CDA
COMMUNITY
DESIGN ALLIANCE

236 High Street
Hamilton, Ohio 45011

Addendum No. 1

The Lane Libraries

Technology Center

The Historic Journal News Building

228 Court Street

Hamilton, Ohio 4501

February 4, 2020

Contents

Pre-Bid Meeting Minutes

Lane Library Technology Center

January 24, 2020 1:00pm

1. Introduction: Amy Hucke, Project Manager, Community Design Alliance (CDA)
    a. Bidding Documents
        a. Plans and Specifications can be found at https://www.lanepl.org/bid
    b. Bid Date / Time
        a. Monday, February 10, 2020 at 12:00 pm
2. Project Representatives:
    a. The Lane Libraries (Owner): Robert Carringer, Fiscal Officer
    b. Architect: Community Design Alliance, Amy Hucke, Project Manager
3. General Scope of Work: Presented by Amy Hucke, CDA
    a. Work includes the following scope of work, but is not limited to:
        i. New tenant buildout of approximately 5,000 square feet of space on the first floor of the Historic Journal News Building
        ii. Electrical scope for new power and lighting.
        iii. Mechanical scope for rework and balancing of existing system.
        iv. New concrete ADA ramp.
        v. Architectural finishes
        vi. Furniture plans provided for reference and coordination with electrical requirements.
4. Site Tour: Immediately following this meeting.
5. Discussion: Submit all questions in writing to Amy Hucke, CDA for written response.

Project: Lane Library Tech Center
Meeting Purpose: Pre-Bid Meeting
Meeting Day, Time: January 24, 2020 1:00pm
Location: 228 Court Street, Hamilton, Ohio 45011

Name	Company	Email Address
Bruce Wilson	PCS	Bwilson@and-build.com
Gary Ruhl	PPC	Gary.PPC@gmail.com
Steve Foley	Performance	performanceconstruction@fuse.net
Carl Padgett	Kramer & Feldman	cpadgett@kficontractors.com
Blake Gebhardt	Siemers Demolition	siemersllc@outlook.com
Letra Harris	D.A.G. Construction	lharris@dag-cons.com
James Hall	Silco Fire & Security	jhall@silcofs.com
Bobby Smith	Rigling Electric	bobbysmith@fuse.net
Tyler Ponchot	K & T Construction	tyler@ktconstructioninc.com
Jeff Brielmaier	Leo J. Brielmaier	jeff@leobrielmaier.com
Brandon Ponchot	K & T Construction	brandon@ktconstuctioninc.com
Tyler Wayne	Wayne Contractors	tyler@waynecontractors.com
Daniel Cross	DSEA Demo	danielc@bizcinci.rr.com
Thomas Stinger	Megen Construction	tstinger@megenconstruction.com
Thomas Frank	Empire Building Co.	tfrank@empirebuildingco.com
Brett Smith	Divirsified Facility Solutions	bsmith@dfscincy.com
Mike Weberding	Geiler	mweberding@geiler.com
Clay Bryngelson	Triton	cbryngelson@tritionservicesinc.com
Dave Watson	Geiler	dwatson@geiler.com
Billy Rouch	DeBra-Kuempel	broche@dkemcor.com
Greg Albanese	Venture One	gfa@v1cinc.com

DOCUMENT 00 21 00

INSTRUCTIONS TO BIDDERS

A. Project Name and Location:

Lane Library Technology Center
Historic Journal News Building
228 Court Street
Hamilton, Ohio 45011

B. Bidding Documents: This document contains instructions to bidders for the project named above. This bidding document is not part of the Contract Documents, unless specifically referenced in the Owner/Contractor Agreement.

C. Bid Documents: To obtain bidding documents contact:

Mr. Robert Carringer, Fiscal Officer
Lane Libraries Administration Center
1396 University Blvd.
Hamilton, Ohio 45011
Email: r.carringer@lanepl.org
Website Link: https://www.lanepl.org/bid

D. Deposit for Documents: A deposit is not required.

E. Submission of Bids: Submit Bid Form before the time and date below. Late submissions will not be considered. Submit bids in sealed and labeled envelopes the project name and bidder's name on the outside of the envelope. Mark the envelope: "Bid Enclosed – Do Not Open" Bids must contain the name of every person interested herein and be accompanied by either, 1.) A bid and performance bond in the full amount of the bid tendered as a guarantee that the bidder will, if award is made to the bidder, enter into a proper contract with The Lane Libraries for the project, or 2.) a certified check drawn upon a solvent bank in the State of Ohio, in the amount equal to ten percent (10%) of the bid tendered as a guarantee that the bidder will, if award is made to the bidder, enter into a proper contract at the time the bidder executes the contract. All such bonds and certified checks shall be payable to The Lane Libraries.

F. Wages: State of Ohio prevailing wage rates published for Butler County are to be complied with throughout this project.

G. Tax Exempt Status: The Lane Libraries is tax exempt.

H. Submit Sealed Bid To:

Mr. Robert Carringer, Fiscal Officer
Lane Libraries Administration Center
1396 University Blvd.
Hamilton, Ohio 45011
On or before February 10, 2020 at 12:00 pm

I. Bid Opening: Bids will be opened in private. Bidders may not be present. Bids may not be withdrawn for 5 calendar days after receipt of bids. Announcements of bid results will be made within 10 days The Lane Libraries Board Meeting, scheduled for February 24, 2020.

