

**Monmouth County
Department of Public Works & Engineering
Highway Division**



**Requirements and Standards
for the Restoration
of County Roads**

Revised May 2013



**Monmouth County
Department of Public Works & Engineering
Highway Division
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Requirements and Standards for the Restoration of County Roads

The current New Jersey State Department of Transportation Standard Specifications for the Road and Bridge Construction, as added to or amended herein, shall govern all work performed under permits issued by the Monmouth County Highway Department.

I. PROTECTION FOR TRAVELING PUBLIC

A - Section 22 & 23 of the Resolution Adopting Regulations For The Protection Of County Road Surfaces, Viaducts And Bridges makes it the duty of any person performing work under a permit issued by the Monmouth County Highway Department to properly guard all work areas by the erection of suitable Barriers, Signs, Lights and other safety devices required in accordance with the manual of Uniform Traffic Control Devices, issued by the U.S.D.O.T., F.H.W.A. (1989), and as amended. The party to whom the permit is issued shall be liable for any neglect to safeguard the traveling public.

B - Winter moratorium Dec. 1 to April 1

Long line pipe will be discontinued. Crossings and 3 x 3's will be dealt with on a individual basis, depending on asphalt availability, ground conditions, and disruption of snow removal operation.

C - 5 Year paving moratorium

If waived moratorium would require full road width or half width final paving of proposed location, as determined by inspector. Individual circumstances will require pre-construction agreements.

II. PROTECTION FROM SUITS

Viaducts and Bridges shall save harmless and agree to indemnify the County of Monmouth, its officers, agents and employees from any loss, injury or damage resulting from any negligence, fault, acts of omissions or commissions on the part of permit holder, his officers, agents or employees in connection with the performance of the work covered by this permit.

Satisfactory documented evidence of insurance is required at the time of application in amounts specified in said resolution.

III. EXCAVATION AND BACKFILLING

A. Pavement pre-cutting

- Full width milling
- Sweep grit into trench and roll tight
- Apply minimum 2" of cold patch and re-roll trench

Sawcutting

- Must clean-cut through asphalt and/or concrete
- Vermeer sawcuts
- Roll grit into slots and cold patch a minimum of 2 inch

B. Concrete pavement shall be saw cut with a power driven concrete saw so as to permit complete breakage of concrete pavement or base without ragged edges. All protruding reinforcing rods shall be cut and removed. All "short slabs" of existing concrete pavement produced by transverse roadway openings, shall be removed. Small or broken longitudinal portions of adjacent slabs shall also be removed at the direction of the Highway Department.

C. Trenches

The length of the trench that may be opened at any one time shall not be greater than the length of pipe and the necessary accessories which are available at the site ready to be put in place. Trenches shall be braced and sheathed according to generally accepted safety standards for construction work or as prescribed by the Highway Department. Except with the written permission of the Highway Supervisor no timber bracing, lagging, sheathing or other lumber shall be left in any trench.

D. Driveway – Curbscut procedure

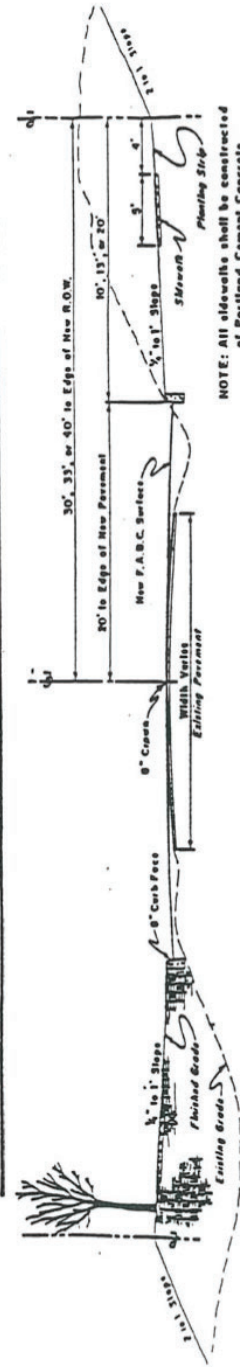
- Before Removing Curb or Apron
- First sawcut 1 foot from curbface and strip out first layer of asphalt
- Set faceform in asphalt slot
- Repave slot with hot FABC top

E. Utilities

All utility facilities shall be located sufficiently in advance of the trench excavation work to avoid damage of those facilities. The 800 number, call before you dig must be utilized. 1-800-272-1000.

