



STATE OF DELAWARE  
DEPARTMENT OF TRANSPORTATION  
PO BOX 778  
DOVER, DELAWARE 19903

JACK MARKELL  
GOVERNOR

SHAILEN BHATT  
SECRETARY

**VIA OVERNIGHT DELIVERY**

(302) 760-2030  
FAX (302) 739-2254

August 16, 2012

Contract No. T201007102.01  
Federal Aid Project No. EBROS-N399(3)  
BR 1-366 ON N399 CHESAPEAKE CITY ROAD OVER GUTHRIE RUN  
New Castle County

Ladies and Gentlemen:

Enclosed is Addendum No. 1 for the referenced contract consisting of the following:

1. **The Bid Due Date is changed to August 28, 2012.**
2. One (1) page, Proposal Cover page, to be substituted for original Cover page.  
*The Proposal Cover page has been marked indicating Addendum 1, and the new Bid Due Date.*
3. One (1) page, Proposal page iii, substituted for the attached page iii.  
*This makes revisions to the table of contents and page numbers.*
4. Twenty (20) pages, Pre-Bid Meeting transcript, new, to be added to the Proposal.
5. One (1) page, Pre-Bid Meeting Attendees, new, to be added to the Proposal.
6. Seventeen (17) pages, page numbers 13 through 29 in the Proposal, removed, to be substituted with the attached eighteen (18) pages numbered 13 through 29 (including page 28A).  
*This updates Form FHWA-1273 'REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACT' to the May 1, 2012 revision.*
7. One (1) page, Special Provision 'MODIFICATIONS TO REQUIRED FEDERAL CONTRACT PROVISIONS', page number 40 in the Proposal, removed, to be substituted with a blank page 40.  
*This Special Provision is no longer needed with the revised form FHWA-1273.*
8. The following revisions have been made to the Plan Sheets:
  - Plan Sheet 3; Notes 17 and 18 added
  - Plan Sheet 3; Note 16 modified
  - Plan Sheet 11; Tierods added
  - Plan Sheets 6, 8, 9, 14, 15, 18 replaced by Sheets 6A, 8A, 9A, 14A, 15A and 18A, respectively.
9. Item 605528 - Utility Support (LS) has been added to the Proposal.
10. Item 612502 - PVC Pipe, 6" (LF) has been added to the Proposal.

11. Quantities for the following items have been revised:

302011 - Delaware No. 3 Stone,  
302522 - Reinforced Soil Foundation,  
602690 - Solid CMU Blocks,  
602691 - Voided CMU Blocks,  
712021 - Riprap, R5, 713003 - Geotextile, Riprap, and  
713501 - Geosynthetic Reinforcement

12. The following **Questions and Answers** are issued:

1. Are the colored CMU's in zone A and the beam set split face block like in zone B?

**In zone B the CMU's are hollow (void). In zone A the CMU's are solid. The beam seat blocks are solid and similar to the CMU's in zone A, but have different thickness.**

2. Utility Relocations - Delmarva Power and Verizon indicate 60 days plus 54 days to complete their work during construction. The proposed contract duration is only 75 days. Their facilities will need to be relocated prior to construction.

**Delmarva Power and Verizon will be relocated before the start of construction.**

3. Artesian has high pressure water lines in very close proximity to the excavation. The test holes indicate existing invert elevations ranging from approx elevation 36.5' to 42.5'. Depending on the exact location of the water lines, the possibility of exposing and even undermining them is great. It is unclear if sufficient space between the water lines and the proposed foundation exists for shoring. Consideration should be given to relocating the Artesian lines., and if not, how does the Department plan on addressing this, especially if the lines cannot be shut down?

**The conflict with the water lines is addressed in Addendum 1.**

4. Support of Excavation and Groundwater

Groundwater is indicated in the borings at elevation 47'. The bottom of the stream appears to be around elevation 44'. With a proposed foundation subgrade of elevation 38', this results in an excavation that is at least 6' deep with up to 9' of dewatering. The stream diversion will only contain the surface water. The plans indicate a 1:1 cut slope. This will be difficult to achieve given the conditions. In addition, OSHA requires a slope of 1½:1 for Type C soils, as is the case here. Any solution will need to address potential conflicts with existing utilities. Is the intent to have bidders assume an open cut with a 1:1 slope and if so, how will it be handled if that doesn't work?

In addition, a dewatering permit will be required from DNREC which takes considerable time to advertise and obtain approval for. This will conflict with the proposed 10/1/12 NTP date. It is assumed the NTP date will be adjusted to allow time to obtain the necessary permit approvals.

**For 'support of excavation and groundwater', and permit timing, please refer to sections 111, 207 and 211 of the Standard Specifications. A conflict between the permit and the NTP date is not anticipated.**

5. Sheet 10 under the framing plan indicates 3 tie rod locations (center of span and both abutments). The beam details on Sheet 11 only indicate a tie rod location at the center of the span. Please clarify how many tie rod locations we are to provide.

**Three tie rods are required as shown on sheet 10.**

6. The proposed bridge (and riprap) will impact the 24" water main owned by Artesian; based on the test-hole information and the plans provide. Please confirm Artesian is working on a relocation plan.

**The waterlines will not be relocated. From the borings, the elevation at the top of the pipe at midstream is approximately 40.89. the elevation of the riprap is approximated to be at 43.18. See also Item 605528-Utility Support in addendum 1.**

7. Two MOT plans are provided (sheet #16 & 17). They are significantly different. Both plan sheets state the "detour shall be implemented after the completion of work on Kights Corner Rd". Both plans work. Are bidders allowed to bid the most cost effective detour and ignore the not-selected detour? Or, please provide additional information on the intent of the two different detour plans.

**The detour plan shown on sheet 16 is for local traffic to get around the closure point. The detour plan shown on sheet 17 is for regional traffic to get around the closure without having to use the local roadways as they are not constructed for increased traffic volumes. Both detours are required to be implemented as part of this project.**

Please note the revisions listed above and submit your bid based upon this information.

Sincerely,



James H. Hoagland  
Contract Services Administrator

JHH:ci  
Enclosures

1 THE STATE OF DELAWARE  
2 DEPARTMENT OF TRANSPORTATION

3  
4 IN RE: )  
5 Contract T201007102.01 )  
6 Federal Aid Project No. BROS-N399(3) )  
7 BR 1-366 on N499 Chesapeake City Road) )  
8 over Guthrie Run in New Castle County)  
9 )

10 TRANSCRIPT OF PRE-BID MEETING

11 DelDOT  
12 800 Bay Road  
13 Dover, Delaware 19901  
14 August 2, 2012  
15 1:33 p.m.

16 CONDUCTED BY: JAMES HOAGLAND

17 APPEARANCES:

18 Percy McNeil - DelDOT  
19 Jason McCluskey - DelDOT  
20 Majid Talebi - University of Delaware  
21 Matthew Becker - University of Delaware  
22 Dan Cacciola - University of Delaware  
23 Ryan O'Donohue - Federal Highway  
24 Administration

25 WILCOX & FETZER  
26 1330 King Street, Wilmington, Delaware 19801  
27 (302) 655-0477  
28 www.wilfet.com

1 ATTENDEES:

2 Jerry Jalosky - Daisy Construction  
3 Jeff Norman - George & Lynch  
4 Jose M. Ibarra - Tierra Construction  
5 Joe Corrado - Greggo & Ferrara  
6 Peter Erony - Mumford & Miller  
7 Wesley Paxton - American Infrastructure  
8 Brian Donaldson - JJID, Inc.  
9 Don Leo - Kuhn Construction  
10 Greg Thelen - Rain for Rent  
11 Bobby Wilson - Bouser Concrete  
12 Rob Hipszer - Tencate-Mirafi  
13 Ryan Kimble - Zack Excavation  
14 Bill "Zack" Czachorowski - Zack Construction

9

10

\* \* \* \* \*

11

12

MR. HOAGLAND: Okay. Good

13

afternoon, everyone. Thank you for coming out

14

for this today. I appreciate that very much.

15

This. The pre-bid meeting for contract

16

T-2010071.02. It's the Bridge 1-366 Chesapeake

17

City Road over Guthrie Run in New Castle County.

18

And I just wanted to have the people

19

at the head table introduce themselves really

20

quickly. You may have questions for them later.

21

First, I guess, myself. I should say, I'm Jim

22

Hoagland, contract services administrator for

23

DelDOT. And go ahead, Jason.

24

MR. McCLUSKEY: Go ahead. I'm Jason

3

1

McCluskey, the project engineer for DelDOT.

2

MR. McNEIL: Percy McNeil, bridge

3

design, DelDOT.

4

MR. HOAGLAND: And the gentlemen

5

from UD.

6

MR. BECKER: I'm Matt Becker, I'm at

7

the University of Delaware.

8

MR. TALEBI: I'm Majid Talebi from

9

University of Delaware.

10

MR. CACCIOLA: Dan Cacciola,

11

University of Delaware, and we'll be in charge of

12

instrumenting the bridge.

13

MR. HOAGLAND: And I wanted to also

14

bring to your attention, Ryan O'Donohue from

15

Federal Highway. And this is a Federally funded

16

and full Federal oversight project, and Ryan or

17

cohorts, I imagine, will be out at the site

18 during some of this, so you can look forward to  
19 that.

20 If anyone has cell phones, please  
21 remember to turn them off, or down. If you get a  
22 call you have to take, please step out the back  
23 of the room and take it out there.

24 I have sign-in sheets. Everybody,

4

1 before you leave, make sure you sign in. The  
2 critical reason for the sign-in and for this  
3 mandatory meeting is to see this demonstration  
4 that they have a video for, and to hear them talk  
5 about the technique that they want to use for  
6 this bridge. That's the real key piece.

7 But do make sure you sign up. I'll  
8 just leave it here, we can do it at the end,  
9 really, if it would cause less hassle to do that,  
10 that's fine.

11 We have a transcriptionist taking  
12 down each word that we say. If you have a  
13 question, please raise your hand, and then when I  
14 call on you, please state your name and the  
15 company that you're with, and do that each time,  
16 with each question, please.

17 The project is a 75 day, calendar  
18 day project, advertised July 16th, and the bids  
19 are due August 21. And within the next week, we  
20 will have issued an addendum that includes the  
21 minutes from this meeting, as well as any  
22 questions and answers that are brought up today.

23 General reminders for all DelDOT  
24 projects, as well as this. The prime contractor

5

1 must perform 51 percent of the work. Are there

2 any primes here today that cannot perform 51  
3 percent? Now is a good time to make yourself  
4 known, so we don't -- you don't waste your time  
5 and we have issues down the road.

6 This will use Federal and State  
7 Highway prevailing wage rates. There is a 6  
8 percent DBE goal on the project. There is a --  
9 down at the bottom of the certification page,  
10 when you turn in your bid paperwork, there is a  
11 notation there for what your goal attainment is  
12 going to be for this project. If it is less than  
13 6, you must enter something in there. You must  
14 also provide with your paperwork proof on good  
15 faith efforts on how you tried to obtain that.

16 There's information on good faith  
17 efforts in the proposal book, and you are always  
18 free to contact our DBE group here at DelDOT for  
19 assistance on that. And there is -- there is  
20 particular ways that you have to show support for  
21 that.

22 If you enter 6 percent, that's good.  
23 If you enter more than 6 percent, that's good,  
24 too, but that is your commitment that you will be

6

1 held to.

2 Okay. And those commitments, as  
3 long as you commit 6 percent, then your bid goes  
4 forward. If you don't commit 6, then you have to  
5 have the good faith effort paperwork with your  
6 bid, or your bid will be rejected.

7 After the bids are taken, the  
8 apparent low bidder will be officially contacted  
9 by the Department, and will have ten days from  
10 that date to submit signed sub agreements for all  
11 their subcontractors.

12                   And what is in this book today is  
13                   form 1273. Since this book was published,  
14                   there's a new 1273 form that will be included in  
15                   the addendum that comes out for this. And that  
16                   new 1273 form, which is also available on  
17                   websites from Federal Highway, and it will be in  
18                   our new package and on our new disk that we send  
19                   out, that form must be included, attached, part  
20                   of each subcontract agreement that you have.

21                   Remember, there's prompt pay  
22                   requirements for all your subcontractors. Please  
23                   remember to acknowledge every addendum on the  
24                   certification page before you turn your bid in.

7

1                   Remember that there is a bid bond for this. It's  
2                   10 percent of your submitted price. Make sure  
3                   your power of attorneys have filled it out  
4                   properly, and the names that they've signed match  
5                   the names that are on the bid bond. We've had a  
6                   few instances of trouble there.

7                   We recommend that you just enter a  
8                   percentage, the 10 percent of your bid is  
9                   entered. But if you have to write out a not to  
10                  exceed amount, we recommend you going above the  
11                  actual amount you bid. In the event you're off  
12                  by a penny, if that 10 percent that you've  
13                  written out, if that doesn't cover that extra  
14                  penny when we go through and find a mathematical  
15                  error, then we cannot accept your bid. It's the  
16                  State law, it has to be 10 percent. So give  
17                  yourself a little fluff if you have to enter more  
18                  than just saying 10 percent of your bid. Make  
19                  sure, look at your bid bond when you get it back  
20                  from your bonding company, make sure it's in

21 order.

22 Make sure your certification is  
23 notarized. Make sure and type your bid forms.  
24 Don't hand write. If you have to make a change

8

1 at the last minute, you can cross out your  
2 typewritten pricing on unit level, and hand write  
3 that in and initial it. We'll accept it that  
4 way. But the initial entry must be typewritten.

5 And I will take any questions anyone  
6 has right now on how to submit your bid. I want  
7 to make sure everybody's comfortable with that.

8 Is there any questions -- is there  
9 anyone that hasn't bid with DelDOT before? And  
10 if there is, feel free to contact us by phone  
11 prior to this, so we can walk you through the bid  
12 process. We don't like to see companies spend  
13 their time and enter bids and we have to throw  
14 you out because something wasn't circled or  
15 checked. And so, we want to make sure we avoid  
16 that if at all possible.

17 The sign-in sheet will sign -- make  
18 sure everyone signs in before you leave today.  
19 I'll just leave it up here on the table. Don't  
20 forget to sign in, and I'll try and remind  
21 everybody again. But this is proof that you're  
22 here. If we receive your bid and your company's  
23 name is not here, then we cannot award to that  
24 company. It's a mandatory meeting, so make sure

9

1 your name is there before you leave.

2 That is all I have with the  
3 traditional bid information. I'll turn it over  
4 to Percy now, to talk about the project

5       specifics.

6                       MR. McNEIL:   Okay.   Good afternoon.  
7       I'll just take a few minutes.   This meeting, as  
8       Jim has said, was called for to familiarize you  
9       with the construction of geosynthetic reinforced  
10      soil, I think another name attached to that is  
11      integrated bridge system.   So it's GRS-IBS.   And  
12      this type of construction, although new here, the  
13      technology is very old.   To be frank, it's over  
14      40 years old, but this is a first time in this  
15      area.

16                      And so, for you to properly bid this  
17      project, we consider it important for you to hear  
18      it.   So you can watch this video, ask whatever  
19      question that you may have about this technology,  
20      and what is required of the contractor.

21                      And so, let me say that this  
22      technology has been proven to the extent that  
23      FHWA have selected this technology to be used in  
24      every day projects, which is trying to get proven  
10

1      technology on the market as quick as possible.

2                      So although it may be new to you and  
3      you may have questions about it, I just want to  
4      let you know that it has been proven.   If not,  
5      FHWA would not have endorsed it.   And not only  
6      that, but to select it so that it can be used for  
7      us to speed up technology on the market.

8                      So, with that said, let the video  
9      roll, and then afterwards we'll try and answer  
10     whatever question that you have.

11                     And as I've said before, this  
12      meeting is primarily, primarily to do with the  
13      technology.   And so, my hope is that most of the  
14      questions -- and that I know when we have a

15 contract, we usually have general questions.  
16 Those we'll probably maybe defer for the usual  
17 method of answering those questions. But if it's  
18 something that has to be answered today, we'll  
19 try our best, or otherwise, we'll get to the  
20 answer as soon as possible.

21 MR. HOAGLAND: And let me just say  
22 one more thing, too. This video is available on  
23 Federal Highway's website. If you go -- is it  
24 just FHWA.gov?

11

1 MR. O'DONOHUE: Yeah. That will  
2 probably work.

3 MR. HOAGLAND: And put in the search  
4 for GRS, it will take you to the page, and  
5 there's a YouTube video up of this on that site,  
6 so you can view it again later and show others.

7 (Video played for potential bidders)

8 MR. McNEIL: There is one basic  
9 difference between this project and the one that  
10 you have looked at, in that this is a research  
11 project, and this is where the University of  
12 Delaware comes in.

13 And so, the geotextile will be  
14 instrumented by the University of Delaware. And  
15 so, it is important that there is a level of  
16 understanding between the contractor and the  
17 university. We have tried our best to state some  
18 of the things that -- our time that may be needed  
19 so that this thing can come together.

20 And although we have tried our best,  
21 a few conditions may dictate otherwise. And so,  
22 it's going to be very important that the  
23 contractor and UD work together.

1 will be there to observe. And as I've said  
2 before, being a -- being that it will be  
3 instrumented so that we can collect data to see  
4 exactly how this bridge will perform against all  
5 of the assumptions that were made over the years.  
6 For 40 years, this technology has been used, but  
7 we can see that in Ohio, they have started using  
8 this about -- 25 years?

9 MR. O'DONOHUE: I'm not sure.

10 MR. McNEIL: About 25 years. And I  
11 don't believe any of those bridges have been  
12 instrumented. Although when you look from the  
13 outside, everything may remain the same or  
14 acceptable, but we decided to go further, to do  
15 the instrumentation, so we can actually have data  
16 to prove that the technology is really working  
17 the way it should.

18 Before I open up for questions, the  
19 University of Delaware, Majid, if you have any  
20 comment on the instrumentation.

21 MR. TALEBI: No. I think you said  
22 whatever you needed to say. I prefer to speak  
23 after, maybe. After the questions.

24 MR. McNEIL: All right.

13

1 MR. HIPSZER: Rob Hipszer,  
2 Tencate-Mirafi. What kind of instrumentation are  
3 you going to have? What's the apparatus, or --

4 MR. TALEBI: Different kind of  
5 instrumentation, including inclinometers, one  
6 inclinometer, and including four sensors, wires  
7 for the pressure cells, and strain gauges, 15

8 strain gauges per abutment, and 10 strain gauges  
9 for the bridge. And some instruments for  
10 measuring volumetric water content, and also some  
11 instruments for measuring pressure. That's all.

12 MR. McNEIL: If you -- I think page  
13 22 in your plans --

14 MR. HIPSZER: Yeah.

15 MR. McNEIL: -- will have the  
16 instrumentation. There may be variations, but  
17 those are the instruments. The quantities may  
18 vary or may change, but those are the instruments  
19 that will be in this plan.

20 And also, I think on sheet -- okay.  
21 On page 3 of 22, note 15, also has some  
22 information on that.

23 MR. McCLUSKEY: Does that help you?

24 MR. HIPSZER: Yeah. Yeah. That

14

1 helps. That helps a lot.

2 MR. McCLUSKEY: And we did -- we  
3 tried to build time into the contract, and that  
4 note number 15, we'll elaborate on that, for the  
5 instrumentation. And you know, the time that we  
6 added to the contract should be on the  
7 conservative end. So it won't go quite -- quite  
8 as fast as three days and you got both, you know,  
9 abutments up, like the video, but it should still  
10 be fast. And 75 days for the contract should be  
11 plenty.

12 Anything else?

13 MR. HOAGLAND: Percy, did you say  
14 that they're going to work with UD personnel in  
15 the field?

16 MR. McNEIL: In the field.

17 MR. HOAGLAND: Doing -- what is UD

18 actually going to do in the field that would be  
19 working with the contractor?

20 MR. McNEIL: Okay. Go ahead.

21 MR. CACCIOLA: I can -- I just want  
22 to add a little bit on that. So, the biggest  
23 problem, as far as like stoppage time for you  
24 guys, would be probably the strain gauges,

15

1 because the string gauges will be attached to the  
2 geosynthetic. We are planning on, as you can see  
3 in the contract, you guys are going to be  
4 delivering the geosynthetic rolls to us first, so  
5 that we can attach our strain gauges, attach our  
6 wiring and stuff onto that ahead of time. And  
7 this way, we'll try to not hinder any of the  
8 construction, you know, as best we can.

9 But what that means is that after  
10 you give us the fabric, we're going to put the  
11 geosynthetics on, and we're going to put all the  
12 wiring that we need on there, all the cables on  
13 there ahead of time.