J. Modifications: Oral, fax and email modifications to bids will not be considered.

K. Acceptance of Bids: The Owner reserves the right to modify the Contract Documents and rebid the project, if necessary, to meet Owner's budgetary requirements.

L. Modifications: The Owner reserves the right to modify the Contract Documents and rebid the project, if necessary, to meet the Owner's budgetary requirements.

M. Questions: During the bidding period, submit questions to the person named below. Questions will be answered in writing and copies distributed to bidders of record.

Amy Hucke
Community Design Alliance
236 High Street
Hamilton, Ohio 45011
513.275.1740
amy@cdalliance.net

N. Site Visit: A site visit is not required. Contact the person above to arrange to visit the site.

END OF DOCUMENT

DOCUMENT 00 41 00

BID FORM

A. Submission of Bids: Submit bids in compliance with Document 00 2100 – Instructions to Bidders. Fill in blanks. The Owner reserves the right to reject incomplete bid forms.

B. Bidding Documents: This Bidding Document is not part of the Contract Documents, unless specifically referenced in the Owner/Contractor Agreement.

C. Project Name: Lane Library Technology Center

D. Project Owner: The Lane Libraries

E. Name of Bidder: _____

F. Base Bid: The Bidder process to perform all of the Work required by the Contract Documents for the amount of: (Fill in amount in words and numbers.)

   1. $ _____

G. Time: The Bidder proposes the following dates (Fill in):

   1. Proposed Start Date: _____

   2. Proposed Date of Substantial Completion (Not later than July 31, 2020):
      _____

H. Submission of Bid Form: By submitting this Bid Form, the Bidder certifies that Bidder has visited the project site, is aware of existing conditions which affect the work and has reviewed the Contract Documents.

I. Bid Qualifications: Submit bid qualifications and reasons for qualifications with this Bid Form at the end of the Bid Form. Include impact of bid qualifications on time, cost or quality. Bid qualifications may include: Cash flow requirements, assumptions for protecting existing and abutting work, proposed modifications to General and Supplementary Conditions, proposed modifications to drawings and specification.

J. Signature: Signed and sealed:

   1. Signature: _____

   2. Printed Name and Title: _____

   3. Date: _____

   4. Firm: _____

   5. Address: _____

   6. City, State, Zip: _____

   7. Phone: _____

   8. Fax: _____

9. Email: _____

K. Project Manager: Bidder's Project Manager to be assigned to the project.

1.

L. Subcontractors: Bidder's List of Proposed Major Subcontractors

1.

M. Bid Qualifications: List of Bid Qualifications by Bidder

1.

END OF DOCUMENT

Proposal Form for

Lane Library Technology Center

GENERAL _____ _____

Contract: (Bid Division) Submitted By: (Contractor)

Submitted No Later Than: 12:00 PM Local Time Monday, February 10, 2020
At the Office of: Mr. Robert Carringer, Fiscal Officer
Lane Libraries Administration Center
1396 University Blvd.
Hamilton, Ohio 45011

PART A – GENERAL NOTES

The attention of the bidder is called to Instructions to Bidders for specific items relating to the execution of the Proposal Form. Non-compliance with any of these provisions may constitute enough cause for rejection of a bid.

Do not alter the wording of this form.

Bidders may attach typewritten sheet(s) providing any additional information and/or substitution for the Owner's consideration.

Submit completed Proposal Form along with all other required information in a sealed envelope plainly identified as to items being bid and name of bidder.

PART B – RECEIPT OF ADDENDA

The following addenda have been received and considered in preparation of this bid:

Addenda No.: _____

Addenda No.: _____

Addenda No.: _____

PART C – PROPOSAL

We, the undersigned bidder has fully examined the contract documents as prepared by Community Design Alliance do hereby propose to furnish all the work described in said contract documents for the item as hereafter designated for the amounts as follows:

GENERAL CONSTRUCTION – BASE BID

INCLUDES ALL SCOPE OF WORK EXCEPT ITEM A AND ITEM B

Material for the sum of _____

_____ (Dollars) $ _____

Labor for the Sum of _____

_____ (Dollars) $ _____

TOTAL for the sum of _____

_____ (Dollars) $ _____

TIME OF COMPLETION

It is **understood** and **agreed** that the work embodied in this contract shall be completed by:

TIME OF COMPLETION **July 31, 2020**

The undersigned bidder represents that they propose to complete the Work covered under items bid on this Proposal within _____ calendar day from the date of written order to proceed with the Work to the date at which all Work under this Proposal is completed. The calendar day stated shall not exceed the completion date as specified above.

VOLUNTARY SUBSTITUTION SHEETS

Attached are _____ sheets indicating Voluntary Alternates or Substitutions per the requirements of the Instructions to Bidders (State "NONE" if none are utilized).

See Supplementary General Conditions for further provisions.