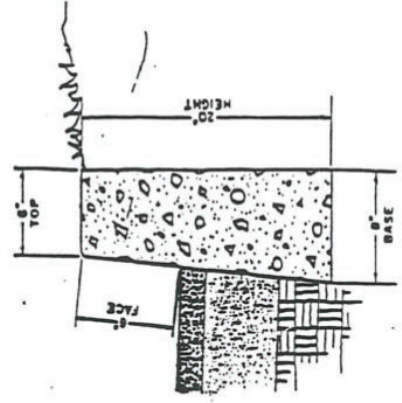
Involvement with and protection of privately or publicly owned utilities should be as stipulated in Section II of the Resolution Adopting Regulations to Protect County Roads, Road Surfaces, Viaducts and Bridges.

COUNTY ROAD CROSS-SECTION REQUIREMENTS



STANDARD SECTIONS

TYPICAL CURB CROSS-SECTION

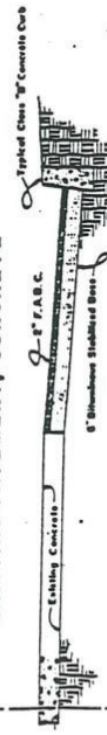


NOTE: All work and material to be in accord with N.J.S.D. Standard Specifications for Road and Bridge Construction 1961.

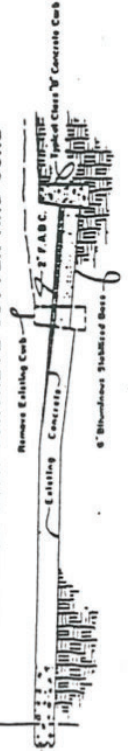
EXISTING PAVEMENT, GRAVEL BASE MIXED IN PLACE



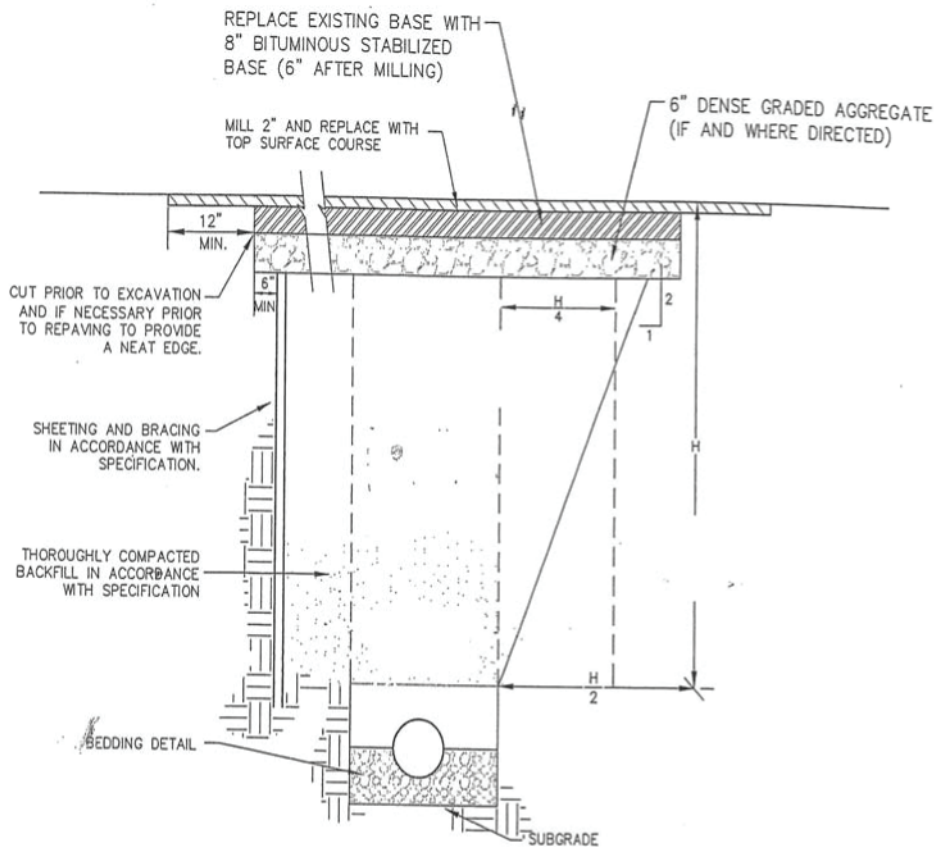
EXISTING PAVEMENT, CONCRETE



EXISTING PAVEMENT WITH CONCRETE GUTTER AND CURB



PREPARED BY THE MONMOUTH COUNTY PLANNING BOARD, MARCH, 1979.



