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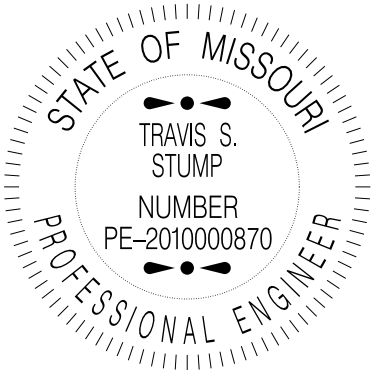

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 W. CAPITOL AVE.
JEFFERSON CITY, MO 65101
Phone (888) 275-6636

If a seal is present on this sheet, JSP's has been electronically sealed and dated.

JOB NO. JCD0342
Crawford County, MO
Date Prepared: 12/16/2025

Only the following items of the Job Special Provisions (Bridge) are authenticated by this seal: All

A. CONSTRUCTION REQUIREMENTS

1.0 Description. This provision contains general construction requirements for this project.

2.0 Construction Requirements. The plans and the asbestos and lead inspection report(s) for the existing structure(s) are included in the contract in the bridge electronic deliverables zip file for informational purposes only.

2.1 In order to assure the least traffic interference, the work shall be scheduled so that a lane closure is for the absolute minimum amount of time required to complete the work. A lane shall not be closed until material is available for continuous construction and the contractor is prepared to diligently pursue the work until the closed lane is opened to traffic.

2.2 Provisions shall be made to prevent any debris and material from falling into the waterway. If determined necessary by the engineer, any debris and material that falls below the bridge outside the previously specified limits shall be removed as approved by the engineer at the contractor's expense.

2.3 Any damage sustained to the remaining structure as a result of the contractor's operations shall be repaired or the material replaced as approved by the engineer at the contractor's expense.

2.4 Provisions shall be made to prevent damage to any existing utilities. Any damage sustained to the utilities as a result of the contractor's operations shall be the responsibility of the contractor. All costs of repair and disruption of service shall be as determined by the utility owners and as approved by the engineer.

3.0 Method of Measurement. No measurement will be made.

4.0 Basis of Payment. Payment for the above described work will be considered completely covered by the contract unit price for other items included in the contract.

B. PREFABRICATED MODULAR BLOCK RETAINING WALL (WET CAST MODULAR BLOCK WITH UNREINFORCED SOIL)

1.0 Description. This work shall consist of furnishing and constructing wet cast precast modular block retaining walls in accordance with these specifications, as shown on the plans or as directed by the engineer.

2.0 Material. All material shall be in accordance with Division 1000, Material Details, and specifically as follows:

Item	**Section**
Concrete	501
Unit Fill	1005
Select Granular Backfill for Structural Systems	1010
Geotextile	1011
Miscellaneous Drainage Material	1013
Reinforcing Steel for Concrete	1036
Resin Anchor Systems	1039

Mechanically Stabilized Earth Wall System Components	1052

2.1 When subject to spraying from adjacent roadways (15 feet or less from edge of shoulder), the steel reinforcement used in the prefabricated modular block and coping shall be epoxy coated

2.2 Reinforcement for wall system units shall be either Grade 60 deformed bars or an equivalent steel welded wire reinforcement. Reinforcement for coping or top cap units shall be Grade 60 deformed bars.

2.3 The unit fill shall consist of a granular backfill in accordance with Gradation D or E of Sec 1005. All other aggregate backfill shall meet the requirements for Select Granular Backfill for Structural Systems in accordance with Sec 1010.

2.4 Class B or B-1 concrete shall be used for cast-in-place concrete leveling pads used for the wall system.

2.5 Concrete blocks shall be wet cast and meet the requirements of MSE Panels and Sound Walls in accordance with Sec 1052.

3.0 Design Requirements.

3.1 The contractor shall use one of the following acceptable bridge pre-qualified products, or an approved equal wet cast gravity wall system with unreinforced soil. The pre-qualified wall system shall not be used whenever live load is placed above wall unless wall system is allowed for bridge abutment fill in accordance with this specification. Height of the wall is defined as top of wall to top of the leveling pad.

Prefabricated Modular Block Wall (Wet cast)	**Concrete Leveling Pad**	**Minimum 12 inches Unit fill require**	**Maximum Retaining Wall Height**	**Allow for bridge abutment fill**
Redi-Rock System Redi-Rock International 05481 US 31 South Charlevoix, MI 49720 Phone: 866-222-8400; Fax: 231-237-9521	Required	Yes	12 feet	No
Stone Strong Systems Stone Strong Systems 3801 Union Dr., Suite 102 Lincoln, NE 68516 Phone: 402-434-5652; Fax: 402-434-5654	Required	Yes	12 feet	No
ReCon ReCon Wall System, Inc. 7600 West 27th St., #229 St. Louis Park, MN 55426	Required	Yes	12 feet	No

