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To: Prospective Bidders

From: Wold Architects and Engineers

Date: March 23, 2015

Comm. No: 144012

Subject: Addendum No. 1 for Bidding Documents for the: Madonna University Toilet Renovation

Livonia, Michigan

BIDS DUE MARCH 26, 2015 AT 10:00AM

This addendum forms a part of the Contract Documents dated (original issue date). Acknowledge receipt of this Addendum on the space provided on the Bid Form. Failure to do so may result in disqualification of Bid.

This Addendum consists of three (3) typed sheets and attachments:

Specification Sections: 00 01 10, 00 41 13, 08 71 00, 09 30 00, 10 28 13

Drawings: A3.11, A6.01

MacMillan Mechanical and Electrical Memo

PROJECT MANUAL

- SPECIFICATION SECTION 00 01 10 TABLE OF CONTENTS.
 - A. Reissued this addendum.
- 2. SPECIFICAITON SECTION 00 41 13 BID FORM.
 - A. Reissued this addendum.
- SPECIFICAITON SECTION 01 23 00 ALTERNATES.
 - A. Deleted this addendum.
- 4. SPECIFICATION SECTION 03 30 00 CAST-IN-PLACE CONCRETE.
 - A. Deleted this addendum.
- 5. SPECIFCATION SECTION 07 13 00 MEMBRANE WATER PROOFING.
 - A. Deleted this addendum.
- 6. SPECIFICATION SECTION 08 71 00 FINISH HARDWARE.
 - A. Reissued this addendum.
- 7. SPECIFICATION SECTION 09 30 00 TILE.
 - A. Reissued this addendum.
- SPECIFICATION SECTION 10 28 13 TOILET ACCESSORIES.
 - A. Reissued this addendum.

Minnesota Illinois Michigan Colorado Iowa



DRAWINGS

Drawing D0.11 DEMOLITION PLAN

- A. At DEMOLITION PLAN GENERAL NOTES include the following:
 - "At each shower head, control lever and drain (one each per each shower compartment shown), demolish the existing fixtures and wall / floor construction as required and coordinate with mechanical for further demolition required."
- A. At DEMOLITION PLAN KEY NOTES add the following KEY NOTE #26:
 - "26. At each shower head, control lever and drain (one each per each shower compartment shown), demolish the existing fixtures and wall / floor construction (approximately 9 SF of wall and 2 SF of floor at each shower) as required and coordinate with mechanical for further demolition required."
- B. At drawings C1/D.011, C3/D.011, C5/D.011, at the plan north most bank of showers add key note #26.
- C. At drawings E1/D.011, G1/D.011, H1/D.011, at the plan east most bank of showers add key note #26.
- D. At drawings E4/D.011, G4/D.011, at the plan west bank of showers add key note #26.

2. Drawing A1.11 GROUND LEVEL FLOOR PLAN

A. Remove all references to Alternate #1; all areas previously noted as an alternate are to be included in the base hid.

Drawing A1.21 MAIN LEVEL FLOOR PLAN

A. Remove all references to Alternate #1; all areas previously noted as an alternate are to be included in the base bid.

4. Drawing A1.31 FIRST LEVEL FLOOR PLAN

A. Remove all references to Alternate #1; all areas previously noted as an alternate are to be included in the base bid.

Drawing A1.41 SECOND LEVEL FLOOR PLAN

A. Remove all references to Alternate #1; all areas previously noted as an alternate are to be included in the base bid.

Drawing A3.01 ENLARGED TOIELT PLANS

- A. At FLOOR PLAN GENERAL NOTES include the following:
 - "13. At each shower head, control lever and drain (1 each per each shower compartment shown) that is to be demolished, patch-in / repair the existing wall / floor construction as required and coordinate with mechanical and electrical for further work required."
- B. Remove all references to Alternate #1; all areas previously noted as an alternate are to be included in the base bid.
- C. Install 2" x 2" porcelain floor tile at the extents of the shower areas from wall to wall to, and including, the raised threshold.
- D. At FLOOR PLAN KEY NOTES add the following KEY NOTE #13:
 - "13. At each shower head, control lever and drain (one each per each shower compartment shown), that is to be demolished, patch-in / repair the existing wall / floor construction as required (approximately 9 SF of wall and 2 SF of floor at each shower) and coordinate with mechanical and electrical for further work."
- E. At drawings C1/A3.01, C3/A3.01, C5/A3.01, at the plan north most bank of showers add key note #13.
- F. At drawings E1/A3.01, G1/A3.01, H1/A3.01, at the plan east most bank of showers add key note #13.
- G. At drawings E4/A3.01, G4/A3.01, at the plan west bank of showers add key note #13.



