



ADDENDUM NO. 2

TO: Interested Parties

FROM: Blair Reynolds,
Chief Project Manager, Division of
Engineering

DATE: Tuesday, July 12, 2022

RE: Professional Boulevard – Phase II
Contract No. RD-PB-270-10
State Contract No. WA071ZM1
FAP No. APL-3(779)E

Acknowledge receipt of this **Addendum No. 2** by signing in the space provided below and returning with your Bid.

Failure to sign and return with your Bid may subject the Bidder to disqualification. This Addendum No. 2 forms a part of the Bid Documents, it supplements and modifies them as outlined herein.

This **Addendum No. 2** consists of **33** pages, including this page and attachments.

I hereby acknowledge receipt of Addendum No. 2:

By: _____ Date _____
Signed Name

Typed Name

Title

For: _____
Firm

80 West Baltimore Street | Hagerstown, MD 21740-6003 | P: 240.313.2460 | TDD: 711

ADDENDUM NO. 2

Professional Boulevard – Phase II
Contract No. RD-PB-270-10; State Contract No. WA071ZM1; FAP No. APL-3(779)E

Date Issued: July 12, 2022

Bids Due: July 27, 2022
3:00 p.m.

The following addendum material is hereby made a part of the Bid Documents. Please note the following changes, information, and/or instructions in connection with the proposed work and submit proposals accordingly.



Blair Reynolds
Chief Project Manager
Division of Engineering

By Authority of:
Board of County Commissioners
Washington County, Maryland



Scott Hobbs, P.E.
Director
Division of Engineering

To: All prime Contractors and all others to whom specifications have been issued.

Item 1.01 **ADDITIONAL QUESTIONS WILL BE ACCEPTED UNTIL THURSDAY, JULY 14, 2022 (4:00 PM)**

Item 1.02 **Table of Content, Page TOC-1**
DELETE in its entirety.
REPLACE with Revised TOC-1R

Item 1.03 **Contract Provisions, Page CP-1**
DELETE in its entirety.
REPLACE with Revised CP-1R

Item 1.04 **Contract Provisions, Page CP-9 thru CP-21**
DELETE in its entirety.
REPLACE with Revised CP-9R thru CP-21R

Item 1.05 **Special Provisions, Page SP-48**
DELETE in its entirety
REPLACE with Revised SP-48R

Item 1.06 **ADD Plate No. 9 Metal Handrail Detail**

Item 1.07 **Bid Forms, Page BF-2.6**
DELETE in its entirety
REPLACE with Revised BF-2.6R

Item 1.08 **Bid Forms, Page BF-2.7**
DELETE in its entirety
REPLACE with Revised BF-2.7R

Item 1.09 **REVISIONS TO THE CONSTRUCTION DRAWINGS:** shall be incorporated into Bid Documents.

1. Sheet 29R of 129: Adjust PVC text to 30 mil Synthetic and for readability concerns
2. Sheet 30R of 129: Include Polyethylene to Synthetic Liner and for readability
3. Sheet 31R of 129: Removed Filterra Copywrite and for readability
4. Sheet 86R of 129: Revised fuse schedule
5. Sheet 87R of 129: Revised fuse schedule

6. Sheet 88R of 129: Revised equipment list

Item 1.10

QUESTIONS THAT WERE SUBMITTED BY FRIDAY, JULY 1, 2022
(4:00PM)

Question #1 – C. William Hetzer/Huntzberry Brothers

We would like to request the AutoCAD files for digital takeoff.

Response: Quantities are provided for bidding purposes. CAD files of the proposed linework will be provided to the winning bidder.

Question #2 – C. William Hetzer

Presently we are experiencing long lead times in procuring materials. Would the County consider extending the contract duration to allow for material procurement process in the fall/winter of 2022 and the actual start of on-site activities in the spring of 2023?

Response: We are aware of the delays in steel mast arms and light poles. However, the work east of the bridge area, (curb, sidewalk, bioswale, paving) can be done while waiting for other materials. We will assess other material delays as construction occurs and make any adjustments to contract length accordingly.

Question #3 – Excavating Associates

Plan Sheet 34A of 129 calls for flowable fill between/around 36” pipes. How is flowable fill paid for? Can you provide a quantity of flowable fill needed?

Response: We have added Item 3024B Flowable Fill which shall have a maximum PSI of 150. The Item and quantity have been added to the Bid Forms Schedule of Prices page 2.6.

Question #4 – Excavating Associates

Bid Item 3020B calls for 300 SY of 30 mil synthetic liner. Plan sheet 28 Bio Swale detail and stormwater swale schedule show 1,556 LF x +/- 20’ of liner which equals +/- 3,458 SY of synthetic liner. Please verify bid quantity is correct.

Response The liner is only to be used when rock is encountered during excavation and the Engineer determines the subgrade poses an increased possibility of sinkhole development. This is why the bid quantity is 300 SY.

Question #5 – Excavating Associates

Is liner to be 30 mil polyethylene per spec SP-48 or PVC per plan sheet 29 SW-08?

Response: The synthetic liner may be Polyethylene or PVC meeting MDE Material Specifications in Table B.3.1, Appendix B.3 of the Maryland Stormwater Management Design Manual. Sheet 29 SW-08 and SP-48 have been revised.

Question #6 – Excavating Associates

Bid Item 4001B Metal Handrail – Can you provide a detail for this handrail? Do post get mounted on proposed 10' shared use path?

Response: The post is to be mounted on the concrete shared use path. A Detail has been added to the Plates Section of the Bid Documents as Plate 9.

Question #7 – Excavating Associates

Detail for free standing barrier on plan sheet 11 shows HSS Rail on top of barrier. What pays for HSS Rail?

Response: We have added Item 4002B – HSS Rail. The Item and quantity have been added to the Bid Forms Schedule of Prices page 2.7.

Question #8 – Rustler Construction

Please provide additional time for questions. Due to weekly busy bid schedules, most companies work in detail on projects just a few days before the bid due date. The county will benefit from more accurate and competitive bids.

Response: We will extend the question period to Thursday July 14, 2022 at 4:00 pm by this Addendum.

Question #9 – Rustler Construction

How is rock removal going to be paid if it is encountered during excavation?

Response: Rock removal is to be paid using Item 2001B or 2001A – Class 1 and Class 2 Excavation.

Question #10 – Rustler Construction

Is a Maryland DOT DBE certification sufficient to meet the DBE requirements for this project?

Response: Maryland DOT DBE Certification is required for the 4% goal. See the Proposal Form Packet within the Bid Forms for more detail.

Question #11 – Rustler Construction

Several Items on the bid forms do not have a code. Please clarify why.

Response: Codes are generally not used on County projects.

Question #12 – Rustler Construction

Is there any night work required in this project, if affirmative, where and for how long?

Response: Night work will be required for the Eastern Boulevard median work, as well as the traffic signal work.

Question #13 – Rustler Construction

Is there a limit in the dollar/percent amount that can be used for mobilization?

Response: Yes, per Special Provision 108 on SP-36.

Question #14 – Rustler Construction

Is there a limit in the dollar/percent amount that can be used for maintenance of traffic?

Response: No.

Question #15 – Rustler Construction

Who is responsible for testing materials (i.e. Concrete, asphalt, soil compaction, etc.) If contractor responsible, how is the county going to pay for them?

Response: See pages TP-3 – TP-4 of Section “The Project” within the Bid Documents.

Question #16 – Rustler Construction

Please list any permits that the general contractor is responsible to obtain. Include costs and how the county plans to pay for them.

Response: The City of Hagerstown will need a General Street Permit (no cost) and the County will transfer its NPDES permit to the Contractor (no cost).

Question #17 – Rustler Construction

Is a staging area required for this project? How is the county going to pay for it?

Response: If a staging area is needed it shall be within the LOD between station 23+00 and 25+25, or station 29+00 and 50+00. Payment will be incidental to the item being stored.

Question #18 – Rustler Construction

Please provide Geotechnical report for this project.

Response: Boring and Drive Tests are provided within the Construction Drawings on sheets 93-107.

Question #19 – Rustler Construction

Please provide Test Hole reports and summary for this project.

Response: Test Pit Data are provided within the Construction Drawings on sheets 8-10.

Question #20 – Rustler Construction

What is the material and depth for items 2005B, 2006A (Full depth saw cuts)?

Response: Per MDOT SHA Standard Specification 206.03.01 - Saw cut to full depth the existing pavement, sidewalk, paved ditches, curb, or combination curb and gutter along the lines specified or as directed.

Question #21 – Rustler Construction

What is the material and depth of the existing pavement (Item 2005A)?

Response: See Roadway Borings RB-01 and RB-02 on sheet 93 and 94 of the Construction Drawings.

Question #22 – Rustler Construction

What is the material, diameter, location and depth of the pipe to be removed in item 3007A?

Response: There is a 36" RCP (4' – 4 1/2' depth) from station 14+50 to 15+83 right and an 18" RCP (4.75' depth) from station 17+00 to 18+40 left. All other pipe removals are incidental to the pipes being placed in the same trench.

Question #23 – Rustler Construction

What is the depth for items 3014B, 3016A?

Response: Class I riprap is as listed on Table 8 on sheet 32 of the Construction Drawings.

Question #24 – Rustler Construction

Plan sheets 29 through 31 are not legible. Please replace them with readable ones.

Response: Plan sheets 29 -31 will be replaced by 29-R, 30-R, and 31-R.

Question #25 – Rustler Construction

Please provide cut and fill areas for each cross section. Also, please provide a summary.

Response: Most of the earthwork was part of the Phase I construction. There is limited excavation for Phase II, so no table is provided.

Question #26 – Rustler Construction

What is the height and width of items 3015B, 3017A (Bottom cutoff wall for class I riprap)?

Response: Cutoff walls are as listed on Table 8 on sheet 32 of the Construction Drawings

Question #27 – Rustler Construction

Please clarify how to price item 7022B (Specimen Tree felling outside LOD per LTE direction).

Response: This is a lump sum item to evaluate the 5 Specimen Trees Listed on the Forest Conservation Plan sheet 61 (102, 103, 104, 107, 108) and remove those that are dead and pose a threat to the safety of the roadway and traveling public.

Question #28 – Rustler Construction

Please clarify how to price item 8006B (Overlay existing ground mounted signs).
Provide detail.

Response: The existing 9’x2.5’ sign is to receive a 24”x12” Aluminum Overlay as shown on the detail on sheet 78 of the Construction Drawings.

Question #29 – Rustler Construction

Provide stations where no work will be performed (in/around Antietam Creek).

Response: Work will be performed from Eastern Boulevard to station 52+88 within the Limits of Disturbance. The work at the bridge includes lighting, concrete barrier, HSS Rail, signing and pavement marking.