14 So you're just going to have to  
15 be -- you know, you're going to have to be  
16 careful with laying out the fabric while it has  
17 all the instrumentation on it already. So it  
18 won't be as simple as in the video, where you're  
19 just laying a piece of fabric with nothing  
20 attached.

21 So that would be the main thing that  
22 would be -- we'd be doing in the field, aside  
23 from the piezometers and inclinometers, there  
24 will be holes being drilled and stuff being

16

1 placed into the ground, I guess, during the

2 construction.

3 MR. TALEBI: After the construction.

4 MR. CACCIOLA: After?

5 MR. HOAGLAND: And UD are doing the  
6 actual installation of the inclinometers and all  
7 the sensors?

8 MR. BECKER: Yeah.

9 MR. CACCIOLA: Yes.

10 MR. McNEIL: The only involvement of  
11 the contractor and UD is time. So the contractor  
12 will -- they have absolutely nothing to do with  
13 the instrumentation in the field, but to allow  
14 the university the time that they will need to  
15 put these things together.

16 MR. HOAGLAND: And do we have any  
17 estimates to share?

18 MR. McNEIL: Yes.

19 MR. McCLUSKEY: They're in the  
20 plans.

21 MR. McNEIL: Note 15, sheet 3 of 22  
22 we have estimated times in there. And as Jason  
23 has said, the time, we believe, is on the very  
24 conservative side. But anything may happen.

17

1 MR. HOAGLAND: Okay. Any questions,  
2 technical or otherwise?

3 MR. ZACK: I have a question. My  
4 name is Bill Zack from Zack Excavating. A  
5 lay-down area, could that driveway that's  
6 adjacent to the site -- I don't know if that's a  
7 transfer station or whatever. There's not a lot  
8 of room to work off of the roadway.

9 MR. McNEIL: If you don't mind, can  
10 you repeat your -- is it a question, or a

11 statement?

12 MR. CROUCH: At the site there is a  
13 driveway, I guess it's on the western side of the  
14 bridge, and it looks like there's a transfer  
15 station or some type of -- maybe it's Artesian  
16 Water. I don't know what it is. But there is an  
17 area in front of that. Can that be used as a  
18 lay-down area?

19 MR. McNEIL: I think part of it has  
20 been taken as TCE. If it's TCE, then you can  
21 definitely use it. Let me see. Yes. There is  
22 an LOC there, because we already have existing  
23 right-of-way.

24 MR. ZACK: Okay.

18

1 MR. McNEIL: So, yeah. We just have  
2 to work within the right-of-way, everything  
3 within the LOC.

4 MR. HOAGLAND: Okay. Questions  
5 after this meeting must be addressed to my  
6 office, either -- preferably via e-mail to  
7 DOT-ask.gov. And please do not contact anyone  
8 from University of Delaware until after bids are  
9 in. We must go only with what is published for  
10 these plans. UD, make sure you guys are all  
11 aware that if you get any questions on this, you  
12 must defer them back to DelDOT.

13 MR. TALEBI: Right.

14 MR. HOAGLAND: Okay? If there are  
15 questions that we need from UD, we'll certainly  
16 approach them to get the answers, but do not make  
17 contact with them directly.

18 Anything else, Percy?

19 MR. McNEIL: That's it.

20 MR. HOAGLAND: Any other questions?

21 I'm just going to remind everyone that there is a  
22 sign-in sheet up here. Please use that. I'm  
23 going to use just the one, and if we need a  
24 second one we'll have it here. Make sure and

19

1 sign before you leave. And that concludes our  
2 meeting. Thank you very much.

3 (Meeting concluded at 2:17 p.m.)

4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

20

1 REPORTER'S CERTIFICATE

2  
3  
4

I, JULIANNE LaBADIA, Registered Diplomate  
Reporter and Notary Public, do hereby certify

5 that the foregoing record, pages 1 through 19  
6 inclusive, is a true and accurate transcript of  
7 my stenographic notes taken on August 2, 2012, in  
8 the above-captioned matter.

9 IN WITNESS WHEREOF, I have hereunto set my  
10 hand and seal this 8th day of August, 2012, at  
11 Wilmington.

12

13

14

15

16 Julianne LaBadia, RDR, CRR

17

18

19

20

21

22

23

24

Project No. T201007102.01

BR 1-366 on N399 Chesapeake City Road over Guthrie Run, New Castle County

Pre-Bid Meeting Sign-in Sheet for August 2, 2012 at 1:30 PM

Name	Company	City	E-Mail Address	Phone #
JERRY GALOSKY	Daisy Const Co	Newport De	galosky@dasyconstruction.com	302 658-4417
Jeff Norman	George & Lynch, Inc.	Dover, DE	jnorman@geolyn.com	302-736-3031
José M. Ibarra	Tierra Construction	Phila. PA	Tierrallc@aol.com	215-673-6900
JOE CORRADO	Greggott Ferrara	New Castle De	JCGFINC@AOL.COM	302-658-5241
Peter Perony	Mumford's Miller	Middleton, DE	perony@mumfordandmiller.com	(302) 378-7736
Wesley Paxton	American Infrastructure	Dover, DE	wesley.paxton@americaninfrastructure.com	302-883-3501
Brian Donaldson	JJID, Inc.	Bear, DE	bdonaldson@jjid.com	302-836-0414
Don Leo	Kuhn Construction	Hockessin De.	DLEO@KUHNCONSTRON	302-239-4344
GREG THELEN	RAIN FOR RENT	MONROEVILLE PA	GTHELEN@RAINFORRENT.COM	856-881-6162
Bobby Wilson	Bowser Concrete	Dover DE	bobby@churchdesignservices.com	302 233 6463
ROB HIPSZEL	TENCATE-MIRAFI	DOUGLASSVILLE, PA	R.HIPSZEL@TENCATE.COM	610-401-7143
Ryan Kimble	Zack Excavating	Smyrna	ryan.kimble@zackexc.com	302 223 6223
Bill Czachorowski	" "	" "	" " "	" " "
"ZACK"				

STATE OF DELAWARE



DEPARTMENT OF TRANSPORTATION

BID PROPOSAL

for

CONTRACT T201007102.01

FEDERAL AID PROJECT NO. BROS-N399(3)

BR 1-366 ON N399 CHESAPEAKE CITY ROAD OVER GUTHRIE RUN

NEW CASTLE COUNTY

ADVERTISEMENT DATE: July 16, 2012

**PROSPECTIVE BIDDERS ARE ADVISED THAT THERE WILL BE A MANDATORY PRE-BID MEETING FOR THIS CONTRACT ON AUGUST 2, 2012 at 1:30 P.M. IN THE BIDDER'S ROOM, TRANSPORTATION ADMINISTRATION CENTER, 800 BAY ROAD, DOVER, DELAWARE 19901.**

Completion Date 75 Calendar Days

SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION  
DELAWARE DEPARTMENT OF TRANSPORTATION  
AUGUST 2001

Bids will be received in the Bidder's Room, Transportation Administration Center, 800 Bay Road, Dover, Delaware until 2:00 P.M. local time ~~August 21, 2012~~ **August 28, 2012**

Addendum 1  
August 16, 2012

<b>LOCATION</b> .....	<b><u>i</u></b>
<b>DESCRIPTION</b> .....	<b><u>i</u></b>
<b>CONSTRUCTION ITEMS UNITS OF MEASURE</b> .....	<b><u>ii</u></b>
<b>GENERAL NOTICES</b> .....	<b><u>1</u></b>
SPECIFICATIONS.....	<u>1</u>
CLARIFICATIONS.....	<u>1</u>
ATTESTING TO NON-COLLUSION.....	<u>1</u>
QUANTITIES.....	<u>1</u>
REQUIREMENT BY DEPARTMENT OF LABOR FOR SWORN PAYROLL INFORMATION..	<u>1</u>
PREFERENCE FOR DELAWARE LABOR.....	<u>2</u>
CONFLICT WITH FEDERAL STATUTES OR REGULATIONS.....	<u>2</u>
EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS.....	<u>2</u>
TAX CLEARANCE.....	<u>2</u>
LICENSE.....	<u>3</u>
TO REPORT BID RIGGING ACTIVITIES.....	<u>3</u>
CONVICT PRODUCED MATERIALS:.....	<u>3</u>
NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246).....	<u>4</u>
STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246).....	<u>4</u>
TRAINING SPECIAL PROVISIONS.....	<u>8</u>
INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT & TRANSPORTATION EQUITY ACT.....	<u>9</u>
DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM SPECIFICATION.....	<u>9</u>
CRITICAL DBE REQUIREMENTS.....	<u>11</u>
GUIDANCE FOR GOOD FAITH EFFORT.....	<u>12</u>
REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS... ..	<u>13</u>
I. GENERAL.....	<u>13</u>
<b>II. NONDISCRIMINATION</b> .....	<u>14</u>
III. NONSEGREGATED FACILITIES.....	<u>18</u>
IV. DAVIS-BACON AND RELATED ACT PROVISIONS.....	<u>18</u>
V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT.....	<u>23</u>
VI. SUBLETTING OR ASSIGNING THE CONTRACT.....	<u>24</u>
VII. SAFETY: ACCIDENT PREVENTION.....	<u>25</u>
VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS.....	<u>25</u>
IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT.....	<u>26</u>
X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION.....	<u>26</u>
XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING .....	<u>28A</u>
DIFFERING SITE CONDITIONS.....	<u>29</u>
PREVAILING WAGES.....	<u>30</u>
PREVAILING WAGE REQUIREMENTS.....	<u>30</u>
APPLICABILITY OF DAVIS-BACON LABOR STANDARD PROVISIONS TO FLAGGERS..	<u>34</u>
ALL AGENCY MEMORANDUM NO. 130.....	<u>34</u>
<b>SUPPLEMENTAL SPECIFICATIONS</b> .....	<b><u>35</u></b>
<b>SPECIAL PROVISIONS</b> .....	<b><u>37</u></b>
CONSTRUCTION ITEM NUMBERS.....	<u>39</u>
<del>MODIFICATIONS TO REQUIRED FEDERAL CONTRACT PROVISIONS</del> .....	<del><u>40</u></del>
401502 - ASPHALT CEMENT COST ADJUSTMENT.....	<u>41</u>
265500 - STREAM DIVERSION.....	<u>42</u>
270500 - DEWATERING BAG.....	<u>44</u>
302521 - GRANULAR EMBANKMENT.....	<u>46</u>
302522 - REINFORCED SOIL FOUNDATION (RSF).....	<u>48</u>
401645 - SUPERPAVE, TYPE C HOT-MIX, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)	

.....	<u>49</u>
401648 - SUPERPAVE, TYPE B HOT-MIX, 160 GYRATIONS, PG 64-22. ....	<u>49</u>
401699 - QUALITY CONTROL/QUALITY ASSURANCE OF BITUMINOUS CONCRETE....	<u>55</u>
602547 - WATERPROOFING BRIDGE DECK. ....	<u>71</u>
602690 – SOLID CONCRETE MASONRY BLOCKS. ....	<u>73</u>
602691 – VOIDED CONCRETE MASONRY BLOCKS. ....	<u>74</u>
<b>605528 – UTILITY SUPPORT</b> .....	<u>74A</u>
<b>612502 - PVC PIPE, 6</b> .....	<u>74B</u>
712531 - CHANNEL BED FILL.....	<u>75</u>
713501 – GEOSYNTHETIC REINFORCEMENT. ....	<u>76</u>
720637 - GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1 - 27. ....	<u>77</u>
720664 - BRIDGE RAILING, GUARDRAIL TYPE.....	<u>79</u>
720665 – BRIDGE RAILING, GUARDRAIL TYPE – TRANSITION UNIT.....	<u>80</u>
735535 - SOIL RETENTION BLANKET MULCH, TYPE 5. ....	<u>81</u>
748548 - PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5" .....	<u>83</u>
.....	<u>83</u>
760507 - PROFILE MILLING, HOT-MIX.....	<u>93</u>
763501 - CONSTRUCTION ENGINEERING.....	<u>95</u>
763643 - MAINTENANCE OF TRAFFIC – ALL INCLUSIVE. ....	<u>99</u>
UTILITY STATEMENT.....	<u>105</u>
RIGHT OF WAY CERTIFICATE. ....	<u>109</u>
ENVIRONMENTAL STATEMENT. ....	<u>111</u>
 BID PROPOSAL FORMS.....	 <u>115</u>

meet the projected goal.

e. Listing of each DBE contacted but not contracted and the reasons for not entering a contract.

4. Efforts made to assist DBEs that need assistance in obtaining bonding, insurance, or lines of credit required by the contractor.

5. Reasons why certified DBEs are not available or not interested.

6. Efforts to effectively use the services of available disadvantaged community organizations; disadvantaged contractor's groups; local, state and federal DBE assistance offices; and other organizations that provide assistance in recruitment and placement of DBEs.

The following are examples of actions that may not be used as justification by the contractor for failure to meet DBE contract goals:

1. Failure to contract with a DBE solely because the DBE was unable to provide performance and/or payment bonds.
2. Rejection of a DBE bid or quotation based on price alone.
3. Rejection of a DBE because of its union or non-union status.
4. Failure to contract with a DBE because the contractor normally would perform all or most of the work in the contract.

Administrative reconsideration:

Within five (5) days of being informed by DelDOT that it is not responsive because it has not documented sufficient good faith efforts, a bidder may request administrative reconsideration. Bidder should make this request in writing to the following reconsideration official: Director of Administration, DelDOT, P. O. Box 778, Dover, Delaware 19903. The reconsideration official will not have played any role in the original determination that the bidder did not document sufficient good faith efforts.

As part of this reconsideration, the bidder will have the opportunity to provide written documentation or argument concerning the issue of whether it met the goal or made adequate good faith efforts to do so. The bidder will have the opportunity to meet in person with the reconsideration official, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. The final decision made by the reconsideration official will be communicated to the bidder in writing. The result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

\* \* \* \* \*

FHWA-1273 -- Revised May 1, 2012

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

(Exclusive of Appalachian Contracts)

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

**I. GENERAL**

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (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).

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.

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). 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 bid proposal or request for proposal 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).

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.

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. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

## **II. NONDISCRIMINATION**

The provisions of this section related to 23 CFR Part 230 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 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, 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 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, 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 230, 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 (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 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 35 and 29 CFR 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.

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, 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 who 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.

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, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure 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. 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, 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, 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 there under. 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, 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 and 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. Assurance Required by 49 CFR 26.13(b):

- a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.
- b. The contractor 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 contracting agency deems appropriate.

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 \$10,000 or more.

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, 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). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

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**

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, Employment Standards Administration, 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 Wage and Hour Administrator for determination. The Wage and Hour 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

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

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 at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to 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 §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, 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 Regulations, 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 section 1001 of title 18 and section 231 of title 31 of the United States Code.

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

##### 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. 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.

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.

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

10. Certification of eligibility.

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**

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.

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 of \$10 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.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting 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.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (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.

## **VI. SUBLETTING OR ASSIGNING THE CONTRACT**

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

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" 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:

- (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.

2. 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. 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.

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

## **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 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.

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 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).

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 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 1, 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**

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

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

#### **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.

##### **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.
- 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.

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.

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 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee 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 grantee or subgrantee 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.

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.

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. 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 Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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. 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) 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;

(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; 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.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

## 2. 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)

a. By signing and submitting this proposal, the prospective lower tier 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.

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 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 grantee or subgrantee 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 grantee or subgrantee 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.

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.

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 Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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.

\* \* \* \* \*

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 is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.
2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall 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 20).

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.

\* \* \* \* \*

DIFFERING SITE CONDITIONS

SUSPENSIONS OF WORK and SIGNIFICANT CHANGES IN THE CHARACTER OF WORK:

Differing site conditions: During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before they are disturbed and before the affected work is performed.

Upon written notification, the engineer will investigate the conditions, and if he/she determines that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding loss of anticipated profits, will be made and the contract modified in writing accordingly. The engineer will notify the contractor of his/her determination whether or not an adjustment of the contract is warranted.

No contract adjustment which results in a benefit to the contractor will be allowed unless the contractor has provided the required written notice.

No contract adjustment will be allowed under their clause for any effects caused on unchanged work.

Suspensions of work ordered by the engineer: If the performance of all or any portion of the work is suspended or delayed by the engineer in writing for an unreasonable period of time (not originally anticipated, customary or inherent to the construction industry) and the contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the contractor shall submit to the engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

Upon receipt, the engineer will evaluate the contractor's request. If the engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The engineer will notify the contractor of his/her determination whether or not an adjustment of the contract is warranted.

No contract adjustment will be allowed unless the contractor has submitted the request for adjustment within the time prescribed.

No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided for or excluded under any other term or condition of this contract.

Significant changes in the character of work: The engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the contractor agrees to perform the work as altered.

If the alterations or changes in quantities significantly change the character of the work under the contract, whether or not changed by any such different quantities or alterations, an adjustment, excluding loss of anticipated profits, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the contractor in such amount as the engineer may determine to be fair and equitable.

The term "significant change" shall be construed to apply only to the following circumstances:

This page intentionally blank

## **605528 – UTILITY SUPPORT**

### **Description:**

The item shall consist of supplying all materials and procedures for protecting and supporting existing underground utilities as indicated on the Plans, as specified herein, and as directed by the Engineer.

### **Temporary Materials:**

The contractor shall supply all materials, including but not limited to, steel beams and bracing, support straps, sheeting and shoring, and all the items necessary to protect existing underground utilities.

All structural steel shall be AASHTO M270, Grade 36.

### **Construction Methods:**

Protect existing utilities in place and maintain the utilities in service, unless otherwise specified. Span excavation with steel beam and support existing utilities with support straps. Backfill and compact under and around the utility so that no voids are left. Repair the lines and associated appurtenances if they are damaged in any way. All costs incurred for protection of utilities or any costs incurred due to the presence of the lines, shall be borne in full by the contractor.

### **Method of Measurement and Basis of Payment:**

“Utility Support” will be paid for at the Contract lump sum bid price. Price and payment shall constitute full compensation for all materials, equipment, and labor necessary to complete the work as described herein and within the Plans. This includes installing any support system, excavation, backfill and compaction of areas outside of item 207, and any additional utility coordination, labor, equipment, materials, and incidentals necessary to complete the work.

8/14/12

**612501 - PVC PIPE, 4"**  
**612502 - PVC PIPE, 6"**  
**612503 - PVC PIPE, 8"**  
**612504 - PVC PIPE, 10"**  
**612505 - PVC PIPE, 12"**  
**612506 - PVC PIPE, 15"**  
**612507 - PVC PIPE, 18"**  
**612518 - PVC PIPE, 21"**

**Description:**

This work consists of furnishing and installing PVC pipe, including all fittings, in accordance with the locations, details, notes on the Plans and as directed by the Engineer. The PVC pipe shall be used for subsurface drainage or for serving as conduit as specified on the Contract Plans.

**Materials and Construction Methods:**

The PVC pipe and fittings shall be free from defects and shall conform to the applicable requirements of ASTM D3034 Type PSM, and pipe shall be of SDR-35 or SDR-41 or SDR-42 for subsurface drainage pipe of the nominal size required by the Plans.

The PVC pipe and fittings shall be free from defects and shall conform to the applicable requirements of ASTM D2466 PVC Pipe Fitting, Schedule 40 for conduit of the size required by the Plans.

The excavation and backfill for the pipe shall be performed in accordance with the applicable requirements of Section 612 of the Standard Specifications, unless otherwise modified on the Plans. The pipe shall be installed at the locations and to the lines, grades, and dimensions shown on the Plans or as directed by the Engineer.

**Method of Measurement:**

The quantity of PVC pipe will be measured as the actual number of linear feet (linear meters) of each size of pipe placed and accepted, measured from end to end of pipe, including structure wall thickness, but excluding structure interior.

**Basis of Payment:**

The quantity of PVC pipe will be paid for at the Contract unit price per linear foot (linear meter) for each size of pipe. Price and payment will constitute full compensation for furnishing, hauling, and installing pipe, for all cribbing or foundation treatment necessary to prevent settlement, for all shoring and sheeting, for the replacement of any pipe which is not true in alignment or which shows any settlement after laying, and for all material, labor, equipment, tools, and incidentals required to complete the work.

For pipe under 24" (600 mm) nominal inside diameter, the excavation, bedding, backfill and backfilling will be included in the price for this work. For pipe of nominal inside diameter 24" (600 mm and over), payment for excavation, bedding, backfill and backfilling will be in accordance with Section 208.

