| AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT | 1. Contract Number DCAM-2009-B-0042 | Page of Pages 1 1 |
|---|---|---|

| 2. Amendment/Modification Number | 3. Effective Date | 4. Requisition/Purchase Request No. | 5. Solicitation Caption |
|---|---|---|---|
| **DCAM-2009-B-0042-001** | 30-Sep-09 | | **See Below** |

6. Issued By: Code 03B
Department of Real Estate Services
Contracting and Procurement Division
2000 14th Street N.W., Suite 500
Washington, D.C. 20009

7. Administered By (If other than line 6)
Department of Real Estate Services
Contracting and Procurement Division
2000 14th Street N.W., Suite 500
Washington, D.C. 20009

8. Name and Address of Contractor (No. Street, city, country, state and ZIP Code)

Code | Facility

(X) 9A. Amendment of Solicitation No. **DCAM-2009-B-0042**

9B. Dated (See Item 11) 4-Sep-09

10A. Modification of Contract/Order No.

10B. Dated (See Item 13)

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[ ] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers [x] is extended. [ ] is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning 1 copy of the amendment: (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or fax which includes a reference to the solicitation and amendment number. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or fax, provided each letter or telegram makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. Accounting and Appropriation Data (If Required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14

(X) A. This change order is issued pursuant to: (Specify Authority)
The changes set forth in Item 14 are made in the contract/order no. in item 10A.

[ ] B. The above numbered contract/order is modified to reflect the administrative changes (such as changes in paying office, appropriation data, etc.) set forth in item 14, pursuant to the authority of 27 DCMR, Chapter 36, Section 3601.2.

[ ] C. This supplemental agreement is entered into pursuant to authority of:

[ ] D. Other (Specify type of modification and authority)

**E. IMPORTANT**: Contractor [ ] is not, [x] is required to sign this document and return 1 copy to the issuing office.

14. Description of amendment/modification (Organized by UCF Section headings, including solicitation/contract subject matter where feasible.)

1. The bid opening of Monday, October 5, 2009 by 2:00pm local times is hereby extended to Monday, October 13, 2009 by 2:00pm local time.
2. Solicitation No. DCAM-2009-B-0042 Renovation of Concrete Stairs, Pathways and Driveways at UDC, Van Ness Campus is hereby amended as follows:

ATTACHMENT 1: ANSWERS TO WRITTEN CONTRACTOR QUESTIONS

ATTACHMENT 2: PROSPECTIVE BIDDERS LIST

3. The following new documents are hereby incorporated:
ATTACHMENT 3: SECTION: 033001-CAST -IN-PLACE CONCRETE OF PARKING GARAGE (7 PAGES) DIVISION 3 - CONCRETE

ATTACHMENT 4: SECTION: 03735-EMERGENCY REPAIR OF CAST-IN-PLACE CONCRETE (5 PAGES) DIVISION 3 - CONCRETE

ATTACHMENT 5: SECTION: 024117-STRUCTURE DEMOLITION OF PARKING GARAGE (5 PAGES) DIVISION 1 - GENERAL REQUIREMENTS

ATTACHMENT 6: DRAWINGS S-19 THRU S-21

All other terms and conditions remain the same.

Except as provided herein, all terms and conditions of the document referenced in Item (9A or 10A) remain unchanged and in full force and effect

| 15A. Name and Title of Signer (Type or print) | | 16A. Name of Contracting Officer **Diane Wooden** | |
|---|---|---|---|
| 15B. Name of Contractor (Signature of person authorized to sign) | 15C. Date Signed | 16B. District of Columbia Diane Wooden (Signature of Contracting Officer) | 16C. Date Signed 9/30/09 |

# ATTACHMENT 1
# ANSWERS TO WRITTEN CONTRACTOR QUESTIONS

## SOLICITATION NO. DCAM-2009-B-0042 RENOVATION OF CONCRETE STAIRS, PATHWAYS AND DRIVEWAYS AT UDC VAN NESS CAMPUS

**QUESTION AND ANSWER SECTIONS:**

(1) Please provide coverage limit requirements for Builders Risk Insurance as specified in Section I, Paragraph I.5.7.

Answer: The Builders Risk Insurance coverage limit requirements are equivalent to the amount the contract will be written for.

(2) Was the pre-bid a "mandatory" pre-bid?

Answer: No

(3) Can you tell me who I'll be bidding against? Please see attached Prospective Bidder's List.

Answer: This is only a list of the companies that have picked up the solicitation as of 9/22/09

(4) Can my bid be submitted via email as long as I hand deliver a copy after?

Answer: No. All bids must be submitted to the bid room on or before 2pm, October 5, 2009

(5) Stair No. 7: Drawings 10 of 27: repair Note and Detail drawing related to Stair No. 7 are missing.

Answer: Stair No. 7 does not require any repair work, however shall be pressure washed according to general note no. 10.

(6) Stair No. 20: Drawings 11 or 27: repair Note and Detail drawing related to Stair No. 20 are missing.

Answer: Stair No. 20 does not require any repair work, however shall be pressure washed according to general note no. 10.

(7) Note No. 4: Detail 1/S-5 on Drawing 14 of 27 says "See Note 4". Note 4 is missing.

Answer: 3. The callout for “see note 4” should read “see note 3”.

