifications.
2. The payment will be the full compensation for all material, labor, equipment, tools and incidentals necessary to complete the work. 6' Wood Fence will be measured and paid for at the Contract unit price per linear foot for the actual linear feet measured from end post to end post.

ELECTRICAL

ITEM 6. FURNISH AND INSTALL 12' DECORATIVE LIGHT POLE

1. This item shall constitute full compensation for the furnishing and installation of light poles and all appurtenant work. Installation of poles shall be done in accordance with the plans and specifications and with Sections 808 of the MD SHA Standard Specifications and in accordance with the manufacturer's recommendations.
2. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work. The quantity to be paid shall be the *number* of light poles actually installed.

ITEM 7. FURNISH AND INSTALL CONCRETE FOR LIGHT FOUNDATION

1. The unit price shall constitute full compensation for concrete, corrugated metal pipe or forms, reinforcement steel, anchor bolts, excavation, backfill, and for all

material, labor, equipment, tools, and incidentals necessary to complete the work. Concrete for Light Foundation shall be furnished and installed in accordance with the plans and specifications, as well as Section 801 MD SHA Standard Specifications (July 2018).

2. The quantity to be paid shall be the number of *cubic yards* installed.

ITEM 8. FURNISH AND INSTALL LED ROADWAY LUMINAIRE (30W LED LUMINAIRE)

1. LED Roadway Luminaires will be measured and paid for at the contract unit price per each. The payment will be full compensation for the LED Roadway Luminaire and drivers, mounting hardware, wiring, integral transformer, shorting cap, and all material, labor, equipment, tools, and incidentals necessary to complete the work. Installation of luminaires shall be done in accordance with the plans and specifications and with Sections 806 of the MD SHA Standard Specifications and in accordance with the manufacturer's recommendations.
2. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work. The quantity to be paid shall be the *number* of luminaires actually installed.

ITEM 9. FURNISH AND INSTALL 200 AMP BASE MOUNTED METERED SERVICE PANEL

1. The payment will be full compensation for all enclosures, concrete foundation, panel boards, circuit breakers, internal wiring, wiring devices, meter sockets, meter, shunts, cover plates, wiring, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.
2. Base Mounted Metered Service Pedestal will be measured and paid for at the Contract unit price per *each* pedestal installed. Metered service panels shall be done in accordance with the plans and specifications and with Sections 807 of the MD SHA Standard Specifications.

ITEM 10. FURNISH AND INSTALL JUNCTION BOX

1. This item shall constitute full compensation for furnishing and installing a junction box as noted on the plans and/or as directed by the County. The payment will be full compensation for all excavation, aggregate drain, concrete, bolts, bricks, pipes, backfill, sealer, frames and covers, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.
2. Junction Boxes will be measured and paid for at the Contract unit price per each.

ITEM 11. FURNISH AND INSTALL DUCT CABLE – 2 CONDUCTOR, NO 6 AWG, 600V

1. The unit price shall constitute full compensation for all duct cable, trench excavation, backfill, sidewalk restoration, wire splices, duct end seals, and for all material, labor, equipment, tools, and incidentals necessary to complete the work. Duct Cable shall be furnished and installed in accordance with the plans and specifications, as well as Section 810 MD SHA Standard Specifications (July 2018).

2. The quantity to be paid shall be the number of *linear feet* installed.

ITEM 12. FURNISH AND INSTALL CABLE – 1 CONDUCTOR, NO 6 AWG, TYPE USE, 600V

1. The unit price shall constitute full compensation for all duct cable, trench excavation, backfill, sidewalk restoration, wire splices, duct end seals, and for all material, labor, equipment, tools, and incidentals necessary to complete the work. Duct Cable shall be furnished and installed in accordance with the plans and specifications, as well as Section 810 MD SHA Standard Specifications (July 2018).
2. The quantity to be paid shall be the number of *linear feet* installed.

ITEM 13. FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER GROUND WIRE

1. The unit price shall constitute full compensation for all ground wire, trench excavation, backfill, sidewalk restoration, and for all material, labor, equipment, tools, and incidentals necessary to complete the work. Bare Copper Ground Wire shall be furnished and installed in accordance with the plans and specifications, as well as Section 810 MD SHA Standard Specifications (July 2018).
2. The quantity to be paid shall be the number of *linear feet* installed.

ITEM 14. FURNISH AND INSTALL 2 INCH DIAMETER RIGID STEEL CONDUIT, SCHEDULE 40

1. The unit price shall constitute full compensation for all excavation, backfill, encasement concrete, asphalt mixes, paint, pull wires, and for all material, labor, equipment, tools, and incidentals necessary to complete the work. 2 Inch diameter rigid steel conduit shall be furnished and installed in accordance with the plans and specifications, as well as Section 805 MD SHA Standard Specifications (July 2018).
2. The quantity to be paid shall be the number of *linear feet* installed.

ITEM 15. FURNISH AND INSTALL TYPE II CONNECTOR KIT

1. The unit price shall constitute full compensation for all connector kits, wire splices, duct end seals, and all material, labor, equipment, tools, and incidentals necessary to complete the work. Type II Connector Kit shall be furnished and installed in accordance with the plans and specifications, as well as Section 810 MD SHA Standard Specifications (July 2018).
2. The quantity to be paid shall for *each* Type II Connector Kit installed.

ITEM 16. FURNISH AND INSTALL TYPE III CONNECTOR KIT

1. The unit price shall constitute full compensation for all connector kits, wire splices, duct end seals, and all material, labor, equipment, tools, and incidentals necessary to complete the work. Type III Connector Kit shall be furnished and installed in accordance with the plans and specifications, as well as Section 810 MD SHA Standard Specifications (July 2018).
2. The quantity to be paid shall for *each* Type III Connector Kit installed.

ITEM 17. FURNISH AND INSTALL TYPE IV CONNECTOR KIT

1. The unit price shall constitute full compensation for all connector kits, wire splices, duct end seals, and all material, labor, equipment, tools, and incidentals necessary to complete the work. Type IV Connector Kit shall be furnished and installed in accordance with the plans and specifications, as well as Section 810 MD SHA Standard Specifications (July 2018).
2. The quantity to be paid shall for *each* Type IV Connector Kit installed.

ITEM 18. FURNISH AND INSTALL GROUND ROD (3/4 INCH DIAMETER X 10 FOOT LENGTH)

1. The unit price shall constitute full compensation for lugs, exothermic welds, excavation, backfill, and for all material, labor, equipment, tools, and incidentals necessary to complete the work. Ground Rods shall be furnished and installed in accordance with the plans and specifications, as well as Section 804 MD SHA Standard Specifications (July 2018).
2. The quantity to be paid shall be for *each* 10 foot ground rod furnished and installed.

ITEM 19. FURNISH AND INSTALL REMOTE LIGHTING CONTROL CABINET 60 AMP

1. This item shall include the furnishing and installation of a remote lighting control cabinet, 60 AMP as noted on the plans and/or as directed by the County. This item includes the equipment enclosure, panel boards, transformers, circuit breakers, lighting contactor, relay, photoelectric controls, thermostats, selector switches, fans, lightning arresters, conduit, wiring and wiring devices, and all other equipment necessary to provide a complete functioning lighting cabinet as specified. Protect all electrical outlets with ground fault circuit interrupters (GFCI).
2. Remote Lighting Control Cabinets will be measured and paid for at the Contract unit price per *each* of the type and size specified. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work.

LANDSCAPING

ITEM 20. FURNISH & INSTALL 6 INCH DEPTH, TOP SOIL

1. This item shall constitute full compensation for the furnishing and installation of a

six inch (6") layer of County approved top soil and shall be in accordance with the specifications and plans as well as Section 701 of the MSHA Standard Specifications (July 2018).

2. The quantity to be paid shall be the number of square yards of approved top soil actually furnished and installed.

ITEM 21. TURFGRASS ESTABLISHMENT

1. This item shall constitute full compensation for the furnishing and installation of turfgrass sod in accordance with Section 705 of MSHA Standard Specifications (July 2018) and as indicated on the plans. The payment will be full compensation for all material, labor, equipment, tools, disposal fees and incidentals necessary to complete the work.
2. The quantity to be paid shall be the number of square yards of approved turfgrass furnished and installed.

ITEM 22. TREE, SHRUB AND PERENNIAL INSTALLATION AND ESTABLISHMENT

1. This item is to install and establish trees, shrubs, perennials, vines, and grasses in topsoil or Bioretention Soil Mix. This work shall be conducted in accordance with Section 710 of the MSHA Standard Specifications (July 2018).
2. The Lump Sum price shall be based on full compensation for all labor, material, equipment, tools, wood disposal and chipping, cleanup and restoration, damage repair, disposal fees and incidentals necessary to complete the work. Any bushes or shrubs within excavation limits shall be incidental to this item.

ITEM 23. CONSTRUCTING PLANTING BEDS

1. This item shall constitute full compensation for constructing planting beds and shall be in accordance with the specifications and plans. This work shall be conducted in accordance with Section 710 of the MSHA Standard Specifications (July 2018).
2. The price will include the cost of layout, marking, fertilizer, soil amendments, rototilling, berming, edging, applying 3 inches of SHB mulch, refertilizing, and all operations related to construction of the planting bed, and any necessary damage repair. The quantity to be paid shall be the number of *square yards* of constructing planting beds furnished and installed.

ITEM 24. TREE BRANCH PRUNING

1. The quantity to be paid for Tree Branch Pruning of existing trees shall be in accordance with Section 712 of the Standard Specifications for Construction and Materials.
2. The Lump Sum price shall be based on full compensation for all labor, material, equipment, tools, wood disposal and chipping, cleanup and restoration, damage repair, disposal fees and incidentals necessary to complete the work. Any bushes

or shrubs within excavation limits shall be incidental to this item.

ITEM 25. BRUSH REMOVAL

1. The quantity to be paid for Brush Removal shall be in accordance with Section 713 of the Standard Specifications for Construction and Materials.
2. Brush Removal shall be measure and paid for per *square yard* of brush removal completed. The payment will be full compensation for all labor, material, equipment, tools, wood disposal and chipping, cleanup and restoration, damage repair, disposal fees and incidentals necessary to complete the work.

MISCELLANEOUS

ITEM 26. CONSTRUCTION STAKEOUT

1. This item shall constitute full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work in accordance with Section 107 of the MSHA Standard Specification.
2. Construction Stakeout will not be measured but will be paid for at the Contract lump sum price.

ITEM 27. MOBILIZATION

1. This item shall constitute full compensation for all work in accordance with Section 108 of the MSHA Standard Specification.
2. Mobilization will not be measured but will be paid for at the Contract lump sum price.

ITEM 28. TEST PIT EXCAVATION AND BACKFILLING (CONTINGENT)

1. The unit price for this item shall constitute full compensation for test pits, 5' long by 3' wide by 5' deep, to determine locations of underground obstructions such as utilities, drainage systems, and any other similar items, as directed by the County or the Engineer. The unit price for this item also includes backfilling, compacting, and restoring the surface of test pit holes in accordance with Section 205 of the MSHA Standard Specifications. These pits shall be hand dug.
2. The quantity to be paid shall be for *each* test pit excavated, backfilled and compacted.

ITEM 29. PERMIT ACQUISITION (ELECTRICAL PERMIT)

1. This item shall constitute full compensation for all tasks and coordination required to obtain electrical permits to complete all work included within the contract documents.
2. The acquisition of permits shall be paid as *lump sum*.

ITEM 30. REMOVE AND RESET TEMPORARY ORANGE CONSTRUCTION FENCE

1. This item is for the furnishing and installation of temporary construction fencing as directed by the County. This fencing shall be removed and reset as work progresses throughout the project site. This item shall constitute full compensation for all work in accordance with Section 104.20 of the MSHA Standard Specification.
2. Remove and Reset Temporary Orange Construction Fence will be measured and paid for per *linear foot* of fencing installed.

ITEM 31. CLEARING AND GRUBBING

1. This item shall include the removal and disposal of all trees, shrubs, stumps, vegetation, felled trees, individual roots and any and all trash and debris from within the limits of disturbance in accordance with Section 101 of the MSHA Standard Specifications. All depressions or holes made below the proposed subgrade or slope surfaces by the removal of stumps or roots shall be refilled and compacted with suitable materials as required by the Engineer in the field.
2. Clearing and Grubbing will not be measured, but will be paid for at the Contract *lump sum* price.

SECTION 02050 – TEMPORARY FACILITIES

PART 1 – GENERAL

1.1 SCOPE OF WORK

The Contractor shall furnish all labor and materials for temporary facilities required during construction operations. The Contractor is responsible for all costs associated with any temporary facilities provided.

1.2 TEMPORARY POWER

The Contractor shall make his own arrangements for, and pay all charges for, temporary power.

1.3 TEMPORARY WATER

The Contractor shall make his own arrangements for, and pay all charges for, temporary water.

1.4 TEMPORARY FIELD TOILET FACILITIES

The Contractor shall make his own arrangements for, and pay all charges for, temporary field toilet facilities.

1.5 CONSTRUCTION TELEPHONE

The Contractor shall arrange for and pay for portable cell phone service for calls, whereby the construction site can be communicated with during working hours and until final payment is made.

1.6 TRAFFIC CONTROL

- A. The Contractor shall provide traffic control and protection for the duration of this project in accordance with Section 104 of the MSHA Standard Specifications, the Plans, and as modified herein.

All advance warning signs for lane closures, intermediate information signs, and standard signs shall be installed in accordance with the “Manual of Uniform Traffic Control Devices for Streets and Highways.”

All traffic control devices shall remain in place until specific authorization for removal is received from the County.

- B. The Contractor’s attention is directed to Article 21.2 of the Supplementary General Conditions in reference to the filing of the required traffic maintenance plan.

1.7 TEMPORARY ACCESS WALKS

Temporary access walks shall be as specified in Section 02100, SITE PREPARATION and on County Maintenance of Traffic Plan, Appendix I.

1.8 TEMPORARY STORAGE FACILITIES (CONTRACTOR'S OPTION)

- A. Provide and maintain, on or adjacent to the project site, storage facilities (e.g., temporary buildings, storage sheds, fenced areas, trailers, etc.) required for work execution.
- B. Storage facility locations:
 - 1. Approved by the County's Representative.
 - 2. Submit three copies of plan indicating proposed storage facility locations and obtain approval from the County's Representative and Property Owner prior to start of construction..

Remove storage facilities and restore affected areas at project's completion or when directed by the County's Representative. Restoration to be approved by the County's Representative and Property Owner.

PART 2 - MATERIALS

Not applicable.

PART 3 - EXECUTION

Not applicable.

*****END OF SECTION 02050*****

SECTION 02100 - SITE PREPARATION

PART 1 – GENERAL

1.1 SCOPE OF WORK

- A. The Contractor shall provide all equipment and do all work necessary to prepare the site, complete, as indicated on the drawings and as specified.
- B. Demolition work, as specified herein, is not intended to be performed as a wrecking operation but as preparatory work relative to the performance of the various construction operations of the Project. The Contractor shall pay special attention to the Project Limits as shown on Plans.
- C. Items involved in the demolition and/or excavation such as pavement and sidewalks of whatever material shall not be classified as rock or hard surface excavation.

1.2 RELATED WORK

The Contractor shall coordinate the work of this Section with related work specified under other Sections, including:

Section 02050: TEMPORARY FACILITIES
Section 02200: EARTHWORK
Section 02600: SITE UTILITIES
Section 03300: CONCRETE
Section 16050: BASIC ELECTRICAL METHODS AND MATERIALS

1.3 JOB CONDITIONS

- A. Dust Control: To prevent unnecessary spread of dust during performance of exterior demolition work, thoroughly moisten surfaces and debris as required to prevent dust from being a nuisance to the public, to neighbors, and to concurrent performance of other work on the site. Water for use in dust control shall be obtained from Contractor's own source.
- B. Protection: Exercise care during demolition work to confine demolition operations to the areas indicated on the Drawings. The physical means and methods used for protection are at the Contractor's option. However, the Contractor shall be responsible for replacement and restitution work of whatever nature at no expense to the County.
 - 1. Any damage to the County or private property not identified as to be demolished or removed shall be replaced or repaired at the Contractor's expense, to the satisfaction of the County or Owner.
 - 2. If public safety could be at risk during the process of the demolition work, provide adequate protective measures to protect public, pedestrian and vehicular traffic.
 - 3. Signs, signals, and barricades used shall conform to requirements of State and City laws, rules, regulations, precautions, orders and decrees.
- C. Cleaning: The Contractor shall remove all debris, leftover Construction materials, etc. from job site on a daily basis.

1.4 INFORMATION NOT GUARANTEED

All information on the drawings and in the specifications relating to subsurface conditions, natural phenomena, existing utilities and structures is from the best sources presently available. All such information is furnished only for information and convenience, and is not guaranteed.

PART 2 - MATERIALS

2.1 SALVAGE MATERIAL

Material indicated on the Drawings or designated in the field by the Engineer to be removed and stockpiled shall be removed and stockpiled at the General Contractor's construction staging area, unless otherwise directed by these specifications and/or by the County's representative.

2.2 MATERIAL TO BE DISPOSED OF

All material resulting from site preparation and not scheduled for salvaging shall become the property of the Contractor and shall be legally and suitably disposed of off-site. Disposal shall be performed as promptly as possible and not left until the final clean up.

PART 3 - EXECUTION

3.1 INSPECTION

The Contractor shall:

- A. Prior to the performance of the actual work, carefully inspect the limits of demolition items and verify with the Owner the items being removed and items to be preserved.
- B. Locate existing exposed and buried utilities and determine the requirement for their protection, or their disposition, with respect to the demolition work. It is the responsibility of the Contractor to notify all utility companies, all pipe line owners or other parties affected within the construction area. The Contractor shall contact "Miss Utility" at least 48 hours prior to the beginning of any work at 1-800-257-7777.

3.2 GENERAL PERFORMANCE

- A. The means and methods of performing demolition operations are the sole responsibility of the Contractor.
- B. Demolished material shall not be broken into small pieces and used as fill, but shall be loaded into trucks and removed from site daily.
- C. The Contractor shall erect and maintain a substantial temporary fence to separate pedestrian traffic from the proposed construction.

3.3 PAVEMENT- SIDEWALK REMOVAL

Existing concrete sidewalk indicated to be removed shall be removed by the Contractor in accordance with Section 206 of the Standard Specifications.

3.4 TEMPORARY ACCESS WALK CONSTRUCTION

- A. Pedestrian access to existing buildings shall be maintained at all times.
- B. During sidewalk construction, pedestrian access shall be maintained at all times during excavation and construction. Pedestrian boardwalk shall be used as needed to provide access using a minimum of 4' x 8' by 5/8" exterior grade plywood.

3.5 DISPOSAL AND SALVAGE

- A. Legally dispose of all debris from demolition operations, daily.
- B. Salvage: The County shall have the right to claim as salvage any of the materials "removed" under the work of this Contract. When the Contractor has removed such items should such right of salvage be exercised by the County, the Contractor shall move and neatly store removed items in a location agreeable to the Owner in a manner approved by the Owner.

3.6 BACKFILLING

Backfill to level of rough grading in the area of demolished items shall be in accordance with Section 02200, Earthwork.

*****END OF SECTION 02100*****

SECTION 02200 – EARTHWORK

PART 1 – GENERAL

1.1 SCOPE OF WORK

The Contractor shall furnish all labor, materials, equipment and services necessary for and reasonably incidental to providing the required earthwork and site preparation within the project limits as shown on the drawings and/or specified herein.

1.2 RELATED WORK

The Contractor shall coordinate the work of this Section with related work specified under other Sections, including:

Section 02100: SITE PREPARATION
Section 02600: SITE UTILITIES
Section 03300: CONCRETE

1.3 EXISTING CONDITIONS

The Contractor shall become thoroughly familiar with the site, consult records and drawings of adjacent structures and of existing utilities and their connections, and note all conditions which may influence the work of this Section.

1.4 INFORMATION NOT GUARANTEED

All information on the drawings and in the specifications relating to subsurface conditions, natural phenomena, existing utilities and structures is from the best sources presently available. All such information is furnished only for information and convenience, and is not guaranteed.

PART 2 - MATERIAL

2.1 GENERAL

- A. The Contractor shall utilize suitable material resulting from on-site excavations when the excavated quantities permit, and as directed for backfill. The suitability of any excavated material for on-site use shall be at the discretion of the County.
- B. Material needed in addition to that available from on-site operations shall be obtained from suitable deposits and meet the applicable specification. The Contractor shall furnish all fill and backfill material needed to complete the work.

2.2 SUITABLE MATERIAL

- A. Suitable material shall be material resulting from on-site excavations which is free of organic matter, including logs, stumps, and roots, rock larger than 6 inches in greatest dimension, and debris such as concrete.
- B. Suitable excavated material shall be of such gradation as to form a stable and firm subgrade.

2.3 TRENCH BACKFILL

Trench backfill material shall be fine aggregate as specified in section 950.05 of the MSHA Standard Specifications.

2.4 SAND

Sand shall meet the requirements of AASHTO M6.

PART 3 - EXECUTION

3.1 SAW CUTTING

Saw cutting shall be executed along the building line or as indicated on the drawings, along the curb, and on the road bed as shown on the drawings. Saw cutting shall be performed in a straight and neat manner.

3.2 PROTECTION OF UTILITIES TO REMAIN

- A. Underground utilities have been indicated on the drawings to the extent of information available, but no guarantee is made that all utilities and structures are shown.
- B. As excavation approaches underground utilities and structures, excavation shall be done by hand tools.
- C. Utilities, structures, curbs, pavements, and other features intended to remain which are damaged due to the Contractors operations shall be restored or replaced, at the Contractors expense, to at least their original condition.
- D. Survey markers which are disturbed shall be restored at the Contractor's expense by a Land Surveyor registered in the State of Maryland.
- E. Utilities which will interfere with the progress of the work shall not be interrupted without the permission of the utility owner.

3.3 FREEZING

No excavations to full depth shall be made when freezing temperatures are expected, unless the structures are placed immediately after the excavation is completed. The excavation bottom shall be protected from freezing if the placing of earth is delayed.

3.4 EARTH EXCAVATION

- A. Earth excavation shall be in accordance with Sections 201 and 404 of the MSHA Standard Specifications, except as modified herein.
- B. All broken bituminous surface material, broken concrete, broken rock, boulders, stones 6 inches or larger, stumps, roots, and other related material deemed by the County to be unsuitable for reuse, shall be suitably disposed of off-site.
- C. If material unsuitable for foundations is found at or below the excavation bottom, the Contractor shall remove such material to the required width and depth and replace it with thoroughly compacted aggregate sub-base.

- D. Trench backfill material shall be the fine aggregate as specified in Section 901 of the MSHA Standard Specifications.

3.5 BACKFILLING AND COMPACTION

- A. Fill and backfill under structures and pavements shall be placed in 6 inch layers and compacted to 95 percent, as determined by Method D of ASTM D1557, unless otherwise directed or except for the following.
- B. Trenches and French Drains shall be backfilled and compacted in accordance with Section 809 of the MSHA Standard Specifications.
- C. Backfill shall not be placed around structures until the concrete has sufficiently set.
- D. If specified, backfilling for certain utilities shall not be done until testing is complete.
- E. If a pipeline is backfilled before testing and fails a test, the Contractor shall remove and later replace such backfill at his own expense in order to repair or replace defective joints or pipe.

3.6 GRADING

Grading shall be done to lines and levels indicated on the plans.

3.7 DISPOSAL

All material resulting from excavations which is unsuitable for reuse shall become the property of the Contractor and suitably disposed of off-site.

3.8 TEST PIT EXCAVATION

The Contractor, under the direction of the County, shall perform Test Pit Excavation to locate existing utilities that may conflict with the proposed construction.

Test pits shall be of the size, depth, and location as approved by the County. Each pit shall be tamp backfilled after horizontal and vertical locations of the utilities have been obtained.

*****END OF SECTION 02200*****

SECTION 02600 - SITE UTILITIES

PART 1 - GENERAL

1.1 SCOPE OF WORK

The Contractor shall furnish all labor, materials, equipment and services necessary for and reasonably incidental to reconstructing, adjusting, and/or relocating all utilities necessary to construct the project according to plans. This work includes, trench drains, water facilities, storm drain, and sewer facilities. This includes minor adjustments (up 6" or down 6") to the above-mentioned facilities, as well as to telephone, gas, and electric facilities. This also includes the labor, equipment, and incidentals necessary to adjust water valves.

1.2 RELATED WORK

The Contractor shall coordinate the work of this Section with related work specified under other Sections, including:

Section 02100: SITE PREPARATION
Section 02200: EARTHWORK

1.3 EXISTING CONDITIONS AND INFORMATION ON DRAWINGS

The location of existing utilities on the drawings has been obtained from records, plans, and field surveys, but is not guaranteed to be either precise or complete. All existing utilities not scheduled for removal shall be protected from damage during the execution of this contract. Any damage done shall be repaired at the Contractor's expense. The project shall be completely marked on the ground by "Miss Utility," telephone 1-800-257-7777, before any work is started.

1.4 GENERAL

- A. All work shall be done in compliance with the appropriate utilities most recent standards and specifications, and the Maryland Department of Transportation, State Highway Administration, *Standards Specifications for Construction and Materials*, dated July 2018.

Any adjustments to public utilities shall be fully coordinated with the utility owners thereof, as follows:

Water/ Storm Systems: Washington Suburban Sanitary Commission
Telephone: 301-206-9672

Gas System - Washington Gas Light Company
Telephone: 703-750-4215

Electric System - Potomac Electric Power Company
Telephone: 301-548-4305

Telephone System - Verizon - MD
Telephone: 301-595-6140

COMCAST
Telephone: 301-294-7774

- B. For approval of materials and inspection of water and sewer work, contact Mr. Ahmad Karami, Washington Suburban Sanitary District - telephone (301) 206-9672 between 7:30 AM and 4:00 PM. a minimum of five (5) days in advance of beginning any work to arrange for inspection.
- C. All work within the public right-of-way of the Montclair Manor Community shall be approved by the County and shall comply with the conditions of a permit to be issued by the Montgomery County Department of Permitting Services.

PART 2 - MATERIAL

2.1 GENERAL

- A. All materials used to construct utilities shall comply with provisions of paragraph 1.4 of PART I above.
- B. All materials required to accomplish the adjustment of water and sewer facilities under the supervision of WSSC must be approved by the Quality Assurance Section of the Washington Suburban Sanitary Commission.

2.2 FIRE HYDRANTS

- A. Contractor to provide WSSC with plans and details, in 8 ½" x 11" format, of proposed fire hydrant relocation, five (5) days in advance of beginning any work to arrange for inspection and direction from WSSC.
- B. During excavation and construction all work pertaining to the relocation of fire hydrants shall be in the presence of and under the direct supervision of the County Project Coordinator and the WSSC inspector as indicated in paragraph 1.4 B of PART I above.
- C. Contractor is responsible to field verify, and provide WSSC and the Engineer, all buried line elevations prior to beginning any relocation work. All proposed invert elevations shall match existing invert elevations.
- D. Determination of relocating existing fire hydrant materials and facilities or installing new fire hydrant materials and facilities will be field verified and directed by WSSC during construction.

PART 3 - EXECUTION

3.1 GENERAL

All work shall be performed to meet provisions of paragraph 1.4 of PART I above. All work to be done on water and sewer facilities shall also meet provisions of paragraph 2.1 B and 2.2 of PART 2 above.

*****END OF SECTION 02600*****

SECTION 02920

TURF AND GRASSES

PART 1 GENERAL

A. SUMMARY

1. Section Includes:
 - a. Sodding.
2. Related Requirements:
 - a. Section 02200 "Earthwork" for subgrade preparation.
 - b. Section 02930 "Exterior Plants" for trees, shrubs, ground covers and soil testing and placement requirements.

B. DEFINITIONS

1. Finish Grade: Elevation of finished surface of planting soil.
2. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
3. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
4. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 329115 "Soil Preparation (Performance Specification)" and drawing designations for planting soils.
5. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

C. INFORMATIONAL SUBMITTALS

1. Qualification Data: For landscape Installer.
2. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture, stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
 - a. Certification of each seed mixture for turfgrass sod. Include identification of source and name and telephone number of supplier.

3. Product Certificates: For fertilizers, from manufacturer.
4. Pesticides and Herbicides: Product label and manufacturer's application instructions specific to Project.

D. CLOSEOUT SUBMITTALS

1. Maintenance Data: Recommended procedures to be established by the County for maintenance of turf during a calendar year. Submit before expiration of required maintenance periods.

E. QUALITY ASSURANCE

1. Installer Qualifications: A qualified landscape installer whose work has resulted in successful turf establishment.
 - a. Experience: Five years' experience in turf installation.
 - b. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
 - c. Pesticide Applicator: State licensed, commercial.

F. DELIVERY, STORAGE, AND HANDLING

1. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable.
2. Sod: Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" sections in TPI's "Guideline Specifications to Turfgrass Sodding." Deliver sod within 24 hours of harvesting and in time for planting promptly. Protect sod from breakage and drying.
3. Bulk Materials:
 - a. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
 - b. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
 - c. Accompany each delivery of bulk materials with appropriate certificates.

G. FIELD CONDITIONS

1. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with initial maintenance periods to provide required maintenance from date of planting completion.
 - a. Spring Planting: March 1 to May 15.
 - b. Fall Planting: October 1 to December 15.
2. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

PART 2 PRODUCTS

A. TURFGRASS SOD

1. Turfgrass Sod: MD State Certified, complying with "Specifications for Turfgrass Sod Materials" in TPI's "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture that is strongly rooted and capable of vigorous growth and development when planted.
2. Turfgrass Species: Sod of grass species as follows, with not less than 85 percent germination, not less than 95 percent pure seed, and not more than 0.2 percent weed seed:
 - a. Sun and Partial Shade: Proportioned by weight as follows:
 1. 90 percent turf-type tall fescue (*Festuca arundinacea*); an equal blend of three cultivars.
 2. 10 percent Kentucky bluegrass (*Poa pratensis*).

B. FERTILIZERS

1. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
 - a. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.
2. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - a. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

C. PESTICIDES

1. General: Pesticide, registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.
2. Pre-Emergent Herbicide (Selective and Nonselective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.
3. Post-Emergent Herbicide (Selective and Nonselective): Effective for controlling weed growth that has already germinated.

PART 3 EXECUTION

A. EXAMINATION

1. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work.
 - a. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
 - b. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
 - c. Uniformly moisten excessively dry soil that is not workable or which is dusty.
2. Proceed with installation only after unsatisfactory conditions have been corrected.
3. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by the County and replace with new planting soil.

B. PREPARATION

1. Protect structures; utilities; sidewalks; pavements; and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
 - a. Protect grade stakes set by others until directed to remove them.

C. TURF AREA PREPARATION

1. General: Prepare planting area for soil placement and mix planting soil according to Section 329115 "Soil Preparation (Performance Specification)."
2. Placing Planting Soil: Place and mix planting soil in place over exposed subgrade.
 - a. Reduce elevation of planting soil to allow for soil thickness of sod.
3. Moistened prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
4. Before planting, obtain the County's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

D. SODDING

1. Lay sod within 24 hours of harvesting unless a suitable preservation method is accepted by the County prior to delivery time. Do not lay sod if dormant or if ground is frozen or muddy.
2. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to soil or sod during installation. Tamp and roll lightly to ensure contact with soil, eliminate air pockets, and form a smooth

surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.

3. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

E. TURF MAINTENANCE

1. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and mulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
 - a. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
 - b. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.
2. Watering: Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of 4 inches.
 - a. Schedule watering to prevent wilting, puddling, or erosion. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
 - b. Water turf with fine spray at a minimum rate of 1 inch per week unless rainfall precipitation is adequate.
3. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than one-third of grass height. Remove no more than one-third of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:
 - a. Mow turf-type tall fescue to a height of 2 to 3 inches.

F. SATISFACTORY TURF

1. Turf installations shall meet the following criteria as determined by the County:
 - a. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities.

- G.** Use specified materials to reestablish turf that does not comply with requirements, and continue maintenance until turf is satisfactory.

H. PESTICIDE APPLICATION

1. Apply pesticides and other chemical products and biological control agents according to requirements of authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with the County's operations and others in proximity to the Work. Notify the County before each application is performed.
2. Post-Emergent Herbicides (Selective and Nonselective): Apply only as necessary to treat already-germinated weeds and according to manufacturer's written recommendations.

I. CLEANUP AND PROTECTION

1. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
2. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off the County's property.
3. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.

J. MAINTENANCE SERVICE

1. Turf Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in "Turf Maintenance" Article. Begin maintenance immediately after each area is planted and continue until acceptable turf is established, but for not less than the following periods:
 - a. Sodded Turf: 30 days from date of planting completion.

*****END OF SECTION 02920*****

SECTION 02930

EXTERIOR PLANTS

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. The Contractor shall furnish all labor, plants, materials, equipment services, and incidentals for furnishing, installing, maintaining and guaranteeing landscape necessary for plantings and other incidental items necessary for satisfactory completion of all planting as shown on the drawings and/or as specified in accordance with Landscape Specification Guidelines by Landscape Contractors Association, latest edition. (2014)
- B. The work shall include, but is not limited to:
 - 1. Supplying plants, topsoil, manure, mulch, peat moss, and guying materials.
 - 2. Mixing planting soil.
 - 3. Placing plants and materials.
 - 4. Maintaining plants.
 - 5. Fulfilling the guarantee and replacement requirements.

1.2 RELATED SECTIONS

The Contractor shall coordinate the work of this section with related work specified under other sections including:

Section 02200: EARTHWORK
Section 02600: SITE UTILITIES
Section 02920: TURF AND GRASSES
Section 03300: CONCRETE

1.3 QUALITY ASSURANCE STANDARDS

- A. All plant material shall conform to the current issue of the American Standard for Nursery Stock published by the American Association of Nurserymen. (ANSI Z60.1)
- B. Reference Codes and Standards:
 - 1. American Standard for Nursery Stock (ANSI Z60.1)
 - 2. Bailey's Standard Cyclopedic of Horticulture
 - 3. Standardized Plant Names, American Joint Committee on Horticultural Nomenclature (AJCHN)
 - 4. Hortus III
- C. Source Quality Control:
 - 1. Packaged products shall indicate the analysis and recommendations for use on the manufacturer's package and arrive on site as originally' packaged and unopened.
 - 2. For freshly dug plants, use nursery grown stock acclimated to the soil and climatic conditions in the local area of intended planting.

