STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION

PLANS AND SPECIFICATIONS FOR

Contract Number: T201206702
Federal Aid Project Number: None

MICRO-SURFACING, NORTH, 2012

UNOFFICIAL WEBSITE COPY

MAUREEN ELIZABETH MAUGER
REGISTERED
No. 12723
DELAWARE
PROFESSIONAL ENGINEER

DONALD D. WEBER
REGISTERED
9176
DELAWARE
PROFESSIONAL ENGINEER

RECOMMENDED:

North District Design Engineer

10 APRIL 2013
Date

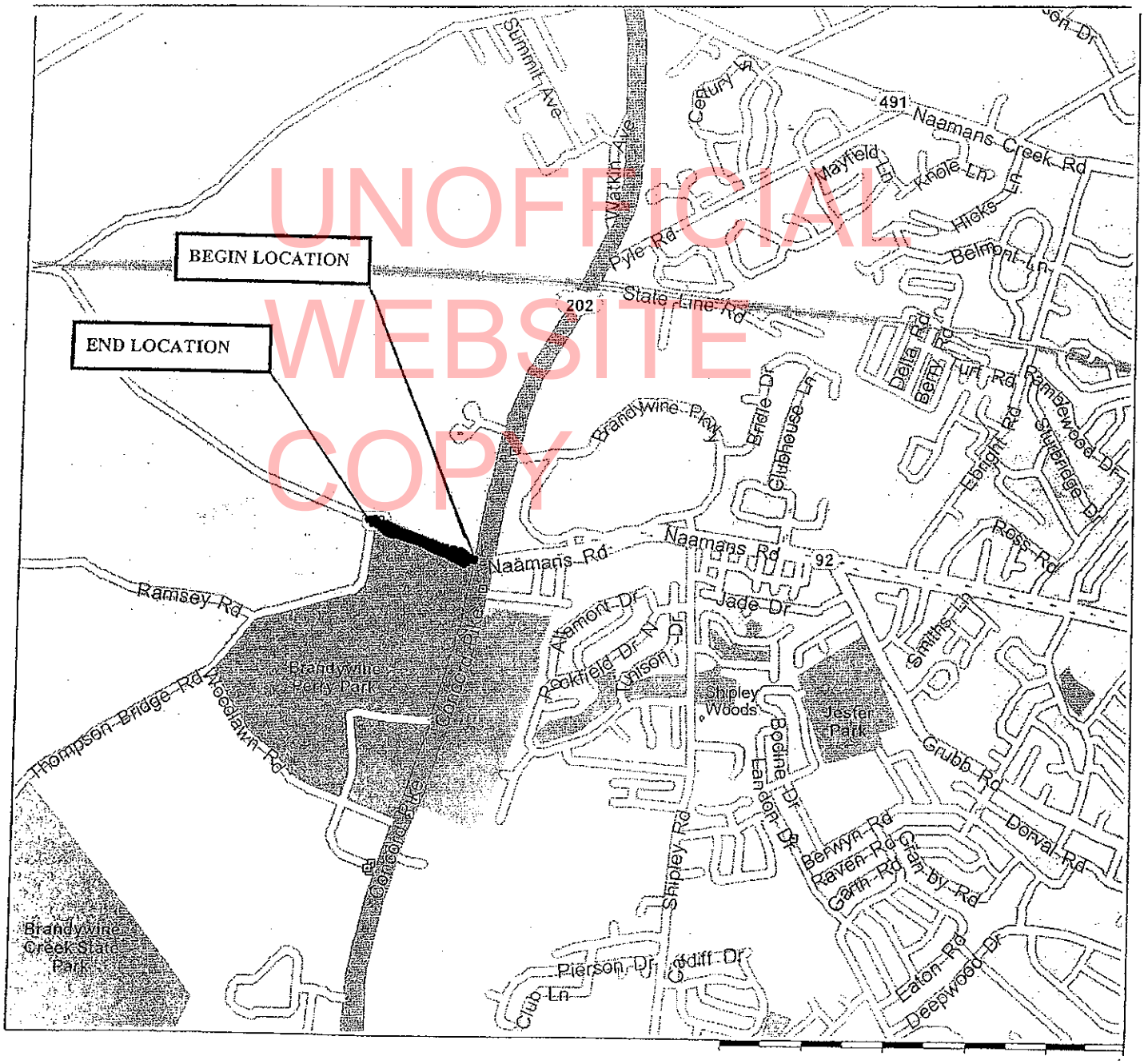
APPROVED:

North District Engineer,
Maintenance and Operations

4/10/13
Date

LOCATION MAP

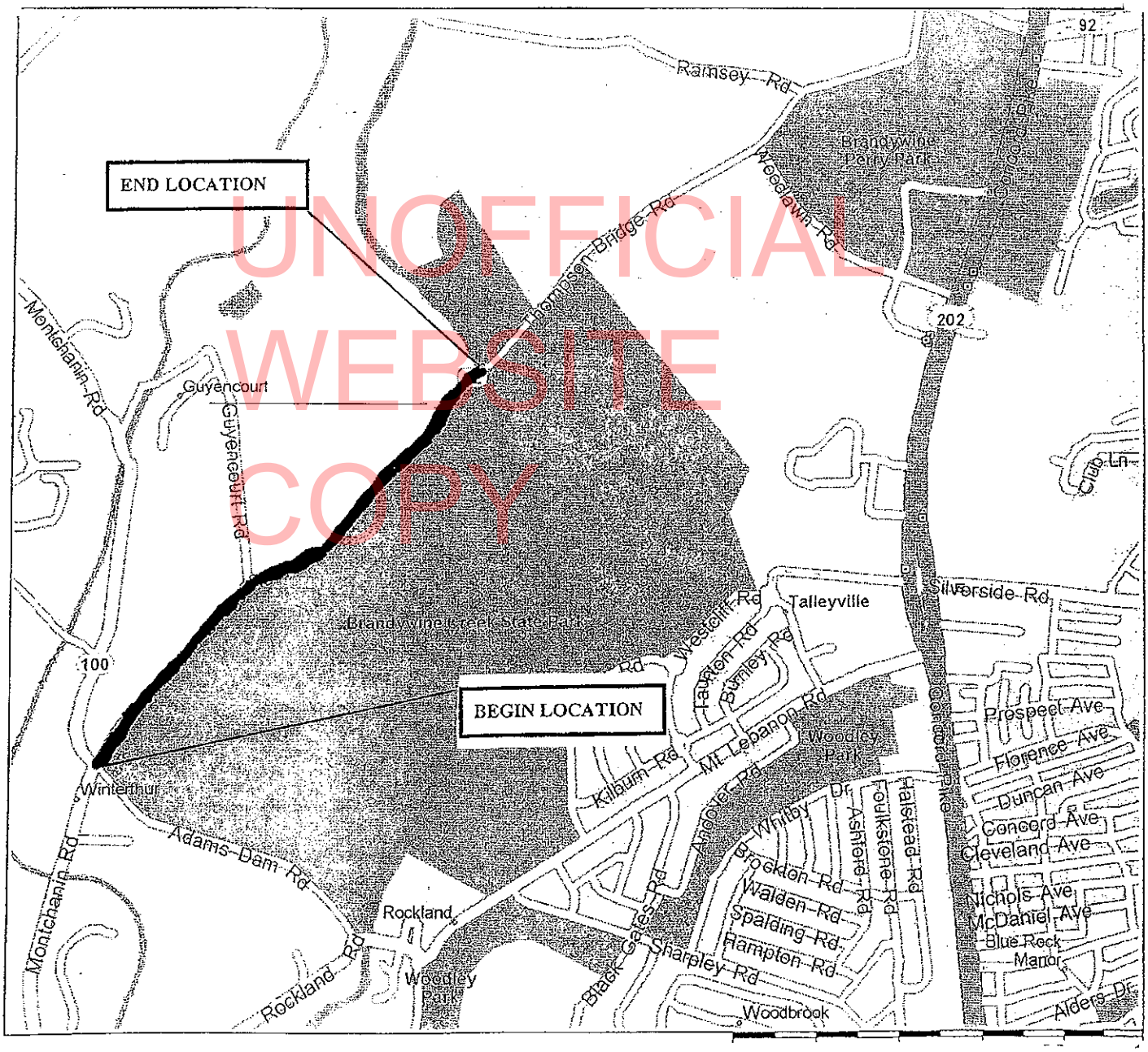
Location #1 - Beaver Valley Rd, from US 202 to Thompson Bridge Rd



UNOFFICIAL WEBSITE COPY

LOCATION MAP

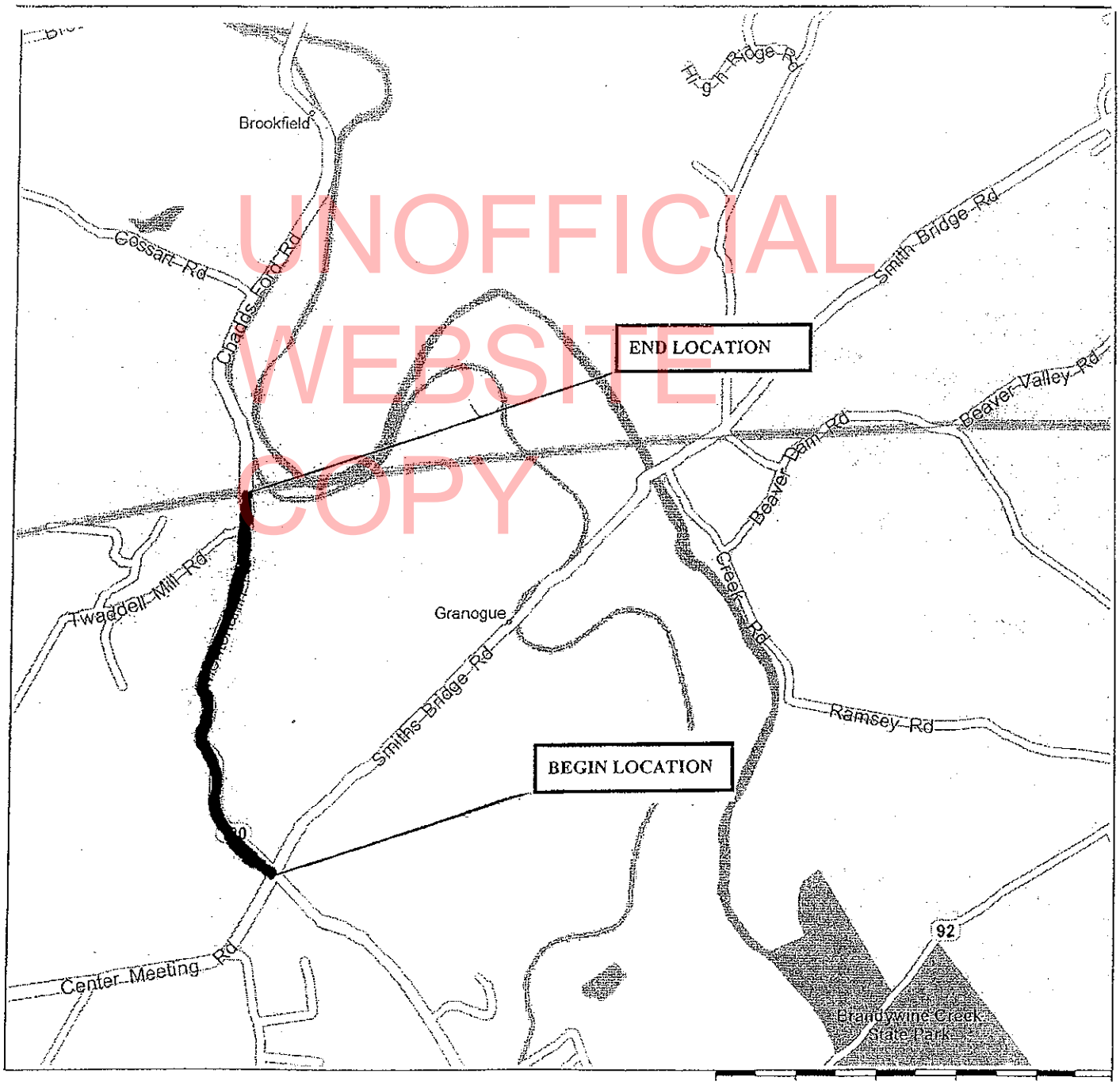
Location #2 - Thompson Bridge Rd, from Rd 232 to Brandywine Creek Bridge



