J E Bowen Construction, LLC
P.O. Box Mesa, AZ. 85216-3696 Phone: (480) 393-3443 Fax: (480) 275-5083

Request for Information

TO	**Robin Berry – Donna Horn**
JOB NAME	CP0096 Mesa Burn Facility Expansion
DELIVERY	FTP Site Upload
RFI #	15
FROM	JE Bowen Construction
DATE	06-22-16

Request: approved repair and patch methods at walls and clear definition of structural damages.
In a few location were rock pockets are visible what materials can we use for repair and patches.
We have a few types
Type 1- non exposed areas without any structural damages (JEB recommends no repair needed since non structural damages surface appearance only.)
Type 2- exposed areas without structural damages (JEB recommends a type of sacking area depending on size of area)
Type 3- non exposed and exposed areas with structural damages (JEB recommends remove loose rocks and concrete per manufacture recommendations suggest by engineers and patch per product specs)

Please advise

LEA Response - Match Finish/Color of CIP walls
R. Jones RA
6-30-16

UNLESS NOTED OTHERWISE BY LEA ARCHITECTS.

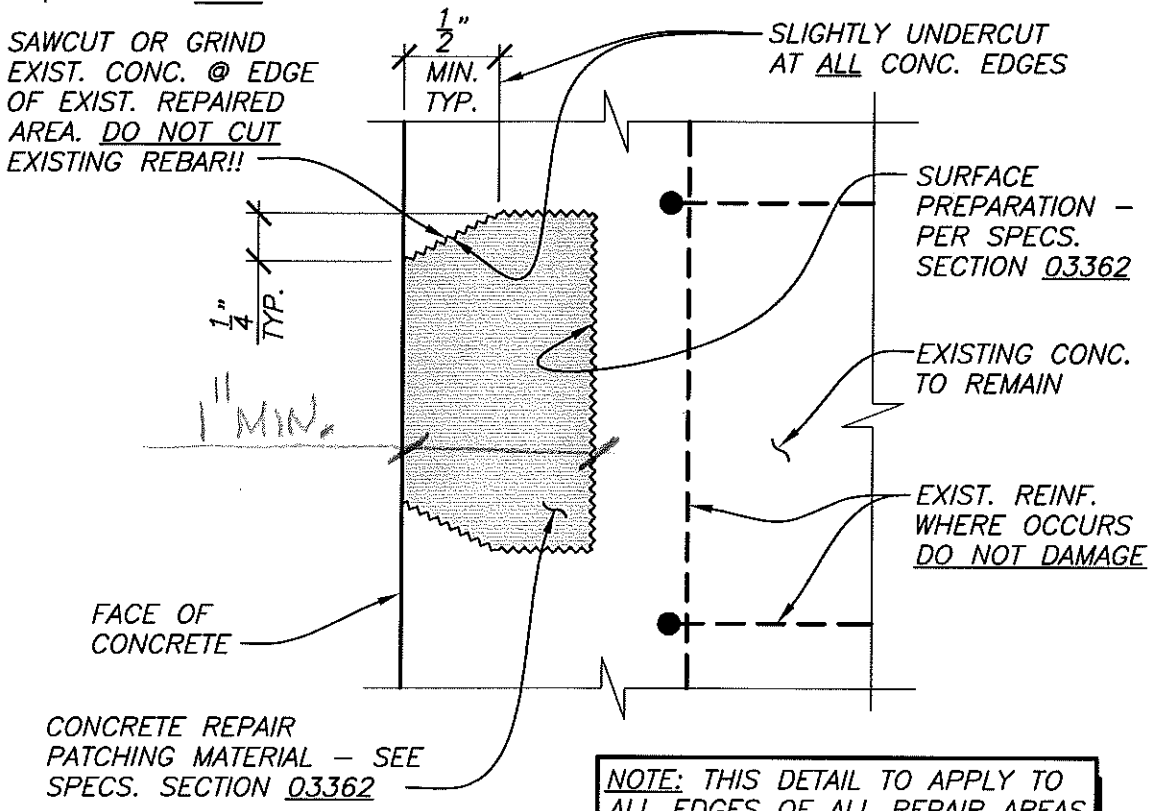
Response: TYPE 1 & 2 REPAIRS OK PER JEB RECOMMENDATIONS ABOVE. FOR TYPE 3 ONLY WHERE HAND PATCHING REPAIRS ARE APPROPRIATE, SEE ATTACHED SPECS, SECTION 03362 & DETAIL 1/S55.

Mark A. Stam P.E. — **Answered By**
GERVASIO & ASSOC, INC. — **Company**
6/29/2016 — **Date**

CORRECTIVE MEASURES

CONCRETE REPAIR NOTES:

1. Existing unsound concrete exhibiting rock pockets, voids, or otherwise unacceptable characteristics must be mechanically removed down to sound concrete by hand chipping.
   a. Actual concrete removal may need to extend past the visible extents of unsound concrete until sound concrete is reached.
   b. The edges of the repair shall be generally square and block-like in shape and shall have a rough profile. Avoid abrupt changes in depth.
   c. The perimeter of the repair shall be kept to a simple shape. Avoid re-enterant corners.
   d. Where reinforcing is encountered, if more than 1/3 of the circumference of a bar is exposed, continue removing concrete to behind the bar. The clear space behind any reinforcing bars to existing concrete surface shall be 1 1/2" min.
   e. Do NOT damage reinforcing steel during chipping.
2. Call Structural Engineer for inspection of repair area after chipping & before proceeding further.
3. Thoroughly clean the existing roughened surface & exposed reinforcement of rust, dirt, loose chips & dust using high pressure, 2500± psi potable water blast.
4. See Specs. Section 03362 for additional information.



