Lynn Guidry
ARCHITECT
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Date : SEPTEMBER 26, 2022
Re : **CARENCRO POLICE STATION - 2022**
Carencro, Louisiana
Project No: 2015.035
To: *THE PRIME CONTRACT BIDDERS AND ALL OTHERS TO WHOM CONTRACT DOCUMENTS HAVE BEEN ISSUED. THE CONTRACTOR SHALL ACKNOWLEDGE RECEIPT OF THIS ADDENDUM ON THE PROPOSAL FORM.*

ADDENDUM Nº 4

This Addendum forms a part of the Contract Documents and modifies the Drawings and Specifications dated August 10, 2022. Failure to comply with this Addendum shall result in the rejection by the architect and/or code enforcement agencies.

Note to contractors and others who are receiving this Addendum:
If you have distributed copies of drawings to sub-contractors, material suppliers, or others,
it is *your* responsibility to distribute copies of this and other Addenda to them.

The location of referenced items is not exclusive. The architect is citing what he feels is the most obvious location of the item being clarified, but that is not to say that these items are not mentioned elsewhere in the contract documents. Inclusion in this and other addenda pertains to the issue addressed in all locations, whether referenced here or not.

I. GENERAL.

a. A Pre-Bid Conference was held on site on September 21, 2022. See Attachment No. 1 for Minutes of that meeting.
b. The actual address of the Police Station will be "5025 North University Avenue, Carencro, Louisiana 70520". (Note: "5025", not "5055"; the previously used "5055" was a place holder until an actual address was assigned.)
c. Utilities.
    i. Entergy will provide electricity to the site. The contact at Entergy is Tom Chamberlain; phone (337) 431-6235; email tchamb2@entergy.com
    ii. The City of Carencro will provide water, sewer, and gas to the site. The contact for utilities at the City of Carencro is Buster Broussard; phone (337) 849-6989; email watersuper@carencro.org
    iii. LUS Fiber will provide fiber to the site. The contact at LUS Fiber is Adrian Kessler; phone (337) 366-3862; email adriank@lusfiber.net
    iv. AT&T and Cox also serve the site. No contact information is available at this time.
d. Insurance: review the Supplemental Conditions, Article 11 for insurance requirements on the police station site. For the work at the Community Center (Alternate No. 1), and the Streetscape work (Alternate No. 3) provide a Certificate of Insurance providing WC and GL coverage, naming Carencro as a certificate holder (Carencro doesn't have to be named as an additional insured).
e. Once awarded a contract, the Fire Protection (sprinkler) company selected for the project will be required to do their own flow tests, but for bidding purposes, use the following information provided by the City of Carencro:
    i. Static: 46
    ii. Residual: 42

iii. Flow: 995

f. Regarding the cameras and the wiring for the cameras, they are not in this contract. The electrical drawings call for empty conduit stub ups with backboxes for the security cameras. No cameras or wiring is included in the electrical portion of the project.

II. SPECIFICATIONS.

a. Section 03350 – Diamond Buff Sealed Concrete.
   i. This Specification Section is hereby added to the Contract Documents. See Attachment No. Two.

b. Section 04090 – Mortar Deflection Devices.
   i. This Specification Section is hereby added to the Contract Documents. See Attachment No. Three.

c. Section 04210 – Brick Unit Masonry
   i. Police Station
      1. The Architect wants a red, smooth brick with matching color mortar. The design intent if to produce a monolithic appearance to the brick walls to complement the smooth white stucco walls. In lieu of the Acme Sante Fe brick called out in the specs, provide Acme Garnet bricks (Smooth finish, Tulsa Plant, TUP002, 102453), or equal.
      2. In lieu of one (1) 4'x4' mock-up, provide two (2) 4'x4' mock-ups. The mock-ups must be provided a month (30 days minimum) before the mason is scheduled to begin the masonry work on the building. Locate the mock-ups adjacent to the stucco mock-ups.
   ii. Community Center (Alternate No. One).
      1. The following information is from the Architect's archives from twenty (20) years ago. This information can be used for bidding purpose, but needs to be verified to match the existing once construction begins:
         a. Bricks: Boral Bricks, 10-828 Wirecut Dark Pink.
         b. Mortar: Rainbow Mortamix, Dessert Buff, (N) 7DB

d. Section 07210 – Building Insulation
   i. The "Maximum Flame Spread" listed on page 07210-2 (3rd line from the bottom) for the Thermal Batt Insulation should be "25", not "75".
   ii. Add the following:
      1. Loose Granular Insulation.
         a. Perlite:
            i. Type II (ASTM C 549).
            ii. Density: 4.1 - 7.4 pounds per cubic foot.
         b. Vermiculite:
            i. Type II, Grade 1, 2, or 3 (ASTM C 516).
      2. Board insulation.
         a. Provide manufacturer's standard preformed insulation units, sized for proper

fit in indicated applications.

