W. M. JORDAN COMPANY'S ADDENDUM NO. _3__

PROJECT: THE WILMINGTON FOOD BANK CD SET

DATE: 12/13/21

Please reference this Addendum on the bid form.

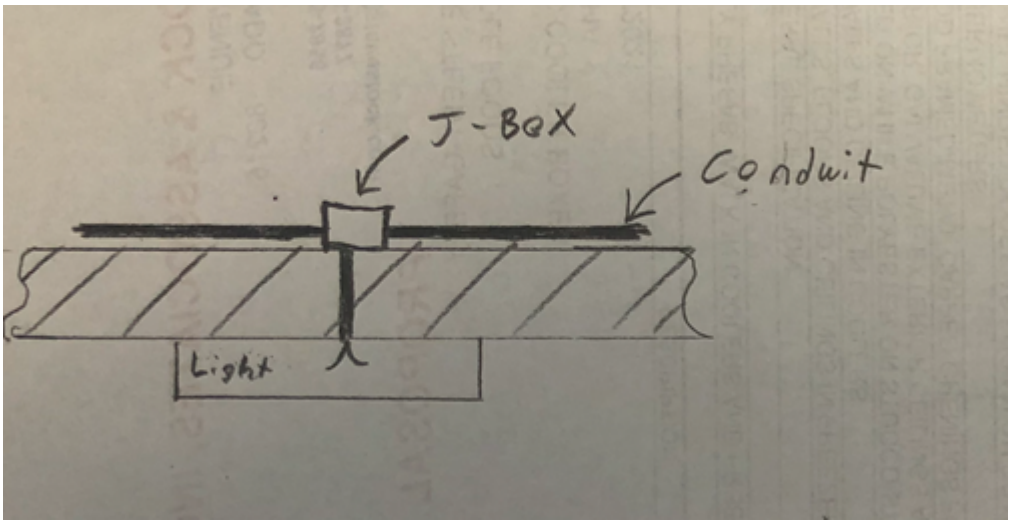
1. Reminder to review the "Supplementary Instructions to Bidders". Bids are to be submitted on the **project bid form** per the plans/specifications in conjunction with the trade specific **bid scopes**.
2. Project bid form was included in previous Addendum No.1. See plan room.
3. A sample contract and insurance requirements are posted in the plan room for review. Please pay attention to the insurance coverage amounts.
4. BP-31A Site contractor to include a 1" meter and backflow preventer for the irrigation to connect to in their bid scope of work. Disregard note in Addendum #2 that references BP-32A Landscaping to provide backflow.
5. Bid Package BP-31A to include the demo of the existing sidewalk along Greenfield street and demo of existing asphalt paving. Sheet C-2.0 already shows the new sidewalks going back in.
6. Bid Package BP-09C Flooring to include wall tile associated with revised detail 24&25/A7.2.
7. Food service vendor will be supplying the floor trough in the kitchen (Item #25) See A1.3 and C4/PS1.3. Plumbing BP-22A to receive and install it.
8. Bid package BP-09C Flooring. Please use the following flooring material allowances for bidding purposes.

   - LVT $3.75/SF
   - Carpet $28/SY
   - Rubber Base $2.35/LF

   Allowances are for material only. These allowances do not include install, freight, adhesives, etc. that are needed.
9. Wall tile shown on finish schedule A6.0 has been removed and rooms to be painted. Floor tile and tile base located in rooms 101,117,119,123,129,138,139 to be based on Daltile Assemble, Emissary 30"x30".
   Floor tile and tile base (quarry tile) located in rooms 120,121,122 to be based on the specification provided and Daltile OT03 Ashen Gray.

10. Aluminum storefront glass doors - hardware group #01

11. Bid package BP-26A Electrical is to run conduit, wiring and junction boxes for the lights in the cooler/freezer boxes located in the warehouse. The conduit and junction boxes to be run on top of the cooler freezer boxes and seal penetrations through the ceiling panel, similar to sketch below. BP-26A can anticipate 5ea lights in the freezer, and 4ea lights in each of the two cooler spaces, as well as 2ea exit lights in each space. (Lights in cooler/freezer provided and mounted by refrigeration contractor).



12. Question: Specification 221316 Storm, Sanitary Waste and Vent Piping. Page 6 paragraph 3.10 piping schedule calls for cast iron piping for above ground waste and vent piping. Is PVC acceptable to use vs cast iron? Please advise.
    Answer: PVC can be used where it is not exposed in return air plenums.

13. Question: Will press fittings be acceptable on the gas piping? Example: Viega MegaPress G fittings? Please advise.
    Answer: Press fittings are acceptable to use on the gas piping.

14. Question: Spec 064020 Interior Architectural Woodwork- lists quartz countertops and backsplashes, but don't believe there are any quartz tops called for? Please confirm none in project.
    Answer: QUARTZ is being proposed for the reception desk and adjacent coffee counter. Additional information will be on Interior Design drawings that will be issued as soon as possible. Details on A7.1 have been modified to show correct material. Price groups has also been provided for the countertop materials until actual spec is submitted.

15. Question: Detail 5/A7.1 shows 1 ½" solid surface counter, but then lists -LAM5 as if it is plastic laminate? Please advise.
    Answer: A7.1 notes have been updated and clarified however Interior Design drawings will provide material selections.

16. Question: Detail 8/A7.4 calls for a 1 ½" counter and references ID drawing for finishes, but there are no ID drawings. Please advise on finish.
    Answer: Interior Design drawings will be submitted as soon as possible.

17. Question: Details 9&10/A7.1 have call out letters, but we haven't been able to locate what those call outs mean?
    Answer: The missing call-out schedule has been added to A7.1.

18. Question: Detail 21/A7.2 calls out the bathroom vanities to have a solid surface tops, however we haven't been able to locate solid surface specifications? Please advise.
    Answer: Specifications for solid surface will be provided on Interior Design drawings.

19. Question: Specification 064020-1.3-B calls for AWI certification labels or certificates. Due to the small amount of the casework in this project, please advise/confirm AWI will not be a requirement for this project?
    Answer: AWI certification will not be required. Please disregard noted paragraph.

20. Question: Details WS-1 & WS-5 on sheet A6.3 seem to indicate solid surface window sills. Solid surface windowsills were deleted in VM exercises, please confirm these are to be wrapped with drywall.
    Answer: Solid surface window sills have been removed. Drywall will wrap into opening on all sides.

21. Question: Schedule on A6.0 has notes about a concrete densifier for areas 140,141,142. We have been under the impression those areas were sealed concrete. Specification 099123 also give information on concrete floor sealer. Please advise which is correct?
    Answer: The owner is currently using a concrete hardener product called MasterKure HD 300WB by BASF to reduce dust and harden existing concrete floors. The product we have specified is also a densifier and concrete hardener called Ashford Formula. (Our local rep for General Polymers had recommended using the Ashford Formula because it can be installed soon after new concrete is safe to walk on and is cost effective treatment.) Since the owner is satisfied with the results having used a densifier product in their other warehouses and also within the walk-in refrigerated rooms I would recommend using a densifier product in lieu of a sealer for this project. If we proceed with the densifier do we use the MasterKure HD or the Ashford Formula. I have attached technical data for each product for review. Both manufacturers are selling the same end result.

    As part of confirming the use of the densifier product, the "FasTop" resin coating currently specified for the walk-in coolers would be removed and replaced with the densifier product.

    BP-09D Painting to remove the “Fas Top” resin coating from scope of work. BP-09D to include tinted concrete sealer in rooms 126,127, 149 with associated construction joint sealants.
    BP-09D to not include the densifier product in scope. WMJ will price the densifier product separately.

22. Question: Please confirm aluminum storefront and glass assemblies are not to be impact rated on this project.
    Answer: Impact rated storefront and glazing assemblies IS NOT required in regards to wind borne debris per code.
    Tempered glass for hazardous locations per code would be used as necessary.

23. Question: For BP-08B Aluminum Storefront scope of work mentions a mock-up panel. Will this mockup be part of the final structure or a separate mockup panel that will be removed at the completion of the project? If it is a separate panel to be removed, can you clarify the size of the window in the mockup, or provide a mockup drawing so we can plan accordingly?
    Answer: Separate mock -up. Size TBD but don’t anticipate it being a large window. Something approx. 2’x2’ or so should be sufficient.

