

### Soil De-compaction and Testing Requirements

#### Soil Compaction Testing Requirements

1. Subgrade soils prior to the application of topsoil (see permanent seeding and stabilization notes for topsoil requirements) shall be free of excessive compaction to a depth of 6.0 inches to enhance the establishment of permanent vegetative cover.
2. Areas of the site which are subject to compaction testing and/or mitigation are graphically denoted on the certified soil erosion control plan.
3. **Compaction testing locations** are denoted on the plan. A copy of the plan or portion of the plan shall be used to mark locations of tests, and attached to the compaction remediation form, available from the local soil conservation district. This form must be filled out and submitted prior to receiving a certificate of compliance from the district.
4. In the event that testing indicates compaction in excess of the maximum thresholds indicated for the simplified testing methods (see details below), the contractor/owner shall have the option to perform either (1) compaction mitigation over the entire mitigation area denoted on the plan (excluding exempt areas), or (2) perform additional, more detailed testing to establish the limits of excessive compaction whereupon only the excessively compacted areas would require compaction mitigation. Additional detailed testing shall be performed by a trained, licensed professional.

#### Compaction Testing Methods

- A. Probing Wire Test (see detail)
- B. Hand-held Penetrometer Test (see detail)
- C. Tube Bulk Density Test (licensed professional engineer required)
- D. Nuclear Density Test (licensed professional engineer required)

Note: Additional testing methods which conform to ASTM standards and specifications, and which produce a dry weight, soil bulk density measurement may be allowed subject to district approval.

Soil compaction testing is not required if/when subsoil compaction remediation (certification) (fillage (6" minimum depth) or similar) is proposed as part of the sequence of construction.

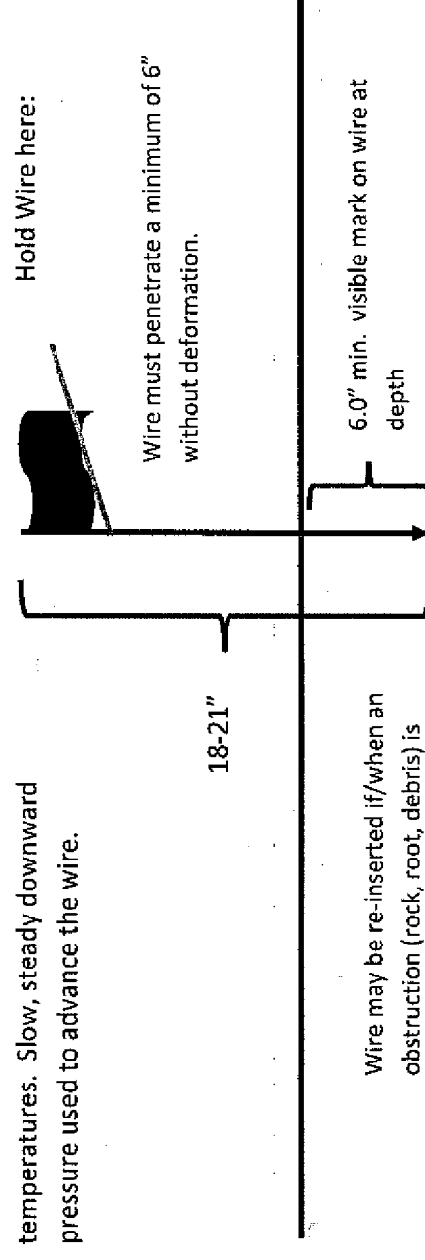
#### Procedures for Soil Compaction Mitigation

Procedures shall be used to mitigate excessive soil compaction prior to placement of topsoil and establishment of permanent vegetative cover.

Restoration of compacted soils shall be through deep scarification/fillage (6" minimum depth) where there is no danger to underground utilities (cables, irrigation systems, etc.). In the alternative, another method as specified by a New Jersey Licensed Professional Engineer may be substituted subject to District Approval.

### Probing Wire Test- 15.5 ga steel wire (survey flag)

Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the wire.



