

## Chapter A240

### ROAD IMPROVEMENT SPECIFICATIONS

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- § A240-28. Documents and sources.

#### Standard Roadway Details Diagrams

[HISTORY: Adopted by the Town of Poestenkill at time of adoption of Code (see Ch. 1, General Provisions, Art. I). Amendments noted where applicable.]

#### GENERAL REFERENCES

Land use — See Ch. 150.

Subdivision of land — See Ch. 195.

ARTICLE I  
General

**§ A240-1. Standards adopted.**

The Town of Poestenkill, herein referred to as the "Town," has adopted these standards for construction of new roadways to be dedicated as part of the Town road system.

**§ A240-2. Certification.**

All roadways to be taken over by the Town shall be certified that they are in compliance with these standards by a professional engineer licensed to practice in New York State, herein referred to as the "project engineer."

**§ A240-3. Acceptance of roadway.**

Before the roadway is to be taken over by the Town, a set of as-built plans approved by the project engineer shall be submitted to the Town Clerk and the Town Highway Superintendent. Approval by the Highway Superintendent that the project meets the standards shall be required prior to acceptance by the Town Board. Both the Highway Superintendent and the Town Board must accept the roadway before it is accepted as a part of the Town road system. The Town reserves the right to not accept a roadway, notwithstanding that all portions of these standards have been met.

**§ A240-4. Applications for dedications.**

- A. All applications for the dedication of a roadway shall be accompanied by a proposed warranty deed conveying said highway to the Town, with all necessary releases from mortgages or other claimants. All deeds and plans must meet requirements for filing with the County Clerk.
- B. In addition, there should be a complete release of all liens arising out of the construction of the dedicated improvements, or receipts in full in lieu thereof, and if required in either case, an affidavit that, so far as the developer has personal knowledge or information, the releases and receipts include all labor and materials for which a lien could be filed.

**§ A240-5. Performance bond or security agreement.**

No highway, road or street within the Town of Poestenkill hereafter constructed or improved will be accepted by the Town Board of the Town of Poestenkill as a Town highway or for maintenance with Town funds unless and until the road is at the time of dedication in a state of repair acceptable to the Town or capable of being made so, and there is provided to the Town at the time of such proffered dedication a performance bond or security agreement with cash escrow deposit warranting the integrity of said road for a period of three years from the date of dedication, during which time the provider of such bond or other security shall be responsible to the Town for the cost of any required reconstruction or repair of said road deemed by the Town to be attributable in whole or in part to design or construction defects. In

addition, if and to the extent that the condition of the proffered road might warrant and any completion or remedial work is deemed by the Town to be required pursuant to foregoing subparagraphs, a separate road repair bond or security arrangement may also be required to secure the costs of completion and/or needed remedial work to be performed during the first construction season following dedication. The amount of any such warranty or repair bond or security deposit shall be as reasonably established by the Town Attorney, upon input from the Town Superintendent of Highways and the Town's engineering consultant.

**§ A240-6. Subdivisions.**

For a subdivision, the plans must be submitted to and approved by the Planning Board prior to start of construction. A construction plan showing utilities, grading, property lines, erosion control and other pertinent information required by the subdivision regulations in Chapter 195, Subdivision of Land, must be supplied for subdivision.

**§ A240-7. Stormwater pollution prevention plan.**

For disturbances of one acre or more, a stormwater pollution prevention plan must be in place which is consistent with Stormwater General Permit GP-0-10-001 (or latest version) and the requirements and standards of the New York State Department of Environmental Conservation.

**§ A240-8. Plan contents.**

As a minimum, the plans for the roadway shall provide the following:

- A. The design criteria used.
- B. The names of all streets approved by the County Department of Emergency Services.
- C. A location and alignment survey performed by a licensed surveyor that includes:
  - (1) The original and finished grades.
  - (2) The layout and locations of all roads and streets and their metes and bounds.
  - (3) The location of any property lines and their metes and bounds.
  - (4) The location of the Town's right-of-way.
  - (5) The location of other rights-of-way and easements, including a statement of their allowable uses.
  - (6) The location of all drainage structures.
  - (7) The location of any utilities in the right-of-way.
  - (8) The names of adjacent property owners to the roadway.
- D. A maintenance plan for the roadway.

- E. The locations of all signs and traffic control devices.
- F. A cross section of a typical tangent section.
- G. A traffic study determining the average daily traffic and types of traffic for all roads and streets. The traffic study shall also describe all methods used to collect data.
- H. The functional classification of all roads and streets based on the criteria presented in the AASHTO Guidelines for Geometric Design of Very Low-Volume Roads (ADT less than or equal to 400) or the AASHTO Policy on Geometric Design of Highways and Streets. Where there exists a conflict between two or more of the defined classifications, the classification having the most stringent design guidelines shall be indicated.

**§ A240-9. Approval of exceptions must be in writing.**

Clarification of exceptions to these standards shall be approved, in advance, by the Town Highway Superintendent in writing. Oral responses by the Town Highway Superintendent will not be considered as approved.

ARTICLE II  
**Design and Construction**

**§ A240-10. Documents for guidance.**

The roadway shall be certified to meet the requirements of the most recent edition of the following documents, listed here in order of precedence:

- A. Fire Code of New York State.
- B. Manual: Guidelines for Rural Town and County Roads, Local Roads Research and Coordination Council.
- C. Guidelines for Geometric Design of Very Low-Volume Local Roads, American Association of State Highway and Transportation Officials.
- D. Standard Specifications for Construction and Materials, New York State Department of Transportation.
- E. Highway Design Manual, New York State Department of Transportation.
- F. Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials.

**§ A240-11. Requirements for low-volume roads.**

The requirements listed in these specifications are for low-volume roads and streets with a maximum average daily traffic (ADT) of 400 vehicles per day.

- A. Any roadway that does not meet the definition of a low-volume roadway will require standards that are more stringent than those defined in these specifications. In such a

case, the entire design must be approved by the Town's engineering consultant and Highway Superintendent before construction.

- B. All new bridges shall meet the criteria in Chapter 5 of the AASHTO Policy on Geometric Design of Highways and Streets.
- C. All design criteria shall be listed on the roadway plans, and any criteria not listed in the publication listed above shall be determined using current engineering practice.
- D. The plans shall designate the source of any design assumptions.