7. DRAWING A3.11 INTERIOR ELEVATIONS AND DETAILS (Reissued)

- A. Refer to reissued drawings sheet A3.11, revise details G1- SECTION @ SHOWER and G4-TYP. TOILET ROOM per attached.
- B. Detail G1/A3.11 is TYPICAL at all shower locations. At H.CAP showers provide floor slopes that meet accessibility code in lieu of raised threshold per standard showers.

8. DRAWING A4.21 MAIN LEVEL REFLECTED CEILING PLAN

A. At Wing 'A', the enlarged plan call out-reads 8/A4.51.

9. DRAWING A6.01 SCHDEULES, MOUNTING HEIGHTS AND DETAILS (Reissued)

- A. Existing hollow metal frames at new doors are to remain, refer to reissued sheet A6.01. All existing frames are to be primed and painted per specifications.
- B. At the MATERIAL FINISH / COLOR SCHDEULE, omit specification section 10 20 00 TOILET ACCESSORIES.
- C. At the MATERIAL FINISH / COLOR SCHDEULE, add the following at SPECIFICAITON SECTION 09 30 00 TILF:
 - "Porcelain Floor Tile -2 (At showers and thresholds), Crossville, Series/Color: Cross-Tread, Terra Rosata"
- D. At detail G7/A6.01 provide sealant joint between tile and metal trim piece.

END OF ADDENDUM #1

SECTION 00 01 10

PROJECT MANUAL TABLE OF CONTENTS

Section No.	<u>Title</u>

<u>Division 00</u> <u>Procurement and Contracting Requirements</u>

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00 21 13	Instructions to Bidders AIA A701
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00 41 16	Non Iran Linked Business Certification

General Conditions of the Contract

00 72 00 General Conditions AIA 201

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Division 02	Existing Conditions
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03 30 00 Cast-In-Place Concrete

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<u>Division 06</u> <u>Wood, Plastics and Composites</u>

O6 65 10 Solid Surface Fabrications

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 08 14 00
 Wood Doors

 08 31 00
 Access Panels

 08 71 00
 Finish Hardware

Division 09Finishes09 21 16Gypsum Board

09 30 00 Tile

09 51 00 Acoustical Ceilings

09 91 00 Painting

09 97 00 ACF for Interior Ceilings

<u>Division 10</u> <u>Specialties</u>

To 21 13 Solid Plastic Toilet Partitions

10 28 13 Toilet Accessories

<u>Division 11-20</u> Not Used

<u>Division 21</u> <u>Fire Suppression</u> (See Mechanical Specifications)

<u>**Division 22**</u> <u>**Plumbing**</u> (See Mechanical Specifications)

<u>Division 23</u> <u>Heating, Ventilating and Air Conditioning</u> (See Mechanical Specifications)

Division 24-25 Not Used

<u>Division 26</u> <u>Electrical</u> (See Electrical Specifications)

<u>Division 27</u> <u>Communications</u> (See Electrical Specifications)

<u>Division 28</u> <u>Electronic Safety and Security</u> (See Electrical Specifications)

Division 29-49 Not Used

SECTION 00 41 13

BID FORM

BID PROPOSAL FOR: MADONNA UNIVERSITY TOILET RENOVATION 36600 SCHOOLCARFT ROAD

LIVONIA, MICHIGAN 48150 BID TO: Madonna University **Business Office 2001** 36600 School Craft Road Livonia, Michigan 48150 BID FROM: We have examined the Contract Documents for the proposed Madonna University Toilet Renovation as prepared by Wold Architects and Engineers, Clawson, Michigan, and the conditions affecting the work. In accordance therewith the undersigned proposes to furnish all labor and materials for Construction as set forth in the Contract Documents, including Addenda Nos. ______ issued thereto. 1. Accompanying this proposal is a Bid Security for all work, required to be furnished by Contract Documents, the same being subject to forfeiture in the event of default by the undersigned. 2. Accompanying this proposal is a Familial Affidavit of Bidder. Accompanying this proposal is a Non-Iran Linked Business Certification. 3. I agree to complete the Project, provided a contract is executed within 30 calendar days, by July 31, 2015 for Phase I and July 29, 2016 for Phase II. I understand the Owner reserves the right to reject any or all bids, and it is agreed that this bid may not be withdrawn for a period of thirty (30) days from the opening thereof. Base Bid The Bidder agrees to perform all work including General, Mechanical and Electrical Construction for the Base 1. Bid Sum of: Dollars \$ Voluntary Alternates R. The Bidder is encouraged to suggest any alternate procedure(s) and/or material(s). Alternates/Suggestions Add or Deduct from Base Bid

