



AMENDMENT #2
INVITATION FOR BID
No. 2015-004

Effective: November 12, 2014
Project: Water Park Roof Replacement and Bathhouse Renovation Project
Issued By: Sunil Prithviraj, Capital Projects Program Manager
Department of Public Works
800 Rabbit Road
Gaithersburg, Maryland 20878

Please be advised that Exhibit A (PLANS AND SPECIFICATIONS) of the Solicitation for the above project is hereby amended as follows:

1. The following drawings (Sheets) of Exhibit A are hereby amended and replaced by the drawings attached hereto, all of which are incorporated into and made part the Solicitation:

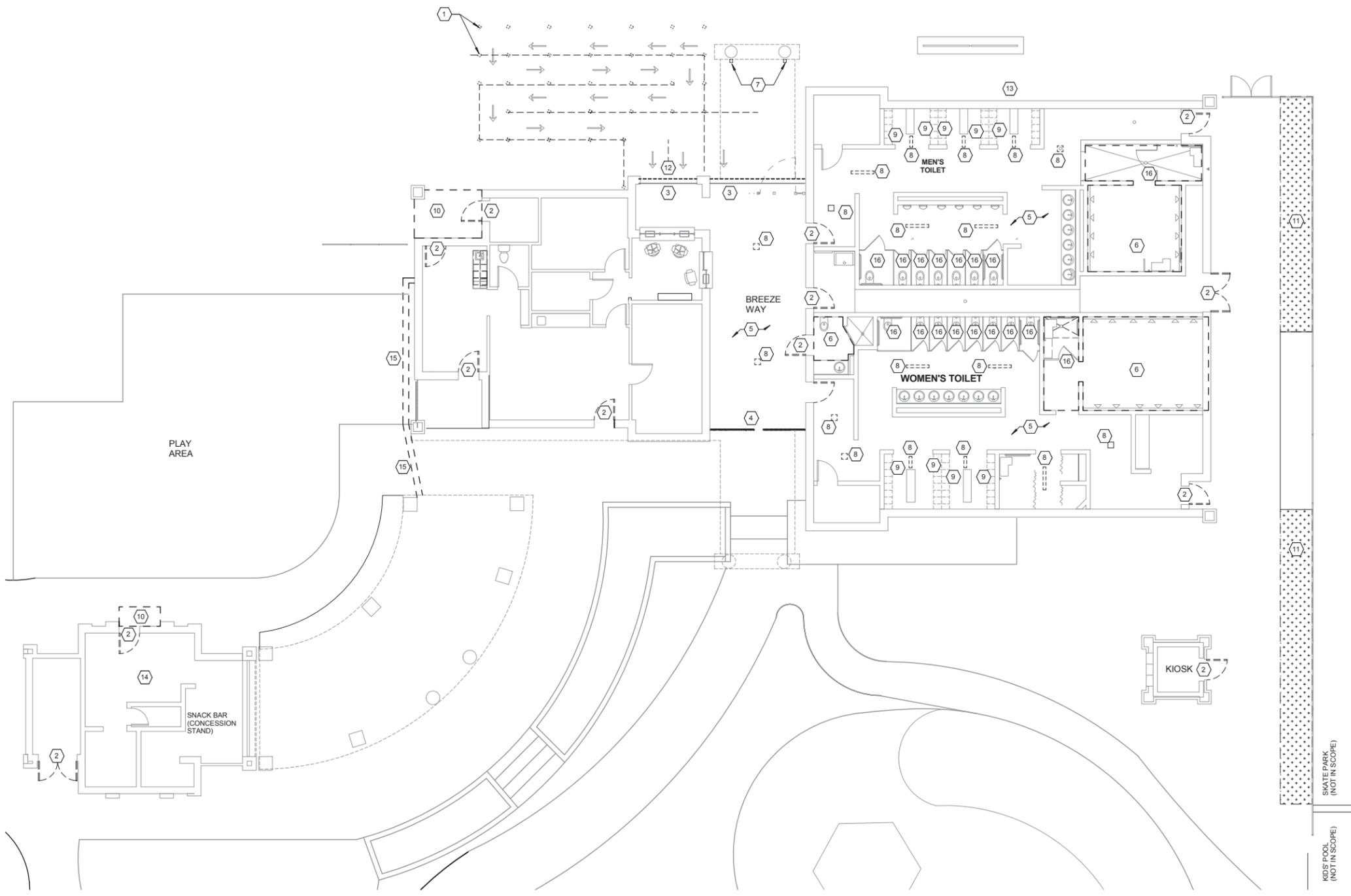
- Sheet AD101
- Sheet A101
- Sheet A103

2. The following specification sections of Exhibit A are hereby amended attached hereto, all of which are incorporated into and made part of the Solicitation:

Section 07015019-Preparation for re-roofing
Architectural Cut Sheets for concrete floor finishes (DUR-A-FLEX)

3. Concrete refinishing floor product has been revised as follows:

Manufacturer: DUR-A-FLEX
Product: HyBri-Flex EQ
Color and finish: Q28-17 with Armor top
Warranty: 1 year manufacture warranty and 5 years addition warranty
Installation: As per manufacturer specifications, contractor shall coordinate installation installation inspection with product representative and get written approval of proper installation.



1 ARCHITECTURAL FLOOR PLAN - BATHHOUSE - DEMO
1/8" = 1'-0"

DEMOLITION NOTES

1. EXISTING EXTERIOR FIXED POLES TO BE REMOVED, AND RETURNED TO THE OWNER. DO NOT DISTURB REMOVABLE BOLLARDS IN BREEZEWAY.
2. REMOVE EXISTING EXTERIOR DOOR AND HARDWARE. PROTECT EXISTING FRAME AT ALL LOCATIONS.
3. REMOVE EXISTING ROLL-UP SHUTTER, GUIDE & MOTOR. MAINTAIN EXISTING STEEL TUBE COLUMNS. MAINTAIN POWER AND CONTROL CIRCUIT.
4. REMOVE EXISTING COLLAPSIBLE GATE.
5. PREPARE EXISTING FLOOR TO RECEIVE NEW FLOORING.
6. REMOVE EXISTING TILES AND BASE.
7. REMOVE EXISTING DOWNSPOUT AFTER FIRST BEND FROM GUTTER.
8. REMOVE EXISTING FLOOR DRAINS AT LOCATIONS INDICATED. SOW CUT AND REMOVE EXISTING SLAB AS REQUIRED TO RECEIVE NEW TRENCH DRAINS AND AREA DRAINS. COORDINATE WITH PLUMBING DRAWINGS.
9. REMOVE EXISTING LOCKERS, SUPPORT AND BLOCKING. SKIM COAT AND PREPARE WALLS TO RECEIVE NEW PAINT.
10. REMOVE EXISTING SLAB ON GRADE TO EXTENTS SHOWN. SOW CUT AT EXISTING JOINTS. PREPARE GROUND FOR NEW POUR.
11. REMOVE EXISTING VEGETATION PATCH AND PREPARE GROUND TO RECEIVE CONCRETE PAVEMENT.
12. REMOVE EXISTING "ENTRANCE" SIGNAGE ON EXTERIOR WALL ABOVE. DOCUMENT MOUNTING HEIGHT.
13. REMOVE EXISTING "WATER PARK" SIGNAGE ON EXTERIOR WALL ABOVE. DOCUMENT MOUNTING HEIGHT.
14. REMOVE EXISTING CEILING TILES, GRID SYSTEM, RECESSED LIGHT FIXTURES AND CEILING FANS IN CONCESSION STAND.
15. SOW CUT EXISTING SLAB FOR NEW CONDUITS. REFER TO ELECTRICAL DRAWINGS FOR COORDINATION.
16. DISMANTLE ALL EXISTING TOILET PARTITIONS FOR REUSE. CLEAN AND STORE SAFELY AWAY FROM CONSTRUCTION AREA.



