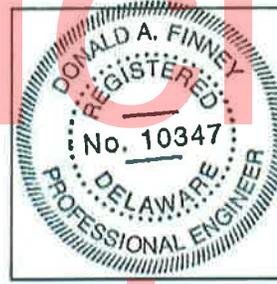


**State of Delaware Department of Transportation
Maintenance and Operations – Canal District
Plans and Specifications
Contract Number T2014-074-05 (EBHOS-2014(20))
Structure Rehabilitation – Open End
FY 2014 Through FY 2016**



Recommended:

4/25/14

Canal District Maintenance Engineer

Date

Recommended:

4/25/14

Canal District Contracts Engineer

Date



Approved:

4/25/14

Canal District Engineer

Date

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Contract Description

The purpose of this open-end contract is to initiate rehabilitation, repairs and preventive maintenance to bridges and culverts. Work shall include but not be limited to crack sealing decks, hot-mix repair, coating parapets and sidewalks, expansion joint replacement, riprap placement, and concrete repair. Some work may be in the channel including but not limited to placing riprap, installing sandbag dike diversions and channel excavation. All work shall be done as directed by the Engineer on the individual work orders.

The specific work sites are not listed herein, but will be assigned as available by the Canal District Maintenance office via work orders.

This is a working day contract that will end three years (1,095 calendar days) from date of Notice To Proceed letter.

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General Notes

1. This project is to be constructed in accordance with 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.
2. Contract Term: This contract shall be for a period of three years (1,095 calendar days) and shall begin from the date of Notice To Proceed.
3. The Contractor, with the Engineer or representative, shall inventory all traffic signs in the vicinity of the work. Necessary signs shall be maintained in operation during construction and any other signs shall be properly stored with the Contractor, who shall be responsible for loss or damage. Immediately prior to final inspection, the Contractor and Engineer or representative shall again inventory the traffic signs and account for any lost or damaged signs.
4. The Contractor and all others shall perform all work in a manner that shall ensure the least practical obstruction to the traveling public and shall conform to the requirements of the latest version of the Delaware Manual on Uniform Traffic Control Devices (MUTCD), Part 6 in effect at the time of advertisement for bids.
5. No utility relocation involvement is anticipated. Should any conflicts be encountered during construction requiring adjustment and/or relocation of the agencies' existing facilities, the necessary relocation work shall be accomplished by the respective agencies' forces, as directed by the District Engineer. Any adjustments and/or relocations on municipally owned facilities shall be done by the State's contractor in accordance with the respective agencies' standard specifications as directed by the District Engineer.
6. No work will begin on structures without written approval from the DeIDOT Environmental Studies office prior to commencement of work. Lists of bridges to be repaired will be provided to the Environmental Studies office prior to commencement of work. No environmental permits are required for this work provided no jurisdictional wetlands or waters are impacted. If there is a question as to whether or not a water or wetland is jurisdictional, contact the DeIDOT Environmental Section at 302-760-2264.
7. It is anticipated that all work will occur within DeIDOT's existing right of way or easement areas. Should the need occur to trespass onto private property; it will be the responsibility of the project manager to secure such trespass needs. Should the need occur to trespass onto railroad property, including the highway-rail crossing; it will be the responsibility of the project manager to contact the railroad chief engineer and obtain written authorization before entering.