# ATTACHMENT 2
# PROSPECTIVE BIDDERS LIST

**GOVERNMENT OF THE DISTRICT OF COLUMBIA**
**DEPARTMENT OF REAL ESTATE SERVICES**
**PROSPECTIVE BIDDERS LIST**
**Solicitation No. DCAM-2009-B-0042**

**Market: Open w/35% SBE**

| | |
|---|---|
| Concrete Protection Restoration, Inc.<br>6737 Dogwood Road<br>Baltimore, MD 21207<br>Ph: 410-278-2669 Fax: 410-278-4086<br>Email: dbickel@c-p-rinc.com | Milani Construction<br>Saeed Milani-nia<br>1109 Good Hope Road, SE<br>Washington, DC 20020<br>Ph: 202-610-9856 Fax: 202-610-9857<br>Email: milaniconstruction@gmail.com |
| Four Seasons Construction Company<br>Hossein Kalanter<br>1325 G St. NW, Suite 500<br>Washington, DC 20005<br>Ph: 240-620-6300 Fax: 202-345-5373<br>Email: hkalantar2@gmail.com | Fort Myer Construction<br>2237 33rd St NE<br>Washington, DC 20018<br>Ph: 202-636-9535 Fax: 202-526-8572<br>Email: salukonis@fortmyer.com |
| Horton and Barber Construction, LLC<br>3127 Martin Luther King Ave<br>Washington, DC 20032<br>Ph: 202-378-0633 Fax: 202-330-9483<br>Email: hortonbarber@comcast.net | Z. Construction<br>PO Box 221735<br>Chantilly, VA 20153<br>Fax: 571-323-9687 |
| Specialty Construction Management<br>1818 New York Ave, NE, Suite 229<br>Washington, DC 20002<br>Ph: 202-832-7250 Fax: 202-832-7552<br>Email: ap@specialtyconstruction.net | F&L Construction, Inc<br>1512 Good Hope Road, SE<br>Washington, DC 20020<br>Ph: 202-678-5788 Fax: 202-678-2280<br>Email: glenkwc@msn.com |
| Prince Construction Company, Inc.<br>1111 Good Hope Road, SE<br>Washington, DC 20020<br>Ph: 202-889-5050 Fax: 202-610-4497<br>Email: germangalloc@yahoo.com | Consys, Inc.<br>732 Kennedy St NW<br>Washington, DC 20011-7717<br>Ph: 202-545-1333 Fax: 202-545-1339<br>Email: Jay@consys-inc.net |
| The Keystone Construction Group<br>Astrid Gomez<br>1600 K St. NW, Suite 350<br>Washington, DC 20006<br>Ph: 202-857-7903 Fax: 202-857-7908<br>Email: agomez@keystonedc.com | Anchor Construction Corp<br>2254 25th Place NE<br>Washington, DC 20018<br>Ph: 202-269-6694<br>Email: ssamuel@anchorconst.com |
| | |

| | |
|---|---|
| RMS Construction<br>1325 E St. NW, Suite 500<br>Washington, DC 20005 | Omni Excavators, Inc.<br>4103 48th St.<br>Bladensburg, MD 20710<br>Ph./Fax: 301-209-0039<br>Email: omniex11@verizon.net |
| Ammka International, Inc./Design Build Company<br>Moses Kassa<br>7600 Georgia Ave NW, Suite 304<br>Washington, DC 20012<br>Ph: 202-386-6101 Fax: 202-536-5115<br>Email: ammka@aol.com | Vista Contracting, Inc<br>1310 Pennsylvania Ave SE<br>Washington, DC 20003<br>Ph: 202-543-3180 Fax: 202-543-3164<br>Email: assistant1@vistacontracting.com |
| GT Contracting Corp<br>1447 Pennsylvania Ave SE<br>Washington, DC 20003-3030<br>Ph: 202-544-5155 Fax: 202-544-6618<br>Email: kimsmith.gtcontracting@juno.com | Authur Construction<br>23691 Overland Dr. Suite 110<br>Sterling, VA 20166<br>Ph: 703-996-1155 Fax: 703-996-1151 |
| Nastos Construction<br>1421 Kenilworth Ave, NE<br>Washington, DC 20019<br>Ph: 202-398-5500 Fax: 202-398-5501<br>Email: ray.amirian@nastos.com | O'Donnell Construction Company<br>3329 8th St. NE<br>Washington, DC 20011<br>Ph: 202-529-7227<br>Email: |
| Bennett Group<br>1230 31st St NW<br>Washington, DC 20007<br>Ph: 202-625-3330 Fax: 202-337-0475 | Capital Paving<br>2211 Channing St. NE<br>Washington, DC 20018<br>Ph: 202-527-7225 Fax: 202-832-5126 |
| EEC of DC<br>1405 H St. NE, Suite 3<br>Washington, DC 20002<br>Ph: 202-635-2189 Fax: 202-330-5729<br>Email: lamond@eecinc.com | Concreto Plus<br>5501 1st St. NW, Suite 1<br>Washington, DC 20011<br>Ph: 202-291-7587 |
| Leone Tech, LLC<br>Manif Jaffa<br>700 12th St. NW, Suite 700<br>Washington, DC 20005<br>Ph: 202-904-2486 Fax: 202-265-6936<br>Email: manif.jaffa@leonetech.net | |

ATTACHMENT 3

SECTION 033001

# SECTION 033001 - CAST-IN-PLACE CONCRETE OF PARKING GARAGE

## PART 1 - GENERAL

### 1.1 SUMMARY

A. This Section specifies cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.

### 1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Design Mixtures: For each concrete mixture.

C. Shop Drawings: For steel reinforcement.

### 1.3 QUALITY ASSURANCE

A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94 requirements for production facilities and equipment.

1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

B. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

1. ACI 301, "Specification for Structural Concrete,"
2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

## PART 2 - PRODUCTS

### 2.1 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints. Finish formwork and formwork accessories according to ACI 301.

### 2.2 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615, Grade 60, deformed.

1. Epoxy-Coated Reinforcing Bars: ASTM A 775, epoxy coated, with less than 2 percent damaged coating in each 12-inch bar length.

B. Deformed-Steel Welded Wire Reinforcement: ASTM A 497, flat sheet.

C. Epoxy-Coated Welded Wire Reinforcement: ASTM A 884, Class A coated, Type 1, deformed steel.

D. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice."

## 2.3 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:

1. Portland Cement: ASTM C 150, Type I or III.

   a. Fly Ash: ASTM C 618, Class C or F.
   b. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.