INFORMATION ABOUT BIDDER

Name of Business: _____

Name of President: _____

Name(s) of Owner (if not a Corporation)

_____

_____

_____

Main Office Address: _____

_____

Main Office Telephone Number: _____

Authorized Signature and Title: _____

Lane Library Technology Center

Pre-Bid RFI #01

1. Bidding Requirements, Contract Forms and Conditions of the Contract section is missing from the Project Specifications. **See attachment**

2. Do you have a specific bid bond form or is AIA or ORC acceptable? **AIA or ORC is acceptable**

3. Anticipated Construction Start date. **On or before March 15, 2020**

4. Are there liquidated damages on this project. **To be determined and agreed upon bid acceptance**

5. Storefront Specification. **See attachment**

6. Ramp Footer Detail. Is the owner open to value engineering the design of the ramp? **Additional ramp details will be provided once completed. Specifications for the Cast in Place concrete will also be provided with details.**

7. Door Schedule – Door Type C 6'-8" schedule for Frame Type 2 which is 8'. **Type 'C' Door will have a Type '1' Door frame**

8. Opening 115 A is scheduled to be removed on A1.0, A1.1. **Existing door, frame and glazed panel is scheduled to be removed. Door (storefront) 115A is new to replace.**

9. Header and jamb details show wood framing; partition types show metal. **Partitions, header and jambs are metal framing.**

10. ½" drywall is scheduled; will 5/8" be acceptable. **5/8" wallboard will be accepted.**

11. Casework calls out AWI standards; will certification need to be presented? **No**

12. Sheet A1.1 Room 113 VR Labs – it appears that there is a folding/panel door in the middle of room. There are no notes on door schedule, and I don't' see a specification. Will this be a part of the project? **Yes, this is to be included in the project scope. See attached specification**.

13. Note inside of existing restrooms on Sheet A1.0 calls for all toilet accessories to be removed but on sheet A1.1 not P15 states to verify and confirm all restroom accessories are in good working order. Please clarify. **Existing toilet accessories with the 'Butler Tech' logo need to be removed and replaced.**

14. Sheet A2.2 Furniture Plan: Is this Plan issued for information only or are GC's responsible for any work on this sheet? **Sheet A2.2 Furniture Plan is for reference and electrical coordination only.**

15. Sheet A1.0, note DP2: refers to wall removal but is used at existing door locations. At door locations does this mean door and frame to be removed but head of wall to remain above? **Yes, head and wall to remain, where only a door is indicated to be removed.**

16. Sheet A2.1 Door Schedule: Door 115 is shown as a 3080 new door, but it also calls for frame type 1, which is 6'-8" high. Please clarify. **Door 115 is existing and to remain.**

17. Sheet A2.0; No specification on railing provided in specification book. Please provide. **See attached specification.**

18. Sheet A2.0; No information on what is required as finishing around new ramp. Are we to salvage brick pavers and reinstall at bottom of ramp and patch concrete paving at side of ramp? **This work is in the right-of-way and will require compliance with the requirements of the City of Hamilton Department of Engineering. Exact requirements are undetermined at this time.**

19. Sheet A2.0; Do brick pavers have a concrete pad underneath or are pavers on a sand bed on grade**? Existing conditions of the paver base is unknown.**

20. Sheet A1.1 Discovery Area Room 112 shows a wall type A3. This wall type is not shown on Sheet A2.1. Please clarify. **A3 has been deleted. Follow A1 wall assembly for areas labeled as A3.**

21. Sheet A1.1 shows lockers in Room 104. Will lockers be provided and installed by others? **Lockers will be provided in the furniture package and not part of this scope.**

22. Sheet A1.1 shows new interior windows in Room 101 and are also shown on elevations 5 and 7 on Sheet A2.1. Will windows be ¼" clear glass in a HM frame? **Yes**.

23. Note P9 coat rack and hooks on Sheet A1.1 in Corridor 115. Please provide a spec on what is required. Note on Furniture Plan coat hooks are also shown in Room 113. **Coat racks and hooks are part of the furniture and not part of this scope.**

24. There is a sprinkler connection in the exterior wall where the new foundation for the ramp. Please clarify. **The sprinkler location will be required to be extended through the new foundation wall of the proposed ramp.**

25. New ramp foundation will cover part of the lower windows. Will windows be removed**? Windows to be removed and infilled with appropriate materials.**

26. Demo Sheet A1.0 does not show any demo work at new door 113A and 113B. Please Clarify **Existing wall to be removed for new door and storefront.**

27. Roof downspouts are going underground in location of new ramp foundation. Please clarify requirements for relocation or reworking pipe**. All downspout lines to be extended beyond the extents of the ramp. All downspouts relocated / damaged shall be installed / repaired to the same or better conditions.**

28. Sheet A1.2 Reflected Ceiling Plan Legend; the forth fixture in legend that is dashed states existing to remain. Should this state remove? New lights are called out for area. **Dashed fixtures to be removed.**

29. Sheet A1.2; corridor 115 should it state that recessed 2x4 light fixtures are to be removed and plaster/drywall ceiling to be patched. **Yes, 2x4 fixtures to be removed. Drywall to be patched and repaired.**

30. Sheet A2.1 Door Schedule appears to list Type C door and Type 2 frames as STRFT, however H1 and J1 details show hollow metal frame and there are no aluminum specs listed in the Specifications manual. Also, note that type C doors do not match elevations 1 and 2 on A2.1 The only glass spec is 084126 for All Glass Entrance. **Please clarify. Door Type 'C' to have Frame Type '1'. See attached Storefront Specification.**

END OF DOCUMENT

SECTION 03 30 00
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Concrete for composite floor construction.