10/31/01

# GENERAL NOTES

- THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2001 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2001, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.
- THE CONTRACTOR SHALL GIVE TWO (2) WEEKS NOTICE TO THE PROPERTY OWNER WHEN ANY FIXTURE, SHRUB OR OTHER OBJECT MUST BE REMOVED FROM THE RIGHT OF WAY OR EASEMENT AREA. IF THE OWNER HAS NOT ATTEMPTED TO SALVAGE THIS PROPERTY, THE CONTRACTOR SHALL REMOVE IT WITHOUT OBLIGATION. COMPENSATION SHALL BE INCIDENTAL TO THE CONTRACT.
- THE ENDS OF ALL CURBS SHALL BE DEPRESSED FLUSH WITH THE PAVEMENT AT A RATIO OF TWELVE TO ONE (12:1) UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL PVC SLEEVES (4" INSIDE MINIMUM DIAMETER, 6" INSIDE MAXIMUM DIAMETER) IN PROPOSED CONCRETE SIDEWALKS, ISLANDS, AND MEDIANS FOR FUTURE TRAFFIC SIGN POSTS AS DIRECTED BY THE ENGINEER. THE LOWER END OF THE SLEEVE SHALL SIT ON THE TOP OF THE SUBBASE MATERIAL. THE COST SHALL BE INCIDENTAL TO THE CONTRACT.
- STAGING AREAS - PROPER EROSION AND SEDIMENT CONTROL MEASURES AS DETERMINED BY THE ENGINEER SHALL BE INSTALLED IN ALL STAGING AREAS. ALL AREAS USED BY THE CONTRACTOR FOR STAGING OPERATIONS SHALL BE FULLY RESTORED BY THE CONTRACTOR UPON COMPLETION OF THE CONTRACT. IF THE STAGING AREA IS PAVED, IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF THE AREA IS UNPAVED, IT SHALL BE RE-GRADED, TOPSOILED, SEEDED AND MULCHED IN ACCORDANCE WITH DELAWARE STANDARD SPECIFICATIONS 732, 734 AND 735, FOR TOPSOIL, SEED AND MULCH RESPECTIVELY, TO THE SATISFACTION OF THE ENGINEER. THE SEED SHALL ADHERE TO THE SPECIFICATIONS OF SECTION 734 FOR PERMANENT GRASS SEEDING - DRY GROUND. ALL COSTS ASSOCIATED WITH RESTORATION OF THE STAGING AREA SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE ENGINEER DETERMINES THAT A SATISFACTORY STAND OF GRASS DOES NOT EXIST AT THE TIME OF FINAL INSPECTION, ALL COSTS ASSOCIATED WITH REESTABLISHING A SATISFACTORY STAND OF GRASS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- SITE REVIEWER - AN EROSION CONTROL SITE REVIEWER SHALL BE A PERSON FROM THE CONTRACTOR'S STAFF ASSIGNED TO EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MAINTENANCE AND SHALL BE REQUIRED ON SPECIFIC PROJECTS. THE NAME AND DNREC CERTIFICATION NUMBER OF EACH SITE REVIEWER SO REQUIRED SHALL BE SUBMITTED TO THE DEPARTMENT. THE NAME OF THE DELAWARE REGISTERED PROFESSIONAL ENGINEER PROVIDING DIRECTION AND SUPERVISION OF THE SITE REVIEWER, AS REQUIRED IN SECTION 12.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, SHALL ALSO BE SUBMITTED TO THE DEPARTMENT. THE SITE REVIEWER REQUIREMENTS IN EFFECT ON THIS PROJECT SHALL BE MARKED WITH AN "X" BELOW:

EROSION POTENTIAL FOR THIS PROJECT	SITE REVIEWER REQUIREMENT
( ) INSIGNIFICANT	NONE
( ) MINOR	CONTRACTOR CERTIFICATION COURSE TRAINING ONLY, AS DEFINED IN SECTION 13 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
( X ) MEDIUM	AT THE TIME OF BID OF THE CONTRACT, EITHER THE SUPERINTENDENT OR A SEPARATE INDIVIDUAL FROM THE CONTRACTOR'S STAFF SHALL BE A CERTIFIED CONSTRUCTION REVIEWER (CCR), AS DEFINED IN SECTION 12 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
( ) MAJOR	SUPERINTENDENT AND AN INDIVIDUAL FROM CONTRACTOR'S STAFF SHALL BE CCR. ONE INDIVIDUAL FROM THE CONTRACTOR'S STAFF MUST BE A CCR AT THE TIME OF BID OF THE CONTRACT. THE SUPERINTENDENT MUST BECOME A CCR WITHIN ONE YEAR AFTER THE AWARD OF CONTRACT.

- ELECTRONIC PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE CONTRACTOR INCLUDE:

( X )	NONE
( )	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
( )	RASTER FILES, IN .CAL FILE FORMAT, FOR ALL PLAN SHEETS.
( )	EXISTING DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
( )	PROPOSED DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
( )	DESIGN FILE, IN .DGN FILE FORMAT, CONTAINING ONLY THE PROPOSED 3D TRIANGLES OF THE PROPOSED DIGITAL TERRAIN MODEL (DTM).

- AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR REQUIREMENT FOR THIS PROJECT.

( )	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
( X )	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR.
( )	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE ATSSA SUPERVISOR'S SOLE JOB SHALL BE SUPERVISION OF THE INSTALLATION, OPERATION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES FOR THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT SHALL NOT BE THE ATSSA SUPERVISOR.

- THE DISTURBED AREA FOR THIS PROJECT IS 0.562 ACRES.

# PROJECT NOTES

## SECTION 200

- SHORING SHALL BE REQUIRED FOR ANY EXCAVATION EXCEEDING 5 FEET IN HEIGHT, THE COST OF SHORING SHALL BE INCIDENTAL TO ITEM # 207000 - EXCAVATION AND BACKFILL FOR STRUCTURES. IN LIEU OF SHORING, THE CONTRACTOR MAY USE A 2:1 CUT SLOPE. NO PAYMENT SHALL BE MADE FOR ADDITIONAL EXCAVATION OR FILL OUTSIDE THE LIMITS AS DEFINED IN SECTION 207 OF THE STANDARD SPECIFICATIONS.
- ITEMS TO BE REMOVED UNDER ITEM 21000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
  - REMOVAL OF THE EXISTING STRUCTURE IN ITS ENTIRETY.
  - REMOVAL OF EXISTING ROADBOX ABOVE STRUCTURE AND GUARDRAILS

## SECTION 600

- STRUCTURAL ELEMENTS OF PORTLAND CEMENT CONCRETE SHALL BE AS NOTED:
  - (F'c = 28 DAY COMPRESSIVE STRENGTH)
  - (ITEM # 623002)-PRESTRESSED REINFORCED CONCRETE MEMBERS, BOX BEAMS (F'c = 6 KSI)
  - CAST-IN-PLACE :
  - CLASS C (ITEM # 602016)-P.C.C. MASONRY (F'c=2,00 ksi)
  - MIX REQUIREMENTS SHALL CONFORM TO SECTION 812 OF THE SPECIFICATIONS. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.
- REINFORCING STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60. ALL REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2" UNLESS OTHERWISE SPECIFIED ON THE PLANS. EPOXY COATED REINFORCING STEEL SHALL CONFORM TO AASHTO M284 (ASTM D3963), AND IS DENOTED WITH THE SUFFIX "E" IN BAR MARKS.

## SECTION 700

- ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT. ALL HOT-MIX SAW CUTTING SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
- VARIABLE MESSAGE SIGNS SHALL BE PLACED 10 DAYS PRIOR TO THE DETOUR. THE MESSAGE SHALL BE AS DIRECTED BY THE CHIEF OF TRAFFIC. PAYMENT SHALL BE UNDER ITEM # 743004-FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN.

## MISCELLANEOUS

- THE CONTRACTOR SHALL CONTACT MICHAEL ELLER, THE CHIEF OF SCHEDULING FOR DART FIRST STATE, 14 DAYS PRIOR TO THE START OF CONSTRUCTION AT 302-576-6061.
- DESIGN CRITERIA: 2010 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 5TH EDITION, USING AASHTO HL93 FOR LIVE LOAD, AND 25 PSF FOR FUTURE WEARING SURFACE.
- HYDRAULIC DATA
  - DRAINAGE AREA = 2.03 SQ. MILES
  - DESIGN FREQUENCY = 50 YEARS
  - DESIGN DISCHARGE = 1084 CFS
  - 50 YR FLOOD ELEVATION = 51.74 FT
  - PROPOSED OPENING = 472 SF
- THE PROPOSED STRUCTURE HAS BEEN ANALYZED FOR THE EFFECTS OF SCOUR IN ACCORDANCE WITH HEC-18-"EVALUATING SCOUR AT BRIDGES" AND HEC-23-"BRIDGE SCOUR AND STREAM INSTABILITY COUNTERMEASURES." SCOUR COUNTERMEASURES HAVE BEEN DESIGNED FOR THE WORST CASE OF THE OVERTOPPING FLOOD OR THE 500-YR FLOOD EVENT.
  - DESIGN EVENT 500 YRS = OVERTOPPING
  - DESIGN VELOCITY = 7.84 FT/SEC
  - DESIGN DISCHARGE = 2115 CFS
  - DESIGN DEPTH OF FLOW = 9.97 FT
- CONSTRUCTION JOINTS: KEYED CONSTRUCTION JOINTS SHALL BE 2" X 4" OR AS NOTED. ALL EXPOSED CONSTRUCTION JOINT EDGES SHALL HAVE A 3/4" V-NOTCH.
- ENVIRONMENTAL COMPLIANCE: SEE ENVIRONMENTAL COMPLIANCE PLAN FOR FURTHER RESTRICTIONS/GUIDANCE ASSOCIATED WITH THIS PROJECT.
- ROAD WILL BE CLOSED DURING THE DURATION OF THE CONTRACT. MAINTENANCE OF TRAFFIC SHALL BE AS PER DETOUR PLAN. SPECIFICATION AND PAYMENT AS PER ITEM #763643-MAINTENANCE OF TRAFFIC, ALL INCLUSIVE
- WATER PROOFING MEMBRANE
  - MEMBRANE SHALL BE INSTALLED ACROSS TOP OF BEAMS AND LAPPED DOWN TO THE BOTTOM OF EACH BEAM.
  - MEMBRANE SHALL ALSO EXTEND 2" UP INSIDE FACE OF DETAIL A OF FASCIA BEAMS. PAYMENT SHALL BE UNDER ITEM #602547 - WATERPROOFING BRIDGE DECKS.
- COORDINATION AND COOPERATION BETWEEN THE CONTRACTOR AND PERSONNEL FROM THE UNIVERSITY OF DELAWARE (UD) IS OF UTMOST IMPORTANCE. UD WILL BE INSTALLING A VARIETY OF INSTRUMENTS ON THE STRUCTURE TO MONITOR ITS BEHAVIOR DURING CONSTRUCTION AND OPERATION. THE MAIN INSTRUMENTS THAT ARE EXPECTED TO BE INSTALLED IN THE GRS-IBS STRUCTURE CONSIST OF THE FOLLOWING BUT NOT LIMITED TO: INCLINOMETERS (1 INCLUDING 4 BIAXIAL SENSORS), PIEZOMETERS (3 ), EARTH PRESSURE CELLS (8), SETTLEMENT CELLS (1), TEMPERATURE SENSORS (2), BRIDGE STRAIN GAUGES (11 TO BE ATTACHED TO THE PRECAST PRESTRESSED VOIDED SLAB), GEOTEXTILE STRAIN GAUGES (50) AND TIME DOMAIN REFLECTOMETRY (5). FOR THE INSTALLATION OF THE INCLINOMETER, THE CONTRACTOR SHALL EXCAVATE TO THE ELEVATION OF THE ABUTMENT FOOTING AND STOP. UD SHALL THEN DRILL HOLES TO THE REQUIRED DEPTH AND INSTALL THE NECESSARY INSTRUMENTS. DRILLING SHALL BE DONE BY AN INDEPENDENT CONTRACTOR AT NO COST TO THE CONTRACTOR. AN ALLOWANCE OF TWO DAYS SHALL BE MADE BY THE CONTRACTOR FOR THE DRILLING AND INSTALLATION OF INSTRUMENTATIONS BY OTHERS. THE CONTRACTOR HAS THE OPTION TO START EXCAVATION ON THE SECOND ABUTMENT. AN ALLOWANCE OF ONE DAY SHALL BE ALLOWED AT THE COMPLETION OF THE EXCAVATION OF THE SECOND ABUTMENT FOR INSTRUMENTATION BY UD. SECTION A-A IN THE APPENDIX, SHOWS THE PROPOSED INSTRUMENTATION AND LOCATIONS. TWO (2) HOURS SHALL BE ALLOWED FOR THE INSTRUMENTATION OF EACH LAYER BY UD AS SHOWN. THE CONTRACTOR WILL BE REQUIRED TO DRILL SMALL HOLES THROUGH THE MASONRY BLOCKS TO FACILITATE INSTRUMENT WIRING ON THE LEVELS SHOWN IN THE APPENDIX. PAYMENT FOR DRILLING HOLES IN MASONRY BLOCKS IS INCIDENTAL TO THE CONTRACT. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR THE STATED DELAYS OR ANY INCONVENIENCE RESULTED FROM THE UD INSTALLATION OPERATION. ALL COSTS ASSOCIATED WITH THE UD COORDINATION SHALL BE INCIDENTAL TO THE CONTRACT.

### ALL ROLLS

- THE CONTRACTOR SHALL DELIVER ONE ROLL OF ITEM #713501-GEOSYNTHETIC REINFORCEMENT TO UD, NEWARK, DELAWARE SEVEN (7) DAYS AFTER THE AWARD OF THE CONTRACT TO ALLOW FOR INSTRUMENTATION WITH STRAIN GAUGES. THE CONTRACTOR SHALL INSTRUCT UD HOW TO CUT THE GEOSYNTHETIC REINFORCEMENT AS IT WOULD BE LAID IN THE FIELD. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PICK-UP THE INSTRUMENTED GEOSYNTHETIC REINFORCEMENT FROM UD AND DELIVER IT CAREFULLY TO THE BRIDGE SITE FOR INSTALLATION. THE CONTACT PERSON AT UD IS MAJID TALEBI, TELEPHONE #302-419-4071 OR 302-831-8053. NO ADDITIONAL COMPENSATION WILL BE PAID FOR THIS OPERATION. ALL COSTS TO THE CONTRACTOR ASSOCIATED WITH DELIVERING AND TRANSPORTING GEOSYNTHETIC REINFORCEMENT SHALL BE INCIDENTAL TO THE CONTRACT.

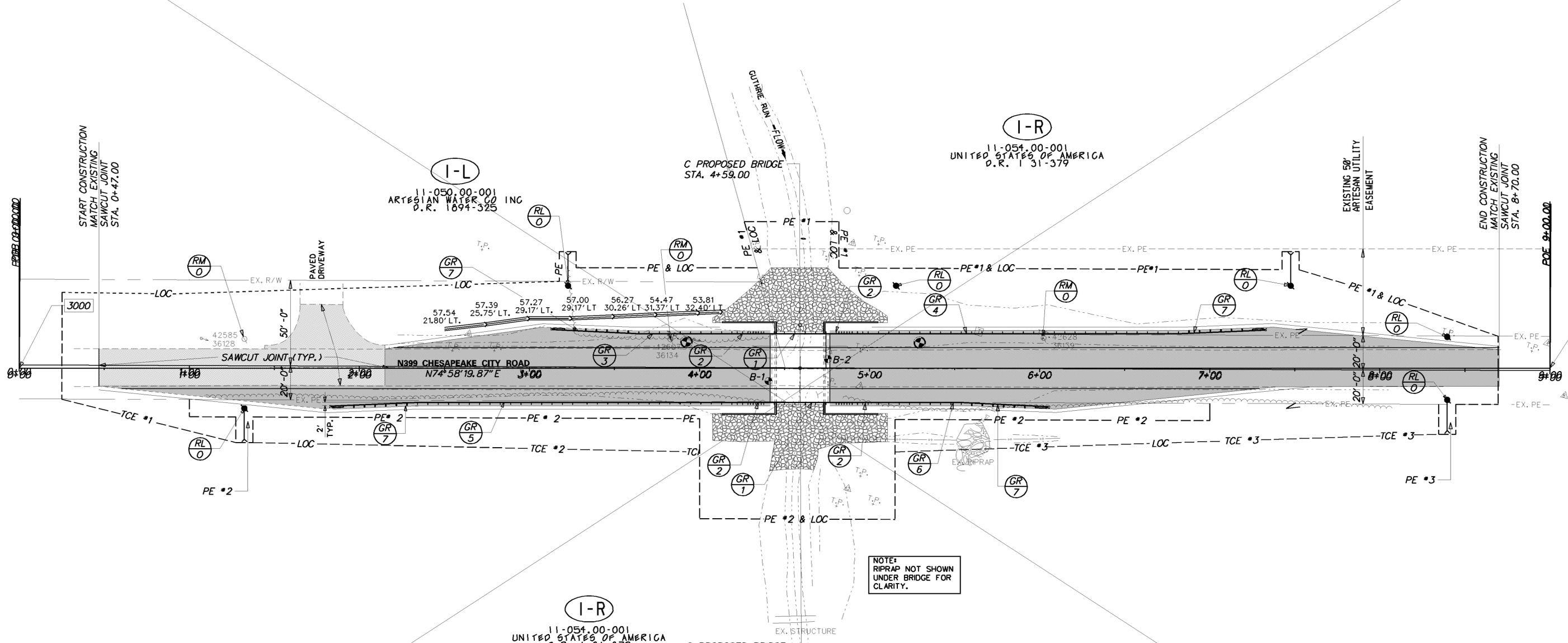
- AFTER THE ROADWAY APPROACHES ARE CONSTRUCTED AND THE BEAMS ARE INSTALLED AND READY TO RECEIVE HOTMIX, THE CONTRACTOR SHALL ALLOW THREE DAYS FOR UD TO INSTALL STRAIN GAUGES TO SUPERSTRUCTURE AND CALIBRATE THEIR INSTRUMENTS WITH TRUCK LOADING. MEANS AND METHODS OF INSTALLATION OF STRAIN GAUGES SHALL BE THE RESPONSIBILITY OF UD. TRUCK LOADING SHALL BE PROVIDED BY THE DEPARTMENT AT NO COST TO THE CONTRACTOR. THIS INSTALLATION AND CALIBRATION SHALL BE DONE PRIOR TO INSTALLING HOT-MIX. NO ADDITIONAL PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR UD'S INSTALLATION AND CALIBRATION OF THE STRAIN GAUGES. ALL COSTS TO THE CONTRACTOR ASSOCIATED WITH THREE DAY ALLOWANCE FOR INSTALLATION AND CALIBRATION OF STRAIN GAUGES SHALL BE INCIDENTAL TO THE CONTRACT.

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS OF THE ARTESAN WATERLINES BEFORE THE START OF THE EXCAVATION. PAYMENT FOR ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCIDENTAL TO ITEM 21000-REMOVAL OF STRUCTURES AND OBSTRUCTIONS.

- THE CONTRACTOR SHALL EXCAVATE TWO TRENCHES 1'-6" DEEP X 1'-6" WIDE X 30'-0" LONG, FOR INSTALLATION OF PVC PIPES AT LOCATIONS TO BE DIRECTED BY THE ENGINEER. PAYMENT FOR ALL TRENCH WORK INCLUDING EXCAVATION, FURNISHING AND PLACEMENT OF BACKFILL SHALL BE PAID UNDER ITEM 612502-PVC PIPE, 6" ..