Phone: 952-922-0027; Fax: 952-922-0028				
Big Block Big Block, Inc. 1340 West 149th Street Olathe, KS 66061 Phone: 913-829-9060; Fax: 913-829-9763	Required	Yes	12 feet	No
Earth Wall Products Gravix DOT Precast Wall System 1349 Old 41 Highway, Suite 135 Marietta, GA 30060 Phone: 770-378-5012	As per manufacturer	No	16 feet	No
The Reinforced Earth Company, Corporate Headquarters T-Wall Retaining Wall System 12001 Sunrise Valley Drive, Suite 400 Reston, VA 20191 Phone: (703) 547-8797; Fax: (703) 348-8485 The Reinforced Earth Company, Midwest Region T-Wall Retaining Wall System 1444 North Farnsworth Avenue, Suite 505 Aurora, IL 60505 Phone: 630-898-3334; Fax: 630-898-3336	As per manufacturer	No	30 feet	Yes
The Reinforced Earth Company, Corporate Headquarters Techwall 12001 Sunrise Valley Drive, Suite 400 Reston, VA 20191 Phone: (703) 547-8797; Fax: (703) 348-8485	As per manufacturer	No	20 feet	Yes

3.2 Soil reinforcement strips or geogrid will not be allowed behind the wall.

3.3 The contractor shall submit six complete sets of the manufacturer's design plans, details and computations for each individual wall structure to the engineer. All submitted information shall be clear and complete, and thoroughly checked before the information is submitted. All submitted information shall be legible and of sufficient contrast to be suitable for archiving in accordance with MoDOT's current practice for archiving. Submitted information determined to be unsuitable for archiving purposes will be returned for corrective action.

3.4 The contractor will be solely responsible for the content of the design plans, details and computations that are submitted, and for the performance of the wall system. The contractor shall be solely responsible for ensuring that the information submitted by the manufacturer is in accordance with all contract plans and specifications and with the wall system used. Completed design plans shall contain all material, fabrication and construction requirements for erecting the wall system complete in place. The completed design plans shall show the longitudinal and lateral layout of the drainage systems used for the wall system. The contractor shall be responsible for the internal and external stability of the structure including compound stability and sliding and overturning analyses at every module level or unit interface.

3.5 All design plans, details and computations submitted for distribution shall be signed, sealed and stamped in accordance with the laws relating to architects and professional engineers (Chapter 327, RSMo).

3.6 Prefabricated modular block retaining walls shall be designed in accordance with the AASHTO specifications shown on the plans and in accordance with additional publications or specifications referenced within the AASHTO specifications. The seismic design/performance category, angle of internal friction for the selected granular backfill for structural systems and other design requirements shown on the plans shall be incorporated into the design of the wall system.

4.0 Construction Requirements.

4.1 The contractor shall use a unit fill to fill all voids between and within the blocks for the wall system. This unit fill shall extend a minimum distance of 12 inches beyond the extreme back face of the wall facing elements. Each course of the wall system shall have the unit fill in place before the next course of the wall system is placed. Any void or gap between unit fill and retained backfill shall be filled with select granular backfill. When stems protrude from the facing elements the contractor shall extend the select granular backfill 12” past the end of the stem.

4.2 Precast top cap units shall be used on the wall systems. The top cap units shall be permanently attached, utilizing either a resin anchor system or an equivalent detail.

4.3 Any equivalent details used shall be part of the wall system details on file for the manufacturer of the wall system.

4.4 Drainage Requirements. A drainage system shall be provided at the base of the wall system near the facing elements. The drainage system shall consist of a perforated pipe wrapped in a Class 2 geotextile to prevent clogging of the perforations. The pipe shall be placed in such a manner that water drains freely from the pipe. When the wall length is such that the slope of the pipe becomes excessive in the engineer’s judgment, lateral drain pipes shall be installed underneath the concrete leveling pad.

4.5 Foundation Preparation. The foundation for the wall system shall be graded level for a width equal to or exceeding the length shown on the plans. Prior to wall construction, the foundation, if not on rock, shall be compacted as directed by the engineer. Any foundation soils found to be unsuitable shall be removed and replaced, as directed by the engineer.

4.6 Leveling Pad. An unreinforced cast-in-place concrete leveling pad shall be provided at the foundation level for each base unit of the wall system. The leveling pad shall be built to the elevations shown on the plans and shall not be raised in elevation to allow for the use of a particular wall system. The leveling pad shall extend beyond the base blocks a minimum of 12

inches in all directions and have a minimum depth of 6 inches. The concrete on the leveling pad shall be cured a minimum of 12 hours before any of the wall system units are placed.

4.7 Batter Requirements. Wall systems shall be built with some inward batter, as determined by the wall system manufacturer, to accommodate the horizontal movement created by the placement and compaction of selected granular backfill for structural systems. Facing elements out of alignment shall not be pulled or pushed into proper place, as that may cause damage to the facing element. If misalignment occurs, the aggregate backfill for structural systems shall be removed and the facing elements reset to the proper alignment.

