



Facilitating Acceptance with ICC-ES Certification

Presented by: Michael Temesvary, P.E. (ICC-ES)

Steel Frame Experience

October 31, 2024



International Code Council (ICC)

An industry association for building code officials and others interested in building safety.

The developer and publisher of the International Codes, such as the IBC.

A family of companies serving code officials and others interested in building safety.



Alliance for
National & Community
Resilience®

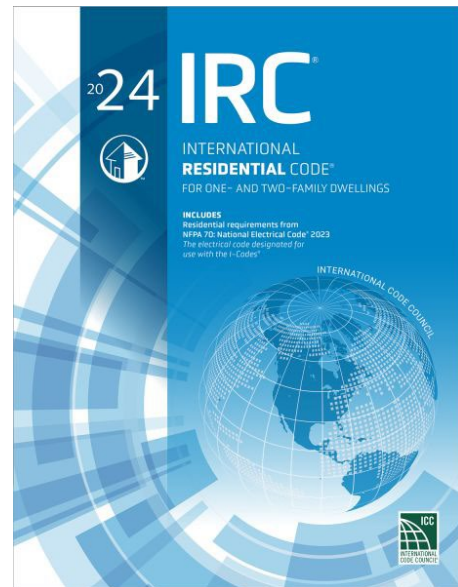
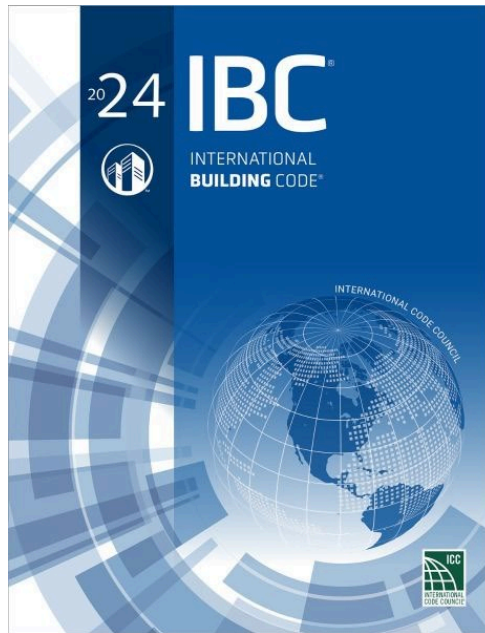


Model Building Codes

ICC publishes model building codes including the International Building Code® (IBC) and the International Residential Code® (IRC).

These codes are not legal requirements until they are adopted by the authority having jurisdiction (AHJ).

The AHJ may make modifications and additions to the model code when adopting it.



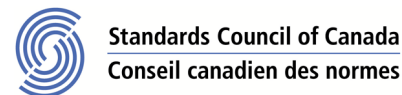
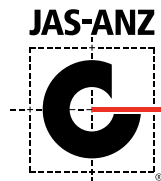
ICC Evaluation Service (ICC-ES)

A subsidiary of the International Code Council.

The leader in evaluating building products against the requirements of the I-Codes.

An ISO/IEC 17065 accredited certifying body.

A one stop shop for clients, offering testing services at our ISO/IEC 17020 accredited laboratories.



ICC-ES Global Regions

- North America (US, Canada)
- South America (Argentina, Brazil, Chile, Ecuador, Peru, Uruguay)
- MENA (Middle East/North Africa)
- Oceania (New Zealand, Australia)



Alliances

ICC-ES has established a number of alliances and relationships (MoU agreements) with other product evaluation bodies and organizations to better serve its customers, including the World Federation of Technical Assessment Organisations. Leveraging these relationships allows ICC-ES to streamline processes, add more value to customers and bridge code conformity gaps that product manufacturers face when seeking building product certification:



ICC-ES Programs

- Evaluation Service Reports (ESRs): Serve as evidence that building products, components, methods, and materials meet code requirements
- Evaluation Service Listing (ESL): Products are evaluated to standards referenced in the codes



ICC-ES Programs (cont.)

- Plumbing, Mechanical and Gas (PMG) Listings: Demonstrate conformance to the standards referenced in the I- Codes® as well as the UPC, UMC and National Plumbing Code of Canada
- Environmental Programs: Provide manufacturers with independent and comprehensive verification and/or certification that their products meet specific sustainability (green) targets (e.g., WaterSense, Energy STAR, formaldehyde emissions)



Testing, Inspection and Certification

Comprehensive Testing Services: ICC-ES offers comprehensive testing services and can also accept ILAC-recognized tests.