GAITHERSBURG WATER PARK PHASE III

512 S Frederick Ave
Gaithersburg, MD 20877

NIKA ARCHITECTS +ENGINEERS

NIKA A+E
451 HUNGERFORD DRIVE (P)301.770.3520
4TH FLOOR (F)301.770.3521
ROCKVILLE, MD 20850 www.nika-ae.com

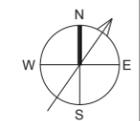
No.	Description	Date

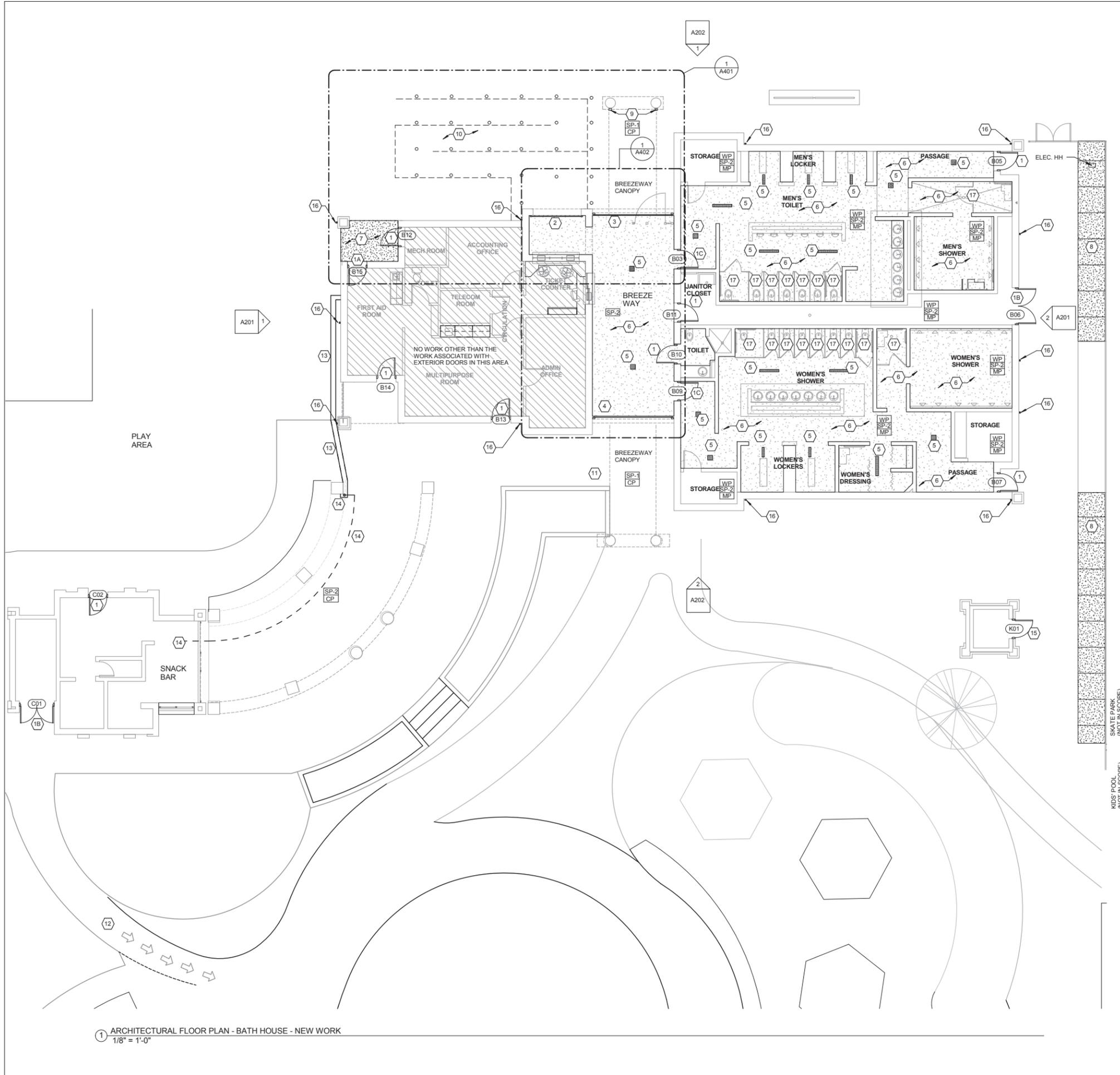
Revisions

Drawing Title
ARCHITECTURAL FLOOR PLAN - BATH HOUSE - DEMOLITION

Phase
 CONCEPT 25% 50% 75% 100%

AE Project Number 12.0009-011	Drawing Scale: AS NOTED
Date 11.09.2014	CADD Filename Revit Model
-RE-ISSUED	CADD Plot Scale 1:1
Drawn By RA	Checked By AV
Sheet Number AD101	