DATE		_	
FIRM NAME			
OFFICIAL ADDRESS			
TELEPHONE NUMBER	()		
FAX NUMBER	(_)		
BY		-	
TITLE			

END OF SECTION 00 41 13

SECTION 08 71 00

FINISH HARDWARE

PART 1: GENERAL

1.01 RELATED DOCUMENTS

A. Drawings, Details of Construction and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification Sections, apply to work specified in this section.

1.02 SUMMARY

- A. This Section includes the furnishing and installing of all finish hardware material specified herein, listed in the hardware schedule, or required by the Drawings.
- B. Cylinders for:
 - 1. Access panel doors as required by Section 08 31 00.
- C. Items of hardware include:
 - 1. Finish hardware
 - 3. Thresholds and weatherstrip

1.03 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 08 14 00 Wood Doors.
- B. Section 08 31 00 Access Panels.
- C. Division 10 Toilet Partitions: Hardware.

1.04 REFERENCES

- A. Builders' Hardware Manufacturers Assoc., Inc. (BHMA), 60 E. 42nd St., New York, NY 10017.
 - 1. Recommended locations for builders' hardware.
- B. American National Standards Institute, Inc. (ANSI), 1430 Broadway, New York, NY 10018.
 - 1. A115.2 Specifications for standard steel door and frame preparations for bored cylindrical locks for 1-3/8" and 1-3/4" doors.
- C. National Fire Protection Association, Inc. (NFPA), Battery March Park, Quincy, MA 02269.
 - 1. NFPA 80 Standard for fire doors and windows.
 - 2. NFPA 101 Code for safety to life from fire in buildings and structures.
- D. Underwriters Laboratories, Inc. (UL), 333 Pfingsten Road, Northbrook, IL 60062.
 - 1. Building Materials Directory.

- E. Builders' Hardware Manufacturers Assoc., Inc. (BHMA), 60 E. 42nd Street, New York, NY 10017.
 - 1. Recommended locations for builders' hardware.
- F. Building Codes: International Building Code, Adopted Edition.
 - 1. Include State amendments modifying model codes in jurisdiction where project is constructed.

1.05 QUALITY ASSURANCE

- A. Except where specified in the hardware schedule, furnish products of only one manufacturer for each type of hardware.
- B. Supplier: Company specializing in the builders' hardware industry.
- C. Provide hardware for fire-rated openings conforming to UBC Standard 7-2.
- Provide hardware for fire-rated openings conforming in compliance with NFPA 80 1995 Edition.

1.06 REGULATORY REQUIREMENTS

- A. Furnish hardware listed by UL testing agency for all rated openings in conformance with requirements for the class of opening scheduled.
- B. Rating requirements have precedence over this specification where conflict exists.
- C. Furnish and install hardware that is in compliance with American with Disabilities Act of 1990 (ADA) technical standards, and current State Building Code.

1.07 SUBMITTALS

- A. Submit in accordance with Section 01 33 00.
 - Schedules
 - a. Immediately after award of the hardware contract, submit a detailed, vertical type hardware schedule and cut sheets for each type of hardware for approval. On existing buildings field verify existing swings and functions prior to submitting schedule.
 - b. Itemize hardware in the sequence and format established by this specification.
 - 1. List and describe each opening separately; include door number, room designations, degree of swing, and hand.
 - List related details; include dimensions, door and frame material, and other conditions affecting hardware.
 - 3. List all hardware items; include manufacturer's name, quantity, product name, catalog number, size, finish, attachments, and related details where applicable.
 - c. Submit manufactures cut sheets on each type of hardware proposed.
 - d. Resubmit the corrected schedule when required.

- e. Determine keying requirements by meeting with the Owner coordinated through the Architect, and submit a detailed keying schedule for review; resubmit the corrected schedule when required.
- 3. Samples: Submit samples of hardware items as may be required by the Architect; identify each sample and indicate the location of subsequent installation in the project.
- 4. Templates: Furnish a copy of the approved hardware schedule and all pertinent templates or template information to each fabricator of material factory-prepared for the installation of hardware.
- Include documentation for UL 10C or other approved testing agency stating hardware has passed UBC Standard 7-2.