Attachments:

Table of Contents, Page TOC-1R (1 Page)
Contract Provisions, Page CP-1R (1 Page)
Contract Provisions, Page CP9R thru CP-21R (13 Pages)
Special Provisions, Page SP-48R (1 Page)
Metal Handrail Detail Plate No. 9 (1 Page)
Bid Forms, Page BF-2.06R (1 Page)
Bid Forms, Page BF-2.7R (1 Page)
Contract Drawings, Page 29R thru 31R (3 Pages)
Contract Drawings, Page 86R thru 88R (3 Pages)

END ADDENDUM No. 2

PROFESSIONAL BOULEVARD
PHASE II
COUNTY CONTRACT NO. RD-PB-270-10
SHA CONTRACT NO. WA071ZM1
FAP NO. APL-3(779)E

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**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

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- II. Nondiscrimination
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- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. 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 paragraph 1.d. of this section; 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 paragraph 1.b. of this section) 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.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, 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. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

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

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

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

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer 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 the contracting officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, 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.

c. 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.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part 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.

2. Withholding (29 CFR 5.5)

The contracting agency 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, the contracting agency may, after written notice to the contractor, 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.

3. Payrolls and basic records (29 CFR 5.5)

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and 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.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. 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. 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 the contracting agency for transmission to the State DOT, the FHWA 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 section 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 the contracting agency.

(2) 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:

(i) 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;

(ii) 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;

(iii) 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.

(3) 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 paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, 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, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, 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 (29 CFR 5.5)

a. Apprentices (programs of the USDOL).

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.

b. Trainees (programs of the USDOL).

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 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 the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of 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.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

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 as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 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 29 CFR 5.5.

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 as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, 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 the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility (29 CFR 5.5)

a. 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).

b. 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).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. 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 he or she is employed on such work to work in excess of forty 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 forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1 of this section, 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 computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph 1 of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1 of this section. 29 CFR 5.5.

* \$27 as of January 23, 2019 (See 84 FR 213-01, 218) as may be adjusted annually by the Department of Labor; pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990).

3. Withholding for unpaid wages and liquidated damages.

The FHWA or the contracting agency 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 contractor, 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 paragraph 2 of this section. 29 CFR 5.5.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 1 through 4 of this section 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 paragraphs 1 through 4 of this section. 29 CFR 5.5.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or

equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on longstanding interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance

with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.326.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders

or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.326.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant

who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is

submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(a) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(b) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(c) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier

subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

CATEGORY 300
DRAINAGE

CONTINGENT: 30 MIL SYNTHETIC LINER

DESCRIPTION. This work is to install a synthetic liner in the proposed bioswales when rock is encountered during excavation and the Engineer determines the subgrade poses an increased possibility of sinkhole development.

MATERIALS. 30 mil U/V Resistant Polyethylene D4397
 30 mil U/V Resistant PCV per Construction Dwg SW-09

CONSTRUCTION. When rock is encountered, contact the Geotech and the Engineer to make the determination. Install per the details on the Construction Drawings.

MEASUREMENT AND PAYMENT. Contingent 30 Mil Synthetic Liner will be measured at the Contract Unit Price per Square Yard accepted in place. The payment will be full compensation for all excavation, material, labor, backfill, and for all overlap. All liner overlap shall be incidental to the cost of the liner installation.

METAL HANDRAIL DETAIL

Two-Line pipe railings and accessories

1-1/4" Standard Pipe, 1.66 OD, Schedule 40

42" Height, Brushed Aluminum, T6063

Coped and Welded

Post Spacing at 5 Feet O.C. maximum with reinforcing insert for added support to the post

Installation Options:

Core Drilling into the concrete sidewalk.

3,000 psi minimum non-shrink grout

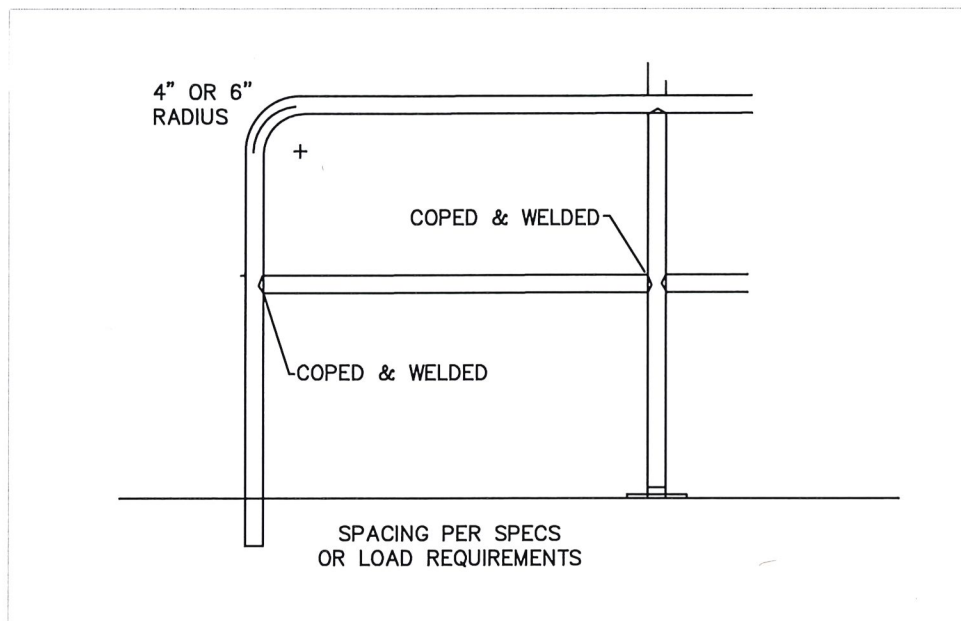
Anchoring Posts to the concrete drainage structure as required to withstand applicable railing loads.

7 inch x 7 inch plate, $\frac{3}{8}$ inch thick

Two (2) 1/2 inch diameter anchor bolts minimum or approve equivalent system

All welding shall be in accordance with the American Welding Society (AWS) D1.1 using E70XX electrodes or as approved. All welds shall be ground smooth.

Posts shall be installed vertically and evenly spaced. Railings shall be installed so that they are parallel to the top of the sidewalk.



WASHINGTON COUNTY, MARYLAND
DIVISION OF ENGINEERING



Washington County Administrative Annex. Building
747 Northern Avenue, Hagerstown, Maryland, 21742
Phone: 240-313-2460 Fax: 240-313-2401

METAL HANDRAIL
DETAIL

PLATE 9

BID FORMS - PROFESSIONAL BOULEVARD PHASE II COUNTY CONTRACT RD-PB-270-10 STATE CONTRACT WA071ZM1 FAP NO. APL-3(779)E

ITEM	CODE	QUANTITY	UNIT	ITEM DESCRIPTION	UNIT PRICE	ITEM TOTAL	
3017B	-	492	C.Y.	NO. 57 AGGREGATE FOR STORMWATER MANAGEMENT FACILITIES	_____	___	_____
3018B	-	115	CY.	PEA GRAVEL	_____	___	_____
3019B	-	1806	L.F.	6 INCH SUB-DRAIN PIPE	_____	___	_____
3020B	-	300	S.Y.	30 MIL SYNTHETIC LINER	_____	___	_____
3021B	-	919	C.Y.	BIORETENTION SOIL MIXTURE	_____	___	_____
3022B	-	LUMP SUM	L.S.	SWM FACILITY AS-BUILT CERTIFICATION	_____	___	_____
3023B	-	169	S.Y.	ACCESS ROAD WITH CELLULAR CONFINEMENT LOAD SUPPORT SYSTEM	_____	___	_____
3024B	-	60	C.Y.	FLOWABLE FILL			
End Category 3000-“B” Items Contract No. RD-PB-270-10 “B” Is For Base Bid					Total This Sheet		_____

BID FORMS - PROFESSIONAL BOULEVARD PHASE II COUNTY CONTRACT RD-PB-270-10 STATE CONTRACT WA071ZM1 FAP NO. APL-3(779)E

ITEM	CODE	QUANTITY	UNIT	ITEM DESCRIPTION	UNIT PRICE		ITEM TOTAL	
4001B	-	200	L.F.	METAL HANDRAIL	_____	___	_____	___
4002B	-	35	L.F.	HSS RAIL	_____	___	_____	___
<p>End Category 4000-"B" Items Contract No. RD-PB-270-10</p> <p>"B" Is For Base Bid</p>					<p>Total This Sheet</p>		<p>_____</p>	<p>___</p>

STORMWATER MANAGEMENT FACILITIES CONSTRUCTION INSPECTION REQUIREMENTS

- The developer/contractor shall notify that Division of Public Works ("DPW") at least five (5) days before commencing any work in conjunction with the approved final stormwater management plan and upon completion of the project when a final inspection will be conducted.
- Regular inspections shall be made and documented for each stormwater practice every two (2) weeks and at the required critical inspection stages identified in the attached checklists and the Washington County SWM, Grading, Soil Erosion and Sediment Control Ordinance.
- All non-structural practices shall be inspected, at a minimum, upon completion of final grading, the establishment of permanent stabilization, and before issuance of use and occupancy permit.
- Inspections shall be conducted by DPW, the MDE (as applicable), and by the Verifying Professional. Inspections performed by the DPW are not to be considered a substitute for those inspections required by the Verifying Professional. Written inspection reports shall be prepared by the Verifying Professional during construction of stormwater facilities. Copies of all inspection reports shall be provided to DPW by the person performing the inspection and kept on file with DPW.
- Written inspection reports are required and shall be submitted in a manner consistent with the Public Works Agreement and this Article and in a format approved by DPW, and shall include, at a minimum:
 - The date and location of the inspection;
 - Work observed;
 - Photos;
 - Tests performed;
 - Whether construction was in compliance with the approved stormwater management plan;
 - Any variations from the approved construction specifications;
 - Any violations that exist;
 - Signature and date of Verifying Professional.
- Failure to comply with these inspection requirements and/or obtain approval from the Verifying Professional or DPW at the required construction stages will result in disapproval of the facility, delays of final acceptance and permit release.
- The developer, DPW, the MDE, Verifying Professional, and on-site personnel shall be notified in writing when violations are observed. Written notification shall be made by the person discovering the violation and shall describe the nature of the violation and the required corrective action. No further work affected by the violation shall proceed until the corrective action is inspected and approved in writing by the Verifying Professional, the Division, MDE (as applicable), and the District (as applicable).
- DPW may require adjustments to address items overlooked or inappropriately addressed by the plans. Such adjustments may be required during construction or at the final inspection.
- The County may require a revision to the approved construction drawings or site plans be submitted and approved by the DPW, the Division of Planning and Community Development (as applicable), the MDE (as applicable) and the District prior to continuation of construction activity.
- No work shall proceed beyond the construction stages specified in attached Checklists and the Washington County SWM, Grading, Soil Erosion and Sediment Control Ordinance until DPW and the Verifying Professional inspect and approve the work previously completed and the Verifying Professional furnishes the DPW and developer with the results of the inspection reports as soon as possible after completion of each required inspection.

