



**STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION**

**DESIGN DIVISION**  
SUITE 1300 JAMES K. POLK BUILDING  
505 DEADERICK STREET  
NASHVILLE, TENNESSEE 37243-3848  
(615) 741-2221

**JOHN C. SCHROER**  
COMMISSIONER

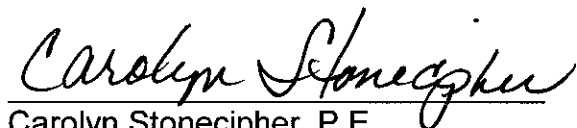
**BILL HASLAM**  
GOVERNOR

**INSTRUCTIONAL BULLETIN NO. 12-16**

**Regarding Various Revised Submission Procedures and Minor Revisions**

Effective immediately, the following sections of the Design Guidelines are revised:

- 2-127.00 is revised to correct reference to the Survey Manual
- 2-175.00 is revised to add the archive file for retaining wall submissions
- Figure 2-24 is revised to include typical design for field and residential drives.
- 3-400.15 is revised to include [TDOT.PDSO@tn.gov](mailto:TDOT.PDSO@tn.gov) to be included estimate submissions.
- 3-405.00 is revised to include Project Managers in R.O.W. Revision Notifications
- 4-140.00 is revised to include Project Managers in Construction Turn-in Notifications
- 4-140.02 is revised: to include Project Managers, the Estimating and Bid Analysis Office and Project Development and Scheduling Division in Letting Revision Notifications, to include sending the Estimate Revision Request Form in the same email as the letting revision notice, and to include special printing instruction in the email.
- Figure 4-8 is revised to include Project Managers in Construction Turn-in Notifications
- 4-140.06 is revised to include [TDOT.PDSO@tn.gov](mailto:TDOT.PDSO@tn.gov) to be included estimate submissions.
- 4-150.00 is revised to include Project Managers in Construction Revision Notifications
- 4-204.05 is revised to correct a typo
- 4-205.00 is added to explain channel excavation
- Figure 4-14 is revised to correct a typo

  
Carolyn Stonecipher, P.E.,  
Civil Engineering Director  
Design Division

August 13, 2012  
CS:ARH:MWC

## **2-127.00 SUBMITTAL OF PLANS FOR STRUCTURAL GRADE APPROVAL**

The designer in the Structures Division shall receive all the material applicable to the drainage portion of the project as specified in Section 3.11 of the Survey Manual when receiving the survey. In addition, they shall receive all the material applicable to grade separations at highway and railroad crossings as specified in Section 3.14 or 3.15 of the Survey Manual when receiving the survey. When grade approval is requested the following material shall be placed on FileNet for use by the Structures Division.

1. Floodplain sections (stream crossing)
2. Stream profiles (stream crossing)
3. Roadway and railroad profile (see Section 1-210.00)
4. Topography
  - C. See Section 3.11, 3.14 and 3.15, and the Survey Check List of the latest edition of the Survey Manual
  - B. Low girder and bridge deck elevations
  - C. Stations for each substructure
5. Complete set of full-size preliminary plans with prints of digital terrain model sheets at bridge locations

An email notification requesting structural grade approval should be sent to the Structures Division once the required materials are placed on FileNet. If a grade or alignment change is made on the project subsequent to the submission for grade approval, all revised information should be resubmitted to the Structures Division if the Design Manager determines it affects a structure. A copy of the email shall be placed in the project folder to document the submittal of structural grade approval request.

## **2-175.00 GUIDELINES FOR DETERMINING AND PROPOSING RETAINING WALLS**

For all design projects that contain retaining walls or that could potentially contain retaining walls, the responsibilities of the Design Division in relation to proposing a retaining wall design shall be as follows:

1. During the development of many roadway design projects, proposing a retaining wall is necessary due to right-of-way limitations, environmental impacts, drainage issues, or the need to reduce damage to adjacent properties. In most cases, a cost evaluation may be needed to justify a retaining wall. For those cases, the Designer should prepare a conceptual drawing in accordance with the Earth Retaining Structures Manual, Chapter 1, Section 3.0 – Conceptual Drawing Preparation. Right-of-way needs, including construction requirements, are to be clearly defined and shaded on the

conceptual drawing and the roadway plans. The conceptual drawing and plans should be emailed to the Structures Division and Right-of-Way Division for cost estimates evaluating the economics of the proposed retaining wall.