UNOFFICIAL WEBSITE COPY

LOCATION MAP

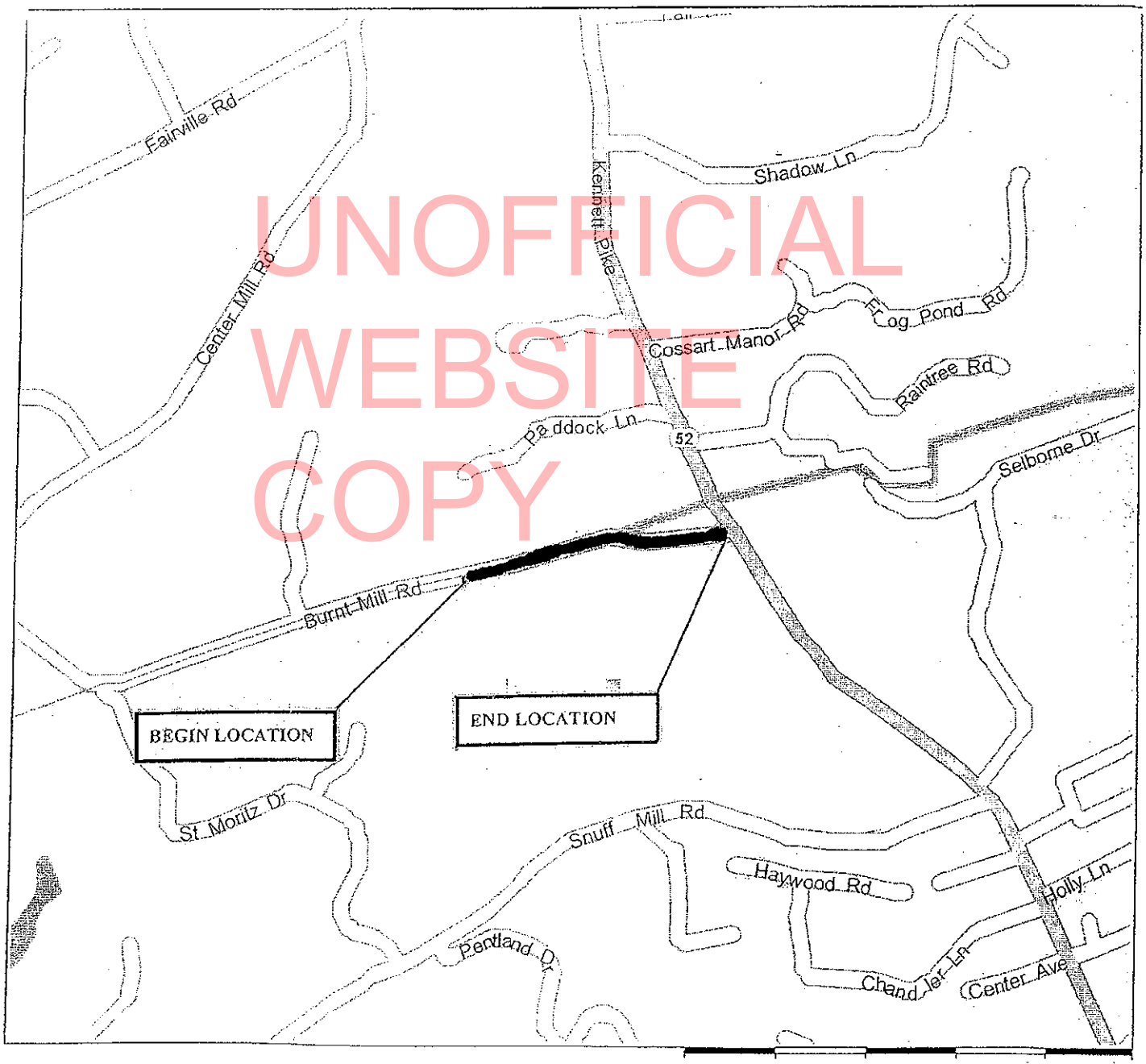
Location #3 - Montchanin Rd, from Smith Bridge Rd to PA/DE State Line



UNOFFICIAL WEBSITE COPY

LOCATION MAP

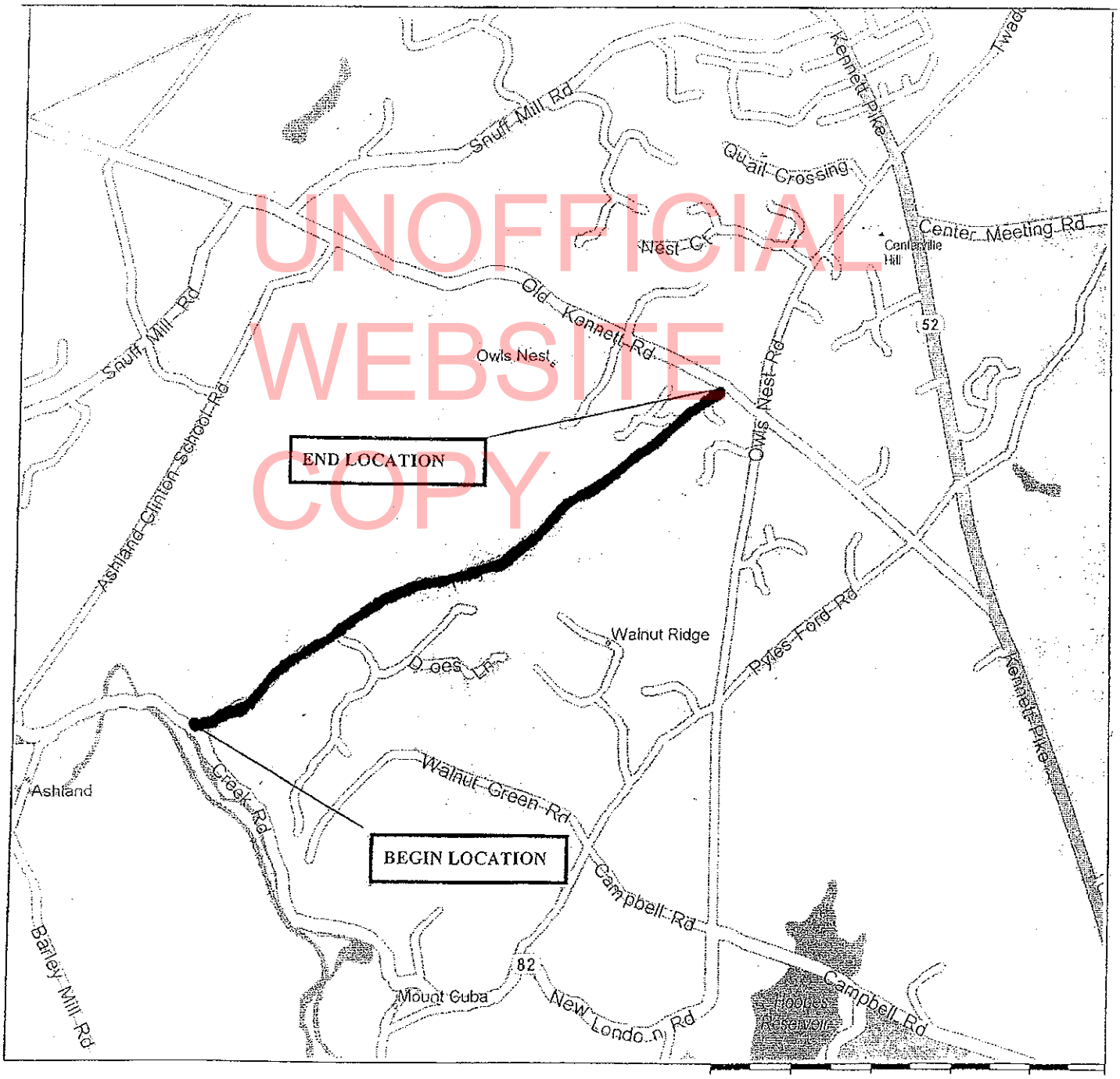
Location #4 - Burnt Mill Rd, from PA State line to Kennett Pike



UNOFFICIAL WEBSITE COPY

LOCATION MAP

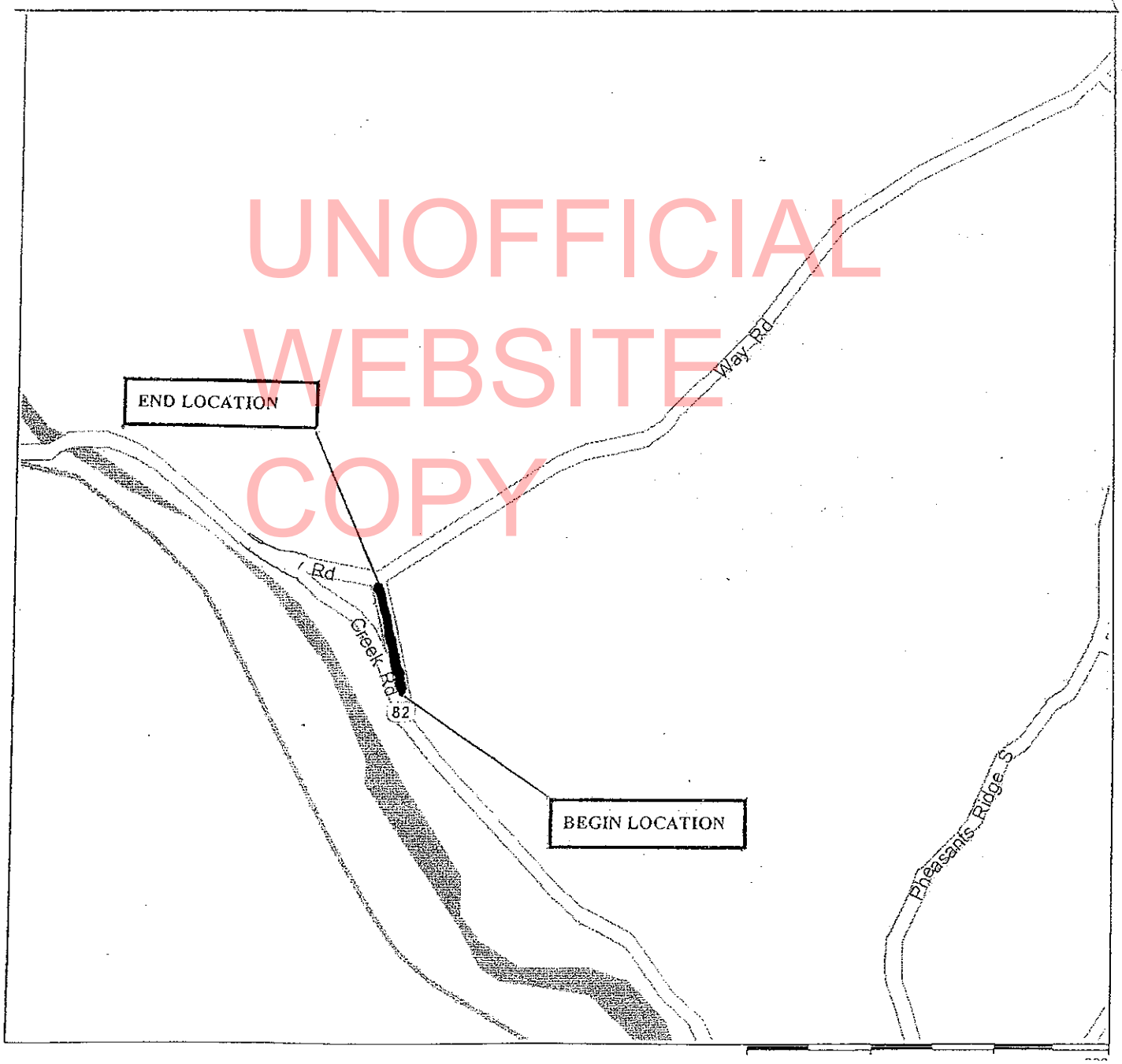
Location #5 - Way Rd, from Creek Rd to Old Kennett Pike