### LRFR LOAD RATINGS

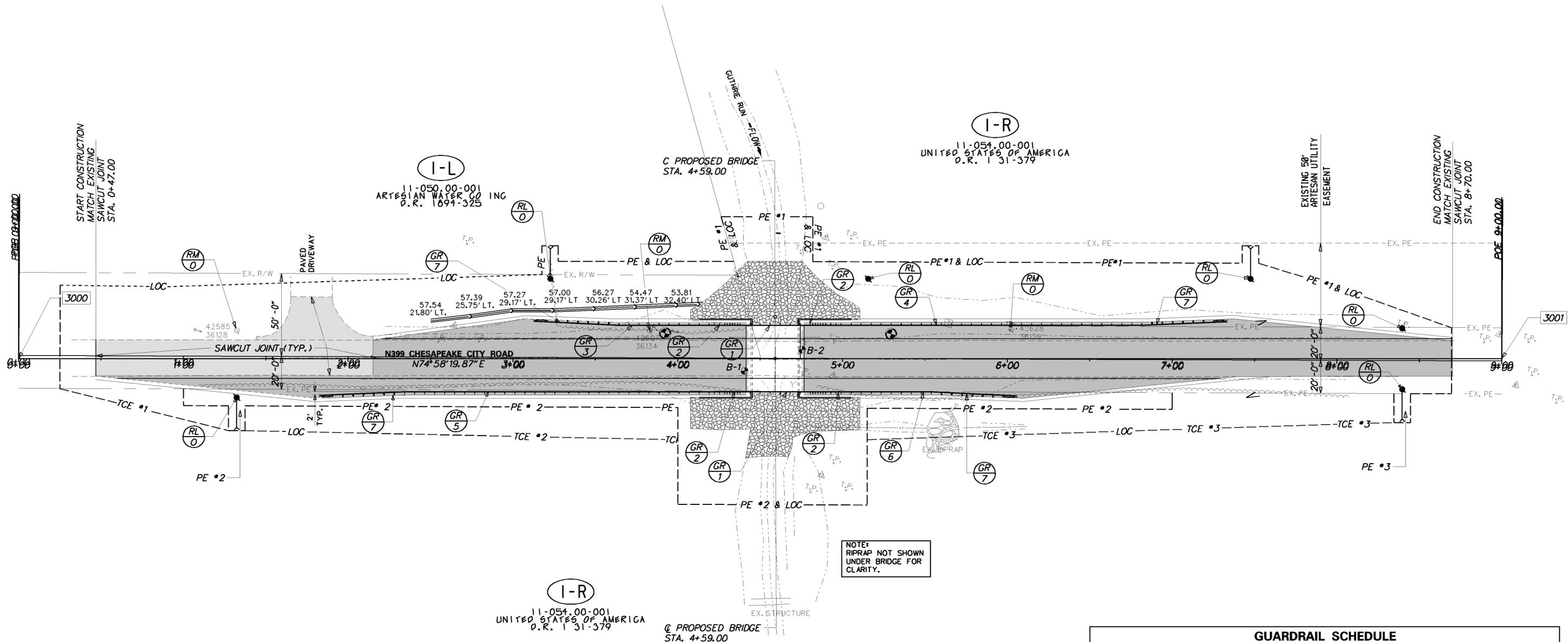
RATING VEHICLE	RATING TYPE	LOAD RATING FACTOR	LOAD RATING (tons)
HL-93 TRUCK	INVENTORY	1.04	N/A
HL-93 TANDEM	INVENTORY	1.00	N/A
HL-93 TRUCK	OPERATING	1.28	N/A
HL-93 TANDEM	OPERATING	1.23	N/A
S220	LEGAL	1.97	20
S335	LEGAL	1.07	35
S437	LEGAL	1.01	37
T330	LEGAL	1.89	30
T435	LEGAL	1.44	35
T540	LEGAL	1.36	40



NOTE:  
RIPRAP NOT SHOWN  
UNDER BRIDGE FOR  
CLARITY.

GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
GR1	720664-BRIDGE RAILING-GUARDRAIL TYPE	4+37.13	20.00 FT	43.75 FT
GR2	720665-BRIDGE RAILING, --TRANSITION UNIT-	-	20.00 FT	25.00 FT
GR3	720043-GUARDRAIL TYPE 1-27	3+62.13	20.00 FT	50.00 FT
GR4	720043-GUARDRAIL TYPE 1-27	5+05.88	20.00 FT	175.00 FT
GR5	720043-GUARDRAIL TYPE 1-27	2+37.13	20.00 FT	175.00 FT
GR6	720043-GUARDRAIL TYPE 1-27	5+05.88	20.00 FT	50.00 FT
GR7	720637-END TREATMENT ATTENUATOR TYPE1	-	20.00 FT	50.00 FT

Y:\NEWCASTL\399\BRIDGE\T201007102\PLANS\CP01.DGN

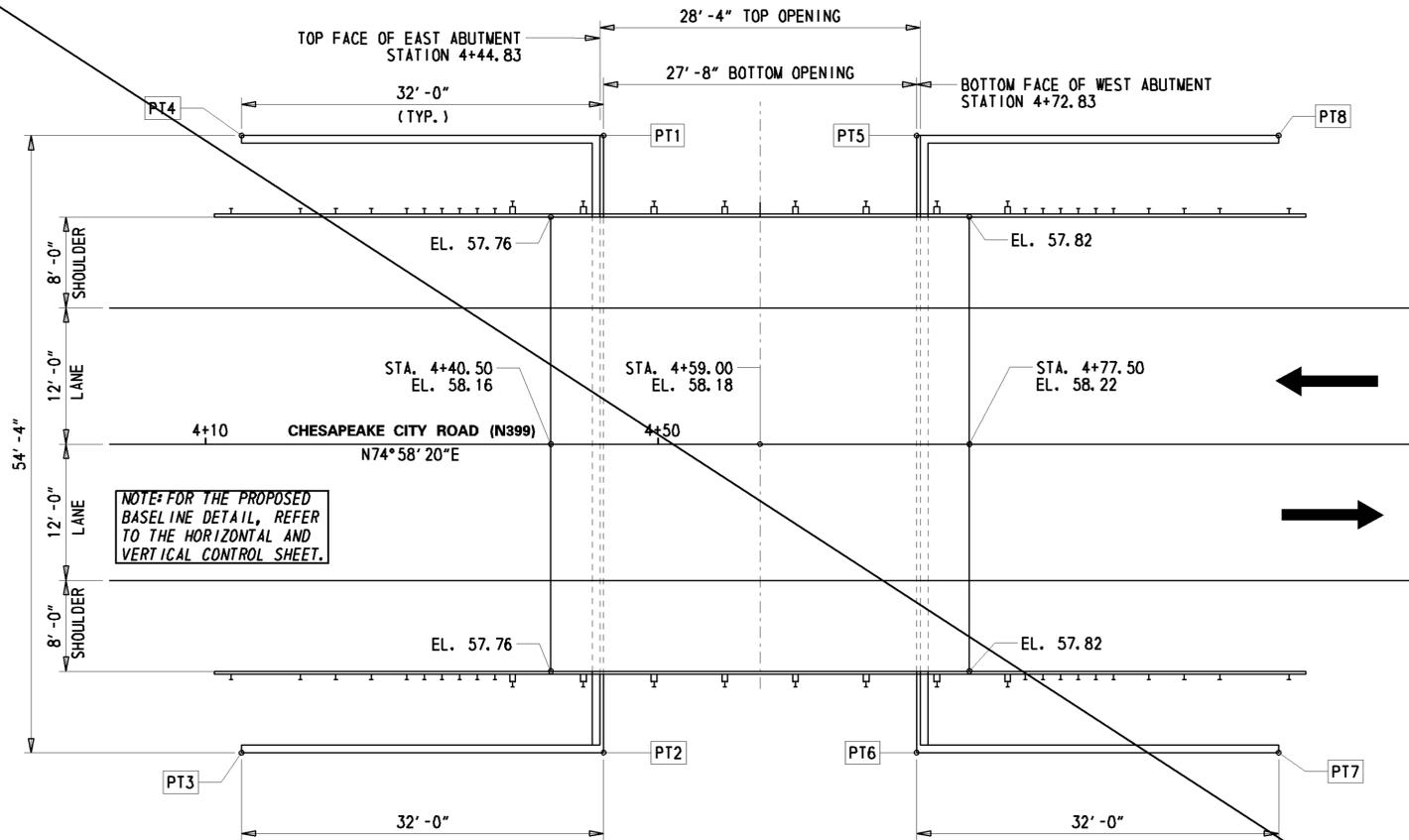


NOTE:  
RIPRAP NOT SHOWN  
UNDER BRIDGE FOR  
CLARITY.

GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
GR1	720664-BRIDGE RAILING-GUARDRAIL TYPE	4+37.13	20.00 FT	43.75 FT
GR2	720665-BRIDGE RAILING, --TRANSITION UNIT-	-	20.00 FT	25.00 FT
GR3	720043-GUARDRAIL TYPE 1-27	3+62.13	20.00 FT	50.00 FT
GR4	720043-GUARDRAIL TYPE 1-27	5+05.88	20.00 FT	175.00 FT
GR5	720043-GUARDRAIL TYPE 1-27	2+37.13	20.00 FT	175.00 FT
GR6	720043-GUARDRAIL TYPE 1-27	5+05.88	20.00 FT	50.00 FT
GR7	720637-END TREATMENT ATTENUATOR TYPE1	-	20.00 FT	50.00 FT

W:\MSV8\CELLS\PROJDEV\SB\CEL

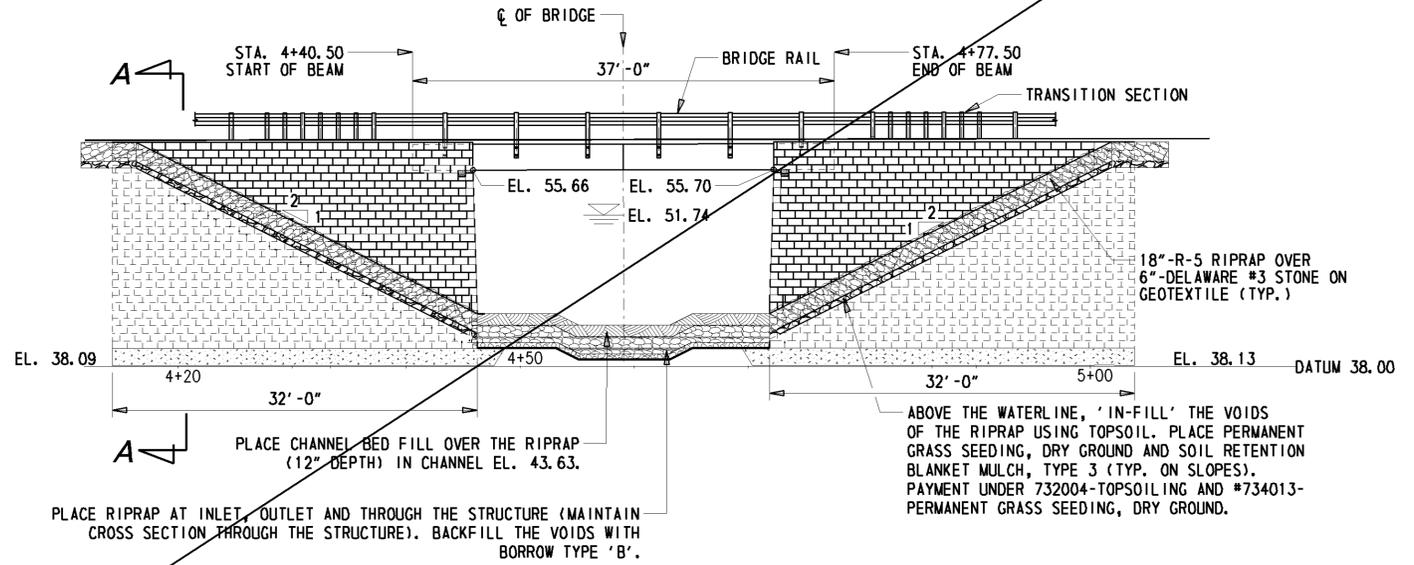
	<b>DELAWARE</b> <b>DEPARTMENT OF TRANSPORTATION</b>	ADDENDUMS / REVISIONS NEW SHEET	SCALE 0 30 60 90 FEET	<b>BR 1-366</b> <b>ON N399 CHESAPEAKE CITY ROAD</b> <b>OVER GUTHRIE RUN</b>	CONTRACT T201007102 COUNTY NEW CASTLE	BRIDGE NO. <b>1-366</b> DESIGNED BY: PAM CHECKED BY: BB	<b>CONSTRUCTION PLAN</b>	SHEET NO. 6 A TOTAL SHTS. 22



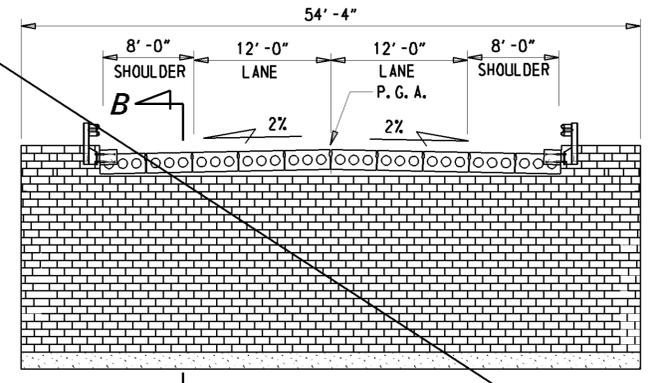
**BRIDGE PLAN**  
1/8" = 1'-0"

WORKING POINTS				
PT.	STATION	OFFSET	NORTHING	EASTING
1	4+45.17	-27.17	562952.136	559413.733
2	4+45.17	27.17	562899.714	559428.019
3	4+13.17	27.17	562891.300	559397.144
4	4+13.17	-27.17	562943.722	559382.856
5	4+72.83	-27.17	562955.409	559440.423
6	4+72.83	27.17	562906.988	559454.709
7	5+04.83	27.17	562915.401	559485.583
8	5+04.83	-27.17	562967.823	559471.297

SEE SHEET 9 FOR SECTIONS A-A AND B-B

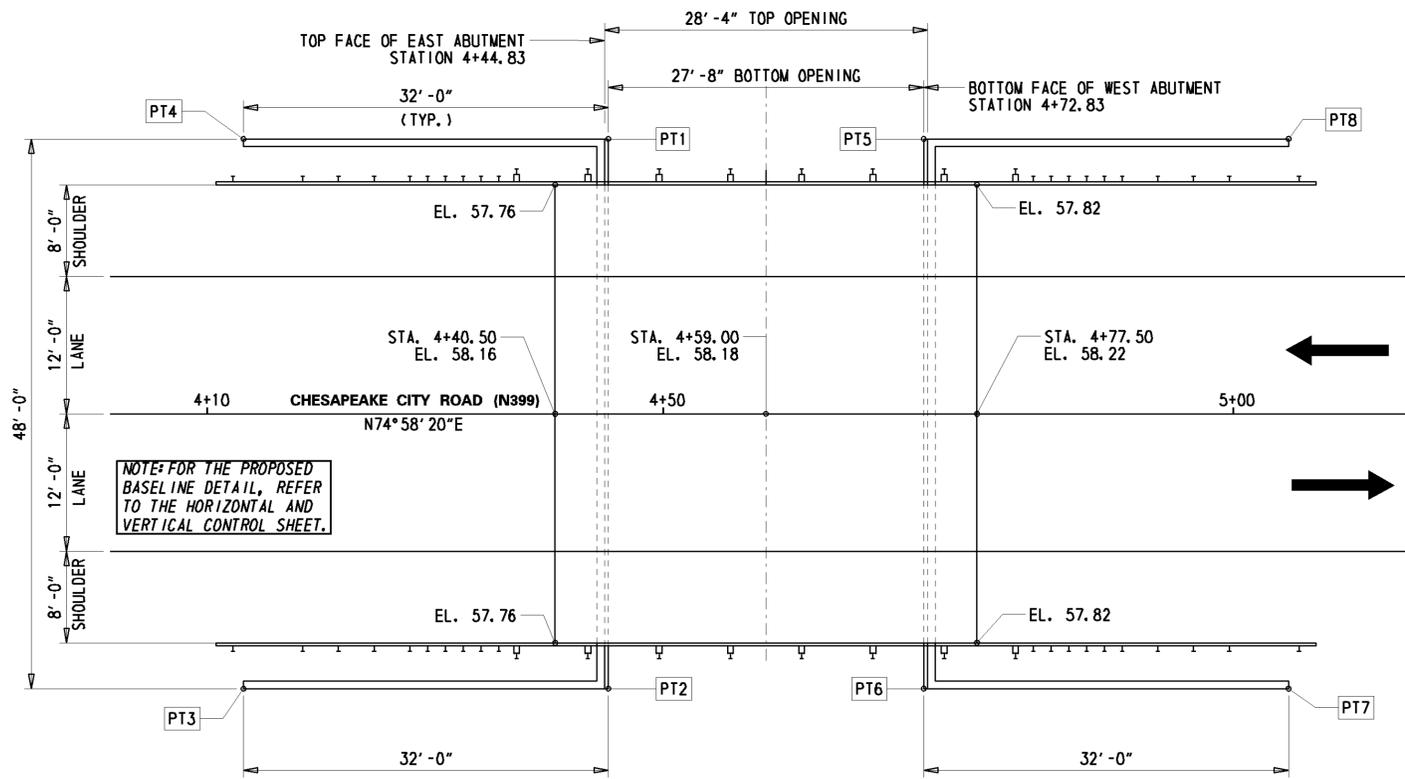


**BRIDGE ELEVATION**  
1/8" = 1'-0"



**BRIDGE SECTION**  
1/8" = 1'-0"

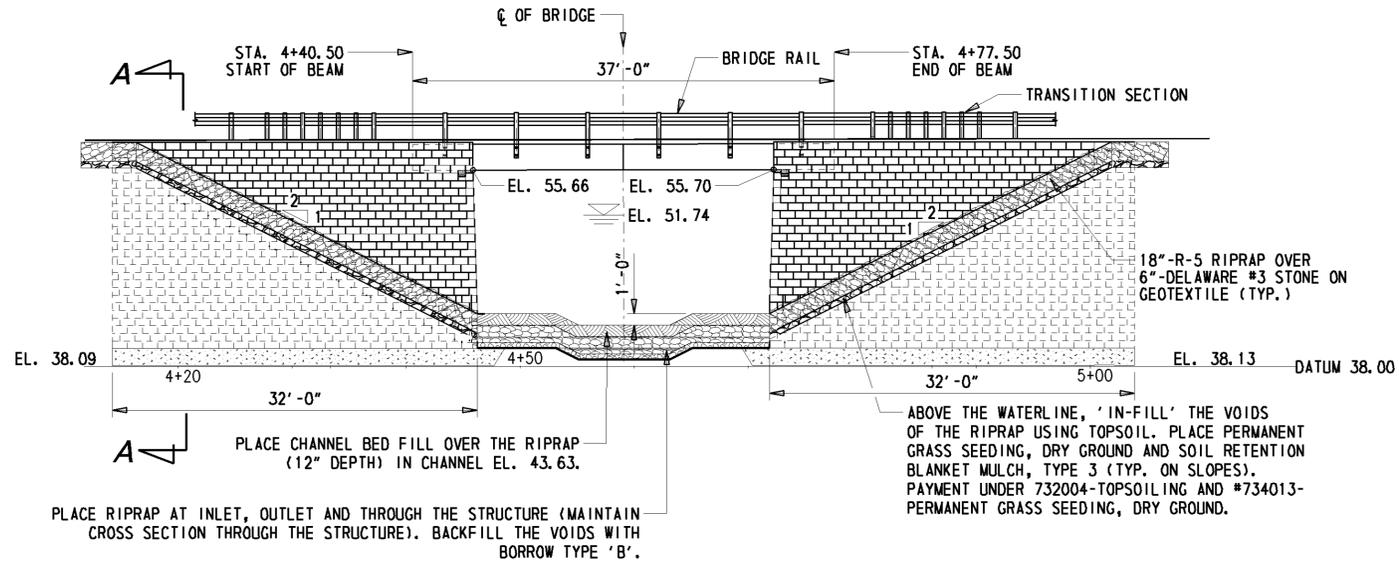
Y:\NEWCASTLE\399\BRIDGE\T201007102\PLANS\GRPS-IBS\PE01.DGN



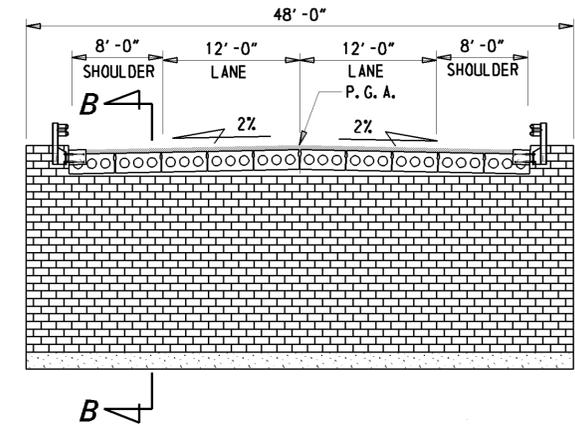
**BRIDGE PLAN**  
1/8" = 1'-0"

WORKING POINTS				
PT.	STATION	OFFSET	NORTHING	EASTING
1	4+45.17	-24.00	562949.081	559414.567
2	4+45.17	24.00	562902.770	559427.188
3	4+13.17	24.00	562894.356	559396.314
4	4+13.17	-24.00	562940.667	559382.693
5	4+72.83	-24.00	562956.354	559441.254
6	4+72.83	24.00	562910.042	559453.875
7	5+04.83	24.00	562918.456	559484.749
8	5+04.83	-24.00	562964.767	559472.128

SEE SHEET 9 FOR SECTIONS A-A AND B-B



**BRIDGE ELEVATION**  
1/8" = 1'-0"



**BRIDGE SECTION**  
1/8" = 1'-0"

Y:\NEWCASTLE\399\BRIDGE\T201007102\PLANS\GRPS-IBS\PE01.DGN

ITEM 602691: VOIDED CONCRETE MASONRY BLOCK - THIS ITEM SHALL CONSIST OF FURNISHING AND PLACING SPLITFACE HOLLOW CORE CONCRETE MASONRY UNITS (CMU). THIS BLOCK IS DESIGNATED TO BE USED IN ZONE B AS SHOWN ON THIS SHEET.