**§ A240-12. Minimum criteria.**

In addition, as a minimum, the road shall meet the following criteria:

- A. A design life of not less than 20 years with routine maintenance.
- B. A minimum design speed of 45 miles per hour or as otherwise provided in these specifications.
- C. A right-of-way of not less than 50 feet.
- D. A total roadway width of not less than 28 feet.
- E. A total driving lane width of not less than 20 feet.
- F. Drainage facilities designed to handle a twenty-five-year storm under the roadway and ten-year storm on all other facilities. The minimum size opening of any pipe is 15 inches in diameter.
- G. The combined thickness of the subbase, asphalt binder and surface courses shall be at least 16 1/2 inches. This shall be comprised of a minimum of 12 inches of DOT Type 2 subbase on stabilization fabric, three inches of binder, and 1 1/2 inches of top course. If Type 4 subbase is used in lieu of Type 2 subbase, the subbase thickness shall be increased to 16 inches.
- H. Easements for private utilities shall be provided on each side of the street right-of-way. The easements shall have a width of 10 feet and be reserved from the properties which they cross. Burial of such utilities in the easements shall be the same as in the public right-of-way.
- I. Minimum design speeds for low-volume (ADT less than 400) roads

**Table 1  
Minimum Design Speeds  
(miles per hour)**

Rural Low-Volume Road Classification Type of Roadway	Type of Terrain		
	Level	Rolling	Mountainous
Major access	45	45	45
Minor access	45	45	30
Industrial/commercial	30	30	30
Agricultural	30	20	20
Recreational/scenic	30	20	20

**§ A240-13. Additional right-of-way.**

The Highway Superintendent may specify additional right-of-way where deep cuts and fills exist in areas adjacent to drainage structures and otherwise with discretion and consideration for the terrain.

**§ A240-14. Termination short of adjacent property line.**

Should the road terminate short of the adjacent property line, the right-of-way shall be extended to the adjacent property line. The additional right-of-way shall meet the specifications in §§ A240-12C and A240-15.

**§ A240-15. Dead-end road design.**

Dead-end road designs will terminate with turn-a-rounds or culs-de-sac designed in accordance with figures in the appendix.<sup>1</sup>

**§ A240-16. Minimum road length.**

All proposed roads shall be a minimum of 500 feet in length unless otherwise approved by the Planning Board.

**§ A240-17. Definition of design criteria.**

Definitions of design criteria:

- A. Design life: The time in years from original construction until the present serviceability index has dropped to 2.0.

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1. Editor's Note: The appendix of Standard Roadway Details is included at the end of this chapter.

- B. Present serviceability index -  $p$  (also known as the "terminal serviceability index -  $p_t$ "): The ability of a roadway to handle traffic as defined by the AASHTO Guide for the Design of Pavement Structures.
- C. A right-of-way: The width of land owned or controlled by a highway agency for the purpose of maintaining or constructing roads and streets.
- D. An  $x$ -year storm: A runoff event with a probability of occurring in a given year equal to the inverse of the value of the year. A fifty-year storm would have a one-in-fifty (two-percent) chance of occurring in a given year.
- E. A fifteen-inch-diameter equivalent opening: An area of 176 square inches.
- F. Design speed: The typical operating speed on a roadway. Also, the speed used to determine the various design features of a roadway based on terrain, traffic volume, and roadway classification.
- G. Stopping sight distance: The sum of the brake reaction distance (the distance traversed by a vehicle from the instant the driver sights an object necessitating a stop to the instant the brakes are applied) and the braking distance (the distance needed to stop a vehicle from the instant brake application begins).
- H. Traveled way. The portion of the roadway for the movement of vehicles, exclusive of shoulders.
- I. Roadway: The portion of a highway, including shoulders, for vehicular use.

**§ A240-18. State Department of Transportation standard specifications.**

All materials and all work shall meet the requirements of the latest revision of the New York State Department of Transportation Standard Specifications for Construction and Materials, including any engineering instructions or bulletins, unless alternatives are approved by the Town Highway Superintendent, in writing, in advance.

**§ A240-19. Rough grading.**

- A. All topsoil shall be stripped from the bed of the proposed paved section, shoulder section and under the width of all fills. All stumps, loose stones, debris and bushes shall be removed from beneath the traveled way and shoulder to a depth of two feet below the finished grade.
- B. The subgrade shall be prepared by excavating and/or filling, removing unstable materials and replacing with a foundation course, as required by the Superintendent of Highways, and thoroughly compacted. Material to be used in fill sections shall consist of run-of-bank material free from all organic material.
- C. Excavation slopes in earth should be no steeper than three foot horizontal to one foot vertical. In rock, slopes shall be no steeper than 0.5 foot horizontal to one foot vertical. Every effort should be made to blend in cuts and fills with the adjacent properties.

- D. Maximum grades shall not exceed 10%. Grades steeper shall require approval by the Planning and Town Boards. The minimum grade should be not less than 1%.

**§ A240-20. Shoulders.**

Shoulders shall be of compacted gravel or crushed stone, not less than four feet in width or as may be required by the Planning Board or Town Board.

**§ A240-21. Drainage.**

- A. A complete system of surface drainage shall be installed to dispose of stormwater. When discharge of stormwater shall be into, upon or through private property, proper easements shall be granted to the Town of Poestenkill and shall convey the perpetual right to discharge stormwater runoff from the highway and from the surrounding area onto and over the affected premises by means of pipes, culverts or ditches or a combination thereof, together with the right to enter such premises for purposes of making such installations and doing such maintenance work as the Town may deem necessary to adequately drain the highway and the surrounding area. Where a drainage easement discharges onto or terminates at property of a third party, the consent for an easement, properly executed, to channel or discharge stormwater from such third party must be obtained by the owner of the road or street.
- B. All culverts under driveways shall be designed to handle a storm of 10 years' frequency. Culvert pipes shall be of approved reinforced concrete, corrugated asphalt-coated galvanized metal or smooth-interior corrugated polyethylene pipe and not less than 15 inches in diameter. The interior of all pipes shall be cleaned of all foreign matter before being placed. Pipe shall be installed in straight lines and at a uniform rate of grade between points to match grade and direction of drainage swales. Any changes in grade or direction shall require the placement of a catch basin.
- C. Where groundwater drainage is encountered, intercepting (curtain) drains may be required. Every effort should be made to use natural drainage and to minimize the use of underground storm drains. Swales are preferred over storm sewers.
- D. All culverts shall begin and terminate with flared end sections. Slope conditions will determine the necessity of riprap. All culverts under the travel way shall maintain a minimum of 24 inches of cover and shall be bedded per the trench detail in Appendix A.<sup>2</sup>

**§ A240-22. Guide rail.**

Guide rail must conform to minimum New York State specifications and shall be placed as required by the Planning Board and on fills which are dangerous in the opinion of the Town Superintendent of Highways.

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2. Editor's Note: Appendix A is included at the end of this chapter.



**§ A240-23. Finished grading.**

All surfaces shall be finish graded from the edge of the shoulder to the toe or top of the slope with a minimum of four inches of topsoil and shall be sown with hardy grass seed in sufficient quantity to produce turf that will stabilize the slope, unless otherwise directed by the Planning Board or Town Board.