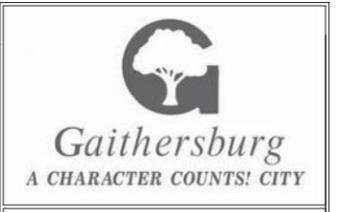




1 ARCHITECTURAL FLOOR PLAN - BATH HOUSE - NEW WORK
1/8" = 1'-0"

NEW WORK NOTES

1. INSTALL NEW HM EXTERIOR DOOR IN EXISTING FRAME. CONTRACTOR TO FIELD MEASURE EACH EXISTING DOOR AND PROCURE NEW DOOR TO EXACT SAME LENGTH AS EXISTING. i.e. UNDERCUT AS EXISTING. EXISTING FRAMES ARE FOR 7'-2" DOOR. INSTALL NEW WEATHER STRIPPING AND THRESHOLD TO MATCH EXISTING. INSTALL NEW HARDWARE. CONTRACTOR TO FIELD VERIFY EACH EXISTING MORTISE LOCKSETS TO ENSURE THAT NEW LOCKSETS MATCH EXISTING FUNCTIONALITY. NEW LOCKSETS SHALL BE CORBIN RUSSWIN®. NEW KEY SYSTEM TO MATCH EXISTING FACILITY STANDARD Medeco® KeyMark® SFIC (Small Format Interchangeable Core) 6PIN CYLINDERS. COORDINATE KEYING WITH THE FACILITY MAINTENANCE. INSTALL CONSTRUCTION CORES DURING CONSTRUCTION. DOOR CLOSER - LCN 4040XP SERIES SURFACE MOUNTED HEAVY DUTY WITH HOLD OPEN ARM. INSTALL 12" SS KICK PLATE AT THE DOORS' WHERE EXISTING DOORS HAVE KICK PLATE.
- 1A. INSTALL NEW CORBIN RUSSWIN® LOCKSET TO MATCH EXISTING FUNCTIONALITY. ADDITIONALLY, NEW LOCKSET WILL HAVE ACCESS CONTROL ELECTRIC STRIKE PLATE COMPATIBLE WITH MAGNETIC SWIPE CARD READER TO BE SELECTED AND INSTALLED BY FACILITY I.T. DEPARTMENT. NEW Medeco® KeyMark® SFIC (Small Format Interchangeable Core) 6PIN CYLINDERS HARDWARE KEY TO OVERRIDE ELECTRONIC ACCESS CONTROL. PREPARE EXISTING CMU WALL WITH INTERIOR JUNCTION BOX TO ELECTRIC STRIKE PLATE. INSTALL CONDUIT RUN AND JUNCTION BOX TO EXTERIOR OF WALL TO RECEIVE ACCESS CARD READER. INSTALL CONDUIT RUN FROM INTERIOR JUNCTION BOX TO TOP OF THE DOOR. DOOR CLOSER - LCN 4040XP SERIES TOP JAMB MOUNT (PULL SIDE) HEAVY DUTY WITH HOLD OPEN ARM.
- 1B. INSTALL PAIR DOORS WITH ASTRAGAL. DOOR TO HAVE TOP AND BOTTOM FLUSH BOLTS. INSTALL LCN NON-HANDED LONG HOLD-OPEN ARM WITH STOP-HOLD OPEN HANDLE.
- 1C. INSTALL NEW HM EXTERIOR DOOR IN EXISTING FRAME. CONTRACTOR TO FIELD MEASURE EACH EXISTING DOOR AND PROCURE NEW DOOR TO EXACT SAME LENGTH AS EXISTING. i.e. UNDERCUT AS EXISTING. EXISTING FRAMES ARE FOR 7'-2" DOOR. INSTALL NEW WEATHER STRIPPING AND THRESHOLD TO MATCH EXISTING. INSTALL THUMB TURN (INTERIOR) WITH KEY OVERRIDE (EXTERIOR). INSTALL 12" SS PULL HANDLE ON INTERIOR SIDE. NEW KEY SYSTEM TO MATCH EXISTING FACILITY STANDARD Medeco® KeyMark® SFIC (Small Format Interchangeable Core) 6PIN CYLINDERS. DOOR CLOSER - LCN 4040XP SERIES SURFACE MOUNTED HEAVY DUTY WITH HOLD OPEN ARM. INSTALL 12" SS KICK PLATE. INSTALL HOLD OPEN FLOOR BOLT.
2. INSTALL NEW MECHANICALLY (CHAIN) OPERATED STEEL ROLLUP DOOR WITH PADLOCKS IN BREEZEWAY. FIELD MEASURE EXISTING OPENING PRIOR TO ORDERING. ROLLUP DOOR ASSEMBLY TO BE FACTORY PAINTED. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
3. INSTALL NEW MOTORIZED STEEL ROLLUP DOOR WITH MECHANICAL (CHAIN) OVERRIDE. ROLLUP DOOR TO BE LOCKABLE FROM INSIDE BREEZEWAY WITH PADLOCK. FIELD MEASURE EXISTING OPENING PRIOR TO ORDERING. ROLLUP DOOR ASSEMBLY TO BE FACTORY PAINTED. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
4. INSTALL NEW MECHANICALLY (CHAIN) OPERATED ALUMINUM ROLLUP DOOR WITH PADLOCKS IN BREEZEWAY. FIELD MEASURE EXISTING OPENING PRIOR TO ORDERING. ROLLUP DOOR ASSEMBLY TO BE FACTORY PAINTED. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
5. INSTALL NEW FLOOR DRAINS AT THE LOCATIONS OF EXISTING DRAINS. COORDINATE WITH PLUMBING DRAWINGS FOR SIZE AND TYPE OF DRAINS. LINEAR (TRENCH) SHAPED DRAINS WILL BE INSTALLED TO ALIGN WITH SLOPE OF FLOOR.
6. INSTALL NEW OWNER-SELECTED "DUR-A-QUARTZ Q28-17 with Armor top with Grip" FLOORING SYSTEM ON EXISTING CONCRETE SLAB. COLOR TO BE FINALIZED IN CONSULTATION WITH PROJECT MANAGER. PREPARE EXISTING SLAB PER MANUFACTURER'S SPECIFICATIONS TO RECEIVE NEW FLOORING. IF REQUIRED BY MANUFACTURER. EXPANSION JOINTS SHALL BE PROVIDED TO PREVENT CRACKING. INSTALL ADA COMPLIANT SMOOTH TRANSITION TO CONCRETE SLAB AT BOTH ENDS OF BREEZEWAY, AND OTHER LOCATIONS AS NECESSARY. INSTALL 4" INTEGRAL COVE BASE.
7. POUR NEW 7" THICK EXTERIOR PAVEMENT CONCRETE SLAB WITH 6' X6' W.W.F. OVER GRAVEL AND COMPACTED EARTH. TOP FINISH TO MATCH ADJACENT BROOM FINISH. SLOPE AWAY FROM ENTRANCE DOOR.
8. POUR NEW 7" THICK EXTERIOR PAVEMENT CONCRETE SLAB WITH 6' X6' W.W.F. OVER GRAVEL AND COMPACTED EARTH. TOP FINISH TO MATCH ADJACENT BROOM FINISH. TOP OF NEW POUR TO FOLLOW THE GRADE OF ADJACENT BRICK PAVERS. RELOCATE EXISTING ELECTRICAL HAND HOLE (HH) COVER TO TOP OF NEW POUR. CONCRETE STRENGTH TO BE 4000 PSI.
9. INSTALL NEW DOWNSPOUT SEGMENTS TO MATCH EXISTING WITH NEW BEND AT CROWN OF EXISTING CONCRETE COLUMN TO BRING NEW DOWNSPOUT CLOSER TO COLUMN. INSTALL NEW C.I. CONVERSION BOOT AT THE BOTTOM OF NEW DOWNSPOUT.
10. NEW PAINTED STEEL 42" BOLLARDS WITH CONCRETE FILL AND REMOVABLE STEEL CHAIN SYSTEM WITH VANDAL PROOF LOCKING. REFER TO ENLARGED PLAN.
11. INSTALL NEW PEDESTAL MOUNTED DIRECTIONAL SIGNAGE FOR ACCESSIBLE ROUTE TO POOL.
12. STRIPE AND PAINT EXISTING PAVEMENT WITH ROUTE POINTERS TOWARDS POOL AREA.
13. PATCH EXISTING SLAB AFTER NEW CONDUITS ARE IN PLACE. REFER TO ELECTRICAL DRAWINGS FOR COORDINATION.
14. STUB NEW CONDUITS OUT NEAR THE EXISTING COLUMN. ROUTE VERTICAL TO ABOVE EXISTING RAFTERS. DROP CONDUITS IN SNACK BAR ABOVE CEILING. REFER TO ELECTRICAL DRAWINGS FOR COORDINATION.
15. INSTALL NEW HM EXTERIOR DOOR IN EXISTING FRAME. CONTRACTOR TO FIELD MEASURE EACH EXISTING DOOR AND PROCURE NEW DOOR TO EXACT SAME LENGTH AS EXISTING. i.e. UNDERCUT AS EXISTING. EXISTING FRAMES ARE FOR 7'-2" DOOR. INSTALL NEW WEATHER STRIPPING AND THRESHOLD TO MATCH EXISTING. INSTALL NEW HARDWARE. CONTRACTOR TO FIELD VERIFY EACH EXISTING MORTISE LOCKSETS TO ENSURE THAT NEW LOCKSETS MATCH EXISTING FUNCTIONALITY. NEW LOCKSETS SHALL BE CORBIN RUSSWIN®. NEW KEY SYSTEM TO MATCH EXISTING FACILITY STANDARD Medeco® KeyMark® SFIC (Small Format Interchangeable Core) 6PIN CYLINDERS. COORDINATE KEYING WITH THE FACILITY MAINTENANCE. INSTALL CONSTRUCTION CORES DURING CONSTRUCTION. DOOR CLOSER - LCN 4040XP SERIES SURFACE MOUNTED HEAVY DUTY WITH HOLD OPEN ARM. INSTALL 12" SS KICK PLATE AT THE DOORS' WHERE EXISTING DOORS HAVE KICK PLATE.
16. LOCATION OF NEW DOWNSPOUTS.
17. REINSTALL PREVIOUSLY REMOVED TOILET PARTITIONS AND SECURE TO FLOOR. REINSTALL ALL HARDWARE. RESTORE TO ORIGINAL CONDITIONS.