ITEM 602690: SOLID CONCRETE MASONRY BLOCK - THIS ITEM SHALL CONSIST OF FURNISHING AND PLACING SOLID CONCRETE MASONRY UNITS (CMU) COLORED RED. THIS BLOCK IS DESIGNATED TO BE USED IN ZONE A AS SHOWN ON THIS SHEET. THE 4"x8" SOLID CMU USED IN THE BEAM SEATS ARE ALSO MEASURED AND PAID FOR UNDER THIS ITEM. ALSO INCIDENTAL TO THIS ITEM ARE THE MATERIALS AND LABOR NECESSARY TO CONSTRUCT THE REMAINDER OF THE BEAM SEAT DETAIL, WHICH INCLUDES THE FOAM AND ALUMINUM FASCIA, AS SHOWN ON THIS SHEET.

ITEM 713501: GEOSYNTHETIC REINFORCEMENT - THE GEOSYNTHETIC REINFORCEMENT SHALL BE PLACED AS SHOWN ON THIS SHEET. THE WIDTH AND LENGTH VARY AS SHOWN ON THE DRAWING AND REINFORCEMENT SCHEDULE.

ITEM 302521: GRANULAR EMBANKMENT - THIS ITEM SHALL INCLUDE FURNISHING AND PLACING COARSE AGGREGATE. THE STONE BACKFILL SHALL BE PLACED BEHIND EACH LAYER OF CMU BLOCK IN A COMPACTED LIFT THICKNESS NOT TO EXCEED THE CMU BLOCK HEIGHT. PLACEMENT OF THE AGGREGATE SHALL BE FROM THE WALL FACE BACKWARD TO PREVENT THE FORMATION OF AND TO REMOVE ANY WRINKLES IN THE GEOTEXTILE. FILL SHALL BE PLACED IN A MANNER TO AVOID WRINKLING OF THE GEOSYNTHETIC REINFORCEMENT. THE BACKFILL SHALL BE COMPLETELY COMPACTED AS PER 302.04.

THIS IS GENERALLY ACHIEVED BY:

- 1) RODDING THE AGGREGATE FILL BEHIND EACH CMU BLOCK APPROXIMATELY EVERY FOOT WHILE EXERTING DOWNWARD PRESSURE ON THE CMU BLOCK TO PREVENT LATERAL MOVEMENT
- 2) USING A VIBRATORY PLATE COMPACTOR (> 4 PASSES) DIRECTLY BEHIND THE CMU BLOCK WHILE EXERTING DOWNWARD PRESSURE ON THE CMU BLOCK TO PREVENT LATERAL MOVEMENT
- 3) LARGER VIBRATORY COMPACTORS MAY BE USED FOR THE BALANCE OF THE AREA MORE THAN 2' BEHIND THE CMU BLOCK. MULTIPLE PASSES OF A VIBRATORY PLATE COMPACTOR CAN ALSO ACHIEVE THE PROPER DENSITY AT THE END OF A DAY'S OPERATIONS, SLOPE THE LAST LIFT OF BACKFILL AWAY FROM THE WALL FACE TO DIRECT SURFACE RUNOFF AWAY FROM THE WALL. DO NOT ALLOW SURFACE RUNOFF FROM ADJACENT AREAS TO ENTER THE WALL CONSTRUCTION AREA.

ITEM #302522: REINFORCED SOIL FOUNDATION - THIS ITEM SHALL INCLUDE FURNISHING AND PLACING COARSE AGGREGATE CONFORMING TO THE DELAWARE #57 GRADATION. THE STONE BACKFILL SHALL BE PLACED IN COMPACTED LIFTS NOT TO EXCEED 6" AND SHALL BE COMPACTED AS PER 302.04. THE BOTTOM OF THE EXCAVATION SHALL BE SOUND SOIL AS DETERMINED BY THE ENGINEER. THIS ITEM SHALL BE PAID AS PLACED.

ITEM 602016: PCC MASONRY CLASS C - THIS ITEM SHALL INCLUDE PROVIDING AND PLACING CLASS C CONCRETE AS PER PLANS AND SPECIFICATIONS. ALL CMU BLOCKS IN THE TOP THREE ROWS SHALL HAVE THE FABRIC CUT OR REMOVED TO ALLOW THE VOIDS TO BE TIED TOGETHER. A PIECE OF #5 REBAR SHALL BE PLACED IN EACH VOID. THIS WILL LIKELY HAVE TO BE DONE IN AT LEAST 2 SEPARATE POURS AS THE VOIDS BELOW THE BEAMS MUST BE FILLED BEFORE BEAM PLACEMENT AND THE VOIDS IN THE BALANCE MUST BE POURED AFTER BEAM PLACEMENT. AFTER THE BLOCK VOID IS FILLED, A THIN LAYER OF THE SAME CONCRETE MIX SHALL BE PLACED ON TOP OF THE BLOCK TO FORM THE COPING. THE COPING IS THEN HAND-TROWELED EITHER SQUARE OR ROUND AND SLOPED TO DRAIN. PLACE 4" ALUMINUM FASCIA ALONG SLOPE OF ABUTMENT BETWEEN BOTTOM OF BEAMS AND FOAM BOARD ON ABUTMENT WALL. THE COST FOR THIS CONCRETE, FURNISHING AND PLACING REBAR AND ALUMINUM FASCIA, AND FABRIC PREPARATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 602016-PCC MASONRY CLASS C.

BEAM SEAT PLACEMENT: THICKNESS OF THE BEAM SEAT IS APPROXIMATELY 20 INCHES AND CONSISTS OF A MINIMUM OF FIVE 4-INCH LIFTS OF WRAPPED-FACE GRS. PLACE PRECUT 3-INCH THICK FOAM BOARD ON TOP OF THE BEARING BED REINFORCEMENT BUT AGAINST THE FACE OF THE CMU BLOCK. SET HALF-HEIGHT CMU BLOCKS ON TOP OF THE FOAM BOARD. WRAP 4-INCH LIFTS ACROSS THE BEAM SEAT, BEFORE FOLDING THE FINAL WRAP, IT MAY BE NECESSARY TO GRADE THE SURFACE AGGREGATE OF THE BEAM SEAT SLIGHTLY HIGHER, TO ABOUT 0.5 INCHES, TO AID IN SEATING THE FOOTING AND TO MAXIMIZE CONTACT WITH THE BEARING AREA AND ENSURE THE PROPER CROWN IN THE BRIDGE.

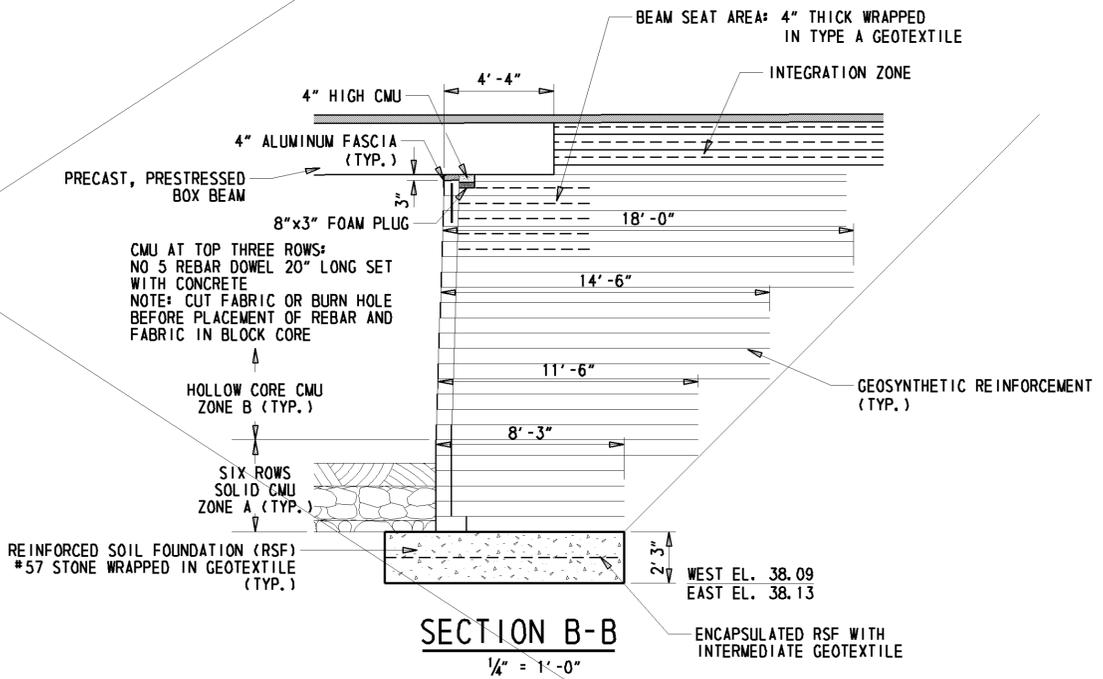
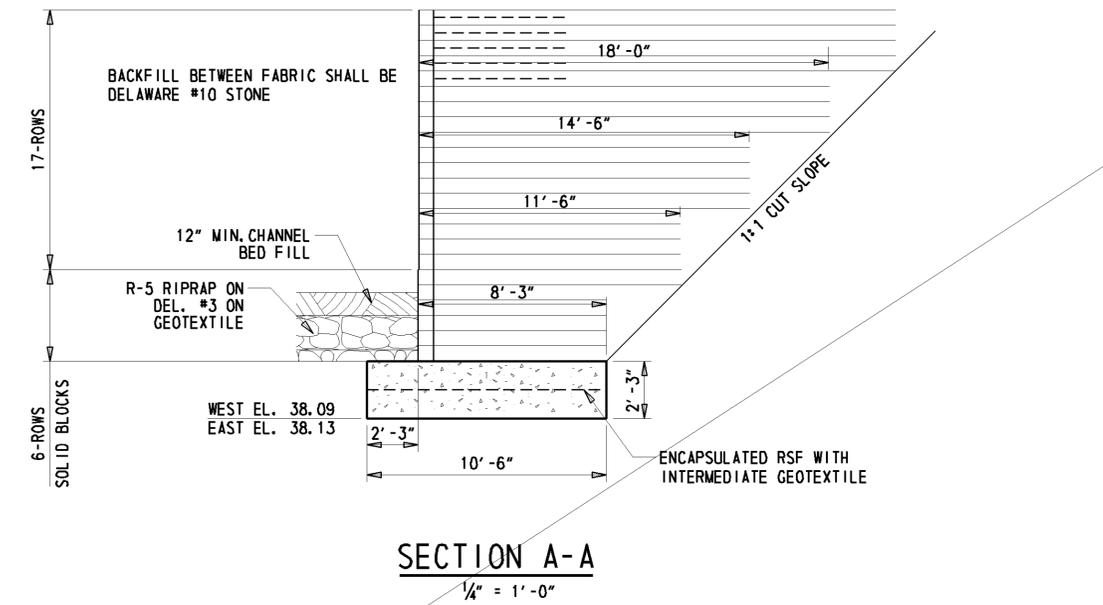
POLYSTYRENE FOAM BOARD: PROVIDE POLYSTYRENE FOAM BOARD CONFORMING TO AASHTO M230, TYPE VI. PAYMENT INCIDENTAL TO ITEM 602016-PCC MASONRY CLASS C.

INTEGRATED APPROACH PLACEMENT: FOLLOWING THE PLACEMENT OF THE SUPERSTRUCTURE, GEOTEXTILE REINFORCEMENT LAYERS ARE PLACED ALONG THE BACK OF THE SUPERSTRUCTURE, BUILT IN MAXIMUM LIFT HEIGHTS OF 4-INCHES. THE TOP OF FINAL WRAP SHOULD ALLOW AT LEAST 2-INCHES OF AGGREGATE BASE COVER OVER THE GEOSYNTHETIC TO PROTECT IT FROM HOT MIX ASPHALT. PAYMENT UNDER THEIR RESPECTIVE ITEMS.

EQUIPMENT PLACEMENT: EQUIPMENT CAN BE POSITIONED ON THE GRS ABUTMENT PROVIDED THE OUTRIGGER PADS ARE SIZED FOR LESS THAN 4000 PSF NEAR THE FACE OF THE ABUTMENT WALL.

COMPACTION: COMPACT BACKFILL TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY ACCORDING TO AASHTO-T-99 AND +/- 2 PERCENT OPTIMUM MOISTURE CONTENT. IN THE BEARING REINFORCEMENT ZONE, COMPACT TO 100 PERCENT OF THE MAXIMUM DRY DENSITY ACCORDING TO AASHTO-T-99. ONLY HAND-OPERATED EQUIPMENT IS ALLOWED WITHIN 3-FEET OF THE WALL FACE. BACKFILL SHALL COMPACT TO NON-MOVEMENT OR NO APPRECIABLE DISPLACEMENT AND ASSESS WITH VISUAL INSPECTION. ALL COMPACTED LIFTS SHALL BE APPROVED BY THE ENGINEER FOR COMPACTNESS BEFORE THE NEXT LIFT WILL BE PERMITTED TO START. REINFORCEMENT EXTENDS DIRECTLY BENEATH EACH LAYER OF CMU BLOCKS, COVERING > 85 PERCENT OF THE FULL WIDTH OF THE BLOCK FACE OF THE WALL.

GUARDRAIL POST: THE CONTRACTOR SHALL PROPOSE A SAFE METHOD FOR INSTALLING THE GUARDRAIL POST THROUGH THE GEOTEXTILE, THAT WILL NOT CAUSE DAMAGE OR MIS-ALIGNMENT TO THE WALL FACING ELEMENTS. PAYMENT INCIDENTAL TO THE RESPECTIVE GUARDRAIL ITEM.



**LEGEND**

CMU	- CONCRETE MASONRY UNIT
GRS	- GEOSYNTHETIC REINFORCED SOIL
IBS	- INTEGRATED BRIDGE SYSTEM
---	TYPE A GEOTEXTILE (4800 LBS/FT) WIDE WIDTH TENSILE STRENGTH
---	INTERMEDIATE LAYER TYPE A GEOTEXTILE (4800 LBS/FT) WIDE WIDTH TENSILE STRENGTH

Y:\NEWCASTL\399\BRIDGE\T201007102\PLANS\PE01.DGN

<p><b>DELAWARE</b> DEPARTMENT OF TRANSPORTATION</p>	<p>ADDENDUMS / REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">SHEET DELETED</td> <td style="width: 50%;"></td> </tr> <tr> <td style="width: 50%;"></td> <td style="width: 50%;"></td> </tr> </table>	SHEET DELETED				<p>Not To Scale</p>	<p><b>BR. 1-366</b> <b>ON N399 CHESAPEAKE CITY ROAD</b> <b>OVER GUTHRIE RUN</b></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>CONTRACT</td> <td>BRIDGE NO.</td> <td style="text-align: center;"><b>1-366</b></td> </tr> <tr> <td>T201007102</td> <td>DESIGNED BY: PAM</td> <td></td> </tr> <tr> <td>COUNTY</td> <td>CHECKED BY: BB</td> <td></td> </tr> <tr> <td>NEW CASTLE</td> <td></td> <td></td> </tr> </table>	CONTRACT	BRIDGE NO.	<b>1-366</b>	T201007102	DESIGNED BY: PAM		COUNTY	CHECKED BY: BB		NEW CASTLE			<p><b>SUBFOUNDATION DETAILS</b></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>SHEET NO.</td> <td style="text-align: center;">9</td> </tr> <tr> <td>TOTAL SHTS.</td> <td style="text-align: center;">22</td> </tr> </table>	SHEET NO.	9	TOTAL SHTS.	22
	SHEET DELETED																									
CONTRACT	BRIDGE NO.	<b>1-366</b>																								
T201007102	DESIGNED BY: PAM																									
COUNTY	CHECKED BY: BB																									
NEW CASTLE																										
SHEET NO.	9																									
TOTAL SHTS.	22																									

ITEM 602691: VOIDED CONCRETE MASONRY BLOCK - THIS ITEM SHALL CONSIST OF FURNISHING AND PLACING SPLITFACE HOLLOW CORE CONCRETE MASONRY UNITS (CMU). THIS BLOCK IS DESIGNATED TO BE USED IN ZONE B AS SHOWN ON THIS SHEET.

ITEM 602690: SOLID CONCRETE MASONRY BLOCK - THIS ITEM SHALL CONSIST OF FURNISHING AND PLACING SOLID CONCRETE MASONRY UNITS (CMU) COLORED RED. THIS BLOCK IS DESIGNATED TO BE USED IN ZONE A AS SHOWN ON THIS SHEET. THE 4"x8" SOLID CMU USED IN THE BEAM SEATS ARE ALSO MEASURED AND PAID FOR UNDER THIS ITEM. ALSO INCIDENTAL TO THIS ITEM ARE THE MATERIALS AND LABOR NECESSARY TO CONSTRUCT THE REMAINDER OF THE BEAM SEAT DETAIL, WHICH INCLUDES THE FOAM AND ALUMINUM FASCIA, AS SHOWN ON THIS SHEET.

ITEM 713501: GEOSYNTHETIC REINFORCEMENT - THE GEOSYNTHETIC REINFORCEMENT SHALL BE PLACED AS SHOWN ON THIS SHEET. THE WIDTH AND LENGTH VARY AS SHOWN ON THE DRAWING AND REINFORCEMENT SCHEDULE.

ITEM 302521: GRANULAR EMBANKMENT - THIS ITEM SHALL INCLUDE FURNISHING AND PLACING COARSE AGGREGATE. THE STONE BACKFILL SHALL BE PLACED BEHIND EACH LAYER OF CMU BLOCK IN A COMPACTED LIFT THICKNESS NOT TO EXCEED THE CMU BLOCK HEIGHT. PLACEMENT OF THE AGGREGATE SHALL BE FROM THE WALL FACE BACKWARD TO PREVENT THE FORMATION OF AND TO REMOVE ANY WRINKLES IN THE GEOTEXTILE. FILL SHALL BE PLACED IN A MANNER TO AVOID WRINKLING OF THE GEOSYNTHETIC REINFORCEMENT. THE BACKFILL SHALL BE COMPLETELY COMPACTED AS PER 302.04.

THIS IS GENERALLY ACHIEVED BY :

- 1) RODDING THE AGGREGATE FILL BEHIND EACH CMU BLOCK APPROXIMATELY EVERY FOOT WHILE EXERTING DOWNWARD PRESSURE ON THE CMU BLOCK TO PREVENT LATERAL MOVEMENT
- 2) USING A VIBRATORY PLATE COMPACTOR (> 4 PASSES) DIRECTLY BEHIND THE CMU BLOCK WHILE EXERTING DOWNWARD PRESSURE ON THE CMU BLOCK TO PREVENT LATERAL MOVEMENT
- 3) LARGER VIBRATORY COMPACTORS MAY BE USED FOR THE BALANCE OF THE AREA MORE THAN 2' BEHIND THE CMU BLOCK. MULTIPLE PASSES OF A VIBRATORY PLATE COMPACTOR CAN ALSO ACHIEVE THE PROPER DENSITY AT THE END OF A DAY'S OPERATIONS, SLOPE THE LAST LIFT OF BACKFILL AWAY FROM THE WALL FACE TO DIRECT SURFACE RUNOFF AWAY FROM THE WALL. DO NOT ALLOW SURFACE RUNOFF FROM ADJACENT AREAS TO ENTER THE WALL CONSTRUCTION AREA.

ITEM #302522: REINFORCED SOIL FOUNDATION - THIS ITEM SHALL INCLUDE FURNISHING AND PLACING COARSE AGGREGATE CONFORMING TO THE DELAWARE #57 GRADATION. THE STONE BACKFILL SHALL BE PLACED IN COMPACTED LIFTS NOT TO EXCEED 6" AND SHALL BE COMPACTED AS PER 302.04. THE BOTTOM OF THE EXCAVATION SHALL BE SOUND SOIL AS DETERMINED BY THE ENGINEER. THIS ITEM SHALL BE PAID AS PLACED.