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8. The Contractor shall not trespass on private property unless the department has acquired a "Temporary Trespass Agreement" from the property owner. If the work is within a permanent easement, the work shall not begin until the adjacent property owners have been notified. Prior to starting work on private property, the Contractor shall notify affected property owners of proposed work dates.
9. The Project Manager shall be responsible for coordinating with the Traffic Section relating to any impacts to Traffic Section facilities (including but not limited to traffic loops, junction wells, etc.) at least four weeks in advance of the start of the construction activity. Prior to initiating any work on this contract (or sites), the Project Manager shall be responsible for preparing and submitting for approval of the Safety Section, a Maintenance of Traffic Plan. Sufficient time shall be provided for the review and approval of the plan. The Maintenance of Traffic Plan shall include proposed time restrictions on the closure of travel lanes subject to the approval of the Safety Section.
10. The Project Manager is responsible for ensuring any required documents and analysis as part of the adopted Work Zone Safety and Mobility Procedures and Guidelines has been completed prior to any work starting on this contract.
11. Work located in Municipalities requires Town Agreements. Work in these locations cannot commence before obtaining them. To obtain a Town Agreement, the contractor must work with DelDOT's TEAM Support at (302) 760-2251.
12. All warning signs shall be constructed of durable retro-reflective diamond grade fluorescent sheeting. Wood panels are not permitted. Type B warning lights will not be required on the warning signs. All warning signs shall be mounted on breakaway posts unless otherwise directed by the Engineer.
13. The work will be scheduled via work orders from the District. The work order will indicate the bridge number and location, the planned items and quantities of work, property owner notification requirements, and the estimated time to perform the work. The District is composed of two maintenance areas designated Area 9 and Area 10. Location maps showing the approximate boundaries of each maintenance area are included for reference. Any questions pertaining to any locations, during construction, shall be referred to the Engineer or his representative. The actual time to perform the work shall be negotiated prior to issuance of work order. The department's field personnel are not authorized to change the scope of work authorized by the Engineer at each work order location, contract provisions, schedules, etc.
14. Prosecution and progress of work:

The Contractor shall commence work indicated on the work order no later than the fifth business day after issuance unless required materials are not available. Non-availability of materials shall be verified by at least three (3) different sources. Verification shall be formal and supplied by the Contractor in writing.

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Issuance of each work order constitutes the notice to proceed with the work described on the work order. Subsection 108.02 of the Standard Specifications is not applicable to this contract. If there is a verified non-availability of materials, time charges shall commence on the first (1st) working day following the delivery date of said materials.

The Contractor may have up to six (6) active work orders at any one time until all assigned work has been completed. The Contractor may be required to have simultaneous operations up to the limit of six (6) active work orders. The District will attempt to issue the work orders grouped together by maintenance area. The Contractor shall be required to work in multiple maintenance areas concurrently to engage in the limit of six (6) work orders simultaneously.

Failure to start assigned work orders in the allowed time constitutes "Failure to Pursue the Work" and subjects the Contractor to Liquidated damages as outlined in Subsection 108.09 of the Standard Specifications. If work on a specific work order is not completed within the allotted time, Liquidated Damages will be assessed in accordance with Subsection 108.09 and based on the total value of that work order.

A final inspection will be performed in accordance with Subsection 105.20 on each work order and if the work is satisfactorily completed it will be accepted by the department. When seeding is required on the work order, a full stand of grass will be required. The stand shall be established for a minimum of seven days prior to final inspection.

15. Each work order shall be considered a single unit of work. Upon completion of each single unit of work and acceptance by the department, one itemized invoice will be prepared by the department for that work. The Contractor shall review and approve the invoice. Payment will be monthly for the completed invoices as outlined in Section 109.07.
16. 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.
17. 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.
18. The contractor shall provide and install PVC sleeves (4 inch inside diameter minimum, 6 inch inside diameter maximum) 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 sub base material. The cost shall be incidental to the contract.
19. Staging areas - Proper erosion and sediment control measures as determined by the Engineer shall be installed in the staging areas. All areas used by the contractor for staging operations shall be fully restored by the contractor upon completion of the project. If the staging area is paved, it shall be restored to its original condition. If the

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staging area is unpaved, it shall be re-graded, top soiled, 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 the 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 re-establishing a satisfactory stand of grass shall be at the contractor’s expense.

20. **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 at the time of bid. 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 at the time of bid. The site reviewer requirements in effect on this project shall be as marked with an (x) below:

Erosion potential for this project	Site reviewer requirement
<input checked="" type="checkbox"/> Insignificant	None
<input type="checkbox"/> Minor	Contractor certification course training only. See 1 below.
<input type="checkbox"/> Medium	At the time of award of the contract, either the superintendent or a separate individual from the contractor’s staff shall be a certified construction reviewer (CCR). See 2 below.
<input type="checkbox"/> Major	Superintendent and individual from the contractor’s staff shall be CCR. See 3 below.