24. Question: As with all projects out in Wilmington I need to verify that Hurricane Impact Rated Glazing, and or glazing rated for wind borne debris is not required on this project, is that correct? I do not see anything in the specs. that calls this out, but as I mentioned I need to verify.
    Answer: As per answer above Impact is not in the specifications, however BP-08B Aluminum storefront to check the structural documents that provide the wind rating zones. BP-08B to confirm on the structural wind rating if there are any special corner zones that impact the window installation/wind ratings needing to be impact rated.

25. Question: Specification 234716.11-2 calls for adaptor curbs. Is that a misprint since this is a new facility? Please advise.
    Answer: Adapter curbs are not needed since this is new work.

26. Question: The HVAC adapter curb specification calls for vibration isolation type. The plans do not seem to reference that. Is vibration isolation required?
    Answer: Vibration isolation type curbs are required for roof top units.

27. Question: The only detail showing foundation waterproofing is on section detail 6 on S3.1 which occurs only at the loading dock retaining wall. There are no details showing waterproofing or dampproofing at any foundations around the building perimeter.
    a. Please advise if waterproofing is needed at the loading dock walls. If so, please provide architectural detail and specification.
    b. Please confirm below grade dampproofing or waterproofing at exterior foundations is not needed as non is currently shown?
    Answer: Waterproofing shall be provide at retaining walls as noted on structural drawings.
    1a--Provide waterproofing at loading dock walls.
    Use a standard waterproofing system for below ground applications.
    1b--Dampproofing or waterproofing not required at exterior foundation.

28. Question: Please advise if there are any pre-fabricated expansion materials/pre-formed joint sealants and expansion joint covers on this project?
    Answer: Isolation joints at columns. i.e. 1/2" preformed joint filler board.

29. Question: In previous progress set, there was exterior gyp sheathing and air-barrier behind the ACM panels. The current CD set does not show either gyp sheathing or air-barrier. Please confirm these are not needed?
    Answer: Sheathing and air-barrier has been removed. ACM can be installed direct to framing. Note: use galvanized metal framing.

30. Question: TAGS: 100 & 114B HDWE 02 Have no exit device trim. People will be able to exit the building but not enter at these openings. Please advise
    Answer: For 114B and 100 please change to HDW #03.

31. Question: TAGS 120B & 137A HDWE 07 are fire rated so must be self-latching. Are calling for push and pull plates which will void fire rating. Please Advise
    Answer: Door 120B & 137A do not need to be rated. Please disregard 60 min. rating indicated for these doors on door schedule.

32. Question: TAG 122 HDWE 08 needs a closer due to fire rating. Please advise.
    Answer: Please provide closer.

33. Question: All closers on hardware schedule do not have covers or thru bolts. Do they need them?
    Answer: Please provide thru-bolts on all closers. Please provide covers on closures.

34. Question: Equipment racking for the roof top refrigeration equipment shows up on structural drawing S2.2, but haven't been able to see any details of sizing/heights, etc.? Please advise.
    Answer: Roof racking assembly will be as follows: Structural drawings will provide 3x3 steel tube stub-ups with a 6"x6" plates at support leg locations shown on roof plan. A modular equipment support system by others will provide a framing system designed to support proposed condensing unit to anchored to provided stub-ups. Basis of Design system; RTS (Rooftop Support Systems) #RTSEQ-MDF-4 series platform framing with #P2072 SQ unistrut post base with 8" tall posts. Finish to be hot dip galvanized. RTS to provide engineered drawings to support equipment and wind/seismic loads. RTS cut sheet attached for reference.

35. Question: Sheet L-2.0 does not show any landscaping inside the stormwater/BMP/Lid Area. Will this area require any seeding or storm water pond plantings?
    Answer: City of Wilmington will require plantings on the top of the infiltration basin, and we have now confirmed NC State will not be providing those plants. We will add them to our landscape plan and reissue. CoW standard planting detail attached for reference.

    Other than plants, it is recommended to sod the basin and we will also note this on the landscape plan. BP-32A Landscaping to include infiltration basin plantings and SOD in their pricing.

36. Question: Sheet E0.4 shows 3ea feeders coming from the transformers and says "Underground Service By Utility Company". Has it been confirmed that the utility company will be furnishing and installing the conduit and wiring for those feeders?
    Answer: The note indicating conduit and conductors by utility is an error. Conduit and conductors from the transformer to the building must be included in the contract. Equivalent ampacity aluminum conductors will be acceptable in lieu of copper if desired. BP-26A Electrical to include this work. If aluminum is used, any changes in equipment/conduit needed to be able to use aluminum must also be taken into account by BP-26A.

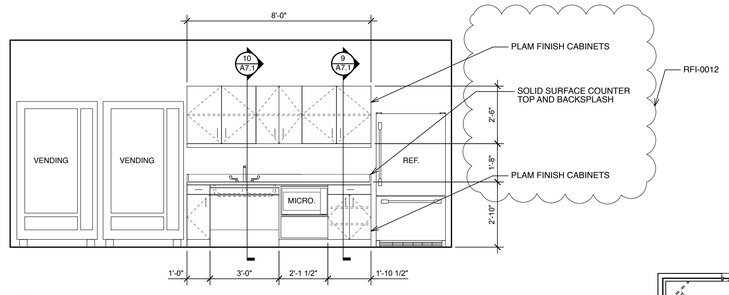
37. Question: FT1, FT2, OB1, RPZ & SK2 are shown on the plumbing fixture schedule. Unable to locate those on the Plumbing drawings. Are these not used?
    Answer: FT1, FT2 were deleted. Trough KEC#25 is specified on Drawing A1.3 (Reference #7 above).
    OB1 (Ice maker outlet box) should be provided for refrigerator Break Rm. 126.
    RPZ not used.
    SK2 located in Break Rm 126. Changed to 2-compartment sink. New sink should be Elkay LR3322 or equivalent.

38. Question: Is there a specific rooftop pipe support to be used?
    Answer: Provide something similar to detail shown and provide a submittal for approval.

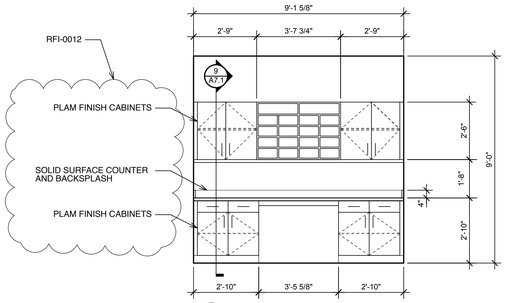
39. Question: A little more detail/info on the water heaters would be great. Aquastat, Circ Pump timer, Thermometers, pressure gauges? Specifications call for thermometer but not able to locate model #?
    Answer: See revised detail for aquastat and thermometer locations.

40. Question: Unable to locate a model # for the trap primers? Please advise.
    Answer: Submit pressure type trap primer from Sioux Chief, PPP, etc for approval.

41. Question: Specification section 233113 subsection 3.9 Duct Cleaning is much more exhaustive than usual for a commercial building. Are we to interpret it as requiring a professional duct cleaning service to be utilized? Please advise
    Answer: The cleaning requirement in the spec are not appropriate for new construction. Section 3.9 should be revised to state contractor must visually inspect duct system to ensure that no visible contaminants are present before testing, adjusting, and balancing.



2 A7.1 Elevation @ Breakroom
Scale: 3/8" = 1'-0"



3 A7.1 Elevation @ Mail Room
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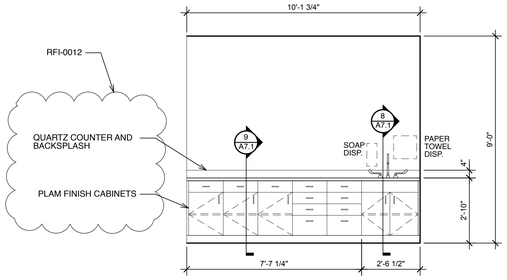


4 A7.1 Elevation @ Volunteer Lounge
Scale: 3/8" = 1'-0"

NOTE:

