

**Geotechnical Manual**  
**Manual Notice Archive**

## **Manual Notice 2020-1**

**From:** Graham Bettis, P.E., Director, Bridge Division

**Manual:** Geotechnical Manual

**Effective Date:** July 13, 2020

### **Purpose**

This manual provides policy for geotechnical investigation and design for project development.

### **Contents**

The revisions contained in each chapter of this version are to clarify the policy and high-level procedures published in 2018. Generally, revisions to the manual were to:

- ◆ Update information in Chapter 2 regarding investigation around suspected karst formations, and provide more guidance when recording groundwater elevations during drilling operations.
- ◆ Make minor changes to the laboratory testing protocol for shear strength determination in Chapter 2.
- ◆ Update procedure in Chapter 3 on ‘Drill Hole Filling’ with current standard practices using mix of bentonite and/or grout.
- ◆ Include limits of any needed Temporary Special Shoring in Retaining Wall layouts standard specifications which would apply to Temporary Special Shoring in Chapter 6.
- ◆ Eliminate prior soil parameter assumptions on nailed embankments to account for independent analysis of wall systems in Chapter 6.
- ◆ Highlight in Chapter 6 the importance of utilizing proper parameters in the RW(MSE)DD sheet to standardize design.
- ◆ Update the minimum criteria for nail diameters in rock nailed walls section in Chapter 6.
- ◆ Provide greater clarification in Chapter 7 that global stability design factors of safety should be at minimum 1.3 and 1.5.

Chapter 5 underwent significant revisions and updates, which include:

- ◆ geologic layer terminology clarification in Sections 1 and 2;
- ◆ updating guidance for Scour Summary Sheet and submission of Form 2605 into the bridge inspection system;
- ◆ updating method for calculating scour at bridge channels including reference to NCHRP reports;

- ◆ updating the scour guidance at bridge class culverts.

### **Supersedes**

The revised manual supersedes prior versions of the manual.

### **Contact**

For more information about any portion of this manual, please contact the TxDOT Bridge Division.

### **Archives**

Past manual notices are available in a [PDF archive](#).

## **Manual Notice 2018-1**

**From:** Gregg A. Freeby, P.E., Director, Bridge Division

**Manual:** Geotechnical Manual

**Effective Date:** March 01, 2018

### **Purpose**

This manual provides guidance to districts in geotechnical investigation and design for project development.

### **Contents**

The revisions contained in each chapter of this version are to clarify the policy and high-level procedures published in 2012. Generally, revisions to the manual were to:

- ◆ update information in Chapter 3 regarding Standard Penetration Testing design methodologies;
- ◆ make minor editorial changes to Chapter 4;
- ◆ make editorial changes to the design requirements for various retaining walls in Chapter 6; and
- ◆ provide clarification on the infinite slope analysis in Chapter 7.

Chapter 5 underwent significant revisions and updates, which include:

- ◆ adding an upper limit to the skin friction and point bearing graphs for Texas Cone Penetration values harder than 100 blows/12 inches;
- ◆ updating the maximum allowable service load table for drilled shafts to include larger diameters;
- ◆ adding new sections on drilled shaft reinforcement, drilled shaft integrity testing, dynamic monitoring, and foundation load testing;
- ◆ clarifications to the layout notes for drilled shafts;
- ◆ updating the scour section to include new bridges with known foundations, existing bridges with known foundations, existing bridges with unknown foundations, bridge class culverts, and scour critical bridges; and
- ◆ adding a new section on stone protection at bridges.

### **Supersedes**

The revised manual supersedes prior versions of the manual.

## **Contact**

For more information about any portion of this manual, please contact the TxDOT Bridge Division.

## **Archives**

Past manual notices are available in a [PDF archive](#).

## **Manual Notice 2012-1**

**From:** Gregg A. Freeby, P.E.  
Director, Bridge Division

**Manual:** Geotechnical Manual

**Effective Date:** December 01, 2012

### **Purpose**

This manual provides guidance to districts in geotechnical investigation and design for project development.

### **Contents**

The revisions contained in each chapter of this version are to clarify the policy and high-level procedures originally published in 2006.

### **Contact**

For more information about any portion of this manual, please contact the TxDOT Bridge Division.

### **Archives**

Past manual notices are available in a [pdf archive](#).

## **Manual Notice 2006-1**

**From:** William R. Cox, P.E.

**Manual:** Geotechnical Manual

**Effective Date:** August 01, 2006

### **Purpose**

The purpose of this manual is to guide the districts in conducting geotechnical investigation and design for project development.

### **Changes**

This revision restructures the manual to include and update policy and high-level procedures.

Recommendations, examples, and background information are now available on the Internet at <http://www.dot.state.tx.us/services/bridge/>.

### **Contact**

For more information about this update, contact the Bridge Division.

### **Archives**

Past manual notices are collected in a [pdf archive](#).

# Manual Notice 2000-1

To: All Districts and Divisions

From: Kirby W. Pickett, P.E.

Functional Manual: Geotechnical Manual

Effective Date: August 29, 2000

## **Purpose**

This manual is intended to guide the districts in performing geotechnical investigation and design for project development.

## **Contents**

The manual contains nine chapters – Field Surveys, Field Operations, Soil and Bedrock, Classification and Logging, Engineering Properties of Soil and Rock, Foundations Design, Retaining Walls, Slope Stability, Laterally Loaded Foundations, and Design Examples.

## **Instructions**

This manual supersedes the previous *Foundation Exploration and Design* Manual.

## **Contact**

For more information regarding any chapter or section in this manual, please contact the Bridge Division Geotechnical Section.