**§ A240-24. Monumentation.**

Sufficient reinforced concrete or granite markers, at least four inches square on top and 4 1/2 feet long must be set at all changes in direction of right-of-way, including points of curve and points of tangent at corners, and at intersection of lot lines with right-of-way. Number and location shall be sufficient to permit a surveyor to reconstruct the entire right-of-way.

**§ A240-25. Inspections.**

Agents of the Town shall have access to all parts of the work while under construction at all times. No portion of the work which will not be exposed upon final completion shall be covered until reasonable opportunity for inspection after written notice has been given. Approval under these specifications shall be by the Town Board and the Superintendent of Highways.

**§ A240-26. Underground utilities.**

All underground utilities which are to be in the right-of-way, including water, sewer, drain, gas, electricity, telephone, cable television, including junction boxes, risers, manhole, catch basins and pull boxes, shall be completely installed prior to construction of the subbase. All excavations shall be suitably filled and tamped with vibratory tampers. All utility lines shall be buried a minimum of 30 inches to the top of pipes and cables and 18 inches to the top of boxes, except for culverts designed to carry stormwater. Manhole and catch basin frames shall be designed to carry H-20 loading.

**§ A240-27. Stormwater pollution prevention plans.**

For projects covering an area of one acre or more, a construction permit notice of intent (NOI) must be filed with the New York State Department of Environmental Conservation (DEC) in order to obtain a Stormwater General Permit GP-0-10-001 (or latest version). The NOI shall include a stormwater pollution prevention plan (SWPPP) consistent with criteria found in the New York State Stormwater Management Design Manual in addition to any other components indicated as necessary by the Instruction Manual for Stormwater Construction Permit. Both documents are available electronically at [www.dec.ny.gov](http://www.dec.ny.gov). The Town of Poestenkill is an MS-4 community and must review and approve all SWPPPs before a NOI can be filed with DEC.

ARTICLE III  
References

**§ A240-28. Documents and sources.**

**New York State Department of Transportation (NYSDOT)**

New York State Department of Transportation

Plan Sales Unit

1st Floor, Suite IPS

50 Wolf Road

Albany, N.Y. 12232-0204

Phone: (518) 457-2124

Website: [www.dot.ny.gov](http://www.dot.ny.gov)

- NYSDOT Standard Specifications for Construction and Materials,  
<https://www.dot.ny.gov/main/business-center/engineering/specifications?nd=nysdot>
- NYSDOT Comprehensive Pavement Design Manual,  
<https://www.dot.ny.gov/divisions/engineering/design/dqab/cpdm?nd=nysdot>
- NYSDOT Highway Design Manual,  
<https://www.dot.ny.gov/divisions/engineering/design/dqab/hdm?nd=nysdot>

**Manual on Uniform Traffic Control Devices (MUTCD)**

<https://www.dot.ny.gov/divisions/operating/oom/transportation-systems/traffic-operations-section/mutcd>

**American Association of State Highway and Transportation Officials (AASHTO)**

444 N. Capital St., N.W., Suite 249

Washington, DC 20001

Phone: (202) 624-5800

Toll free: (800) 231-3475

Website: [www.transportation.org](http://www.transportation.org)

- Guidelines for Geometric Design of Very Low-Volume Local Roads, 2001 or latest.
- A Policy on the Geometric Design of Highways and Streets, 2004 or latest.
- AASHTO Guide for Design of Pavement Structures, 1993 or latest.

**Cornell Local Roads Program (CLRP)**

416 Riley-Robb Hall

Ithaca, NY 14853

Phone: (607) 255-8033

Email: [clrp@cornell.edu](mailto:clrp@cornell.edu)

Website: [www.clrp.cornell.edu](http://www.clrp.cornell.edu)

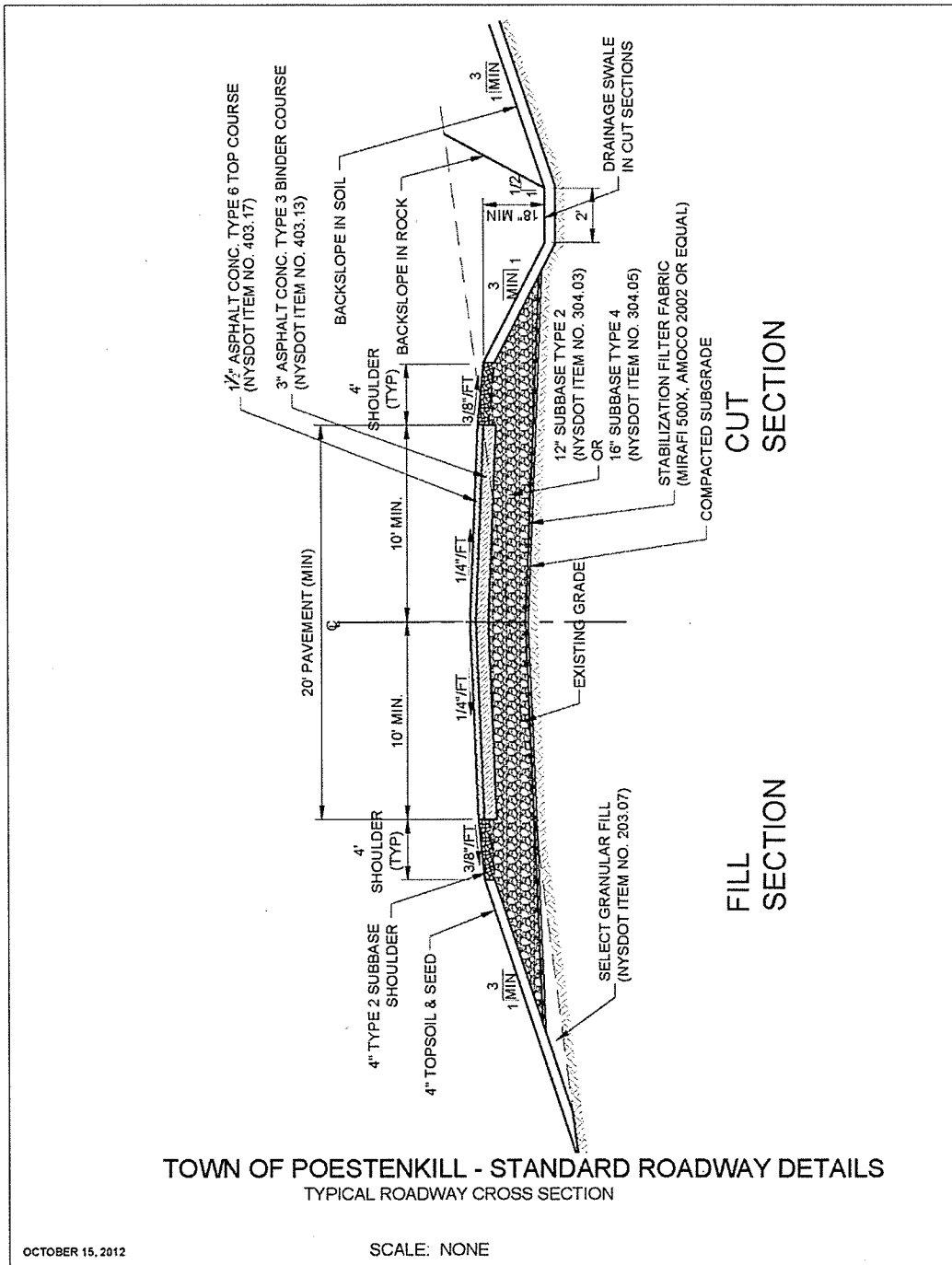
- Manual: Guidelines for Rural Town and County Roads, December 1992. Local Roads Research and Coordination Council; Commission on Rural Resources.