UNOFFICIAL WEBSITE COPY

LOCATION MAP

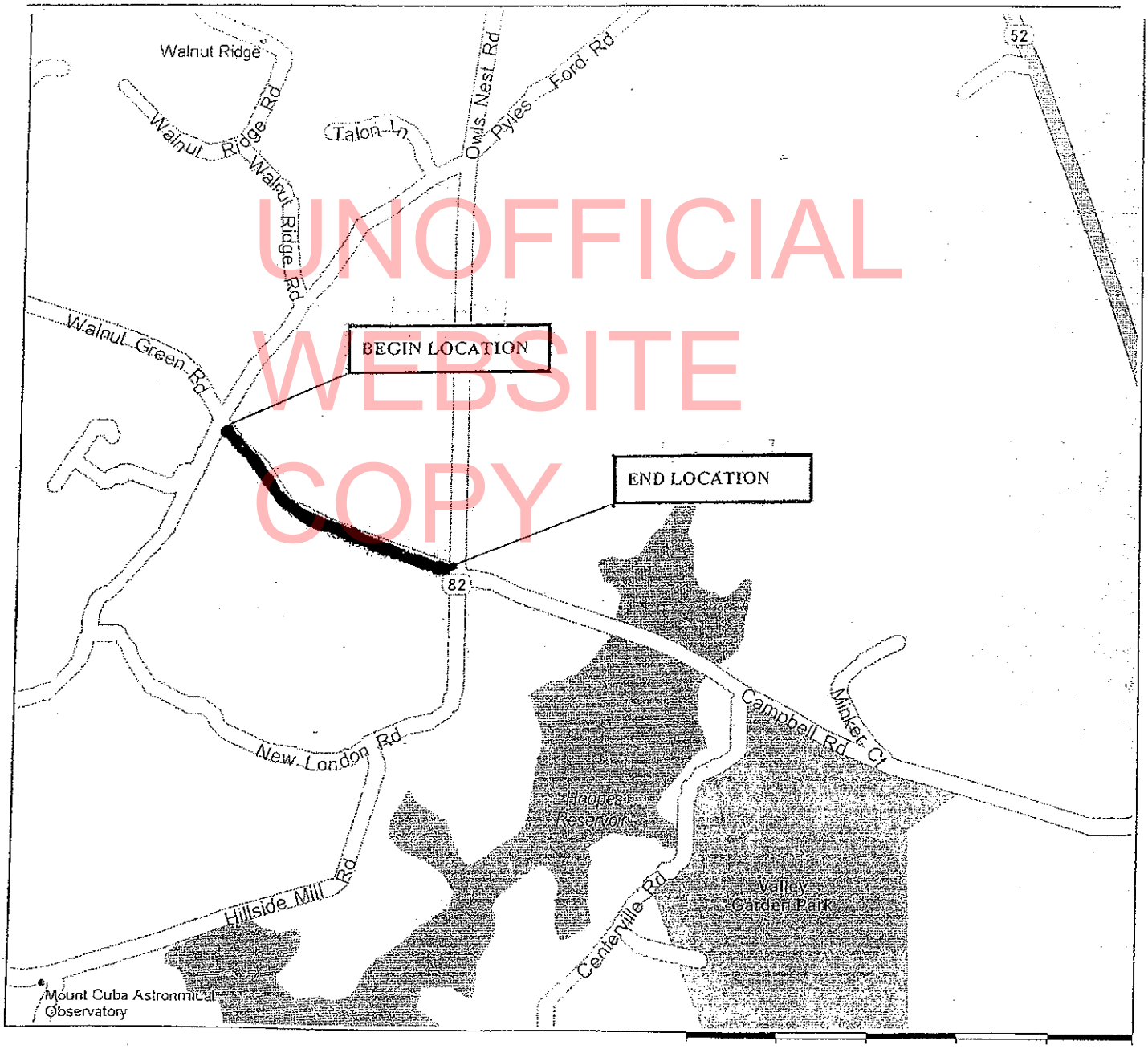
Location #6 - Way Rd (Rd 241A), from Creek Rd to Way Rd (Rd 241)



UNOFFICIAL WEBSITE COPY

LOCATION MAP

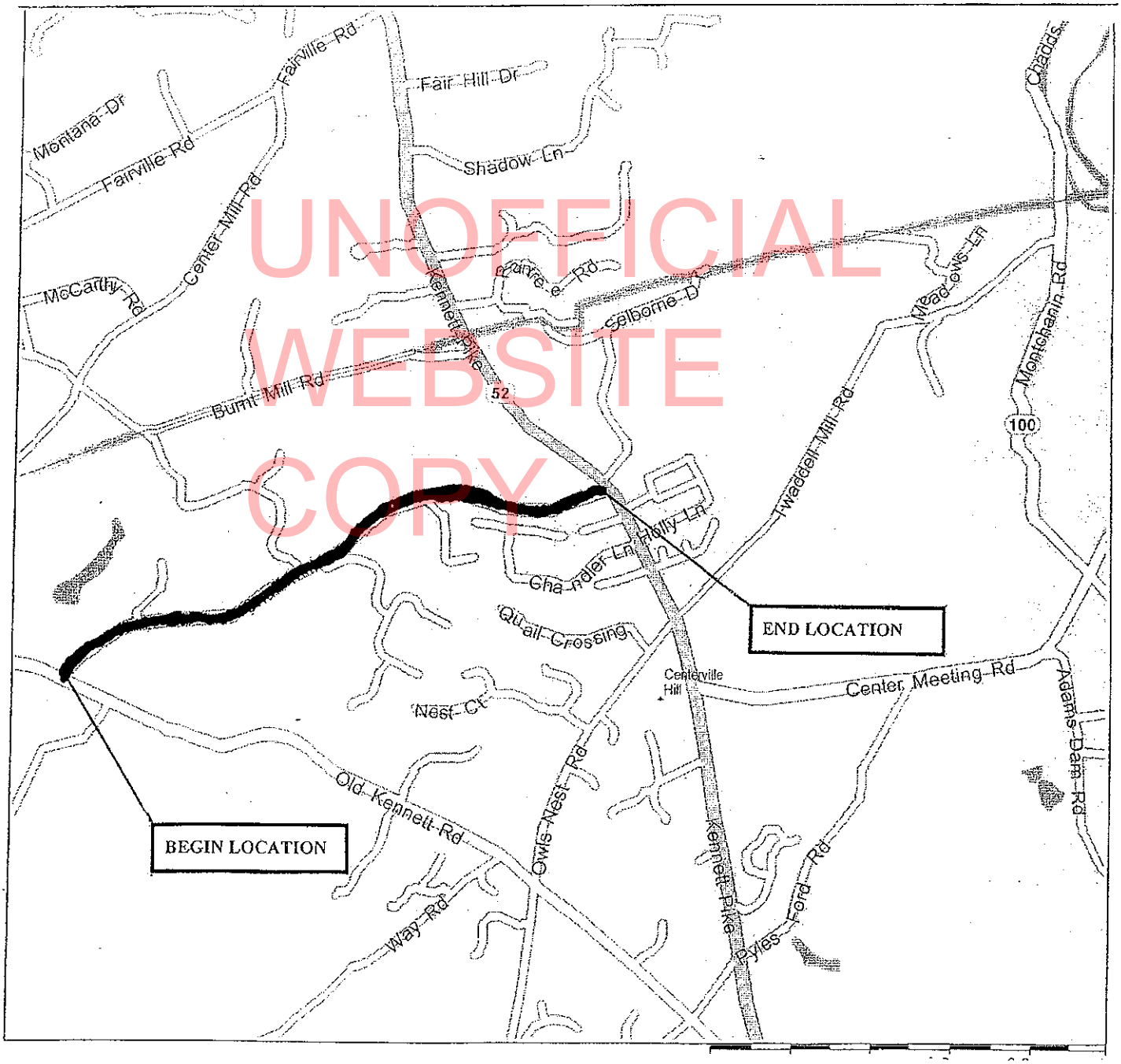
Location #7 - Dean Rd, from Pyles Ford Rd to Owls Nest Rd



UNOFFICIAL WEBSITE COPY

LOCATION MAP

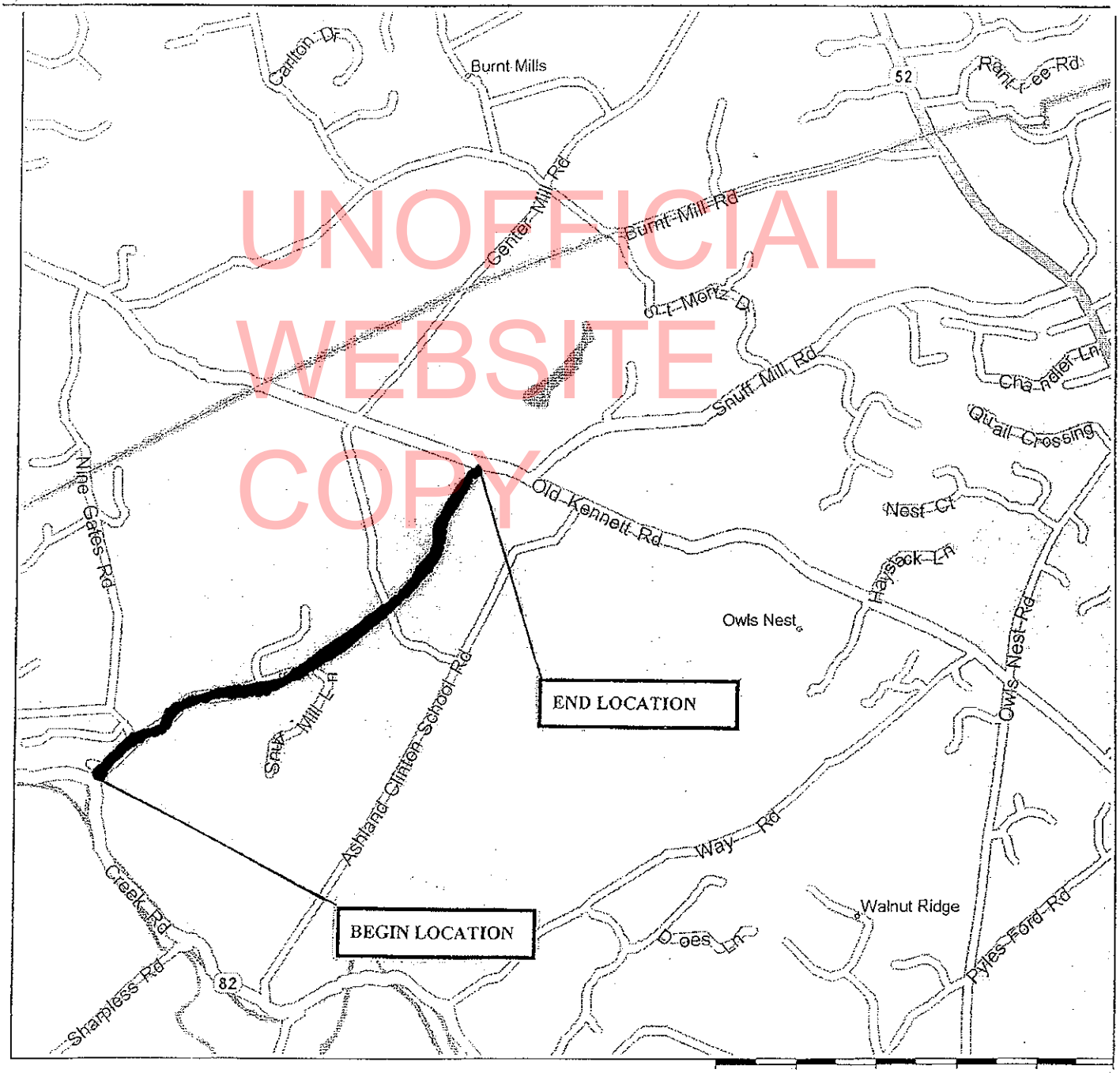
Location #8 - Snuff Mill Rd, from Old Kennett Rd to Kennett Pike