b. Extruded Polystyrene Insulation.
    i. Manufactured by extrusion process with integral high density skin.
    ii. Type X (ASTM C 578): 15.0 psi compressive strength.
    iii. Total R value: 8.1.
c. Expanded Polystyene Insulation.
    i. Manufactured by expansion process.
    ii. Type I (ASTM C 578): 10.0 psi compressive strength.
    iii. Total R value: 8.1
d. Polyisocyanurate Insulation.
    i. Manufactured from glass-fiber-reinforced polyisocyanurate foam.
    ii. Comply with FS HH-I-1972/1, Type 1, Class 2 requirements.
    iii. Aged R-values (per inch):
        1. 8.0 at 40 degrees F.
        2. 7.2 at 75 degrees F.
    iv. Total R value: 8.1.

e. Section 07525 – Modified Bitumen Sheet Roofing
    i. Add the following language to the specifications:
        1. Soprema is the basis of design.
        2. Adhere base ply of Sopralene 180 SP directly to the lightweight concrete deck with Colply EF; torch cap sheet of Sopralene flam 180 fr gr.

f. Section 08415 – Aluminum Storefront
    i. Parts of the specification call for 'anodized' and other parts call for 'painted'. The intent is to have clear anodized aluminum. Delete the references to "Class I color factory baked Kynar finish 1," and other paint references.

g. Section 09220 – Portland Cement Stucco
    i. Provide two (2) 4'x4' mock-ups. The mock-ups must be provided a month (30 days minimum) before the craftsmen are scheduled to begin the stucco work on the building. Locate the mock-ups adjacent to the brick mock-ups.

h. Section 10350 – Flagpoles
    i. There are three flagpoles in the project. The specifications call for the flagpole to be 40' tall. Instead of all three flagpoles being 40' tall, make one 40' tall and two are to be 35' tall. The 40' tall flagpole will be in the center with the two 35' tall flagpoles on either side.

i. Section 10425 – Signs
    i. With the exception of the Electronic Message Board, all signs, letters, numerals, and plaques are to be from a single (preferred) or two manufacturer(s), including necessary mounting fittings and fasteners. If two manufacturers are used, the sign supplier must be a single party and responsible for coordinating the products of the two manufacturers to provide a unified, seamless appearance.
    ii. On page 10425-8, delete the reference to Keynotes 16 and 17 on A.200.
    iii. Additional comments:

1. Dimensional Letters and Numbers
    a. The 9" letters called for on 10425-5 are for Sign 2, as shown in drawing J.4/G.004. This is a one-sided sign, so only one set of these letters are needed.
    b. These letters are to be Cast Aluminum Alloy #514, painted black (semi-gloss).
    c. The mounting of these letters is Flush Stud. Studs must extend into CMU (not just stucco).
    d. The font is either Microgamma Bold Extended or Eurostyle Bold Extended.
    e. The size of these letters is 9" tall and 1.5" thick.
    f. The basis of design is Gemini Corporation US, 103 Mensing Way, Cannon Falls, MN 55009, (507)263.3957. https://geminimade.com/signage/
2. Cast Metal Plaque
    a. The plaque will be installed in the Lobby (room 102) on a gyp. board and metal stud wall.
    b. The plaque is to be bronze (precision Tooled Alloy 22000, Cast Alloy Navy G), with a leatherette background texture in a Duranodic Bronze color, with brushed finish on the raised letters, numbers, and border, and a satin finish. The border is to be Single Line Wide Bevel.
    c. The mounting is to a Blind Mount.
    d. The font is either Microgamma Bold Extended or Eurostyle Bold Extended.
    e. The size of the plaque is 24"x24".
    f. The basis of design is Gemini Corporation US, 103 Mensing Way, Cannon Falls, MN 55009, (507)263.3957. https://geminimade.com/signage/
3. Interior Panel Signs
    a. The interior panel signs will be located throughout the building:
        i. Provide one interior panel sign for each interior door opening.
        ii. Provide two interior panel signs for each exterior door that serves as an exit.
        iii. Provide one interior panel sign for each exterior door that is not an exit.
        iv. Provide fifteen (15) extra interior panel signs.
    b. The font is either Microgamma Bold Extended or Eurostyle Bold Extended.
    c. The Architect will provide the text in English and the French translation. The Braille (Grade 2) translation is the responsibility of the sign manufacturer.
    d. The basis of design is 290 Sign System, 5350 Corporate Grove Blvd SE, Grand Rapids, Michigan 49512, 800-777-4310 https://www.290signs.com/products/slide-system/
4. Exterior Panel Signs
    a. Locations:
        i. One exterior panel sign will be located on Sign 2; see drawing J.4/G.004.
        ii. One exterior panel sign will be located on the east elevation of the Maintenance Building.
    b. The mounting is to be flush and blind (hidden from view).