COUNTY ROAD – TYPICAL TRENCH &
PAVEMENT REPAIR DETAIL

NOT TO SCALE

All County or Municipally owned or controlled storm drains pipes, electrical conduit, culvert or other facilities encountered within the course of the work shall be protected by the party named on the permit. Any damage to underground structures encountered in the course of work done under a permit shall be the responsibility of the permittee to repair and restore to the satisfaction of the Engineering and/or Highway Department.

Storm drainpipe joints shall be laid over a bed of cement. If the pipe bell or spigot is damaged, a brick collar shall be built around the joint from the cement bed up. The brick collar shall then be floated with a cement layer.

F. Backfilling

Immediately after subject installation has been completed, backfilling shall be commenced. It shall be determine by the Highway Supervisor or his representative whether the excavated material shall be used as backfill.

If the excavated material is considered unsatisfactory, the contractor shall supply pervious, densely graded material to be used as backfill. Broken pavement, large stones and debris shall not be used as backfill.

Soil cement shall be used as backfill on high traffic volume roads and openings that will get less then 90 days settlement prior to County overlays or any final pavement restoration, also to used in any opening that falls in the first year of a paving moratorium

First lift of fill, 12 inches above pipe shall be compacted using a Jumping jack tamper. Successive lifts shall be compacted by mechanical means, such as tamping, vibrating or rolling. A vibra plate tamper is not acceptable.

G. Dispositions

All material excavated from trenches and piled adjacent to the trench or in any street shall be maintained in such manner as not to endanger those working in the trench, pedestrians or users of the street, and in such manner so that as little inconvenience as possible is caused to those using streets and adjoining property.

Any gravel, earth or other excavated material which is caused to roll, flow or wash upon any County Highway shall be removed from the roadway within 24 hours after deposit. In the event the gravel, earth or other excavated material is not removed within 24 hours, the County shall remove said material and the cost incurred shall be paid by the party named on the permit or deducted from said deposit.

H. Winter Storms

In the event of a snow or ice storm, the permittee will be required to take whatever steps the Highway Supervisor deems necessary to secure the traveled way for County removal operations. At the first sign of precipitation, all work on shoulders and traveled way shall cease, all materials shall be cleared and any trench backfilled.

IV: TEMPORARY PAVEMENT

If, during the winter months, hot mixed bituminous stabilized base is not available, the contractor may substitute cold mixed bituminous concrete patch. However, as soon as hot mixed stabilized base is available the contractor shall proceed with the normal pavement restoration requirements as stipulated below.

V: PAVEMENT RESTORATION

after compaction, of hot mixed bituminous stabilized base course (State Mix 1-2) shall be constructed in all trench areas as well as those areas where concrete slabs were removed.

Bituminous stabilized base shall be placed in two lifts of four (4) inches and be thoroughly compacted by rolling. The top surface shall be flush with the adjacent pavement and be uniformly contoured to conform to the existing surrounding surface.

