
ORIGINATION FORM

Proposed Revisions to a Standard Plans Index

(Please provide all information — Incomplete forms will be returned)

Contact Information:

Date: June 5, 2023

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Standard Plans:

Index Number: 400-011

Sheet Number (s): 1 of 1

Index Title: Gravity Wall

Summary of the changes:

Updated GENERAL NOTES:

Note 1 - 3 Updated to active voice.

Note 5 - Updated "Joint Seal: Provide and install organic bond breaker or Type D-5 geotextile in accordance with Specifications 400 and 514, respectively."

Note 6 - Updated reference from Specification 985 to Specification 514.

Changed all references of "Geotextile Fabric" to "Geotextile".

Changed all references of "Section" to "Specification".

Areas of the Standard Plans where 985 is referenced for drainage details needs to now reference Specs 514 (Division II specs). The Contractor is not responsible for the producer requirements division III specs, but ensure that the product used is on the APL and used for appropriate intended use. Specs 514 essentially does reference 985 to meet the materials requirement.

Commentary / Background:

In the July 2022 SSRBC workbook, construction requirements for the Contractor for geosynthetic materials from Section 985 was removed. The reason for it was that the construction requirements doesn't belong in Division III of the specifications, as this is for producer requirements. Instead of applying specific requirements to each individual specs that references 985 in Division II, the Department is going to modify specification 514 to cover geosynthetics used for drainage applications. Specs 145 covers the reinforcement (structural) applications and construction requirements and erosion control has specific requirements in various areas of Division II, therefore, both erosion and reinforcement are covered. The only missing link in Division II is the drainage applications. Proposed changes to 514 cover construction requirements and material acceptance. In addition, specs 514 ensures that the Contractor obtains geosynthetic product from a manufacturer that meets 985 spec requirements.

Other Affected Offices / Documents: (Provide name of person contacted)

Yes No

- | | | |
|-------------------------------------|-------------------------------------|---|
| ☐ | ☒ | Other Standard Plans – |
| ☐ | ☒ | FDOT Design Manual – |
| ☐ | ☒ | Basis of Estimates Manual – |
| ☒ | ☐ | Standard Specifications – Various sections where 985 is referenced. |
| ☐ | ☒ | Approved Product List – |
| ☐ | ☒ | Construction – |
| ☐ | ☒ | Maintenance – |

Origination Package Includes: (Submit package to Rick Jenkins)

Yes N/A

- | | | |
|--------------------------|-------------------------------------|---|
| ☐ | ☒ | Redline Mark-ups |
| ☐ | ☒ | Revised or Proposed Standard Plan Instruction (SPI) |
| ☐ | ☒ | Other Support Documents |