c. Upon request, the Owner will provide Vector artwork during shop drawing phase.
d. The basis of design is 290 Sign System, 5350 Corporate Grove Blvd SE, Grand Rapids, Michigan 49512, 800-777-4310 https://www.290signs.com/products/slide-system/

5. Self-Illuminated Signs
   a. The location of the self-illuminated signs is on both sides of Sign 1 (see drawing A.1/G.004). Sign 1 is a two-sided sign, so two sets of letters and numerals are required.
   b. The street number has changed to "5025".
   c. The basis of design is 290 Sign System, 5350 Corporate Grove Blvd SE, Grand Rapids, Michigan 49512, 800-777-4310 https://www.290signs.com/products/slide-system/
6. Electronic Message Board
   a. The location of the electronic message boards is on both sides of Sign 1 (see drawing A.1/G.004). Sign 1 is a two-sided sign, so two electronic message boards are required.
   b. The basis of design is Daktronics United States, 1-800-325-8766, https://www.daktronics.com/en-us
7. Way-Finding Signs
   a. These are directional signs located at various locations on site. See Keynote 24 on G.001 (only five locations are shown but allow for another 15 signs (total of 20). All signs will have two faces; some signs will have directional information on both faces, whereas others will have directional information on one face only.
   b. These signs will have a variety of messages such as "Do Not Enter", "One Way (with an arrow)", "Deliveries (with an arrow)", "Exit (with an arrow)", etc.. All of these signs will also have the Police Department's logo. Upon request, the Owner will provide Vector artwork during shop drawing phase.
   c. These signs will be mounted in the ground using two pre-painted aluminum posts.
   d. An alternate basis of design is 290 Sign System, 5350 Corporate Grove Blvd SE, Grand Rapids, Michigan 49512, 800-777-4310 https://www.290signs.com/

j. Section 11452 – Kitchen Appliances
   i. The following items' locations are:
      1. Undercounter Refrigerator: locate in room 110 Coffee; see Interior Elevation E.11/A.604 and Keynote 8 on A.604.
      2. Undercounter Ice Maker: This item is not needed. Delete this item.
      3. Refrigerator: locate in room 148 Breakroom. See Interior Elevation D.7/A.600 and Keynote 13 on A.600.
      4. Dishwasher: locate in room 148 Breakroom. See Interior Elevation D.7/A.600 and Keynote 14 on A.600.
      5. Range: locate in room 148 Breakroom. See Interior Elevation G.1/A.600 and Keynote 16 on A.600.
      6. MicroWave Oven/Hood: locate in room 148 Breakroom. See Interior Elevation

G.1/A.600 and Keynote 17 on A.600.
7. Microwave Oven: locate in room 110 Coffee; see Interior Elevation E.11/A.604 and Keynote 17 on A.604.
8. Commercial Ice Maker: locate in room 202 Maintenance; see Keynote 31 on A.160 (delete the "N.I.C." in this Keynote).

ii. Delete the Undercounter Ice Maker: This item is not needed.

III. DRAWINGS.

a. Sheet G.002
   i. Referring to drawing H.7, delete Keynotes 32 and 34 as these items have already been removed. The remnants of some existing drives remain, and the contractor should be aware of the possibilities of some existing underground utilities. No power poles need to be relocated.

b. Sheet G.003
   i. In drawing A.12, add three (3) Type "A" bollards along the inside of the back wall of the dumpster yard (12" from back of yard, and spaced 4'-0" o.c.

c. Sheet G.004
   i. Drawing J.4: There are three flagpoles in the project. The specifications call for the flagpoles to be 40' tall. Instead of all three flagpoles being 40' tall, make one flagpole 40' tall and two flagpoles are to be 35' tall. The 40' tall flagpole will be in the center with the two 35' tall flagpoles on either side.
   ii. In lieu of a concrete bollard as shown in drawing J.9, the Type "B" bollard shall be a 10"-11" Estate Bollard Sleeve as manufactured by Keystone Ridge Designs (or approved equal). See Attachment No. Five.

d. G.005
   i. Randy 9.16.22:
      1. The wall detail is as I indicated before 9/S.601 but there is a small hole made for the fence post.
      2. The hole should be no less than 12" diameter depth as you show and no special reinforcing.

e. Sheet A.000
   i. Regarding opening 102.1:
      1. The sections of the opening between column lines 9 and 10 and between 12 and 13 are to comply with windload requirements, have colored insulated glass.
      2. However, the section of the opening between column lines 10 and 12 do not need to comply with windload requirements as they are not exterior glass. Additionally, the glass does not need to be insulated, and shall be ¼" clear tempered glass.

f. Sheet A.001
   i. Door 120.3 was inadvertently shown twice, once as a 10' overall unit and once as a 7'

overall unit. It turns out that both are wrong. The correct size and description is shown in Addendum #1, item "III.e.i."