B. Floors and slabs on grade.

C. Concrete foundations and anchor bolts for pre-engineered building.

D. Joint devices associated with concrete work.

E. Miscellaneous concrete elements, including equipment pads, equipment pits, light pole bases, flagpole bases, thrust blocks and manholes.

F. Concrete curing.

1.02 RELATED REQUIREMENTS

A. Section 031000 - Concrete Forming and Accessories: Forms and accessories for formwork.

B. Section 032000 - Concrete Reinforcing.

C. Section 079200 - Joint Sealants: Products and installation for sealants and joint fillers for saw cut joints and isolation joints in slabs.

D. Section 079513 - Expansion Joint Cover Assemblies.

E. Section 321313 - Concrete Paving: Sidewalks, curbs and gutters.

1.03 REFERENCE STANDARDS

A. ACI 117 - Specifications for Tolerances for Concrete Construction and Materials 2010 (Reapproved 2015).

B. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete 1991 (Reapproved 2009).

C. ACI 211.2 - Standard Practice for Selecting Proportions for Structural Lightweight Concrete 1998 (Reapproved 2004).

D. ACI 301 - Specifications for Structural Concrete 2016.

E. ACI 302.1R - Guide to Concrete Floor and Slab Construction 2015.

F. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete 2000 (Reapproved 2009).

G. ACI 305R - Guide to Hot Weather Concreting 2010.

H. ACI 306R - Guide to Cold Weather Concreting 2016.

I. ACI 308R - Guide to External Curing of Concrete 2016.

J. ACI 318 - Building Code Requirements for Structural Concrete and Commentary 2014 (Errata 2018).

K. ACI 347R - Guide to Formwork for Concrete 2014, with Errata (2017).

L. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement 2018.

M. ASTM A767/A767M - Standard Specification for Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement 2016.

N. ASTM A775/A775M - Standard Specification for Epoxy-Coated Steel Reinforcing Bars 2017.

O. ASTM A884/A884M - Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement 2014.

P. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete 2018a.

Q. ASTM C1602/C1602M - Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete 2012.

R. ASTM C33/C33M - Standard Specification for Concrete Aggregates 2018.

S. ASTM C348 - Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars 2018.

T. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens 2018.

U. ASTM C476 - Standard Specification for Grout for Masonry 2019.

V. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete 2018.

W. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens) 2016a.

X. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete 2015a.

Y. ASTM C150/C150M - Standard Specification for Portland Cement 2018.

Z. ASTM C171 - Standard Specification for Sheet Materials for Curing Concrete 2016.

AA. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method 2016.

BB. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete 2010a (Reapproved 2016).

CC. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete 2011.

DD. ASTM C330/C330M - Standard Specification for Lightweight Aggregates for Structural Concrete 2017a.

EE. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete 2017.

FF. ASTM C579 - Standard Test Methods for Compressive Strength of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings, and Polymer Concretes 2018.

GG. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete 2019.

HH. ASTM C685/C685M - Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing 2017.

II. ASTM C827/C827M - Standard Test Method for Change in Height at Early Ages of Cylindrical Specimens of Cementitious Mixtures 2016.

JJ. ASTM C845/C845M - Standard Specification for Expansive Hydraulic Cement 2018.

KK. ASTM C881/C881M - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete 2015.

LL. ASTM C979/C979M - Standard Specification for Pigments for Integrally Colored Concrete 2016.

MM. ASTM C1059/C1059M - Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete 2013.

NN. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink) 2017.

OO. ASTM C1116/C1116M - Standard Specification for Fiber-Reinforced Concrete 2010a (Reapproved 2015).

PP. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures 2015.

QQ. ASTM C1311 - Standard Specification for Solvent Release Sealants 2014.

RR. ASTM C1315 - Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete 2011.

SS. ASTM C1582/C1582M - Standard Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete 2011, with Editorial Revision (2017).

TT. ASTM D471 - Standard Test Method for Rubber Property--Effect of Liquids 2016a.

UU. ASTM D695 - Standard Test Method for Compressive Properties of Rigid Plastics 2015.

VV. ASTM D8139 - Standard Specification for Semi-Rigid, Closed-Cell Polypropylene Foam, Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction 2017.

WW. ASTM D994/D994M - Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type) 2011 (Reapproved 2016).

XX. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types) 2018.

YY. ASTM D1752 - Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction 2018.

ZZ. ASTM D2103 - Standard Specification for Polyethylene Film and Sheeting 2015.

AAA. ASTM D3963/D3963M - Standard Specification for Fabrication and Jobsite Handling of Epoxy-Coated Steel Reinforcing Bars 2015.

BBB. ASTM E11 - Standard Specification for Woven Wire Test Sieve Cloth and Test Sieves 2017.

CCC. ASTM E154/E154M - Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover 2008a, with Editorial Revision (2013).

DDD. ASTM E1155 - Standard Test Method for Determining F(F) Floor Flatness and F(L) Floor Levelness Numbers 2014.