After receiving the estimates, the Design Manager and the Designer determine if the retaining wall will be cost effective. If the retaining wall is cost effective or is required for other reasons or compelling factors such as environmental considerations, continue to prepare roadway plans with the retaining wall and complete step 2, below. When environmental factors are involved it may also be necessary to coordinate with the Environmental Division.

2. The roadway plans and the conceptual drawing should be emailed to the Structures Division, Hydraulic Section (if water is involved), and the Materials and Tests Division as appropriate. The submittal package should include the standard Letter of Transmittal provided in Appendix C of the Earth Retaining Structures Manual.

The flow chart in Figure 2-21 depicts the Design Division's responsibilities with regard to determining and proposing a retaining wall.

For all proposed retaining wall submittals, a proposed retaining wall request packet shall be emailed to the appropriate Divisions. Each person listed in the CC section of the letter of transmittal should be copied on the email along with the Design Manager. A copy of the email and retaining wall packet shall be placed in the project folder to document the submittal of the retaining wall request. The proposed retaining wall packet shall consist of:

- A single .pdf file that contains the letter of transmittal (shown in Appendix C of the Earth Retaining Structures Manual), the conceptual drawing and a set of plans, as appropriate.
- A folder containing the .DGN files of the conceptual drawing, present, proposed and cross-sections compressed in a self-extracting file (.exe).

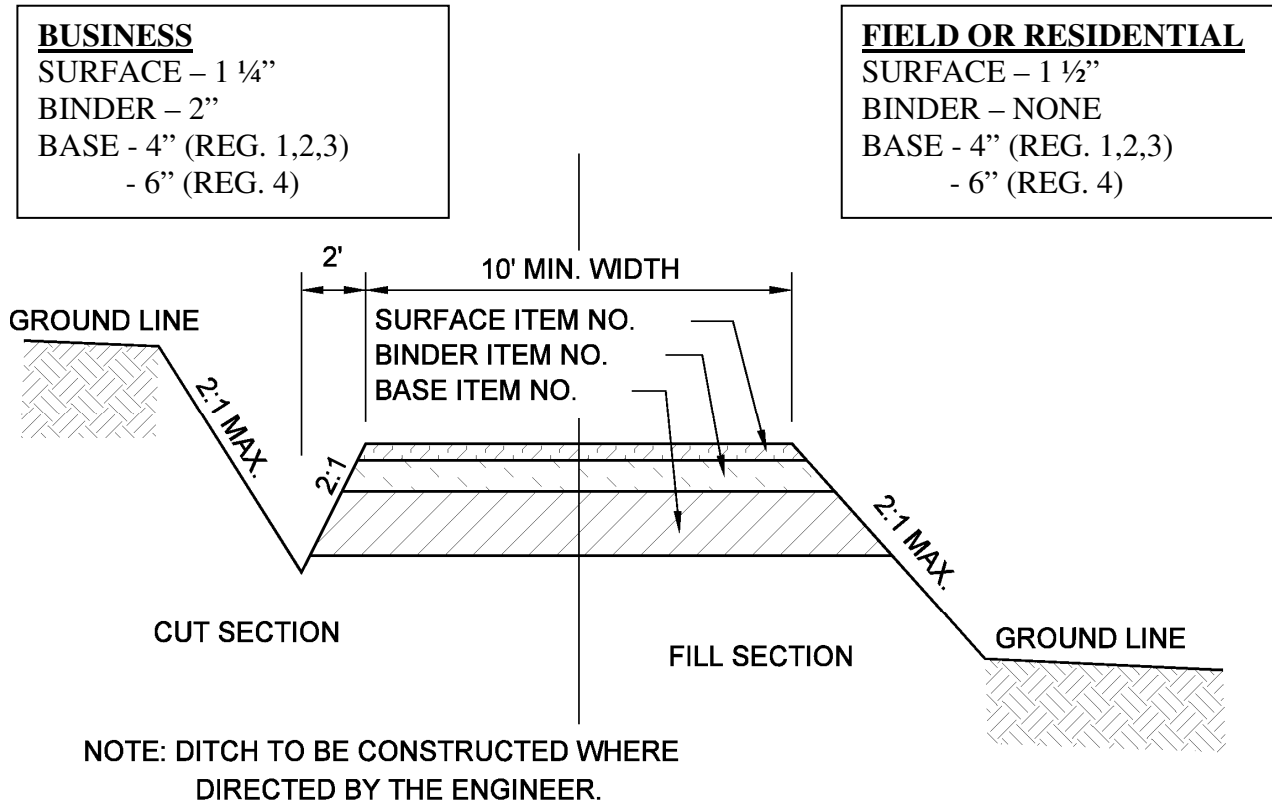
The naming convention for the proposed retaining wall request packet will include the PIN and the Region #, XXXXXX-XX-RetainingWallRequest-RegX.pdf and XXXXXX-XX-RetainingWallRequest-RegX.exe. If there are modifications, including submitting additional information, then the naming convention will be XXXXXX-XX-RetainingWallRequest-RegX-Rev-00-00-00.pdf and XXXXXX-XX-RetainingWallRequest-RegX-Rev-00-00-00.exe. Revised proposed retaining wall request will contain the packet in its entirety – i.e. letter, conceptual drawing, and plans.