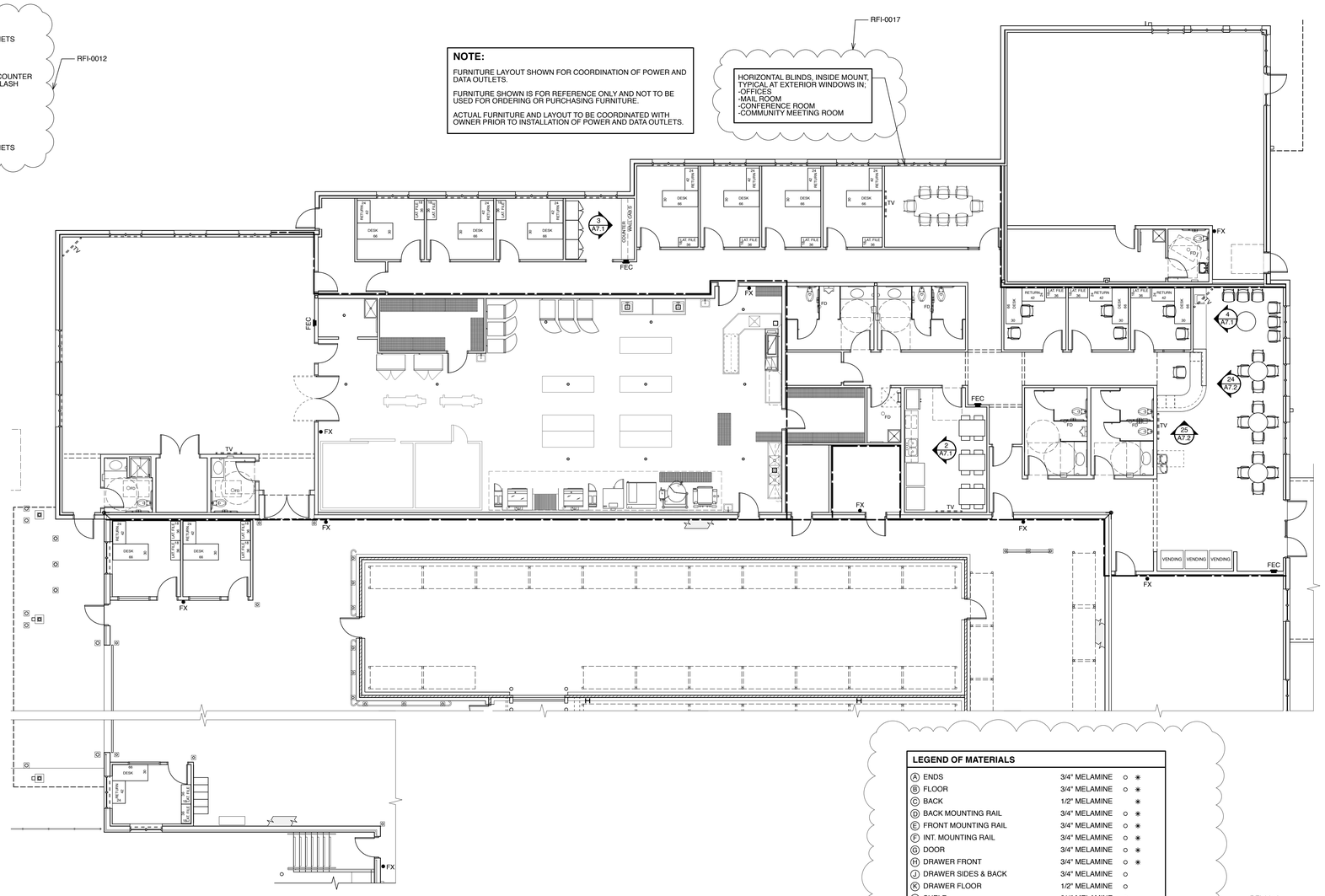
FURNITURE LAYOUT SHOWN FOR COORDINATION OF POWER AND DATA OUTLETS.

FURNITURE SHOWN IS FOR REFERENCE ONLY AND NOT TO BE USED FOR ORDERING OR PURCHASING FURNITURE.

ACTUAL FURNITURE AND LAYOUT TO BE COORDINATED WITH OWNER PRIOR TO INSTALLATION OF POWER AND DATA OUTLETS.

RFI-0017

HORIZONTAL BLINDS, INSIDE MOUNT, TYPICAL AT EXTERIOR WINDOWS IN;
-OFFICES
-MAIL ROOM
-CONFERENCE ROOM
-COMMUNITY MEETING ROOM

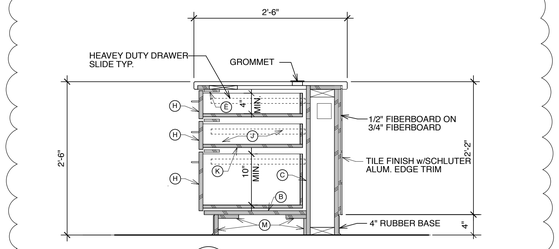


1 A7.1 Furniture and Millwork Plan
Scale: 1/8" = 1'-0"

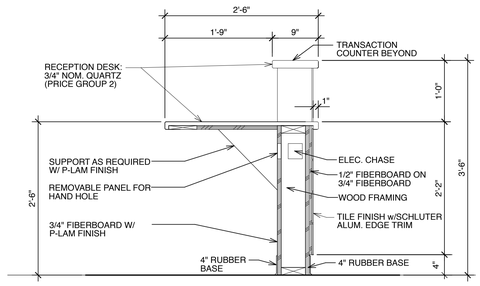
LEGEND OF MATERIALS

(A)	ENDS	3/4" MELAMINE	○ ✱
(B)	FLOOR	3/4" MELAMINE	○ ✱
(C)	BACK	1/2" MELAMINE	✱
(D)	BACK MOUNTING RAIL	3/4" MELAMINE	○ ✱
(E)	FRONT MOUNTING RAIL	3/4" MELAMINE	○ ✱
(F)	INT. MOUNTING RAIL	3/4" MELAMINE	○ ✱
(G)	DOOR	3/4" MELAMINE	○ ✱
(H)	DRAWER FRONT	3/4" MELAMINE	○ ✱
(J)	DRAWER SIDES & BACK	3/4" MELAMINE	○
(K)	DRAWER FLOOR	1/2" MELAMINE	○
(L)	SHELF	3/4" MELAMINE	○
(M)	TOE BOARD ASSEMBLY	3/4" PLYWOOD	○
(N)	COUNTERTOP/BACKSPLASH	MATERIAL AS NOTED	
(O)	WALL CABINET TOP	3/4" MELAMINE	○ ✱

○ WITH PLASTIC LAMINATE EXTERIOR
✱ WITH MATCHING EDGE



5 A7.1 Section @ Reception Desk
Scale: 1" = 1'-0"



6 A7.1 Section @ Reception Desk
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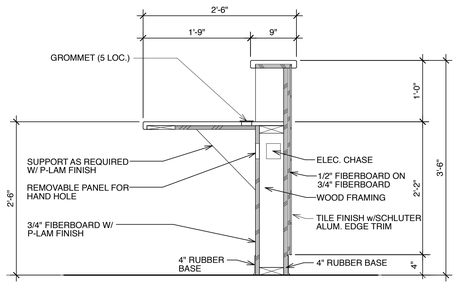

7 A7.1 Section @ Reception Desk
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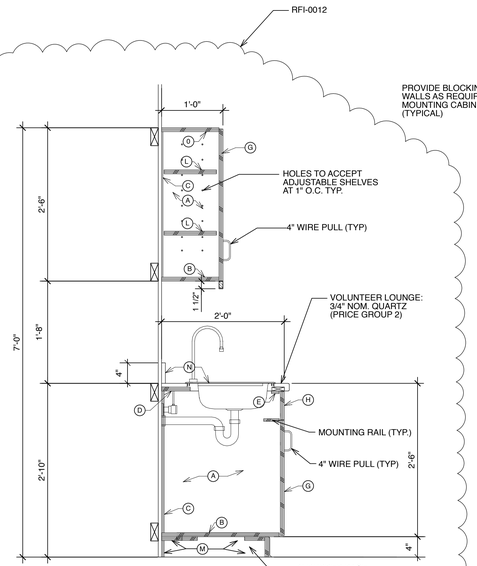
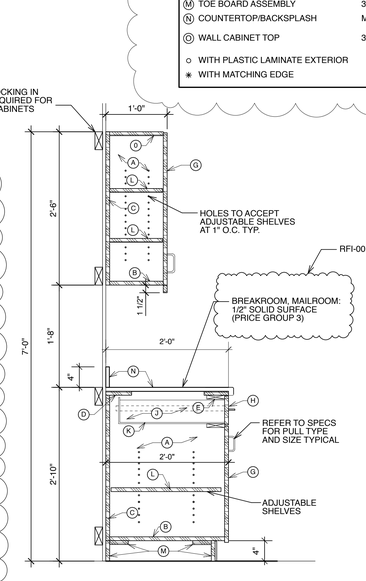


8 A7.1 Section @ Millwork
Scale: 1" = 1'-0"



9 A7.1 Section @ Millwork
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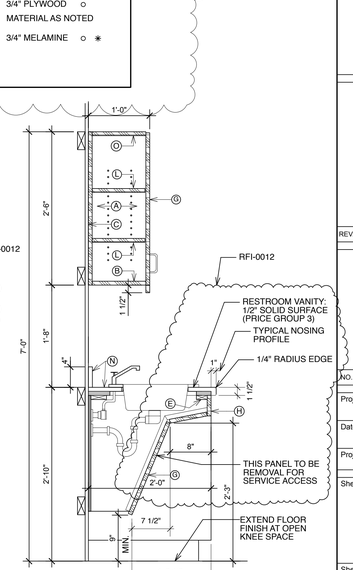


10 A7.1 Section @ Millwork
Scale: 1" = 1'-0"

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621

BOWMAN, MURRAY, HEMINGWAY ARCHITECTS, P.A. · REGISTERED ARCHITECTURAL CORPORATION · NORTH CAROLINA · CERT. NO. 50424 · WILMINGTON, N.C.