ROAD IMPROVEMENT SPECIFICATIONS

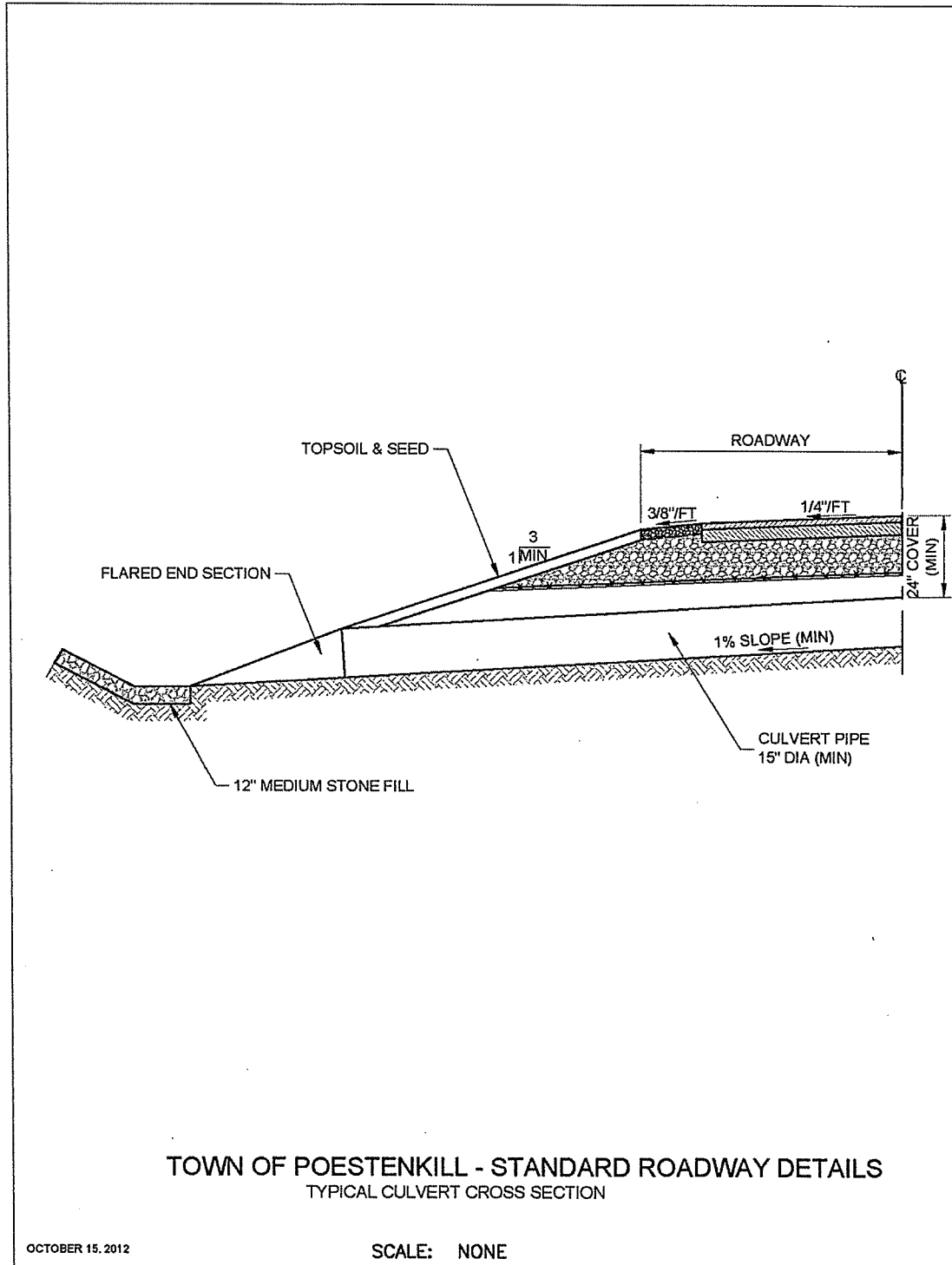
A240 Attachment 1

Town of Poestenkill

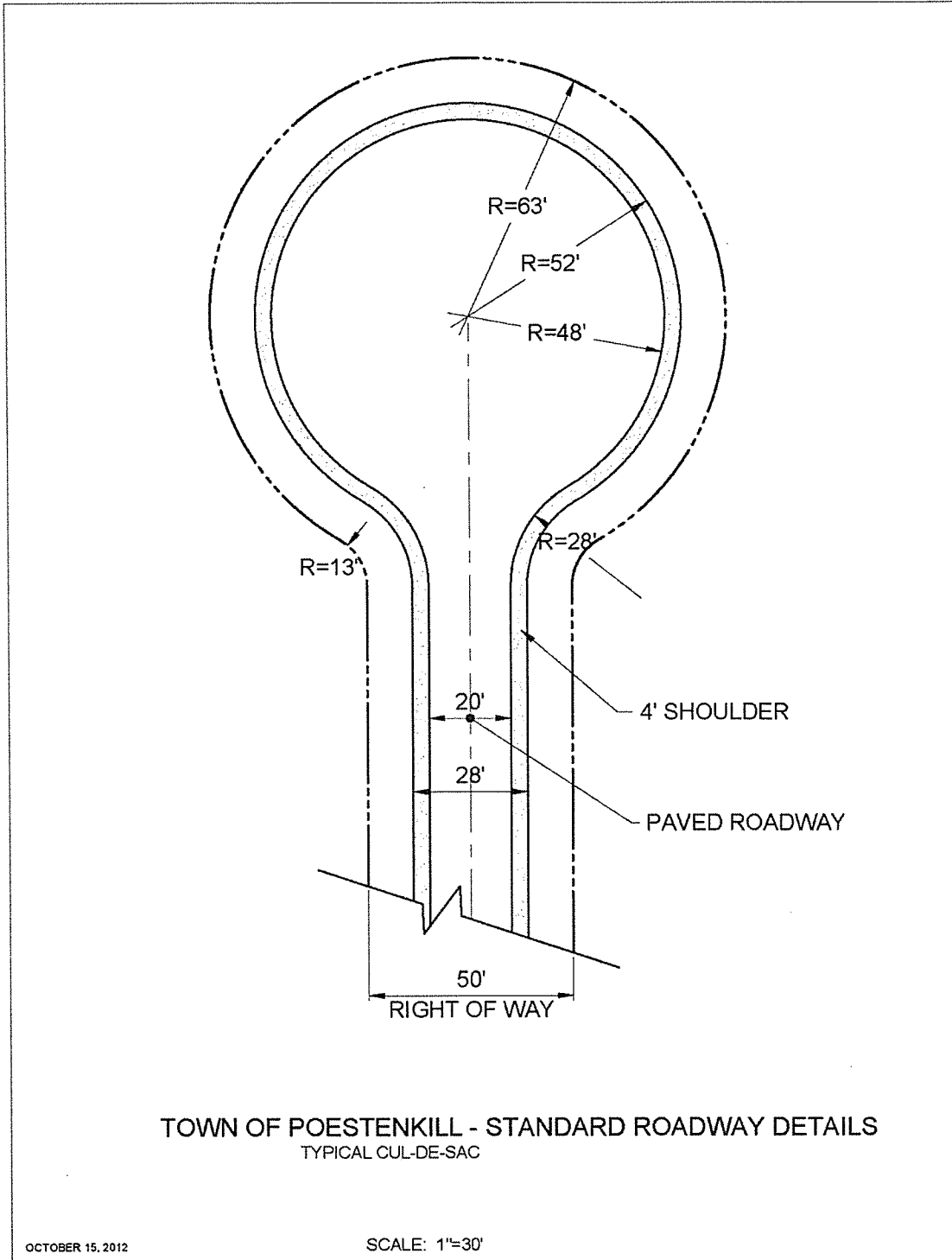
Appendix A  
Standard Roadway Details Diagrams