- ✓ Air/Water/Structural Testing
- ✓ Benchmark Testing
- ✓ Comparative Testing
- ✓ Fire/Flammability
- ✓ Floor Assembly
- ✓ Florida Product Approval (Miami-Dade Hurricane Testing)
- ✓ HUD Assemblies
- ✓ Polymers & Plastics Testing
- ✓ Plumbing
- ✓ Product Performance Testing
- ✓ Prototype Testing
- ✓ Quality Assurance Testing
- ✓ Structural Assembly Performance
- ✓ Termite Resistance
- ✓ Wall Assembly
- ✓ Water Resistance
- ✓ Weathering/Erosion



Product Certification

- Review of products against a standard, a criteria, or a code to ensure continuous compliance of products
- Certification steps include review of products, periodic inspection of plants (by an ISO/IEC 17020 accredited inspection agency), periodic review of submitted information against new or revised standards

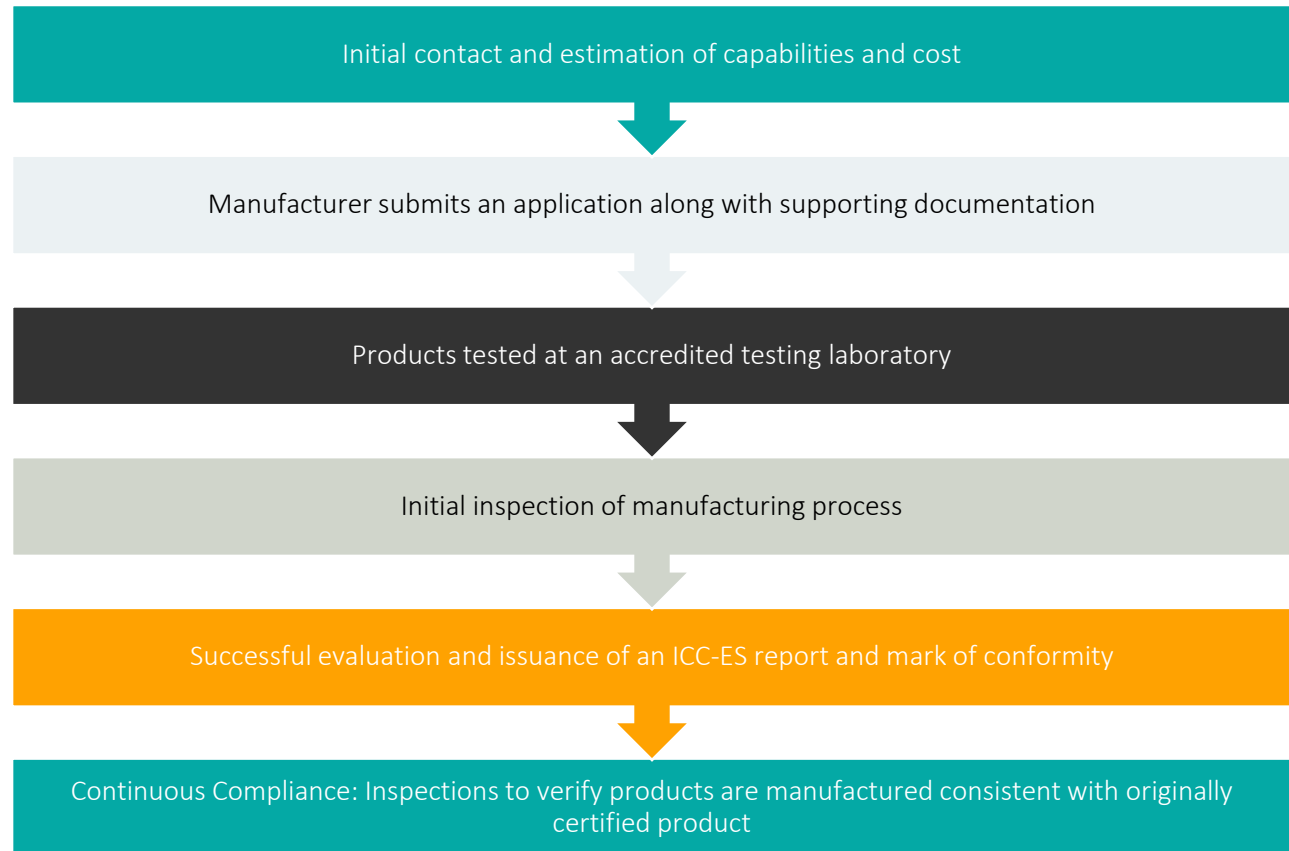


Inspection

Inspection of the manufacturing plants ensures that the product that was once deemed as compliant continues to comply.



Product Certification Process



Qualification Data

Test Reports – Typically must be from an accredited third-party laboratory (not the manufacturer)

Calculations – Must be sealed

Engineering Analyses – Must be sealed



ICC-ES TEST REPORT

Connector Testing per ASTM D7147

RENDERED TO: ABC Manufacturing, Inc.
123 Main St
Anytown, IN 12345

PRODUCT: Tradename® Connectors



Report No.: ABC071524-45(R0)
Test Date(s): 09/02/2024 - 09/06/2024
Report Date: 09/13/2024
Pages: 15

Quality Documentation

Documents used at a manufacturing facility to ensure consistent quality of products