The Wilmington Food Bank
Greenfield Street
Wilmington, North Carolina 28403

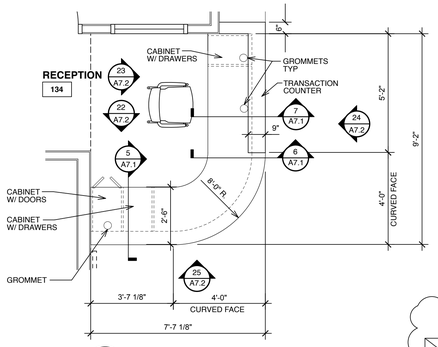
REV.	DATE	DESCRIPTION
	12.07.21	RFI-0012 & RFI-0017

NO.	DATE	ISSUE NOTE

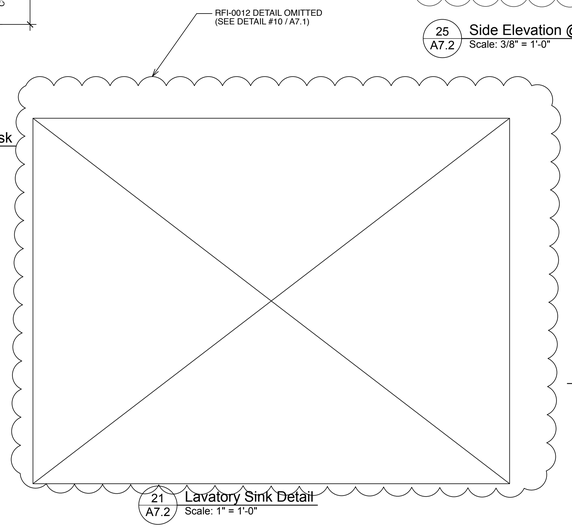
Project Manager	Drawn By: MG/DP/AT
Date: 11.10.2021	Reviewed By: CH
Project ID: -	

Sheet Title
Furniture Plan & Millwork

Sheet No.
A7.1



6 A7.2 Enlarged Millwork Plan @ Reception Desk
Scale: 3/8" = 1'-0"



21 A7.2 Lavatory Sink Detail
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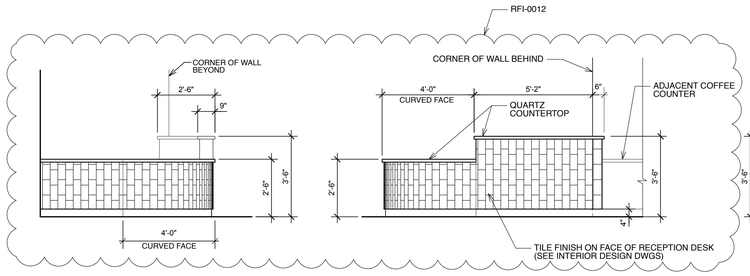
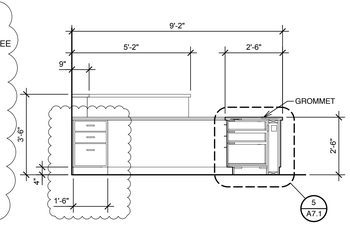


25 A7.2 Side Elevation @ Lounge Desk
Scale: 3/8" = 1'-0"

24 A7.2 Front Elevation @ Reception Desk
Scale: 3/8" = 1'-0"



23 A7.2 Section @ Reception Desk
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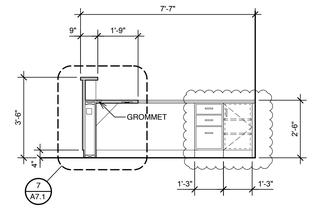

22 A7.2 Section @ Reception Desk
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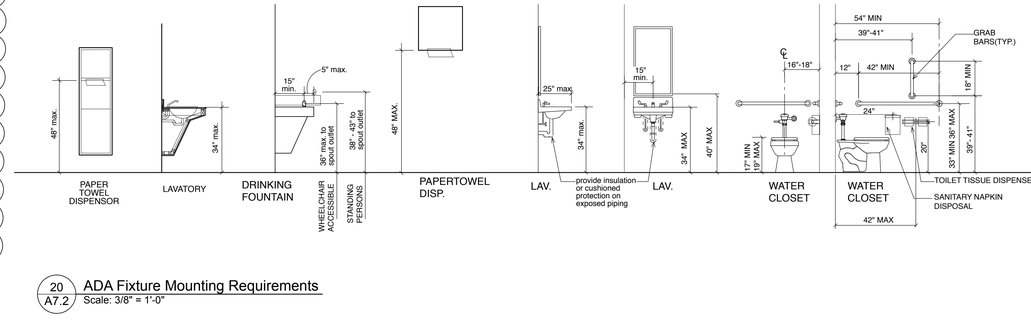
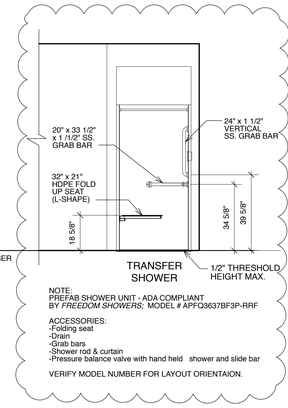
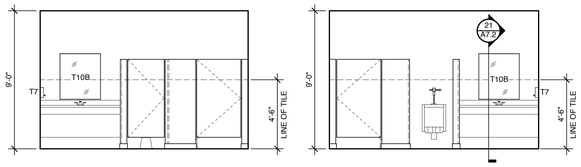


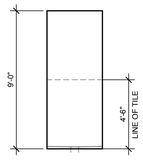
20 A7.2 ADA Fixture Mounting Requirements
Scale: 3/8" = 1'-0"





19 A7.2 Elevation
Scale: 1/4" = 1'-0"

18 A7.2 Elevation
Scale: 1/4" = 1'-0"



17 A7.2 Elevation @ Can Wash
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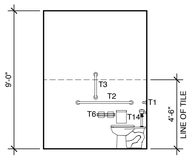

16 A7.2 Elevation
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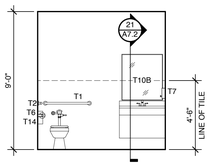

15 A7.2 Elevation
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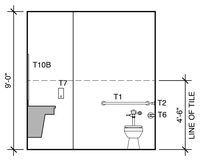

14 A7.2 Elevation
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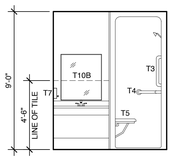

13 A7.2 Elevation
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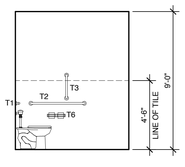
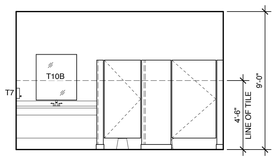
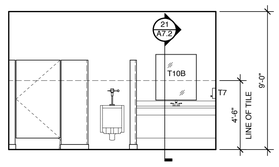


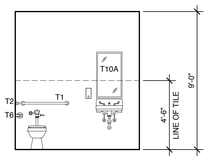
12 A7.2 Elevation
Scale: 1/4" = 1'-0"



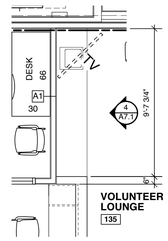
11 A7.2 Elevation
Scale: 1/4" = 1'-0"



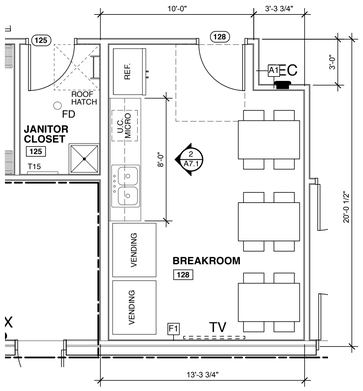
10 A7.2 Elevation
Scale: 1/4" = 1'-0"