GAITHERSBURG WATER PARK PHASE III

512 S Frederick Ave
Gaithersburg, MD 20877



NIKA A+E
451 HUNGERFORD DRIVE (P)301.770.3520
4TH FLOOR (F)301.770.3521
ROCKVILLE, MD 20850 www.nika-ae.com

GENERAL NOTES:

1. REFER TO SHEET A 601 FOR PAINT LEGEND.

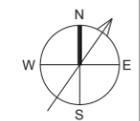
No.	Description	Date

Revisions

Drawing Title
ARCHITECTURAL FLOOR PLAN - BATH HOUSE

Phase
 CONCEPT 25% 50% 75% 100%

AE Project Number 12.0009-011	Drawing Scale: AS NOTED
Date 11.09.2014	CADD Filename Revit Model
-RE-ISSUED	CADD Plot Scale 1:1
Drawn By RA	Checked By AV
Sheet Number A101	



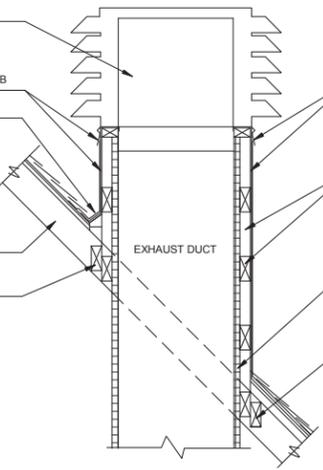
16"x32" RECTANGULAR VENT STACK. COORDINATE SIZE AND LOCATION WITH MECHANICAL DESIGN. SUBMIT SHOP DRAWING WITH CURB DETAIL.

MIN. 16 GAUGE GALVANIZED STEEL CURB FLASHING AND COUNTERFLASHING

NEW CRICKET FLASHING

EXISTING TRUSS. DO NOT CUT. SIZE DUCT TO FIT BETWEEN TRUSSES.

TWO 2 x 4 TREATED WOOD BRACING BETWEEN TRUSSES.



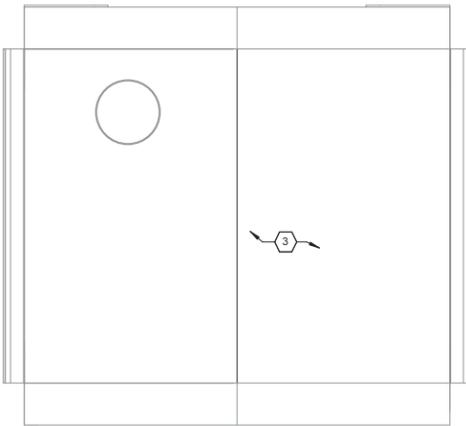
MIN. 16 GAUGE GALVANIZED STEEL CURB FLASHING AND COUNTERFLASHING

TREATED WOOD FRAMING.

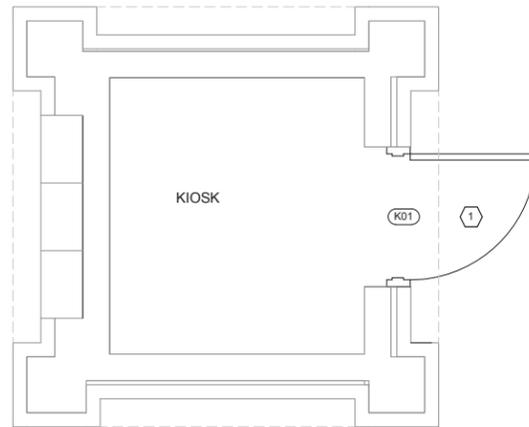
THERMAL AND ACOUSTICAL INSULATION PER MANUFACTURER'S REQUIREMENT.