- As defined in section 13 of the Delaware Sediment and Stormwater Regulations.
- As defined in section 12 of the Delaware Sediment and Stormwater Regulations.
- One individual from the contractor’s staff must be a CCR at the time of award of the contract. The superintendent must become a CCR within one year after the award of contract.

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Project Notes

1. Clearing and grubbing of trees and shrubs less than six (6) inches in diameter shall be incidental to the applicable repair or replacement item. Grubbing activities performed in wetland areas require environmental permit approvals. Other clearing and grubbing will be negotiated or performed by Force Account procedures.
2. Excavated material not needed on the project shall be removed from the site at the Contractor's expense.
3. Paragraph three of Section 406.05 will not apply to this contract. When patching is required, the removal of pavement material (hot-mix, GABC, etc.) shall be paid for under Section 406, hot-mix patching. For patches needed to work on pipe crossings, material removed below the pavement box will be paid for by Section 208. For patches needed to work on structures, removal of material below the pavement box will be incidental to Section 708 or 710.
4. Item 302007, GABC, Type B shall be used as base material under all curb, sidewalk and pavement.
5. Payment for Item 602002, PCC Masonry, will be made based on the actual measured quantity placed.
6. One half-inch cork expansion material shall be placed at each location where Item 762002, Saw Cutting Concrete Full Depth, is paid, unless otherwise directed by the Engineer. Payment for Item 762002 shall be full compensation for furnishing and placing the cork.
7. Removal of existing concrete, saw cutting concrete, and placing PCC Masonry Class A will be paid under Items 758000, 762002 and 602001 respectively.
8. The area and depth of deteriorated concrete removed in spalled areas shall be pre-approved by the Engineer prior to removal (Minimum 2" depth).
9. Crack widths larger than one half inch shall be repaired with grouting per Item 602572, Repair of Existing PCC Structures.
10. Proper disposal of waste (including millings) and tarp(s) shall be the sole responsibility of the Contractor. Disposal locations will be upland (non-wetland) areas. When the work requires a permit from the U.S. Army Corps of Engineers, the contractor shall submit all disposal locations to the State Historic Preservation Office (SHPO) for review. Use of the site will not commence until the SHPO has approved the site.
11. All streambeds shall be restored to original contours and elevations. Payment shall be incidental to the contract.

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12. Test strips for Super-pave items are not required for this contract.
13. All riprap placed in a channel will not require geo-textile underneath. Environmental permits will be required for any riprap placement in waters/wetlands.
14. Channel Excavation does not require environmental permits provided the following conditions are met: 1) work is occurring at a non-tidal location; 2) the sediment is “scooped”—not bladed (pushed). 3) the “scooped” sediment is placed in an upland location. If all of these conditions are not met, work shall not commence until environmental permits have been obtained.
15. Submittals for wet and dry applications are required for Item 602611, Repair of Concrete Structure by Epoxy Injection.
16. Butt joints cut to a depth greater than 2” shall be ramped with hot mix prior to TRM, steel plates or cold patch as directed by the Engineer. Steel plates and cold patch are incidental to work.
17. The paint system used for the structural steel shall be applied in a three (3) coat system application in all stripped and cleaned areas. After the topcoat is applied areas that showed pack rust, as directed by the Engineer, shall be sealed with a paintable caulk with silicone and have one coat of top color applied; payment incidental to Item 605620 – Moisture Cured Urethane Paint System (Recoating), S.F.
18. For all bridges in this contract, any cleaning requiring pressure washing shall be incidental to Item 605532 or Item 605533. The Contractor shall be responsible to check and monitor the structure during the paint removal process to ensure that damage is not occurring to any part of the structure.
19. During the cleaning operation, the Contractor shall report to the Engineer any defects in the steel. These defects include, but are not limited to, loss of section, cracking, buckling, loose bolts, and loose rivets.
20. Maintenance of traffic shall be as per the detour plans or traffic control case as provided for each bridge. All traffic control devices required shall be included in the bid price for the traffic-related items of this contract.
21. All traffic control devices shall be in new or refurbished condition, shall be in compliance with the Delaware MUTCD and with the NCHRP Report 350, and shall be approved by the Engineer before installation. Traffic control devices shall be maintained in good condition for duration of use.
22. Contract equipment can be stored adjacent to the roadway during appointed construction hours (as deemed by the Engineer). During non-construction hours, all construction equipment shall be removed from all shoulders and lanes. All equipment shall be stored in accordance with the Traffic Control Manual. All traffic control devices