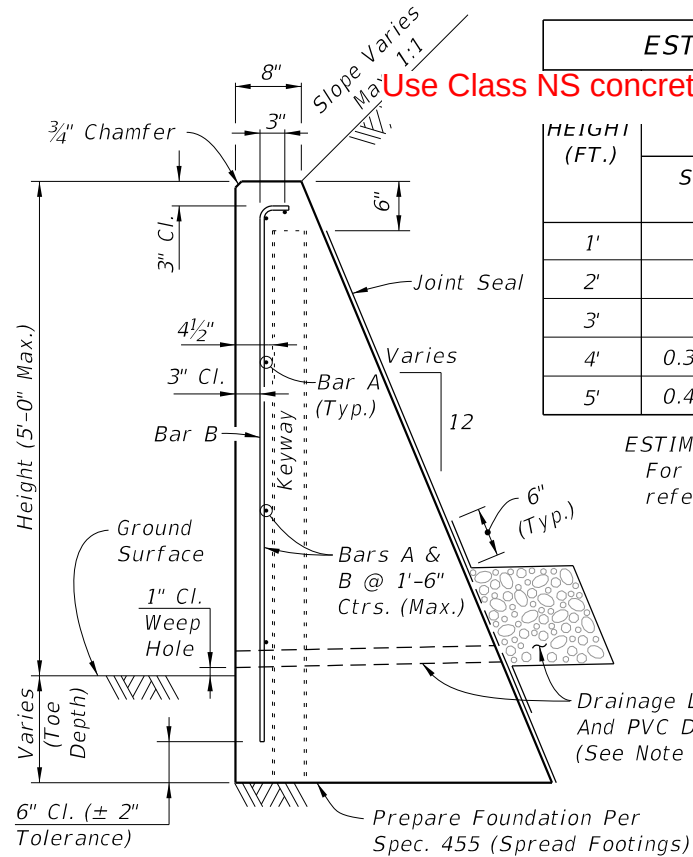
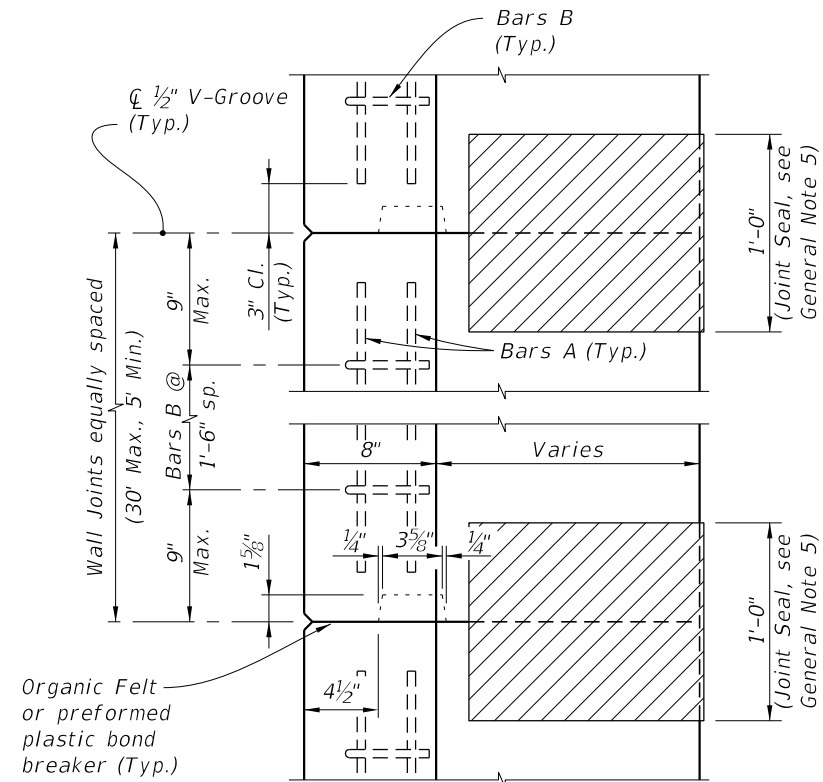
Implementation:

- | | |
|-------------------------------------|----------------------------------|
| ☐ | Design Bulletin (Interim) |
| ☐ | DCE Memo |
| ☐ | Program Mgmt. Bulletin |
| ☒ | FY-Standard Plans (Next Release) |

Contact the Roadway Design Office for assistance in completing this form

Email to: Rick Jenkins rick.jenkins@dot.state.fl.us and Darren Martin darren.martin@dot.state.fl.us