ii. Doors 141.1 & 142.1 should be fire rated openings (door, frame, and glass).

g. Sheet A.003
   i. Details A.5, D.5, A.10 and D.10 apply to all exterior windows that do not extent to the floor; i.e., they apply to all windows marked "D", "F", and "G".

h. Sheet A.100
   i. Toward the north end of Room 120 Training / Emergency OPS, add a 14' long x 3' deep millwork unit. This location of this unit can be seen on sheet A.130 (in light orange). For further description of this unit, see Attachment No. Four – Training Room Fixed Table.

   ii. Keynote 4 refers to a thru wall banking depository as manufactured by Diebold/Mosler Security, or equal. The opening is to be 18" wide minimum. See photo at right.
   iii. At rooms 141 and 142 Holding, the wall type around and between these rooms should be "P5A", not "P5".
   iv. In rooms 132 and 134 Lockers, the lockers are drawn as 12"x12" lockers. However, in the elevations on sheet A.604, they are drawn as 18"x18" lockers and they are described as 18"x18"x 36" lockers in the specifications. The correct size is 18"x18"x36". Adjust the drawing accordingly.
   v. Delete the millwork shown in room 153 CID 2.

i. Sheet A.160
   i. For the foundation under the Mechanical Yard, refer to 11/S.600.
   ii. The floor finish inside of the Maintenance Building is to be concrete with a Diamond Buff Sealed Concrete finish.
   iii. In Keynote 31, delete the "N.I.C.". This piece of equipment is part of this project.
   iv. Keynotes 1 calls for a 6' tall chain link fence partition. In lieu of a 6' high chain link fence partition, provide a 12' high chain link fence partition; adjust the size of the poles, footings, etc. to accommodate this additional height. Provide cable bracing to the metal building structure above. This fence is to be a galvanized (not vinyl) finish fabric. There is no razor wire at this fence.
   v. Keynote 6 calls for a 6' tall chain link fence. This fence is to be a galvanized (not vinyl) finish fabric. There is no razor wire at this fence.

j. Sheet A.260
   i. Keynote 5 calls for a Metal Building Awning. To clarify, this shall be a standard marquee awning as manufactured by most Pre-Engineered Metal Building manufacturers. It will be a standard color (probably white) but must meet wind load and other code requirements.
   ii. Adjust Keynote 23: in lieu of a 6' high chain link fence partition, provide a 12' high chain link fence partition; adjust the size of the poles, footings, etc. to accommodate this additional height. Provide cable bracing to the metal building structure above. This fence is to be a galvanized (not vinyl) finish fabric. There is no razor wire at this fence.

k. Sheet A.280
   i. Regarding Keynote 10, the photo at the right is a photo of a typical existing metal awning on the building.

l. Sheet A.500
   i. Add the following at the end of Keynote 45: "Flashing to extend 1" past edge of slab.
   ii. In detail A.5, provide a slight slope away from the stucco on the concrete "brick ledge" and provide a chamfered edge.
   iii. Adjust the number of pressure treated 2x8's in Keynote 50 from 2 to 3. This occurs at the top of the wall in wall section A.5; instead of two (2) pressure treated 2x8's, provide three (3).

m. Sheet A.600
   i. All counter tops [including but not limited to the counters in the restroom, the Break Room (room 148), the Coffee (room 110), niche on the east end of the Evidence (room 119), and the built-in in the Training (room 120)] are to be seamless Solid Surfacing. See Keynote 22.
   ii. All plastic laminate clad cabinets and drawer fronts are to be vertical grade laminate on the exterior and edges. See Keynotes 23 and 28 for further information.

n. Sheet A.602
   i. The 5/4x2" trim (Keynote 16) and the 5/4x10" base (Keynote 2) are to be stain grade hardwood.

o. Sheet A.604
   i. In rooms 132 and 134 Lockers, the lockers are drawn as 12"x12" lockers. However, in the elevations on sheet A.604, they are drawn as 18"x18" lockers and they are described as 18"x18"x 36" lockers in the specifications. The correct size is 18"x18"x36". Adjust the drawing on A.100 accordingly. This will result in twelve (12) double tier lockers in room 132, and ten (10) double tier lockers in room 134.

p. Sheet A.605
   i. Delete drawing E.1, and the millwork shown therein.

IV. PRIOR APPROVALS.

a. The following manufacturers shall be considered as prior approved to submit materials of equivalent performance, size, operation, etc. for the product(s) indicated. The Contractor shall note that prior approval is by manufacturer's name only. Contractor shall ensure that the products used in preparation of his proposal and proposed to be used on this project, is equivalent to that specified in appearance, performance, size, installation type, and shape. Any material found to not be equivalent to that specified will be rejected. Prior approval of one manufacturer does not automatically prior approve any subsidiary company, parent company and/or sister company and

their associated products.

