

BOARD OF COUNTY COMMISSIONERS
ST. MARY'S COUNTY
LEONARDTOWN, MARYLAND

**SUBDIVISION ROAD CONSTRUCTION
AND INSPECTION PROCEDURES**



APRIL, 1991
AMENDED: JUNE, 2002

DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
POST OFFICE BOX 508
CALIFORNIA, MARYLAND 20619

**ST. MARY’S COUNTY
SUBDIVISION ROAD CONSTRUCTION
AND INSPECTION PROCEDURES**

AUTHORITY

Pursuant to the provisions of Article 25 of The Annotated Code of Maryland, Section 1, and other applicable statutory provisions, the Department of Public Works & Transportation has adopted these Subdivision Road Construction and Inspection Procedures.

PURPOSE

As a supplement to the adopted Road Ordinance, the purpose of these Procedures is to establish a fair, consistent, and easily interpreted policy with respect to construction inspection practices for roadways intended for acceptance into the St. Mary’s County Highway Maintenance System. By following these provisions and procedures, developers, contractors, and County staff are better assured of a timely and orderly completion of permits, and a quality and long-lasting product for roads dedicated for public use in St. Mary’s County, Maryland.

SECTION 1 - GENERAL PROVISIONS

1. **Plan Approvals** - No construction or installation of utilities will be permitted in the bed of any proposed street, or existing County right-of-way, until a set of plans has officially been approved by the Department of Public Works and Transportation, a road construction permit is obtained, and all bonds and fees submitted and approved. This permit will expire 12 to 24 months after its issuance unless extended, in writing, by the Board of County Commissioners. It shall be the responsibility of the permittee to apply for an extension prior to the expiration of the permit.
2. **Availability of Plans** - The Owner/Developer/Contractor shall have on site at all times the most recent, signed, approved set of plans, including traffic control plans, as may be required. The plans shall be complete and be readily available for reference by the Inspector.
3. **Notification** - The Owner/Developer/Contractor shall notify the Construction and Inspections Division a minimum of forty-eight (48) hours prior to starting work. A pre-construction conference may be scheduled if deemed necessary by either the Owner/Developer/Contractor or the Department of Public Works and Transportation.
4. **Maintenance of Traffic** - The Owner/Developer/Contractor is to submit a traffic control plan for vehicular and pedestrian traffic including the installation of advance road work signs. Stop, Street Name, and other required signage shall be installed after gravel base and prior to base asphalt, or at such time as any housing unit is occupied, whichever comes first. Flag persons and “signs” are required for all work on County rights-of-way whenever lane closures are

necessary. Lighted barricades are to be placed at hazardous locations. All traffic control devices shall be designed, constructed and installed in accordance with the Manual on Uniform Traffic Control Devices (MUTC) and Maryland Supplement to the MUTC, as amended from time to time.

5. **Specifications** - The specifications for all work, methods of construction, and materials used for the construction of subdivision roads, and any construction within the existing and/or proposed right-of-way of St. Mary's County, shall be in accordance with the latest editions for the "Standard Specifications for Construction and Materials" of the Maryland Department of Transportation, State Highway Administration (SHA), except as specifically stated in this manual. Construction materials and methods shall be inspected by the Department of Public Works and Transportation and all construction shall meet this Department's specifications.
6. **Compliance** - Failure to comply with the instructions and/or specifications of the Department of Public Works and Transportation can result in the following:
 - a. A "Stop Work Order" and/or fine each day the violation exists.
 - b. In addition, an injunction, mandamus, abatement, or other appropriate action shall be instituted.
 - c. A re-inspection fee shall be levied for any.
 1. Re-inspection of previously inspected items, which had failing results.
 2. Re-scheduled inspections due to the following:
 - a. Contractor did not show up for scheduled inspection; and
 - b. Contractor did not supply proper equipment or manpower for inspection.

SECTION II - CONSTRUCTION SEQUENCE AND SPECIAL PROVISIONS

1. **Construction Stakeout** - A construction stakeout of the proposed construction site shall be performed by a duly authorized and certified Professional licensed in the State of Maryland.
2. **Erosion and Sediment Control** - Prior to any grading, all sediment and erosion control measures shall be installed as required by the approved sediment and erosion control plans signed by the St. Mary's County Soil Conservation District, and maintained until permanent stabilization of area is achieved. The Contractor

will be required to follow all instructions from the Maryland Department of the Environment.