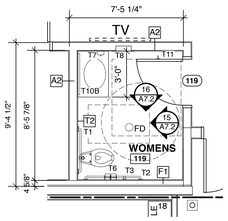
9 A7.2 Elevation
Scale: 1/4" = 1'-0"



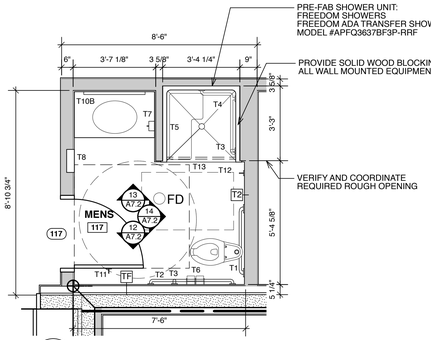
8 A7.2 Enlarged Millwork Plan
Scale: 1/4" = 1'-0"



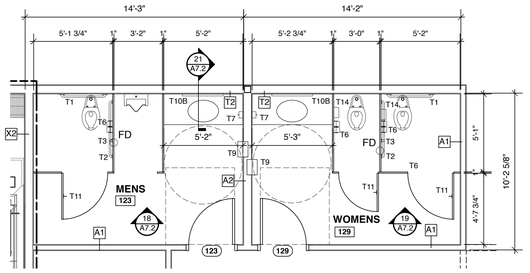
7 A7.2 Enlarged Millwork Plan
Scale: 1/4" = 1'-0"

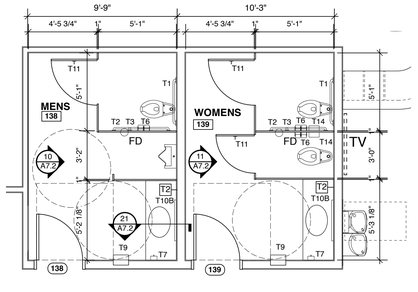


5 A7.2 Enlarged Toilet Room Plan
Scale: 1/4" = 1'-0"

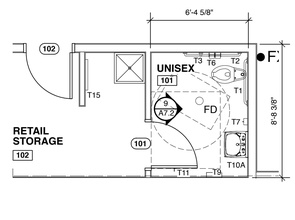


4 A7.2 Enlarged Toilet Room Plan
Scale: 3/8" = 1'-0"





1 A7.2 Enlarged Toilet Room Plan
Scale: 1/4" = 1'-0"



BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621

BOWMAN, MURRAY, HEMINGWAY, ARCHITECTS, P.A. REGISTERED ARCHITECTURAL CORPORATION NORTH CAROLINA WILMINGTON, N.C. CERT. NO. 50424

The Wilmington Food Bank
Greenfield Street
Wilmington, North Carolina 28403

REV.	DATE	DESCRIPTION
	12.08.21	RFI-0012 & OTHER CLARIFICATIONS

NO.	DATE	ISSUE NOTE

Project Manager	Drawn By MG/DP/AT
Date 11.10.2021	Reviewed By CH
Project ID -	

Sheet Title
Enlarged Plans & Interior Elevations

Sheet No.
A7.2

TECHNICAL DATA SHEET

CONCRETE FINISHING 03 35 00

Curecrete Distribution, Inc.

1. Product Name

Ashford Formula

2. Manufacturer

Curecrete Distribution, Inc.
1203 Spring Creek Place
Springville, UT 84663-0551

Phone: (800) 998-5664
(801) 489-5663
Fax: (801) 489-3307

Email: info@ashfordformula.com
Web: www.ashfordformula.com
Video: Floor Expectations


Logistics Center, Kansas City, MO, USA

3. Product Description

BASIC USE

Ashford Formula, a leader in concrete densification since 1949, is a transparent, chemically reactive, water-based treatment that penetrates concrete and masonry building materials, protecting, preserving and strengthening them permanently by:

- **Curing:** Ashford Formula reduces crazing on new concrete. When applied to properly placed, structurally sound freshly finished concrete, Ashford Formula will uniformly cure the concrete through a combined chemical/moisture retention reaction so vital to the complete hydration process
- **Densification:** Ashford Formula penetrates into the concrete surface, forming a chemical reaction of crystalline growth that fills in the natural pores and voids in the concrete surface
- **Hardening:** Ashford Formula solidifies the component parts of the concrete into one solid mass, increasing the density, toughness, hardness and substantially increasing the abrasion resistance and durability of the concrete surface. Smooth steel-troweled surfaces develop a marble-like finish and sheen
- **Dustproofing:** Ashford Formula chemically reacts with the salts in the concrete, permanently eliminating the release of concrete dust through the surface pores
- **Neutralizing Alkali:** as the Ashford Formula progressively penetrates the concrete, it neutralizes the alkalis, forcing them to the surface where they can be washed away during the application; the deep alkalis are locked in, and efflorescence and the leaching of lime and alkalis stop
- **Bonding:** Ashford Formula prepares the treated surface for paints, caulking compounds, adhesives and floor coverings by eliminating the surface concrete salts that are so detrimental to proper bonding; Ashford Formula contains no silicone and is coatable and compatible with any type of covering when standard surface preparation guidelines are followed

With one application of Ashford Formula, concrete or other masonry is cured and rendered permanently more dense for its lifetime, making oils, greases and other surface contaminants easier to clean and remove. The component parts of the concrete are solidified into a solid mass that toughens, hardens and increases the density. Surface alkalis are neutralized, and efflorescence and the leaching of lime and alkalis are stopped.

Treatable materials include concrete, heavyweight concrete block, mortar, plaster, stucco, terrazzo, exposed aggregate and any sand-aggregate-portland cement combination. Applications include warehouses, distribution facilities, aviation hangars, manufacturing plants, food processing and distribution buildings, pulp and paper mills or other types of facilities with large exposed concrete floors.

COMPOSITION AND MATERIALS

Ashford Formula complies with all USDA regulations and is nontoxic, noncombustible and nonflammable. It is not harmful to lungs or hands and contains no volatile organic compounds (VOCs).

SIZES

Ashford Formula is available in 55 gallon (208 L) drums and 5 gallon (19 L) pails.

COLOR, FINISH

Ashford Formula is clear and **will not change the natural appearance of masonry or concrete.** Where alkali, lime and other impurities are forced to the surface and the natural appearance is to be preserved, all treated surfaces must be

flushed clean with clear water in accordance with manufacturer's instructions.

On smooth steel-troweled concrete surfaces, a natural wax-like sheen will appear between 6–12 months after treatment. This can be accelerated by burnishing after curing. The sheen is caused by the hardening and densifying properties of the Ashford Formula, as well as by the abrasion from cleaning and use of the floor. A routine cleaning program using a floor scrubber with abrasive-type brushes will accelerate and enhance the sheen. The sheen will last the lifetime of the surface.

BENEFITS

- Reduces crazing in new concrete
- Only one application creates a permanent, dense surface that is more solid than untreated concrete
- Hardens and strengthens within the concrete mass, protecting against deterioration and producing a floor that is resistant to traffic; rather than eroding, the floor surface actually self-polishes with use
- Treated surface resists dust, oils, greases and other surface contaminants, such as tire marks
- Effective curing agent when applied immediately after the finishing operation; stabilizes surface, minimizes crazing and ensures that the concrete will meet or exceed its design strength
- Prepares the treated surface for paints, caulking compounds, adhesives and floor coverings
- Covers approximately 200 ft2/gal (5 m2/L), depending on concrete temperature and porosity
- Compatible with any type of covering when standard surface preparation guidelines are followed
- Thinners not required; equipment is cleaned using water only

LIMITATIONS

- On concrete where high volumes of de-icers/road salts are allowed to accumulate, or in other salty environments, additional protection is required
  Note: Please contact Curecrete for recommended salt protection products.
- The Ashford Formula is not for application over areas previously treated with curing or sealing agents unless these coatings have been removed by chemical or mechanical means
- The Ashford Formula should not be used as a curing agent when Type K shrinkage compensation cement is used or when shrinkage reducing admixtures with hydrophobic properties are used
- On concrete that is abnormally porous or soft, additional applications of the Ashford Formula may be required. This also applies to surfaces with open finishes, such as broom finished or scarified floors
- At standard coverage rates, the Ashford Formula cannot resolve dusting or erosion problems related to over-troweling, carbonation or poor surface water-to-cement ratio. Additional material can, but not always, resolve these problems
- Non-chloride admixtures are recommended as calcium chloride can cause heavy salt deposits on the surface and produce unpredictable effects on the concrete color
- Concrete mix designs with over 15% total combined pozzolanic materials (fly ash, granulated blast furnace slag, silica fume, etc.) of the total cementitious material will be warranted for hardening and dustproofing only
- In cases of excessive moisture and/or extreme hydrostatic pressure from beneath the slab, this reaction does not prevent excessive salt migration
- The Ashford Formula is not to be used to treat lightweight block or other extremely porous masonry that contains actual holes and air pockets