Quality control manuals (QCMs), product drawings, control plans

Controlled – unique identifier, date

AC10 – our AC for Quality Documentation

The image shows a tilted representation of a quality control document. At the top, the header reads 'Levy Manufacturing' followed by the address '1234 Industrial Blvd. Nowhere, Texas 99999', phone '(555) 999-1234', and contact person 'Contact person: Joe Shmoe'. Below this, the title 'Quality Control Manual' is prominently displayed. Underneath the title, there is a line for a signature and a date stamp that reads 'September 25, 2024'. The main body of the image is a 'RECORD OF REVISIONS' table. The table has four columns: 'Revision date', 'Description of Revisions', 'Approved by', and 'PARTIES TO BE NOTIFIED'. The table is currently empty, showing only the header rows. Below the table, the section '1. SCOPE/PURPOSE' is visible, followed by a paragraph explaining the purpose of the manual: 'The purpose of this manual is to establish the Quality Management System used by Levy Manufacturing to assure the manufacturing consistence and maintenance of continued compliance of the products covered. This manual shall define among the manufacturing processes, sampling methods, product specifications, the manufacturing practices and all other pertinent details.'

Levy Manufacturing
1234 Industrial Blvd.
Nowhere, Texas 99999
(555) 999-1234
Contact person: Joe Shmoe

Quality Control Manual

September 25, 2024

Revision date	Description of Revisions	Approved by	PARTIES TO BE NOTIFIED

1. SCOPE/PURPOSE

1.1. The purpose of this manual is to establish the Quality Management System used by Levy Manufacturing to assure the manufacturing consistence and maintenance of continued compliance of the products covered. This manual shall define among the manufacturing processes, sampling methods, product specifications, the manufacturing practices and all other pertinent details.

ICC-ES Mark of Conformity

- Inspectors look for ICC-ES marks prior to approving installation where the code or other criteria requires conformity to a standard.
- The ICC-ES mark means that the product has undergone a rigorous evaluation (including testing and inspection) and successfully received a report as proof



Benefits of having an ICC-ES Evaluation Report (ESR) to a Code Official

- Provides the necessary evidence a code official can review to determine whether a product complies with codes and standards
- Avoids otherwise required departmental time/resources to ensure compliance
- Speeds permitting review
- Expedites approval by code officials

ESRs are freely accessible for building departments and the general public.

The image shows a screenshot of an ICC-ES Evaluation Report (ESR-2093) for Cold-Formed Steel Framing Members. The report is issued by ICC Evaluation Service, LLC. It includes a table with the following information:

DIVISION: 05 00 00—METALS	REPORT HOLDER: SCOTSDALE CONSTRUCTION SYSTEMS	EVALUATION SUBJECT: COLD-FORMED STEEL FRAMING MEMBERS
Section: 05 40 00—Cold-Formed Metal Framing		
Section: 05 41 00—Structural Metal Stud Framing	ADDITIONAL LISTEE: DVELE OMEGA	
Section: Cold-Formed Metal Joist Framing		
Section: 05 44 00—Cold-Formed Metal Trusses		

Below the table, the report includes sections for 1.0 EVALUATION SCOPE, 2.0 USES, and 3.0 DESCRIPTION. The 3.0 DESCRIPTION section includes a table with the following information:

3.1 General:
Member designations are provided in Table 1. Also, see Figure 1.

The 3.2 Material section includes the following text:

The framing members are cold-rolled from steel coils complying with ASTM A 1003 Structural Grade 50, Type H (ST50H), or ASTM A 653 SS Grade 50 Class 1, or ASTM A 1039 SS Grade 70. The members have minimum G60 coating.

Code Official

Manufacturer

Designer

A Trusted Source for Manufacturers and Code Officials

ICC-ES Evaluation Reports Streamline Approvals in a Growing Number of Jurisdictions

CALIFORNIA

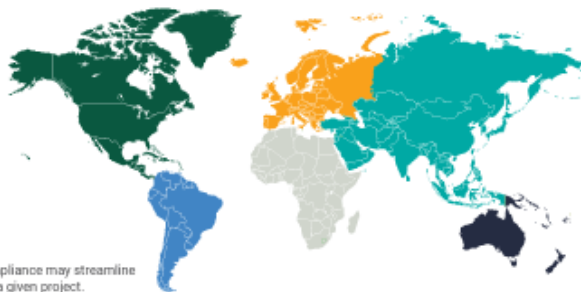
- California State Fire Marshal for Inspections and Labeling
- DSA¹/OSHPD/HCAI
- City of Los Angeles
- Los Angeles County
- San Diego County
- San Francisco County

NORTH AMERICA

- US EPA (EnergyStar, WaterSense, TSCA Title VI)
- Oregon
- Washington
- Las Vegas (Clark County)
- Ohio Department of Transportation
- Florida
- New York
- Chicago
- Mexico – for regulated NOMs
- Canadian Provinces and Territories

INTERNATIONAL

- South America
- Central America
- New Zealand
- Australia
- Korea
- Kingdom of Saudi Arabia
- Dubai Municipality
- UAE Civil Defense



¹ Evaluation reports showing assessment of a product for CBC compliance may streamline DSA review and acceptance of the product for a specified use on a given project.