BIORETENTION/BIO-SWALE MAINTENANCE NOTES:

- Bioretention/bio-swale areas shall be inspected at a minimum bi-annually.
- Owner shall remove silt/sediment if the accumulation of sediment exceeds one inch within the bioretention/swale area.
- The top few inches of filter media shall be removed and replaced when water ponds for more than 48 hours.
- Trash and debris shall be removed as necessary.
- Mulch shall be replaced on an annual basis.
- Plant material shall be inspected yearly and dead and/or diseased vegetation shall be replaced, as necessary. Watering may be required during prolonged dry spells.

NOTES:

- Developer/contractor must contact the Certifying Engineer and the County at least five (5) days prior to the start of construction of the stormwater management system to coordinate inspection time tables.
- If rock is encountered, undercut 18" below the facility and backfill with CL type soil.
- Earth dams shall be compacted to a minimum 95% dry density.
- No trees or shrubs are permitted on the embankment.
- Facility embankments shall be planted with grass only.
- All pipe joints shall be water-tight. (HDPE pipe joints shall meet the 10.8 psi water-tight requirements of ASTM D3212).
- All proposed storm drain pipes must be placed on 95% compacted fill according to AASHTO T180A standards.
- All underdrain piping must have a minimum of 0.5% slope.
- The contractor is to contact Miss Utility a minimum of two (2) days prior to any digging on the site (1-800-257-7777).

LINER NOTES:

- See details to attach the PVC/HDPE liner to inlets and for the anchoring of the detail at the terminus.
- The Contractor is to follow all manufacturer's specifications and instructions for the attachment of the liner to pipes and inlets. Water-tight connections are required for all connections and seams of the liner.

OPERATION AND MAINTENANCE PLAN -- BIORETENTION

INSPECTION ITEM	INSPECTION REQUIREMENTS	REMEDIAL ACTION
Maintenance Access		
General	Check for accessibility to facility; excessive vegetation; surface stability	Repair erosion and maintain access surface in good condition
Pretreatment		
Grass filter strip or sand layer	Check for sediment accumulation	Remove sediment as needed
Optional sand layer	Check sand for staining and sediment accumulation	If contaminated, replace first three inches of sand layer
Gravel diaphragm	Check for sediment accumulation and evidence of erosion	Remove sediment and replace gravel as needed
Mulch layer	Check for a 2-3 inch mulch layer	Remove mulch and replace as needed
Filter Bed		
Dewatering	Check for dewatering within 48 hours of rainfall; noticeable odors; water stains on the filter surface or at the outlet; presence of algae or aquatic vegetation	Remove mulch and the top 3-6 inches of soil/sediment and replace with suitable materials per plan specifications; follow up inspections shall confirm adequate dewatering; contact the plan approval authority if the facility does not function as intended.
Sediment	Check for sediment accumulation	Remove sediment as needed
Mulch layer	Check for adequate cover; sediment accumulation; discoloration	Remove and replace mulch and excess sediment as needed
Vegetation		
Plant composition and health	Check for plant composition according to approved plans; invasive species, weeds, and dead or dying vegetation	Remove and replace plants as necessary
Vegetative cover/erosion	Check for erosion, runoff channelizing, or bare spots	Repair/grade and stabilize as needed
Outlets		
Underdrain system	Check outlet end to ensure that discharge is not obstructed; check for erosion	Remove any flow obstructions; grade and stabilize any eroded areas to provide stable conveyance
Overflow spillway	Check for displacement of riprap, stable conveyance, and erosion below the outlet	Repair and replace as needed
Conveyance Systems		
General	Check for erosion, flow blockages or bypass, and stable conveyance	Repair/replace and stabilize as needed
Flow diversion	Check flow splitter for proper functioning	Repair as necessary
Trash and Debris		
	Check for trash and debris accumulation	Trash and debris shall be disposed of in an acceptable manner
Structural Components		
	Check for structural deterioration, spalling, or cracking	Repair according to specifications on the approved plans

Field conditions may require a modification to the original approval in order to achieve the intended design function. The plan approval authority should be contacted for review and approval of all proposed modifications. Inspection and maintenance should occur after any major rain event (meeting or exceeding the design rainfall depth for the facility).

**NOTICE OF REQUIRED STORMWATER MANAGEMENT INSPECTIONS
SAND FILTERS, BIORETENTION AND RAIN GARDEN FACILITIES**

The following inspections are required to be performed by the Qualified Professional for the construction of any Sand Filter, Bioretention or Rain Garden Facility. Additional inspections may be needed based on professional engineering judgement. Each inspection is required at the start of each stage.							
Inspection Item		SW-1	SW-2	SW-3	SW-4	SW-5	SW-6
EXCAVATION OF FACILITY - Prior to excavation, verify sediment and erosion control features are in place to prevent sediment inflow. Verify all flagging required in the area for sensitive area protection. Verify grading is accurately staked-out and re-staked as needed. Facility dimensions shall be verified and soils checked for infiltration. Verify contributing area is permanently stabilized. Verify that water is not present. Ensure roughening of side walls if sheared and sealed by heavy equipment. Verify that compaction of facility base is minimized.	CERTIFYING ENGINEER						
	DATE						
	COUNTY INSPECTOR						
PLACEMENT OF FILTER CLOTH (Trenches) - Ensure filter fabric is overlapping six (6) inches between strips of cloth. Ensure tree roots or other obstacles are removed from facility walls or sides and base to prevent tearing. Verify that uphill fabric roll overlaps two (2) feet over downhill roll. **USE 30 MIL SYNTHETIC LINER IN PLACE OF FILTER CLOTH AT THE DIRECTION OF THE ENGINEER IN PLACES WHERE EXCAVATION EXPOSES ROCK.**	CERTIFYING ENGINEER						
	DATE						
	COUNTY INSPECTOR						
PLACEMENT OF UNDERDRAINS AND OBSERVATION WELLS - Location, Size and material of underdrain and observation wells shall be verified prior to stone placement. Verify pipe ends capped. Verify 3" gravel cover.	CERTIFYING ENGINEER						
	DATE						
	COUNTY INSPECTOR						
PLACEMENT OF FILTERING MEDIA- Verify bottom layer material and thickness. Verify sand and/or filter media layer material and thickness. Verify filter fabric or pea gravel used between sand layers. Verify top filter media layer.	CERTIFYING ENGINEER						
	DATE						
	COUNTY INSPECTOR						
PLACEMENT OF SAND FILTER LAYER OR GRAVEL DIAPHRAGM - Verify depth and width of sand and/or diaphragm layer. Verify fill material.	CERTIFYING ENGINEER						
	DATE						
	COUNTY INSPECTOR						
STABILIZATION AND LANDSCAPING - Verify site top soiled, seeded and mulched. Verify embankment top soiled and seeded. Verify location, size, type and number of planted landscape material. Verify no more than 1/8 inch root ball exposed. Verify planting stock kept moist during on-site storage. Verify installation location, size, material type of fencing or other safety barriers.	CERTIFYING ENGINEER						
	DATE						
	COUNTY INSPECTOR						

DATE	7.7.22	BY	WC	REVISION DESCRIPTION		NO.	1	DESIGNED BY:	CEB	DRAWN BY:	CEB	CHECKED BY:	BOB	DATE:	APRIL 2019
WASHINGTON COUNTY, MARYLAND DIVISION OF ENGINEERING Washington County Administrative Annex, Building 80 W. Baltimore St., Hagerstown, MD 21740 Phone: 240-313-2400 Fax: 240-313-2401															
PROFESSIONAL BOULEVARD STORMWATER MANAGEMENT FACILITY DETAILS															
SCALE NONE															
SHEET NO. 29R OF 129															
DRAWING SW-08															
PROJECT NO. 10-270															

MARYLAND STORMWATER DESIGN MANUAL

B.4.C Specifications for Micro-Bioretenation, Rain Gardens, Landscape Infiltration & Infiltration Berms

1. Material Specifications

The allowable materials to be used in these practices are detailed in Table B.4.1.

2. Planting Soil

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the micro-bioretenation practice that may be harmful to plant growth or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.

The planting soil shall be tested and shall meet the following criteria:

- Soil Component – Loamy Sand or Sandy Loam (USDA Soil Textural Classification)
- Organic Content – Minimum 10% by dry weight (ASTM D 2974). In general, this can be met with a mixture of loamy sand (60%-65%) and compost (35% to 40%) or sandy loam (30%), coarse sand (30%), and compost (40%).
- Clay Content – Media shall have a clay content of less than 5%.
- pH Range – Should be between 5.5 and 7.0. Amendments (e.g. lime, iron sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.

There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.

3. Compaction

It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible use excavation hoes to remove original soil. If practices are excavated using a loader, the contractor should use wide track or march track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to restructure the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the Engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

4. Plant Material

Recommended plant material for micro-bioretenation practices can be found in Appendix A, Section A.2.3.

5. Plant Installation

Compost is a better organic materials source, is less likely to float, and should be placed in the invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2" to 3". Shredded or chipped hardwood mulch is the only acceptable mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/8th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

Grasses and legume seed should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

6. Underdrains

Underdrains should meet the following criteria:

- Pipe – Should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (ASTM F 758, Type PS 28, or AASHTO-M-278) in a gravel. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE).
- Perforations – If perforated pipe is used, perforations should be 3/8" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a 1/4" (No. 4 or 4x4) galvanized hardware cloth.
- Gravel – The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.
- The main collector pipe shall be at a minimum 0.5% slope.
- A rigid, non-perforated observation well must be provided (one per every 1,000 square feet) to provide a clean-out port and monitor performance of the filter.
- A 4" layer of pea gravel (1/8" to 3/8" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observations well and/or cleanout pipes must be provided (one minimum per every 1,000 square feet or surface area).

7. Miscellaneous

These practices may not be constructed until all contributing drainage area has been stabilized.

Table B-4.1 Material Specifications for Micro-Bioretenation, Rain Gardens & Landscape Infiltration

MATERIAL	SPECIFICATION	SIZE	NOTES
Plantings	See planting list.	n/a	plantings are site-specific
Planting soil (2' to 4' deep)	loamy sand (60-65%) & compost (35-40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content <5%
Organic Content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood	n/a	aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	No. 8 or No. 9 (1/8" to 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile			PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 or NO. 6 AGGREGATE (3/8" to 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; f'c=3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	On-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) <i>not using previously approved State or local standards</i> requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland – design to include meeting ACI Code 350.R/89; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Sand (if required)	AASHTO M-6 or ASTM C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.
Compost	MSHA Standard Specifications for Construction and Materials, May 2017 920.02.05 Compost.	Uniform particle size of 0.5" or less	Source – Separated Compost (Type B). Type B Compost shall be tree leaf compost or non-tree leaf compost. Type B Compost produced from lawn clippings shall be tested for contaminants in conformance with Maryland law and regulations.

CATEGORY 300 – SYNTHETIC LINED STORMWATER FACILITIES

DESCRIPTION. This work shall consist of furnishing, placing and anchoring of a 30 mil PVC or Polyethylene liner within the designated stormwater facility area as shown in the Contract Documents and as directed by the Engineer.