When assembling the pdf file, select small file size of default file size in Adobe Acrobat Standard in order to keep the proposed retaining wall request packet under the 15MB email limit. If the file exceeds 15MB, the designer should split the packet into multiple emails and add Part 1, Part 2, etc. to the naming convention.

Example: 123456-00-RetainingWallRequest-Reg1-Part1.pdf

For the Roadway Plans prepared by consultants, the proposed retaining wall request packet should be prepared as described above and emailed to the Roadway Design Manager for review. Upon acceptance, the Design Manager will forward the package to the appropriate divisions.

The proposed retaining wall packet should be resubmitted whenever major design revisions are made that could affect other aspects of the design as determined by the Design Manager.



**Figure 2-24**  
**Typical Section Private Drive to Business, Field, or Residential Property**

**3-400.15 PRELIMINARY CONSTRUCTION QUANTITY ESTIMATES** (See 4-140.00 and 4-140.05)

A preliminary construction quantity estimate shall be prepared on all projects when the funding is requested for the Final R.O.W. Plans. The Design Manager responsible for the project will place quantity data on FileNet and send an email notification to **TDOT.Preliminary.Estimates@tn.gov** and CC to **TDOT.PDSO@tn.gov**. This submission should be done concurrently with the right-of-way funding approval request. **Projects shall not be submitted for “appraisals and acquisition” or “utilities only” until the preliminary construction quantity estimate is submitted.**

Each designer shall follow the procedure below to obtain the preliminary construction cost estimates:

1. Calculate preliminary quantities to a reasonable detail. Any known quantities which cannot be estimated (example: signal and signing quantities) should be identified and included in the email transmitted to the Estimating and Bid Analysis Office.
2. The TDOT designer or consultant shall provide the Design Manager responsible for the project a .pdf set of the plans and the preliminary construction quantities estimate data via email or CD. The estimate will contain project description information, pay item numbers, and quantities in the proper format. See Section 4-140.05 for additional information. Design managers and designers shall keep a copy of the estimate data in the project folder and a copy of the estimate file.
3. If bridges, retaining walls, or other structures designed by the Structures Division are proposed, the designer shall indicate structures are required and include the structure designer and manager on the project data portion of the estimate file. This information is necessary to insure that the structures are included in the preliminary estimate.
4. Where open-ended item numbers are used, the designer shall fill in the descriptions in the estimate data file. Where lump sum item numbers are used, description and break down of the quantities must be submitted with the estimate data file. Without completing these item descriptions, there is no way the estimator in the Estimating and Bid Analysis Office can complete the preliminary construction cost estimate.
5. Preliminary construction quantities estimates shall be updated whenever a revision to the plans is made that will significantly alter the project cost or every twelve (12) months until construction plans turn-in. In the event that no plan changes are made during the previous twelve month period, the Design Manager will resubmit the original data file with a request that the estimate be updated since the previous estimate is a year old.
6. For federal over-site projects, a preliminary estimate using the construction plans quantities shall be submitted to the Estimating and Bid Analysis Office when the plans are distributed for the construction field review. A construction estimate will still be submitted with construction plans submittal in accordance with Section 4-140.00 and 4-140.05.

**3-405.00 RIGHT-OF-WAY REVISIONS**

When a project has been submitted for right-of-way appraisals and acquisition, and a change becomes necessary anywhere on the project, a Right-of-Way Plans revision is required. All right-of-way revisions will be submitted through the Design Manager responsible for the project in an accurate and timely manner.