2. Blended Hydraulic Cement: ASTM C 595, Type IS or IP.

B. Normal-Weight Aggregates: ASTM C 33, graded, nominal maximum coarse-aggregate size.

1. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: ASTM C 94, potable.

D. Air-Entraining Admixture: ASTM C 260.

E. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494, Type A.
2. Retarding Admixture: ASTM C 494, Type B.
3. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.
4. High-Range, Water-Reducing Admixture: ASTM C 494, Type F.
5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494, Type G.
6. Plasticizing and Retarding Admixture: ASTM C 1017, Type II.

## 2.4 VAPOR RETARDERS

A. Plastic Vapor Retarder: ASTM E 1745, Class A. Include manufacturer's recommended adhesive or pressure-sensitive tape.

B. Plastic Vapor Retarder: ASTM E 1745, Class B. Include manufacturer's recommended adhesive or pressure-sensitive tape.

C. Plastic Vapor Retarder: ASTM E 1745, Class C, or polyethylene sheet, ASTM D 4397, not less than 10 mils thick. Include manufacturer's recommended adhesive or pressure-sensitive joint tape.

## 2.5 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.

C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

D. Water: Potable.

E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

F. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, nondissipating, certified by curing compound manufacturer to not interfere with bonding of floor covering.

G. Clear, Solvent-Borne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

## 2.6 RELATED MATERIALS

A. Expansion and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork or self-expanding cork.

## 2.7 CONCRETE MIXTURES

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.

B. Cementitious Materials: Use fly ash, pozzolan, ground granulated blast-furnace slag, and silica fume as needed to reduce the total amount of portland cement, which would otherwise be used, by not less than 40 percent.

C. Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength: 4000 psi at 28 days.
2. Maximum Water-Cementitious Materials Ratio: 0.49.

3. Slump Limit: 4 inches for concrete with verified slump of 1 to 5 inches before adding high-range water-reducing admixture or plasticizing admixture, plus or minus 1 inch.
4. Air Content: Maintain within range permitted by ACI 301.

## 2.8 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

## 2.9 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94, and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

# PART 3 - EXECUTION

## 3.1 FORMWORK

A. Design, erect, shore, brace, and maintain formwork according to ACI 301 to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

C. Formwork shall not be removed until concrete has obtained a minimum of 80% of its 28 day strength.

## 3.2 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

## 3.3 VAPOR RETARDERS

A. Plastic Vapor Retarders: Place, protect, and repair vapor retarders according to ASTM E 1643 and manufacturer's written instructions.

1. Lap joints 6 inches and seal with manufacturer's recommended tape.

## 3.4 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.

1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

## 3.5 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by the Engineer.

C. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

1. Extend joint fillers full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.

## 3.6 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.

B. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

1. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.

C. Cold-Weather Placement: Comply with ACI 306.1.

D. Hot-Weather Placement: Comply with ACI 301.

## 3.7 FINISHING FORMED SURFACES

A. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

B. Rubbed Finish: Apply the following to smooth-formed finished as-cast concrete where indicated:

1. Smooth-Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture. Do not apply cement grout other than that created by the rubbing process.
2. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix one part portland cement to one and one-half parts fine sand with a 1:1 mixture of bonding admixture and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.
3. Cork-Floated Finish: Wet concrete surfaces and apply a stiff grout. Mix one part portland cement and one part fine sand with a 1:1 mixture of bonding agent and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Compress grout into voids by grinding surface. In a swirling motion, finish surface with a cork float.

C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

## 3.8 FINISHING SLABS

A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Scratch Finish: While still plastic, texture concrete surface that has been screeded and bull-floated or darbied. Use stiff brushes, brooms, or rakes to produce a profile amplitude of 1/4 inch in 1 direction.

C. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.

D. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.

E. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces. While concrete is still plastic, slightly scarify surface with a fine broom.

1. Comply with flatness and levelness tolerances for trowel finished floor surfaces.

F. Broom Finish: Apply a broom finish to exterior concrete stairs and walkways, and elsewhere as indicated.

## 3.9 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Cure concrete according to ACI 308.1, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days.
2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

    a. After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer.

4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

## 3.10 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by the Engineer. Remove and replace concrete that cannot be repaired and patched to Engineer's approval.

## 3.11 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.

1. Testing Services: Tests shall be performed according to ACI 301.

END OF SECTION 033001

ATTACHMENT 4

SECTION 03735

# SECTION 03735 – EMERGENCY REPAIR OF CAST-IN-PLACE CONCRETE

## PART 1 - GENERAL

### 1.1 SUMMARY

A. The CONTRACTOR shall furnish all materials, labor, equipment, tools, etc., required for the emergency repair and replacement of concrete and/or reinforcing steel and miscellaneous items as indicated on the Drawings, specified herein, and determined by field survey.

### 1.2 SUBMITTALS

A. Material certifications and technical data sheets on all grouts, mortars, epoxy resins, aggregates and repair products specified in this Section.

B. SUBCONTRACTOR/Applicator qualifications as specified in Section 033000.

C. Shop Drawings detailing any planned deviation from the proposed construction sequence and/or method of repair.

D. The CONTRACTOR, based on their experience in their profession, may submit to the Engineer for approval, alternative materials and/or methods of work to assure the durability and watertight integrity of the repair work performed.

E. Related Work Specified Elsewhere.

1. Division 1 - General Requirements
2. Division 2 –Demolition
3. Division 3 - Concrete

### 1.3 QUALITY ASSURANCE

A. Reference Specifications, Codes and Standards.

1. Shall be as specified in Division 1, General Conditions.

B. Subcontractor/Applicator Qualifications.

C. The CONTRACTOR shall furnish the name of all subcontractors/applicators which he proposes to use for this work, including necessary evidence and/or experience records to ascertain their qualifications in the application of epoxy, urethane, and polymer-modified mortars and grouts. Approved applicator qualifications shall include:

1. A minimum of 5 years experience in applying epoxy and polymer-modified and cement-based compounds similar to those specified in this Section.
2. A letter from the manufacturer of the specified materials, on the manufacturer's letterhead, signed by an officer of the company, stating that the subcontractor/applicator has been trained in the proper techniques for applying the product, including surface preparation and mixing, placing, curing, and caring for the manufacturer's products. This letter shall further state that the subcontractor/applicator is on the manufacturer's approved list of contractors.