3. The Contractor shall submit to the County for approval, the names, and locations of nurseries which he proposes to use as sources of acceptable plant materials. The Contractor shall determine that the materials meet the requirements of this section. Proposed materials shall be flagged at the nurseries by the Contractor prior to viewing by the County.
4. The Contractor shall schedule with the County a time for viewing plant material in nursery, in order for the County to determine whether plant materials conform to specification requirements. Trips to nurseries shall be efficiently arranged to allow the County to maximize its viewing time. A minimum of 6 weeks shall be allowed for this viewing prior to time that plants are to be dug.
5. The County may choose to attach his seal to each plant, or representative samples.
6. Where requested by the County, photographs of plant material or representative samples of plants shall be submitted.
7. Use plants grown under good nursery practices for a period of two full growing seasons.
8. Plant material shall be subject to inspection, shall be selected from nurseries by the County at the place of growth or holding yard for conformity to specification requirements as to quality, size and variety.
9. Tagging of trees at nursery does not preclude the County's right to reject material at the site of planting.

D. Contractor On-Site Supervision

1. The Contractor shall arrange with the landscape subcontractor to have a competent Senior Landscape Foreman who shall be in attendance at the project site at all times during the progress of the work specified in this section.
2. The Senior Foreman shall have progressively responsible experience as a foreman on projects of similar size and complexity.

1.4 SUBMITTAL

- A. Within ten (10) calendar days after the County's written Notification of Intent to Awards a Contract, submit detailed production schedule to the County indicating various work items and dates each item will be staked or flagged, started, and completed.
- B. Submit schedule for digging and delivery dates for all Plant Materials with Production Schedule.
- C. Samples: Samples, manufacturer's literature, or laboratory analytical data, as applicable, of all materials other than plants shall be submitted for approval to the County.
- D. Soil Supplement Product Certification: Submit, prior to installation, written statements certifying that such products have a guaranteed analysis in conformance with the recommendations for soil supplements contained in the tests and analyses called for in Section 1.9 below.
- E. Plant Certifications: Submit, prior to installation, plant material certificates certifying the plants to be typical and the species or variety in conformity to the current edition of "American Standard for Nursery Stock" of the American Nursery and Landscape Association (ANLA).

- F. Submit, prior to installation, a label from the manufacturer's container certifying that the following products meet the specified requirements:
1. Iron sulfate
 2. Limestone
 3. Commercial fertilizer
 4. Anti-desiccant
 5. Fungicide
 6. Insecticide
- G. Certification of inspection shall accompany the invoice for each shipment of plants as required by law for transportation. Disease-free and insect-free certificates shall be submitted to the County. File certificates with the County prior to acceptance of the material. Inspection by federal or state-governments at place of growth does not preclude rejection of the plants at the site.
- H. Submit statement of qualifications of the proposed Senior Landscape Foreman to the County for review and approval, within ten (10) calendar days after the date of the County's written Notification of Intent to Award a Contract.
- I. All submittals shall be forwarded in a single package to the County's Representative within ten (10) calendar days of the date of the County's written Notification of Intent to Award a Contract, except items otherwise noted.
- J. One month prior to the end of the one-year Maintenance Period, submit written maintenance instructions, recommending procedures for continuing maintenance of Plant Materials.

1.5 SUBSTITUTION

- A. If a Contract plant is found to be unavailable, the Contractor shall notify the County. It is the responsibility of the Contractor to demonstrate lack of availability. Substitutions for convenience will not be considered.
- B. The Contractor shall select another equivalent, available plant and submit details to the County for approval. Approval of a substitution is at the sole discretion of the County and may be rejected for any reason.
- C. Approved substitute plants shall be of the same size, value, and quality as the original plant.

1.6 UTILITIES

- A. The Contractor shall call utility companies to locate all the utilities and notify the County ahead of planting.
- B. If there is a conflict between any utility, underground or overhead, and any proposed plant material, it is the responsibility of the Contractor to notify the County prior to commencement of work. The County must approve any plant material location changes prior to installation. Any additional cost due to relocating plant material as a result of utility conflicts shall be borne by the Contractor.

1.7 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver packaged products to the site in unopened containers with labels intact and legible.

- B. Deliver plant materials to the site in a protected condition to prevent wind damage and drying. Plant materials exhibiting a “heated” or “sweated” condition due to tight packaging or poor ventilation are subject to rejection.
- C. Deliver plants tagged with the name and size legibly indicated in accordance with the ANLA standards of practice. Provide at least one tagged plant in each bundle or lot. In all cases, botanical names shall take precedence over common names.
- D. Store packaged products in such a manner to prevent moisture damage and other forms of contamination.
- E. Prepare dug plants for handling and shipment with balled and burlapped (B&B) root systems. Perform B&B work in accordance with ANLA standards and in accordance with ASNI Z60.1 concerning diameter and depths of balls on B&B plants. Handle plants from bottom of ball. B&B plants arriving at the site with broken, loose, dried or fractured balls, or with abraded bark, are subject to rejection. When a plant has been so rejected, the Contractor shall at once remove it from the area of the work and replace it.
- F. Plants shall not be dug at the nursery or approved source until the Contractor is ready to transport them from their original locations to the site of the work or acceptable storage locations.
- G. Unless otherwise authorized by the County, the Contractor shall notify the County at least 48 hours in advance of the anticipated delivery date of any plant material. A legible copy of the invoice, showing kinds and sizes of materials included for each shipment shall be furnished to the County. Certificate of Inspection, when required, shall accompany each shipment of plant materials.
- H. Anti-desiccant shall be applied to all plants dug in foliage.
- I. Temporary Storage: No plant shall remain in temporary storage over the winter or summer. Plants that are not planted immediately shall be protected as follows:
 - 1. Plants shall remain on the site of the work no longer than three days prior to being planted or placed in storage.
 - 2. The earth balls shall be kept moist and their solidity carefully preserved. To prevent drying out or freezing, they shall be stored in a compact group with a suitable mulch material placed around and between the balls so they are completely covered. The duration and method of storage of plants and mulch material shall be approved by the County.

1.8 JOB CONDITIONS

- A. Environmental Requirements: Do not perform work of the Section when soil or weather conditions are unsuitable. Unsuitable conditions include soil saturated with moisture or frozen in place and precipitation of any kind present or occurring during the work.
- B. Plant Setting Dates: October 1 to December 15 unless otherwise approved by the County in writing. Any request for deviation from the planting dates shall be made no less than four weeks in advance of requested planting dates.
- C. Unforeseen Contingencies: The Contractor will not be held responsible for unforeseen contingencies (other than those in Section 1.6 above) such as, but not limited to, rock, water, clay pan or other obstacles encountered in excavation work which are not apparent on the surface. Course of action will be decided at the time of encounter, per approval of the County.

- D. Drainage: No plants shall be planted in situations that show obviously poor drainage. Such situations shall be brought to the attention of the County and, if necessary, corrective measures shall be taken or the plants shall be relocated.
- E. Water: Water will be supplied by the Contractor.
- F. Utilities: The Contractor shall note the potential minimum earth cover of buried utilities and shall be prepared to dig all tree pits by hand to minimize disturbances. Hand digging will not be considered as extra, and no additional payments will be made for such work.

1.9 CONTRACTOR'S INSPECTION AND TESTING

- A. Testing, analyses, and inspection of soil required by the Contractor for his own information or guidance shall be at his own expense.
- B. The Contractor shall provide soil tests from two separate, representative locations on site, as well as for imported topsoil. The sample size shall be 1/8 cubic foot per sample. The Contractor shall engage (at their own expense) a state laboratory or recognized commercial laboratory acceptable to the County to perform the following tests and analyses:

Material
Topsoil
(Both on-site
and import)

Tests and Analysis Required
Mechanical analysis of soil and determination of pH, organic content,
and nutrient content.

Recommendations shall be made by the testing agency as to the type and quantity of soil additives required to bring nutrient content and mechanical analysis to satisfactory levels for planting.

No planting shall proceed until these tests have been run, the test results reported to the County and the County has given permission to proceed with plant excavations.

Test reports shall distinguish between recommendations for amending soil for use with trees, shrubs, and ground covers.

1. Materials shall not be used in construction until test results have been reviewed by the County.
2. All costs associated with testing shall be at the expense of the Contractor.
3. Any on-site topsoil found unsuitable for planting shall be removed from the project site and disposed of in accordance with all local laws, codes and ordinances at no additional cost to the County.

1.10 INSPECTION, ACCEPTANCE AND GUARANTEE

- A. Initial Acceptance
 1. The County will inspect all work for initial acceptance upon written request of the Contractor. The request shall be received at least ten calendar days before the anticipated date of inspection.

2. Initial acceptance of plant material by the County shall be for general conformance to specified size, character, and quality, and shall not relieve the Contractor of responsibility for full conformance to the Contract Documents, including correct species.
3. Upon completion and re-inspection of all repairs or renewals necessary, the County will determine the work of this Section to be initially accepted.

B. Guarantee Period

1. The guarantee period for plant material shall begin at the date of initial acceptance.
2. All plant material shall be guaranteed by the Contractor for a period of two years from the date of acceptance to be in good, healthy, and flourishing condition.
3. If dormancy of plants requires verification of viability during the next growing season, the Guarantee Period for these plants will commence following such verification.
4. For any delay in completion of planting operations which extends the planting into more than one planting season, the Warranty Period shall begin whenever Substantial Completion Acceptance is granted.
5. For any partially completed work, the Guarantee Period shall begin upon the date of Substantial Completion Acceptance of such work.

C. Replacements

1. The Contractor shall replace, without cost to the County as soon as weather conditions permit, and within the specified planting period, all dead plants and all plants not in a vigorous, thriving condition as determined by the County during and at the end of the guarantee period. The plants shall be free of dead or dying branched and branch tips, and shall bear foliage of normal density, size, and color. Replacements shall closely match adjacent specimens of the same species. Replacements shall be subject to all requirements stated in this Specification. Do not make replacement in any season unfavorable for planting.
2. Any plants that are 25 percent or more dead shall be considered dead when the main leader has died back or 25 percent or more of the crown is dead.
3. The Contractor shall make all necessary repairs to complete work due to plant replacements. Such repairs shall be done at no extra cost to the County.
4. The guarantee of all replacement plants shall extend for an additional period of two years from the date of their initial acceptance after replacement. In the event that a replacement plant is not acceptable during or at the end of the said extended guarantee period, the County may elect subsequent replacement or credit for each item.

D. Guarantee Period Inspections

The Contractor shall make as many periodic inspections as necessary during the guarantee period at no additional cost to the County, to determine what changes, if any should be made to the maintenance program. The Contractor shall submit in writing to the County all recommended changes.

1. Final Inspection and Final Acceptance

2. At the end of the guarantee period, the County will inspect all guaranteed work for Final Acceptance upon written request of the Contractor. The request shall be received at least ten calendar days before the anticipated date for Final Inspection.
3. Upon completion and re-inspection of full repairs or renewals necessary in the judgment of the County at that time, the County will grant Final Acceptance of the work of this Section.

PART 2 - PRODUCTS

2.1 PLANT MATERIAL

- A. Plants shall conform to the varieties specified in the plant list and be true to botanical name as listed. Plants shall be in accordance with the latest version of ANSI Z60.1, except as otherwise stated in the specifications or shown on the Drawings. Where the drawings or specifications are in conflict with ANSI Z60.1, the drawings and specifications shall prevail.
- B. Planting stock shall be well-branched and well-formed, sound, vigorous, healthy, and free from disease, sun-scald, windburn, abrasion, disfiguring knots, cuts of limbs over 3/4 inch which have not completely callused, and harmful insects or insect eggs and shall have healthy, normal and unbroken root systems. Deciduous trees shall be symmetrically developed, of uniform habit or growth, with straight holes or stems, and free from objectionable disfigurements. Tree species shall have a single main trunk. Plants shall have been grown under climatic conditions similar to those in the locality of the project for at least two years.
- C. Plants planted in rows shall be matching in form.
- D. The minimum acceptable sizes of all plants, measured before pruning and with branches in normal position, shall conform to the measurements indicated on the drawings. Plants larger in size than the specified may be used with the approval of the County with no change in the contract price. If larger plants are used, the ball of earth or spread of roots shall be increased in accordance with ANSI Z60.1. Plants shall not be pruned before delivery.
- E. Plant material shall be nursery grown unless otherwise indicated and shall conform to the requirements and recommendations of ANSI Z60.1. Plants shall be dug and prepared for shipment in a manner that will not cause damage to branches, shape, and future development after planting.
 1. Balled and burlapped (B&B) plants shall have ball sizes conforming to ANSI Z60.1. Plants shall be balled with firm natural balls of soil. B&B plants shall be wrapped firmly with burlap or strong cloth and tied securely. In size grading balled-and-burlapped trees, caliper shall take precedence over height. Caliper of the trunk shall be taken 6 inches above the natural ground level for trees up to and including 4-inch caliper size. For trees larger than 4-inch caliper, caliper shall be taken at 12 inches above the natural ground level.
 2. Container grown plants shall have sufficient root growth to hold the earth intact when removed from containers but shall not be root bound.

2.2 ANTI-DESICCANT

Anti-desiccant: "Wilt-pruf" Nursery Specialty Products, Inc., 410 Greenwich Avenue, Greenwich, Connecticut 06830, or approved equivalent.

2.3 PEAT MOSS / COMPOST

- A. Commercially available material consisting of shredded sedge peat and reed peat or sphagnum moss peat, or combinations of such, from fresh water sites. Peats in advanced stages of decay (parent material not identifiable) are not permitted. Use peat having a minimum organic content of 80 percent organic matter by weight, a pH value of 3.5 to 5.5, and a maximum ash content of 15 percent.
- B. Compost: Well-rotted decomposed leaf material.

2.4 FERTILIZER

- A. Planting tablets shall be Agriform 20-10-5 Planting Tablets or approved equal, tightly compressed, long lasting and slow release, weights of 5, 10, and 21 grams with an analysis of 20-10-5 derived from the sources listed in the guaranteed analysis. Place tablet(s) beside the root ball about one inch from root tips. Do not place tablet(s) in bottom of the hole. Complete backfill, tamp, and water.

2.5 TOPSOIL

- A. On-site stockpiled topsoil is not available to the Contractor. Provide imported topsoil as required from sources approved by the County. Topsoil shall only be used for the 2” surface layer of the planting pits. Provide amendments specified to bring topsoil to standards specified.
- B. Topsoil, whether stripped from site or supplied from off-site, shall be a sandy loam or loam soil as defined by the USDA Soil Conservation Service, Soil Classification System, and shall have the following mechanical analysis:

<u>Textural Class</u>	<u>% of Total Weight</u>	<u>Average</u>
Sand (0.05-2.0 mil dia range)	30 to 70	50
Silt (0.002-0.5 mil dia range)	20 to 50	35
Clay (less than 0.002 mil dia range)	5 to 25	15

95% of topsoil shall pass a 2.0 mil sieve.

Topsoil shall be free of stone 1” or larger in longest dimension, earth clods, plant parts and debris.

Organic matter content shall be 4%-12% of dry weight.

Topsoil shall not contain toxic substances harmful to plant growth.

2.6 PLANTING SOIL

- A. Planting soil shall be derived from subsoil from existing plant pits and amendments determined by the soil analysis.
- B. Planting soil shall NOT be sieved. Large clods of earth, clay, roots, etc. are acceptable. Contractor shall collect the existing soil and mix with recommended amendments ONLY ONCE prior to placement in the planting pits.
- C. Planting soil shall meet the same texture class percent as Topsoil per 2.5 above, but shall not be sieved.

2.7 MULCH

- A. Mulch material for plants shall be uncolored, double shredded hardwood mulch. Bark mulch or shredded bark will not be accepted. Material shall be mulching grade, uniform in size, and free of foreign matter.

2.8 WATER

Potable water: to be supplied by the Contractor.

2.9 FUNGICIDE

Fungicide shall be Zinc ethylene bisdithiocarbonate (Zineb), or approved equal.

PART 3 - EXECUTION

3.1 PLANTING PROCEDURES FOR TREES AND SHRUBS

A. Layout of work:

Prior to digging plant pits, Contractor shall layout and stake proposed locations for all plant materials. Layout shall be approved by the County prior to installation.

B. Test Pits:

Should stake locations lie in proximity to subsurface utilities, Contractor may perform subsurface exploration to verify utility locations, at the instruction of the County.

C. Digging Plant Pits:

1. Walls of plant pits shall be dug so that they are 45° from vertical and scarified. Bottoms shall be scarified to depth of 3".
2. Plant pits must be a minimum of 12 inches larger for shrubs on every side of the plant ball and three times the diameter of the root ball for trees.
3. Plant pits shall be deep enough to allow no more than 1/8 of the ball depth to be above existing grade. The bottom of the planting pit shall have a mound of four- (4) inches high compacted planting soil where the root ball will be placed. Loose soil at the bottom of the pit shall be compacted to inhibit settling. Root ball support mounds shall be compacted to 80% per ASRM D698.
4. Add fertilizer specified.

D. Backfill Plant Pits:

1. Backfill plant pit with the planting soil mixture stated in the specifications.
2. Make sure plant remains straight during backfilling procedure.
3. Backfill sides of plant pit halfway with planting soil mixture and tamp as pit is being filled.
4. Cut rope or wire from ball and remove from plant. Pull burlap back to expose the top one-half of the tree ball. Completely remove all plastic wraps and twine.
5. Finish backfilling side of plant pit and tamp firmly. Add the final 2 inches of topsoil to the top of the planting soil mix and tamp firmly.
6. Never cover top of tree ball with soil.

7. Apply a layer of shredded hardwood bark mulch to a uniform depth of 3 inches. Never allow mulch to come in contact with the trunk of the tree. Mulch “volcanoes”; steep piles of mulch placed against the trunk of the tree, will not be accepted.
8. Water to saturation on the interior of the tree pit until it is filled, even if it is raining. A second watering may be necessary to ensure saturation of the root ball.

E. Fungicide Spraying

Immediately after planting, all trunks of deciduous trees shall be sprayed with fungicide spray, applied as directed by manufacturer.

F. Anti-Desiccant Application

1. In extremely hot weather, apply anti-desiccant as per manufacturer’s directions.
2. Spray deciduous trees, which are moved in full-leaf with anti-desiccant at nursery before and two weeks after planting.

G. Pruning

1. General
 - a. Prune only to remove dead, broken or crossed branches.
 - b. DO NOT cut the main leader when pruning trees.
 - c. If side branches are cut to balance tree, make all cuts flush with lateral branch.
 - d. All cuts greater than 1/2 inch shall be carefully pared over with a sharp knife.
 - e. Remove all strings from the plants.
 - f. Do not remove plant tags until after Final Acceptance.

3.2 CLEAN-UP

- A. Clean up all rubbish and debris caused by this work and remove from site. Keep site clean during maintenance period.
- B. Sweep and wash surfaces soiled by this operation.

3.3 INITIAL WARRANTY ACCEPTANCE

- A. Contractor shall request County inspection for initial acceptance of Contract work at least 10 calendar days before estimated date of completion. This acceptance shall initiate the two-year warranty period.
- B. Initial acceptance of plant material by the County shall be for general conformance to specified size, character, and quality, and shall not relieve the Contractor of responsibility for full conformance to the Contract Documents, including current species.

3.4 MAINTENANCE OF PLANTING

- A. Maintenance shall begin immediately after each plant is planted and shall continue through the warranty period until date of Final Acceptance.
- B. The Contractor shall, at the direction of the County, install and maintain 20 gallon “treegator” drip irrigation bags on trees that show distress or display unhealthy and non-vigorous growth conditions that are determined to be from inadequate water levels
- C. During planting and for a period of two (2) years after Initial Acceptance of original planting operations, the Contractor shall maintain plants and shall perform work incidental thereto by replanting plant replacements, resetting plants to proper grades and positions, watering, draining, feeding, weeding, cultivating, fertilizing, pruning, re-mulching, controlling insects and diseases, re-guying, and by performing all other operations of care for promotion or foot growth and plant life so that all work is in a satisfactory condition at the completion of the Contract and throughout the Warranty Period.

3.5 WARRANTY PERIOD

- A. Contractor shall guarantee all plant material for a period of two years, to be free from diseases and insects and in a healthy and vigorous growing condition from initial planting through the date of Final Acceptance by the County. At that time, all maintenance and replacement responsibility will be transferred to the County.
- B. During the warranty and maintenance period, replace planted trees that are dead, or are in an unhealthy, unsightly, or badly impaired condition. Remove dead plants or cut off at the ground line as soon as the condition is evident. Replace with healthy plants of comparable size and quality as soon as is reasonably possible. Do not make replacement in any season unfavorable for planting.
- C. Contractor shall be required to replace all plant material as many times as required to meet the terms of Final Acceptance.
- D. The Contractor will not be held responsible or liable for damage to plants and planting materials by animals, vandalism, malicious or careless damage by humans or agencies over which he has no control, by fire and storm damage.

3.6 FINAL ACCEPTENCE

- A. At the conclusion of the warranty period, the County will make a final inspection of the work to determine condition of all plants. Plants not in a healthy growing condition, as determined by the County, will be noted. Remove immediately and replace as soon as seasonal conditions permit with healthy plants of the same kinds and sizes as originally specified. Make such replacement in the same manner as specified for the original planting, and at no extra cost to the County.

*****END OF SECTION 02930*****

SECTION 03300 – CONCRETE

PART 1 – GENERAL

1.1 SCOPE OF WORK

The Contractor shall furnish all labor, materials, and proper equipment and services necessary for and reasonably incidental to installing the cast-in place concrete work items as shown on the drawings and/ or as specified herein. Form work, reinforcement, placing, and incidental hardware are included.

1.2 RELATED WORK

Section 02100: SITE PREPARATION
Section 02200: EARTHWORK
Section 02600: SITE UTILITIES

1.3 COMPLIANCE WITH CODES

The Contractor shall comply with the latest approved edition of ACI Standards, MSHA Standard Specifications, and all local codes. Where requirements of the specifications and the drawings are exceeded by those of local codes and regulations, the Contractor shall comply with the local codes and regulations at no additional cost to the County.

PART 2 - MATERIALS AND ACCESSORIES

The Contractor shall comply with all requirements and standards of the **MSHA Specifications**, Articles 33.09, 34.08, 34.09, 35.03 and Article 35.04, including the following:

2.1 CEMENT

Portland Cement, ASTM C- 150-65, Type I: for air-entraining Portland Cement. ASTM C-I 75, Type 1A (or Portland Cement with approved air-entraining agent).

2.2 FINE AGGREGATE

Clean, hard natural sand, ASM C-33-64 maximum size 3/8".

2.3 WATER

Clean, fresh and free from harmful matter.

2.4 REINFORCEMENT STEEL BARS

Per ASTM A-6 I 5-68, grade 60 wire mesh: 6" x 6" grade 6/6.

2.5 METAL ACCESSORIES

A. Form Ties: Adjustable length, leaving holes not larger than 1" in concrete face. Following form removal, metal shall be a minimum of 1" from interior finished concrete surface and 2" from exterior.

- B. Chairs and Spacers: Metal of stock design for use intended. Accessories in exposed concrete shall be galvanized. Include all spacers, chairs, bolsters, holding bars, ties and other devices necessary for properly placing, spacing, supporting and fastening reinforcement in place. Metal accessories shall conform to CRSI "Manual of Standard Practice for Reinforced Concrete Construction".

2.6 TEMPORARY FORMS

5/8" minimum Class 1 BB, EXT-DFPA PLYFORM plywood for all exposed concrete form work.

2.7 EXPANSION JOINT FILLERS

Asphalt impregnated fiberboard, conforming to ASTM D-1751-65 for interior work and self- expanding corkboard, conforming to ASTM D-1752-60T, Type 3, for exterior work. Joint fillers: ½" thick and extend full thickness of the slab unless noted.

2.8 CURING COMPOUND

"Sure Cure" by Kaufman Products, Inc., or approved equal. Apply one coat for interior work, two coats for exterior slabs. Waterproof paper, "Sisalkraft" or approved equal.

2.9 HARDENER

"Hvdroment," as manufactured by Upco Co., or similar product, manufactured by Aquabar Co., The Master Builders Co., Sonneborn Building Products, Inc., and Standard Dry Wall Products, Inc., or "approved equal".

PART 3 - EXECUTION

The Contractor shall comply with the following:

3.1 FORM WORK

Conform to shape, line and dimensions shown. Construct forms plumb, straight and with sufficiently tight joints to prevent leakage. Shore or truss forms to prevent deflection, displacement, and to safely support construction loads. Coat with grease part of form ties to be removed. Clean and wet forms immediately before placing concrete: do not wet when freezing is possible. Exercise care in forming exposed concrete: back up joints between form board sheets and secure solidly to framing members.

3.2 REINFORCING

- A. Fabricate and install reinforcing and provide standard supporting accessories in accordance with ACI, "Manual of Standard Practice for Detailing Reinforced Concrete Structures," ACI 135.
- B. Remove rust, scale, paint and coatings from reinforcing. Place accurately, support on chairs spaced to prevent sagging. Furnish and install additional supports if directed. Position and wire to prevent movement during concrete placement; provide necessary support bars.
- C. Provide for installation of metal angles, channels, plates, inserts, hangers, ties, anchors, dowels, bolts, slots, sleeves, blocking, conduits furnished by other trades, etc. Coordinate locations with other trades and secure in position before concrete placement. If sleeves, conduits, outlet boxes, pipes, etc. interfere with reinforcing, County.
- D. Reinforcing for the 16' high light pole footings shall include four (4) anchor bolts measuring 3/4"x 36" with a four- (4) inch bend provided by the owner. The top nine (9) inches of the anchor bolts to be dip galvanized, conforming to AST A-153 and the rod shall have 55,000 psi, minimum yield

strength, conforming to AST-675, grade 70. The Contractor shall provide and install reinforcing bars as follows: Number four (#4) rebar arranged in a circular pattern with number four (4) rebar ties at twelve (12) inches horizontally. The pattern for the anchor bolts will be provided by the manufacturer of streetlight pole. (See details in drawings.)

3.3 STRENGTH, PROPORTION AND CONSISTENCY

- A. Strength: Use of $f'c = 3.000$ psi at 28 days minimum, test strength concrete for all reinforced and structural work, unless otherwise noted on drawings, containing not less than six bags of cement per cubic yard and water-cement ratio of not more than 6-1/2 gallons per bag of cement.
- B. All concrete to be air entrained, with no more than six gallons of water per bag of cement and containing 6%, plus or minus 1%, entraining air. Use entraining cement, or an air entraining admixture conforming to ASTM C-260-65T.
- C. Do not place concrete which has had water added more than one hour before placing. Use no accelerating agents or other admixtures without specific approval.
- D. For grout, use 1 part Portland cement and 1 part sand.

3.4 MIXING

Use ready mixed concrete mixed and delivered in accordance with ASTM C-95-65. Have delivery tickets available to the County upon request.

3.5 CONTROL TESTS

Contractor to retain the services of a testing laboratory and pay all costs to take samples, make tests and submit four (4) copies of tests results. One additional test cylinder shall be taken during cold weather concreting, and will be cured at the job site under the same conditions as the concrete it represents.

3.6 EXTENT OF TESTS

- A. Secure minimum of three test cylinders from each day's pour of structural concrete, including footings.
- B. Test one cylinder at the age of seven days and two cylinders at the age of 28 days. Secure samples: per ASTM C- 72-54(58). Specimens made to check the adequacy of the design for strength of concrete, or as a basis for acceptance of concrete: Made and laboratory cured, per ASTM C-31-65. Additional tests of specimens cured entirely under field conditions may be utilized to check the adequacy of curing and protection of the concrete as directed. Make strength tests per ASTM-39-61.
- C. If tests indicate that concrete does not meet specified requirements, comply with remedial measures determined by County, without additional cost to County.
- D. Slump Tests: Make tests for slump for each set of test cylinders taken at the place of deposit and in accordance with ASTM C-143-58. Unless otherwise noted or specified, the slump shall be in accordance with Section 902.10.03, Task A. of the MSHA Standard Specifications.
- E. The Contractor shall submit to the County, and send to the testing agency, his proposed concrete mix design for review, prior to commencement of the work.

- F. The Contractor shall provide free access to the work and cooperate with the testing agency selected by the County. The Contractor shall notify the testing agency and the County of his intent to place concrete at least 24 hours prior to scheduled time of placement.
- G. Any core testing of concrete or test cylinders required by the County shall be at the expense of the Contractor. Core testing may be required for each day's operation when concrete is poured.

3.7 WEATHER CONDITIONS

Follow methods and recommended practice for placing, protecting and curing concrete as provided in ACI Standard 604 for winter concreting and ACI Standard 605 for hot weather concreting.

3.8 PLACEMENT

- A. Preparation: Before placing concrete, remove all debris, water and ice from the places to be occupied by the concrete. Wet or oil woods forms thoroughly (except in freezing weather) and clean the reinforcement of ice or other coatings. Form work and the placement of reinforcement, pipes, sleeves, conduit, hangers, anchors and other inserts shall be inspected and approved by the County and the local building department before an concrete is deposited. Notify the County min. 48 hours in advance.
- B. Place all concrete in accordance with requirements of the American Concrete Institute Building Code.
- C. Secure approval of County and mechanical trades before placing concrete: depress all conduit over 1-1/4" completely below top of finished concrete. Except where otherwise specified or indicated, set continuous expansion joint filer strips where edge of slab abuts vertical surface.

3.9 CURING

Protect concrete against frost and rapid drying and keep moist for six days after placing.

3.10 FINISHING

All exposed concrete must be trowel finished, smooth and free of cracks, dimples, extraneous material, etc.

3.11 CLEANING

- A. Clean all exposed concrete surfaces and all adjoining work stained by leakage of concrete to meet County's approval.
- B. Cut out surface defects where directed or where structural strength of concrete will not be impaired and refill with fresh concrete. Do not make cuts deeper than one inch (1"), and thoroughly wet just prior to filling with concrete of stiff consistency and of approximately, the same mix as the adjoining work.

3.12 PROTECTION

Cover exposed concrete with building paper and use planking at points of heavy traffic.

*****END OF SECTION 03300*****

SECTION 07900 - JOINTS AND SEALANTS

PART 1 - GENERAL

1.1 SCOPE OF WORK

The Contractor shall furnish all materials and equipment, and do all work necessary to construct joints and sealants, as indicated on the drawings and as specified.

1.2 RELATED WORK

The Contractor shall coordinate the work of this Section with related work specified under other Sections, including:

Section 02870: SITE FURNISHINGS

Section 03300: CONCRETE

Section 04200: MASONRY

PART 2 - MATERIALS

2.1 EXPANSION JOINTS

- A. Concrete base courses shall have expansion joints conforming to ASTM C 1190.
- B. Expansion joints which will be exposed to view shall be as follows:
 - 1. Pre-molded joint filler shall be 1/2" preformed cork, non-asphaltic, conforming to ASTM D 1752. The joint filler shall be compatible with the sealant.
 - 2. Sealant shall be Sonolastic SL I, or approved equal, polyurethane elastomeric type sealant, conforming to Federal Spec. TT-S-00230C. Sonolastic SL I is a one-component polyurethane self-leveling and non- priming and requires no mixing.
 - 3. Sealant colors shall match the sidewalk pavement colors. The Contractor shall submit samples of sealant colors to the County Representative for approval.
 - 4. Joint sealers shall be in accordance with Section 501.03.16 of the Standard Specifications and these Specifications. The color of the joint sealant shall match the sidewalk color. Submit samples to County for approval prior to use.
 - 5. Expansion joints shall be provided using pre-molded cork-type joint filler at concrete work abutting curbs other than those curbs along the roadway edge or

at radius curb returns at driveway aprons, structures and other fixed objects. Backer rod and sealant shall be used with cork-type joint filler.

6. Expansion joints at concrete work abutting curb along the roadway edge or at radius curb returns at driveway aprons shall be 3-ply roofing paper.

2.2 CONTROL JOINTS

The Contractor shall install control joints at indicated locations during edging operations.

2.3 NON-SHRINK GROUT

Non-shrink grout shall be a non-ferrous grout, such as Pac-It Grout, manufactured by W.R. Meadows, Inc., or an approved equal.

PART 3 - EXECUTION

3.1 CONSTRUCTING EXPANSION JOINTS

- A. Pavements shall be placed with the pre-molded joint filler in place and to the proper elevation to allow for the proper sealant depth.
- B. After the concrete has set, the joints shall be thoroughly cleaned to remove all loose materials. Sealant shall be applied to clean, dry and structurally sound surfaces. Adjacent surfaces shall be protected with non-staining masking tape as necessary.
- C. Sealant shall be applied in accordance with the manufacturer's written recommendations, using hand guns or pressure equipment on properly prepared surfaces. Temperature of sealant and concrete shall be as recommended by the sealant manufacturer. Sealant shall be forced into the joint in front of the tip of caulking gun, not pulled after it, and shall be forced against the sides to prevent entrapped air or pulling of sealant off the sides.
- D. Sealant shall be finished slightly recessed from the adjacent surfaces, adjusted in accordance with the outside air temperature. The colder the day, the greater the recess needed. Masking tape shall be removed immediately after tooling of the sealant and before the sealant face starts to skin over. Excess sealant shall be removed from adjacent surfaces.
- E. Construct expansion joints properly aligned with face perpendicular to concrete surface.
- F. Locate expansion joints as indicated. Align expansion joints with abutting curbs and walks.

3.2 CONSTRUCTING CONTROL JOINTS

Provide tooled control joints (score lines) sectioning concrete into areas indicated on the plans and as directed by the County. Hand tool control joints to depth, pattern and at spacing indicated. Saw cut joints are not permitted. Control joints shall be properly aligned with face perpendicular to concrete surface. Joints shall be at locations shown on the plans and not to exceed 20-foot spacing in any direction.