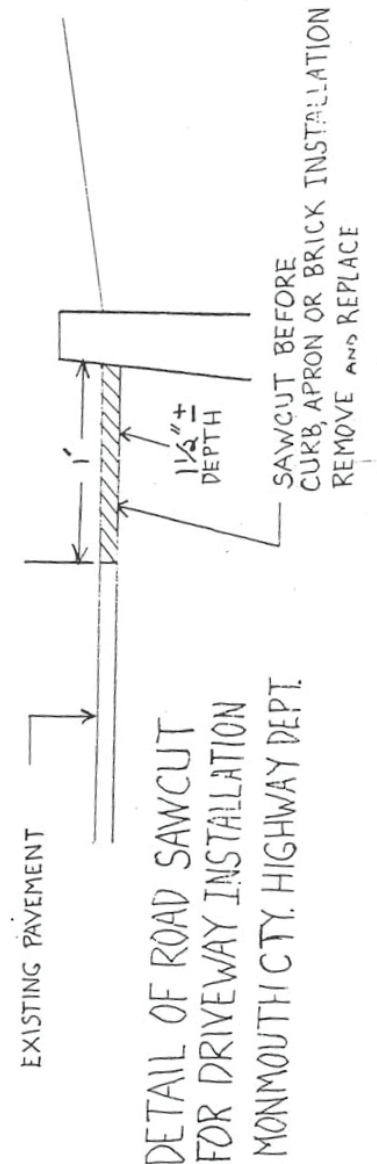
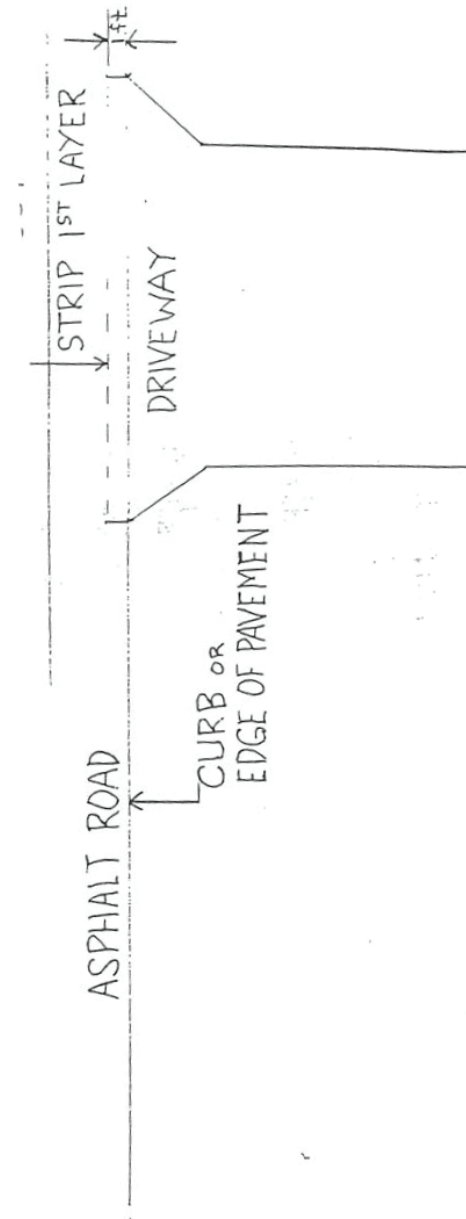
A minimum of 300 feet of stabilized base trench is allowed, before immediate replacement of pavement markings are required. Striping will be replaced as per existing markings.

VI: FINAL PAVEMENT

After a reasonable settlement period of at least 90 days, to be determined by the Highway Supervisor or his representative, a two- (2) inch (average depth) surface course of FABC Pavement (State Mix 1-5) shall be placed over the entire area of stabilized base.

Prior to the application of the surface course the entire area of stabilized base including minimum of twelve (12) inches of all areas of surrounding pavement shall be milled by a milling machine (self propelled, power operated planning, grinding or cutting machine) to a minimum depth of 2".

The resulting milled surface shall then be swept and tack coat material shall be applied before the two- (2) inch surface course is applied. This course shall be thoroughly compacted flush with the surrounding surface by rolling and be uniformly contoured to the adjacent pavement.



Monmouth County Traffic Safety Division Specifications

No Monmouth County roadway shall be closed or traffic detoured from them without first obtaining approval from the Police Departments having jurisdiction of the effected roadway(s). Approval of the detour must be obtained from the Police Department having jurisdiction of the roadway over which detoured traffic will travel. All County road closures and detours shall be reviewed and approved by the Monmouth County Traffic Safety Engineering Division prior to implementation. Upon approval the contractor shall notify Police and Fire Departments, First Aid Squads, and Board of Educations that serve and travel the affected roadways. The contractor will be responsible for signing and maintaining the detour and will assume all costs thereof. All construction and detour signs shall be in compliance with the current edition of the Manual on Uniform Traffic Control Devices.

All existing traffic devices and/or materials (for example: signage; posts; striping; pavement marking; raised pavement markers; loop detectors; junction boxes; signal poles or foundations; meter cabinets and aboveground or underground conduits) shall be left undisturbed wherever possible. The contractor shall replace any and all traffic items disturbed, destroyed, removed or damaged in any manner immediately, and in-kind, to the satisfaction of the Monmouth County Traffic Safety Engineering Division and at no cost to the County of Monmouth. The work completed and materials used or supplied shall be in accordance with the current County of Monmouth Standard Specifications and in compliance with the current edition of the Manual on Uniform Traffic Control Devices.