1.08 DELIVERY, STORAGE AND HANDLING

- A. Deliver hardware to the job site in the manufacturer's original containers that have been marked to correspond with the approved hardware schedule for installation location.
- B. Store hardware in dry surroundings and protect against loss and damage.

PART 2: PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS/MATERIALS

A. Hinges

1. Butt hinge manufacturers and respective catalog numbers:

	<u>IVES</u>	<u>Hager</u>	<u>Stanley</u>	McKinney	Bommer
a.	5PB1	1279	F179	T2714	5000
b.	5BB1	BB1279	FBB179	TB2714	BB5000
c.	5BB1 630	BB1191	FBB191	TB2314	BB5002
d.	5BB1HW	BB1168	FBB168	T4B3786	BB5004
e.	5BB1HW630	BB1199	FBB199	T4B3386	BB5006

2. Continuous hinges manufacturers and respective catalog numbers:

<u>Markar</u>	<u>Stanley</u>	<u>Ives</u>	<u>McKinney</u>
300 Series	600 Series	700 Series	MCK-300 Series

- a. Continuous hinges shall be full height pin and barrel type hinge providing full height door support up to 600 pounds. Edge mount (unless noted otherwise).
- b. Hinges shall be constructed of heavy-duty 14-gauge material. The stainless internal pin shall have a diameter of .25 and the exterior barrel diameter of .438.
- c. Hinge shall be non-handed with symmetrical templated hole pattern and factory drilled. Hinge must accept a minimum of 21 fasteners on the door and 21 fasteners on the frame.
- d. Each knuckle to be 2", including split nylon bearing at each separation for quiet, smooth, self-lubricating operation.
- e. Hinge to be able to carry Warnock Hersey Int. or UL for fire rated doors and frames up to three hours. Note: Fire label for doors and frames should be placed on the header and top rail of rated doors and frames.

- f. Provide adjusting screws equal to Markar's "AdjustaScrew" for continuous hinges specified as HG-305. Adjustment to be able to correct frame fit problems up to 3/8".
- 3. When hinges are specified on the hardware schedule, furnish:
 - a. Interior openings through 36 inches wide and 60 inches high without a door closer: Two (2) standard-weight, plain bearing hinges #1279 per leaf.
 - b. Interior openings through 36 inches wide and 90 inches high without a door closer: Three (3) standard-weight, plain bearing hinges #1279 per leaf.
 - c. Interior openings through 36 inches wide and 60 inches high with a door closer: Two (2) standard-weight, ball bearing hinges #BB1279 per leaf.
 - d. Interior openings through 36 inches wide and 90 inches high with a door closer: Three (3) standard-weight, ball bearing hinges #BB1279 per leaf.
 - e. Interior openings over 36 inches in width and/or 90 inches in height: One (1) continuous hinge per leaf.
 - f. Exterior hollow metal or stainless steel openings: One (1) continuous hinge per leaf.
 - g. Exterior aluminum openings through 36 inch wide and 90 inches high: Four (4) heavyweight ball bearing hinges #BB1199xNRP per leaf.
 - h. Exterior aluminum openings over 36 inches wide in width and/or 90 inches in height: One (1) continuous hinge per leaf.

B. Flush Bolts and Dustproof Strikes

1. Manufacturers and respective catalog numbers:

	<u>Ives</u>	Door Controls	<u>Hager</u>	Rockwood
a.	DP2	80	280X	570
b.	FB31P	842	292D	1842
c.	FB41P	942	291D	1942
d.	FB458	780	282D	550

- Non-labeled openings: Furnish two flush bolts FB458 for the inactive leaf of pairs of locked or latched doors.
 Locate centerline of the top bolt not more than 78" from the finished floor. Furnish dustproof strike DP2 for the bottom bolt.
- 3. Labeled openings: Furnish automatic flush bolt set FB31P or FB41P, as applicable, for the inactive leaf of pairs of doors; furnish dustproof strike DP2 for the bottom bolt.