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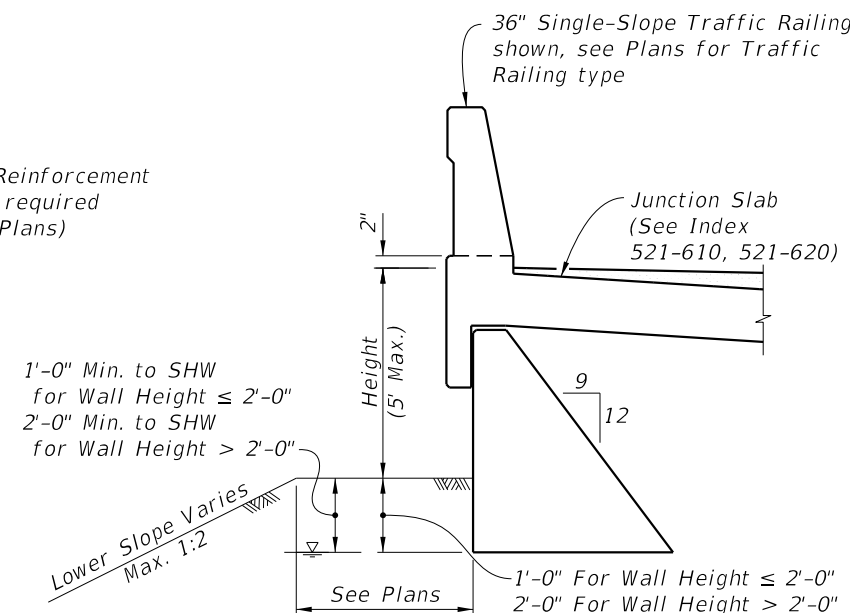
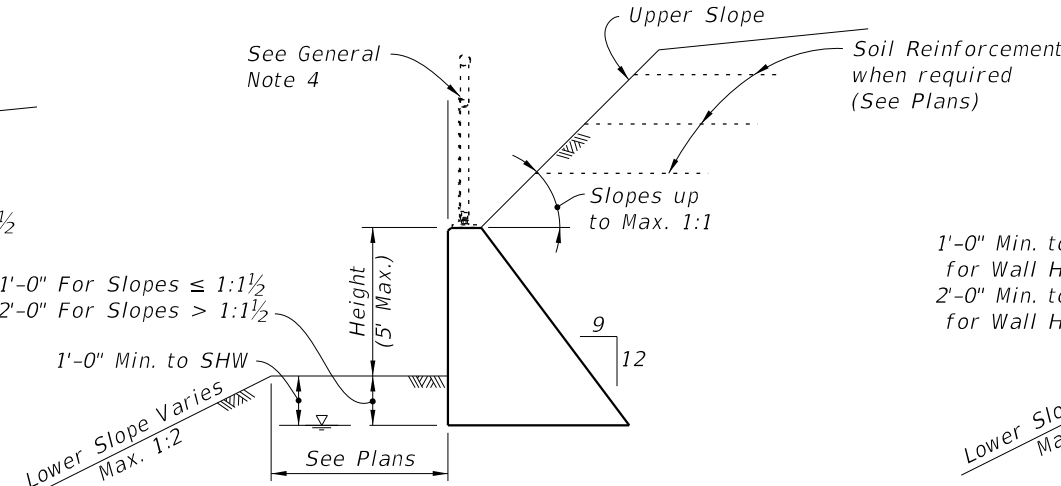
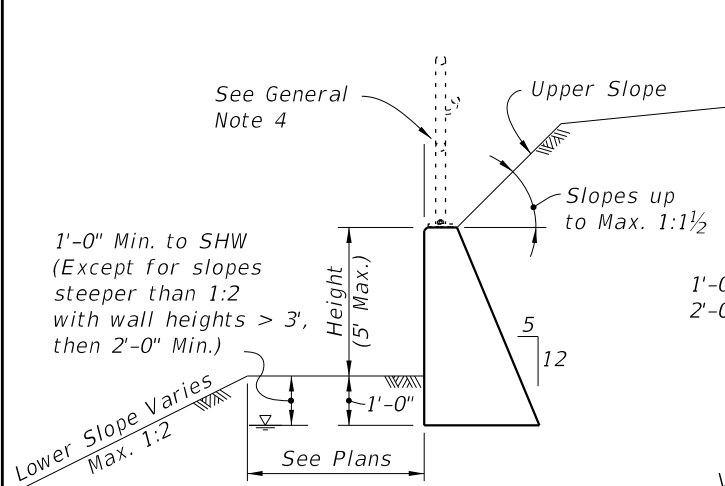
ESTIMATED QUANTITIES FOR C-I-P WALL					
NS concrete for Gravity wall.... T OF WALL					WEEP HOLES & DRAIN REQD.
HEIGHT (FT.)	CLASS NS CONCRETE (CY)			REINF. STEEL (LB.)	
	SCHEME 1	Specification			
1'	0.08	0.11 (0.20*)	0.03	3 (4*)	No
2'	0.14	0.20 (0.32*)	0.09	4 (5*)	No
3'	0.22	0.32 (0.47*)	0.29	5 (6*)	Yes
4'	0.32 (0.43*)	0.47 (0.65*)	0.43	6 (7*)	Yes
5'	0.43 (0.55*)	0.65 (0.85*)	0.60	7 (8*)	Yes