UNOFFICIAL WEBSITE COPY

LOCATION MAP

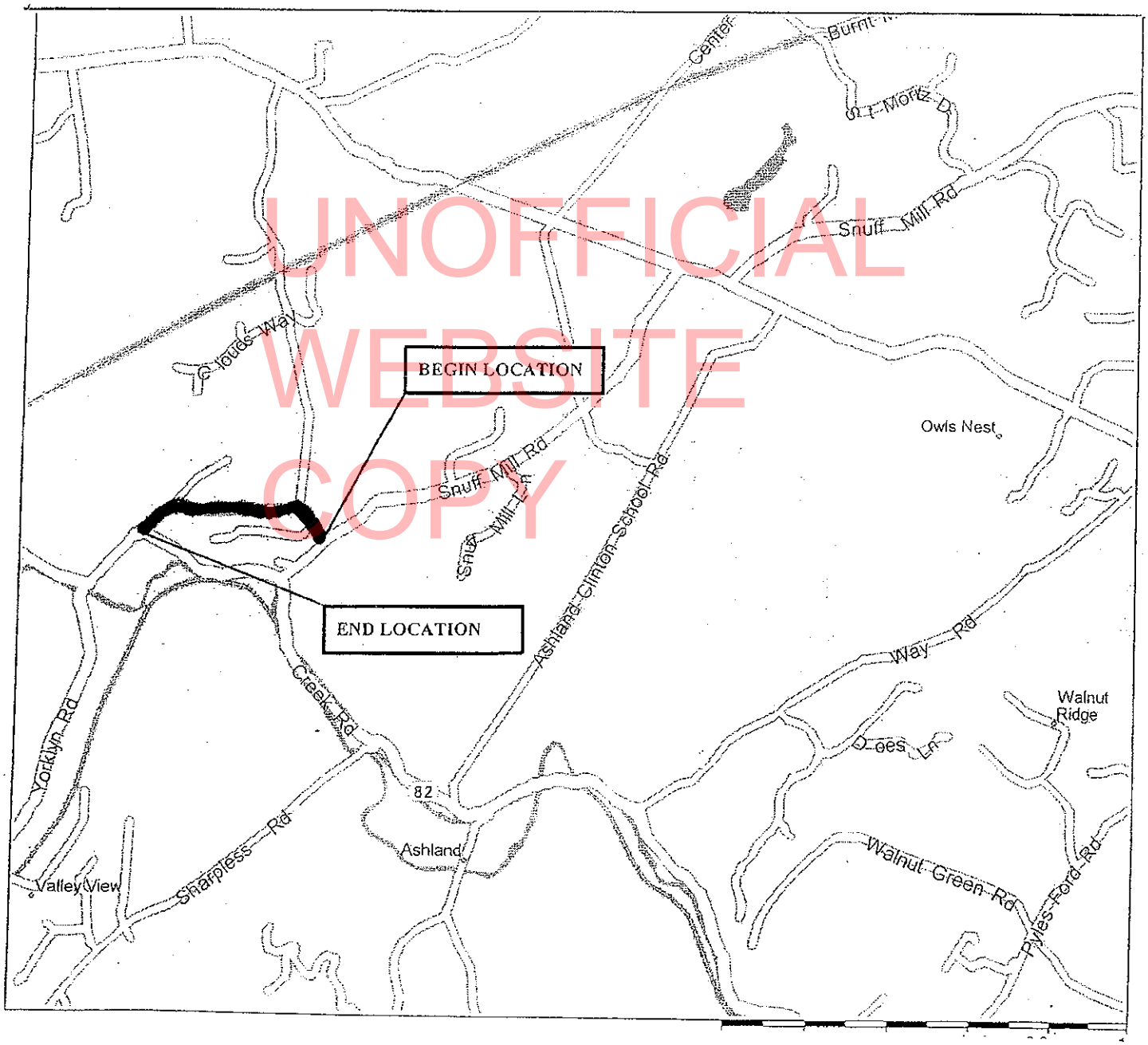
Location #9 - Snuff Mill Rd, from Creek Rd to Old Kennett Rd



UNOFFICIAL WEBSITE COPY

LOCATION MAP

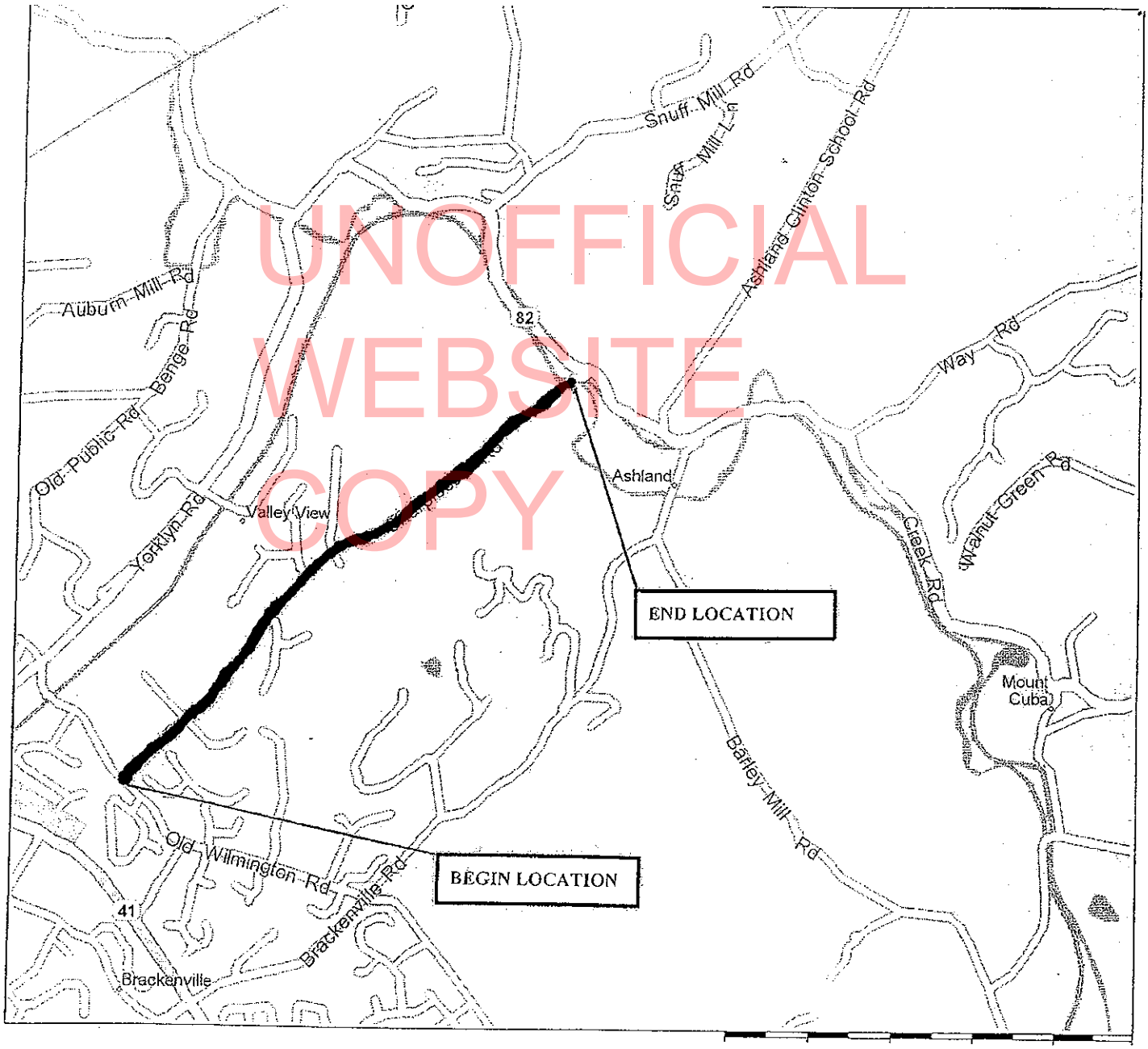
Location #10 - Polish Row Rd, from Snuff Mill Rd to Creek Rd



UNOFFICIAL WEBSITE COPY

LOCATION MAP

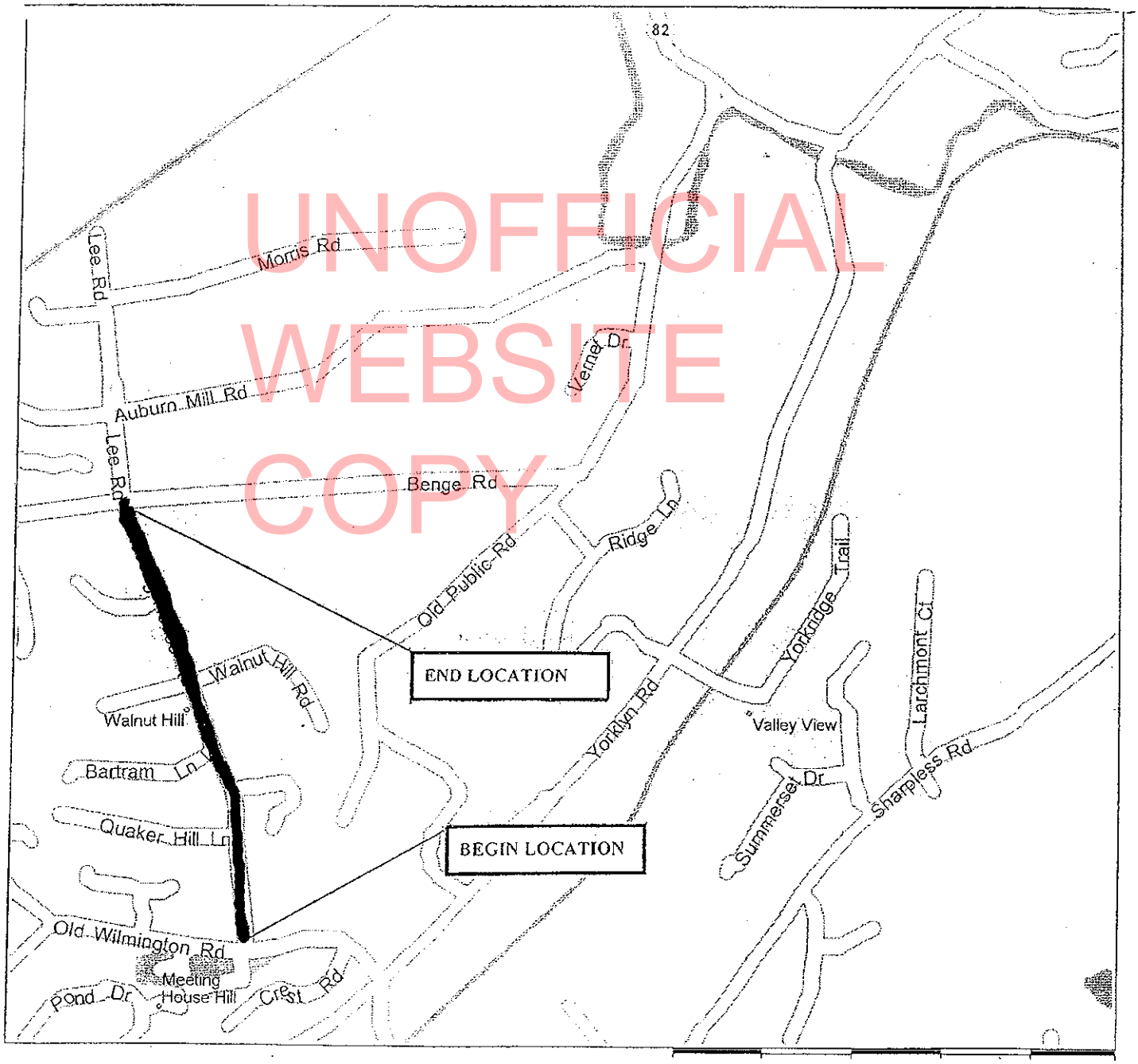
Location #11 - Sharpless Rd, from Old Wilmington Rd to Creek Rd