ITEM 602016: PCC MASONRY CLASS C - THIS ITEM SHALL INCLUDE PROVIDING AND PLACING CLASS C CONCRETE AS PER PLANS AND SPECIFICATIONS. ALL CMU BLOCKS IN THE TOP THREE ROWS SHALL HAVE THE FABRIC CUT OR REMOVED TO ALLOW THE VOIDS TO BE TIED TOGETHER. A PIECE OF #5 REBAR SHALL BE PLACED IN EACH VOID. THIS WILL LIKELY HAVE TO BE DONE IN AT LEAST 2 SEPARATE POURS AS THE VOIDS BELOW THE BEAMS MUST BE FILLED BEFORE BEAM PLACEMENT AND THE VOIDS IN THE BALANCE MUST BE POURED AFTER BEAM PLACEMENT. AFTER THE BLOCK VOID IS FILLED, A THIN LAYER OF THE SAME CONCRETE MIX SHALL BE PLACED ON TOP OF THE BLOCK TO FORM THE COPING. THE COPING IS THEN HAND-TROWELED EITHER SQUARE OR ROUND AND SLOPED TO DRAIN. PLACE 4" ALUMINUM FASCIA ALONG SLOPE OF ABUTMENT BETWEEN BOTTOM OF BEAMS AND FOAM BOARD ON ABUTMENT WALL. THE COST FOR THIS CONCRETE, FURNISHING AND PLACING REBAR AND ALUMINUM FASCIA, AND FABRIC PREPARATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 602016-PCC MASONRY CLASS C.

BEAM SEAT PLACEMENT: THICKNESS OF THE BEAM SEAT IS APPROXIMATELY 20 INCHES AND CONSISTS OF A MINIMUM OF FIVE 4-INCH LIFTS OF WRAPPED-FACE GRS. PLACE PRECUT 3-INCH THICK FOAM BOARD ON TOP OF THE BEARING BED REINFORCEMENT BUT AGAINST THE FACE OF THE CMU BLOCK. SET HALF-HEIGHT CMU BLOCKS ON TOP OF THE FOAM BOARD. WRAP 4-INCH LIFTS ACROSS THE BEAM SEAT, BEFORE FOLDING THE FINAL WRAP, IT MAY BE NECESSARY TO GRADE THE SURFACE AGGREGATE OF THE BEAM SEAT SLIGHTLY HIGHER, TO ABOUT 0.5 INCHES, TO AID IN SEATING THE FOOTING AND TO MAXIMIZE CONTACT WITH THE BEARING AREA AND ENSURE THE PROPER CROWN IN THE BRIDGE.

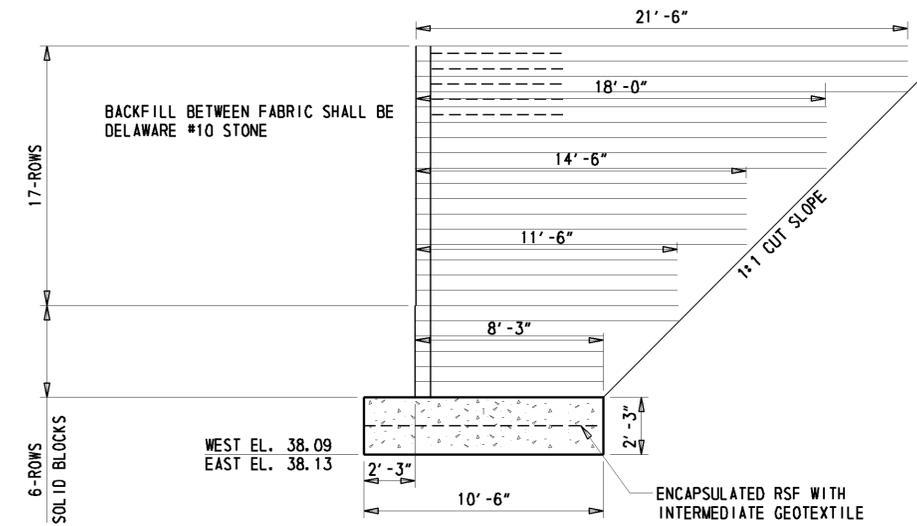
POLYSTYRENE FOAM BOARD: PROVIDE POLYSTYRENE FOAM BOARD CONFORMING TO AASHTO M230, TYPE VI. PAYMENT INCIDENTAL TO ITEM 602016-PCC MASONRY CLASS C.

INTEGRATED APPROACH PLACEMENT: FOLLOWING THE PLACEMENT OF THE SUPERSTRUCTURE, GEOTEXTILE REINFORCEMENT LAYERS ARE PLACED ALONG THE BACK OF THE SUPERSTRUCTURE, BUILT IN MAXIMUM LIFT HEIGHTS OF 4-INCHES. THE TOP OF FINAL WRAP SHOULD ALLOW AT LEAST 2-INCHES OF AGGREGATE BASE COVER OVER THE GEOSYNTHETIC TO PROTECT IT FROM HOT MIX ASPHALT. PAYMENT UNDER THEIR RESPECTIVE ITEMS.

EQUIPMENT PLACEMENT: EQUIPMENT CAN BE POSITIONED ON THE GRS ABUTMENT PROVIDED THE OUTRIGGER PADS ARE SIZED FOR LESS THAN 4000 PSF NEAR THE FACE OF THE ABUTMENT WALL.

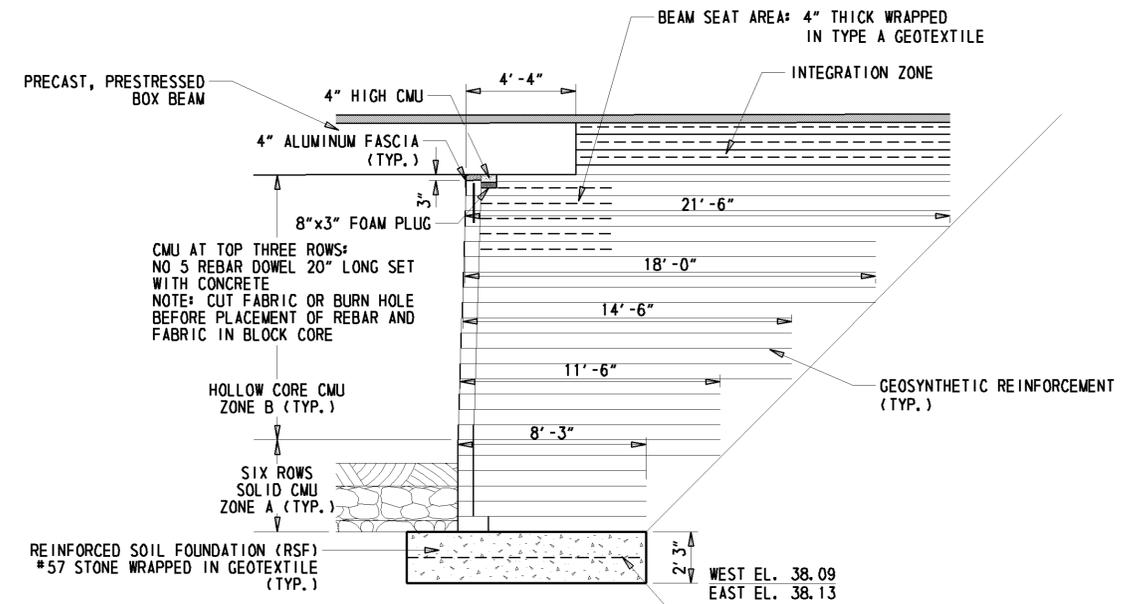
COMPACTION: COMPACT BACKFILL TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY ACCORDING TO AASHTO-T-99 AND +/- 2 PERCENT OPTIMUM MOISTURE CONTENT. IN THE BEARING REINFORCEMENT ZONE, COMPACT TO 100 PERCENT OF THE MAXIMUM DRY DENSITY ACCORDING TO AASHTO-T-99. ONLY HAND-OPERATED EQUIPMENT IS ALLOWED WITHIN 3-FEET OF THE WALL FACE. BACKFILL SHALL COMPACT TO NON-MOVEMENT OR NO APPRECIABLE DISPLACEMENT AND ASSESS WITH VISUAL INSPECTION. ALL COMPACTED LIFTS SHALL BE APPROVED BY THE ENGINEER FOR COMPACTNESS BEFORE THE NEXT LIFT WILL BE PERMITTED TO START. REINFORCEMENT EXTENDS DIRECTLY BENEATH EACH LAYER OF CMU BLOCKS, COVERING > 85 PERCENT OF THE FULL WIDTH OF THE BLOCK FACE OF THE WALL.

GUARDRAIL POST: THE CONTRACTOR SHALL PROPOSE A SAFE METHOD FOR INSTALLING THE GUARDRAIL POST THROUGH THE GEOTEXTILE, THAT WILL NOT CAUSE DAMAGE OR MIS-ALIGNMENT TO THE WALL FACING ELEMENTS. PAYMENT INCIDENTAL TO THE RESPECTIVE GUARDRAIL ITEM.



**SECTION A-A**

1/4" = 1'-0"



**SECTION B-B**

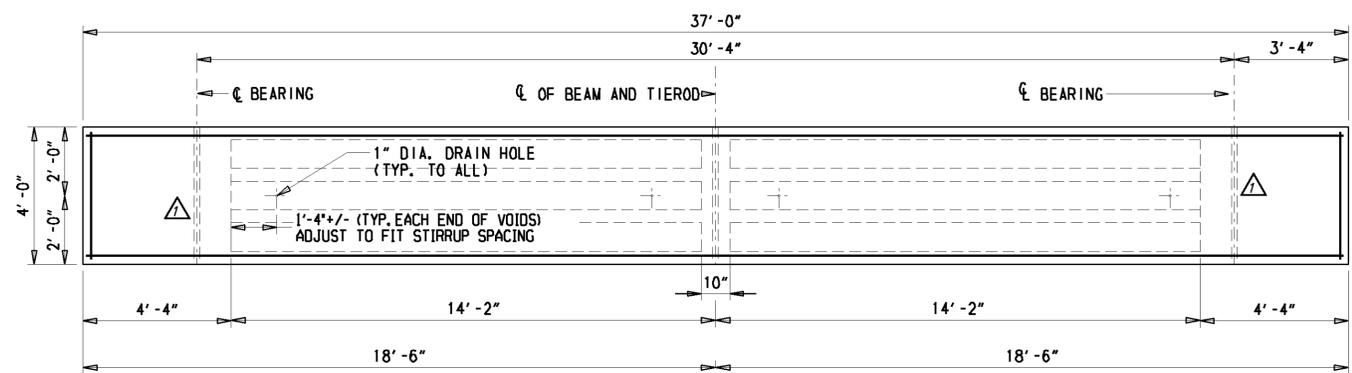
1/4" = 1'-0"

**LEGEND**

- CMU - CONCRETE MASONRY UNIT
- GRS - GEOSYNTHETIC REINFORCED SOIL
- IBS - INTEGRATED BRIDGE SYSTEM
- TYPE A GEOTEXTILE (4800 LBS/FT) WIDE WIDTH TENSILE STRENGTH
- INTERMEDIATE LAYER TYPE A GEOTEXTILE (4800 LBS/FT) WIDE WIDTH TENSILE STRENGTH

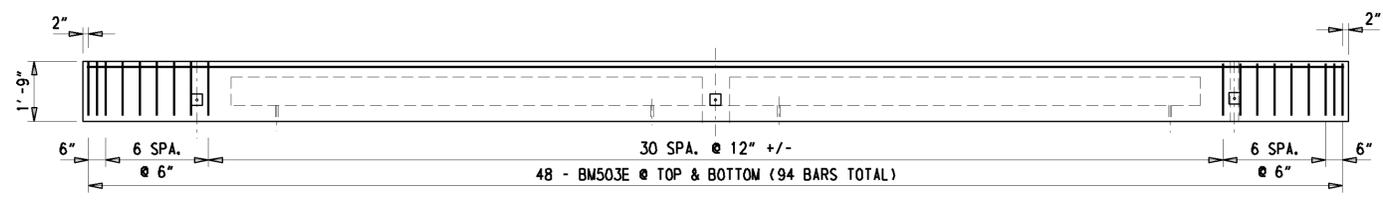
Y:\NEWCASTL\399\BRIDGE\T201007102\PLANS\PE01.DGN

<p><b>DELAWARE</b> DEPARTMENT OF TRANSPORTATION</p>	NEW SHEET	ADDENDUMS / REVISIONS	Not To Scale	<p><b>BR. 1-366</b> <b>ON N399 CHESAPEAKE CITY ROAD</b> <b>OVER GUTHRIE RUN</b></p>	CONTRACT T201007102 COUNTY NEW CASTLE	BRIDGE NO. <b>1-366</b> DESIGNED BY: PAM CHECKED BY: BB	<b>SUBFOUNDATION DETAILS</b>	SHEET NO. 9A TOTAL SHTS. 22

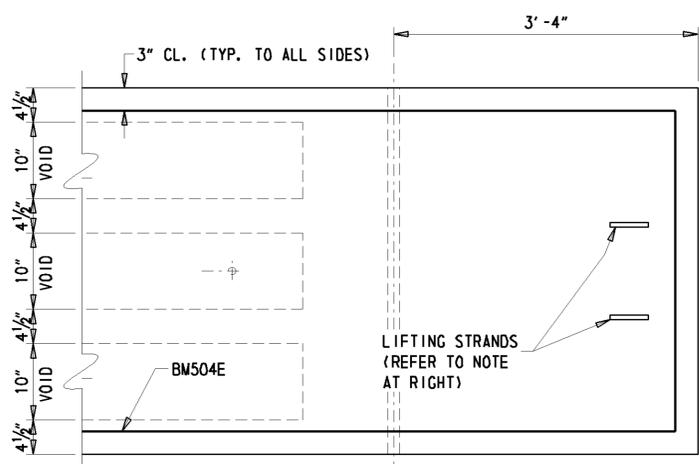


**PLAN**  
3/8" = 1'-0"

NOTE:  
PROPOSED END BLOCK STEEL IS NOT SHOWN IN THESE DETAILS.  
REFER TO THE END BLOCK DETAILS BELOW FOR CLARIFICATION.

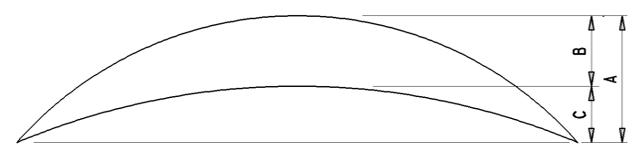


**ELEVATION**  
3/8" = 1'-0"



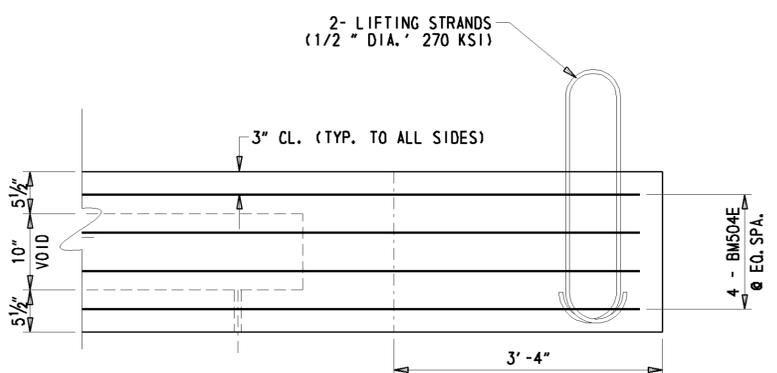
**TYPICAL END BLOCK PLAN**  
1" = 1'-0"

NOTE TO PRECASTER:  
BM505E BARS AND LIFTING STRANDS SHALL BE SPACED SO THAT THEY DO NOT INTERFERE WITH STRAND SPACING. THE PRECASTER SHALL INCLUDE DETAILS OF THE PLACEMENT OF THESE ITEMS IN THEIR SUBMITTED SHOP DRAWINGS.

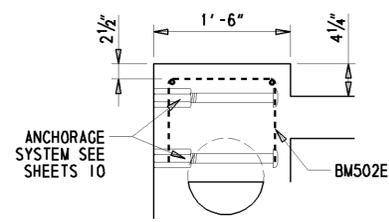


**CAMBER DIAGRAM**

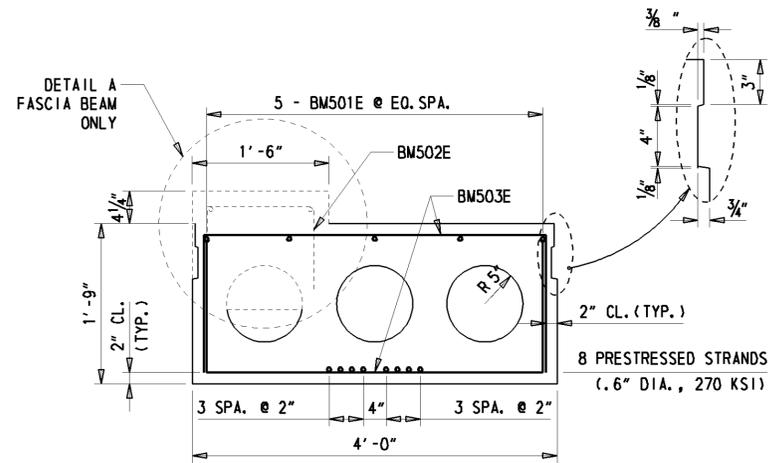
A = ESTIMATED PRESTRESS CAMBER LESS DEFLECTION DUE TO DEAD LOAD OF BEAM AT TIME OF TRANSFER = 0.462"  
B = DEFLECTION DUE TO DEAD LOAD OF SLAB AND PARAPET = 0.197"  
C = A - B = NET CAMBER AT TIME OF CONSTRUCTION.



**TYPICAL END BLOCK ELEVATION**  
1" = 1'-0"



**DETAIL A**  
1" = 1'-0"



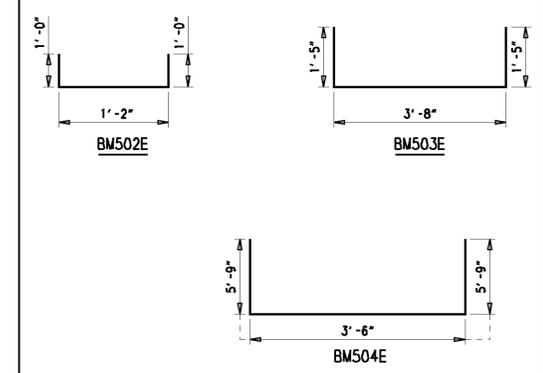
**TYPICAL BEAM SECTION**  
1" = 1'-0"

**REINFORCING BAR LIST**

STRAIGHT BARS				BENT BARS			
MARK	SIZE	NUMBER	LENGTH	MARK	SIZE	NUMBER	LENGTH
BM501E	5	5	36'-8"	BM502E	5	36	3'-2"
				BM503E	5	94	7'-5 1/2"
				BM504E	5	8	13'-6"

**BENDING DIAGRAMS**

ALL DIMENSIONS ARE FROM OUT TO OUT.



**PRESTRESSED BEAM NOTES (48" x 21")**

**DESIGN PLANS - WORKING DRAWINGS**  
INFORMATION PERTAINING TO THE PRESTRESSED PRECAST REINFORCED CONCRETE BOX BEAMS IS INTENDED TO SERVE AS AN INDICATION OF THE TYPE OF CONSTRUCTION ACCEPTABLE FOR USE. THE CONTRACTOR WILL BE REQUIRED TO PREPARE AND SUBMIT, FOR APPROVAL, A COMPLETE SET OF DETAILED SHOP PLANS FOR THE PRESTRESSED PRECAST CONCRETE UNITS THEY PROPOSE TO FURNISH.

**HANDLING**  
PRESTRESSED BEAMS SHALL BE HANDLED ONLY BY LIFTING STRANDS PROVIDED ESPECIALLY FOR THIS PURPOSE. THE APPROXIMATE DEAD WEIGHT OF EACH UNIT IS 14.30 tons.

**CONCRETE STRESSES**  
THE MINIMUM COMPRESSIVE STRENGTH AT TIME OF INITIAL PRESTRESS EQUALS 4800 psi.  
THE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS EQUALS 6000 psi.