TWO 2 x 4 TREATED WOOD BRACING BETWEEN TRUSSES

6 DETAIL - VENT STACK CURB
1" = 1'-0"

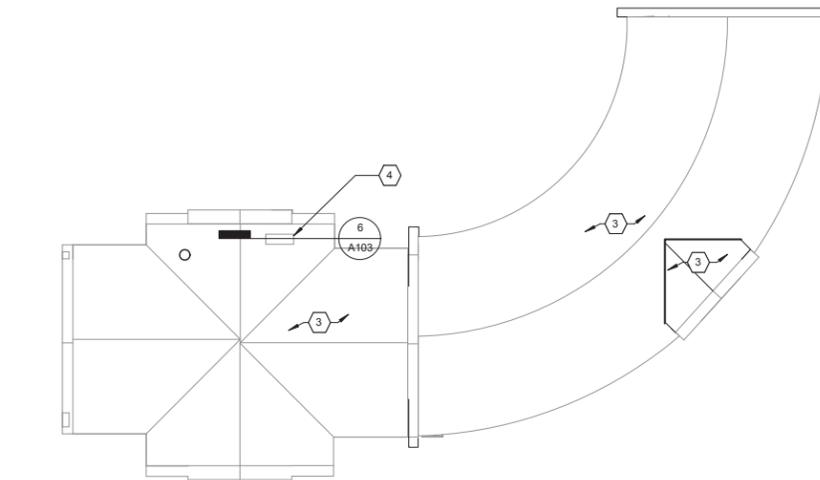


3 ARCHITECTURAL ROOF PLAN - KIOSK
1/2" = 1'-0"

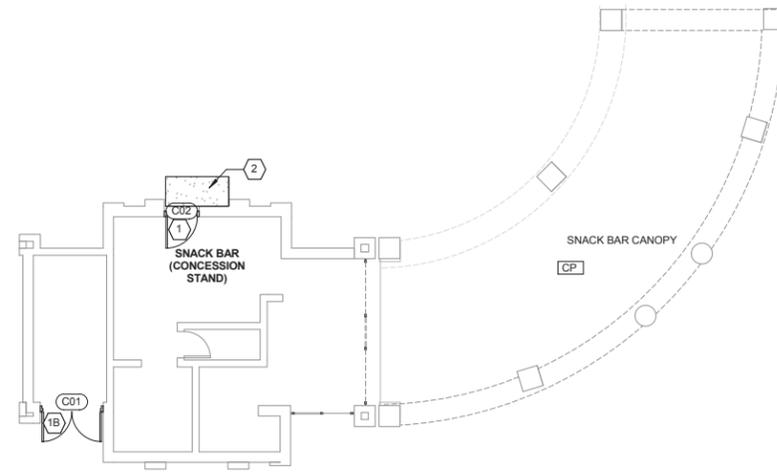


2 ARCHITECTURAL FLOOR PLAN - KIOSK
1/2" = 1'-0"

5 CONCESSION STAND CEILING AND SOFFIT PLAN
1/8" = 1'-0"



4 ARCHITECTURAL ROOF PLAN - CONCESSION STAND
1/8" = 1'-0"



1 ARCHITECTURAL FLOOR PLAN - CONCESSION STAND
1/8" = 1'-0"

NEW WORK NOTES

1. INSTALL NEW HM EXTERIOR DOOR IN EXISTING FRAME. CONTRACTOR TO FIELD MEASURE EACH EXISTING DOOR AND PROCURE NEW DOOR TO EXACT SAME LENGTH AS EXISTING, I.E. UNDERCUT AS EXISTING. EXISTING FRAMES ARE FOR 7'-2" DOOR. INSTALL NEW WEATHER STRIPPING AND THRESHOLD TO MATCH EXISTING. INSTALL NEW HARDWARE. CONTRACTOR TO FIELD VERIFY EACH EXISTING MORTISE LOCKSETS TO ENSURE THAT NEW LOCKSETS MATCH EXISTING FUNCTIONALITY. NEW LOCKSETS SHALL BE CORBIN RUSSWIN®. NEW KEY SYSTEM TO MATCH EXISTING FACILITY STANDARD Medeco® KeyMark® SFIC (Small Format Interchangeable Core) 6PIN CYLINDERS. COORDINATE KEYING WITH THE FACILITY MAINTENANCE. INSTALL CONSTRUCTION CORES DURING CONSTRUCTION. DOOR CLOSER - LCN 4040XP SERIES SURFACE MOUNTED HEAVY DUTY WITH HOLD OPEN ARM. INSTALL 12" SS KICK PLATE AT THE DOORS* WHERE EXISTING DOORS HAVE KICK PLATE.

1B. INSTALL PAIR DOORS WITH ASTRAGAL. DOOR TO HAVE TOP AND BOTTOM FLUSH BOLTS. INSTALL LCN NON-HANDED LONG HOLD-OPEN ARM WITH STOP/HOLD OPEN HANDLE.

2. POUR NEW 7" THICK EXTERIOR PAVEMENT CONCRETE SLAB WITH 6"x6" W.W.F. OVER GRAVEL AND COMPACTED EARTH. TOP FINISH TO MATCH ADJACENT BROOM FINISH. SLOP AWAY FROM ENTRANCE DOOR.

3. NEW ASPHALT SHINGLES ROOFING. INSTALL PER MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS. INSTALL NEW PREFINISHED RIDGE, VALLEY AND STEP FLASHING. MINIMUM LAP LENGTH FOR FLASHING WILL BE 6".

4. NEW CURB SUPPORT, FLASHING AND COUNTER FLASHING FOR NEW ROOF TOP EXHAUST VENT. REFER TO MECHANICAL DRAWINGS FOR COORDINATION.

5. NEW PVC LAY IN CELLULAR CEILING INSULATION AND SUSPENSION GRID SYSTEM.

6. NEW PROCESSED LIGHT FIXTURES. REFER TO ELECTRICAL FOR ADDITIONAL INFORMATION.

7. NEW CEILING FANS. REFER TO ELECTRICAL FOR ADDITIONAL INFORMATION.

8. INSTALL NEW EXTERIOR GRADE PLYWOOD SHEATHING ON UNDERSIDE OF EXISTING "A" FRAME TRUSSES AT THE SNACK BAR CANOPY TO FORM A SOFFIT. SHEATHING TO RUN IN HORIZONTAL BENDS OF NO GREATER THAN 2 FEET HEIGHT ON INCLINED AND CURVED TRUSS ARRAY TO FORM SMOOTH SOFFIT SURFACE. PUTTY AND PREPARE TO RECEIVE PAINT AFTER NAILING. COMPLETELY COVER CANOPY SOFFIT STARTING FROM TOP OF EXISTING EIFS BULKHEAD. PROVIDE BLOCKING FOR NEW ELECTRICAL FIXTURE MOUNTING. INSTALL 12"x12" ACCESS PANELS AT JUNCTION BOXES AS NECESSARY. INSTALL 6 EACH 12"x12" VENTILATING GRILLES IN SOFFIT. COORDINATE NEW LIGHTING FIXTURE LAYOUT WITH ELECTRICAL.

9. STUB NEW CONDUITS OUT NEAR THE EXISTING COLUMN. ROUTE VERTICAL TO ABOVE EXISTING RAFTERS. DROP CONDUITS IN SNACK BAR ABOVE CEILING. REFER TO ELECTRICAL DRAWINGS FOR COORDINATION.

10. NEW ELECTRICAL FIXTURE. PROVIDE ACCESS PANELS AS REQUIRED.

11. INSTALL VENTILATION GRILLES FOR AIR CIRCULATION.



GAITHERSBURG WATER PARK PHASE III

512 S Frederick Ave
Gaithersburg, MD 20877

NIKA ARCHITECTS + ENGINEERS

NIKA A+E
451 HUNGERFORD DRIVE (P)301.770.3520
4TH FLOOR (F)301.770.3521
ROCKVILLE, MD 20850 www.nika-ae.com

GENERAL NOTES

1. AT ALL TIMES DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SAFE WORKING ENVIRONMENT PER OSHA STANDARDS. ROOF INSTALLERS SHALL BE CERTIFIED AND EXPERIENCED. THE CREW MEMBERS AND SUPERVISORS SHALL WEAR ALL REQUIRED PERSONAL PROTECTION EQUIPMENT, SAFE SAFETY HARNESS, AND USE SECURED SHORING.

2. THE SUBSTRATE MUST BE SECURELY FASTENED TO STRUCTURE. IF IT IS FOUND UNSTABLE, IMMEDIATELY NOTIFY THE ARCHITECT AND THE OWNER.

3. THE SUBSTRATE MUST BE CLEAN, DRY, STRUCTURALLY SOUND, FREE OF LOOSE MATERIAL, VOIDS, PROJECTIONS, HOT SPOTS, RELEASE AGENTS, COATINGS, OR OTHER MATERIALS THAT MAY AFFECT ADHESION.