UNOFFICIAL WEBSITE COPY

LOCATION MAP

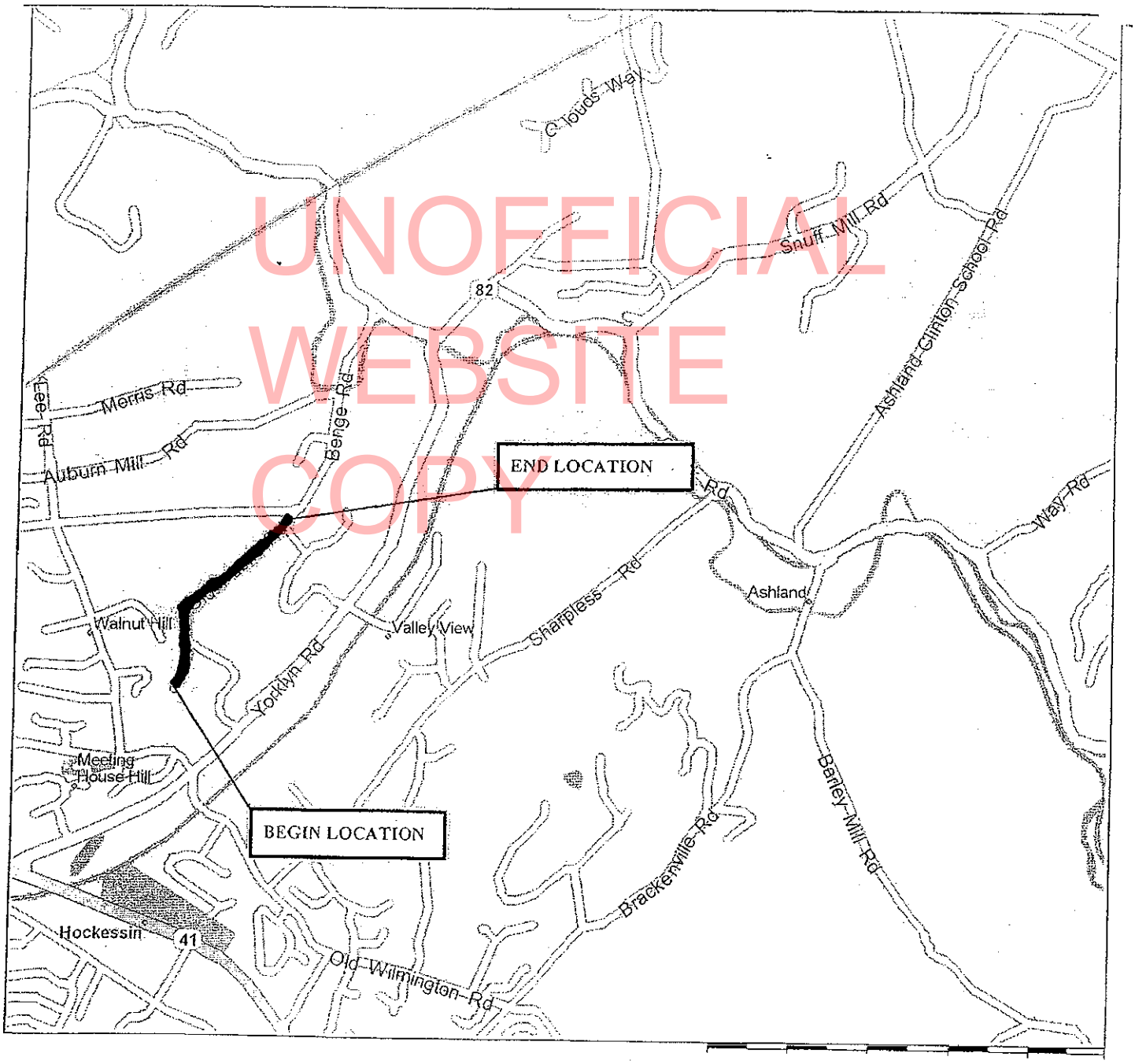
Location #12 - Meeting House Rd, from Old Wilmington Rd to Benge Rd



UNOFFICIAL WEBSITE COPY

LOCATION MAP

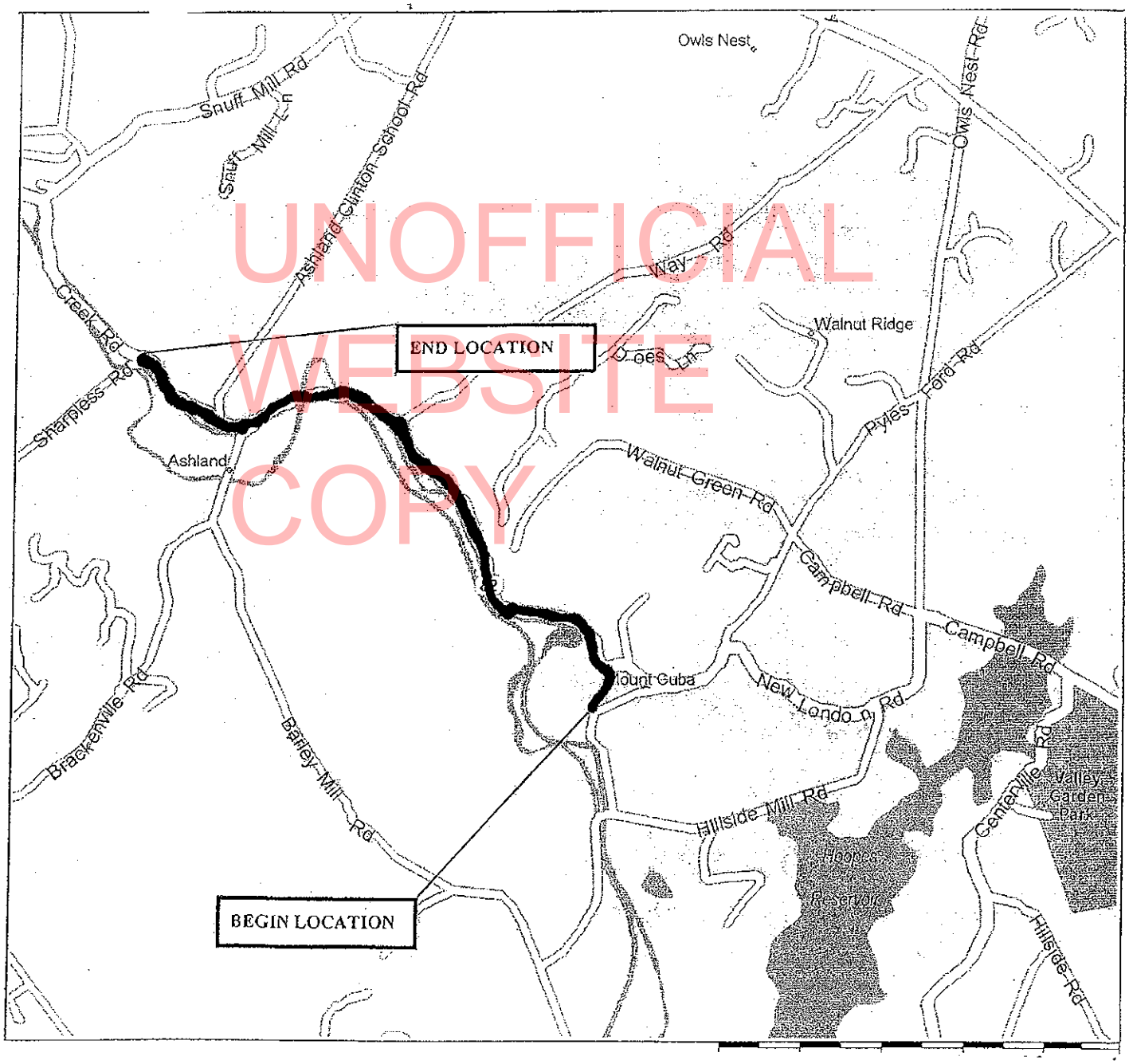
Location #13 - Old Public Rd, from cul del sac to Benge Rd



UNOFFICIAL WEBSITE COPY

LOCATION MAP

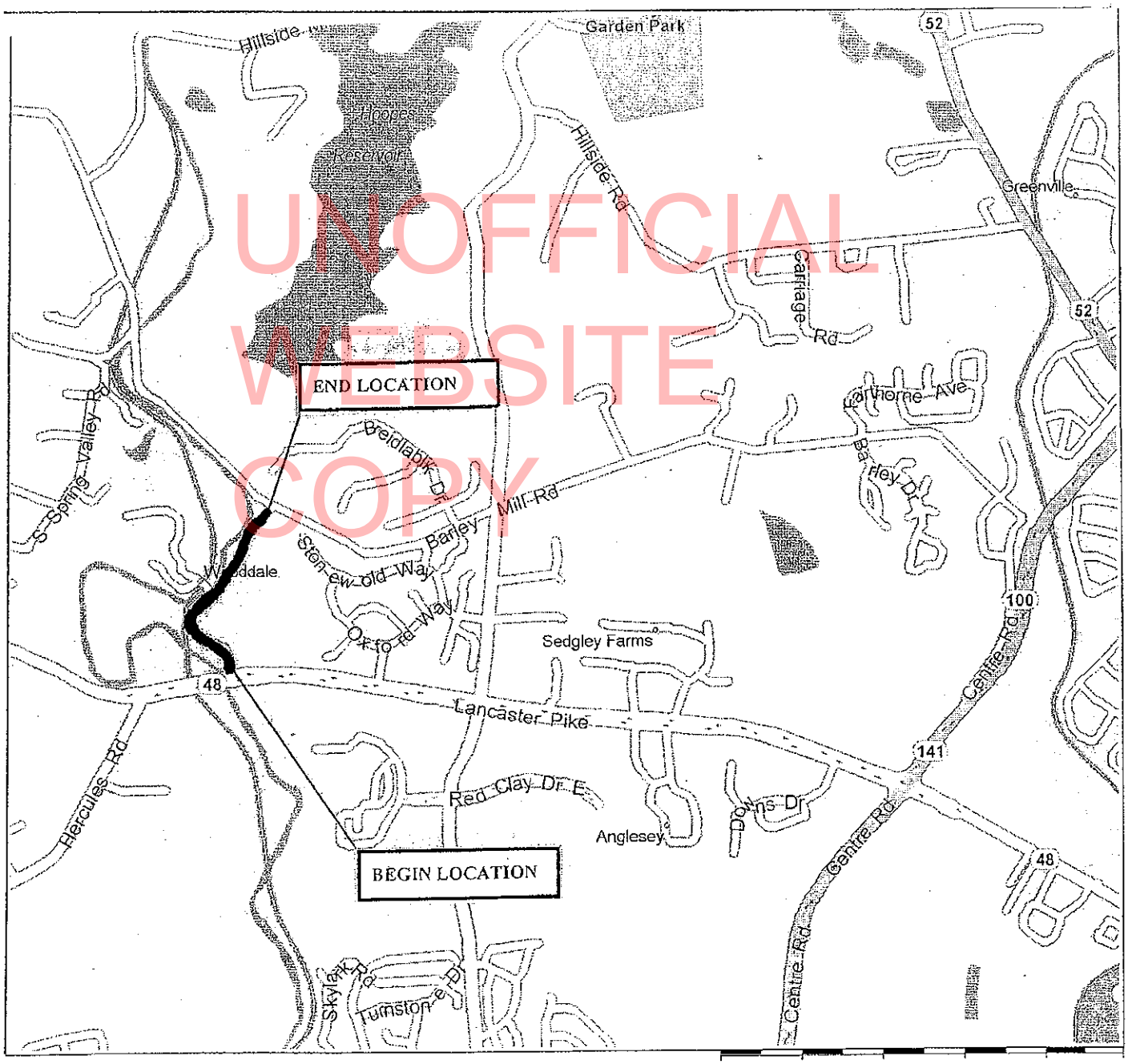
Location #14 - Rt 82 (Creek Rd), from Pyles Ford Rd to Sharpless Rd