4.8 Aggregate Backfill Placement.

4.8.1 Aggregate backfill shall consist of the unit fill and the Select Granular Backfill.

4.8.2 Aggregate backfill shall be placed concurrently with the placement of the retained backfill. The placement of the aggregate backfill shall closely follow the erection of each course of the wall system and shall be placed in such a manner to avoid any damage or disturbance to the wall material or any misalignment of the facing elements of the wall system. Any wall system material that becomes damaged or disturbed during the installation of the wall system shall be removed, replaced or corrected at the contractor's expense, as directed by the engineer. Whenever placement of the aggregate backfill results in the wall facing system being misaligned or distorted outside the limits of this specification, the contractor shall correct the misalignment or distortion as directed by the engineer. All excess aggregate and other materials on top of the units shall be removed before placing the next layer.

4.8.3 The aggregate backfill shall be compacted in accordance with Sec 203, with the following exceptions:

(a) The minimum density shall be no less than 95 percent of maximum density, determined in accordance with AASHTO T 99.

(b) When the material used contains more than 30 percent retained on the 3/4-inch sieve, a method of compaction consisting of at least four passes by a heavy roller shall be used.

(c) The moisture content of the material prior to and during compaction shall be uniformly distributed throughout each layer. The placement moisture content shall be no more than the optimum moisture content.

(d) Compaction within 3 feet of the back face of the wall system shall be achieved by at least three passes of a lightweight mechanical tamper, roller or vibratory system.

(e) The contractor shall ensure that runoff within the wall system construction site is directed away from the wall facing during construction, and that runoff from adjacent areas of the general construction site is directed such that runoff does not enter the wall system construction site.

(f) Class 1 geotextile material shall be placed between the aggregate backfill and the retained backfill and over the top of the aggregate backfill to prevent piping of in-situ soil into the wall system. The unit fill and select granular backfill shall also be separated by Class 1 geotextile.

(g) Tamping-type (sheep’s foot) rollers shall not be used for compaction of the aggregate backfill.

4.9 Construction Tolerances.

4.9.1 Wall systems shall be built in accordance with the dimensions and elevations specified on the plans and in accordance with the requirements of the system manufacturer. Alignments shall be maintained within the following dimensional tolerances:

Dimensional Item	**Dimensional Tolerance**
Final Joint Gaps Between Adjacent Prefabricated Modular Block Units	± 1/4 in.
Vertical and Horizontal Alignment of Facing Elements	± 1/16 in. per ft

4.9.2 Vertical alignments shall be measured along a theoretical vertical line established from the top of the wall system to the base of the wall system. For walls that have a built-in setback, the alignment shall be measured along the theoretical vertical line and the straight line that describes the horizontal setback.

4.10 Technical Assistance. The contractor shall be responsible for having a technical advisor from the wall system manufacturer available for assistance during the installation of the wall system.

4.11 Utilities. All existing utilities near the wall shall be avoided.

5.0 Method of Measurement.

5.1 Measurement of the prefabricated modular block retaining wall will be made to the nearest square foot. The quantity to be paid will be measured from the wall outline as shown on the plans. No adjustments in the measured quantity will be permitted for additional wall area required to meet the minimum wall elevations shown on the plans for any particular wall system.

5.2 Final measurement will not be made except for authorized changes during construction or where appreciable errors are found in the contract quantity. The revision or correction will be computed and added to or deducted from the contract quantity.

5.3 No measurement will be made for required excavation for the construction of the prefabricated modular block retaining wall including the placement of the leveling pad for the wall system.

6.0 Basis of Payment. The accepted quantity of prefabricated modular block retaining wall will be paid for at the contract unit price bid for item 720-99.04, Prefabricated Modular Block Retaining Wall, per square foot. Such payment shall constitute full compensation for all materials, labor, tools, and equipment necessary to complete the construction item including but not limited to all aggregate backfill, separation geotextile, concrete leveling pads and drainage systems. Items not specifically called out in the contract for the installation of this item shall be considered subsidiary to other related items.

C. TEMPORARY FORMWORK/SHORING

1.0 Description. This work shall consist of installing temporary formwork as required for retaining flowable backfill and any temporary shoring as required in accordance with Sec 206, the wall plans and this special provision to retain the fill during construction of the prefabricated modular block retaining wall.

2.0 Construction Requirements. The responsibility for the design and construction of the temporary formwork/shoring shall rest solely with the contractor. The design and plans for the temporary formwork/shoring shall be signed and sealed by a Registered Professional Engineer registered in the State of Missouri. The design shall ensure that the temporary formwork/shoring is braced or substantially secured to prevent soil movement at west end bent of existing Bridge No. A4966 during installation of the flowable backfill and construction of the prefabricated modular block retaining wall. Temporary formwork shall be left in place until flowable backfill has reached the minimum compressive strength as specified in Sec 621. At the contractor's option, the temporary formwork maybe left in place permanently. The temporary shoring shall not be removed until the prefabricated modular retaining wall has been constructed and backfilling completed. The temporary shoring shall become the property of the contractor.

3.0 Method of Measurement. No measurement will be made.

4.0 Basis of Payment. Payment for the above described work, including all material, equipment, labor and any other incidental work necessary to complete this item, will be considered completely covered by the contract lump sum price for Temporary Formwork.