3.3 GROUTING

For signage sleeves, install grout in sleeve in accordance with manufacturer's instructions, being sure to fully fill all voids in signage sleeve once the post is installed.

*****END OF SECTION 07900*****

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SPECIAL PROVISIONS
101 – CLEARING AND GRUBBING

CATEGORY 100

101 CLEARING AND GRUBBING

101.01 DESCRIPTION

Clear and grub within the specified limits.

101.01.01 Definitions

(a) Clearing. The removal and disposal of trees, fallen timber and rotten wood, brush, shrubs, vegetation, rubbish, fences, and structures not specified in the Contract Documents for removal and disposal. Unless otherwise specified, clearing outside the LOD includes the removal of rubbish only.

(b) Grubbing. An earth-disturbing activity, which includes the removing from the ground and disposing of all stumps, roots and stubs, brush, and debris.

(c) Limits of Disturbance (LOD). The maximum allowable limit of earth disturbance as delineated in the Contract Documents. When not delineated in the Contract Documents, the LOD will be 10 feet beyond the top of cut, toe of slope, or limit of ditch excavation. Do not perform earth-disturbing activities beyond the LOD without authorization.

(d) Limits. Clearing and grubbing is confined to the LOD and authorized modifications to the LOD. When indicated in the Contract Documents, the limit of clearing may include the area between the LOD and the right-of-way or easement lines.

(e) Grading Unit. A contiguous area of erodible material exposed at one time, not to exceed 20 acres.

(f) Disturbed Area. An area where erodible material is exposed by construction activities.

(g) Stabilization Measures. Activities that prevent erosion. These activities include the placement of temporary mulch, temporary seed, permanent seeding such as turfgrass establishment, soil stabilization matting, riprap, stone aggregate, and asphalt or concrete paving. The placement of one or more of these temporary or permanent stabilization measures to the satisfaction of the Engineer will meet the requirements for proceeding to the next grading unit or operation.

101.02 MATERIALS

Not applicable.

101.03 CONSTRUCTION

101.03.01 Erosion and Sediment Control. Unless otherwise specified or approved, limit the clearing and grubbing area to a single 20-acre grading unit per grading operation. Once this first unit is half graded and stabilization measures are in place and approved, the work may proceed to a second 20-acre grading unit. When approved by the Engineer, the clearing and grubbing area may exceed the one grading unit requirement when necessary to balance earthwork or when grading interchanges. Maintain erosion and sediment controls as specified.

SPECIAL PROVISIONS

101 – CLEARING AND GRUBBING

The grading operation will be limited to the Contractor's ability to provide adequate resources to perform the grading in a timely manner and to provide and maintain the proper erosion and sediment control measures. The Engineer is the final authority in this determination. When wet soil conditions are encountered, the clearing, grubbing, and grading of another unit will be allowed, once stabilization of the initial unit is approved.

The maximum area that may be cleared and grubbed is limited to a single grading unit unless otherwise specified and approved. Work may proceed to a subsequent grading unit once at least 50 percent of the current grading unit is stabilized as determined and approved by the Regional Environmental Coordinator. Unless specifically approved, no more than 30 acres cumulatively may be disturbed at any given time.

101.03.02 Tree Preservation Areas and Tree Branch Pruning. Trees, shrubs and plants to remain in place will be designated on the plans in conformance with Section 120 or will be designated by the Engineer.

(a) Protect Tree Preservation Areas and other designated plants in conformance with GP7.11 and as specified in Section 120.

(b) Perform Tree Branch Pruning in conformance with Section 712. Cut and trim tree branches overhanging paved areas of the roadway to maintain a vertical clearance of 16 ft above the pavement, or conform to the specifications of any Tree Preservation Plan developed by the Administration.

101.03.03 Fences. Remove and dispose of all fences within the right of way, unless otherwise specified.

101.03.04 Mailboxes. Remove and reset mailboxes as directed.

101.03.05 Grubbing

(a) **Excavation Areas.** Remove all embedded stumps and roots to a depth of at least 3 ft below the subgrade or slope surface. Refill all depressions made below the subgrade or slope surfaces with materials suitable for embankment and compact as specified in Section 204.

(b) **Low Embankments.** Grub areas where the total depth of the embankment is less than 3 ft.

(c) **High Embankments.** In areas where the embankment is 3 ft or more in depth, cut off trees and stumps as close to the ground as practical but not greater than 1 ft above the ground surface. Near the toe of embankment slopes, remove trees and stumps that are within 1 ft of the slope surface.

(d) **Stormwater Management (SWM) Facilities.** In areas specified for SWM facilities, grub excavation areas and embankments as specified in 101.03.05 (a) and (b) regardless of the total depth of the embankment. When SWM facility embankments include embankment cores, grub to a depth at least equal to the depth of the cut-off trench.

101.03.06 Stream and Channel Changes. When an LOD is not specified, clear and grub 5 ft beyond the top of the cut slopes or as directed.

101.03.07 Disposal

(a) **Burning.** Burn only under the constant care of a watchperson and according to applicable laws and ordinances of respective jurisdictions.

SPECIAL PROVISIONS

101 – CLEARING AND GRUBBING

(b) Disposal Locations. Remove from the right-of-way and dispose of all unburned material and debris. Make all necessary arrangements to obtain suitable disposal locations. Furnish the Engineer with a copy of resulting agreements.

(c) Wood Disposal. If disposal of wood to the public is proposed, submit the disposal plan to the District Engineer for review, and obtain approval prior to beginning the clearing and grubbing operation. Perform this method of disposal from a location that is off the job site.

(d) Ash Tree Quarantine. Wood of Ash trees of the genus *Fraxinus* is quarantined, and may not be moved outside the State of Maryland.

101.03.08 Damage to Trees and Other Protected Resources.

(a) Ensure that the LOD and all protected resources are demarcated as specified in Section 107.

(b) Perform damage repair and damage compensation as specified in Section 712 for damage beyond the LOD due to work operations. Refer to Occupying Wetlands provisions in the Contract Documents for unauthorized impacts to wetlands, wetland buffers, Waters of the United States (WUS), and floodplains.

101.04 MEASUREMENT AND PAYMENT

Clearing and Grubbing will not be measured but will be paid for at the Contract lump sum price. The payment will be full compensation for the removal and disposal of fences, removal and resetting of mailboxes, damage repair and compensation for trees, restoration measures for damaged or destroyed protected resources, repair to other damaged properties, removal and disposal of existing buildings when not covered as a specific pay item in the Contract Documents, and material, labor, equipment, tools, and incidentals necessary to complete the work.

101.04.01 Tree Branch Pruning to remove branches overhanging paved areas, and any other Tree Branch Pruning specified in the Contract Documents, will be paid for separately at the Contract lump sum price.

SPECIAL PROVISIONS

104.20 – TEMPORARY ORANGE CONSTRUCTION FENCE

104.20 TEMPORARY ORANGE CONSTRUCTION FENCE

104.20.01 DESCRIPTION

Furnish, install, and maintain new or like new temporary orange mesh construction fence. This fence is not to be used as a safety barrier.

104.20.02 MATERIALS

Precast Concrete Blocks	903.05
Tie Wire, Tension Wires, Tension Wire Clips and Hardware	914.02
Orange Mesh Fencing	As approved

Fence posts shall be 4 ft high, 1.90 in. diameter round posts; or 5-1/2 ft high, 2 in. steel U channel posts, as specified herein.

Submit samples of the fence fabric, fence posts, movable precast concrete blocks, tie wire, tension wires, and other miscellaneous hardware for approval.

104.20.03 CONSTRUCTION

Temporary orange construction fence shall be at least 4 ft high and with a maximum post spacing of 8 ft. When installed on a paved surface, support the fence by inserting the round post into a precast concrete block having a round hole through the center of the block. When installed in unpaved areas, use steel U channel fence posts driven 1-1/2 ft into the ground. Installation of the fence in any other manner will require approval. Secure the fabric to the posts by wrapping a tie wire around the horizontal fence strands and the posts. Install a top tension wire to prevent sagging. When installed on paved surfaces, the Engineer will determine if a bottom tension wire is required.

Remove the fence when the Engineer determines that the fence is no longer required. The removed fence is the property of the Contractor.

Damaged Construction Fence. Repair or replace damaged construction fence within four hours after notification.

104.20.04 MEASUREMENT AND PAYMENT

The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work.

Temporary Orange Construction Fence will be measured and paid for at the Contract unit price per linear foot for the actual number of linear feet measured to the centers of end posts. Remove and Reset Temporary Orange Construction Fence will be measured and paid for at the Contract unit price per linear foot.

SPECIAL PROVISIONS
120 – TREE PRESERVATION

120 TREE PRESERVATION

120.01 DESCRIPTION

Establish and maintain a Tree Preservation Area (TPA).

120.02 MATERIALS

Temporary Orange Construction Fence 104.20.02

Fertilizer 920.03.01

120.02.01 Tree Preservation Program (TPP). The Administration will develop a TPP to establish the goals and specify the procedures for tree branch pruning, brush removal, tree felling, tree root pruning, tree fertilizing, and other tree preservation operations to protect trees and vegetation within the TPA.

120.03 CONSTRUCTION

120.03.01 Maryland Licensed Tree Expert (LTE). A LTE shall perform or directly supervise the operations specified in the Contract Documents and the TPP in conformance with the Maryland Roadside Tree Law, the Forest Conservation Act, and accepted arboricultural practices.

120.03.02 Delineation. Delineate the perimeter of the TPA as specified in the Contract Documents.

120.03.03 Temporary Orange Construction Fence (TOCF). Ensure that the delineated TPA is approved prior to installing the TOCF. Perform installation and maintenance as specified in 104.20.03. Complete installation of the TOCF before:

- (a) Beginning clearing and grubbing operations.
- (b) Installing erosion and sediment controls.
- (c) Conducting the Tree Preservation Meeting.
- (d) Performing tree preservation operations.

120.03.04 Tree Preservation Meeting. Prior to beginning work, meet at the TPA with the Engineer, the Landscape Operations Division, and the LTE to review the TPP.

120.03.05 Tree Preservation Operations. Maintain the TPA as specified in the TPP and the Contract Documents. Perform the following operations, as specified in the TPP.

- (a) Tree Branch Pruning. Section 712.
- (b) Brush Removal. Section 713.
- (c) Tree Felling. Section 714.
- (d) Tree Root Pruning. Section 715.
- (e) Tree Fertilizing. Section 716.

SPECIAL PROVISIONS
120 – TREE PRESERVATION

120.03.06 Prohibited Activities within the TPA

PROHIBITED ACTIVITIES	
a	Felling, removing or harming and tree or plant designated for preservation.
b	Removing wood, soil, stones, and other natural materials.
c	Any kind of foot or vehicular traffic.
d	Driving, storing, washing, or maintaining trucks or construction equipment.
e	Placing backfill, stacking or storing supplies.
f	Grading, trenching, draining, dewatering, and burning activities.
g	Dumping waste or storing toxic or hazardous materials.

120.03.07 Restricted Activities. The following activities are restricted in the area near the TPA unless authorized by the Engineer.

RESTRICTING ACTIVITIES	
a	Felling trees.
b	Grading that will disrupt drainage patterns.
c	Draining and dewatering activities.
d	Storing construction equipment.
e	Truck washing and maintenance activities.
f	Dumping waste or storing toxic or hazardous materials.
g	Burning and trenching activities.

120.03.08 Cleanup and Restoration. When construction activities are complete, remove the TOCF, construction materials, and debris without damaging trees in the TPA and adjacent areas. Grade the perimeter of the TPA to blend with nearby areas. Seed as specified in Section 705.

120.03.09 Damage Repair. Refer to 712.03.11.

120.03.10 Damage Compensation. Refer to 712.03.12.

SPECIAL PROVISIONS
120 – TREE PRESERVATION

120.04 MEASUREMENT AND PAYMENT

Work performed as specified in the Tree Preservation Program or Contract Documents will be measured and paid for one or more of the items listed below. Payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work.

120.04.01 Temporary Orange Construction Fence. Refer to 104.20.04.

120.04.02 Tree Branch Pruning. Refer to 712.04.

120.04.03 Brush Removal. Refer to 713.04.

120.04.04 Tree Felling. Refer to 714.04.

120.04.05 Tree Root Pruning. Refer to 715.04.

120.04.06 Tree Fertilizing. Refer to 716.04.

120.04.07 The licensed tree expert services will not be measured but the cost will be incidental to the Contract unit price for the Clearing and Grubbing item.

END OF SECTION 120

SPECIAL PROVISIONS
600 – 6' WOOD FENCE

600 6' WOOD FENCE

600.01 DESCRIPTION

Construct Wood Fence.

600.02 MATERIALS

1. All fence materials shall be treated wood, or wood of natural resistance to decay. Fastening materials shall be hot-dip galvanized steel, or plastic materials. Installation and durability standards for fencing and fastening materials shall meet all manufacturer's standards and specifications. All wood shall be construction grade 2 or better.

2. All concrete used for post footers shall be Portland Cement Concrete Mix No. 2.

600.03 CONSTRUCTION

600.03.01 General Requirements

1. Photo document the existing conditions prior to construction activities.
2. Confine all activities and operations to the area immediately adjacent to the right-of-way lines and within the right-of-way.
3. Wood fence posts shall be 4 in. by 4 in. and set in a minimum 10 in. diameter concrete pier, extending a minimum of 3 ft. deep.
4. Install all posts plumb. Maintain, as uniform as practical, the spacing specified, with a tolerance of minus two feet.
5. The fence shall have a minimum of three (3) 2 in. by 4 in. wood rails.
6. Vertical wooden fence boards or pickets shall be a minimum of 1 in. in thickness and shall be spaced such that a sphere over 1 in. in diameter cannot pass through.
7. Place the bottom of the vertical wooden fence boards or pickets approximately 1 in. above the groundline. A maximum clearance of 6 in. will be permitted for a maximum horizontal distance of 8 ft.
8. Any excavation or backfill required to comply with the above clearance will require approval. Place vertical wooden fence boards or pickets on the side of the post nearest Montclair Manor.
9. Proposed fence is to be located behind existing trees and no closer than the existing fence line. The fence line shall be a minimum of 1 ft. from all existing trees. Fence post footers along the fence line shall be located a minimum of 2 ft. from existing trees measured at existing ground line.
10. Contractor shall coordinate with the engineer in the field for fence post footing locations to minimize impacts to existing tree root systems.

600.03.02 Anchorage for Posts

1. Where rock is encountered at a depth less than that specified by the footing, drill a hole 1 in. larger than

SPECIAL PROVISIONS

600 – 6' WOOD FENCE

the greatest dimension of the post to a depth of 12 in. or the planned footing depth, whichever is less. After the post has been set, fill the remainder of the drilled hole with grout composed of one part portland cement and two parts mortar sand by dry loose volume. Fill the space above the rock with concrete.

2. Place posts in the center of concrete footings. Thoroughly compact the concrete around the post by rodding or vibrating. Trowel the top surface to a smooth finish slightly above the groundline and uniformly sloped to drain away from the post. Do not disturb the post within the 72 hours after the individual post footing is completed.

600.04 MEASUREMENT AND PAYMENT

The payment will be the full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work.

6' Wood Fence will be measured and paid for at the Contract unit price per linear foot for the actual number of linear feet measured from end post to end post.

SPECIAL PROVISIONS
701 – SUBSOIL AND TOPSOIL

CATEGORY 700 - LANDSCAPING

701 SUBSOIL AND TOPSOIL

701.01 DESCRIPTION

Prepare existing topsoil; or salvage and place subsoil and topsoil; or furnish and place subsoil and topsoil in preparation for vegetation establishment. Refer to Section 704 and provide short-term, long-term or permanent stabilization as necessary for soil erosion protection. Performance of Subsoil and Topsoil as specified herein complies with all requirements of the Maryland Department of the Environment for handling and placing soils.

701.02 MATERIALS

Existing Topsoil	920.01.01
Salvaged Topsoil	920.01.01
Furnished Topsoil	920.01.02
Salvaged Subsoil	920.01.03
Furnished Subsoil	920.01.04
Limestone	920.02.01
Sulfur	920.02.02
Gypsum	920.02.04
Compost, Type A or Type B	920.02.05
Water	920.09.01
Pesticides	920.09.03

701.03 CONSTRUCTION

701.03.01 General

(a) **Schedule.** Perform subsoil and topsoil operations when soil moisture and weather conditions are suitable. Cease operations when soil is muddy, frozen, or otherwise unsuitable.

SPECIAL PROVISIONS

701 – SUBSOIL AND TOPSOIL

(b) Pesticide Application. For any work involving existing or salvaged soils, the Contractor shall possess a Maryland Department of Agriculture Commercial Pesticide Business License and a Pesticide Applicator Certificate for the pertinent pesticide application Category: (2) Forest; (3-A) Ornamental Plant Exterior; (3-C) Turf; (5) Aquatic; (6) Right-of-Way and Weed.

Apply pesticides in conformance with the Maryland Pesticide Applicator’s Law, OSHA and MOSH regulations, and the manufacturer’s label and Safety Data Sheets (SDS).

Ensure that pesticides are applied by a Maryland Certified Pesticide Applicator, or by a Registered Pesticide Applicator under the supervision of a Certified Pesticide Applicator.

(c) Prohibited Weeds. Refer to 920.01.01. Areas of existing topsoil, and areas of topsoil and subsoil to be salvaged and their stockpiles, will be inspected and shall be free of prohibited weeds. Control prohibited weeds as needed and as directed.

(d) Herbicide. To control prohibited weeds, and to remove vegetation when preparing existing topsoil, apply glyphosate 3 percent solution in water or submit a written request to use another herbicide or application rate.

(e) Pesticide Application Reporting. Record the location and details of pesticide applications on the Pesticide Application Reporting Form. Submit the Form within 24 hours after applying pesticides.

(f) Nutrient Management Plan (NMP). The Administration will develop a NMP based upon soil tests. The NMP application rates for soil amendments and fertilizer will be within the ranges shown in the pertinent table of application rates.

Conform to the application rates of the NMP. Do not apply soil amendments when no NMP has been developed. Do not apply soil amendments to subsoil or to furnished topsoil.

(g) Nutrient Management Reporting. Record the location and details of soil amendment and fertilizer applications on the Nutrient Management Reporting Form. Submit the Form within 24 hours after applying soil amendments and fertilizer.

701.03.02 Existing Topsoil. Refer to 920.01.01.

(a) Vegetation Removal. Refer to 701.03.01(d). Cut brush and groundcover vegetation, remove debris, and apply herbicide as necessary to prepare areas for seeding or other specified vegetation installation. Do not injure trees, shrubs and other plants to remain.

(b) Compost and Tilling. Refer to 701.03.01(f) and Table 1. Spread Type B Compost over the soil surface as specified in the NMP and lightly till soil to prepare soil and incorporate compost. Immediately install seeding or other vegetation as specified in the Contract documents.

SUBSOIL AND TOPSOIL		
TABLE 1 - SOIL AMENDMENT APPLICATION RATES & MIXING		
SOIL AMENDMENT & MIXING	APPLICATION RATE^a	
Compost - Existing Topsoil Spread Type B Compost over surface of existing	Up to 0.25 in. depth compost spread over surface of existing topsoil	Up to 34 yd ³ compost per acre of existing topsoil

topsoil and lightly till into soil.		
Compost - Salvaged Topsoil Thoroughly mix Type A or Type B Compost into salvaged topsoil before placing topsoil.	Up to 1.0 yd ³ compost per 6.0 yd ³ of salvaged topsoil	Up to 0.17 yd ³ of compost per 1.0 yd ³ of salvaged topsoil
Gypsum Spread gypsum over surface of existing topsoil, or over surface of placed salvaged topsoil, and till to mix gypsum into upper 2 in. of topsoil.	Up to 0.721 lb of gypsum per yd ² of existing topsoil or placed salvaged topsoil	Up to 3500 lb of gypsum per acre of existing topsoil or placed salvaged topsoil
Limestone Spread limestone over surface of existing topsoil, or over surface of placed salvaged topsoil, and till to mix limestone into upper 2 in. of topsoil.	Up to 1.446 lb limestone per yd ² of existing topsoil or placed salvaged topsoil	Up to 7000 lb of limestone per acre of existing topsoil or placed salvaged topsoil
Sulfur Spread sulfur over surface of existing topsoil, or over surface of placed salvaged topsoil, and till to mix sulfur into upper 2 in. of topsoil.	Up to 0.165 lb sulfur per yd ² of existing topsoil or placed salvaged topsoil	Up to 800 lb Sulfur per acre of existing topsoil or placed salvaged topsoil
^a Note: For existing topsoil and salvaged topsoil, the application rates will be specified in the Nutrient Management Plan (NMP) included in the Contract documents. Do not apply soil amendments except as specified in the NMP. Do not apply soil amendments to subsoil or to furnished topsoil.		

701.03.03 Salvaging Soils

(a) **Vegetation Removal.** Remove vegetation, brush, and other debris from areas where topsoil and subsoil will be salvaged.

(b) **Soil Removal.** Remove topsoil and subsoil to the depths as specified or as directed. Transport salvaged topsoil and subsoil separately, and keep them apart from other materials.

(c) **Stockpiles.** Construct stockpiles on well drained land, away from streams, drainage areas and floodplains as specified in Section 308. Maintain stockpiles of salvaged topsoil and salvaged subsoil away from other materials, and separate from each other.

Refer to Section 704 and apply Temporary Mulch or other stabilization as necessary for soil erosion protection immediately after constructing stockpiles. Refer to 308.03.20 and install perimeter sediment controls.

Maintain stabilization and sediment controls. Refer to 701.03.01(c) and control prohibited weeds as needed and as directed.

(d) **Weed Inspection.** Refer to 701.03.01(c) and ensure that inspection is completed and that prohibited weeds are controlled before removing vegetation, preparing soil, or transporting soil from stockpiles.

(e) Soil Preparation and Transportation

Subsoil. Transport and place salvaged subsoil per 701.03.04 when directed.

SPECIAL PROVISIONS
701 – SUBSOIL AND TOPSOIL

Topsoil. Refer to Table 1. Mix compost in conformance with the Nutrient Management Plan and transport and place prepared salvaged topsoil per 701.03.05 when directed.

701.03.04 Placing Subsoil

- (a) **Site Preparation.** Ensure the site where subsoil will be spread is uniformly graded true to line and cross section.
- (b) **Spreading.** Spread and compact subsoil in layers up to 8 in. thickness to provide a firm and uniform subsoil base. Ensure that subsoil is spread to the specified depth.
- (c) **Tracking.** Track subsoil on slopes 4:1 and steeper with cleated track equipment operated perpendicular to the slope. Check subsoil thickness, lines, grades, and elevations to ensure the completed work is as specified.
- (d) **Debris.** Remove stones and other debris with a length or width greater than 4 in. from the surface of the subsoil.
- (e) **Topsoil and Stabilization.** Refer to 701.03.05 and immediately place topsoil over subsoil, or refer to Section 704 and provide stabilization as necessary for soil erosion protection.

701.03.05 Placing Topsoil

- (a) **Site Preparation.** Ensure the site where topsoil will be spread is uniformly graded true to line and cross section, and that the surface of the subsoil base is loose and able to provide a suitable bond for the topsoil layer to be spread. If the subsoil base is crusted or excessively compacted, then roughen and loosen the surface of the subsoil base with approved machinery before spreading topsoil.
- (b) **Spreading.** Spread topsoil over the designated areas and lightly firm the topsoil to ensure uniform thickness of the specified depth, and to meet the required grades.
- (c) **Tracking.** Track topsoil on slopes 4:1 and steeper with cleated track equipment operated perpendicular to the slope.
- (d) **Grading Adjustment.** When placing topsoil for grading adjustment, the minimum thickness shall be 1/2 in. and the maximum thickness shall be 8 in.
- (e) **Firming.** Ensure that topsoil is uniformly firmed near sidewalks, structures and pavement edges, and that the topsoil surface is without gaps, mounds, depressions, soft spots, or areas that may impair surface drainage or future maintenance. Check topsoil thickness, lines, grades, and elevations to ensure the completed work is as specified.
- (f) **Soil Amendments.** Refer to 701.03.01(f) and Table 1. Apply soil amendments to topsoil in conformance with the Nutrient Management Plan.
- (g) **Tilling.** Refer to Table 1 and till topsoil to incorporate soil amendments and prepare areas for seeding or installation of other specified vegetation.
- (h) **Debris.** In areas within 10 ft of the pavement edge and near commercial and residential property, remove stones, wood, metal, and other debris with a length or width greater than 2 in.

SPECIAL PROVISIONS

701 – SUBSOIL AND TOPSOIL

from the topsoil surface when spreading is completed. In all other areas, remove debris with a length or width greater than 4 in., or as directed.

(i) Stabilization. Immediately perform Turfgrass Establishment, or install other permanent vegetation as specified in the Contract documents, or refer to Section 704 and install Temporary Mulch or Temporary Seed for soil erosion protection.

701.03.06 Inspection and Acceptance. Submit a request for Acceptance when operations are completed. Inspection will be conducted to verify that operations were completed as specified. Acceptance will be granted at that time.

701.04 MEASUREMENT AND PAYMENT

Subsoil and topsoil will be measured and paid for at the Contract unit price for one or more of the specified items. The payment will be full compensation for all material, labor, equipment, tools, disposal fees and incidentals necessary to complete the work.

701.04.01 Existing Topsoil will not be measured and paid for. The cost of preparing existing topsoil, and any cost required for applying soil amendments in conformance with the Nutrient Management Plan, shall be incidental to the pertinent Contract unit price of the specified vegetation establishment.

701.04.02 Salvaging Subsoil and Salvaging Topsoil will not be measured but the cost shall be incidental to the Contract unit price for Class 1 Excavation.

701.04.03 Placing Salvaged Subsoil and Topsoil will be measured and paid for at the pertinent Contract unit price for the specified depth per square yard, or per cubic yard. Any cost required for applying soil amendments in conformance with the Nutrient Management Plan shall be incidental to the pertinent Contract unit price of the specified vegetation establishment.

701.04.04 Placing Furnished Subsoil and Topsoil will be measured and paid for at the pertinent Contract unit price for the specified depth per square yard, or per cubic yard.

701.04.05 Placing Topsoil for Grading Adjustment will be measured and paid for at the pertinent Contract unit price per square yard, or per cubic yard. No payment will be made for topsoil placed less than 1/2 inch depth. Any cost required for applying soil amendments to salvaged soil in conformance with the Nutrient Management Plan shall be incidental to the pertinent Contract unit price of the specified vegetation establishment.

701.04.06 Temporary Mulch, Temporary Seed, Turfgrass Establishment and other permanent vegetation establishment will be measured and paid for at the pertinent Contract unit price per square yard.

SPECIAL PROVISIONS
705 – TURFGRASS ESTABLISHMENT

705 TURFGRASS ESTABLISHMENT

705.01 DESCRIPTION

Perform Turfgrass Establishment as follows.

At Final Grade. For areas that are at final grade, establish turfgrass in topsoil or other specified soil substrate to provide permanent vegetation groundcover.

Not Final Grade. For areas that are not at final grade, or areas that will not be redisturbed for at least 6 months after seeding operations are completed, establish turfgrass in topsoil, subsoil, common borrow, or other specified soil substrate to provide temporary vegetation groundcover.

Temporary Stabilization. When it is not possible to perform Turfgrass Establishment, refer to Section 704 and perform Temporary Mulch or Temporary Seed, or as directed.

Performance of Turfgrass Establishment as specified herein complies with all requirements of the Maryland Department of the Environment for permanent seeding.

705.02 MATERIALS

Fertilizer	920.03.01
Straw Mulch	920.04.01
Wood Cellulose Fiber	920.04.02
Seed	920.06
SHA Turfgrass Seed Mix	920.06.07(a)
SHA Special Purpose Seed Mix	920.06.07(b)
SHA Temporary Seed Mix	920.06.07(c)
Water	920.09.01

705.03 CONSTRUCTION

705.03.01 General

(a) **Regions.** Maryland is divided into Regions by counties as follows:

Region 1. Garrett, Allegany, and Washington, west of Clear Spring MD.

Region 2. Washington, east of Clear Spring, MD, Frederick, Carroll, Baltimore, Harford, Cecil, Howard, Montgomery, and Baltimore City.

Region 3. Anne Arundel, Prince George’s, Calvert, Charles, St. Mary’s, Kent, Queen

SPECIAL PROVISIONS
705 – TURFGRASS ESTABLISHMENT

Anne's, Talbot, Caroline, Dorchester, Wicomico, Worcester, and Somerset.

(b) Seeding Seasons and Seed Mixes. Perform operations according to Table 1 when soil moisture and weather conditions are suitable, when the temperature is above 32 F, and the soil is not frozen. Cease operations when conditions are unsuitable.

TURFGRASS ESTABLISHMENT					
TABLE 1 - SEEDING SEASONS AND SEED MIXES					
REGION	SEEDING SEASON MONTH/DAY				
	Spring	Summer	Fall	Late Fall	Winter³
	SHA Turfgrass Seed Mix¹				
1	3/1 to 6/14	6/15 to 7/31	8/1 to 9/30	10/1 to 11/15	11/16 to 2/29
2	3/1 to 5/14	5/15 to 7/31	8/1 to 10/14	10/15 to 11/15	11/16 to 2/29
3	3/31 to 4/30	5/1 to 7/31	8/1 to 10/31	11/1 to 11/15	11/16 to 2/29
		Plus Additive ²		Plus Additive ²	Plus Additive ²
Notes:	¹ When seeding within 4 miles of a State airport: Use no additives and use SHA Special Purpose Seed Mix in lieu of SHA Turfgrass Seed Mix on slopes 4:1 and steeper, or in designated areas. ² Additive = SHA Temporary Seed Mix ³ Approval is required for seeding during Winter. When approved, apply all materials except fertilizer. Refer to 705.03.06(e)				

(c) Nutrient Management Plan (NMP). Soil testing will be performed and a NMP will be developed by the Administration. Conform to the application rates of the NMP and replace application rates of Table 2 in 705.03.03 as required by the NMP. When no NMP has been developed, apply 200 lb per acre of 20-16-12 (83 percent UF with MAP & SOP) fertilizer as the NMP rate for Turfgrass Establishment.

(d) Nutrient Management Reporting. Record the location and details of soil amendment and fertilizer applications on the Nutrient Management Reporting Form. Submit the Form within 24 hours after applying fertilizer.

705.03.02 Modification Request. Submit a written Modification Request to perform seeding during Winter Seeding Season; to install an approved tackifier at manufacturer's recommended application rates in lieu of wood cellulose fiber to secure straw mulch; or to use Type A, Type D, or Type E Soil Stabilization Matting per Section 709 in lieu of straw mulch and wood cellulose fiber in areas where those mattings have not been specified.

The Engineer in consultation with the Landscape Operations Division will evaluate the Request. If granted, a notice of approved modification will be returned within 14 days after the request is received.

705.03.03 Application Rates. Apply materials according to Table 2.

SPECIAL PROVISIONS
705 – TURFGRASS ESTABLISHMENT

TURFGRASS ESTABLISHMENT		
TABLE 2 - APPLICATION RATES		
MATERIAL	LB PER yd²	LB PER ACRE
INITIAL FERTILIZER per Nutrient Management Plan ^{a, b}		
20-16-12 (83% UF with MAP & SOP)	0 to 0.041	0 to 200
or one or more of the following ^c		
38-0-0 (UF)	0 to 0.021	0 to 100
11-52-0 (MAP)	0 to 0.036	0 to 175
0-0-50 (SOP)	0 to 0.041	0 to 200
SEED MIXES; select one		
SHA Turfgrass Seed Mix, applied to roadsides, facilities, and other designated areas	0.041	200
Or		
SHA Special Purpose Seed Mix, applied to slopes 4:1 and steeper within four miles of a State airport, and other designated areas.	0.041	200
ADDITIVE SEED; when required per Table 1		
SHA Temporary Seed Mix	0.006	25
STRAW MULCH	0.826	4000
WOOD CELLULOSE FIBER to secure straw mulch	0.155	750
REFERTILIZING^d		
37-0-0 Sulfur Coated Urea (SCU)	0.021	100
Notes:	^a For existing topsoil and salvaged topsoil, the application rates will be included in the Contract documents. For furnished topsoil, the application rates will be developed for the approved source of supply. ^b When no NMP has been developed, apply 200 lb per acre of 20-16-12 initial fertilizer. ^c UF = Ureaform; MAP = Monoammonium Phosphate; SOP = Sulfate of Potash. When application rate of 20-16-12 fertilizer is below 200 lb per acre, apply UF, MAP, and SOP per NMP. ^d Refer to 705.03.06(d) and 705.03.09(c). Apply Refertilizing when included in the Contract documents.	

SPECIAL PROVISIONS
705 – TURFGRASS ESTABLISHMENT

705.03.04 Grade Repair. Ensure that soil meets specified grades. Repair any gullies, washes, or disturbed areas that develop before preparing soil.

705.03.05 Preparing Topsoil. Provide a uniform and porous surface that is free of debris and weeds as follows.

(a) **Areas Flatter than 4:1.** Remove clods, stones, wood, metal and other debris with a length or width greater than 1-1/2 in. in any dimension from the soil surface.

(b) **Slopes 4:1 and Steeper.** Track slopes 4:1 and steeper with cleated track equipment operated perpendicular to the slope. After tracking, remove stones, wood, metal, and other debris with a length or width greater than 3 in. in any dimension from the soil surface.

705.03.06 Seeding and Initial Fertilizer

(a) **Application Schedule.** Apply seed and initial fertilizer after preparing soil. Do not apply initial fertilizer in the Winter Seeding Season from November 16 thru February 29.

(b) **Application Equipment.** Use hydroseeders, spreaders, drills, or other approved machinery. Calibrate equipment before application. Apply materials accurately and uniformly to avoid misses and overlaps. Do not operate machinery during windy weather that may interfere with uniform application.

(c) **Hydroseeders.** Hydroseeders shall be equipped with an agitation system able to keep solids in suspension, and have a gauge to show fill levels and tank capacity. Apply fertilizer and seed mixtures within two hours after mixing. Direct hydroseeding mixtures so the droplets produce a uniform spray. Do not allow materials to runoff or cause erosion, or to blow onto sensitive areas or structures.