UNOFFICIAL WEBSITE COPY

LOCATION MAP

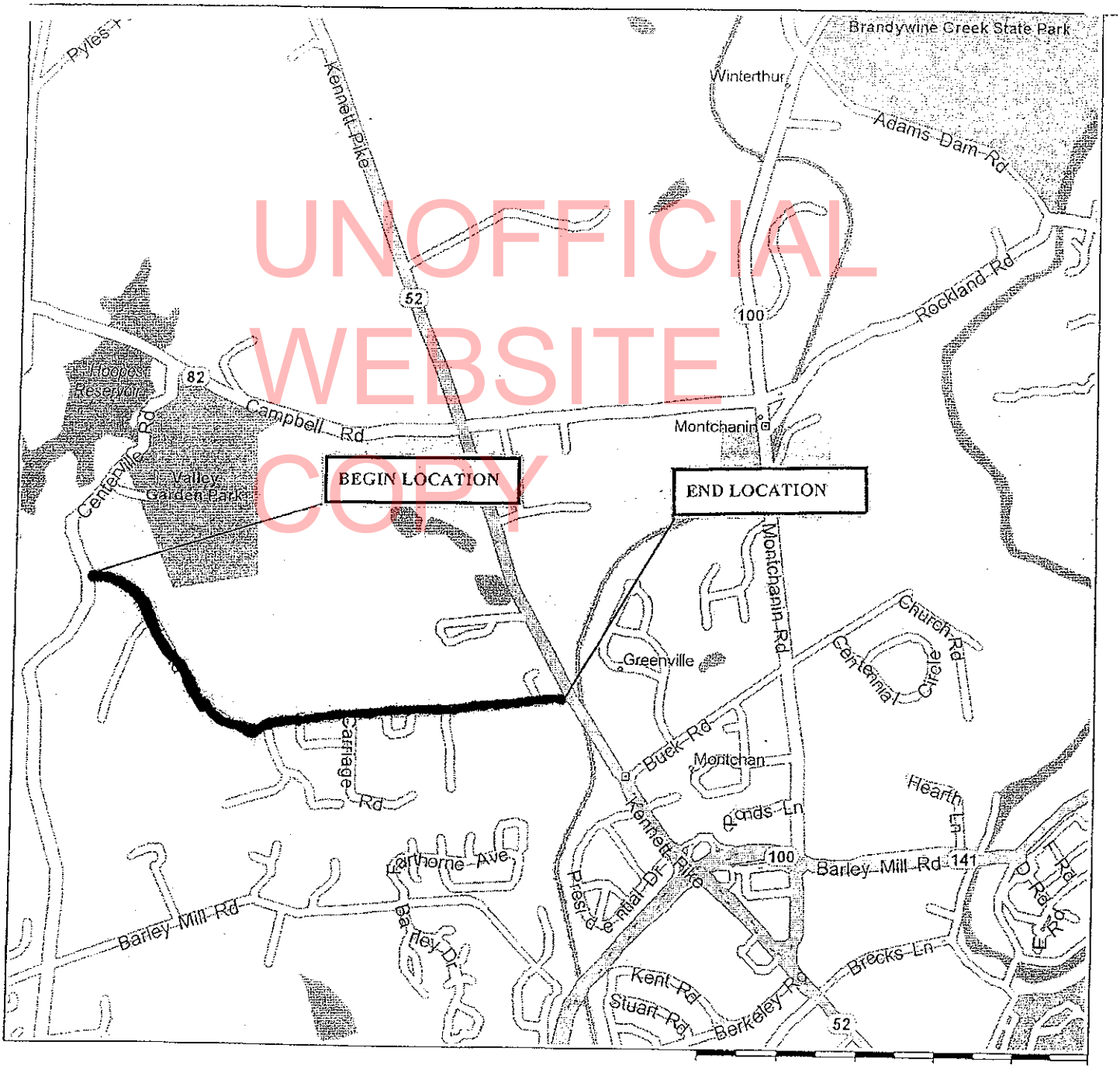
Location #15 - Rolling Mill Rd, from Lancaster Pike to Barley Mill Rd



UNOFFICIAL WEBSITE COPY

LOCATION MAP

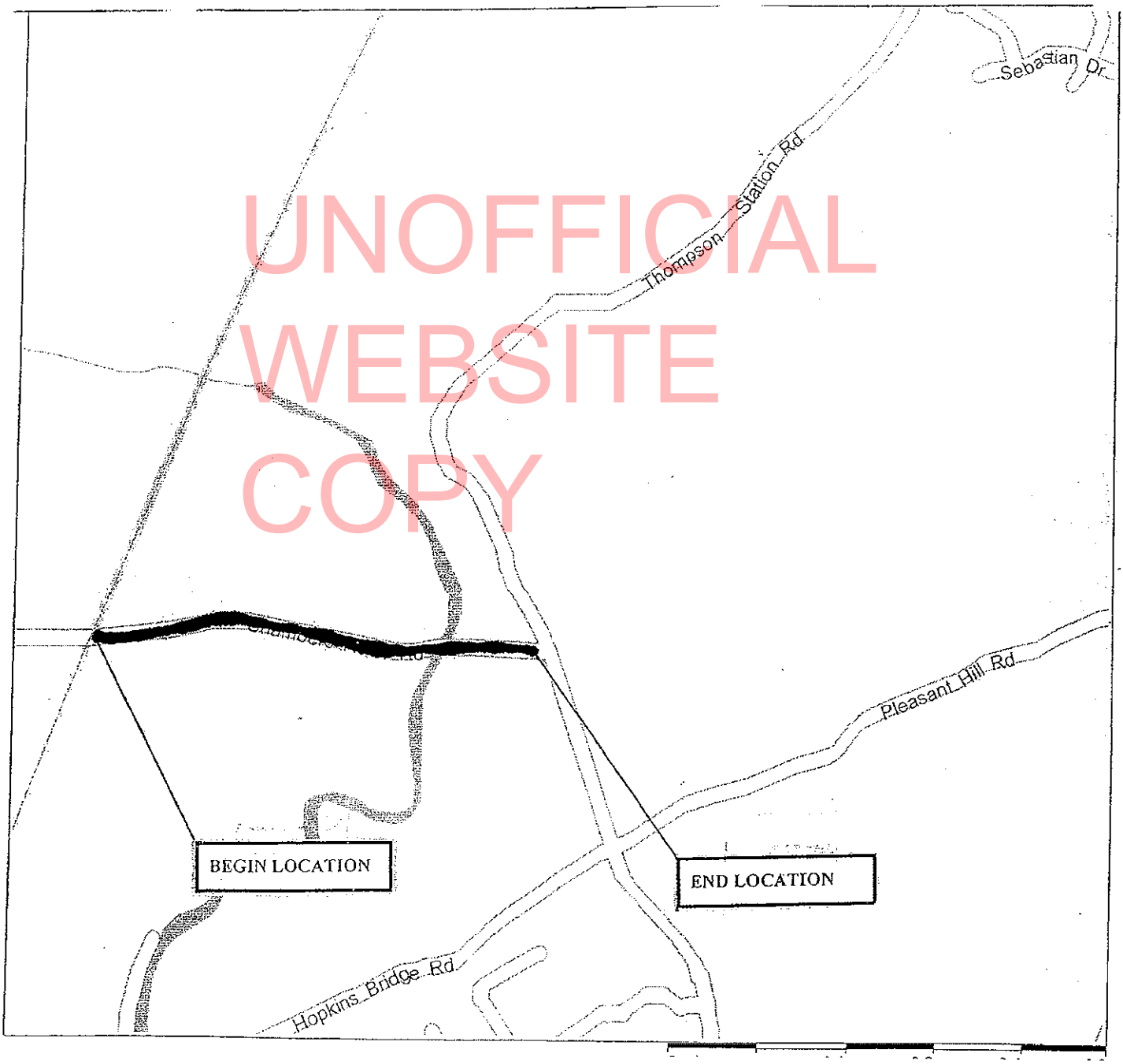
Location #16 - Hillside Rd, from Centerville Rd to Kennett Pike



UNOFFICIAL WEBSITE COPY

LOCATION MAP

Location #17 - Chambers Rock Rd, from PA/DE State Line to Thompson Station Rd



UNOFFICIAL WEBSITE COPY

GENERAL CONTRACT PLAN NOTES

GENERAL CONTRACT NOTES

GENERAL

1. Construction of this contract shall conform to Delaware Department of Transportation Standard Specifications dated August 2001, as amended by the Supplemental Specifications, the Special Provisions, the most recent Standard Construction Details, and these Notes.

2. The purpose of this contract is to perform micro-surfacing and repairs to roads and/or streets within the North District. Depending on fund availability, the Department reserves the right to add or delete locations and/or quantities for this contract. Such location or quantity additions or deletions shall not be cause for an increase or decrease in any contract unit bid prices. No item prices are to be renegotiated due to either and increase or decrease in quantity usage resulting from said additions or deletions.

UNOFFICIAL WEBSITE COPY

3. Whenever the word "Contractor" is used in this Contract, it shall refer to the person or persons, company, or corporation furnishing the services required.

4. Whenever the word "Department" or "Engineer" is used, it shall refer to the person or persons representing the Delaware Department of Transportation (DelDOT).

5. Location listings indicate general limits of construction, major types of improvements, and estimated quantities. During the bidding period, any questions pertaining to the locations shall be directed to the contract administrator. After the award, such questions shall be referred to the North District Engineer or his representative.

6. The Contractor shall submit the required copies of a detailed progress schedule as outlined in Standard Specification 108.04 prior to or at the preconstruction meeting. Details shall include a description of each work activity, the planned days of work, multiple crews of shifts, and scheduled working hours. During the contract, the Contractor shall submit two week (or as required) "look ahead" schedules to the DelDOT Engineer no later than noon of each Thursday. Failure to comply will result in suspension of all contract work with the time charges continuing to be assessed.

7. The Contractor shall not trespass on private property unless the District 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.

8. The Contractor is reminded that Section 105.07 of the Standard Specifications requires the General Contractor to have a competent superintendent or foreman on the project at all times.

GENERAL CONTRACT PLAN NOTES

9. The Contractor shall protect all driveways from damage due to Contractor's equipment and shall be responsible for all such damage done by Contractor's equipment.

10. All costs for the following work shall be incidental to the bid price for micro-surfacing Pay Item 403510 as applicable: Clipping back vegetation from the edges of the roadway, shoulders, and the first 3 feet of paved driveway entrances; picking up and disposing of waste and excess material; and cleaning the existing pavement prior to the micro-surfacing.

11. Grass and soil areas within State right-of-way that have been damaged by equipment during this Contract shall be restored with topsoil, seed and mulch at Contractor's expense

UNOFFICIAL WEBSITE COPY

12. For Pay Item 401823 (WMA Superpave BCBC), the maximum allowable lift thickness is 6 inches depth. Minimum allowable lift thickness is 3 inches.

13. Trash, rubbish, debris or brush that hampers repair/maintenance work in this Contract (as determined by the Engineer) shall be removed within the project limits, and shall be incidental to pay item 763000 (Initial Expense).

14. All milled material shall remain the property of the Contractor.

15. Removal of all warm-mix, base course material, and unsuitable soil shall be paid under Item 406001 (Warm-Mix Patching).

16. Removal of material under Pay Item 406001 (Warm-Mix Patching) shall be performed by use of a milling machine, unless directed otherwise by the Engineer. The Engineer may require use of other removal methods for small patching locations, at the sole discretion of the Engineer. The minimum width for pavement repair is 6 feet, unless directed otherwise by the Engineer. All warm mix materials shall be placed utilizing a paving machine.

17. Excavated material not needed on the project shall be removed from the site at Contractor's expense.

18. All milled patch areas must be backfilled with Superpave B.C.B.C. the same day.

19. Proper disposal of construction related wastes shall be the sole responsibility of the Contractor.

20. After pavement milling, all raised edges of manholes, drainage inlets, water valve boxes, and similar objects shall be ramped with warm-mix temporary roadway material (TRM) at a 20:1 slope or flatter. Payment shall be incidental to Item 406001 (Warm-Mix Patching). Pavement milling or cold patch material will not be allowed for this purpose. All warm-mix TRM shall be removed prior to paving

GENERAL CONTRACT PLAN NOTES

operations.

21. The Contractor shall take care in removing pavement around utilities, butt joints, curbs, and similar objects, so that existing pavement beyond the specified depths is not damaged. Any damage caused by the Contractor's operations may result in placing leveling courses at the Contactor's expense. The removal and clean-up of the warm-mix residue wedge remaining after milling operations shall be incidental to Item 406001 (Warm-Mix Patching). The removal of existing raised pavement markers shall be incidental to Item 406001.

22. The Contractor shall submit detailed drawings that show the existing pavement markings for each project work location. The drawings shall be submitted to the Engineer at the Preconstruction meeting. The drawings shall include, but not be limited to, the existing striping lengths, lane and shoulder widths, turn lane lengths, location of stop bars, turn arrows, crosswalks, and railroad crossings. These drawings will be reviewed by the DelDOT Traffic Section to determine if any changes to the final pavement markings are required. Final pavement markings shall conform to all existing patterns unless otherwise directed by the Engineer.