POESTENKILL CODE



ROAD IMPROVEMENT SPECIFICATIONS

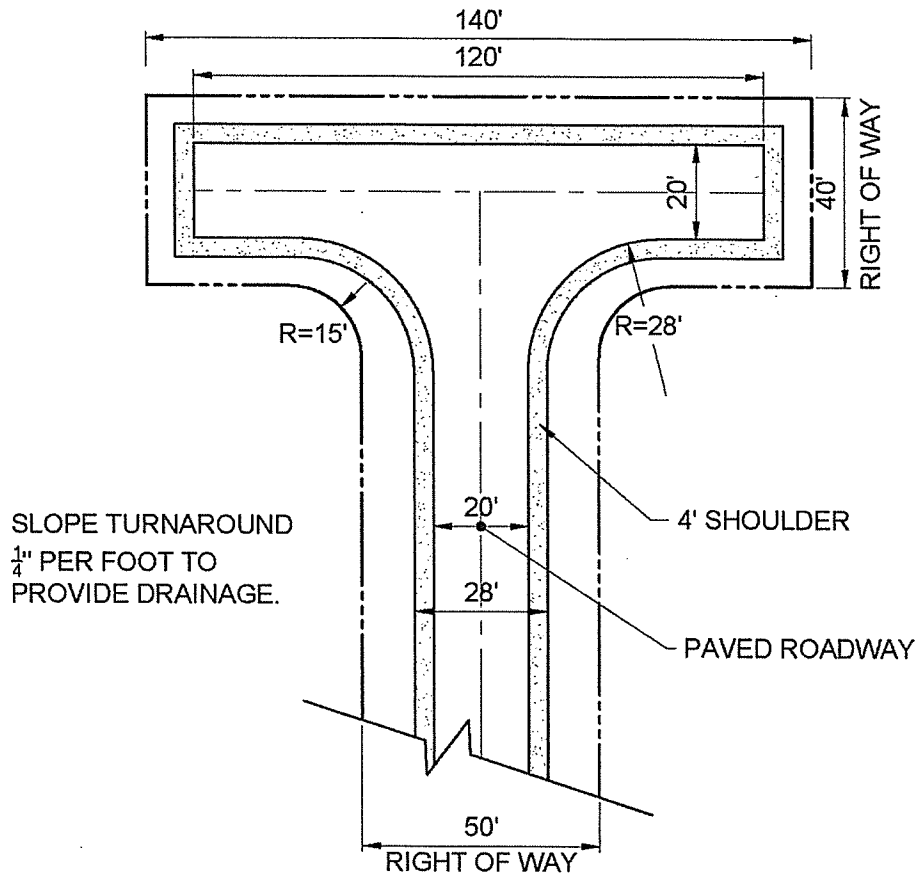


TOWN OF POESTENKILL - STANDARD ROADWAY DETAILS  
TYPICAL CUL-DE-SAC

OCTOBER 15, 2012

SCALE: 1"=30'