D. Locks

1. Manufacturers and respective catalog numbers:

Corbin-Russwin

ML2000 LWA

- 2. Furnish lock types and functions specified in the hardware schedule, with the following provisions:
 - a. Provide interchangeable cores at all exterior doors and all exit devices.
 - b. Provide interchangeable cores at all locations.

c. Strikes:

- 1) Wrought box type for the inactive leaf of pairs of wood doors, or wood frames.
- 2) Lip length sufficient to protect trim, frame or inactive leaf.
- 3. Furnish knurled lock knobs or lever handles on doors to stairs other than exit stairs, loading platforms, stages, boiler rooms, and other hazardous locations.
- 4. Lever handles must be cast brass, bronze or stainless steel construction and conform to ASNI A117.1.
- 5. Provide and install wiring from electric lockset to power supply.
- E. Cylinders: Corbin-Russwin
- F. Pulls, Push Plates/Bars, Flush cup pulls
 - 1. Manufacturers and respective catalog numbers:

	<u>Item</u>	<u>Hager</u>	<u>Hiawatha</u>	Burns	Rockwood
a.	Pull	10Q 18"	518B-18"	26C-18"	118
b.	Push Plate (flush doors	30s 8x16	200K	57	70F
c.	Push Plate (6" stile doors)	30s 4x16	200F	54	70C
d.	Pushbar	130s	1081LBP	422	47
e.	Flush Cup Pulls	27p	-	-	BF97

G. Coordinators

1. Manufacturers and respective catalog numbers:

<u>Ives</u>	Door Control	<u>Hager</u>	Rockwood
COR	600	297D	1600

- 2. Furnish a COR series coordinator for labeled pairs of doors equipped with automatic flush bolts or vertical rod-mortise lock fire exit device combinations with astragals.
- 3. Furnish filler bars for total opening width, closer mounting brackets, carry bars, and special preparation for top latches where applicable.
- 5. Determine closer size in accordance with manufacturer's recommendations for application on the room side of corridor doors, stair side of stair doors, and interior side of exterior doors.
- 6. Provide SRI rust inhibitor primer for all closers in pools and corrosive areas.

H. Closers

1. Manufacturers and respective catalog numbers:

<u>LCN</u>	Sargent	<u>Norton</u>	<u>Yale</u>
4011/4111 Series	351P10	7500 Series	4400 Series

2. Where closers are listed in the hardware schedule, furnish 4011/4111, 351P10, PR7500, PR4400 series unless other functions/series are specified in the hardware groups.

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- Furnish complete with all mounting brackets, drop plates and special shoes as may be required by the door and frame conditions.
- 4. Furnish through bolt attachments for closers specified for mineral core doors, unless solid wood blocking is provided for attachment.
- 5. Determine closer size in accordance with manufacturer's recommendations for application on the room side of corridor doors, stair side of stair doors, and interior side of exterior doors.
- 6. Provide SRI rust inhibitor primer for all closers in pool and corrosive areas.
- I. Kick Plates: Where kick plates are specified in the hardware schedule, furnish 16 gauge, .050" plates, with the following dimensions:
 - 1. Width: 2" less than door width.
 - 2. Height: 8" (unless noted different on door schedule.)
 - 3. All kick plates shall be beveled 4 sides and counter sunk.

J. Overhead Stops

1. Manufacturers and respective catalog numbers:

	Glynn-Johnson	Rixson-Firemark
a.	GJ450	10
b.	GJ90	9
c.	GJ100	1

- 2. Furnish a GJ90 series overhead stop for all doors equipped with regular arm surface type closers that swing more than 140 degrees before striking a wall and for all doors that open against equipment, casework, sidelights, or other objects that would make wall bumpers inappropriate.
- 3. Furnish a GJ90 or GJ100 series overhead holder where listed in the Hardware Schedule.
- 4. Furnish sex bolt attachments for mineral core door applications, unless solid wood blocking is provided in the door for attachment.

K. Floor and Wall Stops and Holders

1. Manufacturers and respective catalog numbers:

		<u>Ives</u>	<u>Hager</u>	<u>Burns</u>	Rockwood
a.	Wall bumper	WS407CVX	232W	570	407
b.	Wall stop	WS11X	255W	530	475
c.	Floor stop	FS435/FS436	241F/246B	510/525	441U
d.	Wall holder	WS40	326W	533	490
e.	Exterior Floor Stop	FS9			

- Furnish a WS407CVX series wall stop, as applicable, for each door leaf except where wall bumber WS11X, floor stops FS435/FS436, holders WS20X, wall holder WS40 or overhead stops/holders are specified in the hardware schedule.
- Where wall stops are not applicable, furnish overhead stops as previously specified within this section of the specification.