EEE. ASTM E1155M - Standard Test Method for Determining F(F) Floor Flatness and F(L) Floor Levelness Numbers (Metric) 2014.

FFF. ASTM E1643 - Standard Practice for Selection, Design, Installation and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs 2011 (Reapproved 2017).

GGG. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs 2017.

HHH. ASTM E1993/E1993M - Standard Specification for Bituminous Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs 1998, with Editorial Revision (2013).

III. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials 2016.

JJJ. COE CRD-C 48 - Method of Test for Water Permeability of Concrete 1992.

KKK. COE CRD-C 513 - COE Specifications for Rubber Waterstops 1974.

LLL. COE CRD-C 572 - Corps of Engineers Specifications for Polyvinylchloride Waterstop 1974.

MMM. ICC-ES AC380 - Acceptance Criteria for Termite Physical Barrier Systems 2014, with Editorial Revision (2017).

NNN. ICRI 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair 2013.

OOO. NSF 61 - Drinking Water System Components - Health Effects 2017.

PPP. NSF 372 - Drinking Water System Components - Lead Content 2016.

1.04 **SUBMITTALS**

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.

1. For curing compounds, provide data on method of removal in the event of incompatibility with floor covering adhesives.

2. For chemical-resistant waterstops, provide data on ASTM D471 test results.

C. Mix Design: Submit proposed concrete mix design.

1. Indicate proposed mix design complies with requirements of ACI 301, Section 4 - Concrete Mixtures.

2. Indicate proposed mix design complies with requirements of ACI 318, Chapter 5 - Concrete Quality, Mixing and Placing.

3. Indicate proposed mix design complies with fiber reinforcing manufacturer's written recommendations.

D. Test Reports: Submit report for each test or series of tests specified.

E. Test Reports: Submit termite-resistant sheet manufacturer's summary of independent laboratory and field testing for effectiveness in subterranean termite exclusion.

1.05 **QUALITY ASSURANCE**

A. Perform work of this section in accordance with ACI 301 and ACI 318.

B. Follow recommendations of ACI 305R when concreting during hot weather.

C. Follow recommendations of ACI 306R when concreting during cold weather.

PART 2 PRODUCTS

2.01 **CONCRETE MATERIALS**

A. Cement: ASTM C150/C150M, Type I - Normal Portland type.

B. Fine and Coarse Aggregates: ASTM C33/C33M.

C. Lightweight Aggregate: ASTM C330/C330M.

D. Fly Ash: ASTM C618, Class C or F.

E. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to concrete.

2.02 **ADMIXTURES**

A. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.

B. Air Entrainment Admixture: ASTM C260/C260M.

C. High Range Water Reducing and Retarding Admixture: ASTM C494/C494M Type G.

D. High Range Water Reducing Admixture: ASTM C494/C494M Type F.

E. Water Reducing and Accelerating Admixture: ASTM C494/C494M Type E.

F. Water Reducing and Retarding Admixture: ASTM C494/C494M Type D.

G. Accelerating Admixture: ASTM C494/C494M Type C.

H. Retarding Admixture: ASTM C494/C494M Type B.

I. Water Reducing Admixture: ASTM C494/C494M Type A.

J. Shrinkage Reducing Admixture:

1. ASTM C494/C494M, Type S.

K. Shrinkage Compensating Admixture: For on site production of concrete with ASTM C845/C845M, Type K cement.

L. Shrinkage Compensating Admixture with Fiber Reinforcement: For on site production of concrete with ASTM C845/C845M, Type K cement with integral fiber reinforcement.

M. Corrosion Inhibiting Admixture:

1. ASTM C494/C494M, Type C.

2. ASTM C1582/C1582M.

2.03 **ACCESSORY MATERIALS**

A. Non-Shrink Cementitious Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.

1. Grout: Comply with ASTM C1107/C1107M.

2. Height Change, Plastic State; when tested in accordance with ASTM C827/C827M:

a. Maximum: Plus 4 percent.

b. Minimum: Plus 1 percent.

3. Minimum Compressive Strength at 48 Hours, ASTM C109/C109M: 2,000 pounds per square inch (13.7 MPa).

4. Minimum Compressive Strength at 48 Hours: 2,000 pounds per square inch (13.7 MPa).

B. Non-Shrink Epoxy Grout: Moisture-insensitive, two-part; consisting of epoxy resin, non-metallic aggregate, and activator.

1. Minimum Compressive Strength at 7 days, ASTM C579: 12,000 pounds per square inch (82.7 MPa).

2. Minimum Compressive Strength at 7 days, ASTM D695: 12,000 pounds per square inch (82.7 MPa).

2.04 BONDING AND JOINTING PRODUCTS

A. Latex Bonding Agent: Non-redispersable acrylic latex, complying with ASTM C1059/C1059M, Type II.

B. Epoxy Bonding System:

1. Complying with ASTM C881/C881M and of Type required for specific application.

C. Waterproofing Admixture Slurry: Slurry coat of Portland cement, sand, and crystalline waterproofing additive, mixed with water in proportions recommended by manufacturer to achieve waterproofing at cold joints in concrete.