4. THERE SHALL BE NO PLANAR IRREGULARITIES GREATER THAN 6.4 MM (1/4 IN) WITHIN ANY 1.2 M (4 FT) RADIUS.

5. PRODUCTS AND INSTALLATION SHALL BE SUBJECTED TO A WRITTEN WARRANTY FROM THE CONTRACTOR FOR A PERIOD OF 20 YEARS MINIMUM, WITH PROVISION TO RENDER ALL SERVICES NECESSARY TO MITIGATE ANY AND ALL DAMAGE TO THE PROPERTY IF OCCURS DURING THE WARRANTED PERIOD DUE TO FAILURE OF ROOFING, AT NO COST TO THE GOVERNMENT (OWNER).

No.	Description	Date

Revisions

Drawing Title

ARCHITECTURAL PLANS - CONCESSION STAND & KIOSK

Phase CONCEPT 35% 65% 95% 100%

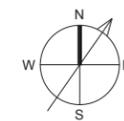
AE Project Number 12.0009-011 Drawing Scale: AS NOTED

Date 11.09.2014 CADD Filename: Revit Model CADD Plot Scale: 1:1

Drawn By RA

Checked By AV

Sheet Number **A103**



SECTION 070150.19 - PREPARATION FOR RE-ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Roof tear-off.
 - 2. Temporary roofing membrane.
 - 3. Roof re-cover preparation.
 - 4. Removal of base flashings.

- B. Related Sections:

1.3 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, reinstalled, or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site.

1.4 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.
- B. Existing Membrane Roofing System: Built-up asphalt, Asphalt Shingles, and Adhered Bituminous roofing membrane, roof insulation, surfacing, and components and accessories between deck and roofing membrane.
- C. Roof Re-Cover Preparation: Existing roofing membrane that is to remain and be prepared for reuse.
- D. Roof Tear-Off: Removal of existing membrane roofing system from deck.
- E. Partial Roof Tear-Off: Removal of a portion of existing membrane roofing system from deck or removal of selected components and accessories from existing membrane roofing system.
- F. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and reinstalled.

- G. Existing to Remain: Existing items of construction that are not indicated to be removed.

1.5 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Temporary Roofing: Include Product Data and description of temporary roofing system. If temporary roof will remain in place, submit surface preparation requirements needed to receive permanent roof, and submit a letter from roofing membrane manufacturer stating acceptance of the temporary membrane and that its inclusion will not adversely affect the roofing system's resistance to fire and wind
- C. Fastener pull-out test report.
- D. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, that might be misconstrued as having been damaged by reroofing operations. Submit before Work begins.
- E. Landfill Records: Indicate receipt and acceptance of hazardous wastes, such as asbestos-containing material, by a landfill facility licensed to accept hazardous wastes.
- F. Qualification Data: For Installer including certificate that Installer is licensed is approved by warrantor of existing roofing system.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Installer of new membrane roofing system approved by warrantor of existing roofing system to work on existing roofing.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning membrane roofing removal. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Reroofing Conference: Conduct conference at Project site
 - 1. Meet with Owner; Architect; Owner's insurer if applicable; testing and inspecting agency representative; roofing system manufacturer's representative; deck Installer; roofing Installer including project manager, superintendent, and foreman; and installers whose work interfaces with or affects reroofing including installers of roof accessories and roof-mounted equipment.
 - 2. Review methods and procedures related to roofing system tear-off and replacement including, but not limited to, the following:
 - a. Reroofing preparation, including membrane roofing system manufacturer's written instructions.
 - b. Temporary protection requirements for existing roofing system that is to remain during and after installation.

- c. Existing roof drains and roof drainage during each stage of reroofing, and roof drain plugging and plug removal requirements.
- d. Construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
- e. Existing deck removal procedures and Owner notifications.
- f. Condition and acceptance of existing roof deck and base flashing substrate for reuse.
- g. Structural loading limitations of deck during reroofing.
- h. Base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that will affect reroofing.
- i. HVAC shutdown and sealing of air intakes.
- j. Shutdown of fire-suppression, -protection, and -alarm and -detection systems.
- k. Asbestos removal and discovery of asbestos-containing materials.
- l. Governing regulations and requirements for insurance and certificates if applicable.
- m. Existing conditions that may require notification of Architect before proceeding.

1.7 PROJECT CONDITIONS

- A. Owner will occupy portions of building immediately below reroofing area. Conduct reroofing so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.
 1. Coordinate work activities daily with Owner so Owner can place protective dust or water leakage covers over sensitive equipment or furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below the work area.
 2. Before working over structurally impaired areas of deck, notify Owner to evacuate occupants from below the affected area. Verify that occupants below the work area have been evacuated before proceeding with work over the impaired deck area.
- B. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
- C. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- D. Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.
 1. Construction Drawings for existing roofing system are available and will be provided if requested for Contractor's reference. Contractor is responsible for conclusions derived from existing documents.
- E. Limit construction loads on roof to 35 lb/wheel rooftop equipment wheel loads and 50 psf for uniformly distributed loads.
- F. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.

- G. Hazardous Materials: It is not expected that hazardous materials such as asbestos-containing materials will be encountered in the Work.
1. Hazardous materials will be removed by Owner before start of the Work. Existing roof will be left no less watertight than before removal.
 2. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- H. Hazardous Materials: Present in building to be reroofed. A report on the presence of hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.
1. Hazardous material remediation is specified elsewhere in the Contract Documents.
 2. Do not disturb hazardous materials or items suspected of containing hazardous materials except according to procedures specified elsewhere in the Contract Documents.
 3. Coordinate with hazardous material remediation subcontractor to prevent water from entering existing roofing system or building.

1.8 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during reroofing, by methods and with materials so as not to void existing roofing system warranty. Notify warrantor before proceeding.
1. Notify warrantor of existing roofing system on completion of reroofing, and obtain documentation verifying that existing roofing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

PART 2 - PRODUCTS

2.1 INFILL MATERIALS

- A. Use infill materials matching existing membrane roofing system materials unless otherwise indicated.

2.2 TEMPORARY ROOFING MATERIALS

- A. Design and selection of materials for temporary roofing are responsibilities of Contractor.
- B. Sheathing Paper: Red-rosin type, minimum **3 lb/100 sq. ft. (0.16 kg/sq. m)**.
- C. Base Sheet: ASTM D 4601, Type II, nonperforated, asphalt-impregnated and -coated, glass-fiber sheet.
- D. Glass-Fiber Felts: ASTM D 2178, Type IV, asphalt-impregnated, glass-fiber felt.

- E. Asphalt Primer: ASTM D 41.
- F. Roofing Asphalt: ASTM D 312, Type III or IV.

2.3 RECOVER BOARDS

- A. Recover Board: ASTM C 208, Type II, Grade [1] [2], cellulosic-fiber insulation board; **1/2 inch (13 mm)** thick.
- B. Recover Board: Fan-folded, unfaced, extruded-polystyrene board insulation; [**3/16-inch (5-mm)**] [**1/4-inch (6-mm)**] [**3/8-inch (10-mm)**] nominal thickness.
- C. Recover Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate; **1/2 inch (13 mm)** thick.
- D. Recover Board: ASTM C 1278/C 1278M, cellulosic-fiber-reinforced, water-resistant gypsum substrate; **1/2 inch (13 mm)** thick.
- E. Fasteners: Factory-coated steel fasteners, No. 14, and metal or plastic plates listed in FM Approval's "Approval Guide," designed for fastening recover boards to deck.