ESTIMATED QUANTITIES NOTES:
For Scheme 3 Junction Slab and Traffic Railing see the referenced Index for estimated quantities.
* Quantity for 2'-0" Toe Depth.
** Quantity for Scheme 3 assumes 1'-3" thick

UPDATED: Joint Seal: Provide and install organic bond breaker or Type D-5 geotextile in accordance with Specifications 400 and 514, respectively.

provide GENERAL NOTES for

- C-I-P Gravity Walls constructed as extensions of reinforced concrete retaining walls, except walls of proprietary designs, shall have the same face texture and finish as the reinforced concrete retaining wall.
- Concrete for Gravity Wall shall be Class NS per Section 347. Concrete for Scheme 3 Junction Slab and Traffic Railing shall be Class H per Section 346, unless otherwise specified in the plans.
- Reinforcing steel shall meet the requirements of Specification Section 931 (Grade 40 or 60). Smooth or Deformed Welded Wire Reinforcement (WWR) may be substituted on an equal area basis. Do not increase bar/wire spacing for Grade 60 reinforcing steel or WWR.
- When required, for adjunct guiderail, see Index 515-070 or 515-080 as appropriate. For adjunct Type B fence see Index 550-002.
- Joint Seal: Organic Felt bond breaker in accordance with Specification Section 400 or Type D-5 geotextile fabric in accordance with Specification Section 985. Mop all contact surfaces of concrete and Organic Felt or geotextile fabric with cut-back asphalt. Stop Organic Felt or geotextile fabric 6" below top of wall.
- Provide a continuous 1'x1' clean gravel or crushed rock drain for wall heights 3 ft. and higher. Wrap drainage layer as shown, with Type D-3 geotextile fabric in accordance with Specification Section 985. Provide 8"x8" galvanized mesh with 1/4" openings, at the inside end of the PVC Drain Pipe. Provide 2" Ø PVC Drain Pipe (Sch. 40) at 10 ft. max. spacing (when Drainage Layer is required). Locate outermost edge of Drain Pipe a minimum of 2'-0" from wall joints. Cost of reinforcing steel, face texture, finish, joint seal, drain pipes, drainage layer, galvanized mesh and geotextile fabric to be included in the Contract Unit Price for Concrete Class NS, Gravity Wall. Cost of concrete for Junction Slab in Scheme 3, to be included in Contract Unit Price for Concrete Traffic Railing Barrier With Junction Slab. Adjunct railings or fences to be paid for separately.



