CONCRETE GUTTER AND DRAINS AT RETAINING WALLS

Minimum Distance As Required To Comply With Safety Criteria

Variable Front Slope - Normal Slope

1/2 Slope If Necessary To Go Beyond Normal Toe Of Slope And Maintain Ditch Width By Moving Out Back Slope.

Slope To Normal Slope If Possible. Slope Not To Be Steeper Than 1:2. See Section Above. If 1:2 Slope Must Go Beyond Toe Of Normal Slope.

NOTE: Filling or excavation of variable slopes to be done during normal grading operations.

METHOD FOR SETTING LIMITS OF VARIABLE FRONT SLOPES AT DRAINAGE STRUCTURES

Use Larger Value Of Either:
1. L=20 #/4 (No Maximum)
2. L=20 #/ditch (s/foot) (Maximum L=200')

GUARD AT PIPE ENDS

Note: Guards to be constructed only at locations specifically called for in plans. Guards, plate & clips, bolts, nuts and sleeves to be included in the contract unit price for Reinforcing Steel (Miscellaneous).
**RAILROAD COMPANY** | CLEARANCE BELOW BOTTOM OF RAIL (FEET) | STRENGTH ASTM (CT6) CLASS
--- | --- | ---
Appalachia Northern | 4.0 | IV
Atlanta And St Andrews Bay | 4.0 | IV
Florida East Coast | 5.5 | IV
Burlington Northern Railroad | 5-7/8" M/L | IV
CSX Transportation, Inc | 4.5 | 5.5 | IV
Southern Railway System | | |
Georgia Southern And Florida | 5.5 | V
Live Oak Ferry And South Georgia | 5.5 | V
St. Johns River Terminal | 5.5 | V

*Clearance is for casing pipe. All subgrade carrier pipelines and主线 will be installed within a casing pipe which will extend from Right-of-Way line to Right-of-Way line.

**DEVELOPMENT CHECKLIST**

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**INLETS, MANHOLES OR JUNCTION BOXES**

ON INTEGRAL PRECAST CONCRETE RISER FOR CONCRETE PIPE

**METHOD FOR DETERMINING THE LENGTH OF SPECIAL PIPE REQUIRED UNDER RAILROADS**