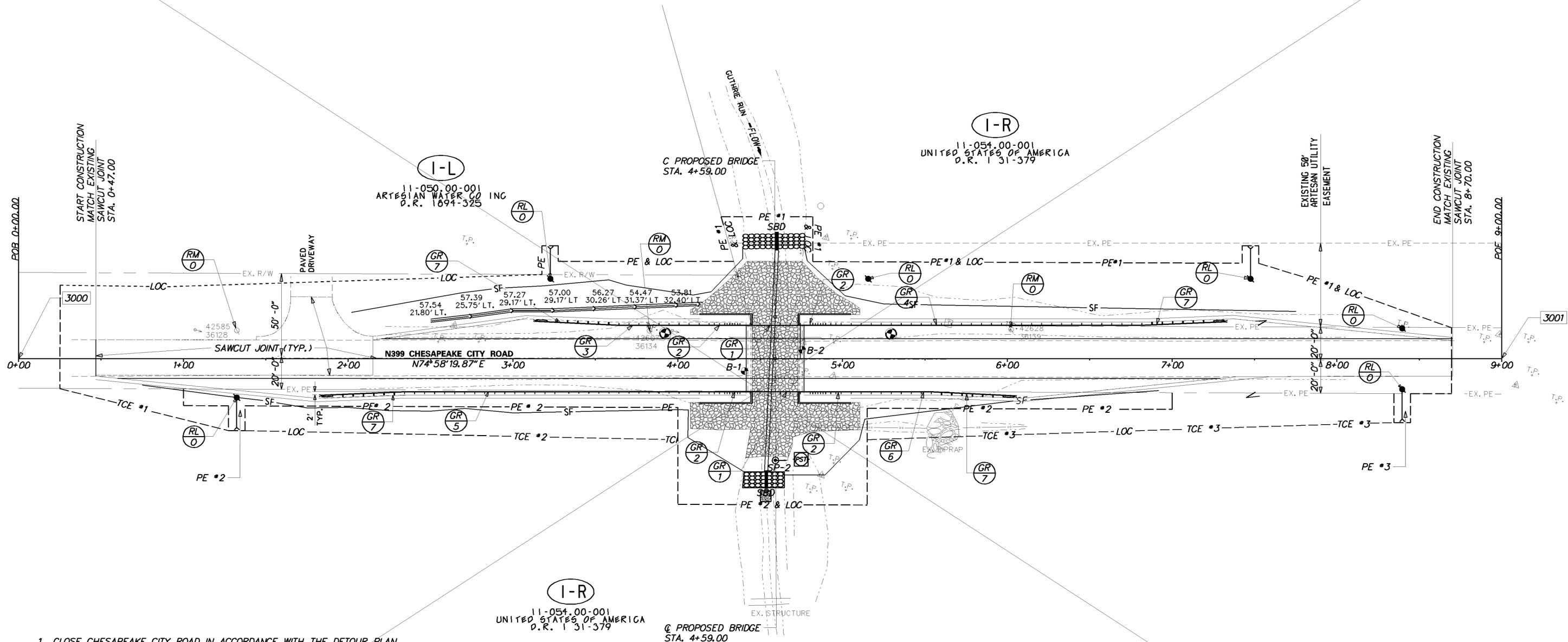
**BAR REINFORCEMENT**  
MATERIALS REQUIREMENT: ASTM #31 - GRADE 60  
ALL BAR REINFORCEMENT TO HAVE 2" MINIMUM COVER EXCEPT AS NOTED OR DETAILED.  
ALL BAR REINFORCEMENT AND CHAIR SUPPORTS SHALL BE PROTECTED WITH FUSION BONDED EPOXY.  
PAYMENT FOR REINFORCING BARS IS INCIDENTAL TO ITEM 623002 - PRESTRESSED REINFORCED CONCRETE MEMBERS, BOX BEAMS.

**STRAND**  
INITIAL PRESTRESSES ON EACH .6" DIA. 270 ksi LOW RELAXATION STRAND EQUALS 43940 lbs MINIMUM ULTIMATE STRENGTH EQUALS 58590 lbs PER STRAND.

**CONCRETE FINISH**  
TOP OF BEAMS ARE TO HAVE A SMOOTH FINISH. BOTTOM AND SIDES OF BEAMS SHALL BE PROTECTED WITH A WATER MISCIBLE, PENETRATING ALKYL EPOXY SILANE SEALER. PAYMENT INCIDENTAL TO ITEM 623002 - PRESTRESSED REINFORCED CONCRETE MEMBERS, BOX BEAMS.

NOTE: 10 TOTAL REQUIRED:  
10-4'-0"x1'-9"

**ANCHOR SYSTEM:**  
ANCHOR ASSEMBLIES CAST IN PRECAST PRESTRESSED CONCRETE BOX BEAM SHALL BE PRESET BY USE OF A TEMPLATE. PAYMENT INCIDENTAL TO ITEM #623002



1. CLOSE CHESAPEAKE CITY ROAD IN ACCORDANCE WITH THE DETOUR PLAN.
2. PLACE SILT FENCE, EXCEPT CONNECTION TO SANDBAG DIKES, AS SHOWN ON THE PLAN. CONSTRUCT SANDBAG DIKES IN THE EXISTING CHANNEL AND CONNECT THE SILT FENCE TO THE SANDBAG DIKE TO ENCLOSE THE WORK AREA. INSTALL STABILIZED OUTFALL USING R-5 RIPRAP. INSTALL 3'-0" DIA. HDPE PIPE THROUGH THE CENTER OF THE EXISTING STRUCTURE TO MAINTAIN FLOW THROUGH THE WORK AREA. THE STREAM DIVERSION SHALL BE INSTALLED AS PER ITEM 265500-STREAM DIVERSIONS. INSTALL SUMP PIT AND DEWATERING BAG FOR USE IN DEWATERING THE WORK AREA. SEE SECTION 111 OF THE STANDARD SPECIFICATIONS FOR MORE INFORMATION ON DEWATERING OPERATIONS.
3. REMOVE THE EXISTING STRUCTURE AND WINGWALLS IN THEIR ENTIRETY.
4. EXCAVATE FOR PROPOSED GEOSYNTHETIC REINFORCED SLOPE-INTEGRATED BRIDGE SYSTEM FOUNDATION AS SHOWN ON PLAN. IF THE CONTRACTOR CHOOSES TO USE ON-SITE CHANNEL BED FILL, EXCAVATE AND STOCKPILE THE EXISTING STREAMBED MATERIAL IN ACCORDANCE WITH THE SPECIAL PROVISIONS OF ITEM #712531-CHANNEL BED FILL. INSTALL FOUNDATION AND CONSTRUCT GRS-IBS ABUTMENTS AND WINGWALLS AS PER PLANS AND SPECIFICATIONS. INSTALL RIPRAP, CHANNEL BED FILL AND SLOPE STABILIZATION AS NOTED.
5. INSTALL PROPOSED SUPERSTRUCTURE ELEMENTS, GUARDRAIL AND PROPOSED ROADWORK. COMPLETE ANY OTHER REMAINING WORK.
6. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES (INCLUDING RIPRAP USED AS STABILIZED OUTFALL) AND RESTORE THE STREAM TO EXISTING CONDITIONS AS OUTLINED IN THE ENVIRONMENTAL COMPLIANCE NOTES. REMOVE ALL MAINTENANCE OF TRAFFIC DEVICES.

I-R  
11-054.00-001  
UNITED STATES OF AMERICA  
D.R. 1 31-379

Q PROPOSED BRIDGE  
STA. 4+59.00



DELAWARE  
DEPARTMENT OF TRANSPORTATION

▲ SHEET DELETED

ADDENDUMS / REVISIONS



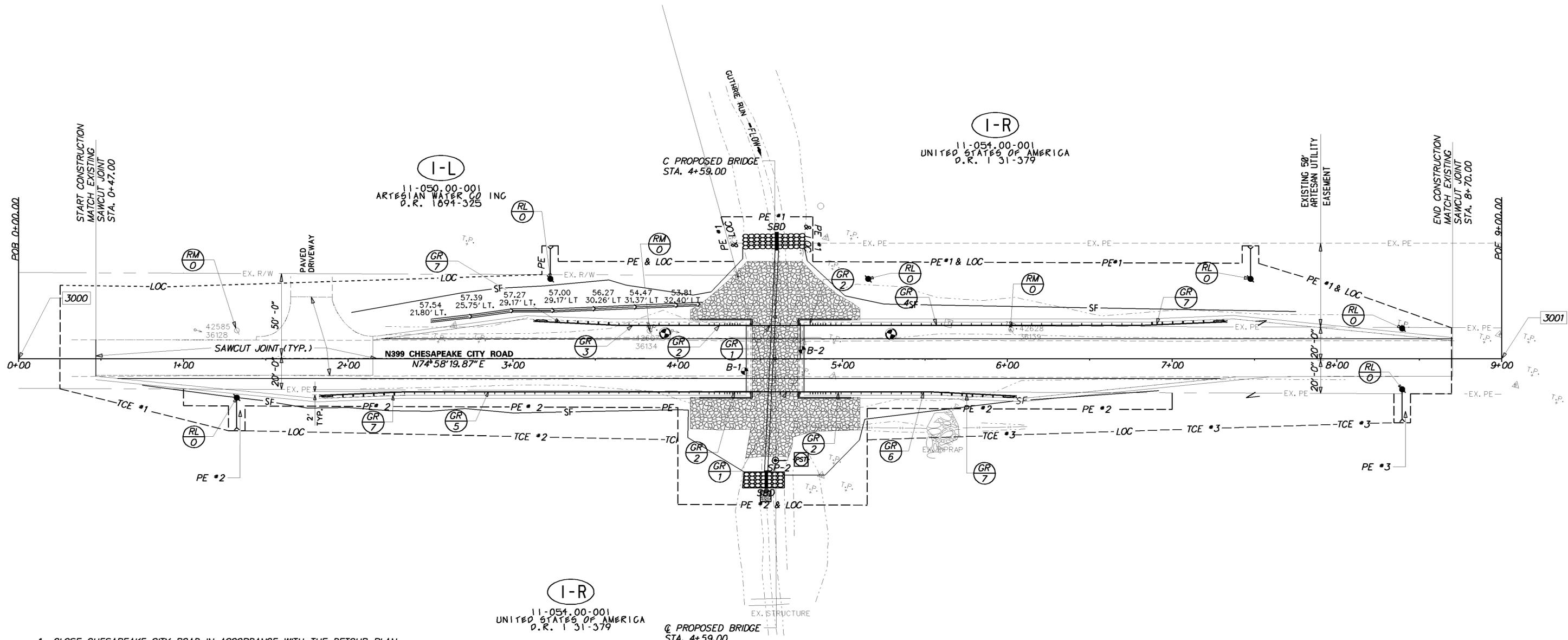
BR 1-366  
ON N399 CHESAPEAKE CITY ROAD  
OVER GUTHRIE RUN

CONTRACT  
T201007102  
COUNTY  
NEW CASTLE

BRIDGE NO.  
1-366  
DESIGNED BY: PAM  
CHECKED BY: BB

CONSTRUCTION PHASING,  
M.O.T., AND EROSION  
CONTROL PLAN - PHASE 1

SHEET NO.  
14  
TOTAL SHTS.  
22



1. CLOSE CHESAPEAKE CITY ROAD IN ACCORDANCE WITH THE DETOUR PLAN.
2. PLACE SILT FENCE, EXCEPT CONNECTION TO SANDBAG DIKES, AS SHOWN ON THE PLAN. CONSTRUCT SANDBAG DIKES IN THE EXISTING CHANNEL AND CONNECT THE SILT FENCE TO THE SANDBAG DIKE TO ENCLOSE THE WORK AREA. INSTALL STABILIZED OUTFALL USING R-5 RIPRAP. INSTALL 3'-0" DIA. HDPE PIPE THROUGH THE CENTER OF THE EXISTING STRUCTURE TO MAINTAIN FLOW THROUGH THE WORK AREA. THE STREAM DIVERSION SHALL BE INSTALLED AS PER ITEM 265500-STREAM DIVERSIONS. INSTALL SUMP PIT AND DEWATERING BAG FOR USE IN DEWATERING THE WORK AREA. SEE SECTION 111 OF THE STANDARD SPECIFICATIONS FOR MORE INFORMATION ON DEWATERING OPERATIONS.
3. REMOVE THE EXISTING STRUCTURE AND WINGWALLS IN THEIR ENTIRETY.
4. EXCAVATE FOR PROPOSED GEOSYNTHETIC REINFORCED SLOPE-INTEGRATED BRIDGE SYSTEM FOUNDATION AS SHOWN ON PLAN. IF THE CONTRACTOR CHOOSES TO USE ON-SITE CHANNEL BED FILL, EXCAVATE AND STOCKPILE THE EXISTING STREAMBED MATERIAL IN ACCORDANCE WITH THE SPECIAL PROVISIONS OF ITEM #712531-CHANNEL BED FILL. INSTALL FOUNDATION AND CONSTRUCT GRS-IBS ABUTMENTS AND WINGWALLS AS PER PLANS AND SPECIFICATIONS. INSTALL RIPRAP, CHANNEL BED FILL AND SLOPE STABILIZATION AS NOTED.
5. INSTALL PROPOSED SUPERSTRUCTURE ELEMENTS, GUARDRAIL AND PROPOSED ROADWORK. COMPLETE ANY OTHER REMAINING WORK.
6. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES (INCLUDING RIPRAP USED AS STABILIZED OUTFALL) AND RESTORE THE STREAM TO EXISTING CONDITIONS AS OUTLINED IN THE ENVIRONMENTAL COMPLIANCE NOTES. REMOVE ALL MAINTENANCE OF TRAFFIC DEVICES.

ADDENDUMS / REVISIONS	
NEW SHEET	



CONTRACT	BRIDGE NO.	1-366
T201007102	DESIGNED BY:	PAM
COUNTY	CHECKED BY:	BB
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 1	SHEET NO.	14A
	TOTAL SHTS.	22

**LEGEND**

PERMANENT IMPACT AREA

TEMPORARY IMPACT AREA

OHW - ORDINARY HIGH WATER

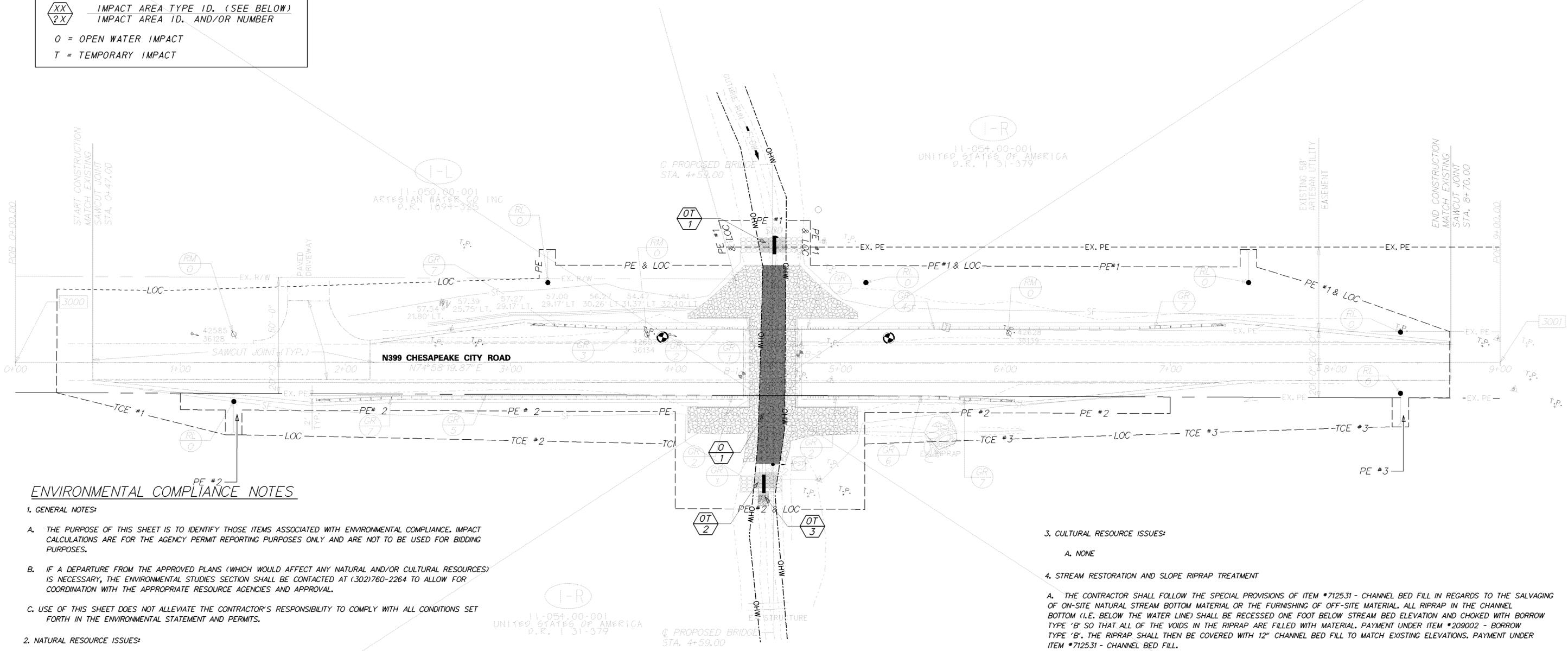
XX / 2X - IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER

O = OPEN WATER IMPACT

T = TEMPORARY IMPACT

ORIGINAL SHEET PREPARED BY P.A.McNeil DATED JUNE 2010. SHEET LAST UPDATED ON 04/12/12.

WETLANDS DELINEATED BY DelDOT ENVIRONMENT STUDIES SECTION DATED ON JUNE 2010 IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS "CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (1987)", AND REGIONAL SUPPLEMENT. NO JURISDICTIONAL WETLANDS EXIST WITHIN THE PROJECT AREA.