Whenever the proposed work shall prevent immediate replacement or repair, the contractor shall install a temporary replacement or repair until the permanent replacement or repair can be completed by the contractor. The contractor shall perform all temporary and permanent replacements and/or repairs including material, location, dimension and installation procedures to the satisfaction of the Monmouth County Traffic Safety Engineering Division.

The Contractor shall provide a minimum of 48 hours advance notice to the Monmouth County Traffic Safety Engineering Division prior to disturbing any traffic devices or materials owned or maintained by the County of Monmouth. For inquires pertaining to signage, markings, signals or other traffic devices, please contact the Supervising Traffic Engineer at 732-431-7849.

REVISED 03/25/04

When using an infra-red resurfacing application, all stabilized base material in the road opening, plus a minimum of 6 inches surrounding the cut edge require heating and raking to a depth of 1 inch. All raked material to be discarded and replaced by fresh hot FABC top.

All manhole frames and covers installed within the pavement area shall be set to finished grade, or just below finished grade.

Final line striping must be applied as per County Traffic Department specifications.

VII: RESTORATION OF DRIVEWAYS AND GRASSED AREAS

All trench openings through grassed areas, within the County right of way shall be backfilled and compacted as herein specified. The top four- (4) inches of trench areas, as well as any area disturbed by excavated material or construction operations shall be backfilled with topsoil, fertilized and seeded.

All driveway areas within the County right-of-way, disturbed by trench opening or construction activity shall be restored minimally to its condition and width prior to the construction activity.

VIII: PRE-CONSTRUCTION MEETING

All sub-division and major utility work permittee's are required to arrange a pre-construction meeting involving County Engineer, County Traffic Engineer, County Inspector, and all Utility Companies involved. Utility work schedules will be required before county permits are issued.

IX: STANDARD DEPOSITS

Crossing - \$5,000.00

½ Crossing - \$2,500.00

5x5 or smaller - \$750.00

Driveways - \$500.00 plus curb calculation

X: GENERAL COMMENTS

of the total repair process is not completed to the satisfaction of the Highway Supervisor, the County shall have the right to complete the restoration and the cost incurred, charged to the permittee or deducted from his deposit.

Road openings and/or trenches involving attachment to bridges shall be restored in accordance with and pursuant to the direction of the County Engineer.

Monmouth County Shade Tree Construction

Requirements providing for the protection and improvement of shade trees upon county highways and properties during construction shall include the following; trimming or removal of any tree or shrub, root disturbance through either excavation and or grade change within 15' of any tree or shrub, application of chemicals or mechanical damage to any tree or shrub, fastening of any rope, cable, sign or other devise to any tree or shrub and planting or transplanting of any tree or shrub.

A. Tree trimming

All tree trimming shall be done in accordance with the latest approved standards of the New Jersey Board of Certified Tree Experts, American National Standards Institute (ANSI-Z133.1 and 300A) and the National Arborist Association. Any tree work done within 10' of an energized conductor must be performed by qualified line clearance personnel in accordance with ANSI standards.

All waste material and debris resulting from trimming shall be removed from site and disposed of in a proper manner.

A permit is required and must be obtained from the Monmouth County Highway Department.

B. Tree removal

County Shade Tree Commission. Each designated tree to be removed must be done so completely, including stump removal 6" below grade. Depressions from stump removal shall be filled with soil to avoid settling. Removal of trees over 4" caliber shall be done in accordance with the latest approved standards of the New Jersey Board of Certified Tree Experts and the American National Standards Institute(ANSI-Z133.1 and 300A).

A permit is required and must be obtained from the Monmouth County Highway Department.

C. Root disturbance

be reviewed by either a Shade Tree Commission representative or a Monmouth County Highway inspector before work begins. Hand digging or boring may be required within 8' of any tree along with on site monitoring by either a Monmouth County Shade Tree representative or Monmouth County Highway inspector.

Construction vehicles, equipment or supplies shall not be parked or stored within the drip line of any tree to avoid soil compaction. The Monmouth County

Shade Tree Commission may require a construction barrier if necessary to protect trees and shrubs during construction.

A permit is required and must be and obtained from the Monmouth County Highway Department.

D. Plantings

If replacement trees or shrubs are required, the Monmouth County Shade Tree Commission shall determine the size and species. All tree and shrub replacements shall be nursery grown as per the American Standards for Nursery stock. Planting shall be done in accordance with the latest proper planting procedures as determined by the Monmouth County Shade Tree Commission.

1-16-05