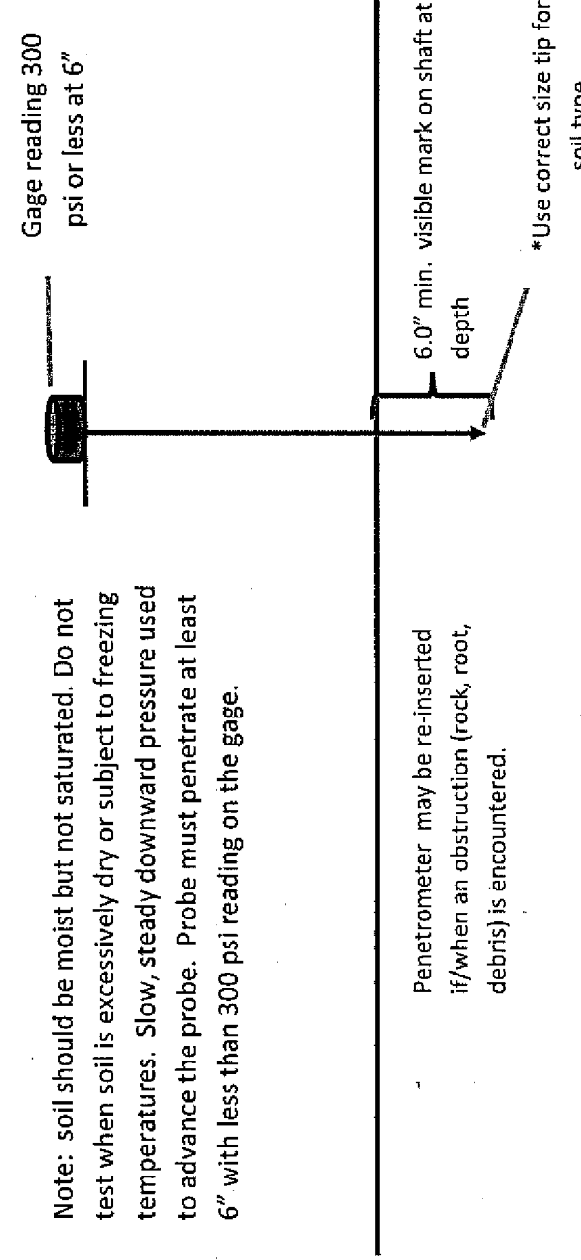
Hold Wire here:

Wire must penetrate a minimum of 6" without deformation.

6.0" min. visible mark on wire at depth

### Handheld Soil Penetrometer Test

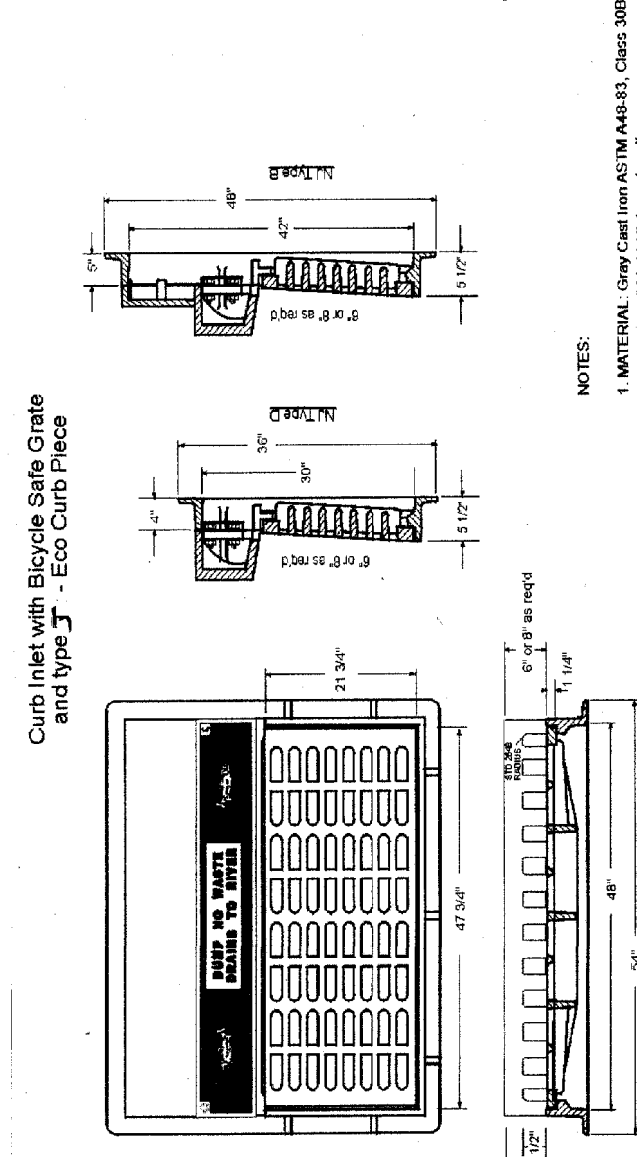
Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the probe. Probe must penetrate at least 6" with less than 300 psi reading on the gage.