(d) **Mechanical Seeders.** Mechanical seeders shall be capable of uniformly placing seed and fertilizer at the specified rate.

(e) **Delayed Initial Fertilizer.** Apply initial fertilizer at the time of seeding per Table 1, except in Winter. When seeding from November 16 to February 29, apply initial fertilizer during March, and apply Refertilizing in conformance with 705.03.09(c) during April.

705.03.07 Mulching. Apply mulch immediately after seeding.

(a) **Soil Stabilization Matting.** Refer to Section 709 and install soil stabilization matting in lieu of straw mulch in designated areas.

(b) **Straw Mulch.** Cover at least 90 percent of the soil surface with straw mulch. When applied with mulch blower, apply straw mulch to a loose depth of 3/4 to 2 in. When applied by hand, apply straw mulch to a loose depth of 1-1/2 to 3 in.

Secure straw mulch immediately after the completion of mulching operations by applying wood cellulose fiber uniformly over the straw without displacing the mulch.

Do not operate machinery during windy weather that may interfere with uniform application. Do not allow materials to blow onto sensitive areas or structures.

SPECIAL PROVISIONS
705 – TURFGRASS ESTABLISHMENT

705.03.08 Seeding Phase Acceptance. Submit a request for Seeding Phase Acceptance when operations are completed. Inspection will be conducted to verify completion, and Seeding Phase Acceptance will be granted at that time.

705.03.09 Establishment Phase. The Establishment Phase will begin upon Seeding Phase Acceptance.

(a) **Period of Maintenance.** Maintain seeded areas until Final Acceptance.

(b) **Required Maintenance.** Perform the following during the Establishment Phase.

Watering. Apply water as needed to ensure survival of the turfgrass. Apply water to seeded and mulched areas with approved machinery. Do not allow water to cause erosion or to displace the mulch.

Overseeding. Overseeding consists of seeding and mulching in areas where living turfgrass coverage is 40 to 95 percent. When living turfgrass groundcover is not acceptable, perform overseeding as directed. In areas to be overseeded, cut the turfgrass to a height of 3 to 5 in. and remove debris that may interfere with seeding. Apply seed mixtures, seed additives, fertilizer, mulch, and secure mulch as specified in 705.03.01 thru .07, but do not repair grade or prepare soil.

Reseeding with Slit Seeder. Perform reseeding when directed in areas where turfgrass groundcover is less than 40 percent, but soil conforms to 701.03.05 and 705.03.05. Cut the area to be reseeded to a height of 1 to 3 in., and remove debris that may interfere with seeding. Utilize a mechanical slit seeder to cut groves into the soil at least 0.25 in. depth. Refer to 705.03.06 and .07 and apply seed, fertilizer, and mulch, but do not secure mulch.

Soil Restoration, Tilling and Reseeding. Perform soil restoration and reseeding when directed in areas where turfgrass groundcover is less than 40 percent, or when soil does not conform to 701.03.05 and 705.03.05 because eroded gullies are present or soil grades are not acceptable. Cut the area to be restored and reseeded to a height of 3 to 5 in. and remove debris that may interfere with seeding. Refer to 705.03.01 thru .07 and repair grades, prepare soil, apply seed, fertilizer, and mulch, and secure mulch.

Mowing. Mow turfgrass in areas flatter than 4:1 before the grass grows to a height of 8 in. Use approved machinery to cut to a height of 3 to 5 in.

(c) **Refertilizing.** Refer to 705.03.06 and apply 37-0-0 SCU Refertilizing as specified in Table 2 at least 1 month after initial fertilizer was applied. Do not apply Refertilizing in the Winter Seeding Season from November 15 thru March 1.

705.03.10 Final Acceptance. The Engineer and the Landscape Operations Division will complete an Inspection Report of turfgrass height, color, and percent groundcover. When it is not possible to perform the Inspection, Final Acceptance will be delayed until Inspection is possible. The Inspection Report will be included in the Punch List requirements for the project. Complete the Punch List requirements as directed.

Final Acceptance will be granted after all operations have been completed, and when the seedlings of turfgrass species have grown at least 4 in. tall, exhibit dark green color, and are least 95 percent groundcover.

SPECIAL PROVISIONS
705 – TURFGRASS ESTABLISHMENT

705.04 MEASUREMENT AND PAYMENT

Turfgrass Establishment will be measured and paid for at the Contract unit price for one or more of the specified items. The payment will be full compensation for all material, labor, equipment, tools, disposal fees and incidentals necessary to complete the work.

705.04.01 Turfgrass Establishment, including grade repair, preparing soil, applying soil amendments and initial fertilizer in conformance with the Nutrient Management Plan, seed mixes, seed additives, mulching, securing mulch, watering, overseeding, reseeding, and mowing, will be measured and paid for at the Contract unit price per square yard.

The use of other materials in conformance with an approved Modification Request shall be incidental to the Contract unit price, and will not be measured or paid for.

(a) Payment Schedule. Payments will be made according to Table 3 when construction requirements are met:

TURFGRASS ESTABLISHMENT		
TABLE 3 - PAYMENT SCHEDULE		
CONSTRUCTION REQUIREMENTS	PERCENT OF TOTAL CONTRACT PRICE	PAYMENT FOR COMPLETED WORK
705.03.01 thru .08	80	At Seeding Phase Acceptance
705.03.09 (a) and (b) and 705.03.10	20	At Final Acceptance
Total Payment	100%	

(b) Forfeiture. Failure to complete operations as required in conformance with the Payment Schedule will result in forfeiture of that percentage of payment.

705.04.02 Refertilizing will be measured and paid for at the Contract unit price per square yard.

705.04.03 Temporary Mulch and Temporary Seed will be measured and paid for at the Contract unit price per square yard.

SPECIAL PROVISIONS

710 – TREE, SHRUB AND PERENNIAL INSTALLATION AND ESTABLISHMENT

710 TREE, SHRUB AND PERENNIAL INSTALLATION AND ESTABLISHMENT

710.01 DESCRIPTION

Install and establish trees, shrubs, perennials, vines, and grasses in topsoil or Bioretention Soil Mix. When it is not possible to perform this work, refer to Section 704 and perform Temporary Mulch, or as directed to provide temporary soil stabilization.

710.02 MATERIALS

Furnished Subsoil	920.01.04
Type B Compost	920.02.05(b)
Fertilizer	920.03
Shredded Hardwood Bark (SHB) Mulch	920.04.03
Plant Materials	920.07
Marking and Staking Materials	920.08
Water	920.09.01
Pesticides	920.09.03
Marking Dye	920.09.04
Spray Adjuvant and Wetting Agent	920.09.05

710.03 CONSTRUCTION

710.03.01 General

(a) Planting Seasons. Perform operations during Planting Seasons when soil moisture and weather conditions are suitable, when the temperature is above 32 F, and the soil is not frozen. Cease operations when conditions are unsuitable.

Spring Planting Season. February 1 through June 30. Do not install plants in July.

Fall Planting Season. August 1 through December 31. Do not install plants in January.

(b) Modification Request. Submit a written Modification Request to install plants of different species, cultivars, sizes, growth habits, or planting stock type. The Engineer in consultation with the Landscape Operations Division will evaluate the Request. If granted, notice of the approved modification will be returned within 14 days afterwards.

SPECIAL PROVISIONS

710 – TREE, SHRUB AND PERENNIAL INSTALLATION AND ESTABLISHMENT

(c) Pesticide Application. The Contractor shall possess a Maryland Department of Agriculture Commercial Pesticide Business License and a Pesticide Applicator Certificate for the pertinent pesticide application Category: (2) Forest; (3A) Ornamental Plant Exterior; (3-C) Turf; (5) Aquatic; (6) Right-of-Way and Weed. Apply pesticides in conformance with the Maryland

Pesticide Applicator’s Law, OSHA and MOSH regulations, and the manufacturer’s label and Safety Data Sheets (SDS). Ensure that pesticides are applied by a Maryland Certified Pesticide Applicator, or by a Registered Pesticide Applicator under the supervision of a Certified Pesticide Applicator.

(d) Pesticide Application Reporting. Record the location and details of pesticide applications on the Pesticide Application Reporting Form. Submit the Form within 24 hours after applying pesticides.

(e) Nutrient Management Plan (NMP). The specified application rates of 14-14- 14 fertilizer will be the NMP unless the Administration develops a substitute NMP. Replace application rates of 710.03.04 and .05 as required by the NMP.

(f) Nutrient Management Reporting. Record the location and details of soil amendment and fertilizer applications on the Nutrient Management Reporting Form. Submit the Form within 24 hours after applying soil amendments and fertilizer.

(g) Plant Storage and Handling. Refer to 920.07.05.

(h) Standard Details. Refer to Maryland Standard MD-710.03-01 through MD710.03-15 when preparing plant materials, constructing planting beds, and installing plant materials.

710.03.02 Submittals and Inspection. Submit the following items:

(a) Breakdown List of Contract Prices. Refer to 710.04.01 and develop a Breakdown List of Contract Prices for each plant in the Contract. Include the cost of all installation and establishment operations in the per plant price.

Submit the written Breakdown List within 14 days after Award of Contract. The Breakdown List will be reviewed by the Engineer and Landscape Operations Division for completeness and balance, and will be approved or returned for correction.

(b) Installation Phase Schedule. Develop a Schedule with dates for completing operations related to 710.03.01 thru .15 according to Table 1.

TREE, SHRUB, AND PERENNIAL	
TABLE 1 - OPERATIONS IN INSTALLATION PHASE SCHEDULE	
1	Layout, utilities review and marking.
2	Undesirable vegetation removal and herbicide application.
3	Planting pit excavation, soil preparation, and plant installation.
4	Planting beds rototilling and soil preparation, applying shredded hardwood bark (SHB) mulch, and plant installation.

5	Applying fertilizer solution after installation, and cleanup.
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Submit the written Schedule at least 30 days before beginning landscape work. The Schedule will be reviewed by the Engineer and Landscape Operations Division for completeness and feasibility, and will be approved or returned for correction.

(c) Plant Material Inspection and Approval. The Inspection will be conducted by the Landscape Operations Division as specified in 920.07.02.

(d) Establishment Phase Schedule & IPM Program. Develop a Schedule with dates for completing 710.03.22. Include an Integrated Pest Management Program (IPM Program) with methods of pest monitoring (weeds, diseases, insects, mammals, etc.), pesticide selection, application rates, and scheduling.

Submit the written Establishment Phase Schedule & IPM Program at the Installation Phase Inspection. The Schedule will be reviewed by the Engineer and the Landscape Operations Division, and will be approved or returned for correction.

710.03.03 Utilities Marking, Layout, and Inspection. Refer to Section 875 when included in the Contract Documents.

(a) Utilities Marking. Contact ‘Miss Utility’ or another approved service to identify and mark utilities in the rights-of-way and on SHA property.

(b) Conflicts. Notify the Administration in writing of conflicts that may involve design changes. Conflicts will be reviewed by the Landscape Operations Division and resolved within 14 days after notice.

(c) Planting Layout. Refer to Maryland Standard MD-710.03-10, MD-710.03-11 and MD-710.03-12. Provide the necessary materials and lay out the locations of planting pits and planting beds specified in the Contract Documents, or as adjusted by the Landscape Operations Division.

(d) Inspection. At least 7 days notice will be required to schedule each stage of a layout inspection in consultation with the Landscape Operations Division. Proceed with operations after layout approval.

710.03.04 Preparing Planting Pits. Refer to Maryland Standard MD-710.03-14 and MD710.03-15. Perform the following operations when preparing planting pits for individual plants.

(a) Undesirable Vegetation. Manually remove undesirable vegetation or refer to 710.03.01(c) and 710.03.01(d) and apply non-selective herbicide in water with wetting agent and dye according to Table 2 at least 14 days before plant installation. Cut and remove dead vegetation or debris that interferes with soil preparation, plant installation or future maintenance.

TREE, SHRUB, AND PERENNIAL	
TABLE 2 - NON-SELECTIVE HERBICIDE APPLICATION	
MATERIAL	RATE PER ACRE
Glyphosate Herbicide	5 lb of active ingredient

Marking Dye	6 to 15 oz
Water	40 to 50 gal

(b) Excavation. Excavate planting pits to the depth required for the placement of root collars as specified in 710.03.09(c). Retain the excavated soil for preparation as backfill soil. Remove excess soil from the site, or spread as directed. For Expanded Tree Pits (ETP), refer to the detail provided

in the Contract Documents. Excavate additional depth and width as shown in the detail, place furnished subsoil to the dimensions shown in the detail, and complete tree installation using Table 3. Remove excess soil from the site, or spread as directed.

(c) Planting Pit Diameter. Use Table 3 to determine the diameter of the planting pit based upon the container or root ball diameter.

TREE, SHRUB, AND PERENNIAL					
TABLE 3 - PREPARING PLANTING PITS AND BACKFILL SOIL					
Container or Root Ball Diameter In.	ANSI Z60 Container Size	Planting Pit Diameter In.	Compost Ft ³	14-14-14 Fertilizer Oz	Water per Event Gal
<3	Plugs	2 to 4	0	0	0.10
3	#SP3	6	0.02	0.10	.015
5	#SP4	10	0.02	0.12	0.2
6	#SP5 OR #1	12	0.03	0.18	0.3
8	#2	17	0.09	0.30	0.5
10	#3	21	0.18	0.55	1.0
12	#5	24	0.28	0.75	1.5
14	#7	28	0.44	1.0	2.3
16	#10	32	0.65	1.3	3.5
18	#15	36	0.94	1.6	5.0
20	#20	40	1.27	2.0	6.8
24	#25	48	2.20	3.0	12
30	-	60	4.30	4.5	23
36	#45	72	7.40	6.5	40
42	#65	84	11.80	8.8	60

Note:	When water is applied over the surface of planting beds where most plants are less than 36 in. apart, apply water per plant in conformance with 'Water per Event', or apply at least 5 gallons of water per yd ² of planting bed.
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(d) Compost and Fertilizer. Use Table 3 to determine the quantity of compost and 14-14-14 fertilizer to mix into backfill soil, based upon planting pit diameter. Uniformly mix compost and fertilizer into the backfill soil.

Use a scale with 0.01 oz or gram accuracy to calibrate measures and verify application rates of 14-14-14 fertilizer when directed.

(e) Water. Use Table 3 to determine the quantity of water to apply for each installed plant based upon planting pit diameter.

710.03.05 Preparing Planting Beds. Refer to Maryland Standard MD-710-03-10, MD710.03-11, MD-710-03-12 and perform the following operations.

(a) Undesirable Vegetation. Remove undesirable vegetation as specified in 710.03.04(a). Cut or mow dead vegetation to a height of 1 in. and remove the debris.

(b) Compost and Rototilling

(1) Areas Flatter than 4:1. Apply 2 in. layer of compost over the soil surface of the planting bed. Rototill to a depth of 6 in. to thoroughly mix compost and any materials specified in the NMP. Do not apply compost or rototill Bioretention Soil Mix (BSM) unless specified otherwise.

(2) Slopes 4:1 and Steeper. Do not rototill.

(c) Fertilizer. Mix 14-14-14 fertilizer into the backfill soil of each planting pit within the bed according to Table 3.

(d) Debris Removal. Remove debris, stones, and soil clods with a length or width greater than 2 in. that are uncovered during rototilling.

(e) Leveling. Level the soil surface after rototilling, and leave it in a condition ready for shredded hardwood bark (SHB) mulching and plant installation.

710.03.06 Plant Acclimation. Ensure that container grown plants are acclimated to prevailing weather conditions before installing. Install bare root plants while dormant when soil and air temperatures are above freezing.

710.03.07 Plant Care. Begin plant care at the time each plant is installed, and continue until Installation Phase Acceptance is granted.

710.03.08 Pruning. Refer to Maryland Standard MD-710.04-14. Remove dead branches, damaged branches, water sprouts, and other undesirable growth manually with pruners. Preserve the natural appearance of trees and shrubs. Remove branches or portions of branches over sidewalks to ensure 8 ft clearance for pedestrians.

710.03.09 Installing. Install plants vertically in planting pits and beds prepared as specified in 710.03.04 and .05, and as follows.

SPECIAL PROVISIONS

710 – TREE, SHRUB AND PERENNIAL INSTALLATION AND ESTABLISHMENT

(a) Removing Containers, Burlap, Wire Baskets. Remove containers. Remove twine, burlap or other fabric from the tops of root balls to a depth at least 6 in. below the surface of the backfilled planting pit. Cut and remove the tops of wire baskets from the upper half of the rootball. Discard containers and any removed twine, wire, burlap or other fabric.

(b) Preparing Roots. Carefully remove the containers of container grown plants, and loosen the soil mass to eliminate girdling roots.

Spread the roots of bare root plants in a natural position, and firmly press backfill soil around the roots.

(c) Placing Root Collar. Refer to Maryland Standard MD-710.03-15. Place the root collar of plants at or above the average soil surface grade outside the planting pit according to Table 4.

TREE, SHRUB, AND PERENNIAL	
TABLE 4- ROOT COLLAR PLACEMENT	
SOIL CONDITIONS	HEIGHT OF ROOT COLLAR
Normal, Well Drained	Place collar at same level to 1 in. above average surface grade
Compacted	Place collar at 1 to 2 in. above average surface grade.
Poorly Drained or Wet	Place collar as needed to ensure 25% of root mass is above average surface grade.

(d) Backfilling. Remove clods, stones and other foreign material with a length or width greater than 2 in. from soil used for backfilling.

Place backfill soil that has been mixed with compost and fertilizer as specified in 710.03.04 and .05 under and around roots to stabilize plants in upright position and restore the grade. Lightly firm and compact backfill soil to reduce air pockets.

710.03.10 Soil Berming. Form a 4 in. high berm of backfill soil around planting pits and planting beds as follows.

(a) Planting Pits. On areas flatter than 4:1, form the berm around the entire planting pit. On slopes 4:1 and steeper, take soil from the upslope rim of the pit and place it on the downslope rim to form the berm.

(b) Planting Beds. On slopes 4:1 and steeper, form the berm as a shoulder at the lower edge of the bed. Berm individual trees and shrubs installed within beds on slopes 4:1 and steeper as described in (a) above.

710.03.11 Edging. Cut edging at a steep angle into the mulched area to a 3 in. depth into the soil. On slopes 4:1 and steeper, cut edging outside of the bermed area on the lower edge of berm. Remove and discard excess soil.

(a) Planting Pits. Edge entirely around all planting pits except planting pits within planting beds.

SPECIAL PROVISIONS

710 – TREE, SHRUB AND PERENNIAL INSTALLATION AND ESTABLISHMENT

(b) Planting Beds. Smoothly cut edging around all planting beds to the shapes specified.

710.03.12 Staking and Guying. Refer to Maryland Standard MD-710.03-01 through MD710.03-09. Stake and guy trees the same day they are installed.

(a) Installation. When two or three stakes are specified for trees, install two stakes parallel to the direction of traffic, or as directed. Drive stakes vertically to a depth of 10 in. below the bottom of the pit, and 5 to 8 in. away from roots according to Table 5.

TREE, SHRUB, AND PERENNIAL				
TABLE 5 - STAKING AND GUYING				
TREE TYPE	CALIPER, in.	HEIGHT, ft	SUPPORT	
			No. of Stakes	Length, ft
Shade	Under 1	6 and 8	2	6
	1 to 2	-	2	8
	2 ½ to 3 ½	-	3	10
	4 and over	-	-	3 guy wires attached to tree anchors
Flowering	¾ to 2 ½	-	2	5-8
	3 and over	-	-	3 guy wires attached to tree anchors
Evergreen	-	5 and 6	2	5-6
	-	7, 8 and 9	3	7-8
	-	10 and over	-	3 guy wires attached to tree anchors

(b) Maintenance. Promptly straighten trees that become crooked after installation. Repair or replace stakes, guys, and other support materials as needed.

710.03.13 Mulching. Spread SHB mulch uniformly over the soil surface to a 3 in. depth. Promptly repair damage caused by washouts or construction activities.

(a) Planting Pits. Spread SHB mulch the same day that plants are installed. Mulch around the base of each plant to cover the soil of the planting pit to its outside edge, including the soil berm. Do not allow mulch to touch the bark or main stem of the plant.

(b) Planting Beds. SHB mulch may be spread before or after installing plants. Spread mulch over the entire bed and rake it to an even surface, including berms and shoulders. Ensure that mulch does not cover plants. For rototilled beds, spread mulch the same day after rototilling. For non-

SPECIAL PROVISIONS

710 – TREE, SHRUB AND PERENNIAL INSTALLATION AND ESTABLISHMENT

rototilled beds, spread mulch within 3 days after plant installation. When installation is completed, ensure that mulch uniformly covers the soil to a uniform 3 in. depth.

(c) Stormwater Infiltration Facilities or other specified areas. SHB mulch applied as Shredded Hardwood Bark Mulching 3 in. depth may be spread before or after installing plants. Spread SHB mulch over the specified area and rake it to an even surface the same day that soil is placed, or refer to 704.03.02 and immediately install Temporary Matting Mulch. As soon as feasible, remove Temporary Matting Mulch and install SHB mulch, and ensure that SHB mulch uniformly covers the specified area to a uniform 3 in. depth.

710.03.14 Watering after Installation

(a) Application Equipment. Watering equipment shall consist of sprinklers or hoses equipped with water breaker nozzles so the materials are applied with care to prevent damage to plants and minimize disturbance to SHB mulch.

For planting pits, refer to Table 4 and apply the required quantity of water to each plant.

For planting beds, apply water to the entire bed area to wet the soil to a depth of 3 in.

(b) Follow-Up Watering. Monitor and apply water during the Installation Phase to supply plant needs.

710.03.15 Cleanup. Remove growers tape, plant stakes, pot markers, field tags, and similar materials at the time of installation. Ensure that the Administration's Material Inspection Approval Seals and plant tags remain on trees and shrubs until the end of the Establishment Phase. Keep turfgrass areas, paved surfaces, and sidewalks clean. Promptly remove excess and waste materials. Take precautions to avoid damage to existing structures, plants, and turfgrass. Repair damage caused to surrounding areas during installation, and fill ruts and reestablish turfgrass as necessary.

710.03.16 Relocating Plants. Begin plant relocation operations within 7 days after notice to relocate, and continue until work is completed. Remove plants installed in undesirable locations as directed by the Engineer, and reinstall these plants as specified in herein.

710.03.17 Abandoned Planting Pits. Backfill abandoned planting pits when directed with excavated soil or approved backfill. Compact the backfill in 8 in. layers to the finished grade. Establish turfgrass as specified in Section 705.

710.03.18 Unacceptable Plants and Replacement Plants. Promptly remove and replace plants that are unacceptable at any time during the Installation Phase as specified in 920.07, or when requested. Plants that are determined to be missing, dead, dying, damaged, diseased, deformed, underdeveloped, damaged by pesticides, or not true to species, cultivar, size or quality shall be replaced. Refer to GP-5.09 regarding removal of defective work and materials, and GP-7.16 regarding Contractor responsibility for work, theft, damage, and loss.

(a) Criteria. The criteria of Table 6 will be used to identify unacceptable plants.

SPECIAL PROVISIONS

710 – TREE, SHRUB AND PERENNIAL INSTALLATION AND ESTABLISHMENT

TREE, SHRUB, AND PERENNIAL			
TABLE 6 - CRITERIA FOR UNACCEPTABLE PLANTS			
Item	Plant Type	Condition	Unacceptable
1	Tree, Shrub, Vine, Perennial Grass	Dead or Missing	Any dead or missing plant, any cause.
2	Tree, Shrub, Vine, Perennial Grass	Defoliation	More than 25% of leaf area dead, lost or dropped.
3	Tree, Shrub, Vine	Bark Wound	More than 15% of bark circumference or 2 in. length.
4	Shrub or Vine	Height Dieback	More than 25% of the shrub or vine height.
5	Tree	Height Dieback	More than 10% of tree height.
6	Tree	Height Dieback	More than 6 in. on 75% of branches

(b) Replacement Plants. Replacement plants shall be true to species, cultivar, size, and quality as specified in the Contract Documents unless a Modification Request is approved.

Install replacement plants as soon as feasible during the current Planting Season, or if between Planting Seasons, during the next Planting Season. Promptly submit a Modification Request as specified in 710.03.01(b) when it is not possible to obtain plants that meet specifications.

Replacement plants shall meet the specifications of 920.07, and be installed and established as specified in Section 710 until Final Acceptance.

710.03.19 Installation Phase Inspection. Submit a request for Installation Phase Inspection when operations are completed, and provide the Establishment Phase Schedule as specified in 710.03.02(d).

The Installation Phase Inspection will be scheduled by the Engineer at the project with the Contractor and the Landscape Operations Division to verify completion. At least 14 days notice will be provided before the scheduled Inspection so that it may be completed in the company of the Contractor.

710.03.20 Installation Phase Punch List. The Engineer in consultation with the Contractor and the Landscape Operations Division will develop the Installation Phase Punch List and list of plants to be replaced. Complete the Punch List requirements and replace plants as required.

710.03.21 Installation Phase Acceptance. Re-inspection will be performed as needed. Installation Phase Acceptance will be granted when the Punch List and all Installation Phase requirements are completed according to Table 7.

SPECIAL PROVISIONS

710 – TREE, SHRUB AND PERENNIAL INSTALLATION AND ESTABLISHMENT

TREE, SHRUB, AND PERENNIAL		
TABLE 7 - REQUIREMENTS FOR INSTALLATION PHASE ACCEPTANCE		
Item	Requirement	Section
a	Submittals are accepted and Inspections are completed.	710.03.01(b), 710.03.02, 920.07
b	Damaging pests are controlled.	710.03.02(c)
c	Layouts are inspected and approved.	710.03.03
d	Fertilizer and compost is mixed soil, as required.	710.03.04 and 710.03.05
e	Planting pits and planting beds are weed free.	710.03.04(a) and 710.03.05(a)
f	Trees and shrubs are pruned.	710.03.08
g	Trees are installed vertically and straightened.	710.03.09
h	Planting pits and beds are bermed and edged.	710.03.10 and 710.03.11
i	Staking and guying are repaired or replaced.	710.03.12
j	SHB mulch is uniformly spread to the specified depth.	710.03.13
k	Washouts in planting pits and beds are repaired.	710.03.13
l	Plants receive initial watering and follow up watering.	710.03.04 and 710.03.14
m	Clean up is completed, plant tags and ribbons are removed.	710.03.15
n	Plants are relocated to approved locations.	710.03.16
o	Abandoned planting pits are filled and seeded.	710.03.17
p	Unacceptable plants are replaced.	710.03.18
q	Damage repairs and Installation Phase Punch List is completed.	710.03.20
r	Pesticide Application and Nutrient Management Reporting Forms are completed.	710.03.01(d) and (f)
s	Plants are properly installed, are none are unacceptable or require replacement.	710.03.01 thru .18
t	Establishment Phase Schedule & IPM Program is accepted.	710.03.02 (e) and 710.03.21

710.03.22 Establishment Phase. The Establishment Phase begins upon Installation Phase Acceptance. Maintain plants and provide care and replacement as specified in 710.03.01 thru .21, and as follows

SPECIAL PROVISIONS

710 – TREE, SHRUB AND PERENNIAL INSTALLATION AND ESTABLISHMENT

- (a) **Period of Maintenance.** Maintain plants for 12 months after installation, until Final Acceptance.
- (b) **Plant Watering.** Monitor the soil moisture and water needs of plants. Promptly apply water as specified in 710.03.14 to planting pits and planting beds as needed, or as directed.
- (c) **Pest Management.** Monitor and promptly control weeds, insects and other pests in conformance with the IPM Program, or when requested. Control weeds in mulched areas in preparation for inspection. Remove dead weeds taller than 6 in. Refer to 710.03.01(d) and complete the Pesticide Application Reporting Form.
- (d) **Unacceptable Plants and Replacement Plants.** Refer to 710.03.18. Promptly remove and replace plants that have become unacceptable during the Establishment Phase as needed or as directed.
- (e) **End-of-Season Foliage Removal.** For perennials, remove the aboveground parts that have declined during the months of November and December, or as directed. For grasses, remove the aboveground parts that have declined and in February or March, or as directed.
- (f) **Refertilizing.** Dissolve 40 lb of 20-20-20 water soluble fertilizer in 1000 gal water. Refer to 710.03.14 regarding application equipment. Apply fertilizer solution in the final 60 days of the Establishment Phase. For planting pits, refer to Table 3 and apply gallons of fertilizer solution to each installed plant based upon the planting pit diameter and water per event gal.
- For planting beds, apply 0.21 gal of fertilizer solution per yd² of planting bed. Apply fertilizer solution to the entire bed area.
- (g) **Removing Supports and Seals.** Remove tree supports, hoses wires, guys and Material Inspection Approval Seals in the final 30 days of the Establishment Phase. Pull stakes from the soil or cut them to ground level.
- (h) **Partial Establishment Phase Inspection.** The Project Engineer will inspect plant establishment 6 months after Installation Phase Acceptance according to Table 8. The Inspection Report will include actions to perform before Partial Establishment Phase Acceptance is granted. Perform repairs, replacements, and other work as specified in the Contract Documents and Inspection Report.

710.03.23 Establishment Phase Inspection and Final Acceptance. The Engineer and the Landscape Operations Division will complete an Inspection Report 12 months after Installation Phase Acceptance. When it is not possible to perform the Inspection, Final Acceptance will be delayed until Inspection is possible.

Final Acceptance will be granted when the requirements of Table 8 are satisfactorily completed. The Inspection Report will be included in the Punch List requirements for the project. Complete the Punch List requirements as directed.

SPECIAL PROVISIONS

710 – TREE, SHRUB AND PERENNIAL INSTALLATION AND ESTABLISHMENT

TREE, SHRUB, AND PERENNIAL		
TABLE 8 - REQUIREMENTS FOR ESTABLISHMENT PHASE AND FINAL ACCEPTANCE		
Item	Requirement	Section
1	Water sprouts are manually pruned and removed.	710.03.08
2	Trees are straightened.	710.03.09
3	Staking and guying are repaired or replaced.	710.03.12
4	Washouts in planting pits and beds are repaired.	710.03.13
5	Plants are relocated to approved locations.	710.03.16
6	Abandoned planting pits are filled and seeded.	710.03.17
7	Plants are successfully established.	710.03.22(a) and (b)
8	Damaging pests are controlled.	710.03.22(c)
9	Planting pits and planting beds are weed free.	710.03.22(c)
10	Unacceptable plants are replaced.	710.03.22(d)
11	Annual foliage dieback of perennials and grasses is cut and removed.	710.03.22(e)
12	Plants are refertilized.	710.03.22(f)
13	Pesticide Application and Nutrient Management Reporting Forms are completed.	710.03.01(d) and (f)
14	Staking, guying, and Material Inspection Seals are removed.	710.03.22(g)
15	Damage repairs and Establishment Punch List are completed.	710.03.22(h)

710.04 MEASUREMENT AND PAYMENT

Tree, Shrub, and Perennial Installation and Establishment will be measured and paid for at the Contract unit price for one or more of the specified items. The payment will be full compensation for all plants, material, labor, equipment, tools, disposal fees and incidentals necessary to complete the work.

710.04.01 Tree, Shrub, and Perennial Installation and Establishment. Tree, Shrub, and Perennial Installation and Establishment shall include the cost of trees, shrubs, vines, perennials, and grasses of all planting stock sizes and classes, layout, marking, pruning, planting pit excavation and disposal of excavated soil, fertilizer, compost, backfilling, staking, guying, berming, edging, watering, cleanup,

SPECIAL PROVISIONS

710 – TREE, SHRUB AND PERENNIAL INSTALLATION AND ESTABLISHMENT

relocating plants, abandoned planting pits, pest management, plant maintenance, refertilizing, and all operations related to the Installation and Establishment Phases of each plant, until Final Acceptance.

Tree, Shrub, and Perennial Installation and Establishment will be paid according to Table 9 based upon the approved Breakdown List of Contract Prices. Refer to 710.03.02(a). In the event of change in the quantities required, payment adjustments will be based on the approved Breakdown List of Contract Prices.

(a) Payment Schedule. Payments will be made according to Table 9 when construction requirements are met.

TREE, SHRUB, AND PERENNIAL			
TABLE 9 - PAYMENT SCHEDULE			
CONSTRUCTION REQUIREMENTS		PERCENT OF TOTAL CONTRACT PRICE	PAYMENT FOR COMPLETED WORK
710.03.01 thru .21	Installation Phase	70	At Installation Phase Acceptance
710.03.22(a) thru (e)	Establishment Phase	15	At Partial Establishment Phase Acceptance
710.03.22(a) thru (h) and 710.03.23	Establishment Phase and Final Acceptance	15	At Final Acceptance
Total Payment		100%	

(b) Forfeiture. Failure to complete operations as required or directed in conformance with the Payment Schedule will result in forfeiture of that percentage of payment based upon the Breakdown List of Contract Prices.

710.04.02 Constructing Planting Beds. Constructing Planting Beds will be measured and paid for at the Contract unit price per square yard. The price will include the cost of layout, marking, fertilizer, soil amendments, rototilling, berming, edging, applying 3 inches of SHB mulch, refertilizing, and all operations related to construction of the planting bed, and any necessary damage repair per 710.03.21 and 710.03.22 until Final Acceptance. Mulching individual planting pits of trees, shrubs, perennials, vines, and grasses within planting beds will not be measured but the cost will be incidental to 710.04.02.

710.04.03 Shredded Hardwood Bark Mulching 3 Inch Depth. Shredded Hardwood Bark Mulching 3 Inch Depth that is installed within stormwater infiltration facilities or within other specified areas, and which is not installed as part of Constructing Planting Beds, will be measured and paid for separately. The payment will include the cost of SHB Mulch, installation, and any necessary damage repair per 710.03.21 and 710.03.22 until Final Acceptance. Mulching individual planting pits of trees, shrubs, perennials, vines, and grasses within areas of Shredded Hardwood Bark Mulching 3 Inch Depth will not be measured but the cost will be incidental to 710.04.03.