D. Waterstops: Bentonite and butyl rubber, complying with NSF 61 and NSF 372.

E. Slab Isolation Joint Filler: 1/2 inch (13 mm) thick, height equal to slab thickness, with removable top section that will form 1/2 inch (13 mm) deep sealant pocket after removal.

1. Material: ASTM D8139, semi-rigid, closed-cell polypropylene foam.

F. Slab Construction Joint Devices: Combination keyed joint form and screed, galvanized steel, with rectangular or round knockout holes for conduit or rebar to pass through joint form at 6 inches (150 mm) on center; ribbed steel stakes for setting.

1. Provide removable plastic cap strip that forms wedge-shaped joint for sealant installation.

2. Height: To suit slab thickness.

G. Dowel Sleeves: Plastic sleeve for smooth, round, steel load-transfer dowels.

2.05 CURING MATERIALS

A. Evaporation Reducer: Liquid thin-film-forming compound that reduces rapid moisture loss caused by high temperature, low humidity, and high winds; intended for application immediately after concrete placement.

B. Curing Compound, Naturally Dissipating: Clear, water-based, liquid membrane-forming compound; complying with ASTM C309.

C. Curing Agent, Water-Cure Equivalent Type: Clear, water-based, non-film-forming, liquid-water cure replacement agent.

1. Comply with ASTM C309 standards for water retention.

2.06 CONCRETE MIX DESIGN

A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.

B. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended or required by manufacturer.

C. Normal Weight Concrete:

1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 4,000 pounds per square inch (27.6 MPa).

2. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.

3. Water-Cement Ratio: Maximum 40 percent by weight.

4. Total Air Content: 4 percent, determined in accordance with ASTM C173/C173M.

5. Maximum Slump: 3 inches (75 mm).
6. Maximum Aggregate Size: 5/8 inch (16 mm).

D. Structural Lightweight Concrete:

1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 4,000 pounds per square inch (27.6 MPa).
2. Water-Cement Ratio: Maximum 40 percent by weight.
3. Total Air Content: 3 percent, determined in accordance with ASTM C173/C173M.
4. Maximum Slump: 3 inches (75 mm).
5. Maximum Aggregate Size: 5/8 inch (16 mm).

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 PREPARATION

A. Verify that forms are clean and free of rust before applying release agent.

B. Coordinate placement of embedded items with erection of concrete formwork and placement of form accessories.

C. Prepare existing concrete surfaces to be repaired according to ICRI 310.2R, [_____].

D. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent in according to bonding agent manufacturer's instructions.

1. Use epoxy bonding system for bonding to damp surfaces, for structural load-bearing applications, and where curing under humid conditions is required.
2. Use latex bonding agent only for non-load-bearing applications.

E. Where new concrete with integral waterproofing is to be bonded to previously placed concrete, prepare surfaces to be treated in accordance with waterproofing manufacturer's instructions. Saturate cold joint surface with clean water, and remove excess water before application of coat of waterproofing admixture slurry. Apply slurry coat uniformly with semi-stiff bristle brush at rate recommended by waterproofing manufacturer.

F. Interior Slabs on Grade: Install vapor retarder under interior slabs on grade. Lap joints minimum 6 inches (150 mm). Seal joints, seams and penetrations watertight with manufacturer's recommended products and follow manufacturer's written instructions. Repair damaged vapor retarder before covering.

3.03 PLACING CONCRETE

A. Place concrete in accordance with ACI 304R.

B. Place concrete for floor slabs in accordance with ACI 302.1R.

C. Ensure reinforcement, inserts, waterstops, embedded parts and formed construction joint devices will not be disturbed during concrete placement.

D. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.

3.04 CURING AND PROTECTION

A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

C. Surfaces Not in Contact with Forms:

1. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water ponding, water-saturated sand, water-fog spray or saturated burlap.

2. Final Curing: Begin after initial curing but before surface is dry.

3.05 **FIELD QUALITY CONTROL**

A. An independent testing agency will perform field quality control tests, as specified in Section 014000 - Quality Requirements.

B. Provide free access to concrete operations at project site and cooperate with appointed firm.

C. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.

3.06 **PROTECTION**

A. Do not permit traffic over unprotected concrete floor surface until fully cured.

3.07 **SCHEDULE - CONCRETE TYPES AND FINISHES**

A. Foundation Walls: 3,000 pounds per square inch (20.7 MPa) 28 day concrete, form finish with honeycomb filled surface.

B. Underside of Supported Floors and Structure Exposed to View: 4,000 pounds per square inch (27.6 MPa) 28 day concrete, form finish with honeycomb filled surface.

END OF SECTION

SECTION 05 70 00
DECORATIVE METAL

PART 1 GENERAL

1.01 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Product Data: Submit manufacturer's product data including description of materials, components, finishes, fabrication details, glass, anchors, and accessories.

C. Shop Drawings: Indicate railing system elevations and sections, details of profile, dimensions, sizes, connection attachments, anchorage, size and type of fasteners, and accessories. Indicate anchor and joint locations, brazed connections, transitions, and terminations.