D. Additional Guarantee.

1. The CONTRACTOR shall guarantee all repair work performed under this Contract against defects in workmanship resulting in leakage and/or failure of concrete bond for a period of two years from the date of the Certificate of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 CONCRETE MATERIALS

A. Water: The water used for mixing concrete repair products shall be clear, potable, and free of deleterious substances.

B. Aggregate: All aggregate shall conform to ASTM C-33. The aggregate supplier shall submit to the Engineer documentation that the proposed aggregates comply with ASTM C-33.

C. Portland Cement Concrete: Concrete shall conform to Class B High Early Strength Concrete unless otherwise specified or shown on the drawings, but shall contain no aggregates greater than ½ inch nominal size.

D. Non-Shrink Grout: A propriety formulation with minimum bond strength of 2000 psi per ASTM C882, compressive strength of 5000 psi minimum after 24 hours per ASTM C579.

E. Non-Shrink Mortar: Mortar shall be cement based non-shrink type meeting the requirements of ASTM C109 for 3000 psi, 28 day strength. It shall be non-sag, stiff consistency for vertical surfaces, and capable of adhering to damp concrete surfaces.

F. Epoxy Bonding Agent: An epoxy bonding agent shall be used when applying fresh concrete to previously placed concrete. Epoxy bonding agent shall conform to ASTM C-881 Type I, II, IV or V; Grade 2 for epoxy resin adhesives, depending on the application. The class of epoxy bonding agent shall be suitable for all ambient and substrate temperatures.

G. Caulking Compound: A one component, non-sag (gun grade) urethane sealant, color gray, meeting Federal Specification TT-S-00230C Type II for vertical use and ASTM C920.

H. Non-Shrink Epoxy Grout: A propriety formulation with minimum bond strength of 2000 psi per ASTM C827, tensile strength of 2000 psi minimum after 24 hours per ASTM C190.

## PART 3 - EXECUTION

### 3.1 GENERAL REQUIREMENTS

A. Due to the time interval between the field survey and notice to proceed, further deterioration may have occurred which would not be reflected in the quantities for the particular bid item; the Engineer will be the sole judge of the extent and total quantities of repairs that are to be made.

B. No repair work shall be undertaken when ambient temperatures are below manufacturer's safe recommendations. No admixtures, except those required by the manufacturer, shall be used in the repairs specified herein. All products shall be applied in strict accordance with manufacturer's recommendations.

C. Sandblast or waterblast (3000-4000 psi waterjet) deteriorated areas to remove all loose concrete, existing coatings, unsound material, debris, and laitance. All surfaces shall be clean, free of dirt, grease, loose particles, and deleterious substances and shall be prepared according to manufacturer's requirements.

D. Storage of Materials: The CONTRACTOR shall provide an area for repair material storage free from exposure to moisture in any form, before, during, and after delivery to the site. Manufactured materials shall be delivered in unbroken containers labeled with the manufacturer's name and product type. All mortar products shall be stored on raised platforms. Materials susceptible to damage by freezing shall be stored in a dry, heated, insulated area. Any material that has hardened, partially set, become caked and/or has been contaminated or deteriorated shall be rejected. All aggregates shall be stored in clean bins, scows or platforms.

### 3.2 CONSTRUCTION METHOD

A. Depth of Concrete Removal: Concrete shall be removed in the designated areas to a depth at which sound concrete is found. The depth at which sound concrete is found will determine the type of repair to be utilized as follows:

1. Depth greater than 4 inches – Repair Type 1, Concrete Repair.
2. Depth 4 inches or less – Repair Type 2, Concrete Patch.
3. Full depth repair/restoration

B. Existing Reinforcing Steel: Extreme care shall be taken when removing concrete so as not to damage the existing reinforcing steel. If the existing reinforcing steel is damaged or deemed unsuitable by the Engineer, it shall be replaced by dowel bars that are the same diameter as the damaged reinforcing steel. The minimum size of replacement dowel shall be a #5 bar.

C. Under Cut: The perimeter of the repair area shall be undercut or bevel cut to key in the proposed repair.

D. Locate areas of deteriorated concrete using hammer, chain drag sounding, or other approved methods and mark boundaries. Mark areas for removal by simplifying and squatting off boundaries. At columns and walls, make boundaries level and plumb, unless otherwise indicated.

E. Surface Preparation: The repair areas shall be structurally sound and free from all dust, dirt, grease, paint and other foreign material. Exposed reinforcing steel shall be sandblasted to a bright metal. The concrete surfaces that are to be repaired shall then be blown clean with oil-free and clean air.

## 3.3 REPAIR TYPE 1, CONCRETE REPAIR

A. Welded Wire Fabric with Anchors: Place 3/8 inch diameter concrete anchors at maximum spacing of 18 inches on centers in each direction and attach welded wire fabric to the anchors. A minimum of one anchor is required per repair area. The welded wire fabric shall be of appropriate size to fill the repair area.

B. Forms: Set forms maintaining all chamfers and flush with adjacent with concrete surface. Provide a minimum of 1 inch cover.

C. Bonding Agent: An epoxy resin adhesive shall be applied to the prepared surface. The adhesive shall be applied according to the manufacturer's recommendations.

## 3.4 REPAIR TYPE 2, CONCRETE PATCH

A. Forms: Set forms maintaining all chamfers and flush with adjacent with concrete surface. Provide a minimum of 1 inch cover.

B. Bonding Agent: An epoxy resin adhesive shall be applied to the prepared surface. The adhesive shall be applied according to the manufacturer's recommendations.

C. Repair: The material used for this repair shall conform to either of the following:

1. Epoxy Mortar – Finish and cure in accordance with the manufacturer's specifications.
2. Non-Shrink Grout – Finish and cure in accordance with manufacturer's specifications.