710.04.04 Expanded Tree Pit. Expanded Tree Pit will be measured and paid for at the Contract unit price per each. The price shall include the cost of excavation to the specified dimensions, furnished subsoil, disposal of excavated soil, and all operations related to construction of the expanded tree pit.

710.04.05 Temporary Mulch will be measured and paid for at the Contract unit price.

SPECIAL PROVISIONS
712 – TREE BRANCH PRUNING

712 TREE BRANCH PRUNING

712.01 DESCRIPTION

Prune tree branches as indicated in the SP 700 Tree Preservation Program, or in the plans. Perform Tree Branch Pruning in conformance with 101.03.02, and Section 120 when pruning is specified within the limits of a Tree Preservation Area.

712.02 MATERIALS

Not applicable.

712.03 CONSTRUCTION

712.03.01 General

- (a) Permits.** Obtain a Roadside Tree Permit from the Maryland Department of Natural Resources - Forest Service.
- (b) Tree Preservation Program (TPP).** Conform to the requirements of the TPP when developed by the Administration.
- (c) Schedule.** Perform operations when weather conditions are suitable. Cease operations when conditions are unsuitable.

712.03.02 Breakdown List of Contract Prices. Refer to 712.04 and develop a Breakdown List of Contract Prices for each tree or group of trees in the Contract. Include costs for pruning and completing all operations per tree or group of trees. Submit the written Breakdown List within 14 days after Notice of Award. The Breakdown List will be reviewed by the Engineer and Landscape Operations Division for completeness and balance, and will be approved or returned for correction.

712.03.03 Maryland Licensed Tree Expert (LTE). A LTE shall perform or directly supervise the Operations in conformance with the Maryland Roadside Tree Law, the Forest Conservation Act, and accepted arboricultural practices.

712.03.04 Meetings. Meet with the Engineer, the LTE, and the LOD to review areas, Operations, and the approved Breakdown List of Contract Prices before beginning Operations.

712.03.05 Marking. Identify trees to be pruned, and obtain approval before beginning Operations.

712.03.06 Equipment. Equipment and tools shall conform to accepted arboricultural practices.

712.03.07 Notice. Notify the Engineer at least 10 days before beginning Operations.

712.03.08 Operations. The Contract Documents will indicate the trees to be pruned or the dimensions or goals to be achieved by pruning. Meet ANSI A300 standards for Tree Care Operations in conformance with one or more of the following Operations, or as specified.

- (a) Cleaning.** To remove dead, diseased, and broken branches.

SPECIAL PROVISIONS

712 – TREE BRANCH PRUNING

(b) Thinning. To reduce the density of live branches; or to remove crossed branches or a codominant leader.

(c) Raising. To provide vertical clearance to a height of 16 ft, or as specified in the Contract Documents.

(d) Reducing. To decrease the height or spread.

(e) Specialty Pruning. To meet the needs of young trees, at planting, once established, pollarding, for restoration, to maintain vistas, or to accommodate utilities.

712.03.09 Wood Chipping. Dispose of wood, or chip wood and disperse chips to a depth of 1 in. as directed.

712.03.10 Cleanup and Restoration. Avoid damage to existing structures, plants, and turfgrass. Keep turfgrass areas, paved surfaces and sidewalks clean. Restore ruts and damaged turfgrass areas by seeding in conformance with Section 705, or perform Turfgrass Sod Establishment in conformance with Section 708 when directed, before beginning any other landscape operations.

712.03.11 Damage Repair. Do not injure vegetation to be preserved. Repair injuries to bark, trunks, or limbs by cutting, smoothing, and tracing the bark in accordance with ANSI A300 Standards for Tree Care Operations.

712.03.12 Damage Compensation. Monetary compensation for damage or loss of trees will be calculated and assessed in conformance with the Guide for Plant Appraisal of the Council of Tree & Landscape Appraisers.

712.04 MEASUREMENT AND PAYMENT

Tree Branch Pruning will not be measured, but will be paid for at the Contract lump sum price based upon the Breakdown List of Contract Prices. The payment will be full compensation for all labor, material, equipment, tools, wood disposal and chipping, cleanup and restoration, damage repair, disposal fees and incidentals necessary to complete the work. If the Administration requests a change, the units and payment will be adjusted on the basis of the approved Breakdown List of Contract Prices.

SPECIAL PROVISIONS
713 - BUSH REMOVAL

713 BRUSH REMOVAL

713.01 DESCRIPTION

Remove brush as indicated in the SP 700 Tree Preservation Program, or in the plans. Perform Brush removal within a Tree Preservation Area per Section 120 when specified, but do not perform these operations within areas of Clearing and Grubbing.

When areas of bare soil are caused by Brush Removal operations, perform Temporary Mulch in conformance with Section 704 to provide temporary soil stabilization, or perform Turfgrass Establishment in conformance with Section 705, or perform other stabilization as directed.

713.02 MATERIALS

Herbicide	920.09.03(a)
Water	920.09.01
Marking Dye	920.09.04

713.03 CONSTRUCTION

713.03.01 General

- (a) **Permits.** Obtain a Roadside Tree Permit from the Maryland Department of Natural Resources - Forest Service.
- (b) **Tree Preservation Program (TPP).** Conform to the requirements of the TPP when developed by the Administration.
- (c) **Schedule.** Perform operations when soil moisture and weather conditions are suitable. Cease operations when conditions are unsuitable.
- (d) **Pesticide Application.** Refer to 701.03.01(b).
- (e) **Pesticide Application Reporting.** Refer to 701.03.01(c).

713.03.02 Maryland Licensed Tree Expert (LTE). A LTE shall perform or directly supervise the Operations in conformance with the Maryland Roadside Tree Law, the Forest Conservation Act, and accepted arboricultural practices.

713.03.03 Meetings. Meet with the Engineer, the LTE, and the Landscape Operations Division to review areas and Operations before beginning Operations

713.03.04 Marking. Mark areas where brush is to be removed. Identify trees and shrubs to be preserved and protected. Ensure that marking and identification is completed and approved before beginning Operations.

713.03.05 Equipment. Equipment and tools shall conform to accepted arboricultural practices.

713.03.06 Notice. Notify the Engineer at least 10 days before beginning Operations.

SPECIAL PROVISIONS

713 - BUSH REMOVAL

713.03.07 Operations. Brush removal shall involve cutting, herbicide treatment, and debris removal of areas of living or dead vegetation. Do not injure vegetation identified for preservation. One or more of the following Operations will be specified:

(a) Operation 1 - Brush Removal. Cut vegetation to a height of no more than 1 in. above the soil surface. Remove wood debris.

(b) Operation 2 - Brush Removal with Stump Treatment. Cut vegetation as in Operation 1. Immediately treat the cambium layer and exposed bark of live stumps with an approved herbicide solution and marking dye. Remove wood debris.

713.03.08 Wood Chipping. Dispose of wood in conformance with the pertinent Operation, or chip wood and disperse chips to a depth of 1 in. as directed.

713.03.09 Cleanup and Restoration. Avoid damage to existing structures, plants, and turfgrass. Keep turfgrass areas, paved surfaces and sidewalks clean. Promptly remove, disperse or dispose of wood debris and other waste materials as directed. Restore ruts and damaged turfgrass outside of areas of Brush Removal by seeding in conformance with Section 705, or perform Turfgrass Sod Establishment in conformance with Section 708 when directed, before beginning other landscape operations.

713.03.10 Damage Repair. Do not injure vegetation to be preserved. Repair injuries to bark, trunks, or limbs by cutting, smoothing, and tracing the bark in accordance with ANSI A300 Standards for Tree Care Operations.

713.03.11 Damage Compensation. Monetary compensation for damages or loss of trees will be calculated and assessed in conformance with the Guide for Plant Appraisal of the Council of Tree & Landscape Appraisers.

713.04 MEASUREMENT AND PAYMENT

Brush Removal will be measured and paid for at the Contract unit price per square yard, as specified. The payment will be full compensation for all labor, material, equipment, tools, wood disposal and chipping, cleanup and restoration, damage repair, disposal fees and incidentals necessary to complete the work.

713.04.01 Payment for Temporary Mulch, Turfgrass Establishment, or for other vegetation establishment within areas of Brush Removal will be measured and paid for at the pertinent Contract Unit price.

SPECIAL PROVISIONS

800 - STREETLIGHT

800 - STREETLIGHT

This is in addition to the MDSHA 2018 Standard Specifications and Montgomery County Department of Transportation Division of Traffic Engineering & Operations Streetlights: Specifications.

Streetlight Post specifications to follow Montgomery County Department of Transportation Division of Traffic Engineering & Operations Streetlight Post: Decorative Cast Pole.

See the following attachments in Addendum 1:

- Holophane Washington Globe Full Cover
- Columbia Aluminum Pole

806 LUMINAIRES

806.02 Materials

Luminaires shall have a color temperature of 3000k. The luminaire for pedestrian lighting application shall be equivalent to Holophane Acrylic Washington Postlite LED Series Luminaire: AWDE2-P20-30K-AS-F-BK-3-F-B-BK. All luminaires that are placed in front of a house must have a house-side shield.

808 LIGHTING STRUCTURES

808.02 Materials

The Lighting Structure for pedestrian lighting application shall be equivalent to the Holophane Columbia Cast Aluminum: CL-A-12-L5J-17-P07-ABG-BK-0R144C.

A 1-gallon can of touch up paint is to be provided by the contractor to the maintenance personnel of each neighborhood matching type, finish, and color of the lighting structure.

SPECIAL PROVISIONS
820 - GENERAL ELECTRICAL WORK AND TESTING

820 GENERAL ELECTRICAL WORK AND TESTING

820.01 DESCRIPTION

Test all electrical items referred to in Category 800.

820.02 MATERIALS

All materials and equipment installed as part of the permanent installation shall be new, UL listed or labeled, and meet NEC, NESC, NEMA, IES, and local codes applicable to the area of installation.

820.03 CONSTRUCTION

820.03.01 General. All installations shall meet NEC, NESC, local utility company requirements, and State and local laws and ordinances governing the work. All electrical work shall be under the direct supervision of a master electrician licensed in the State of Maryland or in the county where the work is performed. All work done under Sections 804, 805, 806, 807, 810 (except loop wire), 811, 814, 816, 817, and 820 shall be performed by a journeyman electrician. Obtain and pay for all permits, licenses, and inspection fees.

820.03.02 Testing. Supply all personnel and equipment required to perform the following tests. Furnish four certified copies of the complete test reports to the Engineer.

At least 30 days prior to the commencement of each test, submit the types, styles, or catalog numbers of all required testing equipment. Include a written certification stating when the testing equipment was last calibrated by an Administration approved testing agency. The calibration date shall be within 180 days of the date when the tests are to be performed. Perform all tests in the presence of the Engineer.

Immediately repair or replace any defects found in the completed installation.

a) Ground Resistance Testing. Use a megger ground tester, using the null balance fall of potential method. Corrected readings greater than 25 ohms will not be accepted.

b) Circuit Testing. Determine the insulation resistance on all cables of every circuit except those installed in lighting structures. Cable insulation resistance shall be at least 10 megohms at 500 volts D.C., except loop detector wire and loop detector lead in shall be at least 100 megohms at 500 volts D.C.

Demonstrate to the Engineer that all conductors are continuous, free from short circuits and unspecified grounds, and that all circuits are properly connected.

c) Performance Testing. Conduct a performance test using the design power source. Operate the electrical system, including automatic control equipment, for 30 consecutive days. If any component fails, replace it immediately and continue the test. Record each fault, the method and date of correction of each, and the beginning and end of the 30-day test period. If more than 5 percent of any component fails during the test, replace the component and restart the 30-day test cycle for the entire system.

d) Illumination Testing. Conduct an illumination test, conforming to procedures approved by the Administration, to determine the illumination characteristics of the roadway lighting installation.

SPECIAL PROVISIONS

820 - GENERAL ELECTRICAL WORK AND TESTING

820.03.03 Traffic Signal Testing. Conduct testing without causing a hazard to the traveling public.

Maintain all new materials until satisfactorily tested and their operation is accepted by the Engineer.

Signal heads and signs that are in place, but not in use, shall be entirely covered with opaque burlap.

After completion, testing, and acceptance, place new traffic signals on flashing operation for a 72 hour period prior to placing the signals on full color operation. Existing full color and flashing signals shall not flash, but shall be kept in operation until the new signal is completed, satisfactorily tested, and approved.

Remove STOP signs at new full color signals at the end of the 72 hour flashing period. Provide a log of the date and time of removal to the Engineer.

Upon acceptance and placement of the new traffic control device into operation, remove unnecessary signal heads, signs, spans, and mast arms.

New traffic signals, exclusive of signal system interconnect installation, may be placed into operation when testing is completed and upon acceptance by the Engineer. Upon completion of the signal system interconnect installation, the signal system interconnect shall also be satisfactorily tested and approved by the Engineer.

820.04 MEASUREMENT AND PAYMENT

General electrical work and testing and the as-built drawings will not be measured but the cost will be incidental to the other pertinent items specified in the Contract Documents.

The cost for furnishing and installing circuit breakers in the existing panels, Pepco Coordination, and other miscellaneous electrical work to install the system and not otherwise provided by pay item shall not be measured and shall be incidental to the cost for lighting.

END OF SECTION 800

SPECIAL PROVISIONS

902 - PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS

**CATEGORY 900
MATERIALS**

665 DELETE: SECTION 902 — PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS in its entirety.

INSERT: The following.

SECTION 902 — PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS

902.01 STORAGE.

Storage of materials shall conform to the Contract Documents and as directed by the Engineer.

902.02 CERTIFICATION OF PORTLAND CEMENT AND BLENDED HYDRAULIC CEMENT.

The manufacturer shall furnish certification as specified in TC-1.02. The certification shall also include:

- (a) The mill shall report its quality control procedures, and submit a new report whenever there is a procedural change.
- (b) The mill's control laboratory shall be inspected by the Cement and Concrete Reference Laboratory of the National Institute of Standards and Technology on their regularly scheduled visits. The Engineer shall be provided with copies of the reports of these inspections along with an account of the action taken to correct cited deficiencies.
- (c) Records of data accumulated by the quality control procedures shall be produced upon request.
- (d) A certified document shall accompany each shipment stating that the contents conform to all applicable requirements. Additionally, the document shall show the producer's name, mill location, carrier number, date loaded, weight contained in carrier, silo number, consignee, destination, Contract number, and type of cement. The signature and title of the signer shall be shown on the document.
- (e) The mill shall, upon request, supply certified chemical and physical test values that can be associated with any sample representing cement drawn from a particular silo on a given date.
- (f) Acceptance of cement by certification will be terminated if test results differ from mill results by more than the precision limits given in the test method. The acceptance procedure will then revert to storage testing and approval prior to shipment.

902.03 HYDRAULIC CEMENT.

902.03.01 Portland Cement. M 85, with the fineness and the time of setting determined using T 153 and T 131, respectively.

902.03.02 Ground Iron Blast Furnace Slag. M 302, Grade 100 or 120. The Contractor may request to substitute a maximum of 50 percent of the weight of cement with ground iron blast furnace slag. When ground iron blast furnace slag is used, the minimum cement factor and water/cement ratio will be determined on the basis of the combined weight of the portland cement and ground iron blast furnace slag. When ground iron blast furnace slag is used to control alkali silica reactivity, see Table 902 B for percentage.

SPECIAL PROVISIONS

902 - PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS

902.04 BLENDED HYDRAULIC CEMENT.

M 240 Type IP containing 15 to 25 percent Fly Ash by weight of cement or Type 1S containing 25 to 50 percent slag cement by weight of cement. Maximum loss on ignition is 3.0 percent. The requirement for a manufacturer's written statement of the chemical composition is waived.

902.05 MASONRY CEMENT.

C 91, except the water retention and staining tests are waived.

902.06 CONCRETE ADMIXTURES.

Do not use concrete admixtures that contribute more than 200 ppm of chlorides based on the cement content when tested per MSMT 610. Use only prequalified admixtures.

902.06.01 Air Entraining Admixtures. M 154.

902.06.02 Chemical Admixtures. M 194, Type A, D, or nonchloride C.

902.06.03 High Range Water Reducing Admixtures. M 194, except that it shall be a liquid, the water content shall be a maximum of 85 percent of that of the control, and the durability factor shall be a minimum of 90. Use Type F for early strength, which shall produce a minimum compressive strength in 12 hours of 180 percent of that of the control. Use Type G when early strength is not specified. The manufacturer shall furnish certification as specified in TC-1.03. The certification shall include curves indicating the fluid ounces of admixture per 100 lb of cement as related to water reduction and strength gain for 12 hours when used with a minimum cement factor of 700 lb.

902.06.04 Pozzolans. When a pozzolan is used, determine the minimum cement factor and water/cement ratio on the basis of the combined weight cement and pozzolan. Do not use pozzolan and Blended Hydraulic Cement in the same mix.

(a) **Fly Ash.** M 295, pozzolan Class C or F, except that the maximum permissible moisture content shall be 1.0 percent, and when used in concrete Mix Nos. 3 and 6 the maximum loss on ignition 3.0 percent. Fly Ash may be substituted up to a maximum of 25 percent of the weight of the cement.

(b) **Microsilica.** C 1240, except that the oversize requirement is waived. Microsilica may be substituted up to a maximum of 7 percent of the weight of cement.

902.06.05 Corrosion Inhibitors. Corrosion inhibitors shall be calcium nitrite based and contain a minimum of 30 percent active ingredients by mass. The gallonage of corrosion inhibitor used in the concrete mixture shall be included as water when determining the water/cementitious materials ratio.

SPECIAL PROVISIONS

902 - PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS

902.07 PORTLAND CEMENT CONCRETE CURING MATERIALS.

Use burlap cloth, sheet materials, liquid membrane forming compounds, or cotton mats.

902.07.01 Burlap. M 182, Class 1, 2, or 3.

902.07.02 Sheet Materials. M 171 with the following exceptions:

- (a) **White Opaque Burlap Polyethylene Sheeting.** Tensile strength and elongation requirements are waived. Use sheeting having a finished product weight of not less than 10 oz/yd².
- (b) **White Opaque Polyethylene Backed Nonwoven Fabric.** 902.07.02(a), with the thickness requirement waived. Use material having a finished product weight of not less than 5 oz/yd².
- (c) **White Opaque Polyethylene Film.** Tensile strength and elongation requirements are waived.

902.07.03 Liquid Membrane. C 309. Field control testing of the white pigmented curing compounds is on the basis of weight per gallon. The samples shall not deviate more than ± 0.3 lb/gal from the original source sample.

902.07.04 Cotton Mats. Cotton mats consist of a filling material of cotton bats or bats covered with unsized cloth and tufted or stitched to maintain the shape and stability of the unit under job conditions of handling.

Use coverings of either cotton cloth, burlap or jute having the following properties:

- (a) Cotton cloth covering shall weigh not less than 6.0 oz/yd² and have an average of not less than 32 threads/in. of warp and not less than 28 threads/in. of filling. Use raw cotton, cotton comber waste, cotton card strip waste, or combinations thereof as the raw material used in the manufacture of the cotton cloth.
- (b) Burlap or jute covering for cotton mats shall weigh not less than 6.4 oz/yd² and shall have not less than 8 threads/in. of warp and not less than 8 threads/in. of filling. Use the grade known commercially as "firsts" and they shall be free from avoidable imperfections in manufacture and from defects or blemishes affecting the serviceability.

902.08 FORM RELEASE COMPOUNDS.

Use form release compounds that effectively prevent the bond of the concrete to the forms. Form release compounds shall not cause discoloration of the concrete or adversely affect the quality or rate of hardening at the interface of the forms.

The flash point of the form release compound shall not be less than 100 F when tested per D 93.

902.09 PARAFFIN WAX.

Use clear paraffin wax for use as a bond breaker for concrete. The flash point shall not be less than 380 F when tested under D 92.

902.10 PORTLAND CEMENT CONCRETE.

Section 915 and as specified herein.

SPECIAL PROVISIONS

902 - PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS

902.10.01 Proportioning. Prior to the start of construction, submit to the Area Materials Engineer (AME) the source and proportions of materials to be used for each concrete mix. The mixture shall meet 902.10.03. The concrete, with the exception of water and chemical admixtures, shall be proportioned by weight. Water and chemical admixtures may be proportioned by volume or weight. The mix shall be uniform and workable.

902.10.02 Materials.

Coarse Aggregate	901.01
Fine Aggregate	901.01
Hydraulic and Blended Hydraulic Cement	902.03 and 902.04
Concrete Admixtures	902.06
Synthetic Fibers	902.15
Water	921.01

902.10.03 Portland Cement Concrete Mixtures.

The concrete mixes shall conform to the following:

TABLE 902 A

PORTLAND CEMENT CONCRETE MIXTURES										
MIX NO.	SPECIFIED COMPRESSIVE STRENGTH psi	COMPREHENSIVE STRENGTH ACCEPTANCE AGE days	STANDARD DEVIATION psi	CRITICAL VALUE psi	MIN CEMENT FACTOR lb/yd³	COARSE AGGREGATE SIZE M 43 / M 195	MAX WATER/CEMENT RATIO by wt	SLUMP RANGE in.	TOTAL AIR CONTENT %	CONCRETE TEMPERATURE F
1	2500	28	375	2430	455	57, 67	0.55	2 — 5	5 — 8	50 - 95
2	3000	28	450	3010	530	57, 67	0.50	2 — 5	5 — 8	50 - 95
3	3500	28	525	3600	580	57, 67	0.50	2 — 5	5 — 8	50 - 95
4	3500	28	525	3600	615	57, 67	0.55	4 — 8	N/A	50 - 95
5	3500	28	525	3600	580	7	0.50	2 — 5	5 — 8	50 - 95
6	4500	28	675	4770	615	57, 67	0.45	2 — 5	5 — 8	50 - 80

IFB No. #1103283
MCDHCA Project No. #0F7701G
Montclair Manor Community
Lighting and Site Improvements

7	4200	28	630	4420	580	57	0.50	1½ — 3	5 — 8	50 - 95
8	4000	28	600	4180	750	7	0.42	2 — 5	5 — 8	50 - 80
9	3000	(a)	N/A	N/A	800	57, 67	0.45	4 — 8	5 — 8	60 - 100
10	4500	28	675	4770	700	¾" - No. 4	0.45	2 — 5	6 — 9	50 - 80
11	4200	28	630	4420	—	57, 67	0.45	2 — 5	5 — 8	50 - 80
12	4200	28	630	4420	—	¾" - No. 4	0.45	2 — 5	6 — 9	50 - 80
HE	3000	(b)	N/A	N/A	N/A	N/A	N/A	3 — 9	5 — 8	60 - 100
PC (c)	N/A	N/A	N/A	N/A	450	7, 8	0.45	N/A	15 - 25	N/A
WT	2500	(d)	N/A	N/A	650	57	0.45	5 max	5 — 8	50 - 95

Note 1: When concrete is exposed to water exceeding 15,000 ppm sodium chloride content, Type II cement shall be used. In lieu of Type II cement, a Type I cement may be used in combined form with an amount of up to 50 percent replacement with slag cement, or an amount of up to 25 percent replacement with Class F fly ash. The Contractor shall submit to the Engineer the proposed mix proportions and satisfactory test results per C 1012 showing a sulfate resistance expansion not exceeding 0.10 percent at 180 days

Note 2: The temperature of Mix No. 6 when used for other than superstructure work as defined in TC-1.03 shall be 50 - 95 F.

Note 3: Type A or D admixture shall be added to bridge, box culvert, and retaining wall concrete.

Note 4: Nonchloride Type C admixtures may be used when approved by the Engineer.

Note 5: Other Slump Requirements:

When a high range water reducing admixture Type F or Type G is specified, the slump shall be 4 to 8 in.

When synthetic fibers are specified, the slump shall be 5 in. maximum.

When concrete is to be placed by the slip form method, the slump shall be 2-1/2 in. maximum.

When the absorption of the coarse aggregate is greater than 10 percent, the slump shall be 3 in. maximum.

Note 6: Mix 9 shall contain a Type F high range water reducing admixture.

Note 7: Mix 10 and 12 shall be proportioned as specified in 211.2 of the ACI's Recommended Practices for Selection Proportions for. Structural Lightweight Concrete. The maximum average Density of Cured Concrete shall be 118 lb/ft³. Control testing for Density of Cured

SPECIAL PROVISIONS

902 - PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS

Concrete shall be two companion cylinders for each 100 yd³, or fraction thereof, as specified in M 195.

Note 8: Mix 11 and 12 shall also conform to all requirements as specified in Table 902 C.

Note 9: Add Polyolefin Macro Fibers to Mix No. 8, Mix No. 9 and High Early Strength Patch Mix (HE). The dosage rate shall be per the manufacturer’s recommendations.

(a) Mix No. 9 is for concrete pavement repair only. Match cure of the samples is permissible in accordance with AASHTO PP 54. Strength tests shall be scheduled accordingly on weekdays and acceptance will be based on a minimum compressive strength of 3000 psi in 24 hours or 3600 psi in 3 days. Acceptance testing shall conform to 902.10.08 except that cylinders shall be field cured and remain in the molds until tests are conducted. Mix No. 9 when specified for incidental work and not requiring traffic control in conformance with 522.03.15 will not require the addition of fibers.

(b) Match cure the samples in accordance with AASHTO PP 54. Design approval will be given based on trial batch obtaining a minimum compressive strength of 2500 psi in 6 hours. Strength tests shall be scheduled accordingly on weekdays and acceptance will be based on a minimum compressive strength of 3000 psi in 24 hours or 3600 psi in 3 days. Acceptance testing shall conform to 902.10.08 except that cylinders shall be field cured and remain in the molds until tests are conducted.

(c) Pervious Concrete (PC) shall be proportioned as specified in 522R of the ACI’s Recommended Practices for Pervious Concrete Mixture Proportions. Acceptance of freshly mixed Pervious Concrete shall be made based on Density and Total Void Content. Density and Total Air Voids of Freshly Mixed Pervious Concrete shall be performed per C 1688

(d) Whitetopping (WT) mix shall contain a high range water reducing admixture, macro-fibers at 3 lbs/yd³ Max, and acceptance will be on a minimum compressive strength of 2500 psi in 24 hours.

Preventive Measures for Aggregate Alkali-Silica Reactivity (ASR). All aggregate, both coarse and fine, intended for use in concrete shall be tested for ASR in accordance with C 1260. Testing shall be performed by an accredited laboratory. Coarse and fine aggregate from the same source shall be tested separately. Testing shall be performed once every 3 years.

The following limitations apply for C 1260 results:

EXPANSION @ 14 DAYS	CLASS AND REACTIVITY STATUS	MITIGATION NOTE
≤0.10%	R0 – Innocuous	No mitigation required
>0.10 but ≤0.20%	R1 – Potentially Reactive	Mitigation Required*
>0.20 but ≤0.30%	R2 – Reactive	Mitigation Required*
>0.30%	Highly Reactive	Shall not be used in PCC

*See Table 902 B for the minimum Supplementary Cementitious Material (SCM) replacement levels for ASR mitigation

SPECIAL PROVISIONS

902 - PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS

Optional C 1293 Concrete Prism Testing. Testing in accordance with C 1293 is nonmandatory but recommended. The test may be used to verify the ASR class status of aggregate having C 1260 result greater than 0.10 percent expansion. If C 1293 testing is not performed, then compliance is assessed based entirely on the C 1260 result.

The requirements for compliance when using C 1293 are as follows;

- (a) Test frequency is once every 3 years.
- (b) The Administration will not perform this test. Testing must be performed by an accredited laboratory.
- (c) Coarse and Fine aggregate from the same source shall be tested separately.
- (d) Each sample shall be split and tested in accordance with both C 1260 and C 1293. This is required to provide comparable data for future reference. Scheduling of the testing is at the producer’s discretion, but both results must be submitted together for approval review. (e) The C 1293 result will supersede the C 1260 result for compliance status.

The following limitations apply for C 1293 results:

EXPANSION AT 1 YEAR	CLASS AND REACTIVITY STATUS	MITIGATION NOTE
≤0.04%	R0 – Innocuous	No mitigation required
>0.04 but ≤0.12%	R1 – Potentially Reactive	Mitigation Required*
>0.12 but ≤0.24%	R2 – Reactive	Mitigation Required* No structural uses allowed.
>0.24%	Highly Reactive	May not be used in PCC

*See Table 902 B for the minimum Supplementary Cementitious Material (SCM) replacement levels for ASR mitigation

TABLE 902 B

MINIMUM MITIGATION REQUIREMENTS				
SCM Type	Low Alkali Cement (≤0.7% Na ₂ O equiv.) R1	Normal Alkali Cement (≤1.0% Na ₂ O equiv.) R1	Low Alkali Cement (≤0.7% Na ₂ O equiv.) R2	Normal Alkali Cement (≤1.0% Na ₂ O equiv.) R2
Class F Fly Ash	20%	25%	25%	25%
Slag (GGBFS)	35%	50%	50%	50%
Ternary Blends	Approval Required	Approval Required	Approval Required	Approval Required

Ternary blends using two SCM’s will require C 1567 testing by an accredited laboratory. The expansion test results shall not be greater than 0.10 percent to be considered acceptable. Changes to the SCM blend percentages will require retesting.

SPECIAL PROVISIONS

902 - PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS

TABLE 902 C

MIX PHYSICAL PROPERTIES		
TEST PROPERTY	TEST METHOD	SPECIFICATION LIMITS
Minimum Cementitious Materials Factor, lb/yd ³	-	580
Maximum Content of Portland Cement, lb/yd ³	-	550
Water/Cementitious Materials Ratio by Wt.	-	0.45
Corrosion Inhibitor, gal/yd ³	902.06.05	2.0
Synthetic Fibers, lb/yd ³	902.15	1.5
Permeability of Field Concrete, moving average of three tests, coulombs max	T 277	2500
Permeability of Field Concrete, individual test, coulombs max	T 277	3000
Shrinkage at 28 days, microstrains	C 157	400

Note 1: Only Type I or II Portland cement shall be used.

Note 2: Mixes shall contain slag cement, fly ash or microsilica.

Note 3: The water to cement ratio shall be based upon the total water to cementitious materials ratio. The gallonage of the corrosion inhibitor shall be included in the water/cementitious materials ratio.

Note 4: The permeability test value of field concrete shall be the average of two test specimens representing production concrete. Test specimens shall be molded on the project site in 4 x 8 in. molds conforming to M 205. Test specimens shall be handled in accordance with T 277 - Accelerated Moist Curing. Test for the geometry of test specimens will be waived.

Note 5: Shrinkage tests will be performed on trial mixes only.

Note 6: High range water reducing admixture may be used except the water reducing requirements will be waived.

Note 7: A sealer conforming to 902.12 shall be used on the finished surface.

902.10.04 Trial Batch. A trial batch shall be prepared to certify that each mix meets 902.10.05 and 902.10.06 except for Mix No. 9. Approval will be given when the test results meets the minimum required average strength. Mix No. 9 design approval will be given based on trial batch obtaining a minimum compressive strength of 2500 psi in 12 hours.

Make arrangements with the AME at least two weeks in advance, to have an authorized representative present during the batching and testing. Each trial batch shall consist of at least 3 yd³ of concrete. Laboratory testing in lieu of plant trial batches may be conducted when approved by the AME. Supply all

SPECIAL PROVISIONS

902 - PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS

equipment, and labor required to produce the trial batches and conduct the required tests at no additional cost to the Administration.

The AME may waive the requirement for a trial batch when past performance records show that the required average strength requirement has been met.

902.10.05 Design Required Average Strength

Specified compressive strength, f_c' , psi	Required average compressive strength, f_{cr}' , psi
$f_c' \leq 5000$	Use the larger value computed From Eq. (A-1) and (A-2) $f_{cr}' = f_c' + 1.34s$ (A-1) $f_{cr}' = f_c' + 2.33s - 500$ (A-2)
Over 5000	Use the larger value computed From Eq. (A-1) and (A-3) $f_{cr}' = f_c' + 1.34s$ (A-1) $f_{cr}' = 0.90 f_c' + 2.33s - 500$ (A-3)

where:

f_c' = the 28 day specified compressive strength.

S = the standard deviation as specified in 902.10.06.

A test is defined as the average strength of two companion cylinders.

902.10.06 Standard Deviation

(a) When past performance records are available, a standard deviation will be established from documented performance records of the producer consisting of a minimum of 15 consecutive 28-day compressive strength tests obtained within the last 12 months.

The standard deviation will be established as the product of the calculated standard deviation and multiplier.

NUMBER OF TESTS	MULTIPLIER FOR STANDARD DEVIATION
15	1.16
20	1.08
25	1.03
30 or more	1.00

SPECIAL PROVISIONS

902 - PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS

Interpolate for intermediate number of tests.

(b) When past performance records are not available, the required average strength shall meet to the following:

Specified compressive strength, f_c' , psi	Required average compressive strength, f_{cr}' , psi
$f_c' < 3000$	$f_{cr}' = f_c' + 1000$
$3000 \leq f_c' \leq 5000$	$f_{cr}' = f_c' + 1200$
$f_c' > 5000$	$f_{cr}' = 1.10 f_c' + 700$

902.10.07 Standard of Control. The average of all sets of three consecutive strength tests shall equal or exceed the critical value as specified in 902.10.03 which shall be computed using the following formula:

$$\text{Critical Value} = f_c' + (1.14 \times S) - 500$$

Failure to conform to this criterion shall be cause for immediate investigation and remedial action up to and including suspension of production. A design standard deviation equal to 15 percent of the specified strength shall be used for calculation until a

minimum of 15 test results are obtained. The actual average strength and standard deviation shall be computed upon the availability of 28 day strength data comprising a minimum of 15 tests. Should this determination indicate an excessive margin of safety, the concrete mix may be modified to produce lower average strength as approved by the Engineer. If these calculations indicate a coefficient of variation greater than 15, the quality of the concrete and testing will be evaluated.