L. Thresholds, Weatherstrips and Jamb Gaskets

1. Manufacturers and respective catalog numbers:

		Reese	<u>Pemko</u>	National Guard
a.	Saddle threshold	S205A	171A	425E
b.	Half saddle threshold	S245A	229A	325 Alum
c.	Bumper seal threshold	S483AV	2005AV	896 Alum (Vinyl)
d.	Weatherstrip	755A	2891APK	700NA
e.	Astragral weatherstrip	804	Pair 309	185
f.	Sweep	964C	18061CP	B606A
g.	Head and Jamb Gasket	797	S88	5050
h.	Drip	R201	346	16
i.	Jamb sound seal	F499	350CSR	1038
j.	Auto door bottom	F521	430CPKL	420

- 2. Where specified in the hardware groups, furnish the above products unless otherwise details in groups.
- 3. Furnish 5050 head/jamb gaskets and NGP 9605 edge stile astragals for pairs, at all fire labeled doors whether listed in group or not. *Reese and Pemko equivalents approved based on passing UL 10C, UBC test Standard 7-2.
- 4. Coordinate with door manufacturer the intumescent fire and smoke material for fire rated openings as required by door and frame manufacturer to comply with UL 10C, UBC test 7-2.
- 5. When "threshold" appears within a hardware group provide the following:
 - a. At aluminum entrances on new buildings provide a half saddle threshold.
 - b. At aluminum entrances on existing buildings provide a saddle threshold.
 - c. At interior door ways provide a saddle threshold.
 - At exterior doorways from occupied rooms and HM or FRP exit only doors provide a bumper seal threshold.
 - At exterior HM or FRP doors to receiving areas, loading docks and boiler rooms provide a saddle threshold.

M. Lock Protectors

1. Manufacturers and respective catalog numbers.

Ives LG1-LG14

O. Accessibility Closers

- 1. Manufacturer: LCN is specified.
 - a. When the term "accessibility closers" appears on the hardware schedule, provide a complete system, including all necessary brackets, mounting plates, tubing and the following items:
 - 1) Closer: Auto Equalizer #4822.
 - 2) Actuators: #8310-856 Provide two (2) per door leaf.
 - 3) Control Box: #7982ES Provide one (1) box for every two (2) door leafs for vestibule locations. Provide one box for single door leafs at other locations.

4) Tubing: #925 (Length as required.)

P. Bifold Door Hardware

1. Acceptable manufacturers and respective catalog numbers:

<u>Stanley</u>	Lawrence	K.N. Crowder
BFC-125	ED600	C-106-4-C-104

2. Bifold hardware to include track, hangers, hinges, snugger, top and bottom pivots and pulls.

2.03 ACCESSORIES AND ATTACHMENTS

A. Furnish all necessary hardware accessories such as wood or machine screws, bolts, nuts, anchors, toggle bolts, and other fasteners, each of the type, size, material and finish for its intended purpose and each according to the material to which the hardware is being applied.

2.04 FINISH AND BASE METALS

A. Finish and Base Metal:

Butt Hinges-Interior US26D on steel

Flush Bolts
US26D on brass or bronze
Exit Devices
US26D on brass or bronze
Pulls And Push Plates/Bars
US32S on stainless steel

Closers Sprayed AL on cast iron or aluminum

Protective Plates US32D on stainless Steel
Overhead Stops US32D on stainless steel

Wall Stops US26D on brass, bronze, or steel Miscellaneous US26D on brass or bronze

2.05 KEYING

- A. Change key and masterkey all lock cylinders as directed by the Architect.
- B. Furnish two change keys for each lock, six masterkeys for each masterkey set, and two removable core control keys.
- C. Stamp keys with file key number and "Do Not Copy."
- D. Ship masterkeys and control keys to the Owner via registered mail.
- E. Permanent cylinder cores shall be installed by the contractor under the supervision of an owner's representative.

PART 3: EXECUTION

3.01 INSTALLATION

- A. Install hardware in accordance with manufacturer's recommendations / instructions, and the adopted Building Code.
- B. Install hardware on UL labeled openings in accordance with manufacturer's requirements, so as to maintain the label.
- C. Install hardware mountable weatherstipping continuous throughout opening prior to installation of other hardware.