## 3.5 FULL DEPTH REPAIR/RESTORATION

A. General: The work covered by this item includes repair or restoration of concrete to the limits of original construction or as indicated on the drawings. The method of repair or restoration shall be as indicated on the drawings or as approved by the Engineer prior to beginning any work.

B. Forms: Method of supporting formwork shall be approved by the Engineer. Set forms maintaining all chamfers and flush with adjacent with concrete surface. Provide a minimum of 1 inch cover.

C. Bonding Agent: An epoxy resin adhesive shall be applied to the prepared surface. The adhesive shall be applied according to the manufacturer's recommendations.

D. Repair: The materials used for this repair shall conform to the requirements of Section 033000.

## 3.6 FASCIA PANEL REPAIR

A. General: The work covered by this item includes repair and reattachment of the garage exterior concrete fascia panels to their original location and condition. Exiting architectural and structural drawings of the panels and method of anchorage cannot be located. The method of proposed repair and reattachment shall be submitted by the Contractor for approval by the Engineer prior to beginning any work. The areas of concrete used for support of the fascia panels shall be repaired in accordance with methods as described in Repair Types Sections 3.3, 3.4 and 3.5.

B. Materials: Materials used for this repair shall conform to the requirements of Section 033000.

END OF SECTION

ATTACHMENT 5

SECTION 024117

# SECTION 024117 - STRUCTURE DEMOLITION OF PARKING GARAGE

## PART 1 - GENERAL

### 1.1 SUMMARY

A. This Section includes the following:

1. Demolition and removal of portions of concrete slabs, walls, columns, beams and other selected areas of the existing Parking Garage as shown on the plans or as indicated by the Engineer.

### 1.2 DEFINITIONS

A. Demolish: Completely and/or partially remove and legally dispose of off-site.

B. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and savaged, or removed and re-installed.

### 1.3 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.

1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

### 1.4 SUBMITTALS

A. Proposed Protection Measures: Submit informational report, including drawings, that indicates the measures proposed for protecting individuals and property, for dust control and for noise control. Indicate proposed locations and construction of barriers.

1. Adjacent Buildings: Detail special measures proposed to protect adjacent buildings to remain.

B. Schedule of Demolition Activities: Indicate the following:

1. Detailed sequence of demolition work, with starting and ending dates for each activity.
2. Temporary interruption of utility services.
3. Temporary interruption of Parking Garage entrance, exits and usable spaces.

C. Inventory: Submit a list of items to be removed and salvaged and deliver to Owner prior to start of demolition.

1.5 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI A10.6 and NFPA 241.

1.6 PROJECT CONDITIONS

A. Parking Garage shall remain in use during the entire demolition and repair process. Selected areas used for parking may be closed during hours that are approved in writing from authorities having jurisdiction. Buildings immediately adjacent to demolition area will be occupied. Conduct demolition so operations of occupied buildings will not be disrupted.

1. Provide not less than 72 hours' notice of activities that will affect operations of adjacent occupied buildings and parking facilities.
2. Maintain access to existing walkways, exits, and other facilities used by occupants of adjacent buildings and parking garage.

B. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify the Owner. Hazardous materials will be removed by Owner under a separate contract.

C. On-site storage or sale of removed items or materials is not permitted.

1.7 COORDINATION

A. Arrange demolition schedule so as not to interfere with operations of adjacent occupied buildings and parking garage.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Review Project Record Documents of existing construction provided by Owner. In addition to review of existing construction documents, the Contractor shall perform a field inventory of all

components scheduled for repair. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.

B. Inventory and record the condition of items to be removed and salvaged if any.

C. Verify that hazardous materials, if found, have been remediated before proceeding with demolition operations.

## 3.2 PREPARATION

A. Temporary Shoring: Provide and maintain exterior shoring, bracing, or structural support to preserve stability and prevent unexpected movement or collapse of items being demolished.

1. Strengthen or add new supports when required during progress of demolition.

## 3.3 PROTECTION

A. Existing Facilities: Protect adjacent walkways, building entries, and other building facilities during demolition operations. Maintain exits from existing buildings.

B. Existing Utilities: Maintain utility services to remain and protect from damage during demolition operations.

1. Do not interrupt existing utilities serving adjacent occupied or operating facilities unless authorized in writing by Owner and authorities having jurisdiction.
2. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and authorities having jurisdiction.

    a. Provide at least 72 hours' notice to occupants of affected buildings if shutdown of service is required during changeover.

C. Temporary Protection: Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.

1. Protect adjacent buildings and facilities from damage due to demolition activities.
2. Protect existing site improvements, appurtenances, and landscaping to remain.
3. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
4. Provide protection to ensure safe passage of people around garage demolition area and to and from occupied portions of adjacent buildings and structures.
5. Protect walls, windows, roofs, and other adjacent exterior construction that are to remain and that are exposed to building demolition operations.

D. Remove temporary barriers and protections where hazards no longer exist. Where open excavations or other hazardous conditions remain, leave temporary barriers and protections in place.

## 3.4 DEMOLITION, GENERAL

A. General: Demolish indicated areas completely or partially. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Locate demolition equipment and remove debris and materials so as not to impose excessive loads on structural components.

B. Engineering Surveys: During demolition, perform surveys to detect hazards that may result from all demolition activities.

C. Site Access and Temporary Controls: Conduct demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
2. Use water mist and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations. Do not use water when it may damage adjacent construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.

D. Explosives: Use of explosives is not permitted.

## 3.5 DEMOLITION BY MECHANICAL MEANS

A. Use cutting methods least likely to damage construction to remain or adjoining construction. Use tools appropriate to minimize disturbance of adjacent surfaces.