902.10.08 Testing. Sampling per R 60. Testing as follows:

TEST	METHOD	MINIMUM TEST FREQUENCY	RESPONSIBILITY
Temperature (e)	T 309	1 per 50 yd ³ (or fraction thereof)	Project Engineer
Slump (a)(e)	T 119	1 per 50 yd ³ (or fraction thereof)	Project Engineer
Air Content (a)(e)	T 152 T 196	1 per 50 yd ³ (or fraction thereof)	Project Engineer
Compression (b)(c)(d)	T 23	1 per 50 yd ³ (or fraction thereof)	Project Engineer
Compression	T 23	3 per Day	Project Engineer

(b)(c)(d)			
Mix No. 7 Only			

(a) A second test will be made when the first slump or air content test fails. Acceptance or rejection will be based on the results of the second test.

(b) Compressive strength tests are defined as the average of two companion cylinders.

(c) The Contractor shall be responsible for the making of all early break cylinders and furnishing the molds, stripping, curing/delivery of all cylinders, including 28 day cylinders, to the testing laboratory.

(d) The Project Engineer will be responsible for making, numbering and signing the 28 day cylinders.

(e) When constructing plain and reinforced concrete pavements, the testing frequency for slump, air content, and temperature shall be 1 per 100 yd3 or fraction thereof.

902.10.09 Acceptance. Concrete will be acceptable if both of the following requirements are met:

(a) The average of all sets of three consecutive strength tests equal or exceed the specified design strength.

(b) No individual strength test (average of two companion cylinders) falls below the specified design strength by more than 500 psi.

902.10.10 Price Adjustment. A price adjustment will be based on the Contract unit price per cubic yard of concrete. If the unit is a lump sum item, the price per cubic yard for the concrete will be determined by dividing the cubic yards into the Contract lump sum price.

(a) **Test Results More Than 500 psi Below the Specified Design Strength.** Failing strength tests will be considered individually with a price adjustment being applied on the percentage basis as shown below.

(Price per yd3) X (quantity of yd3 represented by the failing concrete strength) X (percent of failure).

Example:

$$\$400.00 \text{ per yd3} \times 50 \text{ yd3} \times [1 - (3600 / 4500 \text{ psi})] = \$4000.00$$

No payment will be allowed when the test results fall below 50 percent of the specified design strength for structural concrete or 40 percent for incidental concrete.

The Engineer will determine when the strength of the concrete represented by the failing tests is sufficient to remain in place or whether it must be removed and replaced with Specification concrete.

(b) **Test Results 500 psi or Less than the Specified Design Strength.** Strength failures 500 psi or less than the specified design strength will be averaged with the next two consecutive tests. If those two tests include a failure greater than 500 psi, those tests will be evaluated as in 902.10.10(a) and replaced with the next consecutive test. If the resulting average falls below the specified design strength, a price adjustment will be applied as specified in the table below. Any failure will only be included in one grouping.

SPECIAL PROVISIONS

902 - PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS

STRENGTH BELOW THE SPECIFIED (avg of 3 tests) DESIGN LEVEL, psi	ADJUSTMENT FACTOR
MIX NO. 1 THRU MIX NO. 12 EXCLUDING MIX NO. 9	
1 – 100	0.005
101 – 200	0.01
201 – 300	0.02
301 – 400	0.04
401 – 500	0.08

Adjustment price equals (price per yd³) X (quantity of yd³ represented by the failing cylinders) X (the adjustment factor).

Example:

$$\$400.00 \text{ per yd}^3 \times 50 \text{ yd}^3 \times 0.01 = \$200.00$$

902.11 MORTAR FOR GROUT

Mortar used for grouting anchor bolts, pipe, handrail posts, and miscellaneous items shall be composed in accordance with one of the following:

- (a) One part Portland cement or blended hydraulic cement and one part mortar sand by dry loose volume.
- (b) Prepared bag mixes consisting of Portland cement or blended hydraulic cement and mortar sand. The prepared mixes shall produce a mortar meeting the strength requirements specified in the Contract Documents.
- (c) Use nonshrink grout when specified. The grout shall have a minimum compressive strength of 5000 psi in seven days when tested as specified per T 106, except that the cube molds shall remain intact with a top firmly attached throughout the curing period. The nonshrink grout shall have a minimum expansion of 0.0 percent after seven days when tested as specified per T 160.
- (d) Epoxy grout shall consist of sand and epoxy mixed by volume in per the manufacturer's recommendations. The grout shall be capable of developing a minimum compressive strength of 6500 psi in 72 hours when tested per MSMT 501. Sand for epoxy grout as specified in 901.01.
- (e) An epoxy or polyester anchoring system may be used when approved by the Engineer in accordance with the manufacturer's recommendations. Strength values shall be as specified in the Contract Documents.

902.12 LINSEED OIL.

Shall consist of a 50-50 mixture (by volume) of boiled linseed oil meeting Federal Specification TT-L-190 and kerosene per D 3699.

902.13 LATEX MODIFIED CONCRETE.

Portland cement concrete containing prequalified Laboratory approved styrene butadiene latex emulsion is defined as Latex Modified Concrete (LMC).

SPECIAL PROVISIONS

902 - PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS

Latex emulsion shall have a minimum of 90 percent of the nonvolatiles as styrene butadiene polymers. The latex emulsion as specified in Table 902.13 A. The material shall be stored in suitable containers and be protected from freezing and exposure to temperatures in excess of 85 F.

LMC shall be proportioned using volumetric mixing and designed as follows:

LATEX MODIFIED CONCRETE	
MATERIAL	SPECIFICATION LIMITS
Portland Cement, CWT/yd ³ , min	6.6
Latex Emulsion/Cement Ratio	0.31 – 0.34
Water/Cement Ratio, max	0.22
Entrained Air, %	6.0 ± 3
Slump, in.	5 ± 1

The physical properties of LMC shall conform to Table 902.13 B. The Contractor shall furnish the necessary 3 X 6 in. molds per M 205 to be used for the fabrication of compressive strength cylinders.

Control and Acceptance Sampling.

(a) Submit a two qt minimum sample, of the styrene butadiene latex emulsion to the AME daily for each lot of material used in a day's production.

(b) A batch for LMC is defined as the capacity of the equipment being used on the project. Slump and air samples will be taken and tested before the placement of a batch is permitted. The slump shall be measured four to five minutes after discharge from the mixer. The test material shall be deposited off the deck and not be disturbed during this waiting period. One additional sample for slump and air will be taken randomly during the placement of each batch. For seven day compressive strength, two tests each per batch are required. A test is defined as consisting of two companion cylinders. The samples for these tests will be taken at random while the placement is in progress.

TABLE 902.13 A

REQUIREMENTS FOR CHEMICAL PROPERTIES OF LATEX EMULSION MATERIALS				
PROPERTY	SPECIFICATIONS		QUALITY ASSURANCE TESTS	
	LIMITS	TOLERANCE	PREQUALIFICATION TESTS	CONTROL AND ACCEPTANCE
Color	White	—	X	X
pH	9.0 – 11.0	—	X	X
Weight, lb/gal	8.40 –	—	X	X

	8.47			
Solids Content, %	46 – 53	—	X	X
*Butadiene Content, % of polymer	30 – 40	—	—	—
Viscosity @ 10 rpm-cps	Match Original	± 20	X	X
*Surface Tension, dynes/cm max	50	—	—	—
*Mean Particle Size, polymer – Å	1400 – 2500	—	—	—
Coagulum, % max	0.10	—	X	X
*Freeze-Thaw Stability, coagulum, % max	0.10	—	X	X
Infrared Spectra of Latex Film	Match Original	—	X	X
Infrared of Alcohol, Soluble Portion of Latex	Match Original	—	X	X
Shelf Life, min	1 yr	—	X	—

Note 1: Quality assurance tests shall be conducted as specified in MSMT 612 except those denoted by an * shall be conducted as specified in FHWA RD – 78-35.

Note 2: The original or prequalification sample shall be accompanied by the producer's certification on all of the tests and properties noted above and as specified in TC-1.02. The certification shall contain actual test values of the product and the infrared spectrograph.

Note 3: A separate certification is required for each lot of material. The certification shall note the date of manufacture, lot size, and whether or not the material is identical to the formulation of the original sample.

TABLE 902.13 B

LATEX MODIFIED CONCRETE PHYSICAL PROPERTIES			
TEST PROPERTY	TEST VALUES	QUALITY ASSURANCE TESTS	
		PREQUALIFIED TESTS	CONTROL AND ACCEPTANCE
7 Day Compressive Strength, psi min	3000	X	X
28 Day Compressive Strength, psi min	3500	X	—
42 Day Compressive Strength, psi min	3500	X	—
7 Day Flexural Strength, psi min	550	X	—

28 Day Flexural Strength, psi min	650	X	—
42 Day Shear Bond Strength, psi min	2000	X	—
Durability Factor, 300 cycles, % min	85	X	—
Chloride Permeability, Ppm max	510	X	—
Scaling Resistance, 50 cycles, max	3	X	—

Note 1: Quality assurance tests shall be conducted as specified in MSMT 721.

Note 2: Seven Day Compressive Strength Test will be used for Control & Acceptance of the material. The minimum specified design strength is 3000 psi at seven days. The mix design approval and acceptance will be based on a coefficient of variation of 10 percent with a probability of 1 in 10 tests falling below the specified strength. Only test values 80% or greater than the specified strength will be accepted.

902.14 RAPID HARDENING CEMENTITIOUS MATERIALS FOR CONCRETE PAVEMENT REPAIRS.

Materials shall be a dry, packaged cementitious mortar having less than 5 percent by weight of aggregate retained on the 3/8 in. sieve and meet the following requirements:

Classification.

- Class I — For use at ambient temperatures below 50 F.
- Class II — For use at ambient temperatures of 50 to 90 F.
- Class III — For use at ambient temperatures above 90 F.

Chemical Requirements. C 928 except that no organic compounds such as epoxy resins or polyesters as the principal binder.

Physical Requirements. Meet the following when tested per MSMT 725:

COMPRESSIVE STRENGTH, psi min				
CLASSIFICATION	< 2 hr	2-6 hr	6 hr	28 days
Type I — Slow	—	—	2000	4500
Type II — Rapid	—	2000	—	4500
Type III — Very Rapid	2500	—	—	4500

TEST RESULTS	
TEST PROPERTY	LIMITS
Bond Strength, 7 days, psi min	2000
Length Change, increase after 28 days in water, based on length at 3 hr, % max	+ 0.15
Length Change, decrease after 28 days, % max	- 0.15
Freeze Thaw, loss after 25 cycles in 10% CaCl ₂ solution, % max	8

Initial Setting Time, minutes min	10
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Marking. All packages delivered to the project shall be marked with the following information:

- (a) Date material was packaged.
- (b) Approximate setting time.
- (c) Recommended dosage of water or liquid component.
- (d) Mixing instructions.
- (e) Class or temperature range.

Certification. The manufacturer shall furnish certification as specified in TC-1.02 showing the actual test results for each class and type of material submitted to the Laboratory.

902.15 SYNTHETIC FIBERS.

When synthetic fibers are specified in the Contract Documents, the fibers shall be 1/2 to 1-1/2 in. long and conform to C 1116, Type III. The manufacturer shall furnish certification as specified in TC-1.02. The quantity of fibers used and their point of introduction into the mix shall conform to the fiber manufacturer's recommendations.

902.16 CONTROLLED LOW STRENGTH MATERIAL.

902.16.01 Usage. Controlled Low Strength Material (CLSM) shall consist of the types described below:

TYPE A – Used where future excavation of the CLSM may be necessary (e.g. utility trenches, pipe trenches, bridge abutments, and around box culverts).

TYPE B – Used where future excavation of the CLSM is not anticipated (e.g. filling abandoned conduits, pipes, tunnels, mines, etc. and replacing unsuitable soils below roadway and structure foundations where extra strength is required).

902.16.02 Materials.

Coarse Aggregate	901.01*
Fine Aggregate	901.01
Hydraulic and Blended Hydraulic Cement	902.03 and 902.04
Concrete Admixtures	902.06
Fly Ash	902.06.04
Water	921.01

*maximum size of 3/4 in.

Produce CLSM in conformance with the applicable portions of Section 915 and the following:

902.16.03 Proportioning. Submit the sources and proportions of materials, and certified test data as specified in TC-1.03 for each CLSM mixture prior to construction. CLSM shall be proportioned, on the basis of field experience and/or laboratory trial mixtures, to produce a flowable and self-compacting mixture meeting the requirements of 902.16.04.

SPECIAL PROVISIONS

902 - PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS

CLSM shall be proportioned by weight; with the exception of water and chemical admixtures. Water and chemical admixtures may be proportioned by volume or weight.

902.16.04 CLSM Mixtures. Proportion CLSM with sufficient amounts of Portland cement, fly ash, or slag cement; individually or in combination, to produce a cohesive, non-segregating mixture that conforms to the physical properties in the following table:

CLSM Mix	28 Day Compressive Strength, (psi) D4832	Flow Consistency, (in.) D6103
Type A	50 – 200	8 min.
Type B	500 min.	8 min.

902.17 SELF CONSOLIDATING CONCRETE (SCC).

The SCC mixture must meet the following requirements.

SELF-CONSOLIDATING CONCRETE PROPERTIES		
	PRESTRESS BEAMS	PRECAST
Compressive Strength C1758/T 23	As per Contract Documents	As per Contract Documents
Min Cement Factor lbs./yd ³	700	615
W/C ratio	.32 - .45	.32 - .50
Total Air Content	5.5 +/- 1.5	6.5 +/- 1.5
Concrete Temperature F	65 +/- 15	70 +/- 20
Slump Flow c 1611	22 – 28 in.	22 – 28 in.
Visual Stability Index (VSI)	0 to 1	0 to 1
T20 (T50)	2 – 10 sec.	2 – 10 sec.
J-Ring C 1621	+/- 2 in. design slump flow	+/- 2 in. design slump flow
Column Segregatuib C 1610	12% maximum	-
Rapid Chloride Permeability	Coulombs maximum 2500	-
Freeze Thaw C 666	Maximum durability factor 80	-
Shrinkage at 28 Days C 157	400	-

SPECIAL PROVISIONS

902 - PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS

Note 1: Column Segregation (C 1610), Rapid Chloride Permeability (T 277), Freeze Thaw (C 666), and Shrinkage at 28 Days (C 157) are required only at time of trial batch for mix approval or any time there is a change in materials.

Note 2: Report water/cement ratio, aggregate moistures and cement temperature on each batch ticket.

Note 3: Mold a minimum of one set of Compressive Strength Test Cylinders for each trial batch and for each day's production or each 50 yd³ lot. Take the temperature of the mix once for each day's production or each 50 yd³ lot. Slump Flow, T 20 and VSI testing shall be performed at trial batch and at the beginning of each day's production or each 50 yd³ lot. Conduct J-Ring testing during each trial batch or on the next batch following a failure of either the spread or VSI test.

Note 4: For ASR Mitigation see 902.10.03 - Preventive Measures for Aggregate AlkaliSilica Reactivity

Note 5: High Range Water Reducing admixtures must be Type F or Type G and meet M 194.

Note 6: Viscosity modifying admixtures may be used only with prior approval by the Administration.

902.18 CONCRETE STAIN

The material shall conform to the following requirements:

TEST PROPERTY	TEST METHOD	SPECIFICATION LIMITS
Accelerated Weathering	G7	Passing results
Mildew Resistance/fungus growth	Fed. Test Method STD. 141, Method 6271	Resistance
Weatherometer, 1000 Hours minimum	ASTM G26	No crazing, cracking, chipping or flaking. Light chalk and color change. No other deterioration
Total Non Volatile Vehicle, %	D2369	Mfr. Stated Value +/- 2%
Viscosity, Krebs Units, 77 deg. F	D562	Mfr. Stated Value +/- 10 KU
Drying time (to touch)	D1640	1 hour minimum
Recoat dry time	D1640	Able to recoat within 24 hours
Infrared Spectogram	D2621	n/a
Color	AMS-STD-595A	As specified in contract documents
Weight.gallon, lb. gal	D1475	Mfr. State Value +/- 0.3 lb./gal
Shelf life		6 months minimum

Material more than six months old shall be retested. Material must be VOC compliant for Maryland.

920 LANDSCAPING MATERIALS

920.01 SOILS

Topsoil, Subsoil, and Bioretention Soil Mix shall conform to requirements of this section. Soils shall be sampled, tested and approved by the Soils and Aggregates Technology Division of the Office of Materials Technology, or by other approved tests or laboratories. Soils shall be amended as specified by the Nutrient Management Plan (NMP).

920.01.01 Existing Topsoil and Salvaged Topsoil.

(a) Existing Topsoil. Existing topsoil is the surface material of existing landscaped areas on SHA property that will be used for seeding or other landscape construction without excavation or significant grading.

(b) Salvaged Topsoil. Salvaged topsoil is the surface material of existing landscaped areas on SHA property that will be used for seeding or other landscape construction after being excavated, stockpiled, and placed in designated areas.

(c) Composition. Existing topsoil and salvaged topsoil shall conform to the following:

COMPOSITION - EXISTING TOPSOIL & SALVAGED TOPSOIL						
TEST PROPERTY	TEST ¹ METHOD	TEST VALUE AND AMENDMENT				
Prohibited Weeds	--	Free of live stems or roots of Shattercane, Johnsongrass, Canada Thistle, Bull Thistle, Plumeless Thistle, Musk Thistle, Common Reed and Japanese Knotweed when inspected before transportation.				
Debris	--	1.0 % or less by weight of cement, concrete, asphalt, crushed gravel or construction debris when inspected.				
Grading Analysis	R-58	Sieve Size		Passing by Weight Minimum %		
		2 in.		100		
		No. 4		90		
		No. 10		80		
Textural Analysis	T-88	Particle Size		% Passing by Weight		
		mm	Minimum	Maximum		
		Sand	2.0 – 0.050	15	77	
		Silt	0.050 – 0.002	Combined Silt and Clay		80
Clay	Less than 0.002	23	30			

Soil pH	ASTM D 4972	pH of 4.8 to 7.6. Apply limestone to Existing Topsoil and Salvaged Topsoil with pH 4.8 to 6.1 per NMP. Apply sulfur to Existing Topsoil and Salvaged Topsoil with pH 7.1 to 7.6 per NMP.
Organic Matter	T-267	1.0 to 8.0 % OM by weight. Apply compost to Existing Topsoil and Salvaged Topsoil with 1.0 to 3.7% OM per NMP.
Nutrient Content	--	Administration will assess. Apply fertilizer per NMP for nitrogen requirement and optimum fertility index values (FIV) for phosphorus and potassium.
Soluble Salts	EC 1:2 (V:V)	800 ppm (1.25 mm hos/cm) or less. Apply gypsum to Existing Topsoil and Salvaged Topsoil with 500 to 800 ppm (0.78 to 1.25 mhos/cm) per NMP.
Harmful Materials	--	Topsoil shall not contain substances in concentrations that are harmful to human health, water quality, or plant growth. Industrial waste such as ash, slag, raw sludge, dredge spoil, or similar materials shall not be soil components.
<p>Note:</p> <p>¹ Materials Standards and Materials Testing 356 (MSMT 356) has been superseded by OMT Landscaping Soils Eligibility List. Test methods not defined herein shall be as per visual inspection or methods defined by the Landscape Operations Division.</p>		

920.01.02 Furnished Topsoil. A natural, friable, surface soil that is uniform in color and texture, and not derived from the project. Producers shall be included in the Qualified Products List maintained by the Administration for Furnished Topsoil.

(a) Composition. Furnished topsoil shall conform to the following.

COMPOSITION – FURNISHED TOPSOIL					
TEST PROPERTY	TEST ¹ METHOD	TEST VALUE AND AMENDMENT			
Prohibited Weeds	--	Free of live stems and roots of species in 920.01.01 as well as live stems and roots of Bermudagrass, Quackgrass, and Yellow Nutsedge.			
Debris	--	920.01.01.			
Grading Analysis	R-58	920.01.01.			
Textural	T-88	Particle		% Passing by Weight	
		Size	mm	Minimum	Maximum
		Sand	2.0 – 0.050	20	75

Analysis		Silt	0.050 – 0.002	Combined Silt and Clay	75
		Clay	Less than 0.002		25
Soil pH	ASTM D 4972	pH 6.1 to pH 7.2			
Organic Matter	T-267	4.0 to 8.0% OM by weight			
Nutrient Content	--	920.01.01			
Soluble Salts	EC 1:2 (V:V)	500 ppm (0.78 mm hos/cm) or less.			
Harmful Materials	--	920.01.01			
Note:					
¹ Materials Standards and Materials Testing 356 (MSMT 356) has been superseded by OMT Landscaping Soils Eligibility List. Test methods not defined herein shall be as per visual inspection or methods defined by the Landscape Operations Division.					

(b) Storage. Furnished topsoil shall be a homogenous mixture stored at a specific, identifiable site in a stockpile constructed as specified in 308.03.20 and 701.03.03(c).

(c) Approval. Tests shall be completed, and approval will be granted before furnished topsoil is delivered. Ensure that Form 27B has been completed and that a source of supply letter for the furnished topsoil soil has been submitted and approved.

(d) Delivery. Certification shall be submitted that the furnished topsoil is delivered from an approved stockpile. A bill of lading or other acceptable documentation that identifies the approved source of supply shall be submitted when furnished topsoil is delivered.

920.01.03 Salvaged Subsoil. Salvaged subsoil is the subsurface material of existing areas that will be used for landscape construction after being excavated, stockpiled, and placed in designated areas.

(a) Composition. Salvaged subsoil shall conform to the following:

COMPOSITION – SALVAGED SUBSOIL		
TEST PROPERTY	TEST ¹ METHOD	TEST VALUE AND AMENDMENT
Prohibited Weeds	--	920.01.01

Debris	--	5.0 % or less by weight of any combination of cement, concrete, asphalt, or other construction debris when inspected.			
Grading Analysis	R-58	Sieve Size		Passing by Weight Minimum %	
		2 in.		90	
		No. 4		85	
		No. 10		60	
Textural Analysis	T-88	Particle		% Passing by Weight	
		Size	mm	Minimum	Maximum
		Sand	2.0 – 0.050	10	85
		Silt	0.050 – 0.002	10	85
		Clay	Less than 0.002	5	40
Soil pH	ASTM D 4972	pH of 4.5 to 7.8.			
Organic Matter	T-267	0.1 to 5.0 % by weight.			
Soluble Salts	EC 1:2 (V:V)	1000 ppm (1.56 mm hos/cm) or less.			
Harmful Materials	--	920.01.01			
<p>Note:</p> <p>¹ Materials Standards and Materials Testing 356 (MSMT 356) has been superseded by OMT Landscaping Soils Eligibility List. Test methods not defined herein shall be as per visual inspection or methods defined by the Landscape Operations Division.</p>					

920.01.04 Furnished Subsoil. A natural subsurface soil that is uniform in texture and not derived from the project. Furnished subsoil shall conform to the following:

(a) **Composition.** Furnished subsoil shall conform to the following:

COMPOSITION - FURNISHED SUBSOIL		
TEST PROPERTY	TEST ¹ METHOD	TEST VALUE AND AMENDMENT
Prohibited Weeds	--	920.01.01
Debris	--	920.01.03
Grading Analysis	R-58	920.01.03
Textural Analysis	T 88	920.01.03
Soil pH	ASTM D 4972	920.01.03
Organic Matter	T-267	920.01.03
Soluble Salts	EC 1:2 (V:V)	800 ppm (1.25 mm hos/cm) or less
Harmful Materials	--	920.01.01
Note: ¹ Materials Standards and Materials Testing 356 (MSMT 356) has been superseded by OMT Landscaping Soils Eligibility List. Test methods not defined herein shall be as per visual inspection or methods defined by the Landscape Operations Division.		

(b) Storage. Refer to 920.01.02(b).

(c) Approval. Refer to 920.01.02(c).

(d) Certification and Delivery. Refer to 920.01.02(d).

920.01.05 Bioretention Soil Mix (BSM). BSM shall be a homogenous mixture as follows:

(a) Components. BSM shall be composed of Sand, Furnished Topsoil, and Hardwood Mulch. BSM may include approved soil amendments. No other components shall be used.

(1) Sand. Sand shall be washed silica sand that conforms to ASTM C-33 or ASTM M-6 with less than 1 percent by weight of any combination of diabase, greystone, calcareous, or dolomitic sand.

(2) Furnished Topsoil. Refer to 920.01.02.

(3) Hardwood Mulch. Hardwood Mulch shall be the bark and wood of hardwood trees that is milled and screened to a uniform particle size of 2 in. or less. Hardwood Mulch

shall be aged for 6 months or longer, with negligible quantity of sawdust and no foreign materials.

(4) Amendments. Refer to 920.02. Limestone, Sulfur, and Iron Sulfate may be used to adjust pH of BSM. No other amendments shall be used.

(b) Composition. BSM shall conform to the following:

COMPOSITION- BIORETENTION SOIL MIX (BSM)					
TEST PROPERTY	TEST ¹ METHOD	TEST VALUE			
Weeds	---	Free of seed and viable plant parts of species in 920.06.02(a)(b)(c) when inspected.			
Debris	---	No observable content of cement, concrete, asphalt, crushed gravel or construction debris.			
Hardwood Mulch	--	20% of the loose volume of BSM when inspected.			
Textural Analysis	T-88	Particle		% Passing by Weight	
		Size	mm	Minimum	Maximum
		Sand	2.0 – 0.050	79	94
		Silt	0.050 – 0.002	4	20
Clay	Less than 0.002	1	10		
Soil pH	ASTM D4972	pH of 5.7 to 7.4.			
Organic Matter	T-267	Minimum 1.5 % by weight.			
Soluble Salts	EC 1:2 (V:V)	500 ppm (0.78 mm hos/cm) or less			
Harmful Materials	---	920.01.01(a).			
Note: ¹ Materials Standards and Materials Testing 356 (MSMT 356) has been superseded by OMT Landscaping Soils Eligibility List. Test methods not defined herein shall be as per visual inspection or methods defined by the Landscape Operations Division.					

(c) Storage. Refer to 920.01.02(b).

(d) Approval. Refer to 920.01.02(c).

(e) **Certification and Delivery.** Refer to 920.01.02(d).

920.02 SOIL AMENDMENTS

920.02.01 Limestone. Limestone shall be an agricultural product manufactured and labeled for sale in Maryland for increasing soil pH. Limestone shall contain at least 85 percent calcium and magnesium carbonates. Dolomitic limestone shall contain at least 10 percent magnesium as magnesium oxide and 85 percent calcium and magnesium carbonates.

Limestone shall be supplied as a fine powder, or as pellets produced from fine powder, that conforms to the following:

LIMESTONE GRADING ANALYSIS	
SIEVE	PASSING BY WEIGHT
Size Number	Minimum %
10	100
20	98
100	50

920.02.02 Sulfur. Sulfur shall be an agricultural product manufactured and labeled for sale in Maryland for reducing soil pH. Sulfur labeled as a fertilizer may also be used to supply sulfur as a plant nutrient. Sulfur shall be supplied as a fine powder or pelletized powder with a minimum purity of 90 percent elemental sulfur.

920.02.03 Iron Sulfate. Iron sulfate shall be an agricultural product manufactured and labeled for sale in Maryland for reducing soil pH. Iron sulfate labeled as a fertilizer may also be used to supply sulfur or iron as a plant nutrient. Iron sulfate shall be supplied as a fine powder or pelletized powder with a minimum purity of 15 percent water soluble iron derived from ferrous sulfate.

920.02.04 Gypsum. Gypsum shall be an agricultural product manufactured and labeled for sale in Maryland as an aid for improving soil structure and removing soil soluble salts, or as a fertilizer to supply calcium and sulfate. Gypsum shall be supplied as a fine powder or pelletized powder with a minimum purity of 68 percent calcium sulfate dihydrate.

920.02.05 Compost. Compost products shall be Type A, Type B, or Type C in conformance with this specification. All compost types shall be biologically mature and no longer able to reheat to thermophilic temperatures per DeWar Self Heating > 5 stable; shall have a moisture content of 30 to 55 percent; shall have a weight of 1,400 lb per cubic yard or less when delivered.

(a) Type A Compost. Type A Compost shall be composed primarily of biosolids, manure, and similar compost source materials with low Carbon to Nitrogen ratios. Type A Compost shall be used as a soil amendment when specified in a Nutrient Management Plan (NMP). The typical fertilizer analysis of Type A Compost shall be provided on bagged products offered for sale. The typical fertilizer analysis of bulk Type A Compost products offered for sale by CY or Ton shall be provided to the Administration as a requirement of prequalification, or the analysis may accompany the delivery of bulk compost products.

Type A Compost shall conform to the table below:

COMPOST PHYSICAL PROPERTIES PARTICLE SIZE AND GRADING ANALYSIS		
Type A and Type B Compost		
Type A and Type B Compost shall have pH of 6.0 to 7.5; shall have soluble salt concentration less than 10.0 mm hos/cm; shall have a moisture content of 30 to 55 percent; and shall be screened as follows.		
SIEVE		PASSING BY VOLUME
SIZE	mm	
0.5 in.	12.5	100% minimum
No. 4	4.75	90% maximum
No. 40	0.425	25% maximum
No. 200	0.075	2.2% maximum

(b) Type B Compost. Type B Compost shall be composed primarily of tree leaves, lawn clippings, and similar compost source materials with high Carbon to Nitrogen ratios. Type B Compost shall be used as a soil amendment when specified in a Nutrient Management Plan (NMP).

The typical fertilizer analysis of Type B Compost shall be provided on bagged products offered for sale. The typical fertilizer analysis of bulk Type B Compost products offered for sale by CY or Ton shall be provided to the Administration as a requirement of prequalification, or the analysis may accompany the delivery of bulk compost products. Type B Compost shall conform to the table in 920.02.05(a) above.

(c) Type C Compost. Type C Compost shall be composed primarily of chipped, ground or granulated wood, bark, and similar compost source materials with very high Carbon to Nitrogen ratios. Type C Compost shall be used to construct compost socks, compost logs, compost berms and other manufactured products for sediment and erosion control.

Type C Compost shall conform to the table, below:

COMPOST PHYSICAL PROPERTIES PARTICLE SIZE AND GRADING ANALYSIS	
Type C Compost	
Type C Compost shall have pH of 5.0 to 8.0; shall have soluble salt concentration less than 4.0 mm hos/cm; shall have a moisture content of 30 to 55 percent; and shall be screened as follows.	
SIEVE	PASSING BY VOLUME
6 in.	100% minimum
¾ in.	75% maximum

920.02.06 Peat Moss. A milled sphagnum peat moss with negligible woody substances.

920.02.07 Aged Pine Bark Fines. Derived from the bark of pine trees that have been composted and milled to a fineness approved for use by the Landscape Operations Division.

920.02.08 Water Absorbent Gel. A cross linked polyacrylamide agricultural product used to maintain moisture around bare root plants and as a soil conditioner. Formulas used shall conform to the manufacturer's recommendations.

920.03 FERTILIZERS

920.03.01 Composition. Standard Fertilizers and Special Fertilizers shall be commercial grade products labeled for sale and use as agricultural fertilizer and shall conform to Federal and Maryland State regulations and the Standards of the Association of Official Analytical Chemists. All analyses are subject to approval by the Landscape Operations Division prior to application.

(a) Standard Fertilizer. Standard fertilizers shall be produced of ingredients, analysis, and composition as follows:

(1) Ingredients. Standard fertilizers shall include one or more of the following:

FERTILIZER INGREDIENTS			
Abbreviation and Chemical Name of Ingredient			
	ammonium nitrate		polymer coated urea
	ammonium sulfate		potassium chloride
	biosolids		potassium nitrate
	calcium nitrate	SOP	potassium sulfate
DAP	diammonium phosphate	SCU	sulfur coated urea
	isobutylidene diurea		triple super phosphate
	methylene urea		urea
MAP	monoammonium phosphate	UF	ureaform

(2) Analysis and Composition. Standard fertilizers shall contain nitrogen (N), phosphorus (P), potassium (K), and sulfate (SO4) derived from ingredients above.

STANDARD FERTILIZER ANALYSIS AND COMPOSITION	
FERTILIZER	USE
0-0-50 SOP ^a	Source of potassium (K) and sulfate (SO4) fertilizer. Used alone or in fertilizer mixtures for turfgrass and other groundcover establishment.

11-52-0 MAP ^a	Source of nitrogen (N) and phosphorus (P) fertilizer. Used alone or in fertilizer mixtures for turfgrass and other groundcover establishment.
20-16-12 (83% UF with MAP & SOP) ^b	Source of slow-release nitrogen (N), phosphorus (P), potassium (K) and sulfate (SO ₄). Fertilizer mixture used for turfgrass and other groundcover establishment.
38-0-0 UF ^a	Source of slow-release nitrogen (N) fertilizer. Used in fertilizer mixtures for turfgrass and other groundcover establishment.
37-0-0 SCU	Source of slow-release nitrogen (N) and sulfate (SO ₄). Fertilizer used for Temporary Seed and Refertilizing for groundcover establishment.
Note:	
^a Purity shall be at least 98% UF, MAP, or SOP as indicated. ^b Mixture of UF, MAP, and SOP with no more than 2% of any combination of other materials.	

(b) Special Fertilizers. Special fertilizers shall be of ingredients, analysis, and composition as follows:

(1) Ingredients. Special fertilizers shall provide label analysis guaranteeing nitrogen, phosphorus, and potassium from ingredients in 920.03.01(a) and also include plant micronutrients, coatings, or materials to augment their performance.

(2) Analysis and Composition. As follows:

STANDARD FERTILIZER ANALYSIS AND COMPOSITION	
FERTILIZER^a	USE
14-14-14 Polymer-coated fertilizer with minor nutrients	Slow-release fertilizer used to install trees, shrubs, perennials and other plant materials.
14-14-14 Granular fertilizer with minor nutrients	Slow-release fertilizer used to install trees, shrubs, perennials and other plant materials.
20-10-5 21 to 23 grams per fertilizer tablet. 13% water insoluble and 7% water soluble N, with minor nutrients	Slow release fertilizer tablet used to install trees, shrubs, perennials and other plant materials.
20-20-20 Water soluble powder fertilizer with minor nutrients	Fertilizer solution used to refertilize trees, shrubs, perennials and other plant materials.
Note:	
^a Shall be a mixture of any ingredients listed in 920.03.01(a)(1) and (b)(1) with no more than 5% by weight of any combination of other materials.	