D. Samples: Submit one (1) of each item below for each type and condition shown.

1. Railing: 12 inch (305 mm) long section of handrail illustrating color, finish and connection detail.

2. Cladding: 6 inch by 6 inch (152 mm by 152 mm) sample of each type of cladding, illustrating finish.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Decorative Metal Railings:

1. C. R. Laurence Company, Inc; www.crl-arch.com/#sle.

2. Hollaender Manufacturing Co; Interna-Rail railing system: www.hollaender.com/#sle.

END OF SECTION

SECTION 084313
ALUMINUM-FRAMED STOREFRONTS

PART 1 GENERAL

SECTION INCLUDES

Aluminum-framed storefront, with vision glass.

Infill panels of metal and glass.

Aluminum doors and frames.

Weatherstripping.

RELATED REQUIREMENTS

Section 079200 - Joint Sealants: Sealing joints between frames and adjacent construction.

Section 084229 - Automatic Entrances.

Section 087100 - Door Hardware: Hardware items other than specified in this section.

Section 088000 - Glazing: Glass and glazing accessories.

REFERENCE STANDARDS

AAMA CW-10 - Care and Handling of Architectural Aluminum From Shop to Site 2015.

AAMA 503 - Voluntary Specification for Field Testing of Newly Installed Storefronts, Curtain Walls and Sloped Glazing Systems 2014.

AAMA 609 & 610 - Cleaning and Maintenance Guide for Architecturally Finished Aluminum (Combined Document) 2015.

ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes 2014.

ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric) 2013.

ASTM E783 - Standard Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors 2002 (Reapproved 2018).

ASTM E1105 - Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform or Cyclic Static Air Pressure Difference 2015.

ADMINISTRATIVE REQUIREMENTS

Coordinate with installation of other components that comprise the exterior enclosure.

Preinstallation Meeting: Conduct a preinstallation meeting one week before starting work of this section; require attendance by all affected installers.

SUBMITTALS

See Section 013000 - Administrative Requirements, for submittal procedures.

Product Data: Provide component dimensions, describe components within assembly, anchorage and fasteners, glass and infill, door hardware, and internal drainage details.

Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related work, expansion and contraction joint location and details, and field welding required.

1. Include design engineer's stamp or seal on shop drawings for attachments and anchors.

Samples: Submit two samples [6 x 6] inches ([____] mm) in size illustrating finished aluminum surface, glass, infill panels, glazing materials.

Manufacturer's Certificate: Certify that the products supplied meet or exceed the specified requirements.

Design Data: Provide framing member structural and physical characteristics, engineering calculations, and dimensional limitations.

Field Quality Control Submittals: Report of field testing for water penetration and air leakage.

Designer's Qualification Statement.

Manufacturer's Qualification Statement.

Installer's Qualification Statement.

Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

QUALITY ASSURANCE

Designer Qualifications: Design structural support framing components under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed in the State in which the Project is located.

Manufacturer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.

2. Provide certified glass products through ANSI accredited certifications that include plant audits and independent laboratory performance testing.

a. Insulating Glass Certification Council (IGCC).

b. Safety Glazing Certification Council (SGCC).

Installer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.

3. Provide company, field supervisors, and installers that hold active ANSI accredited certifications in appropriate categories for work specified.

a. North American Contractor Certification (NACC) for glazing contractors.

b. Equivalent independent third-party ANSI accredited certification.

DELIVERY, STORAGE, AND HANDLING

Handle products of this section in accordance with AAMA CW-10.

Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond to aluminum when exposed to sunlight or weather.

FIELD CONDITIONS

Do not install sealants when ambient temperature is less than 40 degrees F (5 degrees C). Maintain this minimum temperature during and 48 hours after installation.

WARRANTY

See Section 017800 - Closeout Submittals, for additional warranty requirements.

Correct defective Work within a five year period after Date of Substantial Completion.

Provide five year manufacturer warranty against failure of glass seal on insulating glass units, including interpane dusting or misting. Include provision for replacement of failed units.

Provide five year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking.

PART 2 PRODUCTS

BASIS OF DESIGN -- FRAMING FOR INSULATING GLAZING

Center-Set Style, Wind-Borne-Debris Resistance Tested:

4. Basis of Design: C.R. Laurence Architectural Products; CRL Aluminum Series 400 & 450 Center Glaze Storefront System: www.crl-arch.com

5. Vertical Mullion Dimensions: [1 3/4 inches wide by 4 1/2 inches deep] ([____]).

6. Horizontal Mullion Dimensions: [1 3/4 inches wide by 4 1/2 inches deep] ([____]).

Center-Set Style, Thermally-Broken:

7. Basis of Design: C.R. Laurence Architectural Products; CRL Aluminum Series 400 & 450 Center Glaze Storefront System: www.crl-arch.com

8. Vertical Mullion Dimensions: 2 inches wide by 4-1/2 inches deep (51 mm wide by 114 mm deep).

9. Horizontal Mullion Dimensions: [1 3/4 inches wide by 4 1/2 inches deep] ([____]).

Substitutions: See Section 016000 - Product Requirements.

10. For any product not identified as "Basis of Design", submit information as specified for substitutions.

BASIS OF DESIGN -- SWINGING DOORS

Narrow Stile, Insulating Glazing, Thermally-Broken:

11. Basis of Design: C.R. Laurence Company, Inc; U.S. Aluminum; Series 250-T Narrow Stile Thermal Entrance Door: www.crl-arch.com/#sle.