Code Officials accept ICC-ES Reports because they streamline approvals

Benefits of an ICC-ES Evaluation Report to the Manufacturer

- **Key to entering U.S. marketplace for domestic and foreign manufacturers**
- Evidence to prove product complies with codes and standards
- ICC brand backing the code compliance of the product
- Reduces regulatory barriers and allows new and innovative products to be used in construction projects
- Competitive advantage



ICC-ES Evaluation Report

ESR-2093

Reissued August 2023

Revised June 2024

Subject to renewal August 2025

This report also contains:

- CBC Supplement

- FBC Supplement


- SBC Supplement

See [ESR-2093-AU](#) for Australian Codes

See [ESR-2093-NZ](#) for New Zealand Codes

ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.

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DIVISION: 05 00 00—METALS Section: 05 40 00—Cold-Formed Metal Framing Section: 05 41 00—Structural Metal Stud Framing Section: Cold-Formed Metal Joist Framing Section: 05 44 00—Cold-Formed Metal Trusses	REPORT HOLDER: SCOTTSDALE CONSTRUCTION SYSTEMS ADDITIONAL LISTEE: DVELE OMEGA	EVALUATION SUBJECT: COLD-FORMED STEEL FRAMING MEMBERS 
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1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018, and 2015 *International Building Code* (IBC)
- 2021, 2018, and 2015 *International Residential Code* (IRC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)*

*The ADIBC is based on the 2009 IBC as referenced under the ADIBC.

Property evaluated:

- Structural

2.0 USES

The cold-formed steel framing members are used for top and bottom chords of trusses in load-bearing roofs and floors.

3.0 DESCRIPTION

3.1 General:

Member designations are provided in Table 1. Also, see [Figure 1](#).

3.2 Material:

The framing members are cold-rolled from steel coils complying with ASTM A 1003 Structural Grade 50, Type H (ST50H), or ASTM A 653 SS Grade 50 Class 1, or ASTM A 1039 SS Grade 70. The members have minimum G60 coating.

ICC-ES product certification can help drive product sales

Report holders may use the mark of conformity and/or Promotional Use electronic display of conformity on any of their marketing material to show customers and code officials that their product has been evaluated to the strictest of standards.


Some examples might be print magazines, digital ads, product webpages, and social media.



An advertisement for Scottsdale Steel Frames. The top section features the company logo 'SCOTTSDALE' in green and white, with the tagline 'THE TRUSTED STEEL-FRAMING PARTNER' below it. To the right is the ICC-ES logo with the text 'ICC EVALUATION SERVICE'. Below these are logos for SRIA, AISC, and CE. A silhouette of various world-famous bridges and buildings spans the width of the ad. The main body of the ad is dark green with white text that reads: 'Check out our latest ICC-ES code approvals!', followed by a list of codes: 'IBC / IRC | FBC / FRC (HVHZ) | CBC / CRC', and locations: 'Australia | New Zealand | Saudi Arabia | Abu Dhabi'. Below this, it says 'Global reach. The latest building codes. World's most advanced steel-framing technology.' The bottom of the ad includes the phone number '1 (888) 208-4060' and the email 'sales@scottsdalesteelframes.com'. On the right side, there is a vertical inset photograph showing a close-up of a steel truss structure.

What's in an ICC-ES Evaluation Report

1. **QR Code**- Easy access to digital report online
2. **CSI Division Number**- ICC-ES Evaluation Reports, and the building products represented in them, are organized according to the Construction Specifications Institute's (CSI) Masterformat system.
3. **Report Holder**- The name, address, and logo of the company or organization that has applied
4. **Evaluation Subject**- The specific product(s) covered by the report.
5. **Evaluation Scope**- The code(s) that were used to evaluate the product.
6. **Properties Evaluated**- A brief description of the properties the product was evaluated against such as fire resistance and wind resistance. This section also shows if the product can be used for structural purposes.
7. **Uses**- Identifies the scope of the ICC-ES Evaluation Report and relates the product evaluated to code provisions.
8. **Description**- Provides a general description of the product and its features, such as length, thickness, etc.



ICC-ES Evaluation Report


ESR-0000



Issued March 2023 This report also contains:
- CBC Supplement
- LABC Supplement

Subject to renewal March 2024

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2 DIVISION: 03 00 00— CONCRETE Section: 03 16 00— Concrete Anchors DIVISION: 05 00 00— METALS Section: 05 05 19—Post- Installed Concrete Anchors	3 REPORT HOLDER SAMPLE, INC. 	4 EVALUATION SUBJECT: SAMPLE SCREW ANCHORS FOR USE IN CRACKED AND UNCRAKED CONCRETE	 1
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5 1.0 EVALUATION SCOPE
Compliance with the following codes:
■ 2021, 2018, 2015 [International Building Code® \(IBC\)](#)
■ 2021, 2018, 2015 [International Residential Code® \(IRC\)](#)
For evaluation for compliance with codes adopted by the [Los Angeles Department of Building and Safety \(LADBS\)](#), see [ESR-0000 LABC and LARC Supplement](#).