ITEM	*MANUFACTURER*
Aluminum Storefront	Manko Window Systems (Manko Windows 2600xpt)
Metal Lockers	Scranton Tufftec Lockers
Metal Benches	Scranton Tufftec Bench
Walkway Covers	Allstate Canopies and Rooms
Evidence Lockers	Tiffin Metal Products

V. PRIOR ADDENDA.

a. Addendum #3
   i. Regarding item "II.c": Section 07400 – Manufactured Metal Roof Panels.
      1. The number used in the title (Section 07400) in incorrect. The correct Section number is 07411.
   ii. Regarding item "IV.b": Attachment No. Two – Specification Section 08361 – Sectional Overhead Doors.
      1. In paragraph "1.4.B", 115 volts is applicable for this project.
      2. In paragraph "2.2.A.5", the door/motor will not have a key. Instead, provide an open/close stop button with a key switch.
      3. In paragraph "2.2.A.8.a", delete options "1" and "2". Provide option "3 Photoelectric sensors monitored to meet UL 325/2010".
      4. Delete paragraph "2.2.A.8.c". The vehicle detector operations feature is not needed.
   iii. Regarding item "IV.b": Attachment No. Three – Specification Section 08711 – Door Hardware
      1. The hardware for the storefront doors is addressed in this specification section, not the deleted one.

VI. ATTACHMENTS.

a. Attachment No. One – Minutes of Pre-Bid Conference. Two (2) 8.5"x11" sheets.
b. Attachment No. Two – Specification Section 03350 – Diamond Buff Sealed Concrete. Seven (7) 8.5"x11" sheets.
c. Attachment No. Three – Specification Section 04090 – Mortar Deflection Devices. Two (2) 8.5"x11" sheets.

□□

END OF ADDENDUM № 4

Lynn Guidry
ARCHITECT
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PRE-BID CONFERENCE
MINUTES

DATE:	September 21, 2022
TIME:	9:00 am
PROJECT:	**CARENCRO POLICE STATION**
ARCHITECT'S PROJECT NUMBER:	**2021.006**
LOCATION:	Site of Carencro Police Station 5055 North University Carencro, Louisiana
PRESENT:	See Sign-In Sheet

1. The purpose of this meeting was to serve as the Pre-Bid Conference.
   a. Lynn had prepared a Sign-In Sheet and asked everyone to sign in.
   b. Lynn introduced Police Chief David Anderson and civil engineer Chad Roussel.
   c. Lynn provided a brief history of the Carencro Police Station project.
   d. Lynn reminded the bidders that City of Carencro will waive the building permit fee, the fees for the gas and water meters, and fees for the gas and water taps, but the contractor will still have to apply for them.
   e. Lynn described and explained the need for the work at the Community Center to be the shortest duration possible. Don't start until you are ready to finish.

2. Lynn opened the meeting to questions and comments. The responses will be addressed by Addendum:
   a. The lightweight roofing specification needs more clarification.
   b. The appliances listed in the specification don't exactly correlate with what is on the drawings.
   c. A question was asked about the longitudinal joints in the concrete.
   d. Asked for a contact at Entergy.
      i. *Response: Tom Chamberlain; phone (337) 431-6235; cell (901) 834-4579; email tchamb2@entergy.com*
   e. Are Entergy fees part of the contract, or will the City cover these costs?
   f. The furniture plan is hard to read because of the many colors.
   g. The time allowed for the project (365 days) was a concern to the contractors. However, Chief Anderson and Lynn explained the urgency on the Owner's end. The contractor felt that because of the supply chain chaos we are in, 15 months was more reasonable.

Respectfully submitted,

Lynn Guidry, AIA
Lynn Guidry Architect

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SIGN-IN SHEET

DATE: **September 21, 2022** TIME: **9:00 am**

RE: **CARENCRO POLICE STATION**
Carencro, Louisiana
2021.006

LOCATION: **Carencro Police Station Site**
5055 North University Avenue
Carencro, Louisiana

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PRE-BID CONFERENCE

The following individuals were present:

NAME	COMPANY	PHONE NO.	EMAIL
LYNN GUIDRY	LYNNGUIDRYARCHITECT	896-6695	lynn@lynnguidryarchitect.com
Trent Descant	M.O. Descant LLC	318 346 6657	[illegible]
Randy Bowen	Pellerin + Wallace	337-654-1340	RandyBowen3@gmail.com
Glen Touchet	ARL Construction, Inc	337-828-7504	ARL@arl.construction
Adam Jalley	Ratcliff Construction	318-448-0826	bids@rccalex.com
SEAN VANCOURT	RUDICK	469-753-1617	svancourt@rudickgroup.com
Eddie Piter	QDI	318-563-8957	epiter.98@gmail.com
KEN FUSELIER	MASTER BUILDERS	337-237-[illegible]	ken@mbs-builds.com
Kasey Kay	PERC Development	832-610-0135	Kasey.Kay@percdevelopment.com
Milo Correa	Milo Correa	337-274-9508	milo@trahanconstruction.com
DAVID ANDERSON	CARENCRO PD.	337-896-6132	danderson@carencropd.com
Chad Roussel	Regin Engineering	337-207-2915	chad@reginengr.com

SECTION 03350 - DIAMOND BUFF SEALED CONCRETE.