MATERIALS

Furnished Topsoil	920
Type B Soil Stabilization Matting	920
Staples	920

SYNTHETIC LINER MATERIAL.

The 30 mil Synthetic Liner shall conform to the following minimum physical properties.

PROPERTY	TEST METHOD	REQUIREMENT
Thickness	D 1593	+/- 5%
Specific Gravity (min.)	D 792	1.20
100% Modulus (psi. min.) (1 b. force/in. width, min.)	D 882	100 30
Tensile (psi. min.) (Lb. force/in. width, min.)	D 882	2300 69
Elongation at Break (% min.)	D 882	325
Graves Tear (lb./in., min.) (1 b. force/in. width, min.)	D 1004	325 8
Resistance to Soil Burial (% change max.) (a) Breaking Factor (b) Elongation At Break (c) Modulus at 100% Elongation	D 3083 (NSF Modified)	5 20 20
Impact Cold Crack(/F)	D 1790	-20
Dimensional Stability (% change/max.)	D 120 (212/f/15 min.)	5
Water Extraction (% max.)	D 3083	-0.25
Volatile Loss (% max.)	D 1203	0.70
Hyrostatic Resistance (psi, min.)	D 751	82

PVC LINER CERTIFICATION.

The Contractor shall certify that the PVC liner material conforms to the physical properties. The PVC Liner Certification shall also include:

- Polymer and composition of the PVC Liner, including additive composition of any coating materials.
- Manufacturer's Quality Control plan including properties, test methods, frequency of testing, tolerances and method of resolution for out-of-specification material.
- Laboratory test results documenting the physical properties.

STORAGE AND HANDLING.

The PVC liner shall remain stored in its original container in a dry area and protected from puncture, dirt, grease, water, mud, mechanical abrasions, excessive heat, extreme cold or other damage. On-site handling of the PVC liner is the responsibility of the Contractor.

Any damage of the PVC liner shall be documented. If the damaged PVC liner cannot be repaired to comply with the specification it shall be removed and replaced at no additional cost to the Administration.

CONSTRUCTION.

Construction shall be in conformance with the details shown on the plans or as directed by the Engineer and the following:

Area Subgrade Preparation.

Surfaces to be lined shall be smooth and free of all rocks, stones, sticks, sharp objects, or debris of any kind. The surface shall provide a firm, unyielding foundation for the liner with no sudden sharp or abrupt changes or break in grade. No standing water, mud, snow, or frozen subgrade that has become softened by water or overly dried until it has been properly reconditioned and recompact. Special care shall be taken to maintain the prepared soil surfaces. The soil surface will be observed daily by the Engineer to evaluate the surface condition. Any damage to the surface caused by weather conditions shall be repaired by the Contractor.

Anchor Trench.

The anchor trench shall be excavated to the line, grade, and width shown on the construction drawings, prior to liner placement.

If the anchor trench is located in clay susceptible to desiccation; no more than the amount of trench required for the liner to be anchored in one day shall be excavated to minimize desiccation of the anchor trench soils.

Slightly rounded corners shall be provided in the trench where the liner adjoins the trench so as to avoid sharp bends in the liner. No loose soil or rocks shall be allowed to underlie the liner in the anchor trench. Leading edges of the anchor trench shall be smooth and even.

Placement of Liner.

- The liner shall be placed down gradient (upstream to downstream) to facilitate overlapping and prevent runoff from entering under the placed liner.
- The method used to place the liner panels shall minimize wrinkles (especially differential wrinkles between adjacent panels). Minimum wrinkles shall be allowed to insure the liner is installed in a relaxed condition. Excessive wrinkles which overlap themselves shall not be allowed.
- All panels may be repositioned after deployment to conform to the overlap requirements, however, deployment and repositioning measures may eliminate dragging or elongating the PVC liner panels.
- The seam overlap shall be a minimum of 3 ft. and a maximum of 4 ft.
- Adequate ballast (e.g. cover soil, or similar measures that will not damage the liner) shall be placed to prevent uplift by wind. In case of high winds, continuous loading is recommended along edges of panels to minimize risk of wind flow under the panels.
- Any equipment necessary for installation and testing of the liner shall be permitted to come in contact with the liner. This equipment shall be rubber tired with a ground pressure not exceeding 5 psi, and the total weight not exceeding 750 lb.

Weather Conditions.

Synthetic liner deployment shall proceed when ambient temperature and material sheet temperature is between 60 and 106 F. Sheet temperature shall be measured on the liner surface by an infrared thermometer or surface contact thermometer.

Liner placement shall not be done during any precipitation, in the presence of excessive moisture (e.g. snow, fog, rain, dew, mud) or in the presence of excessive winds, as determined by the Engineer.

If the liner placement is required at ambient temperatures below 60 F, a means of storing the liner in an area that maintains the liner temperature above 60 F shall be provided. This liner temperature shall be maintained until the time of deployment.

Unpacking the Panels.

The Contractor shall notify the Engineer, before the liner is unpacked. Damaged or suspect areas shall be marked for testing and/or repair. Liner that is damaged during deployment (i.e. that cannot be adequately repaired) shall be replaced at no additional cost to the Administration.

Backfilling of the Anchor Trench.

The anchor trench shall be backfilled and compacted by the Contractor to the satisfaction of the Engineer. Trench backfill material shall be placed in 8 in. thick loose lifts and compacted by wheel rolling with light, rubber-tired or other light compaction equipment.

Care shall be taken when backfilling the trenches to prevent any damage to the PVC liner. At no time shall construction equipment come in direct contact with the liner. If damage occurs, it shall be repaired at no additional cost to the Administration.

Backfilling of PVC Liner.

The liner shall be covered with a 2 ft. layer of soil; the first 1.8 ft. shall conform to Common Borrow specifications and the top 4 in. shall be a layer of furnished topsoil. The backfill shall be tamped in place. Permanent type B soil stabilization matting shall be placed over the topsoil.

At no time shall construction equipment come into direct contact with the liner or traverse the backfilled trench. When damage occurs, it shall be repaired by the Contractor at no additional cost to the Administration. Compaction shall be to the satisfaction of the Engineer.

Measurement and Payment.

The Synthetic ditch liner will be measured and paid for at the contract unit price per square yard accepted in place. The payment will be full compensation for all excavation, liner, furnished topsoil, backfill, and for all overlap. All liner overlap shall be incidental to the cost of Synthetic liner installation. Excavation will be measured and paid for at the contract unit price per cubic yard for class 2 excavation for incidental construction.

WASHINGTON COUNTY, MARYLAND
DIVISION OF ENGINEERING

DESIGNED BY: CEB
DRAWN BY: CEB
CHECKED BY: BGB
DATE: APRIL 2019

Washington County Administrative Annex, Building
80 W. Baltimore St., Hagerstown, MD 21740
Phone: 240-313-2400 Fax: 240-313-2401

PROFESSIONAL BOULEVARD
STORMWATER MANAGEMENT
FACILITY DETAILS

SCALE
NONE

SHEET NO.
30R OF 129

PROJECT NO.
10-270

DRAWING
SW-09

DATE	7.7.22
BY	WC
REVISION DESCRIPTION	REMOVED PROPRIETARY INFORMATION
NO.	1
DESIGNED BY	CEB
DRAWN BY	CEB
CHECKED BY	BGB
DATE	APRIL 2019

WASHINGTON COUNTY, MARYLAND
DIVISION OF ENGINEERING

Washington County Administrative Annex, Building
80 W. Baltimore St., Hagerstown, MD 21740
Phone: 240-313-2460 Fax: 240-313-2401