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required for equipment storage shall be included in the bid price for the traffic-related items of this contract.

23. All work shall be performed within the existing right-of-way unless otherwise noted. Right-of-way information and existing plans shall be available upon request at the DelDOT Administration Office.
24. No equipment is allowed in any waterway or wetland.
25. The Contractor may store the equipment needed for this project at a pre-approved area or in the nearest State of Delaware maintenance yard. The Contractor must remove equipment from the jobsite if and when the district deems it necessary. Areas within the state right-of-way limits in which the soil and vegetation have been damaged from equipment during this contract, shall be repaired with topsoil, seed and mulch in accordance with the requirements for Items 908003 and 908014 at the Contractor's own expense.
26. For areas of steel that require painting, payment for cleaning of the steel is included in Item 605620 – Moisture Cured Urethane Paint System (Recoating). The contractor has the option of using abrasive cleaning of the steel, if the contractor chooses to blast clean he shall submit for approval the containment plan, abrasive to be used, and all pertinent details of the operation as determined by the Engineer, payment shall be incidental to Item 605620, Containment systems are required for all abrasive blasting. The design of the containment system must be submitted and approved by the Department prior to any work being performed.
27. All downspouts shall be vacuum power tool cleaned or abrasive blast cleaned, and where necessary, galvanized downspouts shall be painted with a moisture cure aluminum paint system. If the downspouts are non-galvanized, then they shall be painted with the regular urethane paint system used to paint the bridge as indicated in Item 605620. All galvanized utility or lighting conduits shall be brush painted with moisture cure aluminum paint after receiving an S.S.P.C. SP-7 (Brush off blast cleaning) finish. All non-galvanized utility or lighting conduits shall be brush painted with the regular urethane paint system after receiving an S.S.P.C. SP-6 (Commercial blast cleaning) finish. If there are any dry standpipes, natural gas line conduits, or any plastic pipe conduits on the bridges, then they shall be left as is. All steel weep hole pipes that protrude from the abutments and wingwalls shall be cleaned and painted with the regular urethane paint system (Payment under Item 605620). Any gas mains and/or other utilities found on Bridges should be shielded during blasting operations. Payment for shielding shall be under Item 605620. Lights and conduit that are attached to the bridge should be painted as noted above. The fences attached to the parapet of any of the bridges should not be painted.
28. All bearings for these bridges shall be abrasive blast cleaned to an S.S.P.C. SP-10 finish. Care shall be taken when cleaning "frozen" bearings, because the abrasive blasting operation sometimes causes the bearings to "unfreeze". All pitted areas of the

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structural steel shall be brush painted along with spraying when applying every coat of paint of the three-coat system. Cleaning of bearing areas shall be included under Item 605620. After all the bearings have been painted, and after the paint has cured, and after all concrete has been sealed, the contractor shall lubricate all the bearings with a NLGI grade 2 grease either Mobil Centaur Moly grease, Shell Rhodina SDX 2 grease, or an approved equal. Grease shall be black or clear in color. Payment shall be incidental to Item 605620.