6 Property evaluated:
Structural

7 2.0 USES
The Sample screw anchors are used as anchorage in cracked and uncracked normal-weight and lightweight concrete having a specified strength, f'_c of 2,500 psi to 8,500 psi (17.2 MPa to 58.6 MPa); to resist static, wind and seismic (Seismic Design Categories A through F) tension and shear loads.
The Sample screw anchors are an alternative to anchors described in Section 1901.3 of the 2021, 2018 and 2015 IBC. The anchors may also be used where an engineered design is submitted in accordance with Section R301.1.3 of the IRC.

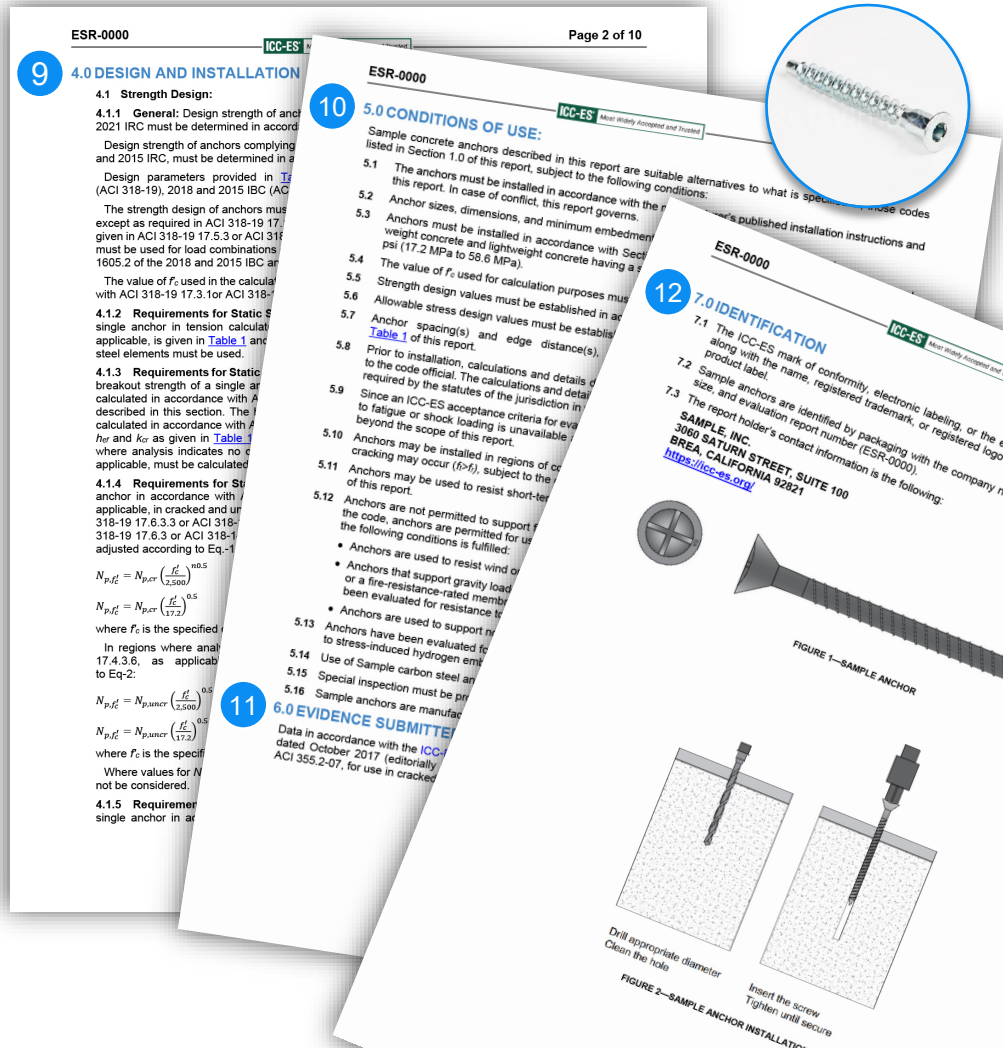
8 3.0 DESCRIPTION
3.1 Sample screw anchors
The Sample screw anchors are comprised of a body with hex washer head. The anchor is manufactured from carbon steel and is heat-treated. The anchoring system is available in a variety of lengths with nominal diameters of 3/8-inch and 1/2-inch. The Sample screw anchor is illustrated in [Figure 1](#).
3.2 Concrete:
Normal-weight and lightweight concrete must conform to Sections 1903 and 1905 of the IBC.



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What's in an ICC-ES Evaluation Report

9. **Design and Installation-** Identifies general and often specific requirements to help the inspector ensure the product is installed properly according to the code requirements or acceptance criteria.
10. **Conditions of Use-** Statement that the product, as described in the ICC-ES Evaluation Report, complies with or is a suitable alternative to the requirements of the applicable code and a list of conditions under which the report is issued
11. **Evidence Submitted-** Data (i.e. test reports, calculations, installation instructions) that was used in evaluating the product.
12. **Identification-** Information that can be used to identify the product, including the manufacturer's name, product code, ICC-ES Evaluation Report number, etc.