UNOFFICIAL WEBSITE COPY

The Department will provide striping layout at locations where no pavement markings previously exist. If Department personnel must provide a striping layout on locations where markings previously existed, then the Contractor shall reimburse the Department for the layout costs.

Unless otherwise directed by the Engineer, white edge lines shall wrap around the radius of all side streets and major commercial entrances to a tangent point. Yellow centerlines shall be continuous around median islands.

The Contractor shall be required to show proof that he has sufficient approved striping materials on hand, to ensure striping is completed prior to opening roadway to traffic.

23. DelDOT will not compensate the Contractor for erroneous pavement markings. Any erroneous pavement markings placed by the Contractor shall be corrected immediately by the Contactor at Contractor's expense. Erroneous markings or shadows that exceed one (1) inch in width shall be removed by either sand or water blasting as directed by the Engineer. No other removal methods will be allowed. A flat black paint or driveway sealer shall be applied in the area of the removed marking to mask the repair. Any damage to the pavement caused by the removal of erroneous markings shall be repaired/replaced to the satisfaction of the Engineer at Contractor's expense.

24. Final pavement markings shall conform to all existing patterns, and shall be placed within five (5) calendar days (maximum) after placement of the final course of micro-surface. Failure to comply will result in suspension of all other contract work, with time charges continuing to be assessed. If the Contractor fails to document the existing pavement markings in an acceptable manner, he shall be

GENERAL CONTRACT PLAN NOTES

required to provide at his own expense, a new pavement marking plan, signed and sealed by a Professional Engineer in the State of Delaware.

25. At the end of each work day and before traffic is returned to unrestricted roadway use, temporary striping shall be placed at locations that require permanent striping. Placement of temporary markings shall receive prior approval from the Engineer. Temporary pavement striping must match the permanent striping in all regards. Temporary pavement markings shall be paid at the applicable contract unit price. The Contractor is responsible for maintaining the temporary markings in good condition, such that the pavement is properly delineated at all times. Any refreshing of the markings will be at the Contractor's expense.

UNOFFICIAL WEBSITE COPY

26. The Contractor shall provide all residents and businesses who live adjacent to the work zone a minimum 48 hour written notice prior to the start of construction work. This notification shall include the scope of work, working hours, anticipated start and completion dates, Contractor name and address, and DelDOT contact numbers. Failure to give proper notice will result in a suspension of the work requiring notice, until proper notice is provided. Access to all business and residences within the project limits shall be maintained throughout the duration of this contract. Any temporary closure of a driveway for tie-in purposes shall be coordinated with the Engineer and/or property owner in advance of the closure.

27. All paving for warm-mix patching is to be completed within seven (7) calendar days from the time the existing pavement was removed, unless directed otherwise by the Engineer. Failure to comply will result in suspension of all other contract work, with time charges continuing to be assessed.

28. The Contractor shall submit certified weight tickets to DelDOT for all aggregate, mineral filler, and emulsion delivered to the job site. These tickets will be checked against the measured yields to ensure final yields meet those stated in the specification.

29. Underground utilities may be present at all locations. Therefore, all standard practices and procedures regarding utilities shall be followed. The Contractor shall contact Miss Utility of Delaware prior to starting each work order. The Contractor is responsible for the support and protection of all utilities when excavating. The Contractor is responsible for ensuring proper clearances, including safety clearances, from overhead utilities for construction equipment. The Contractor is advised to check the site for access purposes for his equipment, and make arrangements directly with utility companies for field adjustments for adequate clearances if necessary.

GENERAL CONTRACT PLAN NOTES

Maintenance of Traffic

30. Temporary traffic control devices shall be furnished and placed in accordance with the most recent version of the **Delaware Manual of Uniform Traffic Control Devices** (MUTCD). The Contractor shall refer to the configuration requirements for each Typical Application scenario at each work location. The proposed traffic control device configuration will be addressed the Contractor's Traffic Control Plan.

31. All **warning signs** shall be diamond grade **retroreflective** on aluminum panels, and made up of NCHRP 350 compliant rigid material.

UNOFFICIAL WEBSITE COPY

32. The Contractor, with the Engineer's representative, shall **inventory all signs** on all roads subject to improvements. 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 shall again inventory the traffic signs and account for any lost or damaged signs. Lost or damaged signs shall be replaced by the Contractor at Contractor's expense.

33. All work shall be performed in a manner that will reasonably provide the **least practicable** obstruction to all road users, including vehicular, pedestrian, and bicycle traffic, and shall conform to the requirements of the Delaware Manual on Uniform Traffic Control Devices, Part 6, including revisions up to the date of advertisement for bids.

34. The Contractor shall prepare and submit a site-specific **Traffic Control Plan** for each work location. The Traffic Control Plan shall be submitted to DelDOT for approval five working days before the start of work at each location. The Traffic Control Plan must clearly indicate orientation of traffic control devices to be used for each site. The Contractor shall submitted Traffic Control Plans for all work locations, including certification documentation for all traffic control devices, prior to the Preconstruction Meeting. The Plans must be approved by the DelDOT Safety Officer and DelDOT Engineer prior to commencement of work at each site. Costs for preparation of the Traffic Control Plan shall be included in the bid price for Item 763643 (Maintenance of Traffic, All Inclusive).

35. All traffic control devices shall be in **new or refurbished** condition, and all work shall be performed in a manner that will reasonably provide the least practicable obstruction to all road users, including vehicular, pedestrian, and bicycle traffic, and shall conform to the requirements of the Delaware Manual on Uniform Traffic Control Devices, Part 6, including revisions up to the date of advertisement for bids.

36. If a road closure is required, the Contractor shall be required to submit the proposed detour route to the DelDOT Safety Officer for approval. The Contractor shall coordinate the road closure with the

GENERAL CONTRACT PLAN NOTES

Engineer. The Engineer will coordinate with the DelDOT Safety Section, and be responsible for the necessary emergency notifications. The detour route requires approval by the Engineer prior to closure. The Engineer will coordinate with the DelDOT Team Support Section for notification requirements prior to road closure. A two week lead time for detour plan review shall be required for any requested detour. The Contractor shall be responsible for furnishing and maintaining the Maintenance of Traffic apparatus at the closure (such as Type III barricades, road closure signs, etc) and all advanced warning signs. The Contractor shall be responsible for placement of detour trailblazers. Payment for detour trailblazers shall be under Item 763643 (Maintenance of Traffic, All Inclusive).

37. All open excavations shall be secured with plastic **drums with retroreflective** fluorescent orange and white prismatic sheeting and orange plastic snow fence. If the construction activity results in a vertical difference or drop-off along, adjacent to, or across a travelway, the Contractor shall eliminate or remedy this hazard by the methods detailed in Table 6G-1 of the Delaware Manual on Uniform Traffic Control Devices (DEMUTCD) as directed by the Engineer. The snow fence, tie wire, and associated items shall be incidental to Item 763643 (Maintenance of Traffic, All Inclusive).

UNOFFICIAL WEBSITE COPY

38. **Drums** with fluorescent sheeting will be required in work areas where completion time will extend beyond one daylight operation. All drums shall consist of fluorescent orange and white prismatic reflective sheeting. Lights shall not be used on drums.

39. All **flaggers** utilized by the Contractor for this project shall be ATSSA certified by a Department approved certification program. All flaggers shall have certification cards and photo identification with them while working. Absence of a certification card will be justification for flagger dismissal from the site, and corresponding suspension of work. All garments worn by the flaggers shall comply with the applicable regulations for visibility and reflectivity. All construction and Contractor vehicles and self-propelled equipment shall be equipped with an operating roof mounted amber flashing light.

40. All workers shall wear a retro reflective safety vest while they are within the right-of-way or adjacent to it. All retro-reflective safety vests must be minimum ANSI Class 2.

41. Work hours shall be from **8:00 AM to 4:00 PM**, Monday through Friday, unless directed otherwise by the Engineer. The Contractor shall comply with these time restrictions.

42. Costs for adjustment in position of traffic control devices due to variances from the standard MOT case numbers, or for any other reason, shall be included in unit price for each respective MOT pay item 763643 (Maintenance of Traffic, All Inclusive).

43. A **Truck mounted attenuator**, Type II (Item 743010) shall be required on roads for shoulder work, travel lane work and other operations as outlined in the Delaware MUTCD, or as directed by the Engineer.

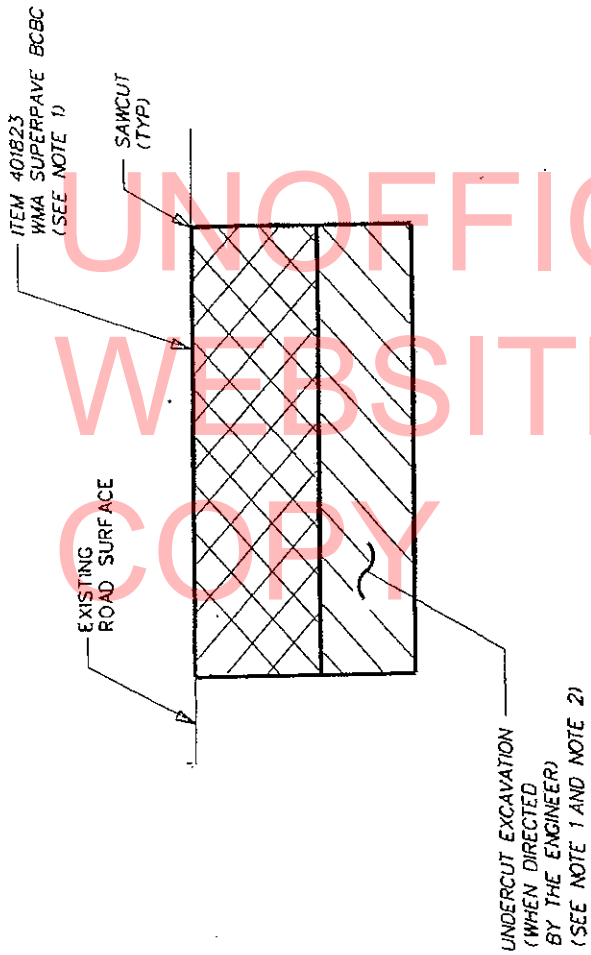
GENERAL CONTRACT PLAN NOTES

44. No lane closures will be permitted unless applicable work activity is taking place.

45. Do not perform microsurfacing, crack sealing or patching within Railroad right-of-way.

UNOFFICIAL WEBSITE COPY

DETAILS SHEET



WARM-MIX PATCH
TYPICAL SECTION
NOT TO SCALE

NOTES

1. DEPTH WILL VARY, AS DIRECTED BY THE DELDOT ENGINEER
2. BACKFILL FOR UNDERCUT EXCAVATION SHALL BE WMA SUPERPAVE B.C.B.C. (ITEM 401823). LIFT THICKNESS SHALL BE 3" (MINIMUM) AND 6" (MAXIMUM) FOR SUPERPAVE B.C.B.C.

DRAWN BY: RCG
FEB 2011

DELAWARE DEPARTMENT OF TRANSPORTATION

WARM-MIX PATCH
BENEATH MICROSURFACING

UNOFFICIAL WEBSITE COPY

LOCATION 1 **221(BEAVER DAM ROAD) FROM US 202, RD 4, CONCORD PIKE TO RD 225, THOMPSON BRIDGE RD**

LENGTH 0.4666 km 0.29 MILE AADT 9135

GENERAL IMPROVEMENTS

MICROSURFACING, CRACK SEALING

COMMENTS:

Correct road name is Beaver Valley Rd, rather than Beaver Dam Rd

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 1

403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	3,800.00 S.Y.
406507	CRACK SEALING	1,500.00 L.F.
743003	ARROWPANELS, TYPE C	2.00 EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	200.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	20.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	270.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	270.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	27,600.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	6,066.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	13,800.00 L.F.