12. Thickness: 1-3/4 inches (43 mm).

Narrow Stile, Insulating Glazing, Not Thermally-Broken:

13. Basis of Design: C.R. Laurence Company, Inc; U.S. Aluminum; Series 250 Narrow Stile Door: www.crl-arch.com/#sle.

14. Thickness: 1-3/4 inches (43 mm).

Substitutions: See Section 016000 - Product Requirements.

MANUFACTURERS

Aluminum-Framed Storefront and Doors:

15. Substitutions: See Section 016000 - Product Requirements.

STOREFRONT

Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashings, anchorage and attachment devices.

16. Glazing Position: Centered (front to back).

17. Finish: Superior performing organic coatings.

a. Factory finish all surfaces that will be exposed in completed assemblies.

b. Touch-up surfaces cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.

18. Finish Color: As selected by Architect from manufacturer's standard line.

19. Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors and hardware; fasteners and attachments concealed from view; reinforced as required for imposed loads.

20. Construction: Eliminate noises caused by wind and thermal movement, prevent vibration harmonics, and prevent "stack effect" in internal spaces.

21. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.

22. Expansion/Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F (95 degrees C) over a 12 hour period without causing detrimental effect to system components, anchorages, and other building elements.

23. Movement: Allow for movement between storefront and adjacent construction, without damage to components or deterioration of seals.

24. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.

COMPONENTS

Aluminum Framing Members: Tubular aluminum sections, thermally broken with interior section insulated from exterior, drainage holes and internal weep drainage system.

25. Glazing Stops: Flush.

MATERIALS

Extruded Aluminum: ASTM B221 (ASTM B221M).

Fasteners: Stainless steel.

Glazing Gaskets: Type to suit application to achieve weather, moisture, and air infiltration requirements.

PART 3 EXECUTION

EXAMINATION

Verify dimensions, tolerances, and method of attachment with other work.

Verify that wall openings and adjoining air and vapor seal materials are ready to receive work of this section.

INSTALLATION

Install wall system in accordance with manufacturer's instructions.

Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.

Provide alignment attachments and shims to permanently fasten system to building structure.

Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.

Provide thermal isolation where components penetrate or disrupt building insulation.

Install sill flashings. Turn up ends and edges; seal to adjacent work to form water tight dam.

Where fasteners penetrate sill flashings, make watertight by seating and sealing fastener heads to sill flashing.

Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.

Install operating sash.

Set thresholds in bed of sealant and secure.

Install hardware using templates provided.

26. See Section 087100 for hardware installation requirements.

27. See Section 084229 for operator and actuator installation requirements.

Install glass and infill panels in accordance with Section 088000, using glazing method required to achieve performance criteria.

Touch-up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired.

TOLERANCES

Maximum Variation from Plumb: 0.06 inch per 3 feet (1.5 mm per m) non-cumulative or 0.06 inch per 10 feet (1.5 mm per 3 m), whichever is less.

Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch (0.8 mm).

FIELD QUALITY CONTROL

Provide services of storefront manufacturer's field representative to observe for proper installation of system and submit report.

See Section 014000 - Quality Requirements, for independent field testing and inspection requirements, and requirements for monitoring quality of specified product installations.

Provide field testing of installed storefront system by independent laboratory in accordance with AAMA 503 during construction process and before installation of interior finishes.

28. Perform a minimum of two tests in each designated area as indicated on drawings.

29. Conduct tests in each area prior to 10 percent and 50 percent completion of this work.

30. Field test for water penetration in accordance with ASTM E1105 with uniform static air pressure difference (Procedure A) not less than 4.18 psf (200 Pa).

a. Maximum allowable rate of water penetration in 15-minute test is 0.5 ounce (14 gram) that is not contained in an area with provisions to drain to exterior, or collected on surface of interior horizontal framing member.

31. Field test for air leakage in accordance with ASTM E783 with uniform static air pressure difference of 1.57 psf (75 Pa).

Repair or replace storefront components that have failed designated field testing, and retest to verify performance complies with specified requirements.

ADJUSTING

Adjust operating hardware and sash for smooth operation.

CLEANING

Remove protective material from pre-finished aluminum surfaces.

Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths, and take care to remove dirt from corners and to wipe surfaces clean.

Upon completion of installation, thoroughly clean aluminum surfaces in accordance with AAMA 609 & 610.

PROTECTION

Protect installed products from damage until Date of Substantial Completion.

END OF SECTION

SECTION 102233
ACCORDION FOLDING PARTITIONS

PART 1 GENERAL

SECTION INCLUDES

Accordion folding partitions.

Track and operating hardware.

SUBMITTALS

Product Data: Provide data on partition operation, hardware and accessories, electric operating components, track switching components, colors and finishes available.

Samples: Submit two samples of full manufacturer's color range for selection of colors.

PART 2 PRODUCTS

MANUFACTURERS

Basis of Design: Modernfold, a DORMA Group Company; Acousti-Seal Continuously Hinged Automated Wall Systems; www.modernfold.com.

Other Acceptable Manufacturers:

1.Modernfold, a DORMA Group Company; www.modernfold.com/#sle.

2.Panelfold, Inc; www.panelfold.com/#sle.

ACCORDION FOLDING PARTITIONS

END OF SECTION