**ENVIRONMENTAL COMPLIANCE NOTES**

1. GENERAL NOTES:
  - A. THE PURPOSE OF THIS SHEET IS TO IDENTIFY THOSE ITEMS ASSOCIATED WITH ENVIRONMENTAL COMPLIANCE. IMPACT CALCULATIONS ARE FOR THE AGENCY PERMIT REPORTING PURPOSES ONLY AND ARE NOT TO BE USED FOR BIDDING PURPOSES.
  - B. IF A DEPARTURE FROM THE APPROVED PLANS (WHICH WOULD AFFECT ANY NATURAL AND/OR CULTURAL RESOURCES) IS NECESSARY, THE ENVIRONMENTAL STUDIES SECTION SHALL BE CONTACTED AT (302)760-2264 TO ALLOW FOR COORDINATION WITH THE APPROPRIATE RESOURCE AGENCIES AND APPROVAL.
  - C. USE OF THIS SHEET DOES NOT ALLEVIATE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE ENVIRONMENTAL STATEMENT AND PERMITS.
2. NATURAL RESOURCE ISSUES:
  - A. PERMIT REQUIREMENTS/APPROVALS:
    - U.S. ARMY CORPS OF ENGINEERS (COE) NWP#3 (a&c) NOPCN
    - DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL) PROJECT CONSISTENT WITH DEL. CODE CH. 72 SECTION 7217(b), AS AMENDED BY SB186 (DRAINAGE AREA = 1300 ACRES)
    - DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): WAIVED (PROJECT NOT LOCATED IN CRITICAL RESOURCE WATER (CRW)).
    - NEW CASTLE COUNTY FLOODPLAIN APPROVAL \*\*
    - \* THE PERMITS/APPROVALS LISTED ARE THOSE REQUIRED FOR THIS PROJECT. THE ENVIRONMENTAL STUDIES SECTION IS RESPONSIBLE FOR COORDINATING AND/OR OBTAINING THIS APPROVAL.
    - \*\* THE CONTRACTOR MUST ENSURE THAT THESE PERMITS/APPROVALS ARE IN THEIR POSSESSION PRIOR TO BEGINNING CONSTRUCTION IN THE PERMITTED AREA(S) AND ENSURE IT IS DISPLAYED ON-SITE DURING THE ENTIRE CONSTRUCTION PERIOD.
  - B. CONSTRUCTION RESTRICTIONS:
    - FISHERIES - NONE
    - ENDANGERED SPECIES - NONE
    - MIGRATORY BIRDS - APRIL 15 - AUGUST 1. EITHER BEGIN WORK ON THE UNDERSIDE OF THE STRUCTURE PRIOR TO 4/15 (TO PREVENT BIRDS FROM NESTING) OR WAIT UNTIL AFTER THE 8/1 (AFTER THE HATCHLINGS HAVE LEFT) TO BEGIN WORK TO UNDERSIDE. IF NEITHER OF THESE OPTIONS IS PRACTICABLE, THEN DETERRENT NESTING (OR SIMILAR DEVICE) SHALL BE INSTALLED PRIOR TO 4/15

3. CULTURAL RESOURCE ISSUES:
  - A. NONE
4. STREAM RESTORATION AND SLOPE RIPRAP TREATMENT
  - A. THE CONTRACTOR SHALL FOLLOW THE SPECIAL PROVISIONS OF ITEM #712531 - CHANNEL BED FILL IN REGARDS TO THE SALVAGING OF ON-SITE NATURAL STREAM BOTTOM MATERIAL OR THE FURNISHING OF OFF-SITE MATERIAL. ALL RIPRAP IN THE CHANNEL BOTTOM (I.E. BELOW THE WATER LINE) SHALL BE RECESSED ONE FOOT BELOW STREAM BED ELEVATION AND CHOKED WITH BORROW TYPE 'B' SO THAT ALL OF THE VOIDS IN THE RIPRAP ARE FILLED WITH MATERIAL. PAYMENT UNDER ITEM #209002 - BORROW TYPE 'B'. THE RIPRAP SHALL THEN BE COVERED WITH 12" CHANNEL BED FILL TO MATCH EXISTING ELEVATIONS. PAYMENT UNDER ITEM #712531 - CHANNEL BED FILL.
  - B. OTHER AREAS OF THE CHANNEL BOTTOM AFFECTED BY CONSTRUCTION (INCLUDING, BUT NOT LIMITED TO, THE LOCATION OF SUMP PITS, STABILIZED OUTFALLS, TEMPORARY PIPES AND/OR SANDBAG DIKES AND DIVERSIONS) SHALL BE RESTORED TO EXISTING CONDITIONS. ANY CAVITIES OR SCOUR HOLES RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE FILLED WITH CHANNEL BED FILL. PAYMENT UNDER ITEM #712531 - CHANNEL BED FILL.
  - C. WHEN ALL EROSION AND SEDIMENT CONTROL MEASURES ARE REMOVED AND THE STREAM RETURNS TO ITS NATURAL FLOW CONDITIONS, THE FLOW MUST REMAIN ABOVE GROUND AND ABOVE THE RIPRAP (I.E. THE FLOW CANNOT BE "LOST" IN THE RIPRAP OR BENEATH THE STRUCTURE). IF THIS IS NOT ACHIEVED, THE CONTRACTOR WILL BE REQUIRED TO TAKE CORRECTIVE ACTION AT THE CONTRACTOR'S EXPENSE.
  - D. ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, SHALL BE CHOKED WITH DELAWARE #57 STONE, FILLED WITH TOPSOIL, SEEDED AND MULCHED WITH SOIL RETENTION BLANKET MULCH, TYPE 3 (ITEM 732004). PLACE JUST ENOUGH CHOKE MATERIAL TO PREVENT THE LOSS OF TOPSOIL THROUGH THE RIPRAP, AND THEN FINISH FILLING THE VOIDS WITH TOPSOIL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. AN ADDITIONAL 4" TOPSOIL LAYER SHALL BE PLACED ON TOP OF THE RIPRAP. SEEDING SHALL BE PERMANENT GRASS SEEDING WET GROUND (ITEM NO. 734015) FROM STREAM BASE FLOW ELEVATION TO 2' UP THE SLOPE AND PERMANENT GRASS SEEDING DRY GROUND (ITEM NO. 734013) ON THE REMAINING SLOPE. ALL WORK, STARTING WITH THE INITIAL CHOKING WITH TOPSOIL THROUGH THE SEEDING AND MULCHING, SHALL BE COMPLETED PRIOR TO ANY RAIN EVENT. PAYMENT FOR RIPRAP AND DELAWARE #57 STONE SHALL BE PAID FOR UNDER THE RIPRAP ITEM. ALL OTHER ITEMS SHALL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

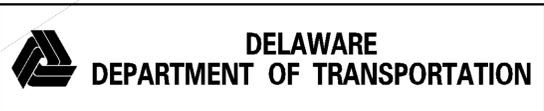
**PERMANENT OPEN WATER IMPACT AREA SCHEDULE**

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
0-1	RIPRAP AREA	1798.00	0.041	133.200	COE/DNREC
<b>TOTAL PERMANENT OPEN WATER IMPACT</b>		<b>1798.00</b>	<b>0.041</b>	<b>133.200</b>	<b>COE/DNREC</b>

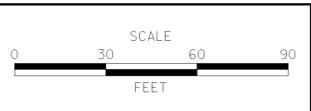
**PERMANENT OPEN WATER IMPACT AREA SCHEDULE**

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OT-1	SANDBAG AREA	149.00	0.003	11.370	COE/DNREC
OT-2	SANDBAG AREA	133.00	0.003	9.852	COE/DNREC
OT-3	RIPRAP AREA	44.00	0.001	0.815	COE/DNREC
<b>TOTAL TEMPORARY OPEN WATER IMPACT</b>		<b>326.00</b>	<b>0.007</b>	<b>22.037</b>	<b>COE/DNREC</b>

W:\MSV8\CELLS\PROJ\DE\1\SB\CEL



ADDENDUMS / REVISIONS
1 SHEET DELETED



**BR 1-366**  
**ON N399 CHESAPEAKE CITY ROAD**  
**OVER GUTHRIE RUN**

CONTRACT	BRIDGE NO.	<b>1-366</b>
T201007102	DESIGNED BY:	PAM
COUNTY	CHECKED BY:	BB
NEW CASTLE		

**ENVIRONMENTAL COMPLIANCE PLAN**

SHEET NO.	15
TOTAL SHTS.	22

**LEGEND**

PERMANENT IMPACT AREA

TEMPORARY IMPACT AREA

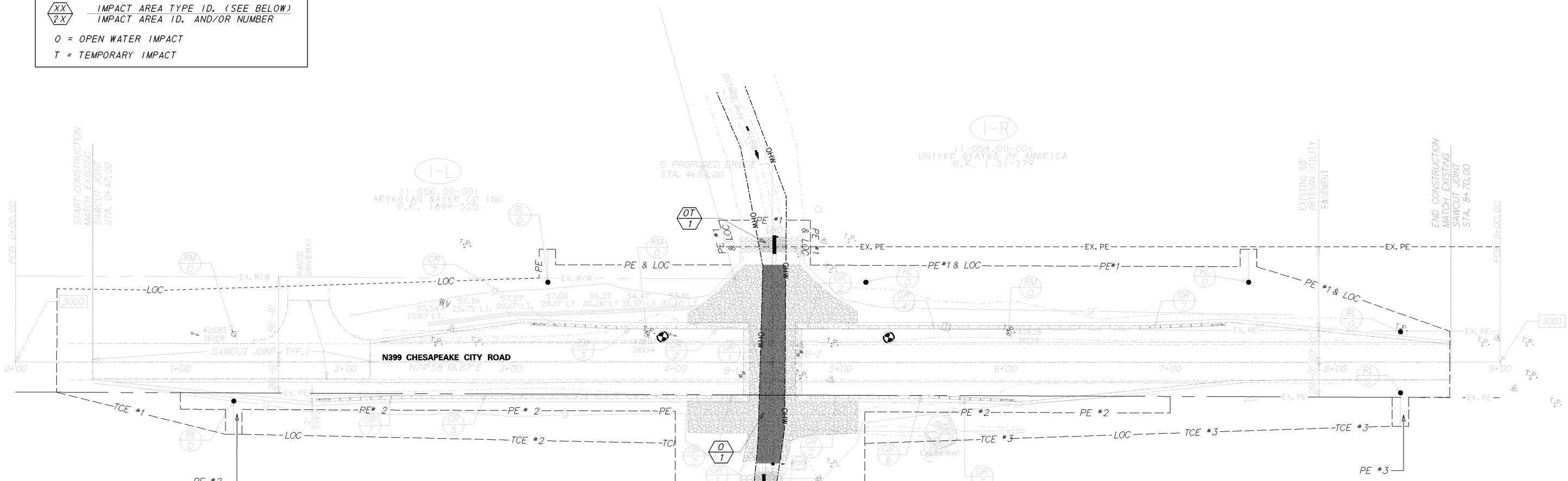
-----OHW----- ORDINARY HIGH WATER

XX  
2X IMPACT AREA TYPE ID. (SEE BELOW)  
IMPACT AREA ID. AND/OR NUMBER

O = OPEN WATER IMPACT  
T = TEMPORARY IMPACT

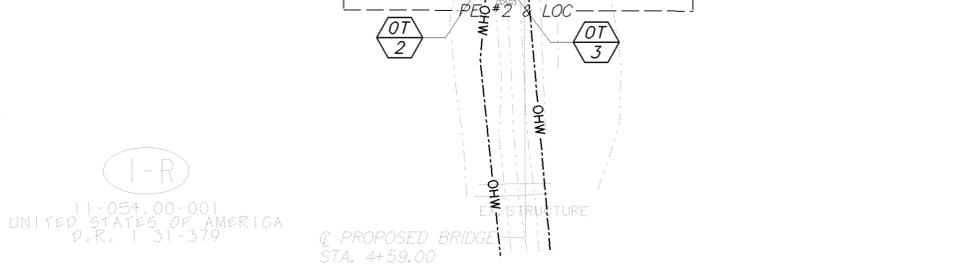
ORIGINAL SHEET PREPARED BY P.A.McNeil DATED JUNE 2010, SHEET LAST UPDATED ON 04/12/12.

WETLANDS DELINEATED BY DelDOT ENVIRONMENTAL STUDIES SECTION DATED ON JUNE 2010 IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS "CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (1987)", AND REGIONAL SUPPLEMENT. NO JURISDICTIONAL WETLANDS EXIST WITHIN THE PROJECT AREA.



**ENVIRONMENTAL COMPLIANCE NOTES**

1. GENERAL NOTES:
- A. THE PURPOSE OF THIS SHEET IS TO IDENTIFY THOSE ITEMS ASSOCIATED WITH ENVIRONMENTAL COMPLIANCE. IMPACT CALCULATIONS ARE FOR THE AGENCY PERMIT REPORTING PURPOSES ONLY AND ARE NOT TO BE USED FOR BIDDING PURPOSES.
  - B. IF A DEPARTURE FROM THE APPROVED PLANS (WHICH WOULD AFFECT ANY NATURAL AND/OR CULTURAL RESOURCES) IS NECESSARY, THE ENVIRONMENTAL STUDIES SECTION SHALL BE CONTACTED AT (302)760-2264 TO ALLOW FOR COORDINATION WITH THE APPROPRIATE RESOURCE AGENCIES AND APPROVAL.
  - C. USE OF THIS SHEET DOES NOT ALLEVIATE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE ENVIRONMENTAL STATEMENT AND PERMITS.
2. NATURAL RESOURCE ISSUES:
- A. PERMIT REQUIREMENTS/APPROVALS\*\*  
U.S. ARMY CORPS OF ENGINEERS (COE) NWP#3 (a&c) NOPCN  
DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL) PROJECT CONSISTENT WITH DEL. CODE CH. 72 SECTION 7217(b), AS AMENDED BY SB186 (DRAINAGE AREA = 1300 ACRES)  
DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): WAIVED (PROJECT NOT LOCATED IN CRITICAL RESOURCE WATER (CRW)).  
NEW CASTLE COUNTY FLOODPLAIN APPROVAL \*\*  
\* THE PERMITS/APPROVALS LISTED ARE THOSE REQUIRED FOR THIS PROJECT. THE ENVIRONMENTAL STUDIES SECTION IS RESPONSIBLE FOR COORDINATING AND/OR OBTAINING THIS APPROVAL.  
\*\* THE CONTRACTOR MUST ENSURE THAT THESE PERMITS/APPROVALS ARE IN THEIR POSSESSION PRIOR TO BEGINNING CONSTRUCTION IN THE PERMITTED AREA(S) AND ENSURE IT IS DISPLAYED ON-SITE DURING THE ENTIRE CONSTRUCTION PERIOD.
  - B. CONSTRUCTION RESTRICTIONS:  
FISHERIES - NONE  
ENDANGERED SPECIES - NONE  
MIGRATORY BIRDS - APRIL 15 - AUGUST 1, EITHER BEGIN WORK ON THE UNDERSIDE OF THE STRUCTURE PRIOR TO 4/15 (TO PREVENT BIRDS FROM NESTING) OR WAIT UNTIL AFTER THE 8/1(AFTER THE HATCHLINGS HAVE LEFT) TO BEGIN WORK TO UNDERSIDE. IF NEITHER OF THESE OPTIONS IS PRACTICABLE, THEN DETERRENT NESTING (OR SIMILAR DEVICE) SHALL BE INSTALLED PRIOR TO 4/15



3. CULTURAL RESOURCE ISSUES:
- A. NONE
4. STREAM RESTORATION AND SLOPE RIPRAP TREATMENT
- A. THE CONTRACTOR SHALL FOLLOW THE SPECIAL PROVISIONS OF ITEM #712531 - CHANNEL BED FILL IN REGARDS TO THE SALVAGING OF ON-SITE NATURAL STREAM BOTTOM MATERIAL OR THE FURNISHING OF OFF-SITE MATERIAL. ALL RIPRAP IN THE CHANNEL BOTTOM (I.E. BELOW THE WATER LINE) SHALL BE RECESSED ONE FOOT BELOW STREAM BED ELEVATION AND CHOKED WITH BORROW TYPE 'B' SO THAT ALL OF THE VOIDS IN THE RIPRAP ARE FILLED WITH MATERIAL. PAYMENT UNDER ITEM #209002 - BORROW TYPE 'B'. THE RIPRAP SHALL THEN BE COVERED WITH 12" CHANNEL BED FILL TO MATCH EXISTING ELEVATIONS. PAYMENT UNDER ITEM #712531 - CHANNEL BED FILL.
  - B. OTHER AREAS OF THE CHANNEL BOTTOM AFFECTED BY CONSTRUCTION (INCLUDING, BUT NOT LIMITED TO, THE LOCATION OF SUMP PITS, STABILIZED OUTFALLS, TEMPORARY PIPES AND/OR SANDBAG DIKES AND DIVERSIONS) SHALL BE RESTORED TO EXISTING CONDITIONS. ANY CAVITIES OR SCOUR HOLES RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE FILLED WITH CHANNEL BED FILL. PAYMENT UNDER ITEM #712531 - CHANNEL BED FILL.
  - C. WHEN ALL EROSION AND SEDIMENT CONTROL MEASURES ARE REMOVED AND THE STREAM RETURNS TO ITS NATURAL FLOW CONDITIONS, THE FLOW MUST REMAIN ABOVE GROUND AND ABOVE THE RIPRAP (I.E. THE FLOW CANNOT BE "LOST" IN THE RIPRAP OR BENEATH THE STRUCTURE). IF THIS IS NOT ACHIEVED, THE CONTRACTOR WILL BE REQUIRED TO TAKE CORRECTIVE ACTION AT THE CONTRACTOR'S EXPENSE.
  - D. ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, SHALL BE CHOKED WITH DELAWARE #57 STONE, FILLED WITH TOPSOIL, SEEDED AND MULCHED WITH SOIL RETENTION BLANKET MULCH, TYPE 3 (ITEM 732004). PLACE JUST ENOUGH CHOKER MATERIAL TO PREVENT THE LOSS OF TOPSOIL THROUGH THE RIPRAP, AND THEN FINISH FILLING THE VOIDS WITH TOPSOIL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. AN ADDITIONAL 4" TOPSOIL LAYER SHALL BE PLACED ON TOP OF THE RIPRAP. SEEDING SHALL BE PERMANENT GRASS SEEDING WET GROUND (ITEM NO. 734015) FROM STREAM BASE FLOW ELEVATION TO 2' UP THE SLOPE AND PERMANENT GRASS SEEDING DRY GROUND (ITEM NO. 734013) ON THE REMAINING SLOPE. ALL WORK, STARTING WITH THE INITIAL CHOKING WITH TOPSOIL THROUGH THE SEEDING AND MULCHING, SHALL BE COMPLETED PRIOR TO ANY RAIN EVENT. PAYMENT FOR RIPRAP AND DELAWARE #57 STONE SHALL BE PAID FOR UNDER THE RIPRAP ITEM. ALL OTHER ITEMS SHALL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

**PERMANENT OPEN WATER IMPACT AREA SCHEDULE**

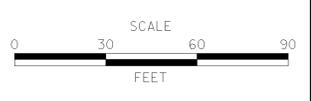
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
0-1	RIPRAP AREA	1798.00	0.041	133.200	COE/DNREC
<b>TOTAL PERMANENT OPEN WATER IMPACT</b>		<b>1798.00</b>	<b>0.041</b>	<b>133.200</b>	<b>COE/DNREC</b>

**PERMANENT OPEN WATER IMPACT AREA SCHEDULE**

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OT-1	SANDBAG AREA	149.00	0.003	11.370	COE/DNREC
OT-2	SANDBAG AREA	133.00	0.003	9.852	COE/DNREC
OT-3	RIPRAP AREA	44.00	0.001	0.815	COE/DNREC
<b>TOTAL TEMPORARY OPEN WATER IMPACT</b>		<b>326.00</b>	<b>0.007</b>	<b>22.037</b>	<b>COE/DNREC</b>



ADDENDUMS / REVISIONS	
NEW SHEET	



**BR 1-366  
ON N399 CHESAPEAKE CITY ROAD  
OVER GUTHRIE RUN**

CONTRACT	BRIDGE NO.	<b>1-366</b>
T201007102	DESIGNED BY:	PAM
COUNTY	CHECKED BY:	BB
NEW CASTLE		

**ENVIRONMENTAL  
COMPLIANCE PLAN**

SHEET NO.	15 A
TOTAL SHTS.	22

M:\MSV8\CELLS\PROJDEV\15B\CECL





DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

PAGE: 2  
DATE:

CONTRACT ID: T201007102.01 PROJECT(S): EBROS-N399(3)

All figures must be typewritten.

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0100	265500 STREAM DIVERSION	LUMP	LUMP			
0110	270500 DEWATERING BAG	3.000 EACH				
0120	302007 GRADED AGGREGATE BASE COURSE, TYPE B	639.000 CY				
0130	302011 DELAWARE NO. 3 STONE	185.000 TON				
0140	302521 GRANULAR EMBANKMENT	2272.000 CY				
0150	302522 REINFORCED SOIL FOUNDATION	470.000 CY				
0160	401645 SUPERPAVE, TYPE C HOT-MIX, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)	444.000 TON				
0170	401648 SUPERPAVE, TYPE B HOT-MIX, 160 GYRATIONS, PG 64-22	404.000 TON				
0180	602016 PORTLAND CEMENT CONCRETE MASONRY, CLASS C	5.500 CY				
0190	602547 WATERPROOFING BRIDGE DECKS, SIDEWALKS ETC.	1519.000 SF				

Addendum 1  
August 16, 2012

DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

PAGE: 3  
DATE:

CONTRACT ID: T201007102.01 PROJECT(S): EBROS-N399(3)

All figures must be typewritten.

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0200	602690 SOLID CONCRETE MASONRY BLOCKS	SF 885.000				
0210	602691 VOIDED CONCRETE MASONRY BLOCKS	SF 2805.000				
0220	623002 PRESTRESSED REINFORCED CONCRETE MEMBERS, BOX-BEAMS	LUMP	LUMP			
0230	712021 RIPRAP, R-5	TON 556.000				
0240	712531 CHANNEL BED FILL	CY 212.000				
0250	713003 GEOTEXTILES, RIPRAP	SY 685.000				
0260	713501 GEOSYNTHETIC REINFORCEMENT	SY 9220.000				
0270	720043 GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-27	LF 450.000				
0280	720637 GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-27	EACH 4.000				
0290	720664 BRIDGE RAILING, GUARDRAIL TYPE	LF 88.000				

Addendum 1  
August 16, 2012

DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

PAGE: 5  
DATE:

CONTRACT ID: T201007102.01 PROJECT(S): EBROS-N399(3)

All figures must be typewritten.

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0400	760507 PROFILE MILLING, HOT-MIX	1030.000 SYIN				
0410	762001 SAW CUTTING, HOT MIX	211.000 LF				
0420	763000 INITIAL EXPENSE	LUMP	LUMP			
0430	763501 CONSTRUCTION ENGINEERING	LUMP	LUMP			
0440	763643 MAINTENANCE OF TRAFFIC, ALL INCLUSIVE	LUMP	LUMP			
410	605528 UTILITY SUPPORT	LUMP	LUMP			
420	612502 PVC PIPE, 6"	60.000 LF				
	SECTION 0001 TOTAL					
	TOTAL BID					

Addendum 1  
August 16, 2012