920.04 MULCHES

Materials used as mulch shall have a uniform texture and be free from foreign materials or concentrations of metals, chemicals, or other substances that are harmful to human health, water quality, or plant growth.

920.04.01 Straw Mulch. Shall consist of thoroughly threshed stems and leaves of barley, oats, rye, and wheat. Straw mulch shall be in an air dry condition suitable for application with a mulch blower or other equipment. Straw mulch shall be visually inspected to ensure it is free of objectionable quantities of mold, foreign substances, and weed seeds.

920.04.02 Wood Cellulose Fiber Mulch. A uniformly processed wood product that is able to form a homogenous slurry with seed, fertilizer, and other materials under agitation with water.

The fiber shall perform satisfactorily in hydraulic seeding equipment without clogging or damaging the system. The slurry shall contain a green dye to provide easy visual inspection for uniformity of application.

The manufacturer shall furnish certification as specified in TC-1.03 of the Technical Association of Pulp and Paper Industry (TAPPI) in conformance with the following:

WOOD CELLULOSE FIBER	
TEST PROPERTY	TEST VALUE
Particle Length	Approx. 0.5 in.
Particle Thickness	Approx. 0.063 in.
Net Dry Weight Content	Minimum as stated on bag
pH, TAPPI Standard T 509	4.0 – 8.5
Ash Content, TAPPI Standard T 413	7.0% maximum
Water Holding Capacity	90% minimum

The material shall be delivered in packages of uniform weight, which shall not exceed 75 lb net weight and shall bear the name of the manufacturer, the net weight, and a supplemental statement of the net weight content.

920.04.03 Shredded Hardwood Bark (SHB) Mulch. Shall consist of natural bark derived from hardwood trees that has been milled and screened to a maximum 4 in. particle size. SHB mulch shall contain negligible quantities of sawdust or other non-bark woody materials.

920.04.04 Composted Wood Chip (CWC) Mulch. Shall consist of natural wood mechanically reduced to a maximum size of 2 in. x 2 in. x 0.5 in. by a chipping machine before being composted. Grading analysis of CWC mulch shall be as follows:

COMPOSTED WOOD CHIP MULCH	
SIEVE SIZE	PASSING BY VOLUME
in.	Maximum %
2	100

1	30
0.5	10

920.05 SOIL STABILIZATION MATTING

920.05.01 Soil Stabilization Matting (SSM). SSM products shall be selected from the Office of Materials Technology’s Qualified Products List (QPL) for Soil Stabilization Matting Manufacturers.

SSM shall consist of machine-produced matting of uniform thickness, weave, or distribution of fibers, supplied in rolls at least 40 in. wide. SSM shall be smolder resistant.

The chemical components shall be nonleaching, nontoxic to vegetation and germinating seed, and noninjurious to the skin.

(a) Type A. Degradable; excelsior or nonwoven coconut fibers with biodegradable netting on top and bottom; netting shall be cotton, cotton blend or coir. Type A soil stabilization matting products shall be listed in the current AASHTO National Transportation Product Evaluation Program (NTPEP) Report for Erosion Control Products. Large scale results shall be obtained by a Geosynthetic Institute Accredited or other approved laboratory for Criteria marked *.

COMPOSITION - TYPE A SSM		
CRITERIA	METHOD	MEASUREMENT
Thickness	D 6526	At least 0.25 in.
Weight	D 6475	At least 7.9 oz per yd ²
Tensile Strength – MD	D 6818	At least 6.25 lb per in.
Tensile Strength – TD	D 6818	At least 4.7 lb per in.
Light Penetration	D 6567	At least 5%
Slope Erosion – C Factor*	D 6459	No more than 0.2
Shear for 0.5 in Soil Loss*	D 6460	At least 1.75 lb per ft ²
Netting Opening	---	No more than 2.0 x 1.0 in
Thread	---	Biodegradable
Stitching and Spacing	---	No more than 4.0 in. apart

(b) Type B. Permanent; non-woven, nondegradable, UV stabilized, synthetic fibers; with non-degradable, UV stabilized, synthetic netting on top and bottom. Type B soil stabilization matting products shall be listed in the current AASHTO National Transportation Product Evaluation Program (NTPEP) Report for Erosion Control Products. Large scale results shall be obtained by a Geosynthetic Institute Accredited or other approved laboratory for Criteria marked *.

COMPOSITION - TYPE B SSM		
CRITERIA	METHOD	MEASUREMENT
Thickness	D 6525	At least 0.3 in.
Weight	D 6655	At least 10.0 oz per yd ²
Tensile Strength – MD	D 6818	At least 12.5 lb per in.
Tensile Strength – TD	D 6818	At least 12.5 lb per in.
Tensile Strength >500 hr. exp	D 4335	At least 80% original
Light Penetration	D 6567	At least 10%
Slope Erosion – C Factor*	D 6459	No more than 0.2
Shear for 0.5 in Soil Loss*	D 6460	At least 2.25 lb per ft ²
Netting Opening	---	No more than 1.0 x 0.75 in.
Thread	---	Biodegradable
Stitching and Spacing	---	No more than 4.0 in. apart

(c) **Type C.** Permanent; nondegradable, synthetic lattice; and easily filled with soil.

COMPOSITION - TYPE C SSM		
CRITERIA	METHOD	MEASUREMENT
Thickness	D 6525	At least 0.4 in.
Weight	D 6655	At least 7.0 oz per yd ²
Tensile Strength – MD	D 6818	At least 12.5 lb per in.
Tensile Strength – TD	D 6818	At least 9.5 lb per in.
Tensile Strength >500 hr. exp	D 4335	At least 80% original
Porosity or Open Area	---	At least 80%

(d) **Type D** Degradable; woven coir.

COMPOSITION - TYPE C SSM		
CRITERIA	METHOD	MEASUREMENT
Thickness	D 6525	At least 0.30 in.

Weight	D 6475	At least 19.0 oz per yd ²
Porosity or Open Area	---	At least 35%

(e) **Type E.** Degradable; excelsior, straw, or straw/coconut blend fibers; biodegradable netting on top and bottom; netting shall be cotton, cotton blend or coir. Type E soil stabilization matting products shall be listed in the current AASHTO National Transportation Product Evaluation Program (NTPEP) Report for Erosion Control Products. Large scale results shall be obtained by a Geosynthetic Institute Accredited or other approved laboratory for Criteria marked *.

COMPOSITION - TYPE E SSM		
CRITERIA	METHOD	MEASUREMENT
Thickness	D 6525	At least 0.25 in.
Weight	D 6475	Excelsior: 6.0 to 7.9 oz per yd ²
		Straw; Straw & Coconut: At least 6.0 oz per yd ²
Tensile Strength – MD	D 6818	At least 6.25 lb per in.
Tensile Strength – TD	D 6818	At least 2.5 lb per in.
Light Penetration	D 6567	At least 5%
Slope Erosion – C Factor*	D 6459	No more than 0.2
Shear for 0.5 in Soil Loss*	D 6460	At least 1.5 lb per ft ²
Netting Opening	---	Excelsior: 2.0 x 1.0 in. or less
		Straw; Straw & Coconut: 0.75 x 0.75 in. or less
Thread	---	Biodegradable
Stitching and Spacing	---	Excelsior: 4.0 in. apart or less
		Straw; Straw & Coconut: 2.0 in. apart or less

920.05.02 Fasteners for Soil Stabilization Matting and Turfgrass Sod. Fasteners shall be selected as specified in Section 709.03.06 and conform to the following:

(a) **Wood Peg.** Wood, biodegradable, untreated; single leg is driven into the soil so that wider top is flush with turfgrass sod and SSM.

6 Inch. Approx. 6 in. long, 3/8 in. thick; top 1 in. wide, tapered to base.

(b) **T-Head Pin.** Molded plastic; biodegradable. Single leg with barbs is driven into the soil so that molded T-Head top is flush with turfgrass sod and SSM.

6 Inch. Approx. 6 in. long, 3/8 in. thick; head 1 in. wide.

8 Inch. Approx. 8 in. long, 3/8 in. thick; head 1 in. wide.

(c) Circle-Top Pin. Steel wire; single leg is driven into the soil so that coil or loop top is flush with turfgrass sod and SSM.

6 Inch. 11 gauge; leg 6 in. long.

8 Inch. 11 gauge; leg 8 in. long.

(d) Round-Head Pin. Molded plastic; biodegradable. Single leg with barbs is driven into the soil so that molded disk top is flush with turfgrass sod and SSM.

6 Inch. Approx. 6 in long; head 1 in. diameter.

8 Inch. Approx. 8 in long; head 1 in. diameter.

(e) U-Shape Staple. Steel wire; two main legs are driven into the soil so that top of staple is flush with turfgrass sod and SSM.

6 Inch. 11 gauge bent into U shape; legs 6 in. long; top 1 to 1-1/2 in. wide.

8 Inch. 8 gauge bent into U shape; legs 8 in. long; top 1 to 1-1/2 in. wide.

12 Inch. 8 gauge bent into U shape; legs 12 in. long; top 1 to 1-1/2 in. wide.

(f) Fabric Pin. Steel nail; single leg is driven into the soil so that steel washer top is flush with SSM.

12 Inch. 11 gauge approx. 12 in. long.

18 Inch. 3/16 in. approx. 18 in. long.

920.06 SEED AND TURFGRASS SOD STANDARDS

920.06.01 Names and Naming. The authority for common and scientific names shall be the USDA NRCS The Plants Database website at plants.usda.gov. Cultivar names shall be those of the registered cultivar.

Plant and seed identification, tags, and labels shall correspond to the common name and scientific name of the species in The Plants Database. Any conflict in names or naming shall be resolved by the Engineer in consultation with the Landscape Operations Division.

920.06.02 Prohibited Weeds.

(a) Weeds Prohibited in Turfgrass Sod and SHA Seed Mixtures. Turfgrass Sod, SHA Turfgrass Seed Mix, SHA Temporary Seed Mix, and Additive Seed shall be free from seed or viable parts of the following species:

WEEDS PROHIBITED	
IN TURFGRASS SOD & SHA SEED MIXTURES	
COMMON NAME	SCIENTIFIC NAME
Annual Bluegrass	<i>Poa annua L.</i>
Balloonvine	<i>Cardiospermum halicacabum L.</i>
Bermudagrass	<i>Cynodon dactylon (L.) Pers. (approved for Bermudagrass sod)</i>
Canada Thistle	<i>Cirsium arvense (L.) Scop.</i>
Carolina Horsenettle	<i>Solanum carolinense L.</i>
Common Corncockle	<i>Agrostemma githago L.</i>
Common Reed = Phragmites	<i>Phragmites australis (Cav.) Trin. ex Steud.</i>
Crested Anoda = Spurred Anoda	<i>Anoda cristata (L.) Schltl.</i>
Dodder	<i>Cuscuta spp. L.</i>
Field Bindweed	<i>Convolvulus arvensis L.</i>
Japanese Bristlegrass = Giant Foxtail	<i>Setaria faberi Herrm.</i>
Java-Bean = Sicklepod	<i>Senna obtusifolia (L.) Irwin and Barneby</i>
Johnsongrass	<i>Sorghum halepense (L.) Pers. and hybrids</i>
Meadow Garlic = Wild Onion	<i>Allium canadense L.</i>
Plumeless Thistle, Musk Thistle	<i>Carduus L.</i>
Quackgrass	<i>Elymus repens (L.) Gould</i>
Rough Cocklebur	<i>Xanthium strumarium L.</i>
Serrated Tussock	<i>Nassella trichotoma (Nees) Hack</i>
Wild Garlic	<i>Allium vineale L.</i>
Yellow Nutsedge	<i>Cyperus esculentus L.</i>

(b) Weeds Prohibited in Meadow and Wildflower Seed. Meadow and Wildflower Seed shall be free of species listed in (a) and the following species:

WEEDS PROHIBITED	
IN MEADOW & WILDFLOWER SEED	
COMMON NAME	SCIENTIFIC NAME
Asiatic Tearthumb = Mile-a-Minute	<i>Polygonum perfoliatum L.</i>
Burdock and related species	<i>Arctium L.</i>
Canarygrass = Reed Canarygrass and related spp.	<i>Phalaris L.</i>
Common Wormwood = Mugwort	<i>Artemisia vulgaris L.</i>
Dogbane and related spp.	<i>Apocynum L.</i>
Eastern Poison Ivy	<i>Toxicodendron radicans (L.) Kuntze</i>
Fig Buttercup = Lesser Celandine	<i>Ranunculus ficaria L. var. bulbifera Marsden-Jones</i>
Garlic Mustard	<i>Alliaria petiolata (M. Bieb.) Cavara and Grande</i>
Giant Hogweed	<i>Heracleum mantegazzianum Sommier and Levier</i>
Japanese Honeysuckle, Tatarian Honeysuckle, related spp.	<i>Lonicera L.</i>
Japanese Knotweed	<i>Polygonum cuspidatum Siebold and Zucc.</i>
Lesser Knapweed = Spotted Knapweed	<i>Centaurea nigra L.</i>
Multiflora Rose	<i>Rosa multiflora Thunb.</i>
Nepalese Browntop = Japanese Stiltgrass	<i>Microstegium vimineum (Trin.) A. Camus</i>
Poison Hemlock	<i>Conium maculatum L.</i>
Purple Loosestrife and related spp.	<i>Lythrum L.</i>
Silvergrass and related spp.	<i>Miscanthus Andersson</i>
Thistle and related spp.	<i>Cirsium Mill., Onopordum L.</i>

(c) Weeds Prohibited in Shrub Seed. Shrub Seed shall be free of species listed in (a) and (b) and the following species:

WEEDS PROHIBITED	
IN SHRUB SEED	
COMMON NAME	SCIENTIFIC NAME
Burningbush	<i>Euonymus alatus (Thunb.) Siebold</i>
Common Buckthorn	<i>Rhamnus cathartica L.</i>
Japanese Barberry	<i>Berberis thunbergii DC.</i>
Oriental Bittersweet	<i>Celastrus orbiculatus Thunb.</i>
Oleaster; Russian Olive, Autumn Olive, and related spp.	<i>Elaeagnus L.</i>
Privet, and related species	<i>Ligustrum L.</i>
Tree of Heaven	<i>Ailanthus altissima (Mill.) Swingle</i>

920.06.03 Turfgrass Sod. Turfgrass sod shall be Maryland Certified Tall Fescue Sod unless Bermudagrass Sod or Zoysiagrass Sod is specified.

Sod shall be field grown in the State of Maryland in compliance with the Maryland Turfgrass Law and Regulations of the State of Maryland. Each load of tall fescue sod shall bear a Maryland State Certified Label.

Sod shall be sufficiently knitted when harvested to resist breakage under normal handling and be in good health at the time of delivery. Sod shall be machine cut in strips at least 14 in. wide. Tall Fescue Sod shall be uniform thickness of 0.75 to 1.25 in., excluding top growth, with thatch thickness less than 3/8 in.

Prior to harvest, Tall Fescue Sod shall be mowed to a height of 2.0 to 3.5 in. Bermudagrass Sod and Zoysiagrass Sod shall be mowed to a height of 0.75 to 3.0 in.

920.06.04 Approved Cultivars. Refer to ‘University of Maryland Turfgrass Technical Update TT-77 Recommended Turfgrass Cultivars for Certified Sod Production and Seed Mixtures in Maryland’. Only cultivars included in TT-77 may be used. When no cultivar is specified, any common type cultivar of the species may be used.

920.06.05 Seed Testing and Sampling. Seed shall comply with the Maryland Seed Law and Regulations of the State of Maryland. Seed suppliers shall assume charges for seed inspections and testing.

(a) Certified Seed. Component cultivars of SHA Turfgrass Seed Mix, SHA Special Purpose Seed Mix, SHA Temporary Seed Mix, and any seed used as additives for these mixes, shall be certified and carry the tags of their state of origin that show the percent purity, percent germination, percent weed seed, and types and content of noxious weed seed.

(b) SHA Seed Mixtures. Turfgrass Seed Mix, SHA Special Purpose Seed Mix, and SHA Temporary Seed Mix shall be sampled and tested by an inspector of the Maryland Department of Agriculture, Turf and Seed Section (MDA) for percent purity, percent germination, percent weed seed, and types and content of noxious weed seed. These seed mixtures shall conform to MDA Standards for Maryland Certified Seed and carry the certified tag of the State of Maryland.

(c) Unmixed Seed. Seed supplied for use as Meadow Seed, Wildflower Seed, and Shrub Seed shall be supplied in containers of a single species, unmixed. Each species shall be tested by the producer or supplier and carry a tag that shows the percent purity, percent germination, percent weed seed; and types and content of noxious weed seed.

920.06.06 Standards for Seed Species. Seed supplied in lots of individual species or used to produce mixes shall conform to the requirements of this section for minimum percent germination, minimum purity, and maximum percent of weed seed.

Meadow seed, wildflower seed, and shrub seed that does not conform to these standards may be used after review and approval by the Engineer in consultation with the Landscape Operations Division. The seed will be subject to use at increased seeding rates or measures to compensate for substandard seed purity, germination, or weed content.

(a) SHA Turfgrass Seed Mix and SHA Special Purpose Seed Mix. Species included in SHA Turfgrass Seed Mix and SHA Special Purpose Seed Mix shall be MDA Certified Seed of approved cultivars and conform to the following requirements for minimum percent purity, maximum percent weed seed, and minimum percent germination:

TURFGRASS SEED SPECIES			
COMMON NAME, and SCIENTIFIC NAME	PURITY Min %	WEED Max %	GERM Min %
Chewings Fescue <i>Festuca rubra L. ssp. fallax (Thuill.) Nyman</i>	98	0.5	85
Red Fescue <i>Festuca rubra L. ssp. Rubra</i>	98	0.5	85
Hard Fescue <i>Festuca brevipila Tracey</i>	98	0.5	85
Kentucky Bluegrass <i>Poa pratensis L. ssp. Pratensis</i>	95	0.4	80
Sheep Fescue <i>Festuca ovina L.</i>	98	0.5	85
Tall Fescue <i>Schedonorus arundinaceus (Schreb.) Dumort., nom. cons.</i>	98	0.5	85

(b) Temporary and Grass Additive Seed. Species included in SHA Temporary Seed Mix, or used as Additive Seed with SHA Turfgrass Seed Mix or SHA Special Purpose Seed Mix shall conform to the following requirements for minimum percent purity, maximum percent weed seed, and minimum percent germination:

TEMPORARY AND GRASS ADDITIVE SEED SPECIES			
COMMON NAME, and SCIENTIFIC NAME	PURITY Min %	WEED Max %	GERM Min %
Cereal Rye <i>Secale cereale</i> L	98	0.1	85
Common Barley, winter type <i>Hordeum vulgare</i> L.	98	0.3	85
Common Oat, winter type <i>Avena sativa</i> L.	98	0.5	85
Common Wheat, winter type <i>Triticum aestivum</i> L	98	0.1	85
Foxtail Millet <i>Setaria italica</i> (L.) P. Beauv.	99	0.1	80
Perennial Ryegrass <i>Lolium perenne</i> L. ssp. <i>Perenne</i>	97	0.5	85
Weeping Alkaligrass <i>Puccinellia distans</i> (Jacq.) Parl.	97	0.5	85

(c) Meadow Forb Seed. Seed shall be supplied in lots of individual species, unmixed, labeled with common name and scientific name in conformance with the following:

(1) Purity. Weed and/or other crop seed content shall be 2.5 percent or less by weight. Seed that does not conform to this specification may be used after approval by the Engineer in consultation with the Landscape Operations Division at increased seeding rates, or with measures to compensate for increased weed or crop seed content.

(2) Origin. Except as noted with asterisk*, Seed shall either be collected from native sources in USDA Hardiness Zone 5b, 6a, 6b and 7a in the States of Maryland, Pennsylvania, New York, New Jersey, Delaware, Virginia, West Virginia, or North Carolina, or shall be grown and produced from seed certified to have been collected from sites in the USDA Hardiness Zones of those States.

Seed that does not conform to origin requirements may be used after review and approval by the Engineer in consultation with the Landscape Operations Division.

(3) Species. Seed shall conform to the following species, subspecies and varieties:

MEADOW FORB SEED SPECIES	
COMMON NAME	SCIENTIFIC NAME
Allegheny Monkeyflower = Square Stem Monkeyflower	<i>Mimulus ringens L. var. ringens</i>
Birds-Foot Trefoil *	<i>Lotus corniculatus L</i>
Bearded Beggarticks = Showy Tickseed	<i>Bidens aristosa (Michx.) Britton</i>
Blackeyed Susan	<i>Rudbeckia hirta L. var. hirta</i> <i>Rudbeckia hirta L. var. pulcherrima Farw.</i>
Blanket Flower	<i>Gaillardia aristata Pursh</i>
Browneyed Susan	<i>Rudbeckia triloba L. var. triloba</i> <i>Rudbeckia triloba L. var. pinnatiloba Torr. and A. Gray</i>
Common Boneset	<i>Eupatorium perfoliatum L. var. perfoliatum</i>
Common Evening Primrose	<i>Oenothera biennis L.</i>
Common Yarrow *	<i>Achillea millefolium L.</i>
Crimsoneyed Rose Mallow	<i>Hibiscus moscheutos L.</i>
Eastern Purple Coneflower	<i>Echinacea purpurea (L.) Moench</i>
Flat-top Goldentop = Grass-Leaved Goldenrod	<i>Euthamia graminifolia (L.) Nutt.</i> <i>Euthamia graminifolia (L.) Nutt. var. graminifolia Euthamia graminifolia (L.) Nutt. var. hirtipes (Fernald) C.E.S. Taylor and R.J. Taylor</i>
Gray Goldenrod	<i>Solidago nemoralis Aiton var. nemoralis</i>
King of the Meadow = Tall Meadow Rue	<i>Thalictrum pubescens Pursh</i>
Lanceleaf Tickseed = Lanceleaf Coreopsis	<i>Coreopsis lanceolata L.</i>
Maryland Senna	<i>Senna marilandica (L.) Link</i>
Maximilian Sunflower	<i>Helianthus maximiliani Schrad.</i>

New England Aster	<i>Symphyotrichum novae-angliae</i> (L.) G.L. Nesom
New York Aster	<i>Symphyotrichum novi-belgii</i> (L.) G.L. Nesom var. <i>elodes</i> (Torr. and A. Gray) G.L. Nesom <i>Symphyotrichum novibelgii</i> (L.) G.L. Nesom var. <i>novi-belgii</i> <i>Symphyotrichum novibelgii</i> (L.) G.L. Nesom var. <i>villicaule</i> (A. Gray) J. Labrecque and L. Brouillet
New York Ironweed	
Partridge Pea	<i>Chamaecrista fasciculata</i> (Michx.) Greene <i>Chamaecrista fasciculata</i> (Michx.) Greene var. <i>fasciculata</i> <i>Chamaecrista fasciculata</i> (Michx.) Greene var. <i>macrosperma</i> (Fernald) C.F. Reed
Red Clover	<i>Trifolium pratense</i> L.
Seedbox	<i>Ludwigia alternifolia</i> L.
Smooth Blue Aster	<i>Symphyotrichum laeve</i> (L.) A. Löve and D. Löve var. <i>laeve</i> <i>Symphyotrichum laeve</i> (L.) A. Löve and D. Löve var. <i>concinnum</i> (Willd.) G.L. Nesom
Smooth Oxeye = Ox-eye Sunflower	<i>Heliopsis helianthoides</i> (L.) Sweet var. <i>helianthoides</i> <i>Heliopsis helianthoides</i> (L.) Sweet var. <i>scabra</i> (Dunal) Fernald
Spotted Trumpetweed = Spotted Joe Pye Weed	<i>Eupatoriadelphus maculatus</i> (L.) King and H. Rob. var. <i>Maculatus</i>
Stiff Goldenrod	<i>Oligoneuron rigidum</i> (L.) Small var. <i>rigidum</i>
Sundial Lupine = Wild Blue Lupine	<i>Lupinus perennis</i> L. ssp. <i>Perennis</i> <i>Lupinus perennis</i> L. ssp. <i>perennis</i> var. <i>perennis</i> <i>Lupinus perennis</i> L. ssp. <i>perennis</i> var. <i>occidentalis</i> S. Watson
Swamp Milkweed	<i>Asclepias incarnata</i> L. <i>Asclepias incarnata</i> L. ssp. <i>incarnata</i> <i>Asclepias incarnata</i> L. ssp. <i>pulchra</i> (Ehrh. ex Willd.) Woodson
Swamp Sunflower = Narrow-Leaved Sunflower	<i>Helianthus angustifolius</i> L.
Swamp Verbena = Blue Vervain	<i>Verbena hastata</i> L. var. <i>hastata</i>
Talus Slope Penstemon = Tall White Beardtongue	<i>Penstemon digitalis</i> Nutt. ex Sims
Joe Pye Weed = Trumpetweed	<i>Eutrochium maculatum</i> (L.) E.E. Lamont var. <i>maculatum</i>

White Clover *	<i>Trifolium repens L.</i>
Wild Bergamot	<i>Monarda fistulosa L. ssp. fistulosa</i> <i>Monarda fistulosa L. ssp. fistulosa var. mollis (L.) Benth.</i> <i>Monarda fistulosa L. ssp. fistulosa var. rubra A. Gray</i> <i>Monarda fistulosa L. ssp. brevis (Fosberg and Artz) Scora, ined.</i>

(d) Meadow Grass, Sedge, and Rush Seed. Seed shall be supplied in lots of individual species, unmixed, labeled with common name, scientific name, and cultivar in conformance with the following:

(1) Purity. Refer to 920.06.06(c)(1). Grasses with awns shall be debarbed or deawned.

(2) Origin. Refer to 920.06.06(c)(2). Cultivars may be produced in any state east of the Mississippi River.

(3) Species. Seed shall conform to the following species, subspecies, varieties, and cultivars:

MEADOW GRASS, SEDGE AND RUSH SEED SPECIES	
COMMON NAME and CULTIVARS	SCIENTIFIC NAME
Big Bluestem cv. Niagara	<i>Andropogon gerardii Vitman</i>
Broomsedge Bluestem = Broomsedge	<i>Andropogon virginicus L.</i> <i>Andropogon virginicus L. var. virginicus</i> <i>Andropogon virginicus L. var. decipiens C.S. Campbell</i>
Common Rush = Soft Rush = Lamp Rush	<i>Juncus effusus L. var. conglomeratus (L.) Engelm.</i> <i>Juncus effusus L. var. decipiens Buchenau</i> <i>Juncus effusus L. var. pylaei (Laharpe) Fernald and Wiegand</i> <i>Juncus effusus L. var. solutus Fernald and Wiegand</i>
Deertongue cv. ‘Tioga’	<i>Dichanthelium clandestinum (L.) Gould</i>
Fowl Bluegrass	<i>Poa palustris L.</i>
Fox Sedge	<i>Carex vulpinoidea Michx. var. vulpinoidea</i>
Gamagrass cv. ‘Meadowcrest’, ‘Pete’	<i>Tripsacum dactyloides (L.) L.</i>
Indiangrass cv. ‘Rumsey’	<i>Sorghastrum nutans (L.) Nash</i>
Little Bluestem cv. ‘Aldous’	<i>Schizachyrium scoparium (Michx.) Nash var. scoparium</i>

	<i>Schizachyrium scoparium (Michx.) Nash var. divergens (Hack.) Gould</i>
Longhair Sedge = Bristly Sedge	<i>Carex comosa Boott</i>
Rattlesnake Mannagrass	<i>Glyceria canadensis (Michx.) Trin.</i>
Shallow Sedge = Lurid Sedge	<i>Carex lurida Wahlenb.</i>
Switchgrass cv. 'Blackwell', 'Shelter'	<i>Panicum virgatum L. var. virgatum</i> <i>Panicum virgatum L. var. spissum Linder</i>
Virginia Wildrye	<i>Elymus virginicus L., Elymus virginicus L. var. halophilus (E.P. Bicknell) Wiegand</i>
Woolgrass	<i>Scirpus cyperinus (L.) Kunth</i>

(e) Wildflower Seed. Seed shall be supplied in lots of individual species, unmixed, labeled with common name, scientific name, and cultivar in conformance with the following:

(1) Purity. Species shall be 98 percent purity or greater, with 75 percent germination or greater, and with weed and/or other crop seed content of 2.5 percent or less by weight. Seed that does not conform to purity requirements may be used after approval by the Engineer in consultation with the Landscape Operation Division at increased seeding rates, or with measures to compensate for increased weed or crop seed content.

(2) Origin. Any State of the United States.

(3) Species. Seed shall conform to the following species, subspecies, varieties, and cultivars:

WILDFLOWER SEED SPECIES	
COMMON NAME and CULTIVARS	SCIENTIFIC NAME
Blackeyed Susan	<i>Rudbeckia hirta L. var. hirta</i> <i>Rudbeckia hirta L. var. pulcherrima Farw.</i>
Calendula	<i>Calendula officinalis L</i>
Common Sunflower cv. 'Autumn Beauty'	<i>Helianthus annuus L.</i>
Corn Poppy, cv. 'Shirley Mix'	<i>Papaver rhoeas L.</i>
Doubtful Knight's-spur = Rocket Larkspur	<i>Consolida ajacis (L.) Schur</i>
Firewheel = Annual Gaillardia	<i>Gaillardia pulchella Foug.</i> <i>Gaillardia pulchella Foug. var. Pulchella</i>

Garden Cornflower = Bachelors Button	<i>Centaurea cyanus L.</i>
Garden Cosmos = Pink Cosmos, cv. 'Sensation'	<i>Cosmos bipinnatus Cav.</i>
Golden Tickseed	<i>Coreopsis tinctoria Nutt.</i>
Lemon Beebalm	<i>Monarda citriodora Cerv. ex Lag</i>
Moroccan Toadflax = Spurred Snapdragon	<i>Linaria maroccana Hook. f.</i>
Siberian Wallflower	<i>Erysimum ×marshallii (Henfr.) Bois</i>
Sulphur Cosmos = Yellow Cosmos, cv. 'Bright Lights'	<i>Cosmos sulphureus Cav.</i>

(f) Shrub Seed. Seed shall be supplied in lots of individual species, unmixed, labeled with common name and scientific name in conformance with the following:

(1) Purity. Weed and/or other crop seed content shall be 0.5 percent or less by weight. Minimum purity and minimum germination shall conform to the requirements of (3), below.

(2) Origin. Refer to 920.06.06(c)(2).

(3) Species. Seed shall conform to the following species, subspecies, and varieties:

SHRUB SEED SPECIES		
SPECIES	PURITY	GERM
Including Subspecies and Variety	Min %	Min %
American Black Elderberry <i>Sambucus nigra L. ssp. canadensis (L.) R. Bolli</i>	98	60
American Cranberrybush <i>Viburnum opulus L. var. americanum Aiton</i>	99	70
Black Chokeberry <i>Photinia melanocarpa (Michx.) K.R. Robertson and Phipps</i>	99	70
Bristly Locust <i>Robinia hispida L. var. fertilis (Ashe) R.T. Clausen</i> <i>Robinia hispida L. var. hispida</i>	99	90
Chokecherry <i>Prunus virginiana L. var. virginiana</i>	99	70

IFB No. #1103283
MCDHCA Project No. #0F7701G
Montclair Manor Community
Lighting and Site Improvements

Common Buttonbush <i>Cephalanthus occidentalis</i>	98	60
Common Ninebark <i>Physocarpus opulifolius</i> (L.) Maxim., orth. Cons.	99	75
Common Winterberry <i>Ilex verticillata</i> (L.) A. Gray	99	60
Desert False Indigo <i>Amorpha fruticosa</i> L.	98	70
Fragrant Sumac <i>Rhus aromatica</i> var. <i>aromatica</i>	99	85
Gray Dogwood <i>Cornus racemosa</i> Lam	99	70
Inkberry <i>Ilex glabra</i> (L.) A. Gray	98	60
Mapleleaf Viburnum <i>Viburnum acerifolium</i> L.	99	70
Maryland Senna <i>Senna marilandica</i> (L.) Link	99	70
Nannyberry <i>Viburnum lentago</i> L	99	75
Red Chokeberry <i>Photinia pyrifolia</i> (Lam.) K.R. Robertson and Phipps	85	60
Red Elderberry <i>Sambucus racemosa</i> L. var. <i>racemose</i>	95	70
Redosier Dogwood <i>Cornus sericea</i> L. ssp. <i>Sericea</i>	99	70
Silky Dogwood <i>Cornus amomum</i> Mill.	98	70

Smooth Sumac <i>Rhus glabra</i> L.	99	80
Southern Arrowwood <i>Viburnum dentatum</i> L. var. <i>dentatum</i> <i>Viburnum dentatum</i> L. var. <i>venosum</i> (Britton) Gleason <i>Viburnum recognitum</i> Fernald	99	70
Spicebush <i>Lindera benzoin</i> (L.) Blume var. <i>benzoin</i>	95	60
Staghorn Sumac <i>Rhus typhina</i> L.	99	85
Steeplebush <i>Spiraea tomentosa</i> L.	85	70
Swamp Rose <i>Rosa palustris</i> Marsh.	99	65
Witch Hazel <i>Hamamelis virginiana</i> L.	99	70

920.06.07 Seed Mixes. Refer to 920.06.01 thru .06 and the document ‘Specifications for Seed and Seed Mixes’ maintained by the Landscape Operations Division, which includes lists of approved cultivars.

(a) SHA Turfgrass Seed Mix.

SHA TURFGRASS SEED MIX		
MIX	SPECIES	
%	Common Name	Scientific Name
95	Tall Fescue	<i>Schedonorus arundinaceus</i> (Schreb.) Dumort., nom. cons.
5	Kentucky Bluegrass	<i>Poa pratensis</i> L. ssp. <i>pratensis</i>

(b) SHA Special Purpose Seed Mix.

SHA SPECIAL PURPOSE SEED MIX		
MIX	SPECIES	
%	Common Name	Scientific Name
75	Hard Fescue	<i>Festuca brevipila</i> Tracey
25	Chewings Fescue	<i>Festuca rubra</i> L. ssp. <i>fallax</i> (Thuill.) Nyman

Note: When pre-mixed SHA Special Purpose Seed Mix is not available, a small quantity exception will allow the mix to be performed at the seeding location using Certified seed of the required species. (c) SHA Temporary Seed Mix.