3. **Clearing** - Right-of-way and easements are to be cleared to the proposed limits of disturbance and all trees, stumps, debris, etc. are to be removed.
4. **Drainage Structures** - The Owner/Developer/Contractor shall notify the Construction and Inspections Division a minimum of forty-eight (48) hours prior to the installation of drainage structures. Installation inspections shall include, but not be limited to, foundations, bedding, grade, alignment, structure size, length, backfill, compaction, cover, end treatments, etc. Drainage structures will be approved prior to backfilling. Drainage structures shall be certified for size, gauge, and/or class.
5. **Grading** - The grading of right-of-way and easement areas is to be done according to the limits and grades as shown on the approved plans.
6. **Temporary Stabilization** - All disturbed areas of the right-of-way and easements are to be temporarily stabilized after initial grading.
7. **Subgrade Stakeout** - The proposed roadway shall be staked out for line and grade of subgrade.
8. **Grading for Subgrade** - Roadway, shoulders, ditches, and slopes are to be excavated to subgrade elevation, alignment, and cross-section.
9. **Utility Installation** - All underground utilities such as water, sewer, telephone, electric, gas, cable TV, etc. and/or conduits are to be installed.
10. **Subgrade Inspection** - The Owner/Developer/Contractor shall notify the Construction and Inspections Division a minimum of forty-eight (48) hours in advance to schedule inspection, and after procedures number one (1) through nine (9) have been completed. Inspection is to include, but not be limited to, the following:
 - a. Proof-roll of subgrade with a loaded twenty (20) ton dump truck;
 - b. CBR test result certifications at the approved plan locations;
 - c. Road, shoulder, ditch, and slope cross-section and profile;
 - d. Length of roadway; and
 - e. Sight distance.
11. **Gravel Base** - Upon written notification, gravel base material shall be installed to the limits of the roadway and shoulders.
12. **Gravel Base Inspection** - The Owner/Developer/Contractor shall notify the Construction and Inspections Division a minimum of forty-eight (48) hours in

advance to schedule inspection. Inspection is to include, but not be limited to, the following:

- a. Depth of granular base material;
- b. Length of granular base;
- c. Width of granular base;
- d. Granular base samples to be taken by Owner's representative as witnessed by the Inspection staff;
- e. Application for payment for gravel samples to be paid in advance – one sample per 1,000 ft. of roadway;
- f. Proof-roll of granular base with a loaded twenty (20) ton dump truck; and
- g. No concrete curb or asphalt base shall be placed until written test results of granular base material samples have been received and approved by the Director and/or his duly authorized representative. The average time to receive written notification of test results is approximately two (2) weeks from sample submission. The Contractor is advised to schedule his work accordingly.

13. **Concrete Curb** - Concrete curb is to be placed on a granular base material. Forms will be inspected for line and grade. Area to receive concrete curb shall be proof-rolled with a loaded twenty (20) ton dump truck. Concrete curb shall have the following:

- a. Full depth template contraction joints every ten (10) feet or one-half (1/2) depth, and expansion joints every thirty (30) feet. Application and payment for concrete samples, one (1) pair of cylinders per 1,000 linear ft. of roadway.
- b. Slip-form concrete curb and gutter shall have “dummy” joints every ten feet (10') and a full depth expansion joint with expansion material every one hundred feet (100'). Expansion joint material shall be placed at tie-ins to rigid structures and for continuation of previously constructed concrete curb and gutter.

14. **Permanent Stabilization** - Topsoil (2" depth minimum), seed, fertilize and mulch all areas and easements outside of shoulder limits. Seed to be Kentucky 31 tall fescue at the rate of two and one-half (2 ½) lbs. per 1,000 square feet. Rip-rap, sod, curlex, etc. are to be placed in accordance with the approved plans.

15. **Traffic Control Signs** - Stop signs and street signs are to be permanently installed at all intersecting roads. Minimum Stop sign size is thirty (30) inches,

unless otherwise indicated. Installation to be on 4"x4" treated wooden posts. Public Street signs to be green with white letters (4" letters on 6" plates for Local and Minor roadways; 6" letters on 8" plates for all other roads). Signs must be installed prior to base asphalt paving. Speed limit and other traffic control signs shall be installed as required by the DPW&T Highway Maintenance Division.

16. **Pavement Markings** – Markings shall be in accordance with the approved construction plans. All transverse markings, such as crosswalks and stop lines, as well as symbols and words, shall be 125 mil thermoplastic material.
17. **Stakeout for Asphalt Base Course** - Construction stakeout for asphalt base course is required. Stakes are to be placed at fifty (50) foot intervals on tangents and at twenty-five (25) foot intervals on curves. Radii are to be staked and radii reference points are to be staked. Stakes shall be two (2) feet off of edge of pavement.
18. **Fine Grade Inspection** - Owner's representative shall notify the Construction and Inspections Division a minimum of forty-eight (48) hours in advance to schedule inspection. Inspection of granular base shall consist of, but not be limited, to the following:
 - a. Granular base cross-section;
 - b. Compaction - proof-roll with a loaded twenty (20) ton dump truck;
 - c. Visual inspection of granular material – too dry, too wet, too sandy, etc.;
 - and
 - d. Verification of the construction stakeout.
19. **Base Course Asphalt** - Base course asphalt may be placed only upon written notification, provided there has been no change to field conditions since the previous inspection. Owner's representative shall notify the Construction and Inspections Division a minimum of forty-eight (48) hours in advance to schedule inspection of base course paving. Base course asphalt shall comply with the 1982 SHA specifications for BF using bank run gravel or 1993 specifications for BF using stone. The inspection shall include, but not be limited to, the following:
 - a. Submit or have on file with the Department of Public Works and Transportation an approved job mix formula (seasonally).
 - b. Make application with payment for asphalt testing at least forty-eight (48) working hours in advance of paving.
 - c. An Inspector must be present during placement of the paving.