POESTENKILL CODE

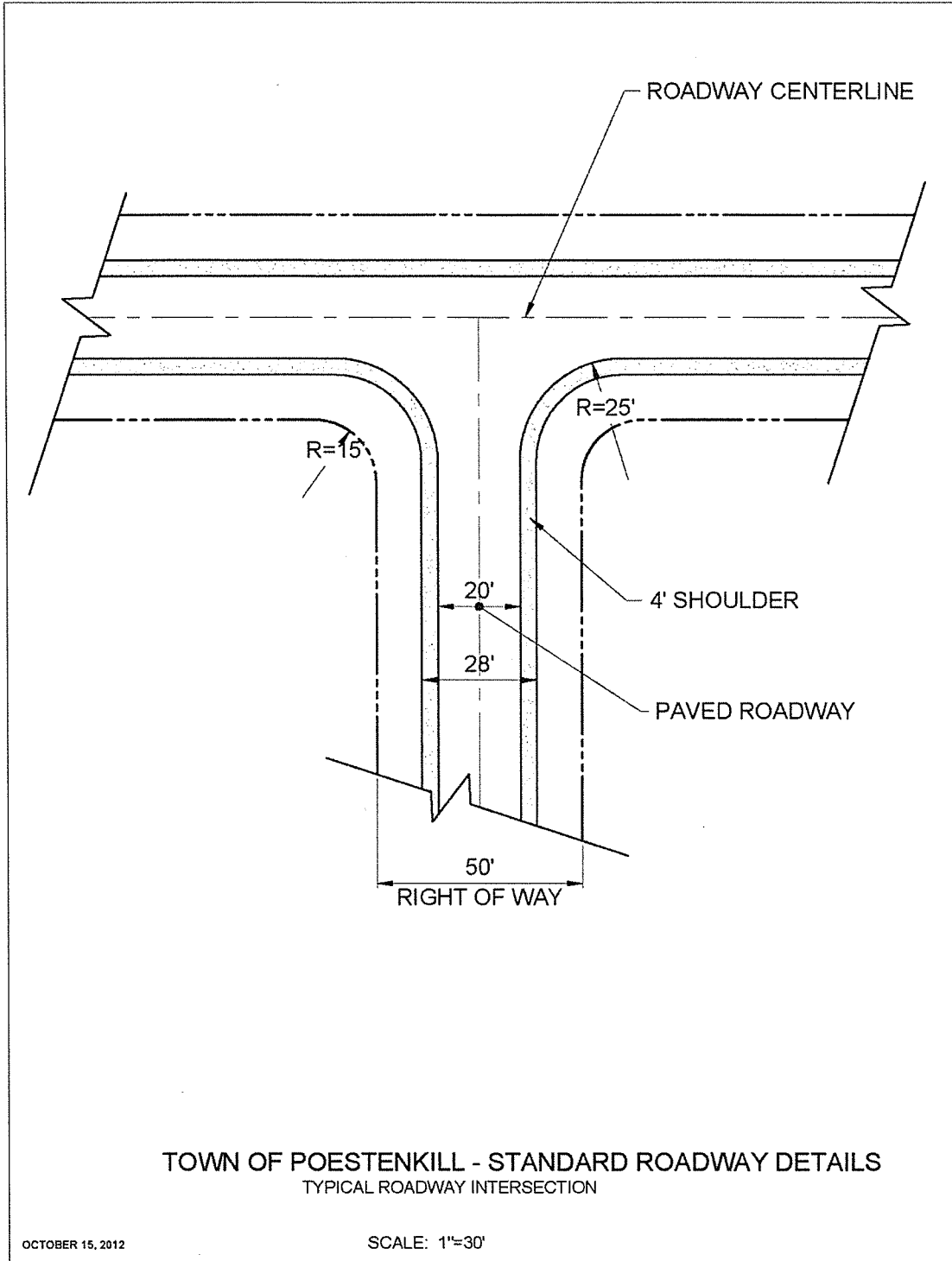


TOWN OF POESTENKILL - STANDARD ROADWAY DETAILS  
TYPICAL ROADWAY TEE TURNAROUND

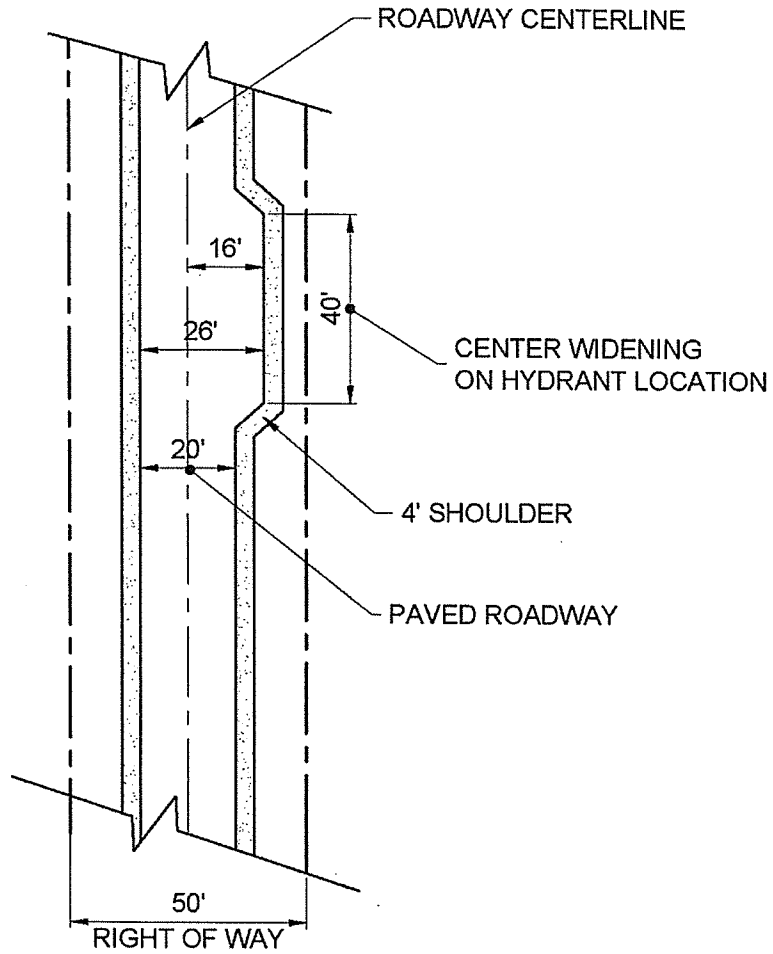
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SCALE: 1"=30'

# ROAD IMPROVEMENT SPECIFICATIONS



POESTENKILL CODE



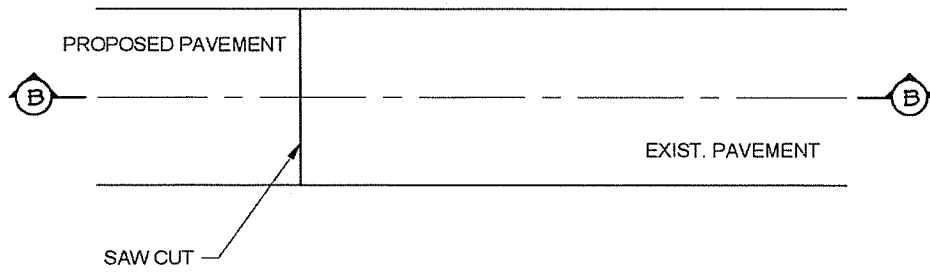
TOWN OF POESTENKILL - STANDARD ROADWAY DETAILS  
ROADWAY WIDENING AT HYDRANT

OCTOBER 15, 2012

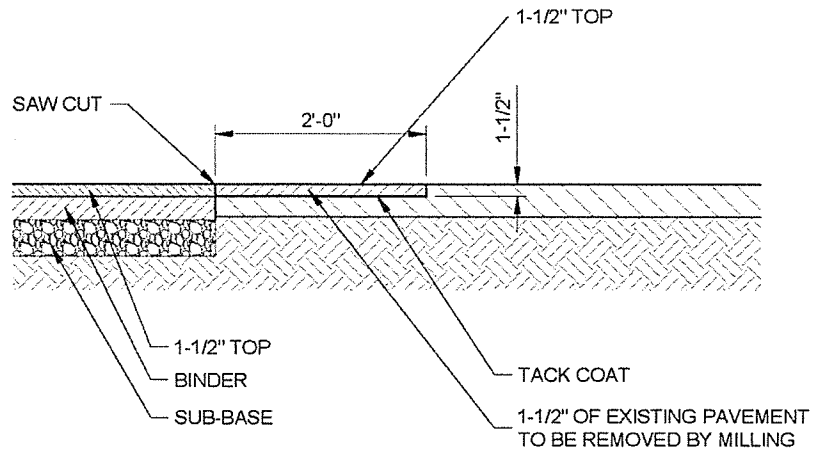
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ROAD IMPROVEMENT SPECIFICATIONS