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Polished concrete.

B. Dyed and polished concrete.

1.2 RELATED SECTIONS

A. Section 033000 - Cast-in-Place Concrete.

B. Section 07900 – Joint Sealers.

1.3 REFERENCES

A. American Concrete Institute (ACI): ACI 302.1R - Guide for Concrete Floor and Slab Construction.

B. American National Standards Institute (ANSI): Standards B-101.1/2009.

C. ASTM International (ASTM):
1. ASTM C 309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
2. ASTM C 171 - Standard Specification for Sheet Materials for Curing Concrete.
3. ASTM C 779 - Standard Test Method for Abrasion Resistance of Horizontal Concrete Surfaces.

D. National Floor Safety Institute (NFSI): NFSI Test Method 101-A - Standard for Evaluating High-Traction Flooring Materials.

1.4 SYSTEM DESCRIPTION

A. Performance Requirements: Provide polished flooring that has been designed, manufactured and installed to achieve the following:
1. Abrasion Resistance: ASTM C779, Method A, high resistance, no more than 0.008 inch (0.20 mm) wear in 30 minutes.
2. Reflectivity: Increase of 35% as determined by standard gloss meter.
3. Waterproof Properties: Rilem Test Method 11.4, 70% or greater reduction in absorption.
4. High Traction Rating: NFSI 101-A, ANSI B-101.1 2009 non-slip properties.

B. Design Requirements:
1. Hardened Concrete Properties:
   a. Minimum Concrete Compressive Strength: 3500 psi (24 MPa).
   b. Normal Weight Concrete: No lightweight aggregate.

c. Non-air entrained.

2. Placement Properties:
   a. Natural concrete slump of 4-1/2 inches to 5 inches (114 to 127 mm). Admixtures may be used.
   b. Flatness Requirements:
      1) Overall FF 50.
      2) Local FF 40.
3. Hard-Steel Troweled (3 passes) Concrete: No burnishing marks. Finish to ACI 302.1R, Class 5 floor.
4. Curing Options:
   a. Membrane forming curing compounds (ASTM C309, Type 1, Class B, all resin, dissipating cure). 1) Acrylic curing and sealing compounds not recommended.
   b. Sheet membrane (ASTM C171); polyethylene film not recommended.
   c. Damp Curing: Seven day cure.

1.5 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Shop Drawings: Indicate information on shop drawings as follows:
1. Typical layout including dimensions and floor grinding schedule.
2. Plan view of floor and joint pattern layout.
3. Areas to receive colored surface treatment.
4. Hardener, sealer, densifier identified in notes.

C. Product Data: Submit product data, including manufacturer's SPEC-DATA product sheet, for specified products.
1. Material Safety Data Sheets (MSDS).
2. Preparation and concrete grinding procedures.
3. Colored Concrete Surface, Dye Selection Guides.

D. Quality Assurance Submittals:
1. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties as cited in Performance Requirements.
2. Certificates:
   a. Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
   b. Letter of certification from the National Floor Safety Institute confirming the system has been tested and passed phase Two Level of certification when tested by Method 101-A. ANSI B-101.1 2009 non-slip properties.
   c. Current contractor's certificate signed by manufacturer declaring Contractor as an approved installer of polishing system.
3. Manufacturer's Instructions: Manufacturer's installation instructions.

E. Warranty: Submit warranty documents specified.

F. Operation and Maintenance Data: Submit operation and maintenance data for installed products.

1. Manufacturer's instructions on maintenance renewal of applied treatments.
2. Protocols and product specifications for joint filing, crack repair and/or surface repair.

1.6 QUALITY ASSURANCE

A. Installer Qualifications:
   1. Installer with a minimum of 5 years' experience in performing work of this section who has specialized in installation of work similar to that required for this project.
   2. Installer trained and holding a current certificate as a FGS PermaShine installer.
   3. Current Certification from the CPAA stating that the technicians are trained craftsmen.

B. Concrete finishing components and materials shall be from single manufacturer.

C. Manufacturer Qualifications:
   1. Manufacturer capable of providing field service representation during construction and approving application method.
   2. Manufacturer shall have a minimum 5 years of experience in manufacturing components similar to or exceeding requirements of project.