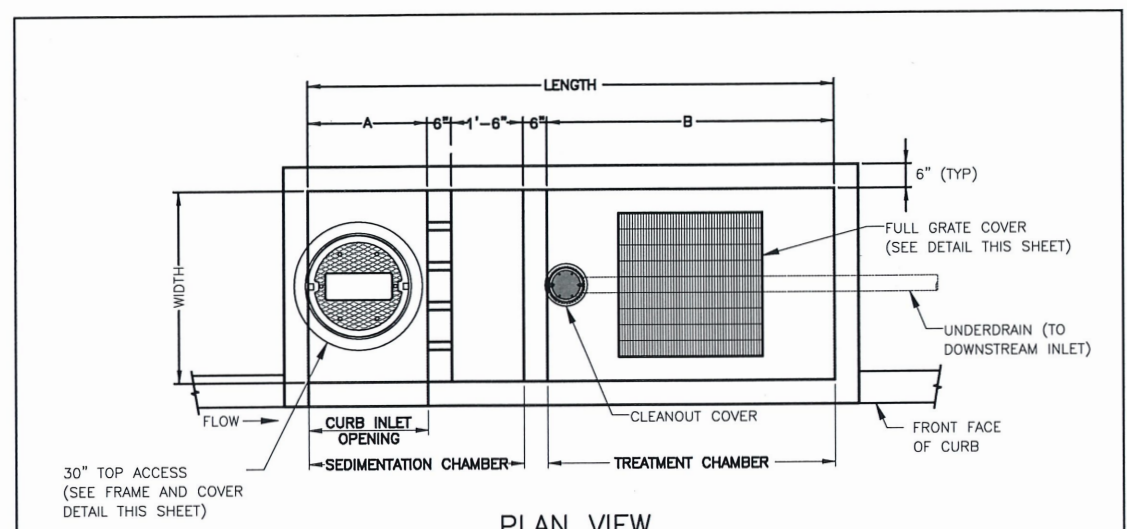
PROFESSIONAL BOULEVARD

STORMWATER MANAGEMENT
FILTER INLET DETAILS

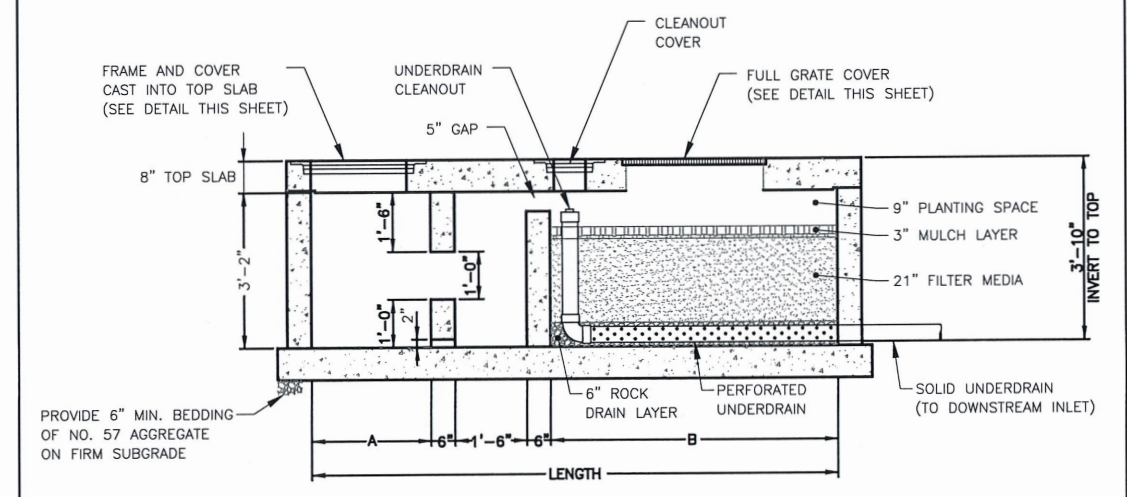
SCALE
AS SHOWN

SHEET NO.
31R OF 129

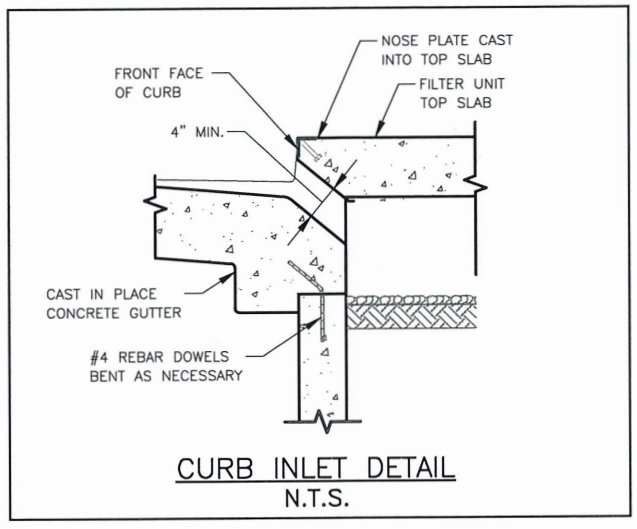
PROJECT NO.
10-270



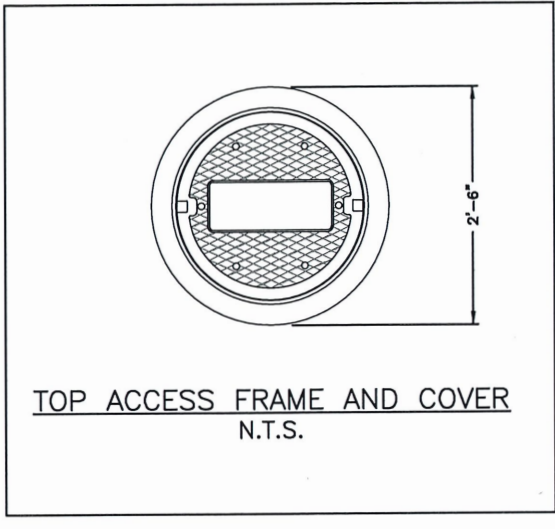
PLAN VIEW
N.T.S.



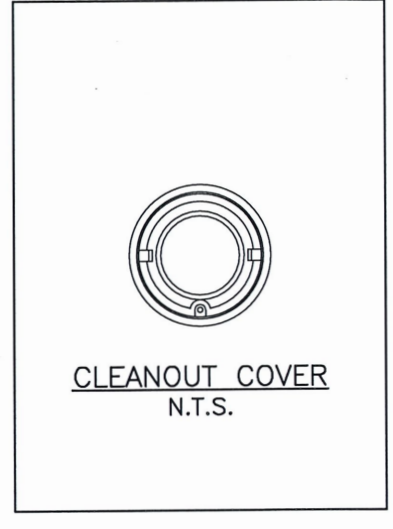
ELEVATION VIEW
N.T.S.



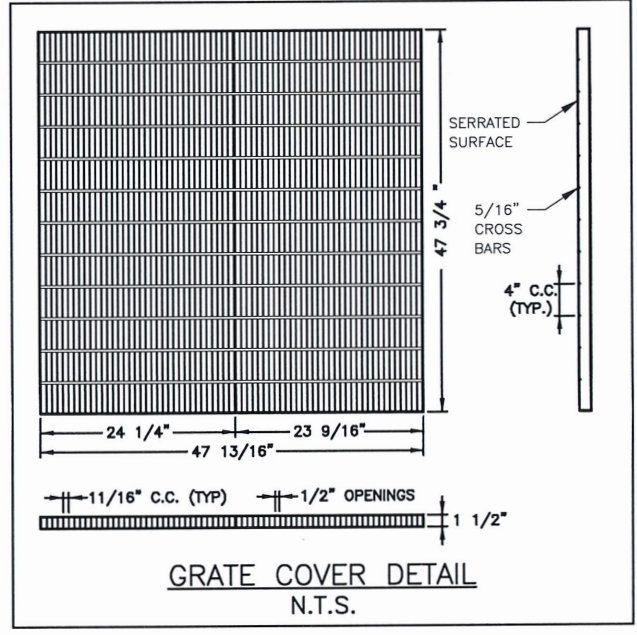
CURB INLET DETAIL
N.T.S.



TOP ACCESS FRAME AND COVER
N.T.S.



CLEANOUT COVER
N.T.S.



GRATE COVER DETAIL
N.T.S.

INSTALLATION PROCEDURE

THE FOLLOWING PROCEDURE PROVIDES AN OVERVIEW OF RECOMMENDED INSTALLATION PRACTICES. INSTALLATION SHALL FOLLOW THE REQUIREMENTS OUTLINED IN THE FILTER INLET INSTALLATION MANUAL, PREPARED BY THE MANUFACTURER.

1. MANUFACTURER SHALL DELIVER THE FILTER UNITS TO THE SITE IN COORDINATION WITH THE CONTRACTOR. INSPECTION OF THE FILTER UNIT AND ALL PARTS CONTAINED IN OR SHIPPED OUTSIDE OF THE UNIT SHALL BE PERFORMED AT THE TIME OF DELIVERY BY THE SITE ENGINEER/INSPECTOR AND THE CONTRACTOR. ANY NONCONFORMANCE TO THE APPROVED DRAWINGS OR DAMAGE TO ANY PART OF THE SYSTEM SHALL BE DOCUMENTED ON THE FILTER UNIT SHIPPING TICKET. DAMAGE TO THE UNIT DURING AND AFTER UNLOADING SHALL BE CORRECTED AT THE EXPENSE OF THE CONTRACTOR. ANY NECESSARY REPAIRS TO THE FILTER UNIT SHALL BE MADE TO THE ACCEPTANCE OF THE ENGINEER/INSPECTOR.
2. THE CONTRACTOR SHALL PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE FILTER VAULT. THE CONTRACTOR WILL REQUIRE SPREADER BARS AND CHAINS/CABLES/STRAPS, AS WELL AS LIFTING BLOCKS TO SAFELY AND SECURELY LIFT BOX SECTIONS AND TOP SLABS. FILTER BOXES SHALL BE LIFTED SEPARATELY FROM THE TOP SLABS.
3. THE UNIT SHALL BE PLACED ON A COMPACTED SUB-GRADE WITH A MINIMUM 6-INCH GRAVEL BASE MATCHING THE FINAL GRADE OF THE CURB LINE IN THE AREA OF THE UNIT. THE UNIT IS TO BE PLACED SUCH THAT THE UNIT AND TOP SLAB MATCH THE GRADE OF THE CURB IN THE AREA OF THE UNIT. COMPACTED UNDISTURBED SUB-GRADE MATERIALS TO 95% OF MAXIMUM DENSITY AT +1% TO +2% OF OPTIMUM MOISTURE. UNSUITABLE MATERIAL BELOW SUB-GRADE SHALL BE REPLACED TO THE SITE ENGINEER'S APPROVAL.
4. ONCE THE UNIT IS SET, THE INTERNAL WOODEN FORMS AND PROTECTED SILT FABRIC COVER MUST BE LEFT INTACT. THE TOP LID SHOULD BE SEALED ONTO THE BOX BEFORE BACKFILLING, USING A NON-SHRINK GROUT, BUTYL RUBBER, OR SIMILAR WATERPROOF SEAL. THE BOARDS ON THE TOP OF THE LID AND BOARDS SEALED IN THE UNIT'S THROAT MUST NOT BE REMOVED. THE SUPPLIER WILL REMOVE THESE SECTIONS AT THE TIME OF ACTIVATION.
5. OUTLET CONNECTIONS SHALL BE ALIGNED AND SEALED AT THE OUTLET CONNECTION LOCATION MARKED ON THE FILTER BOX. DO NOT USE PLUGGED COUPLINGS MARKED "USE OTHER CONNECTION".
6. BACKFILLING SHOULD BE PERFORMED IN A CAREFUL MANNER, BRINGING THE APPROPRIATE FILL MATERIAL UP IN 6" LIFTS ON ALL SIDES. PRECAST SECTIONS SHALL BE SET IN A MANNER THAT WILL RESULT IN A WATERTIGHT JOINT. IN ALL INSTANCES, INSTALLATION OF THE FILTER UNIT SHALL CONFORM TO ASTM SPECIFICATION C891 "STANDARD PRACTICE FOR INSTALLATION OF UNDERGROUND PRECAST UTILITY STRUCTURES".
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE CURB AND GUTTER AND TRANSITION TO THE FILTER UNIT FOR PROPER FLOW INTO THE SYSTEM.
8. THE CONTRACTOR SHALL BLOCK FILTER INLET CURB OPENINGS AFTER THE VAULT IS IN PLACE UNTIL THE SYSTEM IS ACTIVATED BY THE MANUFACTURER. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE AND COMPLETE MEASURES TO PROTECT THE FILTER UNIT FROM CONSTRUCTION-RELATED EROSION RUNOFF.
9. ACTIVATION SHALL BE PERFORMED ONLY BY THE MANUFACTURER'S AUTHORIZED PERSONNEL. ACTIVATION CAN OCCUR ONCE THE PROJECT SITE IS FULLY STABILIZED. CALL THE MANUFACTURER TO SCHEDULE ACTIVATION.

MAINTENANCE PROCEDURE

THE FOLLOWING PROCEDURE PROVIDES AN OVERVIEW OF RECOMMENDED MAINTENANCE PRACTICES FOR FILTER INLET UNITS. OPERATION AND MAINTENANCE WORK SHALL ADHERE TO THE METHODS OUTLINED IN THE FILTER INLET OWNER'S MANUAL, PREPARED BY THE MANUFACTURER.