PLAN VIEW



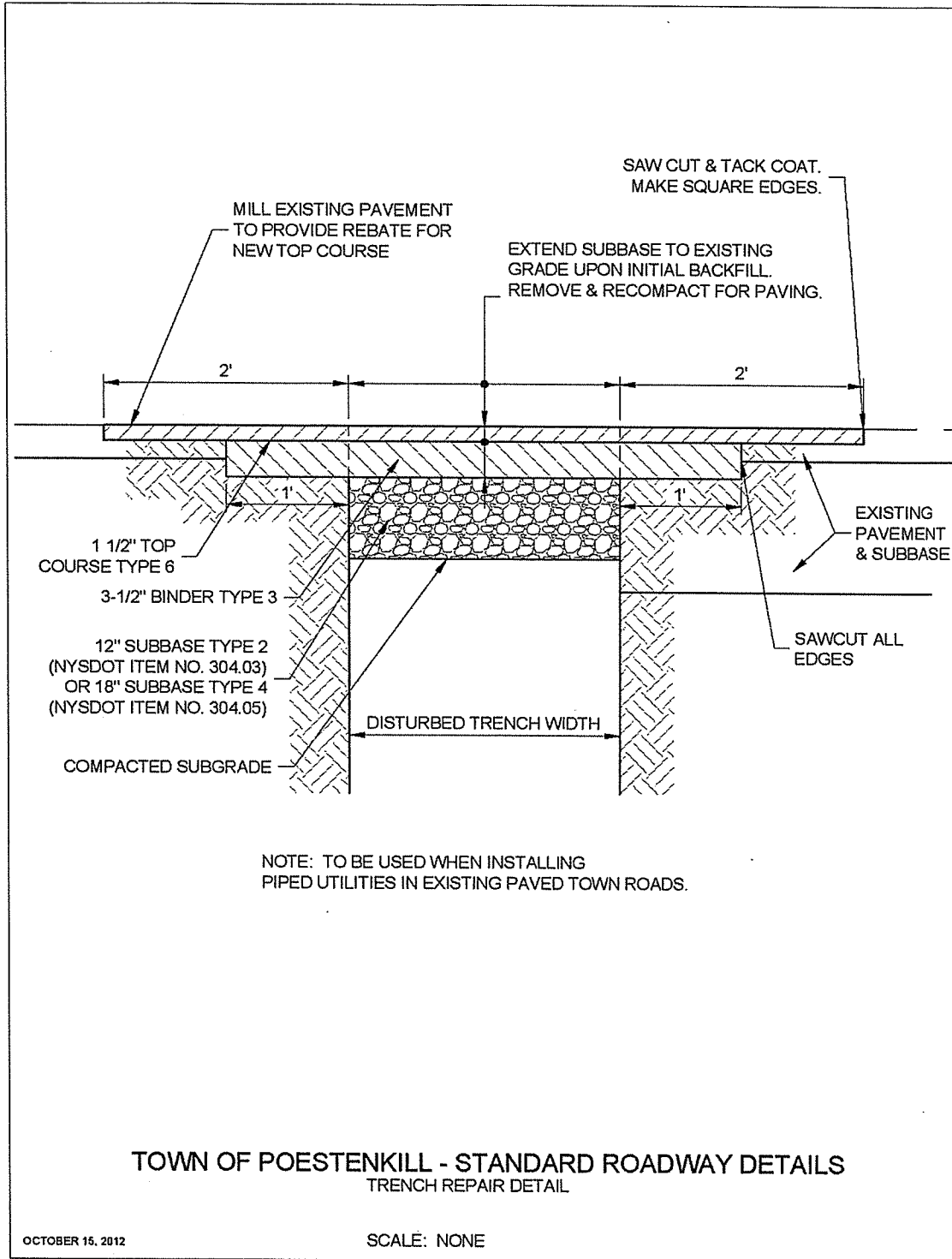
SECTION B-B

TOWN OF POESTENKILL - STANDARD ROADWAY DETAILS  
PAVEMENT TERMINATION DETAIL

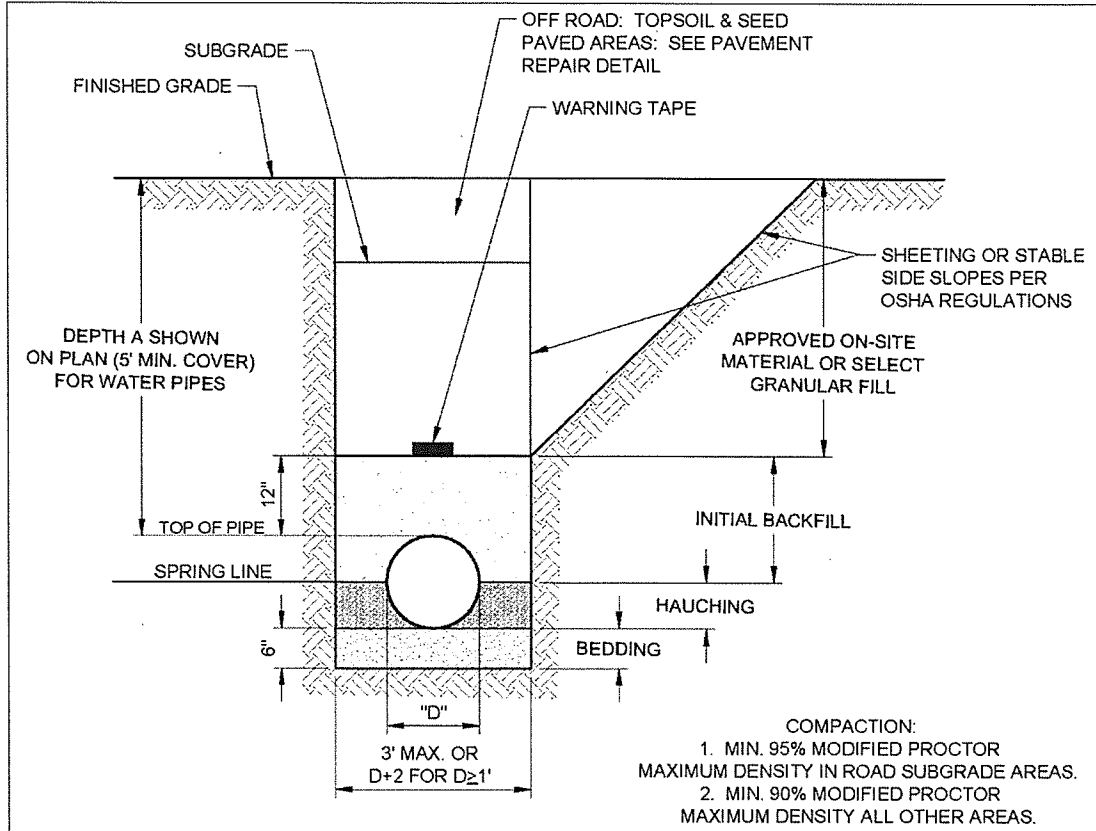
OCTOBER 15, 2012

SCALE: NONE

POESTENKILL CODE



# ROAD IMPROVEMENT SPECIFICATIONS



TRENCHING SCHEDULE				
PIPE	CONDITION	BEDDING	HAUNCHING	INITIAL BACKFILL
PLASTIC	ALL	NO 1 & NO 2 CRUSHED STONE	NYS DOT TYPE 2 OR 50-50 MIX OF NO1 & NO2 CRUSHED STONE	SELECT GRANULAR FILL NYS DOT ITEM 203.07
DIP	OVER BEDROCK	NO 1 & NO 2 CRUSHED STONE	NYS DOT TYPE 2 OR 50-50 MIX OF NO1 & NO2 CRUSHED STONE	SELECT GRANULAR FILL NYS DOT ITEM 203.07