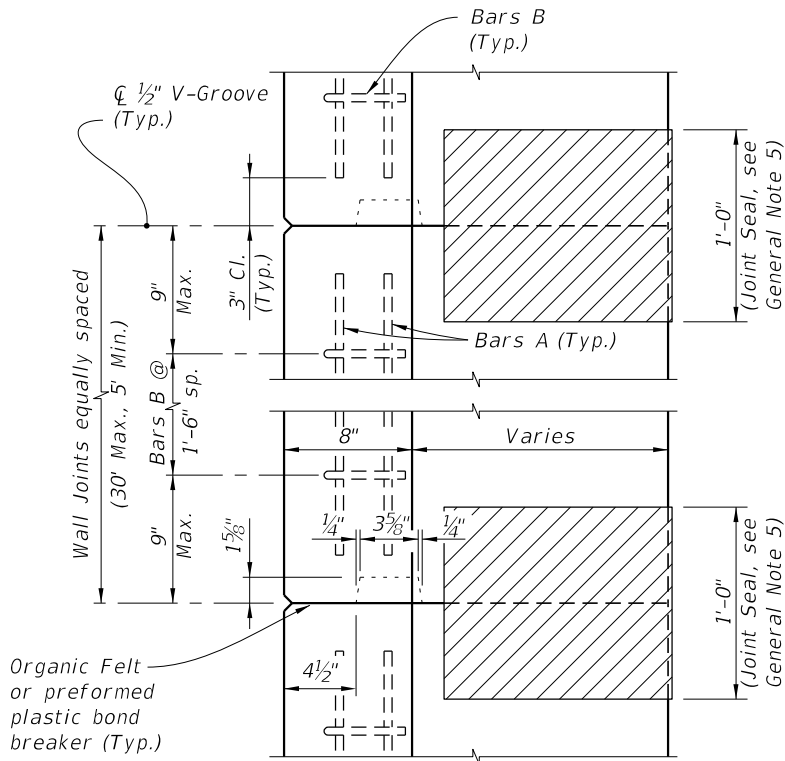
BILL OF REINFORCING STEEL		
MARK	SIZE	LENGTH
A	4	As Req'd.
B	4	As Req'd.

BAR BENDING DIAGRAM

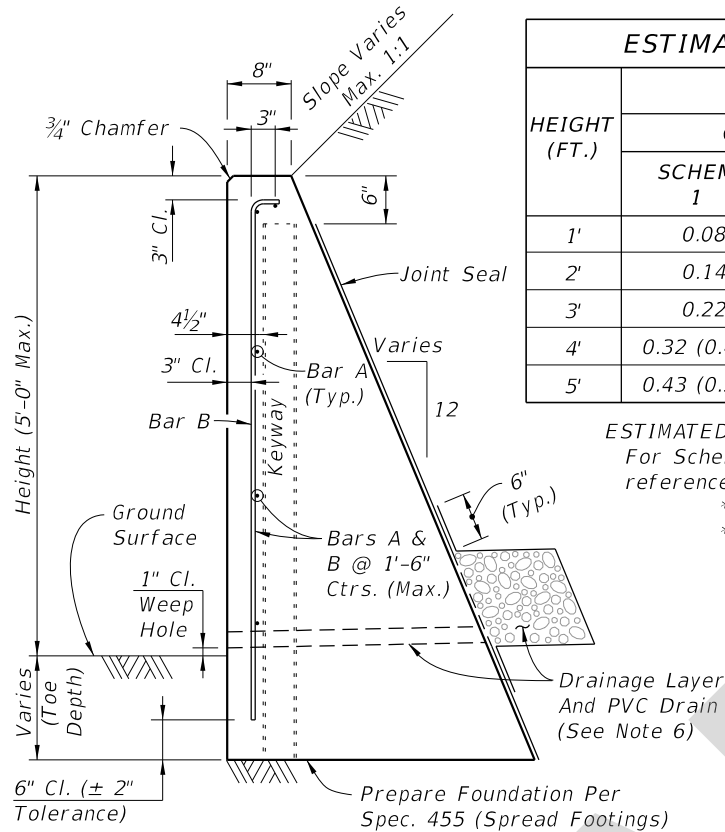
BAR A

BAR B

NOTES:
1. All bar dimensions are out to out.
2. Lap splices for Bars A must be a minimum of 1'-10".