29. All concrete surfaces as directed in the Structure Specific Notes shall be prepared and sealed as indicated in Item 602646. All boundaries between sealed and unsealed concrete will be a straight horizontal or vertical line unless directed otherwise by the Engineer or Structure Specific Notes.
30. The contractor shall place a leveling course prior to installation of the elastomeric joint seal. Leveling course shall be a rapid hardening, high early strength gaining mortar. Mortar shall be SikaQuick 2500 or Dayton Superior HD-25, or approved equal. The mortar shall have a minimum compressive strength of 2000 psi in 3 hours. Adhere to manufacturer's recommendations for use of aggregate based on depth of repair. Follow manufacturer's recommendations for lift thickness. Payment for mortar shall be incidental to pay item 605654. Minimum depth of elastomeric material shall be 2" and the maximum gap to be spanned shall be 2". Any temporary measures to open the roadway prior to completion of the joint, plates, cold patch, etc., shall be incidental to item 605654.
31. Two variable message boards shall be placed at each bridge location ten days prior to the start of construction to notify drivers of the lane/shoulder closure and impending construction activity. The message shall include the dates and times of the lane closures and how long the closures will be necessary, message shall be approved by the Safety Officer. For locations that have parallel structures, a total of two variable message boards shall be used for both bridges.
32. Patch spalls in the parapet, abutments, and backwalls as directed. Use (602572) for shallow spall repairs, less than 1 ½" deep, use (602586) for deep spall repairs, 1 ½" to 3 ½" deep, and use (602001 & 602580) for spall repair deeper than 3 ½".
33. The contractor shall be responsible for coordinating all work and required clearances with Amtrak/Norfolk Southern Railroad in accordance with Item 763502 – Maintenance of Railroad Traffic (Amtrak/Norfolk Southern) if applicable. The contractor shall design, install, and maintain his scaffolding/containment such that railroad flagging is only required during scaffolding/containment installation and removal. Any other railroad flagging shall be the responsibility of the contractor.
34. The structural steel paint color shall be submitted for approval.
35. The staging of equipment and materials need department approval prior to the issuance of the Notice to Proceed.

36. No material or equipment shall be stored at the bridge site.

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QUANTITY SUMMARY SHEET

Item	Description	UOM	Quantity
208001	Flowable Fill	C.Y.	40
210000	Type C Borrow, Trench and Structure Backfill	C.Y.	260
302007	GABC, Type B	C.Y.	130
302008	GABC, Type B, Patching	C.Y.	65
302011	Delaware No. 3 Stone	T	50
302012	Delaware No. 57 Stone	T	65
401821	WMA, Superpave, Type C, 160 Gyration, PG 64-22, Patching	T	85
406001	Warm-Mix Patching	S.Y-IN	425
503501	Crack and Joint Sealing, less than 3/4" wide	L.F.	615
503502	Crack and Joint Sealing, 3/4" to 1-3/4" wide	L.F.	1,300
503509	Joint Waterproofing Membrane, 6"	L.F.	1,000
602001	Portland Cement Concrete Masonry, Class A	C.Y.	65
602002	Portland Cement Concrete Masonry, Class B	C.Y.	65
602516	Grouting	Bag	35
602523	Rehabilitation of Concrete Structure, Epoxy	S.F.	5,000
602572	Repair of Existing P.C.C. Structures	LB	2,000
602574	Deck Repair, 1/4" to 1" Depth	S.F.	60
602575	Deck Repair, 1" to 3" Depth	S.F.	130
602576	Deck Repair, 3" to < Full Depth	S.F.	60
602577	Deck Repair, Full Depth	S.F.	160
602580	Partial Removal of P.C.C. Masonry	C.Y.	15
602586	Rehabilitation of Concrete Structure	C.F.	1,500
602611	Repair of Concrete Structure by Epoxy Injection	L.F.	325
602620	Crack Sealing Bridge Decks	S.F.	640
602646	Silicone Acrylic Concrete Sealer, S.F.	S.F.	13,000
604000	Bar Reinforcement Epoxy Coated	L.B.	5,000
605511	Prefabricated Expansion Joint 3"	L.F.	150
605620	Moisture Cured Urethane Paint System (Recoating), S.F.	S.F.	14,000
605636	Clean and Lubricate Bridge Bearings	EACH	20
605653	Closed-Cell Joint Seal	L.F.	325
605654	Asphaltic Plug Joint	L.F.	275
605692	Silicone Joint Seal	L.F.	2,550
605717	Preformed Silicone Joint Seal	L.F.	700
610502	Pointing Existing Stone Masonry	L.F.	1,200