DIP	OTHER LOCATIONS	NO 1 & NO 2 CRUSHED STONE	NYS DOT TYPE 2 OR 50-50 MIX OF NO1 & NO2 CRUSHED STONE	SELECT GRANULAR FILL NYS DOT ITEM 203.07

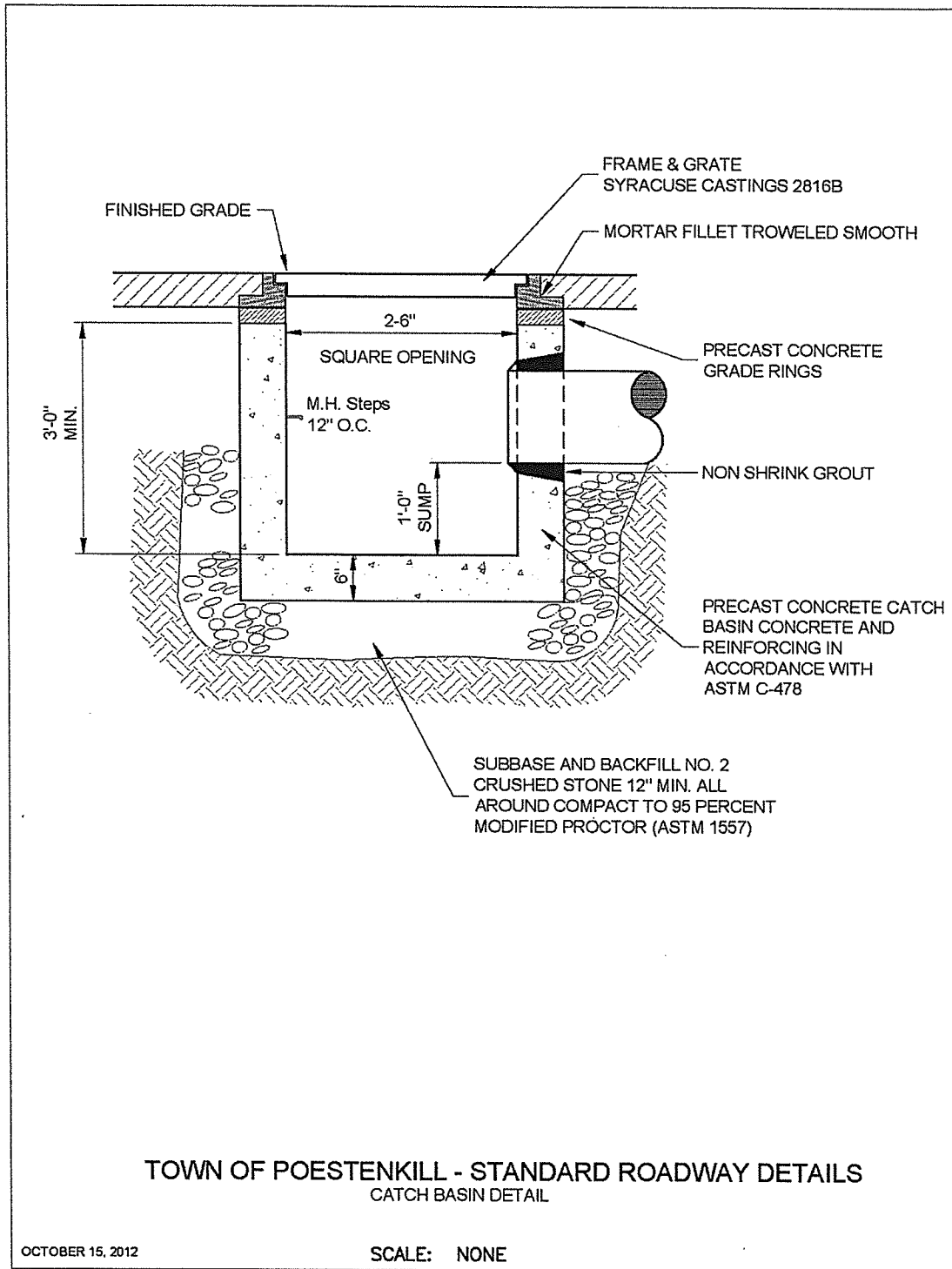
**NOTE:**  
 1. COMPLY WITH OSHA REGULATIONS AND NYS DOL INDUSTRIAL CODE 23.  
 COMPLY WITH NYS DOT STANDARD SPECIFICATIONS:  
 203-3.15 BACKFILL AT PIPES  
 206 TRENCH EXCAVATION

## TOWN OF POESTENKILL - STANDARD ROADWAY DETAILS PIPE TRENCH DETAIL

OCTOBER 15, 2012

SCALE: NONE

POESTENKILL CODE



# ROAD IMPROVEMENT SPECIFICATIONS