- d. One asphalt box sample will be taken as a minimum for each one thousand (1,000) linear feet of roadway per day. The sample is to be taken by Owner's representative from a truck on site prior to unloading as witnessed by the Inspector.
- e. Equipment is to be checked by Inspector prior to starting and during paving operations. If equipment is not functioning properly, the operation shall cease and repairs made and/or equipment removed from job and replaced.
- f. Owner's representative is to have sufficient manpower, tools, proper working equipment, traffic control and supply of material to properly complete the work. Two, 46 ton rollers are required. Paver shall be equal to a Blaw Knox 115-minimum, eight (8) foot screed with bolt-on, or extending screed.
- g. Paving boxes shall not be allowed. The Inspector shall be the sole judge of what is or is not acceptable.
- h. Temperature of material in truck and paver will be checked. Material with temperature below two hundred twenty-five (225) degrees Fahrenheit will not be placed.
- i. All truckloads of bituminous concrete shall be covered.
- j. Contaminated, segregated, cold, burnt, dry and/or wet mixtures will be rejected.
- k. Loose material shall be removed from surface to be paved.
- l. Lanes will be checked for cross-slope, alignment, width, length, radii, joints, depth and condition of finished mat.
- m. Paving tickets for job shall be submitted.
- n. Owner's representative to supply equipment, personnel and material to cut and repair core samples if required.
- o. All cold joints shall be tacked and heels cut as directed.
- p. The ambient air and surface temperature at time of placement of asphalt is to be 35 degrees Fahrenheit and rising for base asphalt, and 45 degrees Fahrenheit and rising for surface asphalt. The surface upon which asphalt is to be placed is to be clean and dry.
- q. The Contractor shall supply sufficient material and coordinate the rate of placement of material with the rate of delivery of material so as to keep time between loads at a minimum and to make the paving operation as continuous as possible. If the paver sits in one position any longer than

15 minutes, and/or the material temperature drops below 225 degrees Fahrenheit, the paver shall be removed from the road and a new joint will be cut prior to resuming paving operation, cold material will be removed from site. In-place compaction shall be completed before the mixture cools to a temperature below 225 degrees Fahrenheit. Any areas of material not rolled before the mix temperature drops below 225 degrees Fahrenheit shall be removed as directed by the Inspector.

20. **Shoulder Adjustment** - Shoulders are to be adjusted to base course asphalt within five (5) working days after completion of base course asphalt.
 - a. Topsoiled shoulders may be permanently stabilized at this time if surface course to be placed is one and one half (1½) inches or less in depth. If depth of surface asphalt course is in excess of one and one half (1½) inches, further adjustment shall be required.
 - b. Gravel shoulders shall be adjusted to base course and compacted and then adjusted to finished grade within five (5) working days of completion of final asphalt course.
21. **Surface Course Asphalt** - Surface course asphalt shall comply with the 1982 SHA specifications for SN and 1993 specifications for SF and SC.
 - a. Test Results - No surface course asphalt shall be placed upon the base asphalt until written test results of base asphalt samples have been received and approved by the Director, and/or his duly authorized representative. The average time to receive written notification of test results is approximately two (2) weeks from sample submission. The Contractor is advised to schedule his work accordingly.
 - b. Inspection - Inspection for placement of surface course asphalt shall be scheduled by the Owner's representative a minimum of forty-eight (48) working hours in advance of proposed paving date. All previous items numbered 1 through 19 shall have been completed. Inspection procedures shall be those used for base course asphalt. Base course asphalt shall be tacked at a rate between .01 and .05 gallons per square yard. All cold joints shall be tacked. Tie-ins for existing entrances shall be made during surface course asphalt operations.
22. **Field Changes and Alterations to Construction Plans** - Any proposed field revisions to approved plans and profiles shall be submitted to the Manager of Construction & Inspections for approval by the Director of Public Works & Transportation (DPW&T). For DPW&T directed field modifications, the County

inspector shall clearly denote same on the Inspector's Copy of the approved plans by circling the revision in red and dating same.