The Design Manager responsible for the project will upload the revised plan set to Design FileNet (See Section 1-115.00) and submit an email notification to the appropriate personnel. The email will contain the revision letter and a pdf of the revised sheets only. In the event that the pdf is larger than the 15 MB email limit, then the pdf should be broken down into smaller files and additional emails sent.

**Distribution of Right-of-Way Plans Revisions**

**The following plans revision distribution shall be sent by email for all of right-of-way revisions regardless of whether they have been let to contract or not.**

TO	EMAIL ADDRESS
Director, State Right-of-Way Division	<a href="mailto:TDOT.HQ.ROW@tn.gov">TDOT.HQ.ROW@tn.gov</a>
Appropriate Regional Right-of-Way Manager	<a href="mailto:TDOT.RG1.ROW@tn.gov">TDOT.RG1.ROW@tn.gov</a> <a href="mailto:TDOT.RG2.ROW@tn.gov">TDOT.RG2.ROW@tn.gov</a> <a href="mailto:TDOT.RG3.ROW@tn.gov">TDOT.RG3.ROW@tn.gov</a> <a href="mailto:TDOT.RG4.ROW@tn.gov">TDOT.RG4.ROW@tn.gov</a>
Environmental Division	<a href="mailto:TDOT.EnvironmentalDoc@tn.gov">TDOT.EnvironmentalDoc@tn.gov</a> <a href="mailto:Permits.Filenet.TDOT@tn.gov">Permits.Filenet.TDOT@tn.gov</a> <a href="mailto:Ecology.Plans@tn.gov">Ecology.Plans@tn.gov</a> <a href="mailto:TDOT.Historians@tn.gov">TDOT.Historians@tn.gov</a>
Design Division, Quality Assurance Office	<a href="mailto:TDOT.QualityAssurance@tn.gov">TDOT.QualityAssurance@tn.gov</a>
Railroad Coordinator (if railroad involvement)	Use individual email address*
Project Manager (if applicable)	Use individual email address

\* See Contact List at:  
[http://www.tdot.state.tn.us/Chief\\_Engineer/assistant\\_engineer\\_design/design/DesGuide.htm](http://www.tdot.state.tn.us/Chief_Engineer/assistant_engineer_design/design/DesGuide.htm)

The email subject line shall include the Region, County, State Route Number or Route Name, PIN, "ROW-Revision"

It will be the responsibility of the Right-of-Way office to print and distribute copies of the plans as needed.

#### **4-140.00 SUBMITTAL OF CONSTRUCTION PROJECT PLANS**

Final sealed and signed construction plans shall be posted onto FileNet and the Construction Plans Transmittal Letter (see Figure 4-8) shall be emailed to [Eplans.turnin.TDOT@tn.gov](mailto:Eplans.turnin.TDOT@tn.gov). (See Table 3-6 for notification to be sent to Environmental Division). For projects involving railroads shall also copy the Railroad Coordinator on the transmittal notice. For projects with oversight from a project manager, CC the transmittal notice to the individual project manager working on the project.

A copy of the Right-of-Way Title Sheet and construction plans transmittal letter shall also be attached at the front of the pdf.

The email subject line shall include the Region, County, State Route Number or Route Name, PIN, "Construction Turn-in"

If the project includes grading quantities, a pdf copy of the grading quantity calculation sheets will be emailed to [Eplans.turnin.TDOT@tn.gov](mailto:Eplans.turnin.TDOT@tn.gov).

**4-140.02 LETTING REVISIONS**

The determination of a letting revision will be made by the Headquarters Construction Office. An estimate revision may or may not require a Letting Revision. The designer should check with the Printing Services Office to see if the plans have been printed. If the plans have not been printed the revised sheets may be swapped out without formal revision.