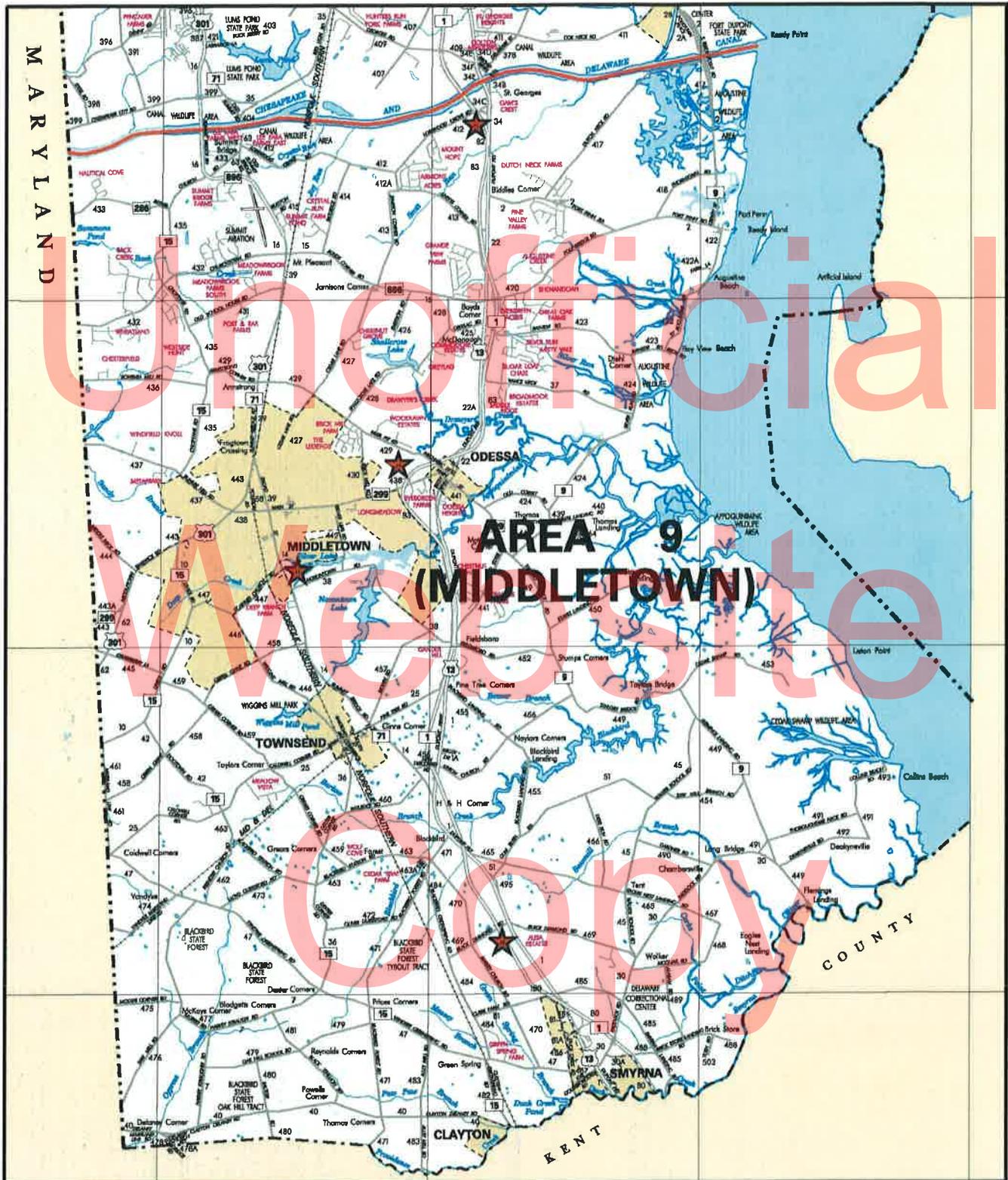
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AREA 9