- D. Mortise and cut to close tolerance and conceal evidence of cutting in the finished work.
- E. Remove, cover or protect hardware after fitting until paint or other finish is applied; permanently install hardware after finishing operations are complete.
- F. Install closers on the room side of corridor doors, stair side of stairways, and interior side of exterior doors.
- G. Mounting heights:
 - 1. Install hardware at mounting heights conforming to the recommended mounting locations of the Builders' Hardware Manufacturing Association, and the adopted Building Code.
 - 2. Install wall stops WS11X, wall holders WS20X, and magnetic holders to strike near top of doors, but not more than 78" from the finished floor line; install wall stops WS407CVX to engage knobs, levers or pulls.
- H. Install pulls at 40" to top of pull and push bars at 36" above finished floor. Off set pull on exterior door rails to allow access to cylinders.
- Deliver to the Owner one complete set of installation and adjustment instructions, and tools as furnished with the hardware.
- J. Before hardware installation, general contractor/construction manager shall coordinate a hardware installation seminar to be conducted on the rough-in of electrical boxes for hardware and the installation of hardware, specifically of locksets, closers/accessibility closers, exit devices, hardware, mountable weatherstrip and overhead stops. Manufacturer's representative of the above products to present seminar. Seminar to be held at the job site and attended by installers of hardware (including low voltage hardware) for aluminum, hollow metal and wood doors. Training to include use of installation manuals, hardware schedule, templates and physical product samples. The architect needs to be informed of the meeting and contractor is to distribute meeting minutes on issues raised at seminar.
- K. Install per door and/or frame manufacturer's supplemental "S" label instructions on fire rated openings.

3.02 ADJUSTING AND CLEANING

- A. At final completion, adjust and test all hardware for function, performance, building code compliance and leave in good operating condition. Panic Hardware device manufacturer's representative to inspect panic hardware installation and provide a report to contractor and architect on items that need correction.
- B. Clean all hardware to restore the original finish.

3.03 PROTECTION

- A. Protect the finished installation until acceptance of the project.
- B. Provide final adjustment or cleaning where necessary.

3.04 DEMONSTRATION

A. Engage a factory-authorized service representative(s) to train Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. At a minimum, provide the following training:

1.	Miscellaneous hardware	1 hour
2.	Exit devices	2 hours
3.	Locks	1 hour
4.	Closers	1 hour

5. Electromagnetic locks6. Accessibility closers2 hours2 hours

Refer to Section 01 79 00 Demonstration and Training.

3.05 HARDWARE GROUP #1

HINGES AS REQUIRED

PUSH PLATE PULL CLOSER KICK PLATE STOP

8103-0 4011/4111 EDA

3.06 HARDWARE GROUP #2

HINGES AS REQUIRED

PRIVACY LOCK CLOSER KICK PLATE STOP GASKETING L9040 4011/4111 EDA

END OF SECTION 08 71 00

SECTION 09 30 00

TILE

PART 1: GENERAL

1.01 RELATED DOCUMENTS

A. Drawings, Details of Construction and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification Sections, apply to work specified in this section.

1.02 SUMMARY

A. Section includes:

- 1. Mortar bed installations in toilets, showers, kitchens and other areas shown on drawings with floor drains over depressed substrates.
- 2. Removal of concrete curing compound on tile installations installed directly over concrete substrates.
- 3. Ceramic tile on walls, floors, and railings.
- 4. Porcelain tile on walls, floors.
- 5. Quarry tile floors.
- Caulking of joints in tile on inside corners of tiled rooms and sealing of joints in tile.
- B. Related work specified in other sections:
 - 1. Concrete Substrates Section 03 30 00.
 - 2. Drywall substrates Section 09 21 16.

1.03 SUBMITTALS

- A. Submit in accordance to Section 01 33 00:
 - 1. Submit samples for colors on 12" x 12" panels in duplicate for each tile specified for Architect's selection and approval.
 - 2. Submit two (2) samples each for each different trim piece required for this project.
 - 3. Furnish Master Grade Certificates to Architect for all tile, indicating compliance with TCA 137.1-76.
 - 4. Submit product information on grout and samples indicating color range anticipated, texture.
 - 5. Submit samples of sealant that match grout color.
 - 6. Submit installation system manufacturer qualifications, installer qualifications, and laboratory confirmation of installation materials as outlined in Quality Assurance.

1.04 REFERENCE SPECIFICATIONS

- A. The latest edition of following specifications and standards are incorporated by reference.
 - 1. Tile Council of North America, Inc., Handbook for Ceramic Tile Installation (TCNA).
 - 2. American National Standard Specifications for the installation of ceramic tile (ANSI).
- B. Maintain a copy of publications in the Contractor's office, available for reference.