The Design Manager responsible for the project will upload the revised plan set to Design FileNet (See Section 1-115.00) and submit an email notification to the appropriate personnel. The email will contain the Revision Letter, the Estimate Revision Request form (Figure 4-9) and a pdf of the revised sheets only. In the event that the pdf is larger than the 15 MB email limit, then the pdf should be broken down into smaller files and additional emails sent. **In the body of the email add the following note:**

**ATTENTION PRINT SHOP: 3 sets of 11" x 17" prints of the revised sheets only is requested for the HQ Construction Office. Please contact their office when the prints are ready to be picked up.**

**Distribution of Letting Plans Revisions**

<b>TO:</b>	<b>EMAIL ADDRESS</b>
Construction Division Director	<a href="mailto:TDOT.HQ.Construction@tn.gov">TDOT.HQ.Construction@tn.gov</a>
Design Division – Plans Assembly	<a href="mailto:Eplans.turnin.TDOT@tn.gov">Eplans.turnin.TDOT@tn.gov</a>
C.E. Manager 2, Design Division	Use individual email address*
Railroad Coordinator (if railroad involvement)	Use individual email address*
Environmental Division	<a href="mailto:TDOT.EnvironmentalDoc@tn.gov">TDOT.EnvironmentalDoc@tn.gov</a> <a href="mailto:Permits.Filenet.TDOT@tn.gov">Permits.Filenet.TDOT@tn.gov</a> <a href="mailto:Ecology.Plans@tn.gov">Ecology.Plans@tn.gov</a> <a href="mailto:TDOT.Historians@tn.gov">TDOT.Historians@tn.gov</a>
Printing Services Superintendent	<a href="mailto:TDOT.CopyCenter@tn.gov">TDOT.CopyCenter@tn.gov</a>
<b>Estimating and Bid Analysis Office</b>	<a href="mailto:TDOT.EstimatingOffice@tn.gov">TDOT.EstimatingOffice@tn.gov</a> <a href="mailto:TDOT.Construction.Estimates@tn.gov">TDOT.Construction.Estimates@tn.gov</a>
<b>Project Manager (If applicable)</b>	Use individual email address
<b>Project Development and Scheduling Division</b>	<a href="mailto:TDOT.PDSO@tn.gov">TDOT.PDSO@tn.gov</a>

\* See Contact List at:

[http://www.tdot.state.tn.us/Chief\\_Engineer/assistant\\_engineer\\_design/design/DesGuide.htm](http://www.tdot.state.tn.us/Chief_Engineer/assistant_engineer_design/design/DesGuide.htm)

Letting Revision Distribution for projects with the following prefixes: **I, IM, ID, NH-1, STP-1, CM-1, MA-1, IXA-1, BR-1 and DPI**; also must send the following:

- FHWA Division, Project Management Engineer W/1 set prints (half size) & 4 copies of the letter

The email subject line shall include the Region, County, State Route Number or Route Name, PIN, "Letting-Revision"

**Estimate Revisions**

An "Estimate Revision Request" form, shown in Figure 4-9, must be filled out anytime a quantity is changed after the submission of the construction estimate and/or a Letting Revision is issued. If a Letting Revision is issued but no quantities were revised the designer shall state "No Quantities Affected" in the body of the email. This information is necessary in order to maintain a current and accurate state estimate. **The completed form shall be attached to the letting revision notification email.**





STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
DESIGN DIVISION  
SUITE 1300, JAMES K. POLK BUILDING  
Nashville, Tennessee 37243-0348

JOHN C. SCHROER  
COMMISSIONER

BILL HASLAM  
GOVERNOR

**MEMORANDUM**

**TO:** [Eplans.Turnin.TDOT@tn.gov](mailto:Eplans.Turnin.TDOT@tn.gov)

**FROM:**

**DATE:**

**SUBJECT:** Project No.:  
PIN  
Description:

The following completed Construction Plan items for the referenced project are being transmitted for the \_\_\_\_\_ Letting Process.

- Original Construction Drawings ( \_\_\_\_\_ Sheets)
- Original Roadway Cross-Sections ( \_\_\_\_\_ Sheets)
- Original R.O.W. Title Sheets
- Copy Grading Quantity Sheets emailed
- Estimate e-mailed
- Resurfacing Plans ( \_\_\_\_\_ Sheets)

Plans have been placed on FileNet: Filename:  
Added On Date:

Comments:

For further information, please contact \_\_\_\_\_ Phone: ( \_\_\_\_\_ ) \_\_\_\_\_ - \_\_\_\_\_ , email:

cc: Environmental Division  
**Project Manager (if applicable)**

**Figure 4-8  
Example Construction Plans Transmittal Letter**

#### 4-140.06 SUBMITTAL OF CONSTRUCTION QUANTITIES ESTIMATES

For in-house design projects, the designer should place the completed construction estimate Excel file on FileNet at the time final plans are submitted. The Excel file shall also be emailed to: [TDOT.Construction.Estimates@tn.gov](mailto:TDOT.Construction.Estimates@tn.gov), [TDOT.EstimatingOffice@tn.gov](mailto:TDOT.EstimatingOffice@tn.gov) and CC to [TDOT.PDSO@tn.gov](mailto:TDOT.PDSO@tn.gov). A copy of the email shall be placed in the project folder to document the submittal of the construction estimate.

