



2-12 SPECIAL DESIGN EARTH RETAINING SYSTEMS NUMBERING

The Structure Numbering System for Special Design Earth Retaining Systems (ERS) is used to identify permanent ERS under the jurisdiction of the Department of Transportation. The assignment of Structure Numbers to ERS ensures that the as-built plans and working drawings are archived for future reference in the Bridge Inspection Records Information System (BIRIS).

The ERS structure number consists of three parts:

1. County Identification Field

This is a two digit number from 01 through 58 designating the County where the structure is located.

2. Earth Retaining System Suffix

This is the alpha character “E” that follows the County number designating the structure as an Earth Retaining System; e.g. 24EXXXXX. The “E” replaces the customary “dash”.

3. Structure Number Field

This is a four digit number assigned to each unique structure.

Special Design ERS are defined as those which do not adhere to the Standard Plan details due to site specific requirements such as structure height, surcharge loading, utility openings, geology, etc. These systems include but are not limited to:

1. Anchored Diaphragm walls including those under existing abutments
2. Experimental wall types
3. Mechanically Stabilized Embankments (MSE)
4. Micropile walls
5. Proprietary ERS (various types)
6. Special design repairs to any type of ERS including those originally built from Standard Plans
7. Secant walls
8. Soil Nail walls
9. Soldier Pile walls with or without ground anchors
10. Standard Plan walls with modified foundations, footings, wall stems, batter, added ground anchors, utility openings, etc.



11. Tangent walls

12. Walls using Standard Detail (XS) sheets with or without modifications

Information pertaining to ERS designed according to the Standard Plans can easily be extracted from the appropriate Standard Plans; therefore they do not receive structure numbers. However, special design ERS require access to the actual as-built plans and working drawings for repairs and modifications.

Structure numbers are to be requested when it is certain that the ERS are to be included in the project, but not at the Advanced Planning Study (APS) phase when the ERS are being contemplated and the ultimate alignment and structure types have not yet been identified. The Structure Project Engineer (PE) shall request the structure numbers for special design ERS at the Structure Plans and Quantities (P&Q) phase of the project. The Structure PE must send an email request, including the attached structure number request form (ERSBrNo.pdf) and the General Plan to the ERS Technical Specialist when seeking a structure number for all Special Design ERS. It is essential that complete and accurate notes be included in the structure number request form for inclusion in the ERS database. A separate request form is required for each ERS included in the project.

For oversight projects, the Structure Liaison Engineer shall request the structure number on behalf of the Consultant.

When a single special design ERS incorporates several structure types, only one (1) structure number is required.

In the event that a special design ERS is substituted for a Standard Plan wall through a Value Engineering Cost Proposal (VECP), changed site conditions, new alignment, etc., the Structure PE must also request a structure number.

Original signed by Barton J. Newton

Barton J. Newton

State Bridge Engineer

Deputy Division Chief, Structure Policy & Innovation

Division of Engineering Services