Basis for Evaluation Report

Code Provisions

- This is the basis for evaluation

Acceptance Criteria

- For innovative products not specifically referenced in the code (such as alternative material), existing or new Acceptance Criteria developed by ICC-ES are used as the basis for evaluation



ICC-ES Evaluation Report


ESR-0000



Issued March 2023
Subject to renewal March 2024

This report also contains:
- CBC Supplement
- LABC Supplement

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DIVISION: 03 00 00— CONCRETE Section: 03 16 00— Concrete Anchors DIVISION: 05 00 00— METALS Section: 05 05 19—Post- Installed Concrete Anchors	REPORT HOLDER: SAMPLE, INC. 	EVALUATION SUBJECT: SAMPLE SCREW ANCHORS FOR USE IN CRACKED AND UNCRAKED CONCRETE	
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1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018, 2015 [International Building Code® \(IBC\)](#)
- 2021, 2018, 2015 [International Residential Code® \(IRC\)](#)

For evaluation for compliance with codes adopted by the [Los Angeles Department of Building and Safety \(LADBS\)](#), see [ESR-0000 LABC and LARC Supplement](#).

Property evaluated:
Structural

2.0 USES

The Sample screw anchors are used as anchorage in cracked and uncracked normal-weight and lightweight concrete having a specified strength, f_c of 2,500 psi to 8,500 psi (17.2 MPa to 58.6 MPa); to resist static, wind and seismic (Seismic Design Categories A through F) tension and shear loads.

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3.0 DESCRIPTION

3.1 Sample screw anchors

The Sample screw anchors are comprised of a body with hex washer head. The anchor is manufactured from carbon steel and is heat-treated. The anchoring system is available in a variety of lengths with nominal diameters of $\frac{3}{16}$ -inch and $\frac{1}{2}$ -inch. The Sample screw anchor is illustrated in [Figure 1](#).

3.2 Concrete:

Normal-weight and lightweight concrete must conform to Sections 1903 and 1905 of the IBC.



Page 1 of 10

Alternative Material

A material that is not addressed in the building code.

A material that is not sufficiently addressed in the building code.

A material that is addressed in the building code but is being used in a way that is not addressed in the building code.



Acceptance Criterias (ACs)

Documents which provide requirements and instructions to report applicants, test labs and consultants and ICC-ES staff.

Each AC addresses a different type of product and has a unique number. For instance, AC116 is the ICC-ES Acceptance Criteria for Nails.

ICC-ES ACs apply to ICC-ES evaluations and are not intended for use by other certification bodies.



Acceptance Criteria related to Steel Framing

AC46– Cold-formed Steel Framing Members

AC129 - Steel Moment Frame Connection Systems

AC390 - Wall Panels with a Welded Steel Perimeter Frame Used in Agricultural Storage Structures

AC398 - Steel Connectors for Connecting Light-frame Construction Members to Concrete



www.icc-es.org

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ES ICC EVALUATION SERVICE

Evaluation Reports Program Testing Services PMG Listing Program Building Products Listing Program Environmental Reports Program Renewables Wind/Solar Other Certifications Marketing/Food Safety

ICC-ES Evaluation Report

ESR-1234

Product Image

External Links

Internal Links

Pop-up Links

Streamlining Projects, Empowering Professionals:
Introducing the Enhanced ICC-ES Report

LEARN MORE

Western Roofing Expo 2024

Visit ICC-ES at Booth #147! Join us as WSRCA celebrates its 50th Anniversary at the Western Roofing Expo 2024 – September 29th – October 1st ... [VIEW DETAILS >](#)

REGISTER BY AUG 30th AND SAVE 10%!

September 29, 2024

NV, United States

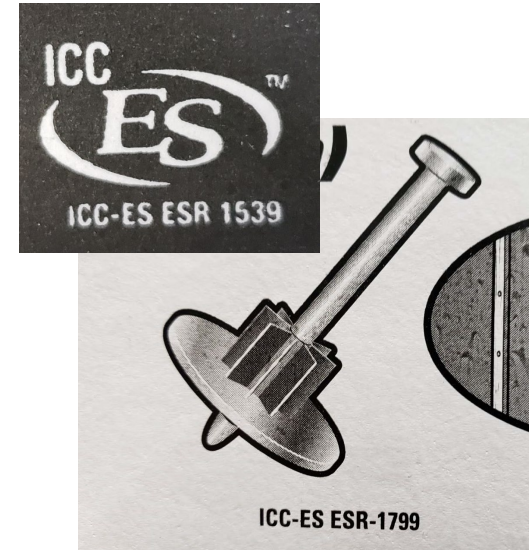
GET ACCESS TO ALL ICC-ES REPORTS DIRECTORY

VIEW ALL

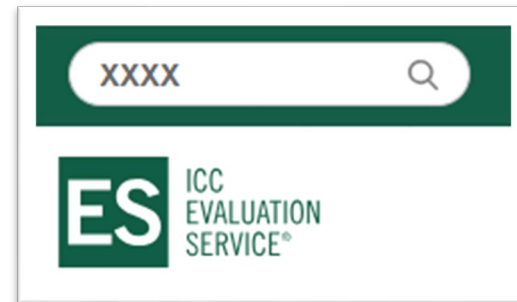
DESIGN LISTINGS

If you know the Report Number (ESR-XXXX):