For consultant design projects, the completed Excel file is to be forwarded with the final construction plans to the Design Manager for submittal. Submittal may be on either CD, DVD, or via email. The manager should place the construction estimate Excel file on FileNet at the time final plans are submitted. The Excel file shall also be emailed to: [TDOT.Construction.Estimates@tn.gov](mailto:TDOT.Construction.Estimates@tn.gov), [TDOT.EstimatingOffice@tn.gov](mailto:TDOT.EstimatingOffice@tn.gov) and CC to [TDOT.PDSO@tn.gov](mailto:TDOT.PDSO@tn.gov). A copy of the email shall be placed in the project folder to document the submittal of the construction estimate.

In the subject line of the email state the following information: "County: Pin No."

The following information is also required at the time of Construction plans submittal:

1. If the project includes right-of-way removal items, the unit prices furnished by the Right-of-Way Office will be shown in the unit price column of the submitted estimate. A copy of the letter from the Right-of-Way Office stating the values of the various removal items shall be submitted to the Estimating and Bid Analysis Office. All other unit prices will be set by the Estimating and Bid Analysis Office.
2. If the project includes non-participating items, any information concerning price will be furnished to the Estimating and Bid Analysis Office.

Any and all changes to the items after submittal must be revised in accordance with the Plans and Estimates Revision guidelines. (See Section 4-140.02.)

If further information is required, please contact the Estimating and Bid Analysis Office.

**4-150.00 CONSTRUCTION REVISIONS**

When a project has been awarded to construction, and a change becomes necessary anywhere on the project, a Construction Plans revision is required. The Design Manager responsible for the project will upload the revised plan set to Design FileNet (See Section 1-115.00) and submit an email notification to the appropriate personnel. The email will contain the revision letter and a pdf of the revised sheets only. In the event that the pdf is larger than the 15 MB email limit, then the pdf should be broken down into smaller files and additional emails sent.

**Distribution of Construction Plans Revisions**

Note: A Right-of-Way Revision may also be required.

<b>TO:</b>	<b>EMAIL ADDRESS</b>
Appropriate Regional Construction Supervisor	Use individual Email address*
CE Manager 2, Design Division	Use individual Email address*
Environmental Division	<a href="mailto:TDOT.EnvironmentalDoc@tn.gov">TDOT.EnvironmentalDoc@tn.gov</a> <a href="mailto:Permits.Filenet.TDOT@tn.gov">Permits.Filenet.TDOT@tn.gov</a> <a href="mailto:Ecology.Plans@tn.gov">Ecology.Plans@tn.gov</a> <a href="mailto:TDOT.Historians@tn.gov">TDOT.Historians@tn.gov</a>
Railroad Coordinator (if railroad involvement)	Use individual email address*
Design Division, File Room	<a href="mailto:TDOT.DesignFileRoom@tn.gov">TDOT.DesignFileRoom@tn.gov</a>
<b>Project Manager (if applicable)</b>	<b>Use individual email address</b>

\* See Contact List at:

[http://www.tdot.state.tn.us/Chief\\_Engineer/assistant\\_engineer\\_design/design/DesGuide.htm](http://www.tdot.state.tn.us/Chief_Engineer/assistant_engineer_design/design/DesGuide.htm)

Construction Revision Distribution for projects with the following prefixes: **I, IM, ID, NH-1, STP-1, CM-1, MA-1, IXA-1, BR-1 and DPI**; also must send the following:

- FHWA Division, Projects Management Engineer W/1 set prints (half size) & 4 copies of the letter

The email subject line shall include the Region, County, State Route Number or Route Name, PIN, "Construction-Revision"