** DENOTES FIXED PRICE ITEM

NORTH MAINTENANCE MICRO-SURFACING, NORTH, 2012

LOCATION 2 **225(THOMPSON BRIDGE ROAD) FROM RD 1-00232 TO BRIDGE BRANDYWINE CREEK**

LENGTH 2.2204 km 1.38 MILE AADT 7897

GENERAL IMPROVEMENTS

MICROSURFACING, WARM MIX PATCHING AND CRACK SEALING

COMMENTS:

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 2

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	50.00 TON
403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	19,900.00 S.Y.
406001	WARM-MIX PATCHING	900.00 SY-IN
406507	CRACK SEALING	17,500.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	300.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	30.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	22.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	22.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	58,400.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	12,286.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	29,200.00 L.F.
762001	SAW CUTTING, HOT MIX	100.00 L.F.

** DENOTES FIXED PRICE ITEM

NORTH MAINTENANCE MICRO-SURFACING, NORTH, 2012

LOCATION 3 **232(MONTCHANIN ROAD) FROM RD 221 SMITH BRIDGE RD TO PA/DE STATE LINE**

LENGTH 1.6895 km 1.05 MILE AADT 4910

GENERAL IMPROVEMENTS

MICROSURFACING, WARM MIX PATCHING, CRACK SEALING

COMMENTS:

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 3

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	450.00 TON
403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	13,600.00 S.Y.
406001	WARM-MIX PATCHING	8,000.00 SY-IN
406507	CRACK SEALING	5,500.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	300.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	30.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	22.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	22.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	44,400.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	9,346.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	22,200.00 L.F.
762001	SAW CUTTING, HOT MIX	100.00 L.F.

** DENOTES FIXED PRICE ITEM

LOCATION 4 **238(BURNT MILL ROAD) FROM PA STATE LINE TO RD 9 KENNETT PIKE**

LENGTH 0.7562 km 0.47 MILE AADT 598

GENERAL IMPROVEMENTS

MICROSURFACING, WARM MIX PATCHING, CRACK SEALING

COMMENTS:

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 4

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	450.00 TON
403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	6,100.00 S.Y.
406001	WARM-MIX PATCHING	8,000.00 SY-IN
406507	CRACK SEALING	13,200.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	200.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	20.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	25.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	25.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	11,000.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	2,251.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	5,300.00 L.F.
762001	SAW CUTTING, HOT MIX	500.00 L.F.

** DENOTES FIXED PRICE ITEM

LOCATION 5 **241(WAY ROAD) FROM RD 261 CREEK RD TO RD 243 OLD KENNETT ROAD**

LENGTH 2.687 km 1.67 MILE AADT 485

GENERAL IMPROVEMENTS

MICROSURFACING, WARM MIX PATCHING AND CRACK SEALING

COMMENTS:

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 5

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	50.00	TON
403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	21,600.00	S.Y.
406001	WARM-MIX PATCHING	900.00	SY-IN
406507	CRACK SEALING	13,500.00	L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00	EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00	EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	200.00	HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	20.00	HOUR
762001	SAW CUTTING, HOT MIX	100.00	L.F.

** DENOTES FIXED PRICE ITEM

LOCATION 6 **241A(WAY ROAD) FROM RD 261 CREEK RD TO RD 241 WAY RD**

LENGTH 0.1126 km 0.07 MILE AADT 485

GENERAL IMPROVEMENTS

MICROSURFACING AND CRACK SEALING

COMMENTS:

Schedule work to be performed at Location #5 and Location #6 simultaneously

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 6

403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	910.00 S.Y.
406507	CRACK SEALING	500.00 L.F.
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	25.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	5.00 HOUR

** DENOTES FIXED PRICE ITEM

LOCATION 7 **242(DEAN ROAD) FROM RD 239 PYLES FORD RD TO RD 240 OWLS NEST RD**

LENGTH 0.6275 km 0.39 MILE AADT 4872

GENERAL IMPROVEMENTS

MICROSURFACING, WARM MIX PATCHING, CRACK SEALING

COMMENTS:

Dean Road is also known as Walnut Green Rd at this road section

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 7

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	150.00 TON
403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	5,100.00 S.Y.
406001	WARM-MIX PATCHING	2,400.00 SY-IN
406507	CRACK SEALING	5,000.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	200.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	20.00 HOUR
748032	TEMPORARY MARKINGS, PAINT, 5"	8,400.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	1,764.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	4,200.00 L.F.
762001	SAW CUTTING, HOT MIX	200.00 L.F.

** DENOTES FIXED PRICE ITEM

NORTH MAINTENANCE MICRO-SURFACING, NORTH, 2012

LOCATION 8 **244(SNUFF MILL ROAD) FROM RD 243 OLD KENNETT RD TO RD 9 KENNETT PIKE**

LENGTH 2.494 km 1.55 MILE AADT 1436

GENERAL IMPROVEMENTS

MICROSURFACING, WARM MIX PATCHING, CRACK SEALING

COMMENTS:

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 8

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	50.00	TON
403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	20,100.00	S.Y.
406001	WARM-MIX PATCHING	900.00	SY-IN
406507	CRACK SEALING	8,000.00	L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00	EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00	EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	300.00	HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	30.00	HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	45.00	S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	45.00	S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	65,600.00	L.F.
748530	REMOVAL OF PAVEMENT STRIPING	13,821.00	S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	32,800.00	L.F.
762001	SAW CUTTING, HOT MIX	100.00	L.F.

** DENOTES FIXED PRICE ITEM

LOCATION 9 **247(SNUFF MILL ROAD) FROM RD 261 MOUNT CUBA RD TO RD 243 OLD KENNETT RD**

LENGTH 2.1239 km 1.32 MILE AADT 1436

GENERAL IMPROVEMENTS

MICROSURFACING, CRACK SEALING

COMMENTS:

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 9

403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	17,100.00 S.Y.
406507	CRACK SEALING	7,000.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	300.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	30.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	45.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	45.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	26,800.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	5,673.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	13,400.00 L.F.

** DENOTES FIXED PRICE ITEM

LOCATION 10 **250(POLISH ROW ROAD) FROM RD 247 SNUFF MILL RD TO RD 247 CREEK RD**

LENGTH 0.8689 km 0.54 MILE AADT 932

GENERAL IMPROVEMENTS

MICROSURFACING AND CRACK SEALING

COMMENTS:

Phase this location with two separate detours. One detour for Polish Row Rd, and the other for Nine Gates Rd

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 10

403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	7,000.00 S.Y.
406507	CRACK SEALING	3,000.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	200.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	20.00 HOUR
748032	TEMPORARY MARKINGS, PAINT, 5"	12,000.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	2,520.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	6,000.00 L.F.

** DENOTES FIXED PRICE ITEM

LOCATION 11 **251(SHARPLESS ROAD) FROM RD 275 OLD WILMINGTON RD TO RD 261 CREEK RD**

LENGTH 2.494 km 1.55 MILE AADT 870

GENERAL IMPROVEMENTS

MICROSURFACING AND CRACK SEALING

COMMENTS:

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 11

403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	20,100.00 S.Y.
406507	CRACK SEALING	8,200.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	300.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	30.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	190.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	190.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	66,600.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	14,176.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	33,300.00 L.F.

** DENOTES FIXED PRICE ITEM

LOCATION 12 **254(MEETING HOUSE ROAD) FROM RD 275 OLD WILMINGTON RD TO RD 253 BENGE RD**

LENGTH 0.9976 km 0.62 MILE AADT 2151

GENERAL IMPROVEMENTS

MICROSURFACING, WARM MIX PATCHING, CRACK SEALING

COMMENTS:

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 12

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	350.00 TON
403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	8,100.00 S.Y.
406001	WARM-MIX PATCHING	6,200.00 SY-IN
406507	CRACK SEALING	13,200.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	200.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	20.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	200.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	200.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	16,000.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	4,820.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	11,000.00 L.F.
762001	SAW CUTTING, HOT MIX	250.00 L.F.

** DENOTES FIXED PRICE ITEM

LOCATION 13 **255(OLD PUBLIC ROAD) FROM CUL DE SAC TO RD 253 BENGE RD**

LENGTH 0.9654 km 0.6 MILE AADT 368

GENERAL IMPROVEMENTS

MICROSURFACING, PATCHING AND CRACK SEALING

COMMENTS:

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 13

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	150.00 TON
403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	7,800.00 S.Y.
406001	WARM-MIX PATCHING	2,400.00 SY-IN
406507	CRACK SEALING	8,000.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	200.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	20.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	15.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	15.00 S.F.
762001	SAW CUTTING, HOT MIX	200.00 L.F.

** DENOTES FIXED PRICE ITEM

LOCATION 14 **261(MOUNT CUBA ROAD) FROM RD 262 PYLES FORD RD TO RD 251 SHARPLESS RD**

LENGTH 2.8479 km 1.77 MILE AADT 1785

GENERAL IMPROVEMENTS

MICROSURFACING, CRACK SEALING

COMMENTS:

Road name may be Creek Rd rather than Mount Cuba Rd

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 14

403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	22,900.00 S.Y.
406507	CRACK SEALING	14,100.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	400.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	40.00 HOUR
748032	TEMPORARY MARKINGS, PAINT, 5"	30,000.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	7,896.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	18,800.00 L.F.

** DENOTES FIXED PRICE ITEM

LOCATION 15 **263(ROLLING MILL ROAD) FROM RD 237 LANCASTER PIKE TO RD 259 BARLEY MILL RD**

LENGTH 0.9332 km 0.58 MILE AADT 271

GENERAL IMPROVEMENTS

MICROSURFACING AND CRACK SEALING

COMMENTS:

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 15

403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	7,500.00 S.Y.
406507	CRACK SEALING	3,000.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	200.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	20.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	50.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	50.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	12,400.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	2,654.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	6,200.00 L.F.

** DENOTES FIXED PRICE ITEM

LOCATION 16 **264(HILLSIDE ROAD) FROM RD 273 CENTERVILLE RD TO RD 9 KENNETT PIKE**

LENGTH 2.3331 km 1.45 MILE AADT 1373

GENERAL IMPROVEMENTS

MICROSURFACING, WARM MIX PATCHING, CRACK SEALING

COMMENTS:

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 16

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	50.00 TON
403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	18,800.00 S.Y.
406001	WARM-MIX PATCHING	900.00 SY-IN
406507	CRACK SEALING	7,700.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	300.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	30.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	150.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	150.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	60,000.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	12,918.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	30,400.00 L.F.
762001	SAW CUTTING, HOT MIX	100.00 L.F.

** DENOTES FIXED PRICE ITEM

LOCATION 17 **329(CHAMBERS ROCK ROAD) FROM PA/DE STATE LINE TO RD 53 THOMPSON STATION RD**

LENGTH 0.9815 km 0.61 MILE AADT 2542

GENERAL IMPROVEMENTS

MICROSURFACING, WARM MIX PATCHING, CRACK SEALING

COMMENTS:

UNOFFICIAL WEBSITE COPY

MATERIAL ESTIMATE FOR LOCATION 17

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	50.00 TON
403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	7,900.00 S.Y.
406001	WARM-MIX PATCHING	900.00 SY-IN
406507	CRACK SEALING	13,200.00 L.F.
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	4.00 EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	200.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	20.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	25.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	25.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	11,000.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	2,251.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	5,300.00 L.F.
762001	SAW CUTTING, HOT MIX	100.00 L.F.

** DENOTES FIXED PRICE ITEM

CONTRACT QUANTITIES SUMMARY SHEET

401823	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	1,800.00 TON
403510	POLYMER-MODIFIED EMULSION MICRO-SURFACING	208,310.00 S.Y.
406001	WARM-MIX PATCHING	31,500.00 SY-IN
406507	CRACK SEALING	142,100.00 L.F.
743003	ARROWPANELS, TYPE C	2.00 EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	160.00 EA-DY
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	64.00 EA-DY
743050	** FLAGGER, NEW CASTLE COUNTY, STATE	4,025.00 HOUR
743062	** FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME	405.00 HOUR
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	1,059.00 S.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	1,059.00 S.F.
748032	TEMPORARY MARKINGS, PAINT, 5"	450,200.00 L.F.
748530	REMOVAL OF PAVEMENT STRIPING	98,442.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	231,900.00 L.F.
762001	SAW CUTTING, HOT MIX	1,750.00 L.F.
763000	INITIAL EXPENSE	LUMP SUM
763643	MAINTENANCE OF TRAFFIC, ALL INCLUSIVE	LUMP SUM

UNOFFICIAL WEBSITE COPY

** DENOTES FIXED PRICE ITEM