KEYWAY & WALL JOINT DETAIL
(TOP VIEW)



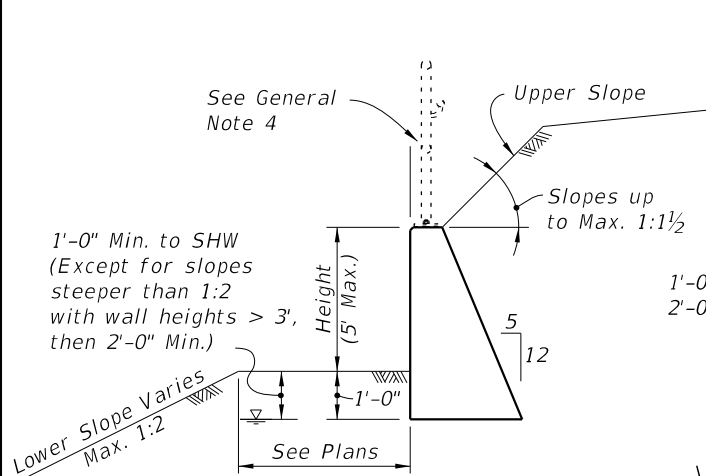
TYPICAL SECTION
C-I-P CONCRETE GRAVITY WALL

ESTIMATED QUANTITIES FOR C-I-P WALL						
HEIGHT (FT.)	PER LINEAR FOOT OF WALL			WEEP HOLES & DRAIN REQD.		
	CLASS NS CONCRETE (CY)					REINF. STEEL (LB.)
	SCHEME 1	SCHEME 2	SCHEME 3 **			
1'	0.08	0.11 (0.20*)	0.03	3 (4*)	No	
2'	0.14	0.20 (0.32*)	0.09	4 (5*)	No	
3'	0.22	0.32 (0.47*)	0.29	5 (6*)	Yes	
4'	0.32 (0.43*)	0.47 (0.65*)	0.43	6 (7*)	Yes	
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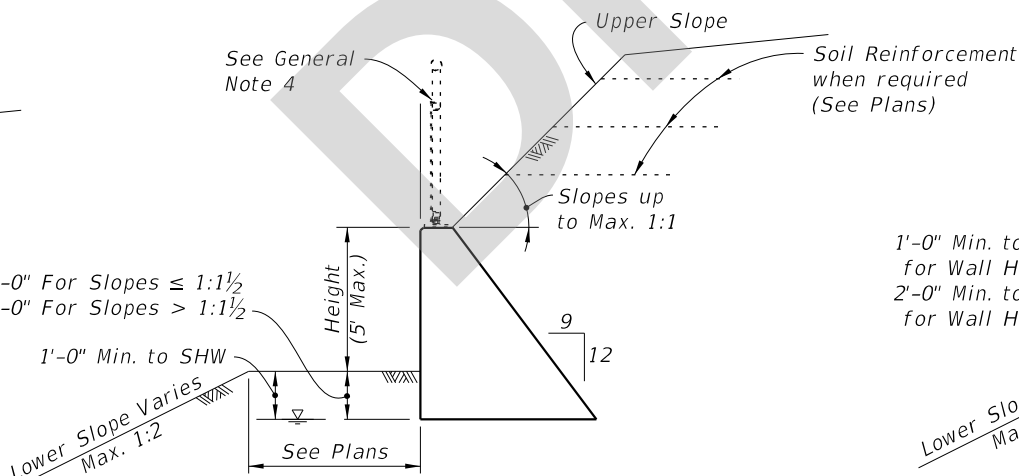
ESTIMATED QUANTITIES NOTES:
For Scheme 3 Junction Slab and Traffic Railing see the referenced Index for estimated quantities.
* Quantity for 2'-0" Toe Depth.
** Quantity for Scheme 3 assumes 1'-3" thick coping above Gravity Wall.