4. Technical Data

APPLICABLE STANDARDS

American Society for Testing and Materials (ASTM)

- **ASTM C779** Standard Test Method for Abrasion Resistance of Horizontal Concrete Surfaces
- **ASTM C805** Standard Test Method for Rebound Number of Hardened Concrete
- **ASTM C1028** Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method
- **ASTM D3359** Standard Test Methods for Measuring Adhesion by Tape Test
- **ASTM F150(06) 2018** Standard Test Method for Electrical Resistance of Conductive and Static Dissipative Resilient Flooring
- **ASTM G23** Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials (Withdrawn 2000)

American National Standards Institute (ANSI)

- **ANSI B101.1** Test Method for Measuring Wet SCOF of Common Hard-Surface Floors
- **ANSI B101.3** Test Method for Measuring Wet DCOF of Common Hard-Surface Floors

National Floor Safety Institute (NFSI)

- Certified as High Traction by the National Floor Safety Institute (NFSI), Phase 2 testing

USGBC LEED Version 4

- Indoor VOC Emission Test; California Department of Public Health CDPH/EHLB/Standard Method Version 1.2, 2017

Health Product Declaration Collaborative (HPD)

- **HPD v1.0**
- **HPD v2.1**

PHYSICAL/CHEMICAL PROPERTIES

See Table 1 *(last page)*.

5. Installation

PREPARATORY WORK

Deliver products in manufacturer's original, unopened, undamaged containers with identification labels intact. Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer. Storage life is indefinite. Agitate before use if product is more than one year old.

Verify that site conditions are acceptable for installation. Do not proceed with installation until unacceptable conditions are corrected.

On existing concrete remove all surface coatings. To remove dust, dirt and contamination from areas to be treated, sweep surface using a fine-bristled broom or hose off with water and let dry. Ashford Formula can be applied to damp surfaces as long as all puddled areas are swept away. This prevents the Ashford Formula from becoming diluted before it is able to penetrate the surface.

METHODS

Ashford Formula may be applied on new concrete by owners, contractors, or qualified applicators. If owners or their contractors apply the material, Curecrete recommends that a field technician be on hand to provide assistance and ensure the application is done correctly. On existing concrete, Curecrete recommends that only qualified applicators prepare the surface and apply the material. Outside of the United States, the Ashford Formula can be applied only by certified applicators.

New Concrete

Apply product immediately following the finishing operation, as soon as the surface is firm enough to walk on and before hairline checking and temperature cracking begin. Curecrete recommends application using a low-pressure, high-volume pump that will dispense material at 40–70 psi (276–483 kPa) and roughly 3–5 gal (11–19 L) per minute. Keep the entire surface wet with Ashford Formula for 30 minutes, working it into the concrete surface with a soft-bristled broom.

As the Ashford Formula becomes slippery underfoot, lightly mist the surface with water. As it again becomes slippery underfoot, thoroughly flush the entire surface with water and squeegee it completely dry to remove all surface alkalis and/or Ashford Formula residue.

On exterior broom-finished surfaces, no flushing is required, but any remaining Ashford Formula must be squeegeed or broom-swept from the surface after 30–40 minutes.

Newly placed concrete requires the normal hardening period. Allow 30 days for proper curing before applying paint or covering.

Old Concrete/All Cured Surfaces

Spray with a low-pressure sprayer or pour and brush with a soft-bristled broom to saturate the entire surface with Ashford Formula. Keep the surface wet with the formula for 30 minutes.

- **Option 1:** if the majority of the Ashford Formula has been absorbed into the surface after 30–40 minutes, broom or squeegee any excess material from all low spots and puddles so that all remaining Ashford Formula is entirely absorbed into the concrete or is totally removed from the surface
- **Option 2:** if after 30–40 minutes the majority of the Ashford Formula is still on the surface, wait until it becomes slippery underfoot, then thoroughly flush the entire surface with clear water; squeegee completely dry to remove all Ashford Formula residue

The surface can be used as soon as it is again dry to the touch and the application is complete. Allow 3–7 days before applying paint or coverings.

Instructions for tilt-wall applications and vertical surface applications are available online at www.ashfordformula.com.

PRECAUTIONS

Performance

- Apply product with low-pressure sprayer only. Do not use airless sprayers, as they atomize the material, allowing inhalation which may pose a health hazard
- Diaper all construction equipment components that might drip oil, hydraulic fluid or other liquids
- Apply Ashford Formula to colored concrete only after the slab is fully cured
- Prevent Ashford Formula from getting on glass or other finished surfaces—if this occurs, immediately wipe with a damp cloth or flush the affected surface immediately—when applying near windows, mask the glass
- Do not apply Ashford Formula when the temperature falls to below 35 degrees F (1.7 degrees C)
- Protect new concrete from freezing for a period of six days
- If the Ashford Formula becomes frozen, thaw and agitate before using

Safety

- If taken internally, do not induce vomiting. Drink large amounts of milk or water; consult a physician immediately
- May cause eye and mucous membrane damage. Avoid contact with eyes and mucous membranes; if contact occurs, flush with water for 15 minutes
- Surfaces treated with the Ashford Formula temporarily become slippery during application; exercise care and caution to avoid falls

BUILDING CODES

Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.

6. Availability and Cost

AVAILABILITY

Curecrete Distribution, Inc. has inventory facilities throughout the United States, allowing for next day delivery to more than 95 percent of all zip codes, as well as same day service in some

areas. Contact the manufacturer for local availability information.

COST

Ashford Formula is competitively priced. For specific price information, contact Curecrete Distribution, Inc.

7. Warranty

Curecrete Distribution, Inc. warrants that a properly prepared and structurally sound concrete or masonry surface treated with Ashford Formula according to the manufacturer's directions will remain dustproof, hardened and water repellent for 20 years. If the treated surface does not remain dustproof, hardened and water repellent after the specified densification period, Curecrete Distribution, Inc. will supply, at its own expense, sufficient Ashford Formula to re-treat any defective area. This warranty does not apply if the Ashford Formula is improperly applied or if structural faults occur due to faulty workmanship, improper design or failure of materials other than the Ashford Formula. Complete warranty terms and conditions are available from the manufacturer. For details, consult Curecrete Distribution, Inc.

8. Maintenance

Scrub the floor often. The abrasion polishes the floor and enhances the shine. Ample water used with routine detergent scrubbing will accelerate the densification process.

Curecrete Distribution, Inc. recommends using a detergent void of acids, sulphates and hydroxides (caustic soda, such as CreteClean Plus with Scar Guard that is) with a pH of 8.5–10.5 to clean the floor. Acidic cleaner or sweeping compounds will dull the surface appearance.

Clean spills quickly. Highly concentrated acid may etch the surface if left in contact with the floor. Foods such as mustard and grape juice may leave a residual stain if not removed immediately.

Keep a good oil emulsifier on hand to clean oil, grease or fats. Waxing or coating with other products is unnecessary and is not recommended.