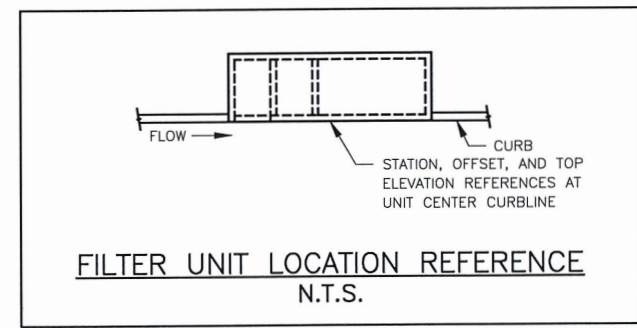
1. INSPECT THE FILTER UNIT AND SURROUNDING AREA. THE PRESENCE OF THE FOLLOWING CONDITIONS SHOULD BE NOTED ON THE MAINTENANCE REPORT AND PHOTOGRAPHED FOR DOCUMENTATION.
 - STANDING WATER
 - DAMAGE TO BOX STRUCTURE
 - DAMAGE TO GRATE
 - FLOW PREVENTED TO BYPASS
2. REMOVE THE UNIT GRATE FOR ACCESS INTO THE FILTER BOX AND DIG OUT ANY SILT, DEBRIS, OR TRASH. NOTE THE VOLUME AND TYPE OF MATERIAL REQUIRING REMOVAL.
3. MEASURE THE DISTANCE FROM THE TOP OF THE FILTER MEDIA LAYER TO THE BOTTOM OF THE TOP SLAB. IF THE DISTANCE IS GREATER THAN 15", ADD FILTER MEDIA (NOT TOP SOIL OR OTHER) TO A DISTANCE OF 12" TO THE TOP SLAB AND REPLACE MULCH.
4. ADD DOUBLE SHREDDED MULCH EVENLY ACROSS THE ENTIRE UNIT TO A DEPTH OF 3". MULCH SHOULD BE APPROVED BY THE MANUFACTURER FOR USE IN THE FILTER INLET SYSTEMS.
5. EXAMINE THE HEALTH OF THE PLANTED SURFACE AND REPLACE IF DEAD. TRIM AS NECESSARY TO REMAIN BELOW THE GRATE SURFACE. THE FOLLOWING ITEMS SHOULD BE NOTED ON THE MAINTENANCE REPORT. PROVIDE PHOTOGRAPHS OF CONDITION FOR DOCUMENTATION.
 - HEIGHT OF PLANT MATERIAL.
 - HEALTH
 - DAMAGE TO PLANTING
 - PLANTING REPLACED
6. CLEAN AREA AROUND THE UNIT AND REMOVE ALL REFUSE TO BE DISPOSED OF APPROPRIATELY.

GENERAL NOTES

1. FILTER UNITS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH OF THE PERTINENT SIZE UNIT. THE PAYMENT WILL BE FULL COMPENSATION FOR ALL EXCAVATION, THE PRECAST UNIT AND MATERIALS FROM THE MANUFACTURER, AGGREGATE, GRADE AND SLOPE ADJUSTMENTS, BACKFILL AND FOR ALL MATERIAL, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
2. THE MANUFACTURER SHALL PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
3. FILTER INLET STRUCTURES SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM-918, AND ACI-319 LOAD FACTOR DESIGN METHOD.
4. IF THE FILTER UNIT IS STORED BEFORE INSTALLATION, THE TOP SLAB MUST BE PLACED ON THE BOX USING 2X4 WOOD PROVIDED, TO PREVENT ANY CONTAMINATION FROM THE SITE. ALL INTERNAL FITTING SUPPLIED (IF ANY) MUST BE LEFT IN PLACE AS PER THE DELIVERY.
5. THE CONTRACTOR SHALL ADHERE TO ALL JURISDICTIONAL AND/OR OSHA SAFETY RULES DURING FILTER INLET INSTALLATION AND FOR PROVIDING TEMPORARY SHORING OF THE EXCAVATION.
6. EACH UNIT SHALL BE CONSTRUCTED AT THE LOCATIONS AND ELEVATIONS ACCORDING TO THE SIZES SHOWN ON THE APPROVED DRAWINGS. ANY MODIFICATIONS TO THE ELEVATIONS OR LOCATION SHALL BE AT THE DIRECTION OF AND APPROVED BY THE ENGINEER.
7. THE CONTRACTOR SHALL PROVIDE, INSTALL, AND GROUT OUTLET PIPES. OUTLET PIPES SHALL BE PAID OR PER LINEAR FOOT OF SUB-DRAIN PIPE.
8. PLANTINGS AND MULCH SHALL BE SUPPLIED BY THE MANUFACTURER AND DELIVERED AT THE TIME OF SYSTEM ACTIVATION. UNITS SHALL BE PLANTED USING CAREX APPALACHICA (APPALACHIAN SEDGE). ANY CHANGE TO THE PLANT SELECTION SHALL BE APPROVED BY THE ENGINEER.
9. FILTER UNITS WILL BE MAINTAINED BY THE MANUFACTURER FOR 1 YEAR AFTER ACTIVATION. AFTER THE 1-YEAR MAINTENANCE PERIOD IS OVER, MAINTENANCE SHALL BE ACCORDING TO THE MAINTENANCE PROCEDURES OUTLINED ON THIS SHEET.
10. CONTACT THE MANUFACTURER FOR ADDITIONAL DOCUMENTATION INCLUDING THE FILTER UNIT OWNER'S MANUAL, INSTALLATION MANUAL, AND OPERATIONS & MAINTENANCE MANUAL.

FILTER UNIT SCHEDULE								
FILTER NO.	LOCATION	WIDTH	LENGTH	A	B	TOP EL*	UNDERDRAIN DIAMETER	DOWNSTREAM INLET
F/1-1**	STA. 11+48.5, 28.8' LT	4'	19'	5'-6"	11'-0"	497.89	4"	1/1-1
F/1-2	STA. 11+50.2, 28.8' RT	4'	16'	5'-6"	8'-0"	498.19	4"	1/1-2
F/1-3	STA. 14+29.7, 28.8' LT	4'	16'	5'-6"	8'-0"	495.51	4"	1/1-6
F/1-4	STA. 14+32.5, 28.8' RT	4'	12'	3'-6"	6'-0"	495.82	4"	1/1-7
F/2-1	STA. 17+21.5, 25.0' LT	6'	19'	6'-6"	10'-0"	503.71	6"	1/2-1
F/2-2	STA. 17+21.6, 26.6' RT	6'	19'	6'-6"	10'-0"	503.58	6"	1/2-2
F/3-1	STA. 21+18.0, 25.0' LT	4'	16'	5'-6"	8'-0"	509.64	4"	1/3-1A

*TOP ELEVATION REFERS TO THE TOP OF CURB ELEVATION AT THE CENTER OF THE UNIT. THE UNIT SHALL BE SLOPED TO THE GRADE OF THE PROPOSED CURB.
**UNIT DIMENSIONS ARE NOT A STANDARD SIZE FOR PRECAST FILTER UNITS AND MAY REQUIRE A LONGER PRODUCTION LEAD TIME.



FILTER UNIT LOCATION REFERENCE
N.T.S.

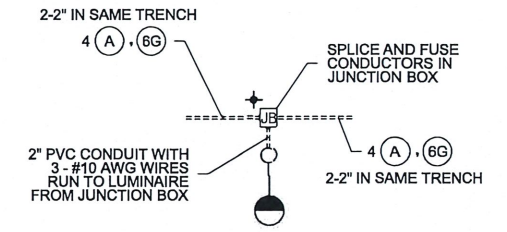
**FILTER INLET WITH SEDIMENTATION CHAMBER DETAILS
N.T.S.**

DRAWING
SW-10

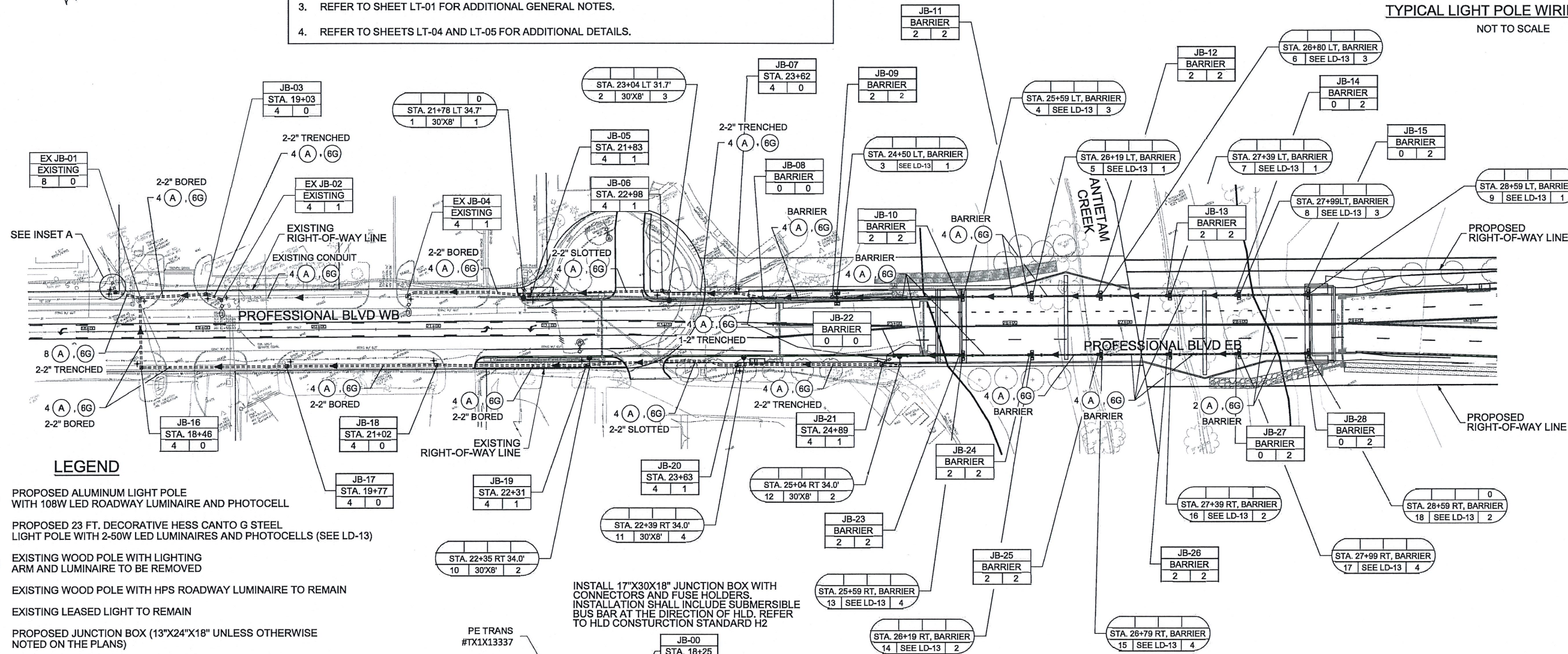


SPECIAL NOTES

- POLE FOUNDATIONS IN THE BARRIER SHALL BE INSTALLED AND QUANTIFIED IN THE BRIDGE PLANS FOR WASHINGTON COUNTY PROJECT NO. 10-244. POLE FOUNDATIONS WILL INCLUDE SLEEVES FOR FUTURE ANCHOR BOLTS, BUT NO MOUNTING HARDWARE. ALL MOUNTING HARDWARE SHALL BE INSTALLED UNDER WASHINGTON COUNTY PROJECT NO. 10-270. MOUNTING HARDWARE INCLUDING, BUT NOT LIMITED TO, ANCHOR BOLTS, WASHERS, NUTS, AND FABRIC PADS SHALL BE INCIDENTAL TO THE CONTRACT UNIT PRICE FOR DECORATIVE LIGHT POLES.
- PROPOSED JUNCTION BOXES AND CONDUIT EMBEDDED IN BARRIER ON BRIDGE WILL BE INSTALLED AND QUANTIFIED IN THE BRIDGE PLANS FOR WASHINGTON COUNTY PROJECT NO. 10-244.
- REFER TO SHEET LT-01 FOR ADDITIONAL GENERAL NOTES.
- REFER TO SHEETS LT-04 AND LT-05 FOR ADDITIONAL DETAILS.