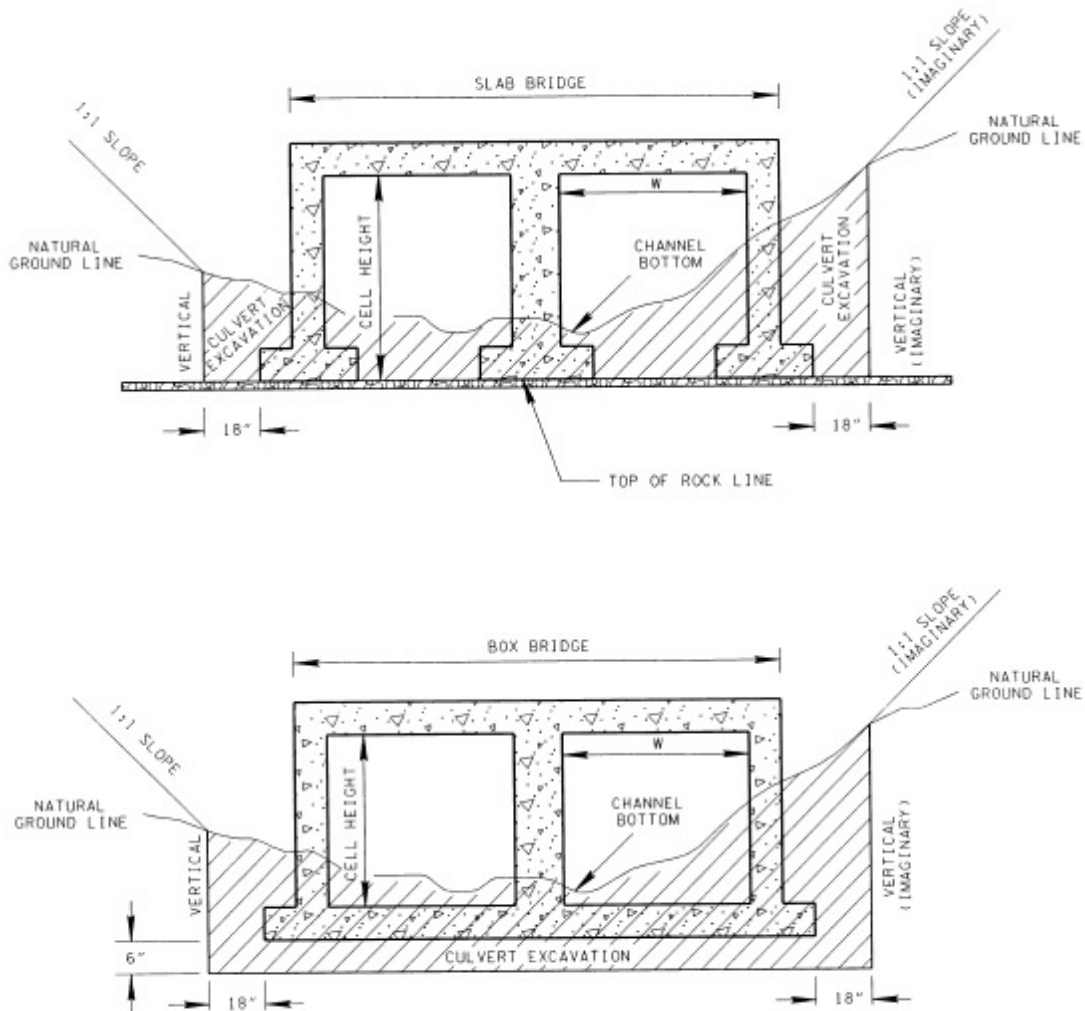
**4-204.05 EXCAVATION FOR CONCRETE BOX AND SLAB TYPE CULVERTS AND BRIDGES**

All excavation required to place a box culvert or slab bridge will be considered culvert excavation. Compute quantities of **culvert excavation** (Figure 4-14) for these structures only if directed to do so. If culvert excavation is not computed for these structures, include the following note in the plans:

"Culvert excavation for concrete box or slab type culverts or bridges will not be measured and paid for directly, but the cost will be included in the cost of other items."

**4-205.00 CHANNEL EXCAVATION**

Excavations to widen, deepen, straighten or construct new channels which have a width at the bottom of 14 feet or greater shall be paid under item 203-08 "Channel Excavation (Unclassified)." If the channel bottom is less than 14 feet wide the excavation shall be paid for as item 203-01 "Road and Drainage Excavation (Unclassified)."



**Figure 4-14**  
**Quantities of Culvert Excavation for Slab Type and Box Culverts and Bridges**