2.4 AUXILIARY REROOFING MATERIALS

- A. General: Auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of [**existing and**] new membrane roofing system.
- B. Base Sheet Fasteners: Capped head, factory-coated steel fasteners, listed in FM Approval's "Approval Guide."
- C. Metal Flashing Sheet: Metal flashing sheet is specified in Division 07 Section "Sheet Metal Flashing and Trim."

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect existing membrane roofing system that is indicated not to be reroofed.
 - 1. Loosely lay **1-inch- (25-mm-)** minimum thick, molded expanded polystyrene (MEPS) insulation over the roofing membrane in areas indicated. Loosely lay **15/32-inch (12-mm)** plywood or OSB panels over MEPS. Extend MEPS past edges of plywood or OSB panels a minimum of **1 inch (25 mm)**.
 - 2. Limit traffic and material storage to areas of existing roofing membrane that have been protected.
 - 3. Maintain temporary protection and leave in place until replacement roofing has been completed. Remove temporary protection on completion of reroofing.

- B. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work. Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- C. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
- D. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
 - 1. If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new membrane roofing system, provide alternative drainage method to remove water and eliminate ponding. Do not permit water to enter into or under existing membrane roofing system components that are to remain.
- E. Verify that rooftop utilities and service piping have been shut off before beginning the Work.

3.2 ROOF TEAR-OFF

- A. General: Notify Owner each day of extent of roof tear-off proposed for that day. Retain first paragraph below for existing aggregate-ballasted elastomeric or thermoplastic membrane roofing systems or for aggregate-surfaced foamed roofing. Retain option or revise to suit Project.
- B. Remove aggregate ballast from roofing membrane.
- C. Remove loose aggregate from aggregate-surfaced built-up bituminous roofing using a power broom.
- D. Remove pavers and accessories from roofing membrane. Store and protect pavers and accessories for reuse. Discard cracked pavers.
- E. Remove protection mat and extruded-polystyrene insulation from protected roofing membrane.
 - 1. Discard extruded-polystyrene insulation that is wet and exceeds **8 lb/cu. ft. (128 kg/cu. m)**
 - 2. Store extruded-polystyrene insulation for reuse and protect from physical damage.
- F. Roof Tear-Off: Remove existing roofing membrane and other membrane roofing system components down to the deck.
 - 1. Remove roof insulation
 - 2. Bitumen and felts that are firmly bonded to concrete decks are permitted to remain if felts are dry. Remove unadhered bitumen and felts and wet felts.
 - 3. Remove fasteners from deck to the extent possible or cut fasteners off slightly above deck surface.

- G. Partial Roof Tear-Off: Where indicated, remove existing roofing membrane and other membrane roofing system components down to the deck.
1. Remove roof insulation.
 2. Bitumen and felts that are firmly bonded to concrete decks are permitted to remain if felts are dry. Remove unadhered bitumen and felts and wet felts.
 3. Remove fasteners from deck to the extent possible or cut fasteners off slightly above deck surface.
- H. Partial Roof Tear-Off: Remove existing roofing membrane and immediately check for presence of moisture by visually observing substrate boards that will remain.
1. Coordinate with Owner's inspector to schedule times for tests and inspections immediately after membrane removal.
 2. With an electrical capacitance moisture-detection meter, spot check substrate boards that will remain.
 3. Remove wet or damp boards and roof insulation. Removal will be paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.
 4. Bitumen and felts that are firmly bonded to concrete decks are permitted to remain if felts are dry. Remove unadhered bitumen and felts and wet felts.
 5. Remove fasteners from deck to the extent possible or cut fasteners off slightly above deck surface.

3.3 DECK PREPARATION

- A. Inspect deck after tear-off of membrane or other existing roofing system.
- B. If broken or loose fasteners that secure deck panels to one another or to structure are observed or if deck appears or feels inadequately attached, immediately notify Architect. Do not proceed with installation until directed by Architect.
- C. If deck surface is not suitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect. Do not proceed with installation until directed by Architect.
- D. Replace deck after inspection where the deck is not in condition to receive new roofing.

3.4 INFILL MATERIALS INSTALLATION

- A. Immediately after removal of selected portions of existing membrane roofing system, and inspection and repair, if needed, of deck, fill in the tear-off areas to match existing membrane roofing system construction.
1. Install new roofing membrane patch over roof infill area. If new roofing membrane is installed the same day tear-off is made, roofing membrane patch is not required.

3.5 ROOF RE-COVER PREPARATION

- A. Remove blisters, ridges, buckles, mechanically attached roofing membrane fastener buttons projecting above the membrane, and other substrate irregularities from existing roofing membrane that inhibit new recover boards from conforming to substrate.
1. Remove loose aggregate from aggregate-surfaced built-up bituminous roofing with a power broom.
 2. Scarify the surface of sprayed polyurethane foam as necessary to achieve a sufficiently uniform plane to receive new recover boards.
 3. Broom clean existing substrate.
 4. Coordinate with Owner's inspector to schedule times for tests and inspections before proceeding with installation of recover boards.
 5. Verify that existing substrate is dry before proceeding with installation of recover boards. Spot check substrates with an electrical capacitance moisture-detection meter.
 6. Remove materials that are wet or damp. Removal will be paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.
- B. Remove blisters, ridges, buckles, mechanically attached roofing membrane fastener buttons projecting above the membrane, and other substrate irregularities from existing roofing membrane that inhibit new recover boards roofing membrane from conforming to substrate.
1. Remove loose aggregate from aggregate-surfaced built-up bituminous roofing with a power broom.
 2. Scarify the surface of sprayed polyurethane foam as necessary to achieve a sufficiently uniform plane to receive new recover boards
 3. Broom clean existing substrate.
 4. Coordinate with Owner's inspector to schedule times for tests and inspections.
 5. Verify that existing substrate is dry before proceeding with installation. Spot check substrates with an electrical capacitance moisture-detection meter.
 6. Remove materials that are wet and damp. Removal will be paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.
- C. Remove blisters and areas of membrane not fully adhered.
- D. Remove mechanically attached roofing membrane fastener buttons projecting above the membrane and other substrate irregularities that inhibit new recover boards from conforming to substrate.
1. Remove loose aggregate from aggregate-surfaced built-up bituminous roofing with a power broom.
 2. Clean substrate of contaminants such as dirt, debris, oil, and grease that can affect adhesion of coated foamed roofing.
 3. Power vacuum the existing roof surface. If recommended by foam manufacturer, prime dried surface at recommended rate with recommended primer.
 4. Scarify the surface of coated polyurethane roofing as necessary to achieve a suitable substrate for new roofing.

5. Verify that surface is dry by pressing litmus paper to surface areas most likely to retain moisture, such as shaded areas and low spots. If paper changes color, surface is too wet to apply foam.
6. Build up isolated low spots on existing roofing membrane with sprayed foam specified in Division 07 Section "Coated Foamed Roofing" to prevent ponding.