23. **Final Inspection.**

- a. Final approval of construction work under any permit shall be given by the Director of Public Works and Transportation once that work conforms in all aspects with the permit and plan. Attachment A shall be completed by a Construction & Inspections Division Inspector prior to recommending acceptance of the roadway.
- b. Requests for final inspections shall be submitted in writing.
- c. Permanent stabilization shall be complete with a satisfactory stand of grass.

24. **Acceptance** - Actual acceptance into the St. Mary's County Highway Maintenance System for perpetual maintenance shall be in accordance with the provisions of the Road Ordinance, and only by Order of the Board of County Commissioners for St. Mary's County.

The above Subdivision Road Construction And Inspection Procedures have been recommended by the Construction & Inspections Division and are hereby adopted for use by the Department of Public Works and Transportation. The applicant shall comply with all requirements of the Director of Public Works & Transportation pertaining to public safety and the avoidance of unnecessary inconvenience to the public during construction and compliance with the Specifications.

RECOMMEND FOR APPROVAL:

APPROVED:

Michael E. Mattingly, Manager
Construction & Inspections Division

George A. Erichsen, P.E., Director
Department of Public Works and Transportation

DATE: _____

DATE: _____

ATTACHMENT A
FINAL INSPECTION CHECKLIST FOR ROADWAY CONSTRUCTION

Name of Subdivision _____ Section _____ Phase _____

PART I. **At a minimum, the following items shall be certified by the Construction & Inspections Division as having been satisfactorily performed and completed in accordance with the Subdivision Road Construction Standards and Inspection Procedures prior to scheduling a development project for a Final Inspection:**

- Clearing limits verified
- Gravel base inspection completed
- Grading of slopes, ditches and easements areas as per plan (modifications noted)
- Sub-grade stake-out and inspection completed
- Need for under-drains properly evaluated
- Installation of utility conduit(s) at road crossings
- Gravel samples taken 1/1000' of roadway
- Granular base material sampling witnessed and test results accepted
- Proof rolling properly performed
- Fine grade inspection
- Stakeout of base course asphalt
- Receipt of acceptable asphalt sampling results from lab
- Asphalt placement and compaction approved
- Delivery of piping (approval stamps verified)
- Trenching, bedding and compaction (compacted fill density) accepted
- Asphalt load tickets in file and quantities verified
- Drainage structures approved prior to backfilling
- Inspector present during paving operations
- Structures certified as to size, gauge and/or class
- Temperatures for paving monitored and approved
- Asphalt box samples witnessed @ 1 per 1000' of roadway per day
- Form inspection(s) for line and grade
- Gravel base depth and compaction for curbing
- Sidewalk width, separation, length and ADA ramp compliance

**ATTACHMENT A
FINAL INSPECTION CHECKLIST FOR ROADWAY CONSTRUCTION**

Name of Subdivision _____ **Section** _____ **Phase** _____

PART I. (Cont'd.)

- Concrete samples taken and acceptable test results in file
- Reinforcing requirements, if any
- Positive grade verified and areas of ponding water addressed
- Daily records and reports have been kept up-to-date w/ photographs as required

CERTIFIED AS COMPLETE: _____	DATE: _____
Construction & Inspections Division	

ATTACHMENT A
FINAL INSPECTION CHECKLIST FOR ROADWAY CONSTRUCTION

Name of Subdivision _____ Section _____ Phase _____

PART II. **At a minimum, the following items shall be re-evaluated at the time of final inspection for adequacy and acceptability and shall be certified by the Construction & Inspections Division as having been satisfactorily performed and completed in accordance with the Subdivision Road Construction Standards and Inspection Procedures prior to recommendation for acceptance of the roadway:**

- Copy of approved construction and sediment control plans on-site
- Design errors addressed & field changes red-lined on the Inspector's plans
- Assessment of possible future maintenance issues by County Highways
- Concentrated flow directed into easements as shown on plans
- Handling of drainage into or altered path of over-lot drainage
- Status of bonding (extension, reduction or release)
- Stabilization established within roadway construction disturbance limits
- Prior punch-list items adequately addressed
- Stop and street signs properly installed (height, color, size, placement) and inventory form completed
- Other warning, regulatory and guide signs installed
- Shoulder areas adjusted, stabilized and free from rutting
- Adequacy of outlet works and out-falls, evidence of standing water
- Line striping and / or pavement markings
- Installation and condition of landscaping and streetscaping
- Sediment control measures removed
- Sidewalk ADA accessibility provisions
- Overall condition of improvements and rideability of pavement surface
- Road and Culvert Inventory completed for submission to Office Manager

CERTIFIED AS COMPLETE: _____	DATE: _____
Construction & Inspections Division	