1.1 SUMMARY

A. Includes But Not Limited To:
   1. Design, construction, and safety of formwork.
   2. Furnish and install required formwork ready for placing of concrete.
   3. Strip and dispose of formwork.

B. Related Sections
   1. Section 03 3111: Tolerances for placing normal weight structural concrete.
   2. Section 03 3513: Tolerances for High-Tolerance Concrete Floor.

1.2 REFERENCES

A. American Society For Testing And Materials:
      Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).'

1.3 SUBMITTALS

A. Quality Assurance / Control: Manufacturer's application instructions for form release agent.

PART 2 - PRODUCTS

2.1 COMPONENTS

A. Forms: Wood, metal, or plastic as arranged by Contractor. Forming material shall be compatible with
   specified form release agents and with finish requirements for concrete to be left exposed or to receive
   decorative finish.

B. Form Release Agents:
   1. Unexposed Surfaces Only: Contractor's option.
   2. Vertical, Exposed Surfaces or Unexposed Surfaces:
      a. Chemically acting type.
      b. Type Two Acceptable Products.
         2) Clean Strip (J-1 or J-3 VOC) by Dayton / Richmond Concrete Accessories, Miamisburg,
         3) E-Z Strip or DEBOND Form Coating by L & M Construction Chemicals, Omaha, NE
         6) Equal as approved by Architect before use. See Section 01 6000.

C. Expansion / Contraction Joints:
   1. 1/2 inch thick.
   2. Manufactured commercial fiber type:
      a. Meet requirements of ASTM D 1751.
b. Type Two Acceptable Products:
   3) Equal as approved by Architect before installation. See Section 01 6000.

3. Recycled Vinyl:
   a. Light gray color.
   b. Type Two Acceptable Products:
      2) Equal as approved by Architect before installation. See Section 01 6000.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Forms:
   1. Assemble forms so forms are sufficiently tight to prevent leakage.
   2. Properly brace and tie forms.
   3. Provide temporary cleanouts at base of tall forms to facilitate cleaning and inspection.
   4. Make proper form adjustments before, during, and after concreting.
   5. Use new forms, or used forms that have been cleaned of loose concrete and other debris from
      previous concreting and repaired to proper condition. Provide smooth liner on forms used for
      concrete to be exposed if necessary to attain specified finish quality.
   6. Use metal cold joint forms when unable to place concrete for footings, foundations, and slabs in
      continuous pours.
   7. Provide beveled 2 inch by 4 inch keys where shown on Drawings for tall or heavily loaded walls.

B. Accessories:
   1. Provide for installation of inserts, templates, fastening devices, and other accessories to be set in
      concrete before placing.
   2. Position anchor bolts for hold-down anchors and columns and securely tie in place prior to
      placing concrete.

C. Form Release Agents:
   1. Film thickness shall be no thicker than as recommended by Manufacturer to attain specified
      finish. Finish on vertical, exposed concrete shall be of quality equal to CCS-1 or CCS-2 surface
      as defined by Cresset Chemical.
   2. Allow no release agent on reinforcing steel or footings.

D. Expansion Joints: Install at joints between floor slab and foundation wall where shown on Drawings.

E. Form Removal: Removal of forms can usually be accomplished in 12 to 24 hours. If temperature is
   below 50 deg F or if concrete (stairs, beams, etc) depends on forms for structural support, leave forms
   intact for sufficient period for concrete to reach adequate strength.

END OF SECTION