Gage reading 300 psi or less at 6"

6.0" min. visible mark on shaft at depth

\*Use correct size tip for soil type

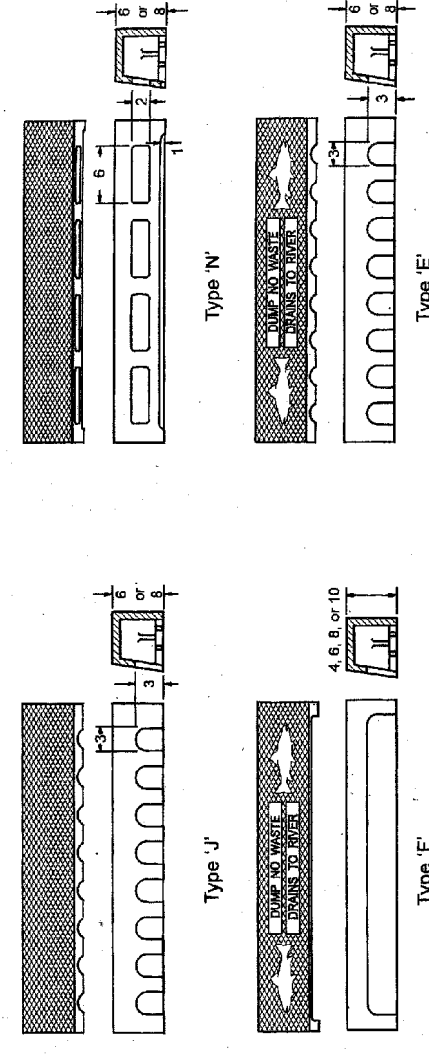


NOTES:  
1. See Notes on Sheet No. 100, Cases 1001.  
2. All 15.5 GA STEEL WIRE SHALL BE GALVANNEAL COATED.  
3. Supplies without surface coating.