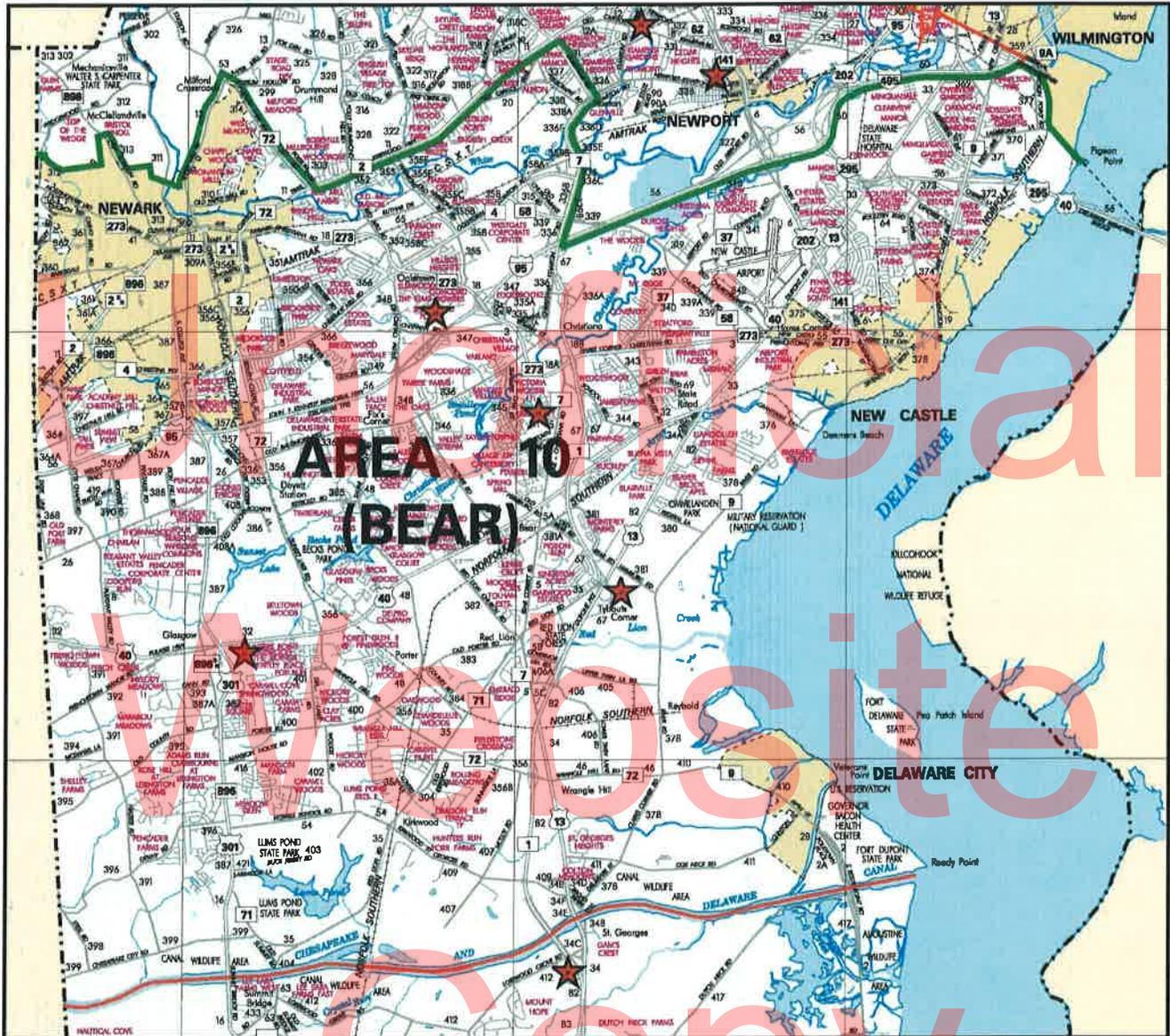
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