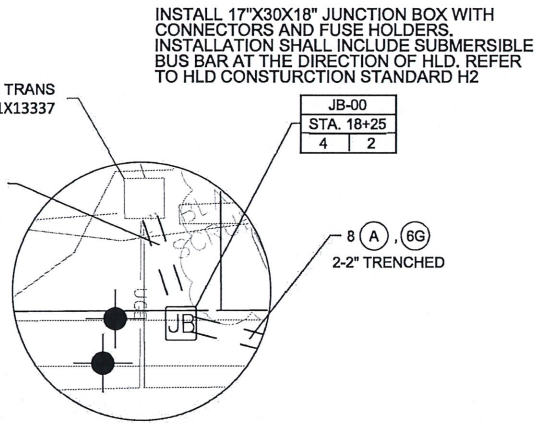


TYPICAL LIGHT POLE WIRING DETAIL
NOT TO SCALE



LEGEND

- PROPOSED ALUMINUM LIGHT POLE WITH 108W LED ROADWAY LUMINAIRE AND PHOTOCELL
- PROPOSED 23 FT. DECORATIVE HESS CANTO G STEEL LIGHT POLE WITH 2-50W LED LUMINAIRES AND PHOTOCELLS (SEE LD-13)
- EXISTING WOOD POLE WITH LIGHTING ARM AND LUMINAIRE TO BE REMOVED
- EXISTING WOOD POLE WITH HPS ROADWAY LUMINAIRE TO REMAIN
- EXISTING LEASED LIGHT TO REMAIN
- PROPOSED JUNCTION BOX (13\"X24\"X18\" UNLESS OTHERWISE NOTED ON THE PLANS)
- EXISTING JUNCTION BOX TO REMAIN
- EXISTING JUNCTION BOX TO BE REMOVED
- PROPOSED PVC CONDUITS (SEE PLANS FOR SIZE AND TYPE)
- PROPOSED PVC CONDUIT EMBEDDED IN TRAFFIC BARRIER
- EXISTING CONDUIT TO REMAIN
- EXISTING CONDUIT TO BE ABANDONED/REMOVED
- PROPOSED GROUND ROD
- DIRECTION TOWARDS TRANSFORMER
- CIRCUIT MATCHLINE DIRECTION ARROW



INSET A
NOT TO SCALE

WIRING LEGEND

- (A) 1-CONDUCTOR NO. 6 AWG COPPER, TYPE XLP
- (6G) NO. 6 COPPER GROUND WIRE (GREEN INSULATION)

GEOMETRIC LEGEND

	EXISTING
	PROPOSED

UTILITY LEGEND

	SD	STORM DRAIN
	GAS	GAS MAIN
	W	WATER MAIN
	SS	SEWER MAIN
	UGE	ELECTRIC CABLES
	E	AERIAL CABLES
	UGT	TELEPHONE CABLES
	FO	FIBER-OPTIC

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ENGINEER'S CERTIFICATION

PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 53359
EXPIRATION DATE: 2022-10-22

CITY OF HAGERSTOWN, MARYLAND DEPARTMENT OF PARKS AND ENGINEERING			
LOCATION: PROFESSIONAL BLVD BETWEEN EASTERN BLVD AND WASHINGTON COUNTY LINE			
TITLE: ROADWAY LIGHTING UPGRADES FOR PROFESSIONAL BLVD WIDENING (LIGHTING PLAN SHEET)			
SCALES	HORIZONTAL: 1"=50'	VERTICAL: -	
DRAWN BY	AFD	DATE	JUNE 2021
SURVEY BY	-	DATE	-
REVISY BY	-	DATE	JAN 2022
COUNTY PROJECT NO. 10-270	SHEET LT-02 OF 5		
ADDENDUM # 2	DRAWING NUMBER SHEET 86R OF 129		
CHANGE ORDER #	NOT USED FOR CONSTRUCTION		

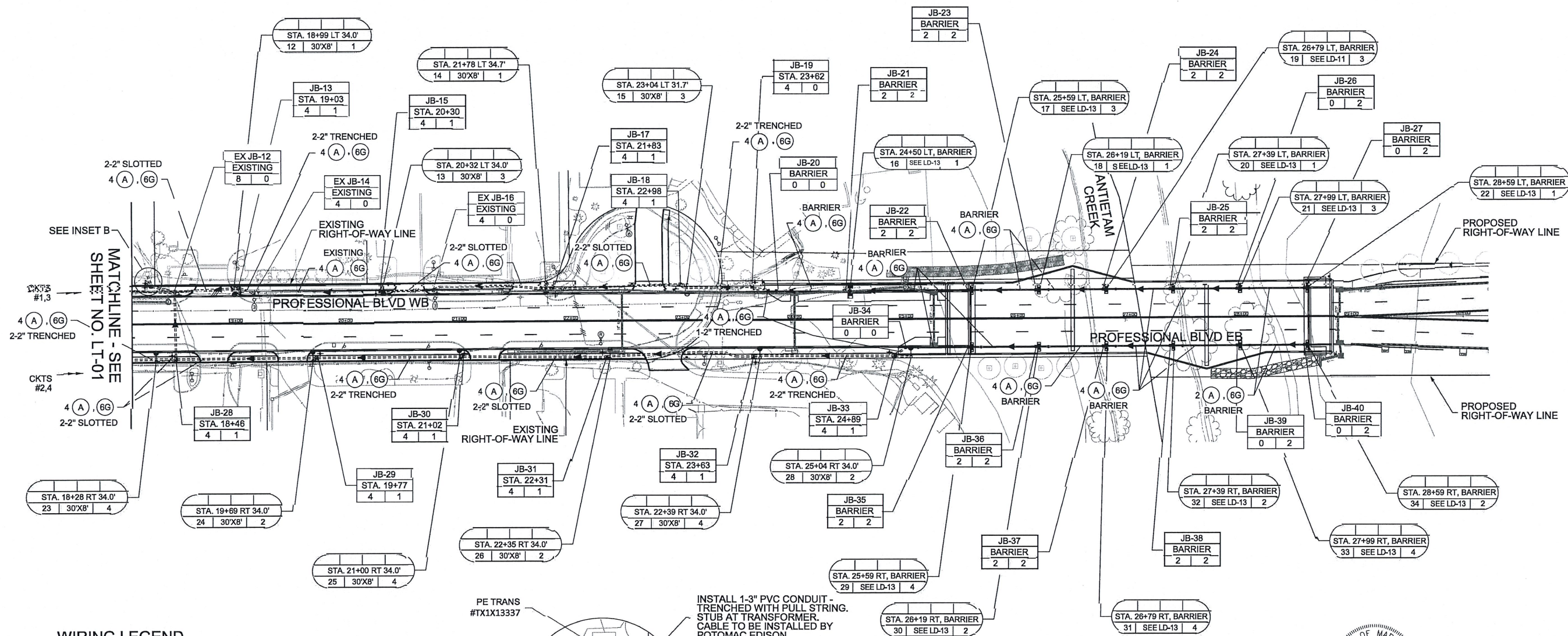


SPECIAL NOTES

- POLE FOUNDATIONS IN THE BARRIER SHALL BE INSTALLED AND QUANTIFIED IN THE BRIDGE PLANS FOR WASHINGTON COUNTY PROJECT NO. 10-244. POLE FOUNDATIONS WILL INCLUDE SLEEVES FOR FUTURE ANCHOR BOLTS, BUT NO MOUNTING HARDWARE. ALL MOUNTING HARDWARE SHALL BE INSTALLED UNDER WASHINGTON COUNTY PROJECT NO. 10-270. MOUNTING HARDWARE INCLUDING, BUT NOT LIMITED TO, ANCHOR BOLTS, WASHERS, NUTS, AND FABRIC PADS SHALL BE INCIDENTAL TO THE CONTRACT UNIT PRICE FOR DECORATIVE LIGHT POLES.
- PROPOSED JUNCTION BOXES AND CONDUIT EMBEDDED IN BARRIER ON BRIDGE WILL BE INSTALLED AND QUANTIFIED IN THE BRIDGE PLANS FOR WASHINGTON COUNTY PROJECT NO. 10-244.
- REFER TO SHEET LT-01 FOR ADDITIONAL GENERAL NOTES.
- REFER TO SHEETS LT-04 AND LT-05 FOR ADDITIONAL DETAILS.

LEGEND

- PROPOSED ALUMINUM LIGHT POLE WITH 108W LED ROADWAY LUMINAIRE AND PHOTOCELL
- PROPOSED 23 FT. DECORATIVE HESS CANTO G STEEL LIGHT POLE WITH 2-50W LED LUMINAIRES AND PHOTOCELLS (SEE LD-13)
- EXISTING WOOD POLE WITH LIGHTING ARM AND LUMINAIRE TO BE REMOVED
- EXISTING WOOD POLE WITH HPS ROADWAY LUMINAIRE TO REMAIN
- EXISTING LEASED LIGHT TO REMAIN
- PROPOSED JUNCTION BOX (13"x24"x18")
- EXISTING JUNCTION BOX TO REMAIN
- EXISTING JUNCTION BOX TO BE REMOVED
- PROPOSED PVC CONDUITS (SEE PLANS FOR SIZE AND TYPE)
- PROPOSED PVC CONDUIT EMBEDDED IN TRAFFIC BARRIER
- EXISTING CONDUIT TO REMAIN
- EXISTING CONDUIT TO BE ABANDONED/REMOVED
- PROPOSED GROUND ROD
- DIRECTION TOWARDS TRANSFORMER
- CIRCUIT MATCHLINE DIRECTION ARROW



WIRING LEGEND

- (A) 1-CONDUCTOR NO. 6 AWG COPPER, TYPE XLP
- (6G) NO. 6 COPPER GROUND WIRE (GREEN INSULATION)