## 3.6 DEMOLITION BY HYDRO-JETTING MEANS

A. Hydro-jetting equipment may be used for areas indicated as partial replacement (resurfacing).

B. Hydro-jetting equipment shall be capable of uniformly removing the specified minimum depth from the existing concrete surface

C. The runoff water shall be satisfactorily controlled to prevent it from reaching any traveled roadway, walkway or any other area designated by the Owner.

## 3.7 SITE RESTORATION (Not Used)

## 3.8 REPAIRS

A. Promptly repair damage to adjacent buildings and other areas designated to remain caused by demolition operations.

## 3.9 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove demolition waste materials from Project site.

B. Remove demolition waste materials from Project site and legally dispose of them in an EPA-approved landfill acceptable to authorities having jurisdiction.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

C. Do not burn demolished materials.

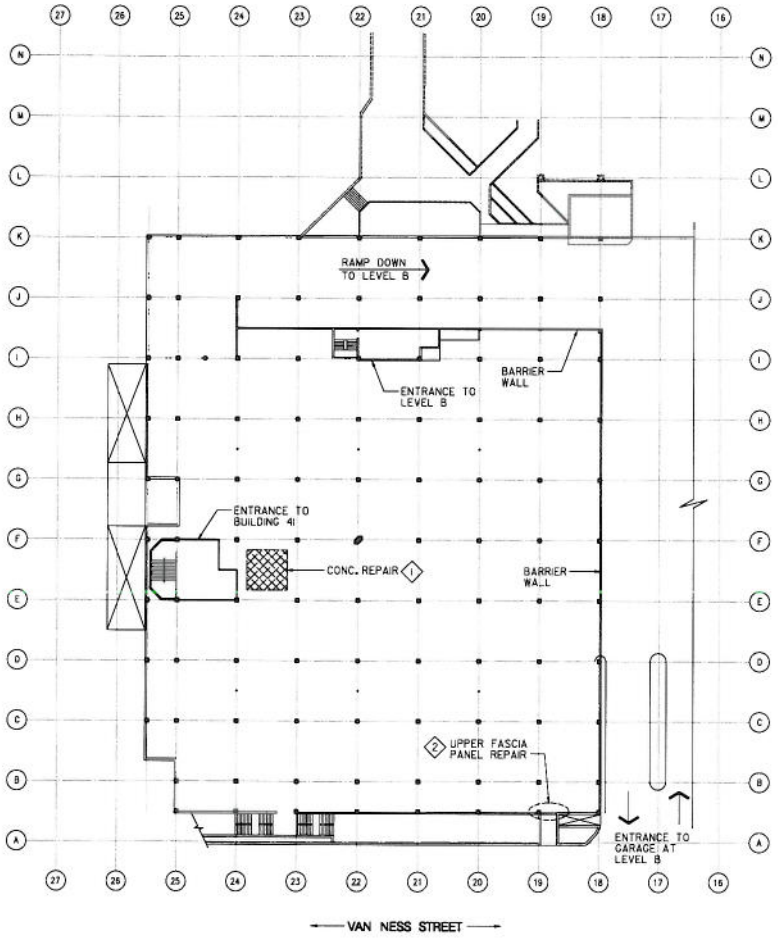
## 3.10 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by stair demolition operations. Return adjacent areas to condition existing before demolition operations began.

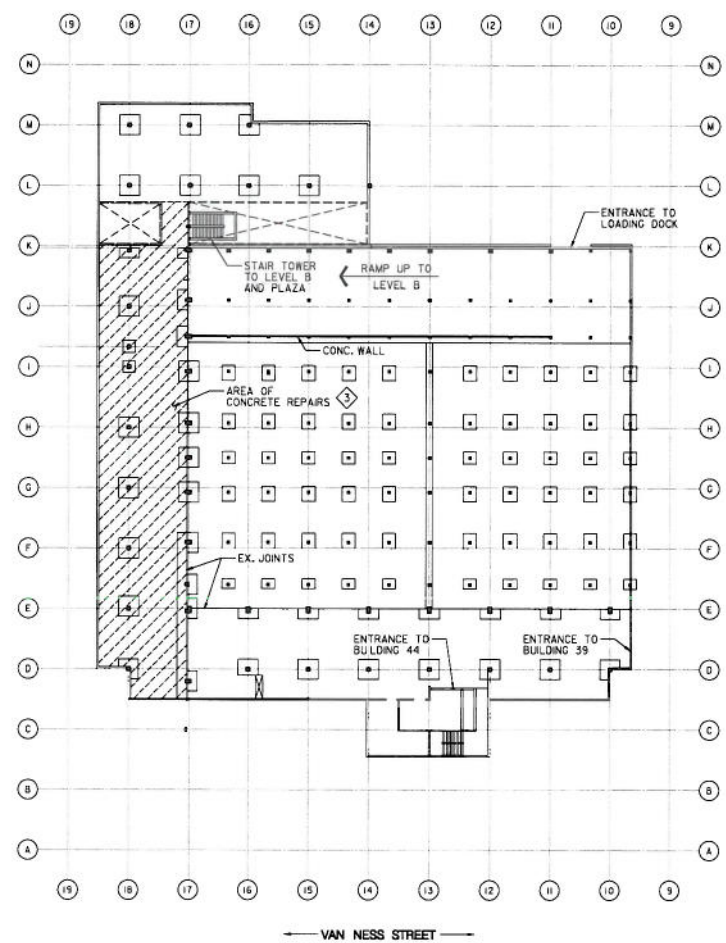
END OF SECTION 024117

ATTACHMENT 6

DRAWINGS S-19 THRU S-21




LEVEL B1 (FLOOR)




LEVEL C (REFLECTED CEILING)

PLAN VIEW - PARKING GARAGE

**REPAIR NOTES**

1. FULL DEPTH CONCRETE REPAIR, SEE SHEET S-21 FOR CONCRETE REPAIR DETAILS.
2. RESET/REPAIR FASCIA PANEL (1 PANEL) AND CONCRETE REPAIR, SEE SHEET S-21 FOR CONCRETE REPAIR DETAILS. FASCIA PANEL COMPONENTS, SUCH AS ATTACHMENT BRACKETS DEEMED UNSUITABLE BY THE ENGINEER FOR REUSE SHALL BE REPLACED IN-KIND PRIOR TO RESETTING THE PANEL.
3. CONCRETE REPAIR (TYPE 1 OR 2) SCATTERED THROUGHOUT HATCHED AREA - DELAMINATION AND SPALLS. SEE SHEET S-21 FOR REPAIR DETAILS.