D. Regulatory Requirements: Comply with NFSI Test Method 101-A Phase Two Level High Traction Material.

E. Mock-Ups:
   1. Mock-Up Size: 100 sf (9.3 m2) sample panel at jobsite at location as directed under conditions similar to those which will exist during actual placement.
   2. Mock-up will be used to judge workmanship, concrete substrate preparation, operation of equipment, material application, color selection and shine.
   3. Allow 24 hours for inspection of mock-up before proceeding with work.
   4. When accepted, mock-up will demonstrate minimum standard of quality required for this work.
      a. Approved mock-up may remain as part of finished work in Mechanical Yard in area that will be covered by equipment (e.g., generator).
   5. Mock-Up will demonstrate required level of cut:
      a. Level 2 - Salt/Pepper Finish: Expose the fine aggregate such as sand and small aggregate with the concrete. The depth of grind will depend greatly on the placement and finishing procedures. Generally, this level of cut can be achieved within 1/16" of the surface.
      b. Sheen Level B: Sheen (high gloss) as determined by a gloss reading of 60 - 70.

F. Pre-installation Meetings: Conduct a pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements. Review the following:
   1. Environmental requirements.
   2. Scheduling and phasing of work.
   3. Coordinating with other work and personnel. Remind all trades that they are working on a surface that is to become a finished surface.
   4. Protection of adjacent surfaces.
   5. Surface preparation.

6. Repair of defects and defective work prior to installation.
7. Cleaning.
8. Installation of polished floor finishes.
9. Application of liquid hardener, densifier.
10. Protection of finished surfaces after installation.
11. placing of materials on the concrete surface that may cause staining, etching or scratching

1.7 DELIVERY, STORAGE AND HANDLING

A. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.

B. Delivery: Deliver materials in manufacturer's original packaging with identification labels and seals intact.

C. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.

1.8 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

B. Protect Concrete Slab:
1. Protect from petroleum stains during construction.
2. Diaper hydraulic power equipment.
3. Restrict vehicular parking.
4. Restrict use of pipe cutting machinery.
5. Restrict placement of reinforcing steel on slab.
6. Restrict use of acids or acidic detergents on slab.

C. Waste Management and Disposal:
1. Separate waste materials for Reuse and Recycling in accordance with Section 01 74 19 - Construction Waste Management and Disposal.
2. Remove from site and dispose of packaging materials at appropriate recycling facilities.

1.9 PROJECT AMBIENT CONDITIONS

A. Installation Location: Comply with manufacturer's written recommendations.

1.10 SEQUENCING

A. Sequence with Other Work: Comply with manufacturer's written recommendations for sequencing construction operations.

1.11 WARRANTY

A. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty

document executed by authorized company official. Manufacturer's warranty is in addition to, and does not limit, other rights Owner may have under Contract Documents.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: L&M Construction Chemicals, which is located at: 1 LATICRETE Park N.; Bethany, CT 06524-3423; Toll Free Tel: 800-362-3331; Tel: 402-453-6600; Email:request info (info@lmcc.com); Web:www.laticrete.com/lmcc

B. Requests for substitutions will be considered in accordance with provisions of Section 00103 - Instructions To Bidders.

2.2 POLISHED CONCRETE

A. Products/Systems:
   1. Hardener, Sealer, Densifier: Proprietary, water based, odorless liquid, VOC compliant, environmentally safe chemical hardening solution leaving no surface film.
      a. Acceptable Material: L & M Construction Chemicals, Inc., FGS Hardener Plus. Basis of design.
      b. Acceptable Material: L&M Construction Chemicals, Inc., Lion Hard may be substituted when conditions exist where disposing of rinse water is in conflict with local building codes.
   2. Joint Filler: Semi-rigid, 2-component, self-leveling, 100% solids, rapid curing, polyurea control joint and crack filler with Shore A 80 or higher hardness.
      a. Acceptable Material: L & M Construction Chemicals, Inc., Joint Tite 750.
   3. Oil Repellent Sealer: Ready to use, silane, siloxane and fluoropolymers blended water based solution sealer, quick drying, low-odor, oil and water repellent, VOC compliant and compatible with chemically hardened floors.
      a. Acceptable Material: L & M Construction Chemicals, Inc., Petrotex.
   4. Cleaning Solution: Proprietary, mild, highly concentrated liquid concrete cleaner and conditioner containing wetting and emulsifying agents; biodegradable, environmentally safe and certified High Traction by National Floor Safety Institute (NFSI).
      a. Acceptable Material: L & M Construction Chemicals, Inc., FGS Concrete Conditioner.
   5. Stain Guard Sealer: Ready to use, is a low odor, VOC compliant, topical sealer consisting of low molecular emulsified cross-linking, coupling polymers that effectively protect concrete and other natural stone floor surfaces from the damaging effects of staining, defacing and deterioration due to contaminant penetration.
      a. Acceptable Material: L& M Construction Chemicals, Inc. Permaguard SPS.
   6. Finish: Medium gloss (MG-2), 800.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions:
   1. Verify that concrete substrate conditions, which have been previously installed under other sections or contracts, are acceptable for product installation in accordance with manufacturer's instructions prior to installation of concrete finishing materials.