3.6 EXISTING BASE FLASHINGS

- A. Remove existing base flashings around parapets, curbs, walls, and penetrations.
 1. Clean substrates of contaminants such as asphalt, sheet materials, dirt, and debris.
- B. Do not damage metal counterflashings that are to remain. Replace metal counterflashings damaged during removal with counterflashings of same metal, weight or thickness, and finish.
- C. Inspect parapet sheathing for deterioration and damage. If parapet sheathing has deteriorated, immediately notify Architect.
- D. Remove existing parapet sheathing and replace with new pressure-preservativetreated plywood sheathing, **19/32 inch (15 mm)** thick. If parapet framing has deteriorated, immediately notify Architect.
 1. Plywood parapet sheathing is specified in Division 06 Section "Rough Carpentry Miscellaneous Rough Carpentry."

3.7 RECOVER BOARD INSTALLATION

- A. Install recover boards over **roof insulation with** long joints in continuous straight lines and end joints staggered between rows. Loosely butt recover boards together and fasten to deck.
 1. Tape joints of recover boards if required by roofing membrane manufacturer.
 2. Fasten recover boards to resist wind-uplift pressure at corners, perimeter, and field of roof.
 3. Install additional fasteners near board corners and edges as necessary to conform boards to substrate and to adjacent boards.

3.8 DISPOSAL

- A. Collect demolished materials and place in containers. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
 1. Storage or sale of demolished items or materials on-site is not permitted.
- B. Transport and legally dispose of demolished materials off Owner's property.

END OF SECTION 070150.19

HYBRI-FLEX EQ

DESCRIPTION

HYBRI-FLEX EQ is a 100% solids low odor color quartz system composed of a 1/8" POLY-CRETE MD SL body coat with a decorative quartz broadcast. It uses a DUR-A-GLAZE #4 broadcast coat, DUR-A-GLAZE #4 grout coat, and an ARMOR TOP topcoat yielding a total nominal system thickness of 1/4".

BENEFITS

- VOC Compliant
- ADA Compliant
- Contributes to LEED Credits
- Meets USDA, FDA and CFIA Standards
- Hygienic - Does Not Harbor Bacteria
- High Chemical Resistance
- High Abrasion Resistance
- Self-Priming for Most Applications
- Wide Service Temperature Range
- Can Be Applied To 5-7 Day Old Concrete

LIMITATIONS

This product is best suited for application in temperatures between 60°F and 85°F. Substrate must be clean, sound and dry.

TYPICAL USES

HYBRI-FLEX EQ is designed to protect concrete, polymer reinforced screeds, mild steel and water resistant plywood from chemical attack, corrosion, impact and thermal shock. It is also unaffected by freeze/thaw cycles.

- Pharmaceutical Plants
- Manufacturing Areas
- Warehouses
- Restaurants
- Pool Decks

COLORS

HYBRI-FLEX EQ is available in blended and solid colors and in two sizes (Q11 and Q28). Refer to Quartz Color Blends Selector Chart for available quartz blends.

PACKAGING & STORAGE CONDITIONS

POLY-CRETE MD SL is available in pre-measured kits that consist of resin, hardener and aggregate. DUR-A-GLAZE #4 is available 1 and 5-gallon cans and 50-gallon drums. ARMOR TOP is available in pre-measured kits. HYBRI-FLEX EQ components must be stored dry. Do not allow resins to freeze. Do not store near open flame or food. The shelf life of this product is 6 months from ship date in the original unopened container.

SURFACE PREPARATION

This product requires preparation in order to perform as expected. Surface must be profiled, clean, dry, oil free and sound. Please refer to the Surface Preparation Guide on our website for more information.

APPLICATION METHOD

POLY-CRETE MD SL is applied to a properly prepared area at the required thickness using a "V" notched squeegee. The freshly placed material is then loop rolled into which the proper size quartz aggregate is broadcast to excess to achieve the desired profile. Allow a minimum of 6 hours for the Base Coat to cure before sweeping, sanding or vacuuming. Apply a second quartz broadcast into DUR-A-GLAZE #4. Apply the DUR-A-GLAZE #4 coats to achieve the required texture. Finish with a top coat of ARMOR TOP. See Application Instructions on our website for a detailed installation procedure.

GUIDE SPECIFICATIONS

This product is part of the DUR-A-FLEX family of polymer systems. Please contact DUR-A-FLEX for complete three part guide specs.

DRAWINGS AND DETAILS

Standard CAD drawings and details are available for coves, drains, breaches, transitions, etc. Please refer to the master Drawings and Details guide for actual drawings.

JOINT GUIDELINES

Refer to the Joint Guidelines for complete details on our website.

HYBRI-FLEX EQ

TECHNICAL INFORMATION

Physical Property	Test Method	Result	
Hardness (Shore D)	ASTM D-2240	75-80	
Compressive Strength	ASTM D-695 ASTM C-579	17,500 psi 12,500 psi	
Tensile Strength	ASTM D-638 ASTM C-307	4,000 psi 2,600 psi	
Tensile Elongation	ASTM D-638	7.50%	
Flexural Strength	ASTM D-790 ASTM C-580	6,250 psi 4,500 psi	
Flexural Modulus of Elasticity	ASTM D-790	6.2×10^5	
Linear Expansion	ASTM D-696	2×10^{-5}	
Bond Strength to Concrete	ASTM D-4541	400 psi substrate fails	
Indentation	ML D-3134	.025 MAX	
Impact Resistance	ML D-3134	Pass	
Water Absorption	ASTM D-570	0.04%	
Heat Resistance Limitation		140°F - 200°F	
Flammability	ASTM D-635	Self Extinguishing	
Flame Spread/NFPA 101	ASTM E-84	Class A	
Taber Abrasion Resistance A&B	ASTM D 4060, 1000g load, 1000 cycles, CS-17 wheel after full cure	<u>Gloss finish</u> w/grit - 4 mg. loss no grit - 10 mg. loss	<u>Satin finish</u> w/grit - 8 mg. loss no grit - 12 mg. loss
Noise Reduction Coefficient	ASTM C-423	0.05	
Coefficient of Friction Standard Slip-Resistant Orange Peel Smooth	ASTM D-2047	0.9 0.8 0.7	
VOC Content	Base coat <5g/l	Armor Top 0 g/l	

MOISTURE CONCERNS

Normal limits for moisture vapor transmission for Hybri-Flex floor systems are 20 lbs./1,000 sq. ft./24 hour using the calcium chloride test per ASTM F-1869 or 99% relative humidity using in-situ Relative Humidity Testing per ASTM F-2170. Please refer to the Floor Evaluation Guidelines at www.dur-a-flex.com for complete details

CHEMICAL RESISTANCE

HYBRI-FLEX EQ has excellent resistance to organic and inorganic acids, alkalis, fuel and hydraulic oils, as well as aromatic and aliphatic hydrocarbons. Contact the Dur-A-Flex Technical Department for questions about specific chemicals.

CLEANING

Regular scrubbing will maintain these systems in serviceable condition. However, certain textures and service environments require specific procedures. Please refer to the master Cleaning Guide on our website for more information.

CAUTION

Read, understand and follow Material Safety Data Sheets and Application Instructions of this flooring system prior to use. Follow the Hazardous Materials Identification System labeling guide for proper personal protective equipment to use when handling this product. Use only as directed

Before using any DUR-A-FLEX, Inc. product, be sure the Material Safety Data Sheet is read and understood.