### Options For Curb Type Inlets

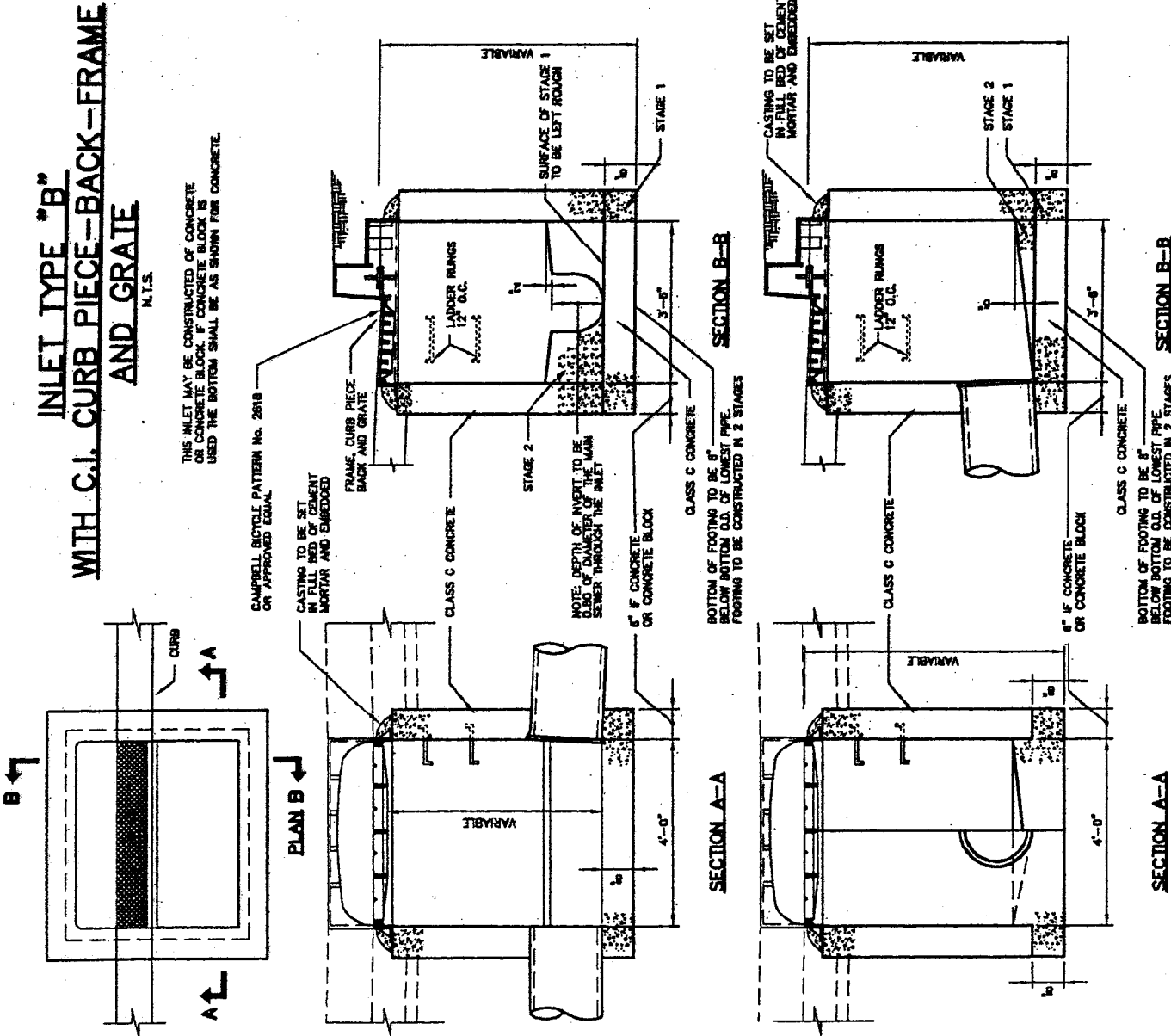
#### ALTERNATE CURB TYPES

Shown below are examples of alternate curb designs. Custom curb designs are available for most standard curb sizes. Please contact our engineering department for assistance.