**LEGEND**

- AREA OF FULL DEPTH CONCRETE REPAIR
- AREA OF TYPE 1 OR 2 (PARTIAL DEPTH) CONCRETE REPAIR
- REPAIR NOTE, THIS DRAWING

S-19

DAVID VOLKERT & ASSOC. ENG., P.C.
5028 WISCONSIN AVE. N.W., WASHINGTON, D.C. 20016

ENGINEER'S SEAL & SIGNATURE

GARAGE REPAIR

SITE PLAN

OFFICE OF PROPERTY MANAGEMENT
CONSTRUCTION DIVISION

UNIVERSITY OF THE DISTRICT OF COLUMBIA,
VAN NESS CAMPUS, N.W.
REPAIR OF CONCRETE STAIRS,
PATHWAYS & DRIVEWAYS

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Checked By PW
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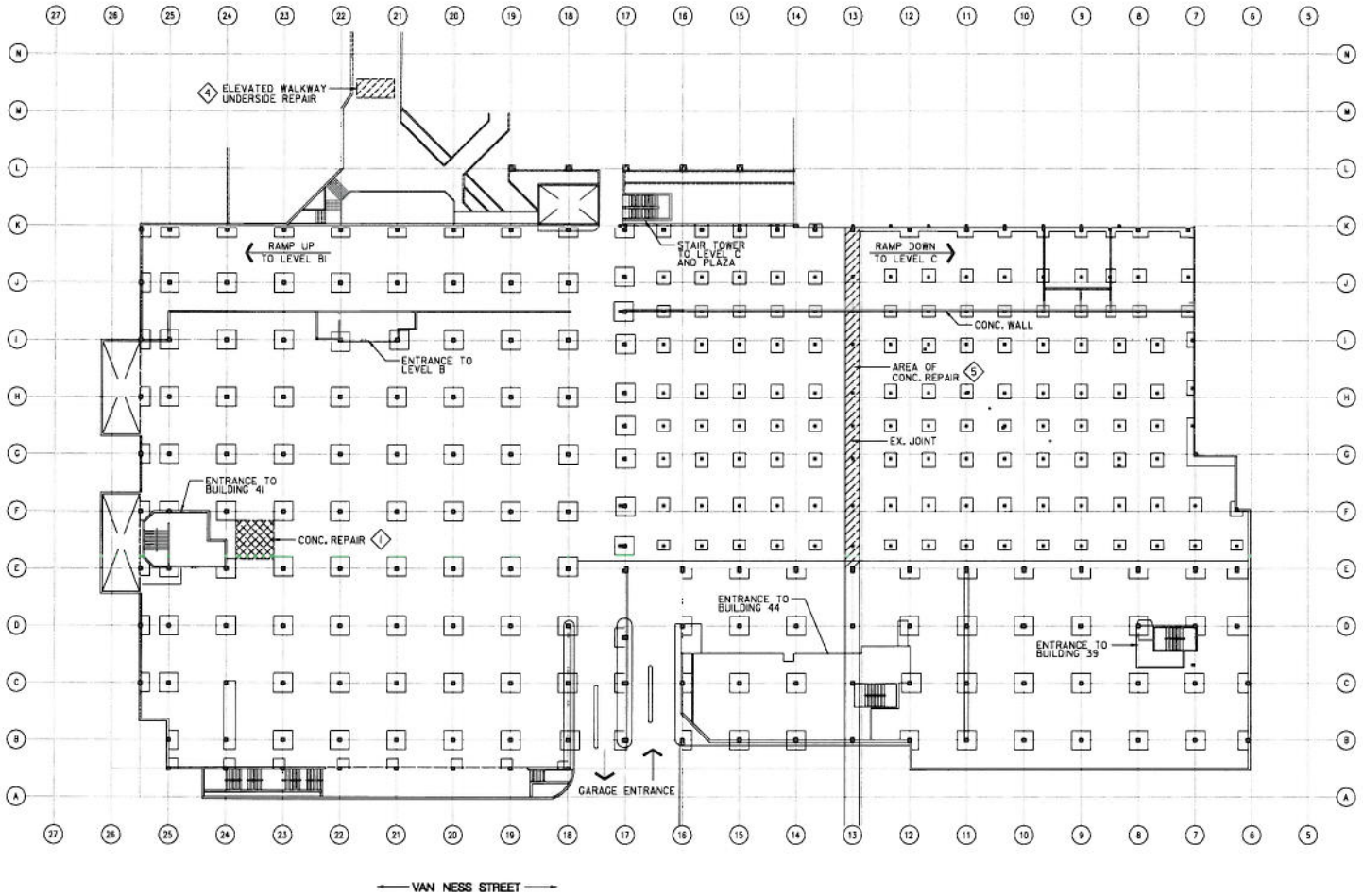


LEVEL B (REFLECTED CEILING)

PLAN VIEW – PARKING GARAGE

**REPAIR NOTES**

1. FULL DEPTH CONCRETE REPAIR, SEE SHEET S-21 FOR CONCRETE REPAIR DETAILS.
4. CONCRETE REPAIR (TYPE I OR 2) THROUGHOUT HATCHED AREA - DELAMINATION AND SPALLS. SEE SHEET S-21 FOR REPAIR DETAILS.
5. CONCRETE REPAIR (TYPE I OR 2) THROUGHOUT HATCHED AREA - DELAMINATION AND SPALLS. SEE SHEET S-21 FOR REPAIR DETAILS.