9. Technical Services

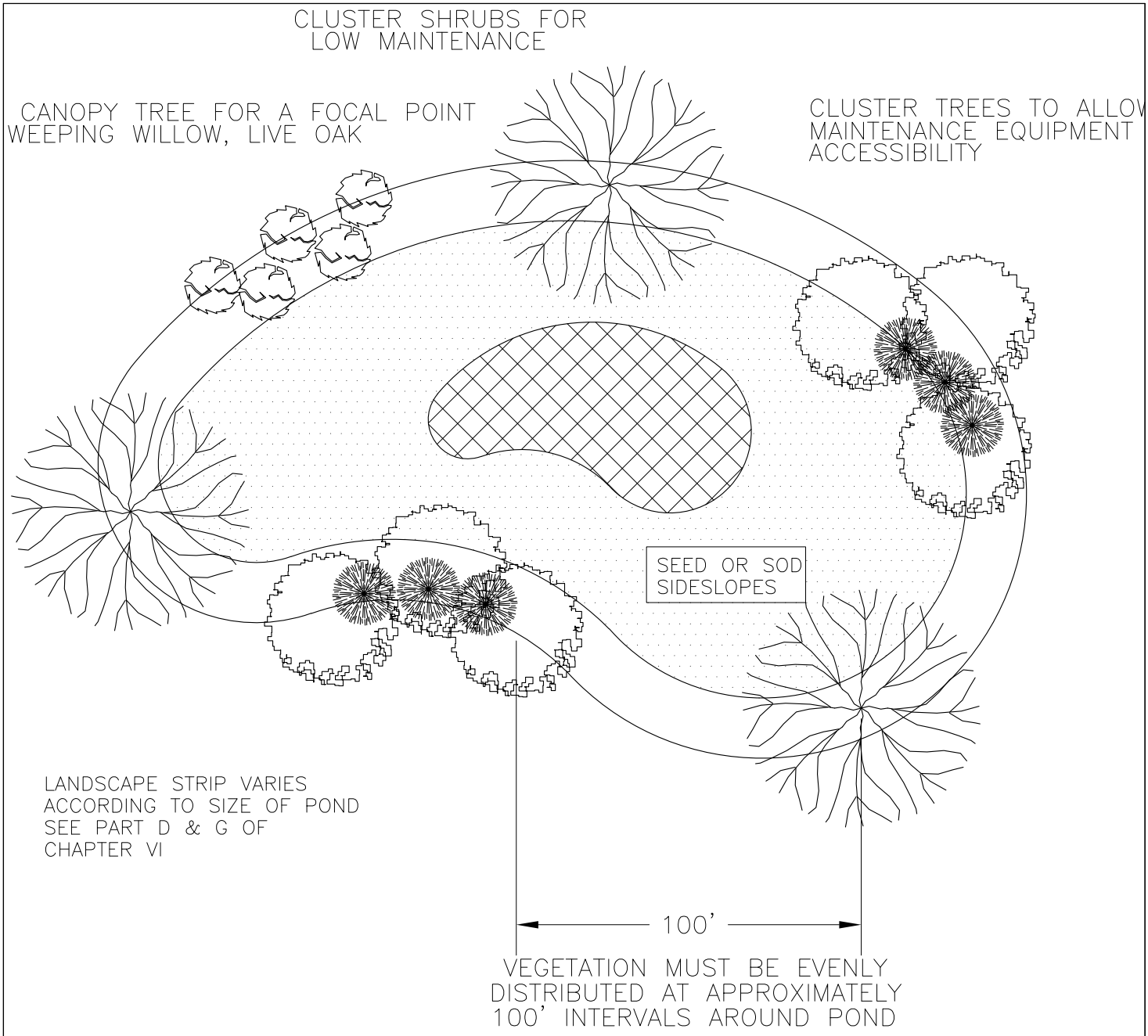
Technical assistance, including more detailed information, product literature, test results, project lists, assistance in preparing project specifications and arrangements for application supervision, is available by contacting Curecrete.

10. Filing Systems

Additional product information is available from the manufacturer upon request

Table 1 - Physical/Chemical Properties

Abrasian resistance (ASTM C779)	32.5% increast at 30 minutes
Surface adhesion (ASTM D3359)	22% increase in epoxy adhesion; no change for polyurethane adhesion
Curing	93% greater moisture retention during the initial critical 24 hr curing period compared to untreated samples
Impact resistance (ASTM C805)	13.3% increase in impact resistance compared to untreated samples
Permeability	0.00073 oz (0.022 cc)/hr seepage rate using a 7 ft (2.13 m) head of water and a 4.91 in^2 (3168 mm^2) treated area
Coefficient of friction (ASTM C1028)	0.86 dry; 0.69 wet
Coefficient of friction (ANSI 101.1)	Average SCOF 0.67
Coefficient of friction (ANSI 101.3)	Average DCOF 0.54
High Traction	High Traction - NFSI Phase 2 Certified
Weathering (ASTM G23)	Ultraviolet light and water spray exposure had no adverse effect on treated samples
Electrical resistance	To ASTM F150
CDPH/EHLB/Standard Method Version 1.2, 2017	Indoor Air Quality Certified Compliant according to California Department of Public Health



Notes:

1. If possible, locate pond where vegetation exists.
2. Suggest minimal clearing to conserve visual quality of site and minimize the additional of tree planting. An irregular shape provides a more natural appearance.
3. Landscape strip shall be a maximum slope of 7:1 in order to plant vegetation.
4. Provide a minimum of 3 inches of mulch around all vegetation.

	STANDARD DETAIL
DATE: JULY 2003	TYPICAL STORM WATER FACILITY LANDSCAPING PLAN
DRAWN BY JSR	
CHECKED BY B.P., P.E.	
SCALE NOT TO SCALE	

CITY OF WILMINGTON NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SD 15-16

BASF

We create chemistry

Technical Data Guide

3 | 03 35 00
Concrete
Finishing

MasterKure® HD 300WB

Concrete hardener and dustproofer

FORMERLY LAPIDOLITH®

PACKAGING
5-gallon (18.9 L) pails
55-gallon (208 L) drums

COLOR
Clear liquid

YIELD
See Chart on page 4.

STORAGE
Store in unopened containers in a cool, dry area between 35° and 85° F (4° and 29° C). Keep from freezing.

SHELF LIFE
15 months when properly stored.

VOC CONTENT
0 g/L, less water and exempt solvents.

DESCRIPTION
MasterKure HD 300WB is a magnesium fluorosilicate concrete hardener and dustproofer that bonds chemically with the concrete to strengthen and harden floors that are porous, readily absorptive, and only moderately hard.

PRODUCT HIGHLIGHTS
- Hardens and densifies concrete floors to reduce absorption and prolong service life
- 100% reactive with the free lime in concrete to produce a dense, abrasion-resistant yet breathable surface
- Tightly binds together the cement, sand, and aggregate for improved chemical resistance
- Non-film forming, resulting in reduced cleaning and maintenance costs
- Compatible with most resilient tile adhesives

APPLICATIONS
- Interior and exterior
- Floors requiring a hard, dense, chemical-resistant finish
- Floors subject to heavy traffic and abrasion
- Floors that must resist penetration of contaminants

SUBSTRATES
- Concrete
- Terrazzo (non-resinous)

HOW TO APPLY

SURFACE PREPARATION

1. New concrete should be cured per ACI 308 Guidelines. For best results, allow concrete to air dry for at least 72 hours. Concrete should be at least 10 days old and preferably 28 days old before application of MasterKure HD 300WB.
2. Surfaces must be clean, dry, and free of contaminants, including carbonation byproducts.

APPLICATION

1. The number of applications and dilution ratios for MasterKure HD 300WB are dependent on the porosity and density of the concrete. Refer to coverage chart. Two applications of MasterKure HD 300WB are generally required on concrete and non-resin-based terrazzo floors. Wood-floated, broom-finished, or porous floors may require a third application of product at full strength.
2. Apply MasterKure HD 300WB by roller, spray, brush, or squeegee. Bubbling indicates reaction of MasterKure HD 300WB with the concrete. Distribute evenly and mop up excess solution or puddles.

CONCRETE

1. After the first application, allow the floor to dry until no longer visibly wet.
2. If crystals develop during the second application, flush the surface liberally with clean water. Use hot water if available. At the same time, rapidly brush the floor with a stiff-bristled broom.
3. Mop up excess water and allow the surface to dry.

CONCRETE, POLISHED SHEEN

1. To achieve the appearance of a polished sheen, use 3 applications of MasterKure HD 300WB. See Yield Chart for dilution ratios of each coat.
2. As the last application is drying, wait for the uniform appearance of white crystals. Flood the floor with water and buff with a commercial floor buffer using an abrasive pad. Continue buffing until the floor acquires a patina or polish and the whiteness is gone.
3. The above recommendation is for dense, steel-troweled floors. Older or more porous concrete may require a stronger mix, lower coverage rate or more than three applications.
   Caution: unusually wet or oily environments will be more slippery with this surface treatment.

TERRAZZO (NON-RESIN-BASED)

1. Do not allow the first application to dry. While the surface is still damp, flush it thoroughly with clean hot water and then allow it to dry until no longer visibly wet. For the second application, follow the same procedure but mop up excess wash water and allow the surface to dry.
2. The appearance of white crystals after the first or second application indicates that the mix may be too strong, or that the surface has reached maximum hardness. If this occurs, stop the application and flush the surface with clean, hot water; scrub with a stiff-bristle broom, and allow to dry. Increase the dilution for any remaining applications to minimize crystal formation.