B. Do not begin installation until substrates have been properly prepared.

C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

D. Verify Concrete Slab Performance Requirements:
   1. Verify concrete is cured to 28 day duration and 3500 psi (24 MPa) strength.
   2. Verify concrete surfaces have received a hard steel-trowel finish (3 passes) during placement.
   3. Verify overall floor flatness is a minimum of Ff 40.

3.2 PREPARATION

A. Ensure surfaces are clean and free of dirt and other foreign matter harmful to performance of concrete finishing materials.

B. Examine surface to determine soundness of concrete for polishing.

3.3 INSTALLATION

A. Compliance: Comply with manufacturer's written data, including product technical bulletins, product catalog installation instructions, product carton installation instructions.

B. Floor Surface Polishing and Treatment:
   1. Provide polished concrete floor treatment in entirety of slab indicated by drawings. Provide consistent finish in all contiguous areas.
   2. Apply floor finish prior to installation of fixtures and accessories.
   3. Diamond polish concrete floor surfaces with power disc machine recommended by floor finish manufacturer. Sequence with coarse to fine grit. Installer to determine the optimum starting grit in order to achieve the specified aggregate exposure.
      a. Comply with manufacturer's recommended polishing grits for each sequence to achieve desired finish level. Following the initial passes of metal bond diamonds, the installer shall drop back a minimum of one grit level when transitioning to resin bond diamonds. The separation in grit designation shall be a minimum of 50 for the transitioning step. The installer shall refine each abrasive grit to its fullest potential before moving on to the next level. Floor shall be thoroughly scrubbed between each grit pass to remove all loose material. Level of sheen shall match that of approved mock-up.
      b. Expose aggregate in concrete surface only as determined by approved mock-up.
      c. All concrete surfaces shall be as uniform in appearance as possible.
   4. Hardener and Densifier Application:
      a. First coat of FGS Hardener Plus at 250 ft2/gal (6.25 m2/L), following the 400 grit

level. (Lion Hard at 400-600 sq ft / gallon).

b. Second coat of FGS Hardener Plus at 350 ft2/gal (8.75 m2/L), prior to the final polishing pass (Lion Hard at 600-800 sq ft / gallon).

c. Follow manufacturer's recommendations for drying time between successive coats.

5. Remove defects and re-polish defective areas.

6. Finish edges of floor finish adjoining other materials in a clean and sharp manner.

3.4 ADJUSTMENTS

A. Re-polish those areas not meeting specified gloss levels per mock-up.

B. Fill joints flush to surface prior to the start of polishing operations.

3.5 FINAL CLEANING

A. Upon completion, remove surplus and excess materials, rubbish, tools and equipment.

3.6 PROTECTION

A. Protect installed product from damage during construction in accordance with manufacturer's recommendations.

END OF SECTION 03350

SECTION 04090 – MORTAR DEFLECTION DEVICES

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes: Polymer mesh strips with geometric design to be placed in masonry cavities to break up mortar droppings and prevent weep hole blockage.

1.2 REFERENCES

A. ASTM D5035 – Breaking Force and Elongation of Textile Fabrics (Strip Method).

1.3 SUMBITTALS

A. Provide in accordance with Section 01330 – Submittal Procedures:

1. Product data and installation instructions.

2. 3 by 3 inches [76 by 76 mm] minimum size sample of mortar deflection device.

PART 2 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Advanced Building Products, Inc., P. O. 98, Springvale, Maine 04083; 800-252-2306; www.advancedbuildingproducts.com

B. Manufacturers of equivalent products submitted and approved in accordance with Section 00103 – Instructions to Bidders.

2.2 PRODUCTS

A. Mortar deflection device:

1. Type: Polymer mesh strips with geometric design to be placed in masonry cavities to break up and deflect mortar droppings; Mortar Break DT as manufactured by Advanced Building Products, Inc., or equal.

2. Composition: High density polyethylene woven mesh former into geometric design.

3. Thickness: 1.0 inches.

4. Width: 11 inches.

5. Properties tested in accordance with ASTM D5035:

a. Tensile strength:

1) Roll direction: 285 PSI minimum.

2) Cross roll direction: 310 PSI minimum.

b. Elongation:

1) Roll direction: 60 percent

2) Cross roll direction: 55 percent

PART 3 – EXECUTION

3.1 INSTALLATION

A. Install mortar deflection devices as part of masonry wall construction and in accordance with manufacturer's installation instructions.

B. Install in cavities at full height of cavity.

C. Place deflection strips horizontally and diagonally directly on flashings.

END OF SECTION 04090