GENERAL NOTES

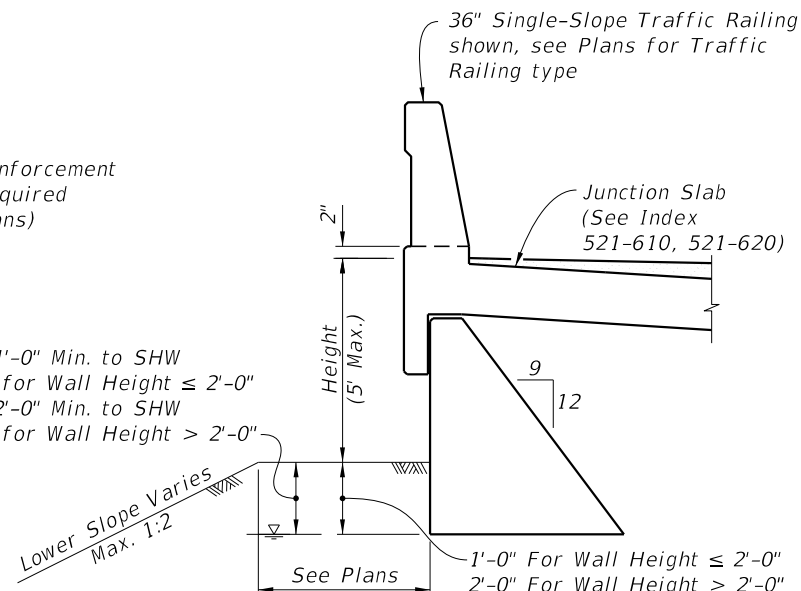
- C-I-P Gravity Walls constructed as extensions of reinforced concrete retaining walls, except for walls of proprietary designs, provide the same face texture and finish as the reinforced concrete retaining wall.
- Use Class NS Concrete for Gravity Wall per Specification 347. Concrete for Scheme 3 Junction Slab and Traffic Railing shall be Class II per Specification 346, unless otherwise specified in the plans.
- Reinforcing steel meets the requirements of Specification 931 (Grade 40 or 60). Smooth or Deformed Welded Wire Reinforcement (WWR) may be substituted on an equal area basis. Do not increase bar/wire spacing for Grade 60 reinforcing steel or WWR.
- When required, for adjunct guiderail, see Index 515-070 or 515-080 as appropriate. For adjunct Type B fence see Index 550-002.
- Joint Seal: Provide and install organic bond breaker or Type D-5 geotextile in accordance with Specifications 400 and 514 respectively. Mop all contact surfaces of concrete and Organic Felt or geotextile with cut-back asphalt. Stop Organic Felt or geotextile 6" below top of wall.
- Provide a continuous 1'x1' clean gravel or crushed rock drain for wall heights 3 ft. and higher. Wrap drainage layer as shown, with Type D-3 geotextile in accordance with Specification 514. Provide 8"x8" galvanized mesh with 1/4" openings, at the inside end of the PVC Drain Pipe. Provide 2" Ø PVC Drain Pipe (Sch. 40) at 10 ft. max. spacing (when Drainage Layer is required). Locate outermost edge of Drain Pipe a minimum of 2'-0" from wall joints.
- Cost of reinforcing steel, face texture, finish, joint seal, drain pipes, drainage layer, galvanized mesh and geotextile to be included in the Contract Unit Price for Concrete Class NS, Gravity Wall. Cost of concrete for Junction Slab in Scheme 3, to be included in Contract Unit Price for Concrete Traffic Railing Barrier With Junction Slab. Adjunct railings or fences to be paid for separately.



SCHEME 1
(No Traffic Loading Effects &
Upper Slopes ≤ 1:1½)



SCHEME 2
(With Traffic Loading or
Upper Slopes > 1:1½)



SCHEME 3
(With Traffic Railing)

BILL OF REINFORCING STEEL		
MARK	SIZE	LENGTH
A	4	As Reqd.
B	4	As Reqd.
BAR BENDING DIAGRAM		
NOTES: 1. All bar dimensions are out to out. 2. Lap splices for Bars A must be a minimum of 1'-10".		