SECTION 330130.86 - MANHOLE RIM ADJUSTMENT

1. GENERAL
	* + 1. SUMMARY
				1. Section Includes:

Raising manhole frames and covers.

Replacing manhole frames and covers.

* + - * 1. Related Requirements:

List other Sections directly related to or affecting Work of this Section. Include Sections specifying information expected to be found in this Section as well as Sections required to describe complete system or assembly requirements.

Section 034100 - Precast Structural Concrete: Execution requirements for precast and prestressed concrete members as specified in this Section.

[**Section 042000 - Unit Masonry: Clay brick riser rings.**]

Section 330130.61 - Packer Injection Grouting: Execution requirements for grout sealing as required by this Section.

Section 333100 - Sanitary Sewerage Piping: Execution requirements for sewerage piping as required by this Section.

* + - 1. REFERENCE STANDARDS

List reference standards included within text of this section, with designations, numbers, and complete document titles.

* + - * 1. ASTM International:

ASTM A4 - Standard Specification for Gray Iron Castings.

ASTM A1064 - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete

ASTM B766 – Standard Specification for Electrodeposited Coatings of Cadmium

ASTM C478 - Standard Specification for Circular Precast Reinforced Concrete Manhole Sections.

ASTM C877 - Standard Specification for External Sealing Bands for Concrete Pipe, Manholes, and Precast Box Sections.

ASTM C990 - Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants.

ASTM F593 - Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.

ASTM F1554 - Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength.

* + - 1. SUBMITTALS

Only request submittals needed to verify compliance with project requirements.

* + - * 1. Submittals in this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
				2. Manufacturer’s installation instructions shall be provided along with product data.
				3. Submittals shall be provided in the order in which they are specified and tabbed (for combination submittals).
				4. Product Data: Submit manufacturer information for manhole covers and riser rings construction, features, configuration, dimensions [**and**] <**\_\_\_\_\_\_\_\_**>.
				5. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

Include separate paragraphs for additional certifications.

* + - * 1. Manufacturer Instructions: Submit detailed instructions on installation requirements, including storage and handling procedures.
			1. CLOSEOUT SUBMITTALS
				1. Project Record Documents: Record actual grade-adjusted elevation of manholes.
			2. DELIVERY, STORAGE, AND HANDLING
				1. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
				2. Store materials according to manufacturer instructions.
				3. Protection:

Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.

Provide additional protection according to manufacturer instructions.

* + - 1. EXISTING CONDITIONS
				1. Field Measurements:

Verify field measurements prior to fabrication.

Indicate field measurements on Shop Drawings.

1. PRODUCTS
	* + 1. RISER RINGS
				1. [Manufacturers](http://www.specagent.com/LookUp/?ulid=13267&mf=04&src=wd):

Grade Extension Rings: The Fort Miller Co., Inc., P.O. Box 98, Schuylerville, NY 12871, (518) 695-5000.

Approved equivalent.

* + - * 1. Grade Extension Rings:

Designed for AASHTO H-20 loading, 30 percent impact.

Dimensions:

Minimum 6-inch-wide radial bearing.

Thickness (height) as required.

Concrete: 4000 psi.

Reinforcement: ASTM A615, Grade 60 or ASTM A1064, Grade 65.

Entrained Air: 5.0 to 9.0 percent.

* + - * 1. Accessories:

Joint Sealant: Comply with ASTM C990.

Bolts: [**Stainless steel; ASTM F593**] [**Galvanized steel; ASTM F1554**].

Epoxy Mortar Mix for channel and bench repair:

Two component, 100 percent solids.

Non-shrink.

Chemically resistant.

Moisture insensitive.

1. EXECUTION
	* + 1. EXAMINATION
				1. Verify and locate manholes requiring grade adjustment.
			2. INSTALLATION
				1. Raising Manhole Frames and Covers:

Use sealant to seal joints between manhole top, rubber rings, and frame.

Reinstall removed manhole frame and cover.

* + - * 1. Replacing Manhole Frames and Covers:

Locate manholes for replacement of frames and covers as indicated [**on Drawings**].

Remove existing manhole frames and covers to enable reuse.

Deliver removed manhole frames and covers to Director’s Representative, as indicated.

Install new frames and covers for manholes as indicated [**on Drawings**].

Adjust new frames and covers to match finished grade as indicated [**on Drawings**]. Coordinate final grades with the Director’s Representative.

Seal joints between manholes and manhole frames.

END OF SECTION 330130.86