NOTE: THIS DETAIL TO APPLY TO ALL EDGES OF ALL REPAIR AREAS

1 UNDERCUT EDGE @ CONC. REPAIR AREAS

NO SCALE

SEE CONTRACT DOCUMENTS FOR INFORMATION NOT CALLED OUT.

RESPONSE TO RFI NO. 15 - REQUEST FOR CONCRETE REPAIR PROCEDURE.

GERVASIO & ASSOC. INC.
CONSULTING ENGINEERS
77 E. THOMAS ROAD, SUITE 120
PHOENIX, ARIZONA 85012
(602) 285-1720 FAX 285-1530

MESA PUBLIC SAFETY TRAINING FACILITY
BURN FACILITY EXPANSION
3260 N. 40TH STREET
MESA, ARIZONA

Job No.	4082.1 S02
Date	6/30/16
By	MAS, EMK
Sheet No.	SS-5

SECTION 03362

CONCRETE HAND PATCHING REPAIRS

PART 1 GENERAL

1.01 SCOPE

A. This Section specifies a one-component, cement-based trowellable, non-segregating, structural repair concrete with integral corrosion inhibitor.

B. This product is designed for repairing horizontal, vertical or overhead concrete surfaces not less than 1 inch (25 mm) in repair depth where hand applied materials are appropriate.

C. This section also applies to smoothing out rough surfaces of new or existing concrete with minor defects or exposed aggregate.

1.02 PROJECT CONDITIONS

A. Weather Conditions: Apply repair mortar only when ambient and surface temperatures are 45 degrees F. and rising. Do not make the repair if the ambient temperature is expected to fall below 40 degrees F. within 24 hours after placement. Do not apply repair mortar when ambient temperatures are 100 degrees F. and above. Maximum substrate and material temperature shall not exceed 90 degrees F.

B. Follow manufacturer's recommendations regarding additional installation information (hot weather-drying conditions, or cold weather installation).

PART 2 MATERIALS

2.01 APPROVED MATERIALS

A. Cementious Repair Mortar: "SIKA QUICK VOH" as manufactured by SIKA Corporation or "TAMMS STRUCTURAL MORTAR" as manufactured by The Euclid Chemical Company.

B. Water: Potable

PART 3 EXECUTION

3.01 SURFACE PREPARATION

A. See Detail Sketch for surface preparation for repair areas.

3.02 MIXING

A. Drill and Paddle Mixer:

1. Other Repair Materials: Start by adding the minimum amount of pre-measured potable water into pail. While mixing at a slow speed, slowly add repair material and mix to a uniform consistency. Add remaining water to achieve desired consistency. Do not exceed maximum water content as stated on product packaging or an amount that will cause segregation.

2. Continue to mix thoroughly for approximately five (5) minutes.

3. Do not mix more material than can be placed within the working time of the repair material. Do not retemper the mix by adding additional water.

PART 4 APPLICATION

4.01 SPECIAL INSPECTION

A. Structural special inspection is required during material mixing and placement.

4.02 BONDING AGENT

A. For all applications, use Sikadur 32 as a bonding agent. Thoroughly scrub a thin layer of bonding agent into the clean surface with a stiff-bristled brush.

This should be done immediately before the application of the bulk of the mortar. Do not apply more of the bonding agent than can be covered with mortar before the bonding agent dries.

4.03 TROWEL - VERTICAL

A. Other Repair Materials: Apply repair material in layers thick enough to prevent sagging. Roughen each lift for mechanical bond and allow to stiffen before applying next thin layer and subsequent lift. Work repair material firmly into previous lift to ensure bond.

B. Placement shall proceed continuously until area is completely filled.

PART 5 FINISHING AND CURING

5.01 Cure repair areas with two (2) coats of curing and sealing compound: "KURE 1315" by BASF Construction Chemicals or "SUPERDIAMOND CLEAR VOX" by Euclid Chemical Company. NO SUBSTITUTIONS PERMITTED. Apply at a rate of 300 sq. ft. per gallon.

END OF SECTION

SECTION 00801

CONTRACTOR QUALIFICATIONS FOR CONCRETE PATCHING & EPOXY REPAIRS

PART 1 GENERAL

1.01 QUALITY ASSURANCE

A. Manufacturing Qualifications: The manufacturer of the specified product shall have in existence a recognized on-going quality assurance program independently audited on a regular basis.

B. Contractor Qualifications: Contractor shall be qualified in the field of concrete repair and protection with a successful track record of five (5) years or more. Submit contractor qualifications and list and description of similar projects to Engineer for review and approval. Certain products/procedures may require more experience, as specified in the individual sections. Contractor shall maintain qualified personnel who have received product training by a manufacturer's representative.

C. Install materials in accordance with all safety and weather conditions required by the manufacturer, or as modified by applicable rules and regulations of local, state and federal authorities having jurisdiction. Consult Material Safety Data Sheets (MSDS) for complete handling recommendations.

END OF SECTION