I. GENERAL
The Contractor shall provide Manufacturer’s certification that the frame and grate is in conformance with Standard Specification §106-11, *Buy America*. The Contractor shall notify the Engineer-in-Charge of any frames or grates from foreign country producers and the Engineer-in-Charge will confirm that the Contractor’s bid was based on using foreign steel and/or iron. If the bid was not based on using foreign steel, the Engineer-in-Charge will determine whether the total quantity of foreign steel and/or iron from all items surpasses the maximum allowed in §106–11. The entire quantity of any material above the maximum allowed will be rejected, unless a waiver is obtained by the Contractor from the approving authority.

Unless otherwise specified, frames, grates, covers and appurtenant parts shall be delivered to the work site free of any coatings other than galvanizing. Frames, grates, covers or appurtenant parts that fail to meet the specification requirements will be rejected and the Contractor shall remove them from the work site.

II. CAST ARTICLES
A. Approvals. Cast articles may be approved by either of the two methods outlined below:
1. The Contractor shall provide Manufacturer’s Certification that the casting is in conformance with one of the following:
   - Standard Sheet M655-9R1 *Cast Manhole Frames, Grates and Covers*,
   - Standard Sheet M655-11R1 *Cast Frames and Curb Boxes and Welded Frames*,
   and the material is one of the following:
   - Steel - ASTM A27M Grade N-1 §715-02 Steel Castings
   - Malleable Iron - ASTM A47M, Grade 22010 §715-09 Malleable Iron Castings; or:

2. The Contractor shall submit two copies of the Material Details to the Engineer-in-Charge, at least ten days prior to the use of the product, for each type of casting supplied. The Engineer-in-Charge will verify that the Material Details appear on the Department Approved List by Manufacturer’s name, reference number and approval date for that item. The Contractor shall provide Manufacturer’s certification that the casting was manufactured in conformance with the approved Materials Details and the material is one of the following:
   - Grey Iron - AASHTO M105, Class 30B §715-07 Proof Loaded Iron Castings
   - Grey Iron - AASHTO M105, Class 35B §715-07 Proof Loaded Iron Castings

B. Markings. The Inspector will verify the identification markings listed below on the article. All castings, except those approved under A(1) above, shall have the identifying markings required in both AASHTO M105 and AASHTO M306, space permitted. These markings should be permanent and indelible:

   **Required Markings as per AASHTO M105:**
   - Identifying mark of the Manufacturer
   - Part or pattern number

   **Required Markings as per AASHTO M306:**
   - Country of manufacture
   - AASHTO designation or ASTM Designation number
   - Class of Cast Iron
   - Heat number and date
SECTION 655 FRAMES AND GRATES

III. FABRICATED ARTICLES
The Contractor shall provide the following certifications for all fabricated articles:

1. The Contractor shall provide Manufacturer’s certification identifying each component of the fabricated item as conforming to one of the following steel materials; ASTM A36M, AISI Grade 1020, AISI Grade 1025, or ASTM A529M Grade 345. Mill certifications identifying the steel material compositions shall accompany the Manufacturer’s certifications. Longitudinal bars for grates G1, G2, G3, 10 PCB, 11 PCB, and 12 PCB shall be certified as meeting the requirements of ASTM A529M, Grade 345. Mill certification of ASTM A529M Grade 345 shall accompany Manufacturer’s certification for these grates.

2. The Contractor shall provide Manufacturer’s certification that the welding and galvanizing comply with the requirements of Section 655. The specification requires welds conforming to the New York State Steel Construction Manual (except the requirement for radiographic inspection), and any applicable standard sheets, plans, approved shop drawings, or proposal. The specification requires galvanizing in accordance with §719-01, Type I unless required otherwise.

3. The Contractor shall provide Manufacturer’s certification that the fabricated article is in conformance with one of the following:
   Standard Sheet M655-6 Rectangular Grates
   Standard Sheet M655-8R2 Parallel Bar Frames and Grates
   Standard Sheet M655-10R2 Reticuline Grates
   Standard Sheet M655-11R1 Cast Frames and Curb Boxes and Welded Frames (For welded frames only.)
   The Inspector will inspect the fabricated articles for conformance to the appropriate Standard Sheet. Non conforming articles will be rejected.

IV. INSTALLATION
The Engineer-in-Charge will ensure that the frames are placed to line and grade and that the frames make a firm, full and even bearing on its underlying surface. The Engineer-in-Charge will ensure that grates and covers have full and uniform bearing contact with their corresponding frames. The system and its components shall be non-rocking when in place and under the influence of traffic or other loads. Non-rocking fits between grates, covers and their corresponding frames may be achieved by ground mating surfaces or machined and milled mating surfaces (horizontal and/or vertical)

RELATED CONTRACT PROVISIONS
§715-02 Steel Castings
§715-07 Proof Loaded Iron Castings
§715-09 Malleable Iron Castings
§719-01 Galvanized Coatings and Repair Methods

REFERENCES
HDM Chapter 13; Utilities
Standard Sheets M655-6, M665-8R2 to M655-14
Contract Administration Manual (CAM) §106-11, Buy America