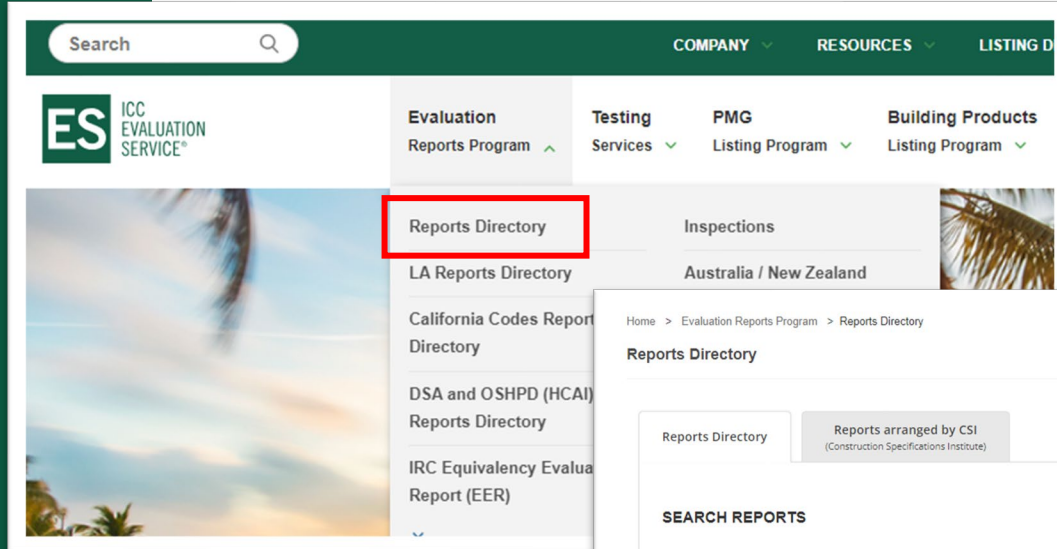
- See ESR-2442 for actual recognized design loads.
Visit (www.icc-es.org)



Simply enter the
numerical digits in the
search box



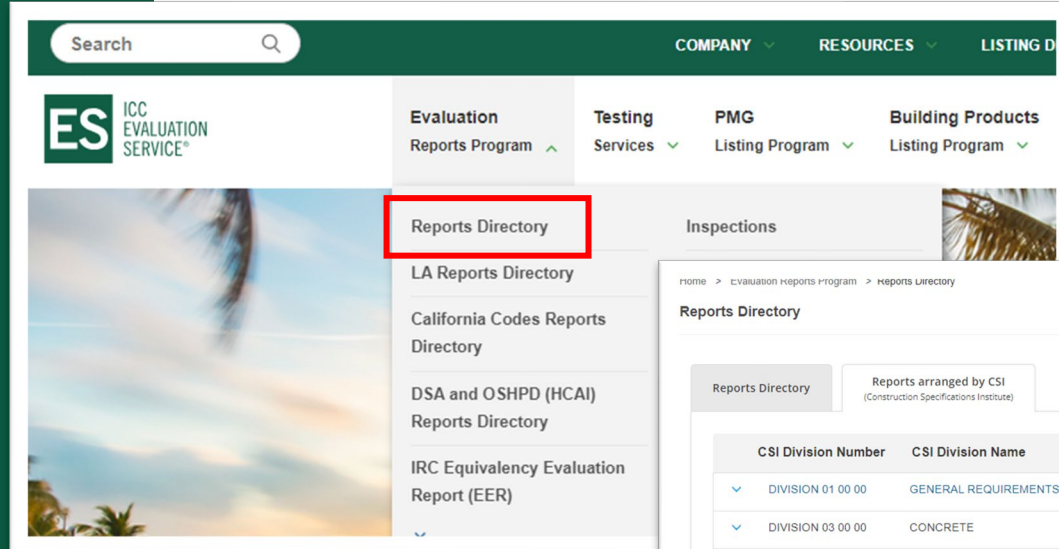
If you know don't know the Report Number, but do know the product name and/or report holder name:



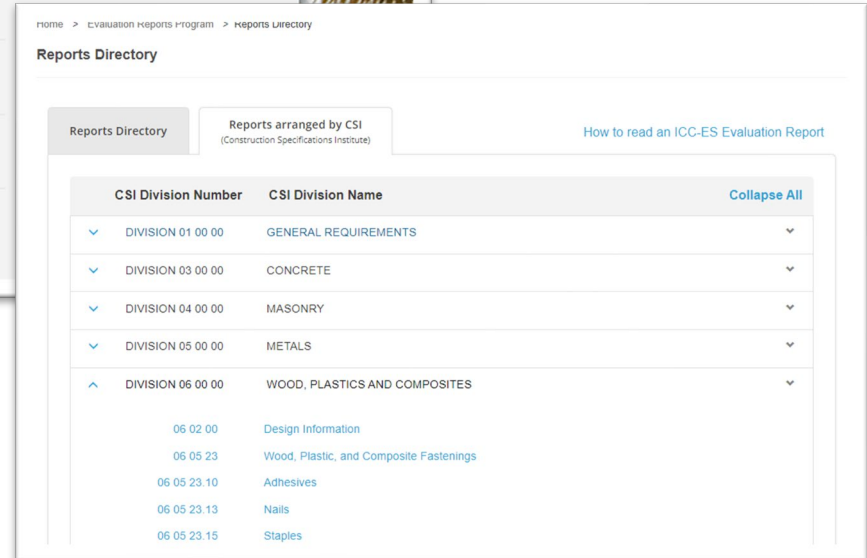
Use the Reports Directory search tool.

