

Item No. 621S
Diversion (Temporary)

621S.1 Description

This item shall govern providing and placing earthen berms, channels or a combination thereof along such areas as indicated on the Drawings in accordance with these specifications and Standard Detail No. 621S-1, "Diversion". This method shall only be used during construction and its purpose shall be to temporarily control soil loss by intercepting and conveying the runoff to a stable outlet. This item shall also include the subsequent removal of the diversion device and re-vegetation of the area.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text, the inch-pound units are given preference followed by SI units shown within parentheses.

621S.2 Submittals

The submittal requirements for this specification item shall include:

- A. Characteristics (LL, PI, maximum density, etc.) of proposed embankment material,
- B. Identification of the type, source, mixture, pure live seed (PLS) and rate of application of the seeding,
- C. Type of mulch,
- D. Type of tacking agent, and
- E. Type, chemical analysis and rate of application of fertilizer.

621S.3 Materials

A. Berm

The berm shall consist of earthen materials conforming to Standard Specification Item No. 130S, "Borrow", Class A and shall be free of brush, debris and stones larger than 6 inches (150 mm). The liquid limit (LL) of the borrow material shall not exceed 45 and the plasticity index (PI) shall not exceed 15 (TxDoT Test Methods Tex 103-E, Tex-104-E and Tex-106-E).

B. Seeding

Seeding shall conform to Standard Specification Item No. 604S, "Seeding for Erosion Control".

621S.4 Construction Methods

Diversion shall not be used where the slope of existing ground exceeds 15 percent.

All brush, stumps and debris shall be removed from the diversion area before construction. Diversion berms shall be constructed to the height and length indicated or as directed by the Engineer or designated representative. The height shall include a minimum of 1-foot (0.3 meter) freeboard above the design high water elevation. The berms shall have a minimum

width of 4 feet (1.2 meters) at the top with maximum side slopes of 3:1 unless otherwise specified by the Engineer or designated representative.

The earthen material shall be placed in successive 6-inch (150 mm) layers and compacted by rolling with construction equipment or other approved methods to provide not less than 95 percent of the maximum dry density as determined in accordance with TxDOT Test Methods Tex-114-E and Tex-115-E. The top 4 inches (100 mm) shall only be compacted to 85 percent of the maximum density to facilitate seeding. Berms, channels and any area disturbed shall be seeded. Seeding shall conform to Item No. 604S, "Seeding for Erosion Control", except that topsoil will not be required on the berm.

Berms and channels shall be maintained and silt accumulation removed when necessary or as directed by the Engineer or designated representative. After completion of construction or when directed by the Engineer or designated representative, the berm and channel shall be removed and the site restored either to its natural condition, to the lines and grades indicated on the Drawings or as determined by the Engineer or designated representative.

621S.5 Measurement

The work performed and the materials furnished as prescribed by this item will be measured by the lineal foot (lineal meter: 1 meter equals 3.281 feet) of diversion, complete in place.

621S.6 Payment

The work performed and materials furnished and measured as provided under "Measurement" will be paid for at the unit bid price per lineal foot for Diversion as indicated on the Drawings. The unit bid price shall include: a) full compensation for furnishing, hauling and placing all materials; b) all labor, tools, seeding, equipment and incidentals needed to complete the work, c) any repair, replacement and seeding of materials to maintain the Diversion d) removal and disposal of all materials at the completion of construction and e) reseeding the areas disturbed by the removal of the temporary Diversion.

Payment will be made under:

Pay Item No. 621S: Diversion - Per Lineal Foot.

End

<i>SPECIFIC</i> CROSS REFERENCE MATERIALS	
Specification Item 621S "Diversion (Temporary)"	

City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 130S	Borrow
Item No. 604S	Seeding for Erosion Control
Item No. 606S	Fertilizer

City of Austin Standard Details

<u>Designation</u>	<u>Description</u>
No. 621S-1	Diversion

SPECIFIC CROSS REFERENCE MATERIALS (Continued)

Texas Department of Transportation: Manual of Testing Procedures

<u>Designation</u>	<u>Description</u>
Tex-103-E	Determination of Moisture Content of Soil Materials
Tex-104-E	Determination of Liquid Limit of Soils
Tex-105-E	Determination of Plastic Limit of Soils
Tex-106-E	Method of Calculating the Plasticity Index of Soils
Tex-114-E	Laboratory Compaction Characteristics and Moisture-Density Relationship of Subgrade & Embankment Soil
Tex-115-E	Field Method for Determination of In-Place Density of Soils and Base Materials

RELATED CROSS REFERENCE MATERIALS

City of Austin Land Development Code

<u>Designation</u>	<u>Description</u>
Chapter 25	Drainage
Section 25-7-61	Criteria for Approval of Plats, Construction Plans, And Site Plans
Section 25-7-61 (A) (4)	"temporary and permanent measures to control erosion...."
Section 25-7-65	Fiscal Security
Article 5	Erosion and Sedimentation Control; Overland Flow
Section 25-8-181	Erosion and Sedimentation Control
Section 25-8-182	Development Completion
Section 25-8-183	Modification of Erosion Control and Construction Sequencing Plans
Section 25-8-323	Temporary Storage Areas; Topsoil Protection
Section 25-8-341 (B)	"A cut must be restored and stabilized"
Section 25-8-342 (B)	"A fill must be restored and stabilized"

City of Austin Environmental Criteria Manual

<u>Designation</u>	<u>Description</u>
Section 1.4.0	Erosion and Sedimentation Control Criteria
Section 1.4.1	Introduction
Section 1.4.1.2	Project Management
Section 1.4.2	Temporary Structural Practices
Section 1.4.2.B	Diversion, Interceptor and Perimeter Dikes

City of Austin Standard Specifications

<u>Designation</u>	<u>Description</u>
Item No. 101S	Preparing Right of Way
Item No. 102S	Clearing and Grubbing
Item No. 111S	Excavation
Item No. 132S	Embankment
Item No. 201S	Subgrade Preparation
Item No. 601S	Salvaging and Placing Topsoil
Item No. 605S	Soil Retention Blanket
Item No. 607S	Slope Stabilization

City of Austin Standards (Details)

<u>Standard No.</u>	<u>Description</u>
No. 627S-1	Grass Lined Swale
No. 627S-2	Grass Lined Swale W/ Stone Center
No. 633S-1	Landgrading

RELATED CROSS REFERENCE MATERIALS (Continued)
 Specification Item 621S "Diversion (Temporary)"

Texas Department of Transportation: Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges

<u>Designation</u>	<u>Description</u>
Item No. 100	Preparing Right of Way
Item No. 110	Excavation
Item No. 160	Furnishing and Placing Topsoil
Item No. 164	Seeding for Erosion Control
Item No. 166	Fertilizer
Item No. 168	Vegetative Watering
Item No. 169	Soil Retention Blanket