GEOMETRIC LEGEND

- EXISTING
- PROPOSED

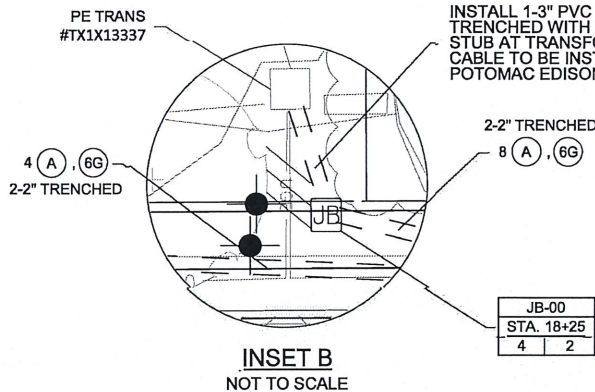
UTILITY LEGEND

- SD STORM DRAIN
- GAS GAS MAIN
- W WATER MAIN
- SS SEWER MAIN
- UGE ELECTRIC CABLES
- E AERIAL CABLES
- UGT TELEPHONE CABLES
- FO FIBER-OPTIC



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INSET B
NOT TO SCALE

INSTALL 1-3" PVC CONDUIT - TRENCHED WITH PULL STRING. STUB AT TRANSFORMER. CABLE TO BE INSTALLED BY POTOMAC EDISON

INSTALL 17"x30"x18" JUNCTION BOX WITH CONNECTORS AND FUSE HOLDERS. INSTALLATION SHALL INCLUDE SUBMERSIBLE BUS BAR AT THE DIRECTION OF HLD. REFER TO HLD CONSTRUCTION STANDARD H2

48 HRS.
Before You Dig
Call
"MISS UTILITY"
Service Protection Center

CALL TOLL FREE
1-800-257-7777



ENGINEER'S CERTIFICATION

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 53359
EXPIRATION DATE: 2022-10-22

REVISION NOTES

ADD ALTERNATIVE

CITY OF HAGERSTOWN, MARYLAND
DEPARTMENT OF
PARKS AND ENGINEERING

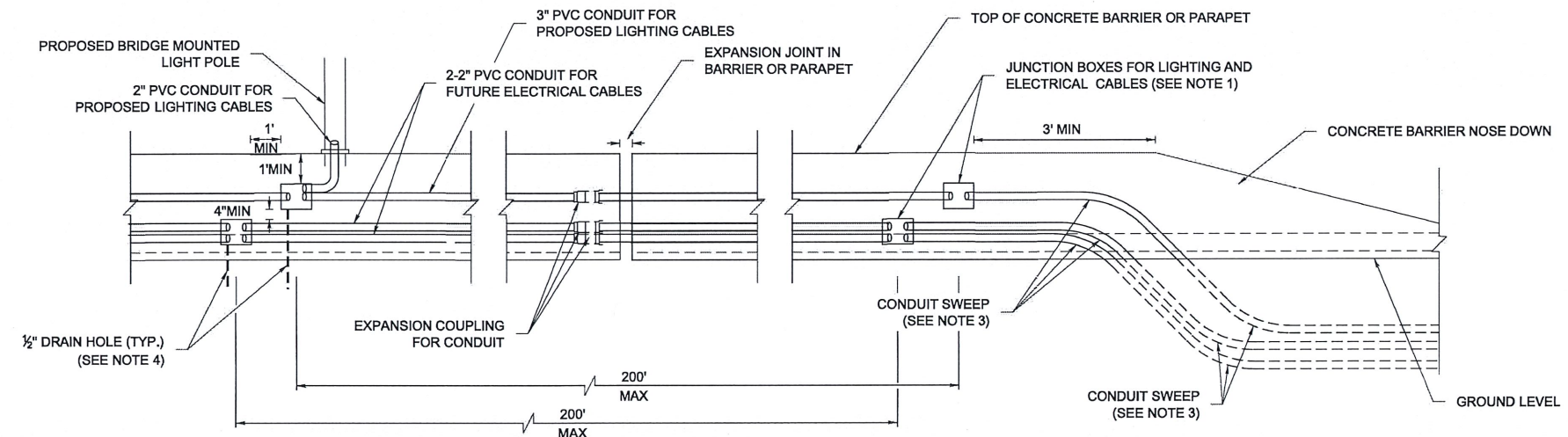
LOCATION: PROFESSIONAL BLVD
BETWEEN EASTERN BLVD AND
WASHINGTON COUNTY LINE

TITLE: ROADWAY LIGHTING UPGRADES
FOR PROFESSIONAL BLVD WIDENING
(LIGHTING PLAN SHEET)

SCALES HORIZONTAL: 1"=50'	VERTICAL: -
DRAWN BY: AFD	DATE: JUNE 2021
SURVEY BY: -	DATE: -
REVISED BY: -	DATE: JAN 2022
COUNTY PROJECT NO. 10-270	SHEET LT-03 OF 5
ADDENDUM # 2	SHEET 87R OF 129
CHANGE ORDER #	NOT USED FOR CONSTRUCTION

EQUIPMENT LIST

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	ADD ALT QUANTITY
2008	TEST PIT EXCAVATION	CY	10	17
8007	2 INCH SCHEDULE 40 RIGID PVC CONDUIT-TRENCHED	LF	785	2,150
8008	23 FOOT DECORATIVE HESS CANTO G STEEL LIGHT POLE - DOUBLE BRACKET ARM	EA	15	15
8009	30 FOOT ALUMINUM LIGHT POLE - 8 FOOT BRACKET ARM	EA	5	21
8010	50W LED LUMINAIRE AND PHOTOCELL FOR DECORATIVE HESS CANTO G	EA	28	28
8011	108W LED COBRAHEAD ROADWAY LUMINAIRE AND PHOTOCELL	EA	5	21
8012	CABLE - 1 CONDUCTOR, NO 8 AWG, TYPE XLP	LF	12,390	19,480
8013	GROUND ROD - 5/8 INCH DIAMETER X 8 FOOT LENGTH	EA	13	25
8014	LIGHTING JUNCTION BOX - 13 INCH X 24 INCH X 18 INCH (H3)	EA	11	22
8015	CONCRETE FOR LIGHT FOUNDATION	CY	4	15
8019	NO. 8 AWG STRANDED BARE COPPER GROUND WIRE	LF	200	400
8020	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED	LF	1,340	2,105
8024	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED	LF	530	1,650
8026	LIGHTING JUNCTION BOX - 17 INCH X 30 INCH X 18 INCH (H3)	EA	1	1
8037	REMOVE AND DISPOSE OF EXISTING LIGHTING INFRASTRUCTURE	LS	1	1
8038	MAINTAIN EXISTING ROADWAY LIGHTING	LS	1	1
8039	CABLE - 1 CONDUCTOR, NO 10 AWG, TYPE THWN/THHN, 600V	LF	2,250	4,650
8040	GTAP CONNECTOR KIT	EA	78	122
8041	FUSE WITH HOLDER	EA	37	49

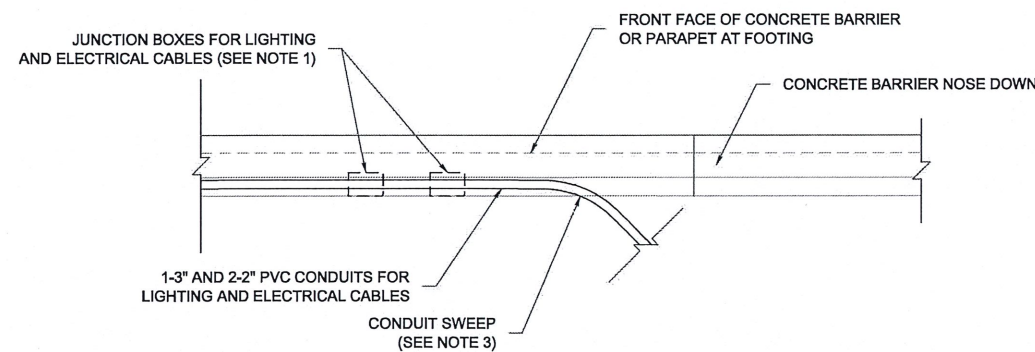


ELEVATION VIEW

CONDUIT AND JUNCTION BOXES AT END OF PARAPET OR CONCRETE BARRIER

NOTES

- BRIDGE PARAPET EMBEDDED JUNCTION BOXES ARE TO BE INSTALLED UNDER WASHINGTON COUNTY PROJECT NO. 10-244. JUNCTION BOXES INSTALLED IN BRIDGE PARAPET WALL SHALL BE 12"X10"X8".
- BARRIER EMBEDDED CONDUITS ARE INCIDENTAL TO THE PERTINENT CONCRETE BARRIER BID ITEMS.
- CONDUIT SHALL EXIT CONCRETE BARRIER OR BRIDGE PARAPET USING CONDUIT BENDS AND SWEEPS, NOT BY EXISTING THROUGH THE BOTTOM OF THE JUNCTION BOX. BEND RADII SHALL MEET THE MINIMUM REQUIREMENTS OF THE CABLE MANUFACTURER.
- AT LOW POINT TO ALLOW FOR PROPER DRAINAGE.
- MAXIMUM JUNCTION BOX SPACING IS 200'.
- ALL PIPE AND EXPANSION FITTINGS SHALL BE U.L. APPROVED FOR ENCASEMENT IN CONCRETE.
- REFER TO LANDSCAPE PLANS FOR ADDITIONAL DETAILS ON BRIDGE MOUNTED LIGHT POLES.
- LIGHTING QUANTITIES INCLUDE AN ADDITIONAL TWO (2) HESS CANTO G POLES AND TWO (2) 50W LED LUMINAIRES TO BE PROVIDED BY THE CONTRACTOR AND DELIVERED TO HAGERSTOWN LIGHT DEPARTMENT (HLD) FOR FUTURE MAINTENANCE. DELIVERY IS INCIDENTAL TO THE POLE.
- ANCHOR BOLTS AND MOUNTING HARDWARE FOR LIGHT POLES MOUNTED ON THE BRIDGE STRUCTURES SHALL BE INCIDENTAL TO THE LIGHT POLE BID ITEMS.



PLAN VIEW

CONDUIT AND JUNCTION BOXES AT END OF PARAPET OR CONCRETE BARRIER

48 HRS.
Before You Dig
Call
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Service Protection Center

CALL TOLL FREE
1-800-257-7777



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PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 53359
EXPIRATION DATE: 2022-10-22

CITY OF HAGERSTOWN, MARYLAND DEPARTMENT OF PARKS AND ENGINEERING	
LOCATION: PROFESSIONAL BLVD BETWEEN EASTERN BLVD AND WASHINGTON COUNTY LINE	
TITLE: ROADWAY LIGHTING UPGRADES FOR PROFESSIONAL BLVD WIDENING (LIGHTING DETAILS)	
SCALES HORIZONTAL: NONE	VERTICAL: --
DRAWN BY: AFD	DATE: JUNE 2021
SURVEY BY: --	DATE: --
REVISED BY: --	DATE: JAN 2022
COUNTY PROJECT NO. 10-270	SHEET LT-04 OF 5
ADDENDUM # 2	DRAWING NUMBER SHEET 88R OF 129
CHANGE ORDER #	NOT USED FOR CONSTRUCTION

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