A screenshot of the Reports Directory search tool interface. The page title is 'Reports Directory'. Below the title, there are two tabs: 'Reports Directory' and 'Reports arranged by CSI (Construction Specifications Institute)'. A link 'How to read an ICC-ES Evaluation Report' is visible on the right. The search section is titled 'SEARCH REPORTS' and contains four input fields: 'Report Number', 'Manufacturer', 'Country' (a dropdown menu with 'All' selected), and 'Product'. There is also a 'Code Edition' dropdown menu with 'All' selected. At the bottom, there are two buttons: 'SEARCH' and 'RESET'.

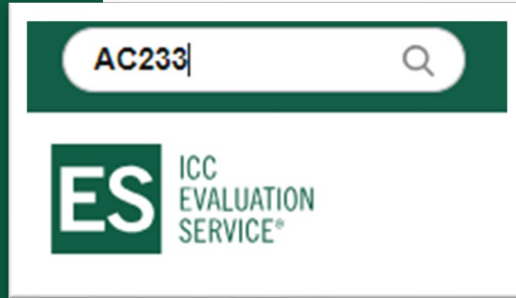
If you are not looking for a specific report, but want to see reports on a particular product type:



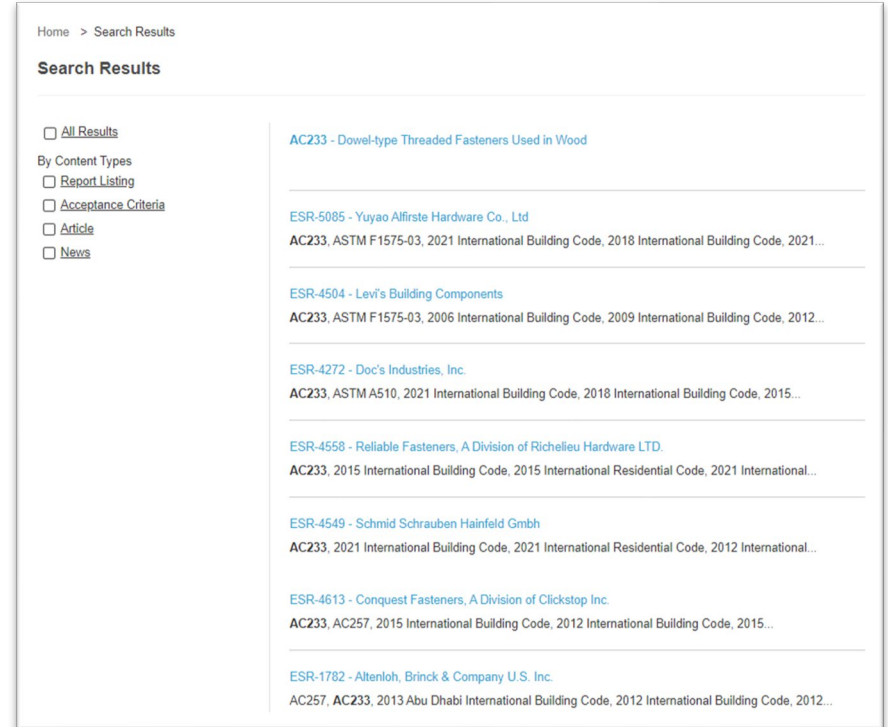
Search by CSI Division and Section numbers.



To see reports under a particular ICC-ES
Acceptance Criteria:



Use the global
search box.





BUILDING SAFETY,
BUILDING CONFIDENCE
WORLDWIDE

Global Product Approval through
Quality Conformity Assessment



SCAN ME

There are a wide variety of free instructional tools available
to the public at www.icc-es.org/education

How to Read an ICC-ES Report



PowerPoint Presentations

- [ICC-ES Overview Presentation](#)
- [Description of ICC-ES Evaluation Committee Hearing Process and Flowchart](#)
- [ICC-ES MgOBPA Presentation](#)

Instructional Tools and Brochures

- [ICC-ES Overview Brochure](#)
- [What's in an Evaluation Service Report \(ESR\)?](#)
- [Jurisdictions Readily Accepting ICC-ES Reports](#)
- [Reasons Why Code Officials Accept ICC-ES Reports](#)
- [ICC-ES Evaluation Process](#)
- [ICC-ES Oceania Building Product Evaluation Brochure](#)
- [Do I need an ESR or ESL?](#)
- [ICC-ES PMG Brochure](#)

Industry Resources

ICC-ES supports the building industry



Thank You



Family of Solutions