CLEAN UP

Clean all tools and equipment with water immediately after use. Thoroughly flush sprayers. Dispose of unused material according to local regulations.

MAINTENANCE

1. Routine sweeping and washing of floors with mild conventional cleaners and detergents is recommended.
2. Remove all abrasive grit and wipe up corrosive spills as soon as possible.

FOR BEST PERFORMANCE

- If MasterKure HD 300WB freezes, warm and restir to uniformity. If separation is persistent, discard product.
- When transferring MasterKure HD 300WB from the original sealed container, use only plastic buckets or pails.
- Small amounts of sediment or a cloudy appearance in the container will not affect product performance.
- Do not apply to uncured concrete; concrete must be properly wet cured.
- Do not apply MasterKure HD 300WB to floors that have been previously sealed or treated with curing and parting compounds unless these products have been chemically or mechanically removed.
- MasterKure HD 300WB can be used for exteriors. However, if the surface has been hard-troweled, traffic can polish the surface and make it slippery.
- Although MasterKure HD 300WB is chemically resistant, its application in specific chemical environments should be checked with BASF Technical Service.
- For resilient tile applications, conduct an adhesion test.
- Do not apply MasterKure HD 300WB to resin-based terrazzo mixes.
- MasterKure HD 300WB will not remediate honeycombed or structurally unsound surfaces.
- Do not allow MasterKure HD 300WB to dry on terrazzo floors except as indicated in application instructions.
- Do not allow MasterKure HD 300WB to come in contact with any glass, fabric, metal, or painted surfaces. Immediately wipe contaminated surfaces with a clean water-saturated cloth, then wipe dry with a second clean cloth.
- For subsequent coating applications, consult coating manufacturer for surface preparation and application instructions.
- For professional use only; not for sale to or use by the general public.
- Make certain the most current versions of product data sheet and SDS are being used; call Customer Service (1-800-433-9517) to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Technical Data

Composition

MasterKure HD 300WB is a magnesium fluorosilicate hardener.

Compliances

- Recommended for use on all classes of concrete floors as noted in Table 1.1, ACI Standard 302.1R
- USDA compliant for use in meat and poultry areas

Test Data

PROPERTY	RESULTS	TEST METHODS
Abrasion Resistance, depth of wear, in (mm)		ASTM C 779*
30 minutes		
Untreated concrete	0.0264 (0.7)	
MasterKure DH 310 WB treated*	0.0025 (0.06)	
Abrasion Resistance, depth of wear, in (mm)		ASTM C 779*
60 minutes		
Untreated concrete	0.0428 (1.1)	
MasterKure DH 310 WB treated*	0.0106 (0.27)	

*Concrete was cured for 28 days.

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

Chemical Resistance

ACI Standard 302.1R magnesium fluorosilicate hardeners can be used to increase concrete resistance to chemicals including, but not limited to the following:

Aluminum sulfate
Ammonium chloride
Barium hydroxide
Beef fat
Calcium hydroxide
Calcium nitrate
Carbon dioxide
Carbonic acid
Castor oil
Coal-tar oils
Cottonseed oil
Creosote
Cresol
Distillers slop
Ethylene glycol
Ferric chloride
Ferric sulfate
Ferrous chloride
Ferrous sulfate
Fish oil
Fruit juices
Glucose
Glycerine
Hydrogen sulfide
Iodine
Lactic acid, 25%
Lead refining solutions, 10%
Lignite oils
Machine oils
Magnesium chloride
Magnesium sulfate
Manganese sulfate
Manure
Mash, fermenting
Mercuric chloride
Mercurous chloride
Mine water, waste
Mineral oil
Molasses
Mustard oil
Nickel sulfate
Oleic acid, 100%
Olive oil
Paraffin
Phenol, 25%
Phosphoric acid, 85%
Pickling brine, 10%
Poppy seed oil
Potassium aluminum sulfate, 10%
Potassium carbonate
Potassium chloride
Potassium dichromate
Potassium persulfate
Potassium sulfate
Rapeseed oil
Sea water
Silage
Sodium bromide
Sodium carbonate
Sodium chloride
Sodium dichromate
Sodium nitrite
Sodium sulfate, 10%
Sodium sulfite, 10%
Sodium thiosulfate
Soybean oil
Sugar
Sulfite liquor
Tallow and tallow oil
Tannic acid
Tanning liquor, 10%
Tobacco
Walnut oil
Zinc chloride
Zinc nitrate
Zinc sulfate

Yield

TYPE OF SURFACE	FT_2/GAL (M_2/L) (MIXED MATERIAL)	APPLICATIONS	DILUTION RATIO (BY VOLUME) WATER TO MasterKure HD 300WB	RATIO
Light to moderately troweled floors	100 (2.45)	2	1 to 1 first 1 to 2 second	1.17
Heavy-duty or densely troweled floors	100 – 300 (2.45 – 7.35)	2	3 to 1 first 1 to 2 second	0.92
Rough-finished floors	100 (2.45)	2	1 to 1 first 1 to 2 second	1.17
Terrazzo (nonresin based)	300 (7.35)	2	3 to 1 each	0.50
Concrete, polished sheen	200 – 300 (4.9 – 7.35)	3	4 to 1 first 3 to 1 second 2 to 1 third	0.78

To estimate the quantity of MasterKure® HD 300WB needed for an application, divide the area of the floor by the coverage rate (ft^2/gal or m^2/L) of mixed material. Multiply this number by the ratio (in last column). Example: 8,000 ft^2 floor, moderately troweled: 8,000 ÷ 100 = 80 gallons mixed material x 1.17 = 93.6 gallons of MasterKure HD 300WB needed.

Recommendations for the number of applications and the dilution ratios are based upon average conditions. Coverage varies with application method, porosity, and texture of concrete.

HEALTH, SAFETY AND ENVIRONMENTAL

Read, understand and follow all Safety Data Sheets and product label information for this product prior to use. The SDS can be obtained by visiting buildingsystems.basf.com, e-mailing your request to basfbscst@basf.com or calling 1(800)433-9517. Use only as directed. **For medical emergencies only, call ChemTrec® 1(800) 424-9300.**

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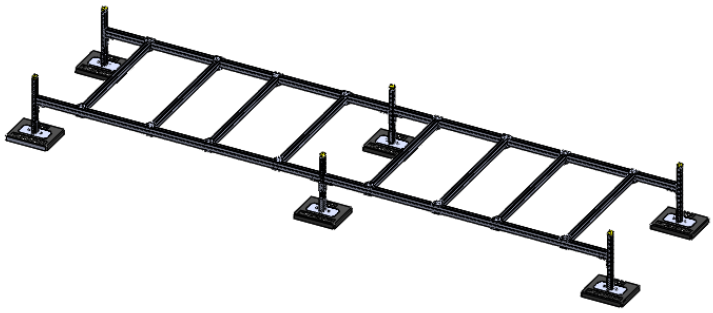
RTSEQ-MDF-4

PRODUCT SUBMITTAL SHEET

FOUR UNIT SUPPORT



Description

Non-penetrating and adjustable condenser support consisting of strut channel framing and recycled rubber bases for safely supporting HVAC units.

Product Information

Compatible Bases: RTSF21

Clearance: Adjustable height 12 in - 24 in

Maximum Load Weight: 2000 lbs total. 500 lbs/ unit

Framing: Welded 1-5/8 in x 3-1/4 in solid, and 1-5/8 in x 1-5/8 in perforated, 12 gauge strut channel

Framing Finish: Pre-Galvanized (ASTM 653), Hot Dip Galvanized (ASTM 123), or 304 Stainless Steel

Hardware Finish: Electro-Galvanized (ASTM B633) or 304 Stainless Steel

Installation

1. Place base on roof based on design layout
2. Preload (1) 3/8 in channel nut and bolt into one of the top two holes on the base receiver
3. Insert upright components into bases with strut opening facing outward. Tighten bolt to 19 ft/lbs to secure
4. Attach 90 degree brackets to uprights at approximate height of unit using 1/2 in hardware. Hand tighten
5. Install welded channel framing to the 90 degree brackets to form the ends of the support. Level in all directions and tighten hardware to 50 ft/lbs
6. Attach the remaining welded channel tothe top and bottom of the welded channel using the plate fittings provided. Align the strut with mount holes on the unit and tighten to 50 ft/lbs
7. Install yellow caps on the tops of the upright

Quantity: Contractor: Project:

RTSEQ-MDF-4

PRODUCT SUBMITTAL SHEET

Rooftop Support Systems®