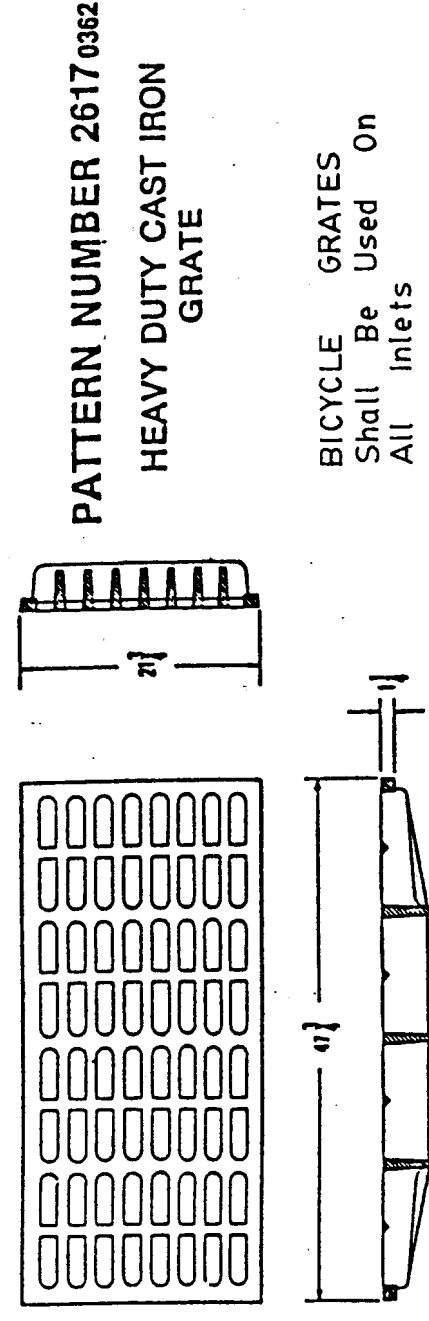


### INLET TYPE "B" WITH C.I. CURB PIECE-BACK-FRAME AND GRATE

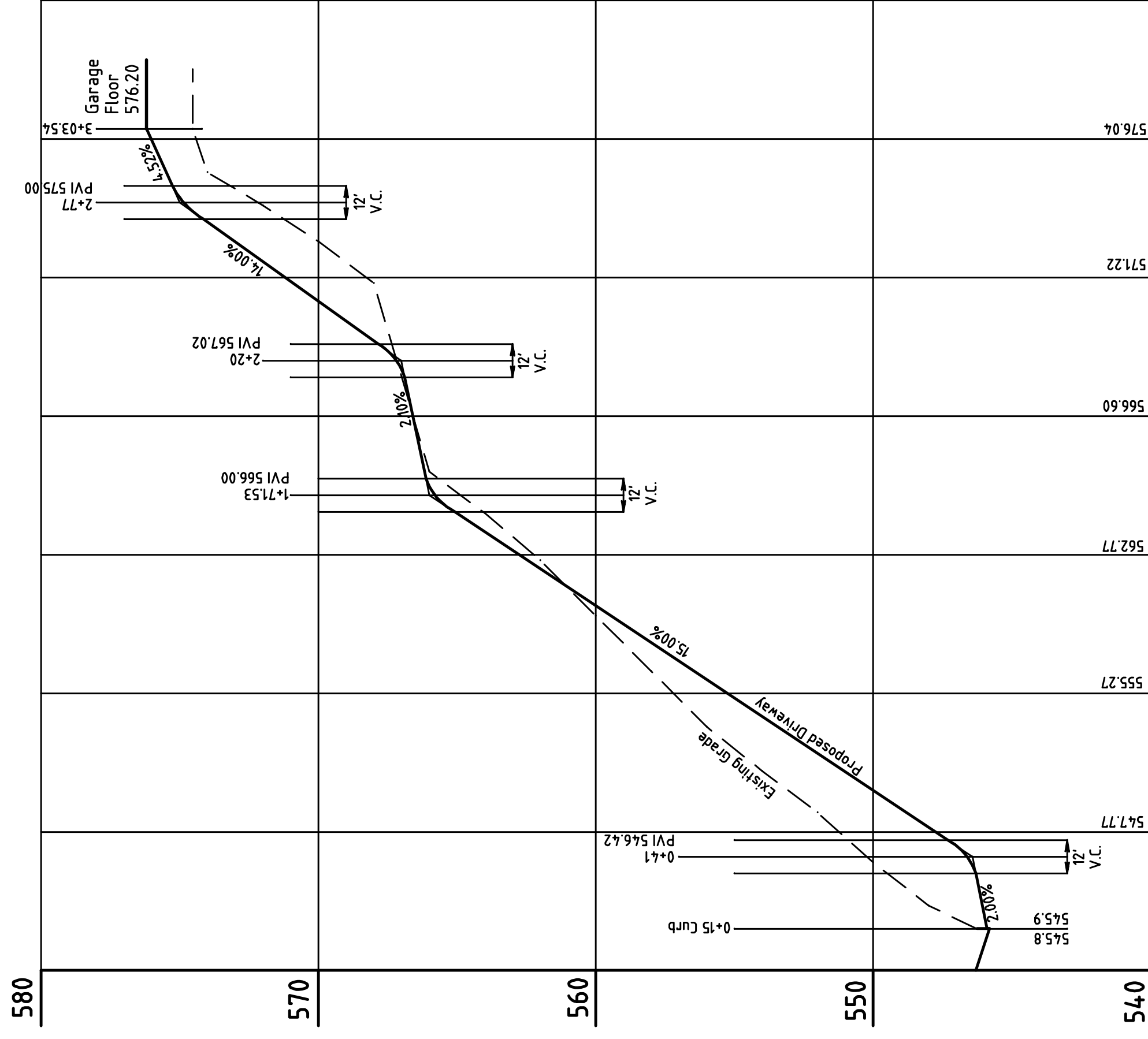
THE BACK-FRAME SHALL BE CONCRETE OR CAST IN PLACE CONCRETE. THE CURB SHALL BE 6" MIN. HIGH AND 6" MIN. WIDE. THE GRATE SHALL BE 18" X 18" SQUARE.



### BICYCLE GRATES



### DETAILS



### DRIVEWAY PROFILE

Hor. 1" = 40'  
Vert. 1" = 4'

REVISED	DESCRIPTION OF REVISION	10/21/19	S.I.S.
DATE	DRN. BY		

**PLOT PLAN**  
**BOROUGH OF MORRIS PLAINS**  
**TAX MAP SHEET 7, BLOCK 72, LOTS 11 & 12**  
**TOWNSHIP OF PARSIPPANY-TROY HILLS**  
**TAX MAP SHEET 15, BLOCK 12, LOTS 1 & 1.01**  
**MORRIS COUNTY, NEW JERSEY**

*Steven J. Smith*  
**NORMAN A. SMITH** Professional Engineer & Land Surveyor No. 10077, Professional Planner No. 129  
**STEVEN I. SMITH** Professional Land Surveyor No. 29357, Professional Planner No. 3201  
**JOHN E. GRIBBIN** Professional Engineer No. 24992  
**JAMAN ENGINEERING ASSOCIATES**  
**ENGINEERS, SURVEYORS & PLANNERS**  
 320 ROUTE 10 WEST, RANDOLPH, NEW JERSEY 07869  
 (973) 366-6277

DRN. BY: S.I.S. DATE: FEBRUARY 4, 2019 SCALE: J 08-24  
 JOB NO. J 08-24