**LEGEND**

- AREA OF FULL DEPTH CONCRETE REPAIR
- AREA OF TYPE I OR 2 (PARTIAL DEPTH) CONCRETE REPAIR
- REPAIR NOTE, THIS DRAWING

S-20

DAVID VOLKERT & ASSOC. ENG., P.C.
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ENGINEER'S SEAL & SIGNATURE

GARAGE REPAIR

SITE PLAN

OFFICE OF PROPERTY MANAGEMENT
CONSTRUCTION DIVISION

UNIVERSITY OF THE DISTRICT OF COLUMBIA,
VAN NESS CAMPUS, N.W.
REPAIR OF CONCRETE STAIRS,
PATHWAYS & DRIVEWAYS

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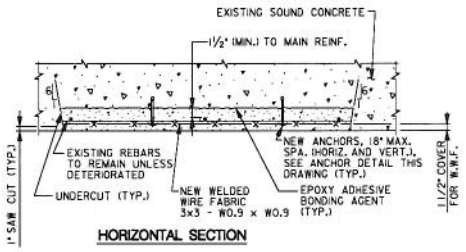
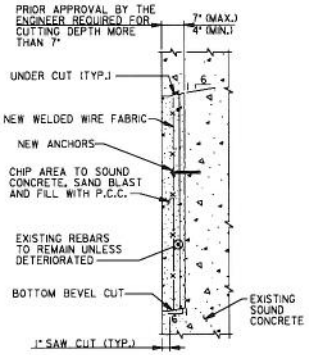


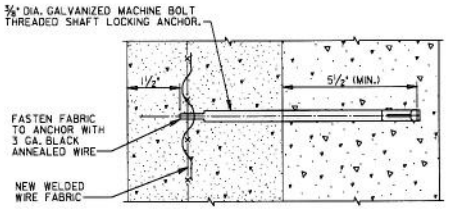

HORIZONTAL SECTION

NOTE:

WELDED WIRE FABRIC AND ANCHOR ARE REQUIRED IN REPAIR AREAS THAT HAVE DETERIORATED REBARS, MISSING REBARS, AND LARGE REPAIR AREAS.

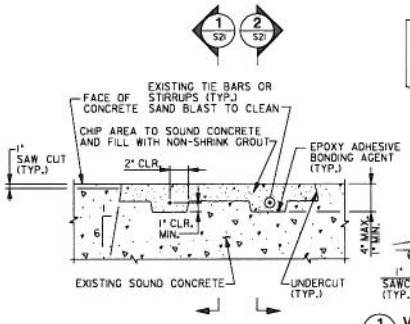



VERTICAL SECTION




ANCHOR DETAIL

TYPE 1 – REPAIR (OVER 4" IN DEPTH)

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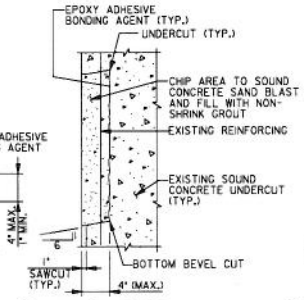
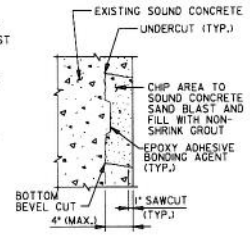



1 S2 VERTICAL SECTION

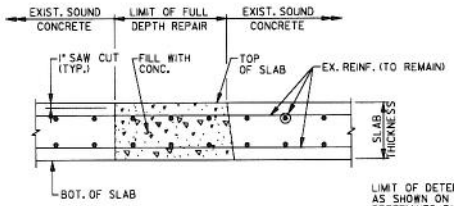
REINFORCING STEEL ENCOUNTERED




2 S2 VERTICAL SECTION

REINFORCING STEEL NOT ENCOUNTERED

TYPE 2 REPAIR (4" PATCH OR LESS IN DEPTH)




FULL DEPTH REPAIR / RESTORATION

LIMIT OF DETERIORATION SHALL BE AS SHOWN ON THE PLANS OR AS DETERMINED BY METHODS SPECIFIED IN SECTION 03735 OF THE SPECIFICATIONS.

## CONCRETE REPAIR NOTES

1. PRIOR TO BEGINNING REPAIRS TO STRUCTURAL CONCRETE, ALL NECESSARY TEMPORARY SUPPORTS SHALL BE IN PLACE TO THE SATISFACTION OF THE ENGINEER.
2. REPAIRS MADE TO SLABS, COLUMNS, BEAMS, ETC. SHALL MATCH THE GEOMETRY, ALIGNMENT, COLOR AND TEXTURE OF THE EXISTING SURFACE TO THE ACCEPTANCE OF THE ENGINEER.
3. DEMOLITION SHALL BE IN CONFORMANCE WITH SECTION 024116 OF THE SPECIFICATIONS. REPAIR TYPES 1, 2 AND FULL DEPTH REPAIRS SHALL BE IN CONFORMANCE WITH SECTION 03735 OF THE SPECIFICATIONS.
4. LOCATE AREAS OR DETERIORATED CONCRETE USING HAMMER OR CHAIN DRAG SOUNDING AND MARK BOUNDARIES.
5. IN GENERAL, THE BEVEL CUT SHALL BE USED ONLY ALONG THE BOTTOM EDGE OF EACH REPAIR AREA. THE UNDERCUT SHALL BE USED FOR THE SIDES AND TOP EDGES OF EACH AREA.
6. FORMWORK SHALL NOT BE REMOVED UNTIL NEW CONCRETE HAS OBTAINED A MINIMUM OF 80% OF ITS 28 DAY STRENGTH.

S – 21

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ENGINEER'S SEAL & SIGNATURE

GARAGE REPAIR

CONCRETE REPAIR DETAILS

OFFICE OF PROPERTY MANAGEMENT
CONSTRUCTION DIVISION

UNIVERSITY OF THE DISTRICT OF COLUMBIA, VAN NESS CAMPUS, N.W.
REPAIR OF CONCRETE STAIRS, PATHWAYS & DRIVEWAYS

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