SHA TEMPORARY SEED MIX		
MIX	SPECIES	
%	Common Name	Scientific Name
95	One or more of the following: Common Wheat, winter type Common Barley, winter type Common Oat, winter type Cereal Rye, winter type	<i>Triticum aestivum</i> L. <i>Hordeum vulgare</i> L. <i>Avena sativa</i> L. <i>Secale cereale</i> L.
5	Foxtail Millet	<i>Setaria italica</i> (L.) P. Beauv.

920.07 PLANT MATERIALS

920.07.01 Certificate and Licenses. Sellers, distributors, installers or producers of nursery stock shall possess the Plant Dealer License, Plant Broker License, or Nursery Inspection Certificate of the Maryland Department of Agriculture, or substitute a similar certificate or licenses from another State where they do business.

920.07.02 Plant Material Inspection. Refer to 920.06.01 regarding common and scientific names of plants. Plant material will be inspected for conformance with 920.07.03 thru .05, and tagged with Administration Plant Material Inspection Seals (Seals) as follows:

(a) **Inspection.** The Plant Material Inspection will be conducted in Maryland at the nursery where the plant material is grown, or at the brokerage where the plant material is sold. When plant material is produced by a nursery outside Maryland, the Inspection will be conducted at the Contractor's holding area, or at the project site before planting, unless otherwise specified in the Contract Documents.

The Contractor shall ensure that the plant material is present for inspection on the scheduled date, and that it meets the requirements of 920.07. The condition and identity of plant material will be subject to re-inspection for the duration of the Contract.

(b) Scheduling. The Inspection will be scheduled by the Engineer in consultation with the Landscape Operations Division. At least 14 days notice to schedule an Inspection within Maryland, and at least 45 days notice to schedule an Inspection outside Maryland.

(c) Seals. The Administration will determine which plants, if any, will be tagged with Seals. When Seals are placed upon representative plants within a block of plant material, the plant material delivered for installation shall be similar in size, shape and character to the plant material that received Seals. Plant material that is delivered with broken or missing Seals, or that is not similar to the plant material within the block that was tagged with Seals will be rejected.

(d) Rejected Plants. Plant materials which do not meet these requirements will be rejected. Plant material rejected at the nursery or holding area shall not be delivered to the project; if delivered, it shall immediately be removed. Plants shall not be installed until the Plant Material Inspection has been completed and satisfactory identification has been provided.

920.07.03 Plant Material Standards. Plant material shall be grown, identified, graded, and delivered in good condition as specified in this section.

(a) Hardiness Zones and Origin. Trees, shrubs, perennials and ornamental grasses shall be nursery grown within plant hardiness zones 5, 6, or 7 according to the 'USDA Plant Hardiness Zone Map' in the following states, unless specified otherwise: Maryland, Ohio, Pennsylvania, New York, New Jersey, Delaware, Virginia, West Virginia, North Carolina, Tennessee, Kentucky, Georgia. Annuals and bulbs shall be nursery grown.

(b) Names and Identification. Refer to 920.06.01. Plant material shall be clearly and correctly identified by the grower or distributor. Plant materials that are misidentified, or not satisfactorily tagged or labeled, or do not conform to the accepted characteristics of the species or cultivar, will be rejected.

(c) ANSI Standards. Plant material shall conform to 'American Standard for Nursery Stock (ANSI Z60.1) of the American Nursery and Landscape Association. Plant grades shall be those established in ANSI Z60.1, and shall include plants from that size up to but not including the next larger grade size. When specimen plants are specified by the Contract documents, the specimen requirement shall also be met. Plant material which does not meet the standards of this section shall be rejected.

(d) Health and Sanitation. Plant material shall be dug and transported in conformance ANSI Z60.1. Bare root deciduous plants shall be delivered in a dormant condition. Roots shall be adequately protected and kept moist.

Plant material shall be in good health and be declared and certified free from disease and insects as required by law for transportation, and shall be free from pest-related stress and pest damage.

Plants shall be healthy, free from physical defects and stresses, and have welldeveloped branches and a vigorous root system. Plants shall not exhibit wilt, shriveling, insufficient root mass, broken or loose root balls, or inadequate protection.

Container grown plants shall be well rooted, vigorous and established in the size pot specified, shall have well balanced tops for their pot size, and shall not be root bound. Plants grown in fields or containers which include Ailanthus, Canada Thistle, Johnsongrass, or Yellow Nutsedge will be

rejected.

(e) Shade and Flowering Trees. Shade and flowering trees shall be symmetrically balanced. Major branch unions shall not have 'V' shaped crotches, bark inclusion or unions derived from water sprouts (epicormic growth) capable of causing structural weakness.

Trees shall be free of unhealed branch removal wounds greater than 1 in. diameter, or wounds or scars caused by staking, wire or ties, or any other defect which could cause structural failure or disfigurement.

Shade trees and central leader flowering trees shall have a single main trunk. Trunk height to the lowest branch shall conform to the following:

HEIGHT TO LOWEST BRANCH	
CALIPER	HEIGHT
In.	ft
1-1/2 and 1-3/4	4
2 to 2-1/2	5
3	6

(f) Unacceptable Plants. Plant material that becomes unacceptable after installation shall be rejected as specified in 710.03.18.

920.07.04 American Holly (*Ilex opaca* Aiton). Unless other cultivars or ratios are specified in the Contract document, each lot of plants shall include 90 percent female plants and 10 percent male plants of cultivars selected from the following list, unless specified otherwise.

AMERICAN HOLLY CULTIVARS		
FEMALE		MALE
Angelica	Miss Helen	David
Arlene Leach	Old Heavy Berry	Jersey Knight
B and O	Patterson	Leather Leaf
Dan Fenton	Satyr Hill	Nelson West
Jersey Princess	Wyetta	North Wind

920.07.05 Plant Storage and Handling. Adequate facilities shall be provided for plant storage. Plants shall be handled with care to avoid damage.

(a) Bulbs. Bulbs shall be stored under appropriate climate control.

(b) Perennials, Ornamental Grasses, Plug Plants and Annuals. Perennials, ornamental grasses, plug plants and annuals shall be kept moist.

(c) Bare Root Plants and Live Stakes. Bare root plants and live stakes shall be kept moist and heeled into moist soil or other suitable material until installed. During transport, the roots shall be covered with canvas, burlap or straw.

(d) Balled and Burlapped and Container Grown Plants. Balled and burlapped plants and container grown plants shall be kept moist and installed within seven days of delivery, or the root balls or containers shall be covered with mulch or straw until removed for installation.

920.08 MARKING AND STAKING MATERIALS

920.08.01 Outline Stakes. Outline stakes shall be full cut 1.75 in. x 1.75 in. sound hardwood, 48 in. long, as approved.

920.08.02 Stakes. Stakes for supporting trees shall be rough sawn, straight grain hardwood reasonably free from bark, knot holes, excessive warping, or other imperfections. Stakes shall be full cut 2.0 in. x 2.0 in. thickness.

920.08.03 Wire. Wire shall be No. 12 and 14 gauge new annealed galvanized wire.

920.08.04 Wire Rope. Wire rope shall be 0.25 in. zinc coated steel wire seven strand as commonly used for guying large trees.

920.08.05 Cable Clamps. Cable clamps shall be zinc galvanized steel.

920.08.06 Hose. Hose shall be 5/8 in. inside diameter corded synthetic rubber hose.

920.08.07 Turnbuckles. Turnbuckles shall be zinc galvanized with 4.5 in. openings and 5/16 in. threaded ends with screw eyes.

920.08.08 Anchors. Tree anchors shall be earth anchors of a type commonly used for anchoring large trees.

920.09 WATER, PESTICIDES, AND ADJUVANTS

920.09.01 Water. Water used for the installation and establishment of vegetation shall not contain concentrations of substances that are harmful to plant growth. Water derived from public and municipal water systems in Maryland shall be acceptable for irrigation, fertilization, or mixing with pesticides. Water derived from wells or other sources may be used when it has soluble salts concentration less than 500 ppm, sodium less than 50 percent of total salts, and pH between 5.0 to 7.8.

920.09.02 Seed Carrier. Seed carrier shall be one or more inert, horticultural-grade materials used to improve seed mixing and distribution through a spreader or drill. Seed carriers shall be free flowing, easily mixable with seed, and nontoxic to seed, plants, humans, and wildlife. Seed carrier shall include one or more of the following:

(a) Calcined Clay. Calcined clay shall be a furnace-baked clay product.

(b) Cocoa Shell. Cocoa shell shall be processed cocoa seeds.

(c) Oyster Shell. Oyster shell shall be crushed shells of oyster or other mollusk.

(d) **Vermiculite.** Vermiculite shall be heat-expanded mineral mica.

(e) **Perlite.** Perlite shall be heat-expanded mineral perlite.

920.09.03 Pesticides. Pesticides shall be EPA-approved and registered for use in Maryland to control plants, fungi, insects or other pests. Pesticides shall be approved for use, and acceptable application rates established by the Landscape Operations Division as follows:

(a) **Herbicide.** Herbicide shall control or prevent regrowth of plants or vegetation.

(b) **Insecticide.** Insecticide shall control or protect against insect or other arthropod pests.

(c) **Fungicide.** Fungicide shall control or protect against fungal or bacterial pests.

(d) **Other Pesticides.** Other pesticides shall control or protect against other pests such as deer, beaver, etc.

920.09.04 Marking Dye. Marking dyes shall be used to color spray solutions, be nonphytotoxic, oil or water soluble, and compatible with the pesticide products they are applied with. Marking dye products and application rates shall be approved by the Landscape Operations Division.

920.09.05 Spray Adjuvant and Wetting Agent. Spray adjuvant and wetting agents shall be compatible with the pesticides or other products they are applied with.

920.09.06 Antidesiccant. Antidesiccant and antitranspirant products shall be materials that provide a film over plant surfaces to limit water loss. These products and application rates shall be approved by the Landscape Operations Division.

END OF SECTION 900

BID

AND

SCHEDULE

OF

PRICES

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***NOTICE: FROM THIS POINT FORWARD, ALL PAGES
ARE PRINTED ON ONE SIDE***

INVITATION FOR BIDS TO MONTGOMERY COUNTY

Made this _____ day of _____ 2019

By Name of Contractor _____

Business Address _____

The bidder declares that the only person, firm or corporation, or persons, firms or corporations, that has or have any interest in this Bid or in the contract or contracts proposed to be taken, is or are the undersigned; that this Bid is made without any connection or collusion with any person, firm or corporation making a Bid for the same work, that the attached Special Provisions, Specifications and form of contract and the drawings herein referred to have been carefully examined and are understood, that as careful examination has been made as is necessary to become informed as to the character and extent of the work required; and that it is proposed and agreed if the Bid is accepted, to contract to do the required work in the manner set forth in the Special Provisions, Specifications and as shown on the drawings.

The unit prices on the attached and signed Bid are to include and cover the furnishing of all materials and labor requisite and proper and providing of all necessary machinery, tools apparatus and means of performing the work and the doing of all the above mentioned work in the manner set forth, described and shown in the Special Provisions, Specifications and on the contract drawings within the prescribed number of consecutive working or calendar days after service of written notice from the Engineer to proceed with the work. If this Bid is accepted and the undersigned shall refuse or neglect, within ten (10) days after receiving the contract for execution, to execute the same then it shall be determined that the bidder has abandoned the contract, and therefore the Bid and the acceptance thereof shall be null and void and the deposit accompanying the Bid shall be forfeited.

(The names and addresses of all members of a firm, or the names, addresses and titles of every officer of a corporation, as the case may be, must be given here by the member of the firm or by the Officer or agent of the corporation who signs the Bid).

It is further proposed:

To do all extra work that may be required to complete the work contemplated at unit prices or lump sums to be agreed upon in writing prior to starting such extra work, or if such prices of sums cannot be agreed upon, to perform such work on a "Force Account" basis, as described in Section TC-7.03 FORCE ACCOUNT WORK, in the MSHA Standard Specifications for Construction and Materials, July 2018.

To execute the form of Contract and begin work within ten (10) days of the date of the Notice to Proceed, and to prosecute said work so as to complete the construction in **SIXTY-FIVE (65) WORKING DAYS.**

To furnish contract bonds in the full amount of the contract award, as security for the construction and completion of the work, in accordance with the plans, specifications and contract and as security for payment of labor and materials.

To guarantee all the work performed under this contract to be done in accordance with the Special Provisions, Specifications and Contract Drawings in a good workmanlike manner, and to renew or repair any work which may be rejected due to defective materials or workmanship, prior to final completion and acceptance of the construction.

Enclosed herewith find certified check or bid bond made payable to Montgomery County, Maryland as a proposal guarantee, which it is understood will be forfeited in the event the Form of Contract is not executed, if awarded to the undersigned, in the amount of _____ (\$ _____) for 5% of the Total Base Bid.

Receipt is acknowledged of addenda and such is included in this proposal as follows:

No. _____ Date: _____

No. _____ Date: _____

Respectfully submitted, signed (Authorized Signature) _____

Signatures of offerors and contractors must be in their correct legal form and must not be abbreviated to common usage or trade name form. All signatures must be made by an authorized officer, partner, manager, member or employee. The signing of an offer or a contract is a representation by the person signing that the person signing is authorized to do so on behalf of the offeror or contractor. Contracts that are not signed in compliance with these requirements are voidable at the option of the County.

SCHEDULE OF PRICES – TOTAL BASE BID

NOTE: Award of a contract will be made to the lowest responsive and responsible bidder as determined by the Director, Department of General Services. The lowest bidder is determined by the total amount of the Unit Prices extended by the quantities set forth on the Schedule of Prices, and shall include all necessary costs as required to perform the work specified in the technical specifications. The Total Base Bid is inclusive of all contingent items.

The Base Bid is the sum for which the bidder offers to perform the work specified in the technical specification, not including that work for which alternate bids are also submitted. Alternate Bids will include items and prices which may be added to or subtracted from the base bid price if alternate methods and materials are chosen.

Dollar total in numerals (Base Bid)

Dollar total in written words (Base Bid)

SIGNATURE: _____

I have read and understand all the clauses and requirements contained herein and any amendment thereto and the prices quote reflect the conditions stated:

NAME OF FIRM: _____

ADDRESS: _____

TELEPHONE: _____

FAX NUMBER: _____

E-MAIL ADDRESS: _____

NAME: _____

TITLE: _____

AUTHORIZED SIGNATURE: _____

NOTE: NO BIDS WILL BE ACCEPTED UNLESS SUBMITTED IN INK OR TYPEWRITTEN. All signatures on bids, amendments, or related documents or correspondence must be by persons who are authorized to contractually bind the Offerors.

MONTCLAIR MANOR COMMUNITY LIGHTING AND SITE IMPROVEMENTS PROJECT

Notice to Bidders: This proposal shall be filled by the bidder, with the prices written in numerals, and the extensions shall be made by the bidder. In the event of a discrepancy between the unit prices and the extensions (product of the quantity and unit price), the unit price will govern. This applies to all items (1-31) in this schedule of prices. For complete information concerning these items, see Specifications, General and Specific Provisions and Contract Forms. Contingent items will be denoted with an asterisk (*).

DEMOLITION

ITEM	APPROXIMATE QUANTITY			DESCRIPTION OF ITEMS	UNIT PRICE		EXTENDED PRICE		
					Dollars	Cts	Dollars	Cts	
1	52	EA		Removal and Disposal of Existing Lighting Structure & Luminaire	\$_____		\$_____		
2	224	LF		Removal and Disposal of Existing Fence	\$_____		\$_____		
3	1	EA		Removal and Disposal of Electrical Service	\$_____		\$_____		
					\$_____		\$_____		
TOTAL DEMOLITION COSTS								\$_____	

IFB No. #1103283
MCDHCA Project No. #0F7701G
Montclair Manor Community
Lighting and Site Improvements

MONTCLAIR MANOR COMMUNITY LIGHTING AND SITE IMPROVEMENTS PROJECT

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FENCING

ITEM	APPROXIMATE QUANTITY			DESCRIPTION OF ITEMS	UNIT PRICE		EXTENDED PRICE	
					Dollars	Cts	Dollars	Cts
*4	50	EA		Furnish and Replace Wood Slats in Existing Fence	\$ _____		\$ _____	
5	224	LF		Furnish and Install 6' Wood Fence				
					\$ _____		\$ _____	
TOTAL FENCE COSTS							\$ _____	

MONTCLAIR MANOR COMMUNITY LIGHTING AND SITE IMPROVEMENTS PROJECT

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ELECTRICAL

ITEM	APPROXIMATE QUANTITY		DESCRIPTION OF ITEMS	UNIT PRICE		EXTENDED PRICE	
				Dollars	Cts	Dollars	Cts
6	34	EA	Furnish and Install 12' Decorative Light Pole	\$ _____		\$ _____	
7	17	CY	Furnish and Install Concrete for Light Foundation	\$ _____		\$ _____	
8	34	EA	Furnish and Install LED Roadway Luminaire (30 W LED)	\$ _____		\$ _____	
9	1	EA	Furnish and Install 200 AMP Base Mounted Metered Service Panel	\$ _____		\$ _____	
10	4	EA	Furnish and Install Junction Box	\$ _____		\$ _____	
11	4300	LF	Furnish and Install Duct Cable – 2 Conductor, No 6 AWG, 600V	\$ _____		\$ _____	
12	160	LF	Furnish and Install Cable – 1 Conductor, No. 6 AWG Use 600V	\$ _____		\$ _____	
13	4750	LF	Furnish and Install Bare Copper Ground Wire No. 6 AWG	\$ _____		\$ _____	
14	20	LF	Furnish and Install 2 Inch Diameter Rigid Steel Conduit, Schedule 40	\$ _____		\$ _____	
15	38	EA	Furnish and Install Connector Kit – Type II	\$ _____		\$ _____	

MONTCLAIR MANOR COMMUNITY LIGHTING AND SITE IMPROVEMENTS PROJECT

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ELECTRICAL (con't)

ITEM	APPROXIMATE QUANTITY			DESCRIPTION OF ITEMS	UNIT PRICE		EXTENDED PRICE	
					Dollars	Cts	Dollars	Cts
16	30	EA		Furnish and Install Connector Kit – Type III	\$ _____		\$ _____	
17	20	EA		Furnish and Install Connector Kit – Type VI	\$ _____		\$ _____	
18	34	EA		Furnish and Install Ground Rod – ¾ Inch Diameter x 10 Foot Length	\$ _____		\$ _____	
19	1	EA		Furnish and Install Remote Lighting Cabinet 60 AMP	\$ _____		\$ _____	
					\$ _____		\$ _____	
					\$ _____		\$ _____	
					\$ _____		\$ _____	
					\$ _____		\$ _____	
					\$ _____		\$ _____	
					\$ _____		\$ _____	
					\$ _____		\$ _____	
				TOTAL ELECTRICAL COSTS				

MONTCLAIR MANOR COMMUNITY LIGHTING AND SITE IMPROVEMENTS PROJECT

Notice to Bidders: This proposal shall be filled by the bidder, with the prices written in numerals, and the extensions shall be made by the bidder. In the event of a discrepancy between the unit prices and the extensions (product of the quantity and unit price), the unit price will govern. This applies to all items (1-31) in this schedule of prices. For complete information concerning these items, see Specifications, General and Specific Provisions and Contract Forms. Contingent items will be denoted with an asterisk (*).

LANDSCAPING

ITEM	APPROXIMATE QUANTITY			DESCRIPTION OF ITEMS	UNIT PRICE		EXTENDED PRICE	
					Dollars	Cts	Dollars	Cts
20	24	SY		Furnish & Install 6 Inch Depth Topsoil	\$ _____		\$ _____	
21	25	SY		Furnish & Install Turfgrass Establishment	\$ _____		\$ _____	
22	1	LS		Tree, Shrub, Perennial Installation and Establishment	\$ _____		\$ _____	
23	24	SY		Constructing Planting Beds	\$ _____		\$ _____	
24	1	LS		Tree Branch Pruning	\$ _____		\$ _____	
25	50	SY		Brush Removal	\$ _____		\$ _____	
					\$ _____		\$ _____	
					\$ _____		\$ _____	
TOTAL LANDSCAPING COSTS							\$ _____	

MONTCLAIR MANOR COMMUNITY LIGHTING AND SITE IMPROVEMENTS PROJECT

Notice to Bidders: This proposal shall be filled by the bidder, with the prices written in numerals, and the extensions shall be made by the bidder. In the event of a discrepancy between the unit prices and the extensions (product of the quantity and unit price), the unit price will govern. This applies to all items (1-31) in this schedule of prices. For complete information concerning these items, see Specifications, General and Specific Provisions and Contract Forms. Contingent items will be denoted with an asterisk (*).

MISCELLANEOUS

ITEM	APPROXIMATE QUANTITY			DESCRIPTION OF ITEMS	UNIT PRICE		EXTENDED PRICE		
					Dollars	Cts	Dollars	Cts	
26	1.10	LS		Construction Stakeout	\$ _____		\$ _____		
27	1.10	LS		Mobilization	\$ _____		\$ _____		
*28	12	EA		Test Pit Excavation & Backfilling	\$ _____		\$ _____		
29	1	LS		Permit Acquisition (Electrical Permit)	\$ _____		\$ _____		
30	100	LF		Remove and Reset Temporary Orange Construction Fence	\$ _____		\$ _____		
31	1	LS		Clearing and Grubbing	\$ _____		\$ _____		
					\$ _____		\$ _____		
					\$ _____		\$ _____		
TOTAL MISCELLANEOUS COSTS								\$ _____	

IFB No. #1103283
MCDHCA Project No. #0F7701G
Montclair Manor Community
Lighting and Site Improvements

MONTCLAIR MANOR COMMUNITY LIGHTING AND SITE IMPROVEMENTS PROJECT

Notice to Bidders: This proposal shall be filled by the bidder, with the prices written in numerals, and the extensions shall be made by the bidder. In the event of a discrepancy between the unit prices and the extensions (product of the quantity and unit price), the unit price will govern. This applies to all items (1-31) in this schedule of prices. For complete information concerning these items, see Specifications, General and Specific Provisions and Contract Forms. Contingent items will be denoted with an asterisk (*).

SUMMARY

ITEM	DESCRIPTION OF ITEMS	EXTENDED PRICE	
		Dollars	Cts
1 - 3	TOTAL DEMOLITION COST	\$ _____	
4 - 5	TOTAL FENCING COST	\$ _____	
6 - 19	TOTAL ELECTRICAL COST	\$ _____	
20 - 25	TOTAL LANDSCAPING COST	\$ _____	
26 - 31	TOTAL MISCELLANEOUS COST	\$ _____	
		\$ _____	
		\$ _____	
	TOTAL BASE BID	\$ _____	

**MONTGOMERY COUNTY, MARYLAND
DEPARTMENT OF HOUSING AND COMMUNITY AFFAIRS**

EXPERIENCE AND EQUIPMENT CERTIFICATION

Contract No. 1103283

I. GENERAL

(a.) Legal Title and Address of Organization

(b.) Maryland Representative's Name, Title, and Address

(c.) Check One: Corporation _____ Co-Partnership _____ Individual _____

Other (describe) _____

(d.) Name and Title of Officers, Managers, Partners, etc Authorized to sign Contract Documents, Change and Field Orders, Estimates, and other pertinent Contract Forms. Please be advised that it will be necessary to inform the County of any changes in the above authorization.

<u>NAME</u>	<u>TITLE</u>
_____	_____
_____	_____
_____	_____
_____	_____

II EXPERIENCE

(a) Indicate the type of contracting undertaken by your organization and year's experience.

General _____ Sub _____ Type of Work: _____
Years years

(b) State construction experience of principal members of your organization:

<u>Name</u>	<u>Title</u> <u>Pres., Mgr.,</u> <u>etc.</u>	<u>Construction</u> <u>Experience</u> <u>Years</u>	<u>Type of Work</u> <u>(Hwy.,</u> <u>Bridges,</u> <u>Paving, etc.)</u>	<u>In What</u> <u>Capacity?</u> <u>(Supt.,</u> <u>Foreman, etc.)</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

(c) Give any special qualifications of firm members (Registered Engineer, Surveyors, etc.)

III EQUIPMENT

- (a) What equipment do you own, rent, or intend to buy for use on this project. (Please include any attachments.)

<u>Quantity</u>	<u>Item</u>	<u>Description, Capacity, Size, etc.</u>	<u>Condition</u>	<u>Years of Service</u>	<u>Present Location</u>	<u>Date Available for this Project</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

IV AWARD OF CONTRACT

- (a) If awarded this contract, do you intend to sublet any portion of this work? _____ If so, list as follows. You may use a separate sheet of paper if needed.

Name	Address	Applicable Certification	Years of Experience	Projects Completed
Landscape Subcontractor				
Arborist				
Other				
Other				

(b) Work presently under contract to, or pending award to, your organization. (Please include any attachments.)

<u>Contract No. or Description</u>	<u>Total cost of Project</u>	<u>Amount of Work Completed</u>	<u>Amount to be Completed</u>	<u>Probable Date of Completion</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

(c) List some principal projects completed by your organization. (Please include any attachments.)

<u>Description of Work</u>	<u>General or Sub (If Sub, what type of work)</u>	<u>Your Contract Amount</u>	<u>Year</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

- (d) Have you ever performed work for the U. S. Government? _____ Any State government? _____ Any County or City government? _____ If yes to any of these, please list which agency, references, phone numbers, and contact persons.

- (e) Have you ever failed to complete any work awarded to you? _____ If so, where and why.

- (f) Has any officer or partner of your organization ever been an officer or partner of some other organization that failed to complete a construction contract? If so, state name of individual, other organization and reason therefore.

- (g) Has any officer or partner of your organization ever failed to complete a construction contract handled in his own name? _____ If so, state name of individual, name of owner and reason therefore.

V. BIDDER CERTIFICATION

The above statements are certified to be true and accurate and we have the equipment, labor, supervision, and financial capacity to perform this Contract, either with our organization, or with subcontractors.

Dated at _____

this _____ day of _____ 2019.

By: _____

(Title of Person Signing)

(Name of Organization)

State of _____

County of _____

_____ Being duly sworn states that he is _____

_____ of _____, and that
(Title) (Name of Organization)

the answers to the foregoing questions and all statements therein contained are true and accurate.

Sworn to before me this _____ day of _____, 2019.

Notary Public

My commission expires _____

CONTRACT

AND

BONDS

MONTGOMERY COUNTY, MARYLAND

STANDARD FORM OF AGREEMENT BETWEEN

MONTGOMERY COUNTY and CONTRACTOR
where the basis of payment is a

UNIT PRICE

AGREEMENT

made this _____ day of _____ in the year of Two Thousand and Nineteen

BETWEEN

MONTGOMERY COUNTY, MARYLAND

the Owner and

the Contractor

The Owner and the Contractor agree as set forth below.

IFB No. #1103283
MCDHCA Project No. 0F7701G
Montclair Manor Community Lighting and Site Improvements Project

TERMS AND CONDITIONS OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

ARTICLE 1

THE CONTRACT DOCUMENTS

The Contract Documents consist of Invitation For Bid, Instructions to Bidders or Bidders Information, Bid, Schedule of Prices, Bid Bond, this Agreement, Conditions and Provisions of the Contract (General, Supplementary, Special and other Conditions or Provisions), Drawings (except boring logs and appurtenant data), Specifications, all Addenda issued prior to execution of this Agreement and all Modifications issued subsequent thereto, and Notice-to-Proceed. These form the Contract, and all are as fully a part of the Contract as if attached to this Agreement or repeated herein.

"COUNTY CODE and PROCUREMENT REGULATIONS" – The requirements of the Montgomery County County Code and the County's Procurement Regulations are incorporated by reference and made a part of this contract. In case of any inconsistency between this contract and the Procurement Regulations, the Procurement Regulations shall govern. By signing this contract and/or performing work under this contract, the Contractor certifies that it will comply with all requirements of the Montgomery County Code and the County's Procurement Regulations.

ARTICLE 2

THE WORK

Work shall be understood to mean the furnishing of all labor, materials equipment and other incidentals necessary to the successful completion of the project and the carrying out of all the duties and obligations imposed by the Contract Documents.

ARTICLE 3

ARCHITECT/ENGINEER

The Architect/Engineer for this Project is as defined in the General Provisions – Section 1.

ARTICLE 4

TIME OF COMMENCEMENT AND COMPLETION

The work to be performed under this Contract shall be commenced at a time established in the written Notice-to-Proceed. The Contractor agrees that all the work included in this Contract shall be completed in its entirety in **65 WORKING DAYS**. Each project shall be completed within 120 days. In the event the Contractor shall fail to complete his/her work in its entirety within the time stated herein, the Contractor acknowledges and agrees that the Owner will deduct and retain from any monies due the Contractor Liquidated Damages (not as penalty) in the amount of **\$600.00** per working day that extends beyond the 65 working day contract period, as specified in the Contract Documents.

ARTICLE 5

CONTRACT AMOUNT

The Owner shall pay the Contractor an estimated amount of _____
_____ (\$_____)

for the performance of the Work set forth in the Contract Documents subject to additions and deductions, by Change Orders, as defined in the General Conditions. The actual compensation to be paid shall be in accordance with the "Schedule of Prices" attached to the "Bid to Montgomery County" which is the basis of the Contractor's bid. It is understood that the approximate quantities shown in the "Schedule of Prices" are solely for the purpose of facilitating the comparison of Bids, and that the Contractor's compensation will be computed upon the basis of the actual quantities in the completed work, whether they be more or less than the quantities shown in the "Schedule of Prices".

Contractor's Name: _____

Contract No.: 1103283

SIGNATURES

MONTGOMERY COUNTY, MARYLAND

By: _____
Avinash G. Shetty, Director
Office of Procurement

By: _____

Date: _____

Typed: _____

Title: _____

Date: _____

RECOMMENDED

By: _____
Timothy J. Goetzinger, Acting Director
Department of Housing and
Community Affairs

Date: _____

I hereby affirm that the above named person
is a corporate officer and empowered to
sign contractual agreements for the
corporation

Signed: _____

Typed: _____

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENT, THAT _____

hereinafter called the CONTRACTOR, and _____

a corporation incorporated under the laws of the State of _____ hereinafter
called the SURETY, are held and firmly bound unto Montgomery County, Maryland, in the full
just sum of _____

_____ (\$ _____),
(95% of the TOTAL BASE BID PRICE) lawful money of the United States of America, to be paid
to the said Montgomery County, to which payment well and truly to be made and done, we bind
ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these
present.

Sealed with our respective seals and dated this _____ day of _____, 2019

Whereas, the above bonded CONTRACTOR has entered into a contract with the said
Montgomery County, Maryland, bearing even date herewith for _____

Montgomery County, Maryland being approximately _____
(_____) feet in length, for approximately the sum of _____
_____ (\$ _____),

the said project being situated _____
_____ and,

NOW THEREFORE, the condition of this obligation is such that if the above bonded Contractor shall in all respects comply with the terms and conditions of this contract and fully meet and perform his/her, their or its obligations thereunder, including the plans, specifications and special provisions therein referred to, and made a part thereof, and such alterations as may be made in said plans and specifications as therein provided for, and shall well and truly and in a manner satisfactory to the Chief Administrative Officer for Montgomery County complete the work contracted for, and shall save harmless Montgomery County from any expense incurred through the failure of said Contractor to complete the work as specified, or from any damages growing out of the negligence of the said Contractor, or his, their or its agents and employees or any liability for the payment of any wages due or materials furnished in connection with said contract; and shall well and truly pay all just debts incurred for labor and materials entering into the work covered by said contract, through sub-contract or in any other manner, by or on behalf of the Contractor.

AND also shall save and keep harmless the said Montgomery County against and from all losses to it from any cause whatever, including costs of transportation by water, rail or otherwise, and patent trademark and copyright infringements, but without limiting the foregoing, in the manner of constructing said improvement, then this obligation to be void or otherwise to be and remain in full force and virtue.

Witness:

By: _____ (SEAL)

Title: _____ By: _____ (SEAL)

_____ (SEAL)

_____ (SEAL)

Surety Company

BY: _____

Witness:

TITLE: _____

BY: _____

TITLE: _____

LABOR AND MATERIAL PAYMENT BOND

This bond is issued simultaneously with performance bond in favor of the owner conditioned for the full and faithful performance of the contract.

KNOW ALL MEN BY THESE PRESENTS: that _____
(Here insert full name and

address of legal title of Contractor)

as Principal, hereinafter called Contractor, and _____
(Here insert full

_____, a corporation created
name and address of legal title of Surety)

existing under the laws of the State of Maryland, hereinafter called Surety, are held and firmly bound unto MONTGOMERY COUNTY, MARYLAND as Obligee, hereinafter called Owner, for the use and benefit of claimants as hereinbelow defined, in the amount of

(Here insert a sum equal to 100% of the TOTAL BASE BID PRICE

Dollars(\$),
in written words)

for the payment where of Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS _____

Principal has by written agreement dated _____ 2019,
entered into a contract with owner for

for approximately the sum of _____
which contract is by reference made a part hereof, and is herein-after referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if, Contractor shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Contractor or with a Subcontractor of the Contractor for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being constructed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.
2. The above named Contractor and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.
3. No suit or action shall be commenced hereunder by any claimant:
 - a) Unless claimant, other than one having a direct contract with the Contractor, shall have given written notice to any two of the following: the Contractor, the Owner or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Contractor, Owner or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.
 - b) After the expiration of one (1) year following the date on which Contractor ceased work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
 - c) Other than in a state court of competent jurisdiction in and for the County of other political subdivision of the state in which the Project, or any part thereof, is situated, or in the United States District Court for the district in which the Project, or any part thereof, is situated and not elsewhere.

4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

Signed and sealed this _____ day of _____ A.D. 2019

IN THE PRESENCE OF:

	_____ ((Principal) (Seal)
	(
	((By)
	_____ (
_____ (Witness)	_____ (Title)

	_____ ((Surety) (Seal)
	(
	((By)
	_____ (
_____ (Witness)	_____ (Title)