1.05 QUALITY ASSURANCE

- A. Installation System Manufacturer (single source responsibility): Company specializing in adhesives, mortars, grouts and other installation materials with ten (10) years minimum experience and ISO 9001 certification. Obtain installation materials from single source manufacturer to insure consistent quality and full compatibility.
- B. Submit laboratory confirmation of adhesives, mortars, grouts and other installation materials:
 - 1. Identify proper usage of specified materials using positive analytical method.
 - 2. Identify compatibility of specified materials using positive analytical method.
 - 3. Identify proper color matching of specified materials using a positive analytical method.
- C. Installer qualifications: company specializing in installation of ceramic tile, mosaics, pavers, trim units and thresholds with five (5) years documented experience with installations of similar scope, materials and design.

1.06 MOCK-UPS

A. Provide mock-up of each type/style/finish/size/color of ceramic tile, mosaics, pavers, trim unit and threshold, along with respective installation adhesives, mortars, grouts and other installation materials. Mock may be part of final installation if accepted.

1.07 PRE-INSTALLATION CONFERENCE

A. Pre-installation conference: at least three weeks prior to commencing the work attend a meeting at the jobsite to discuss conformance with requirements of specification and job site conditions. Representatives of Owner, Architect, General Contractor or Construction Manager, Tile Subcontractor, Tile Manufacturer, Installation System Manufacturer and any other parties who are involved in the scope of this installation must attend the meeting.

1.08 WARRANTY

- A. The manufacturer of adhesives, mortars, grouts, and other installation materials shall provide a written twenty-five (25) year warranty, which covers materials and labor; reference Manufacturer Warranty Data Sheet for complete details and requirements.
- B. For exterior facades over steel or wood framing, the manufacturer of adhesives, mortars, grouts and other installation materials shall provide a written ten (10) year warranty, which covers replacement of Manufacturer products only reference Warranty Data Sheet for complete details and requirements.

1.09 PRODUCT HANDLING, DELIVERY AND STORAGE

- A. Package, handle, deliver and store at the job site in original unbroken containers in a manner that will avoid damage or contamination. All containers shall bear grade seals, manufacturer's name, size, color and quantity.
- B. Reject any tiles that are cracked or broken.

1.10 JOB CONDITIONS

A. Set and grout tile when ambient temperature is at least 50° F. and rising.

PART 2: PRODUCTS

2.01 APPROVED MANUFACTURERS

- A. Manufacturers listed in this specification are approved under the following conditions:
 - 1. A manufacturer listed in both the specification and the Material Finish/Color Schedule, on Architectural Drawings is not required to submit a pre-bid approval.
 - 2. Manufacturers listed in this specification, but not in the Material Finish/Color Schedule, on Architectural Drawings shall submit color samples for pre-bid approval by addendum. Refer to Section 01 25 00.
 - 3. When no colors are listed in the Material Finish/Color Schedule, on Architectural Drawings, any manufacturer listed in this specification are not required to submit a pre-bid approval.

2.02 PORCELAIN FLOOR TILE

- A. Manufacturer: Products by American Olean Dal-Tile, Lea Ceramiche, Roca Tile, Mirage, Crossville, Mirage
- B. 100% Porcelain Floor Tile
 - 1. Size:
 - a. Tile 1: 12" x 24"
 - b. Tile 2: 2" x 2" (at shower floors, with cross tread pattern)
 - 2. Colors: See material Finish/Color Schedule, on Architectural Drawings.
 - 3. Patterns: Provide as shown on drawings.
 - 4. Grout joint width: 3/16".

2.03 PORCELAIN WALL TILE

- A. Manufacturer: Products by American Olean Dal-Tile, Lea Ceramiche, Roca Tile, Mirage, Crossvile, Ergon
- B. 100% Porcelain Tile
 - 1. Sizes:
 - a. Tile 4: 12" x 24"
 - 2. Colors: See material Finish/Color Schedule, on Architectural Drawings.
 - 3. Patterns: Provide as shown on drawings.
 - 4. Grout joint width: 3/16".

2.05 SETTING MATERIALS

- Manufacturers: Products and systems by Bostik Construction Products Laticrete are specified. Equivalent products and systems by Ardex, Mapei, Bonsal, H.B. Fuller, Latierete-Bostik Construction Products, Custom Building Products, and American Olean are acceptable subject to approval of submittals.
- 2. Tile Setting Systems:
 - a. Setting bed for tile on concrete slabs-on-grade or masonry walls: Acrylic latex modified thin set meeting ANSI A118.4, Hydroment "Tile Mate" mixed with Hydroment "Multi-Purpose Acrylic Latex Mortar Admixture". 3701 Modified Mortar Bed.
 - b. Setting bed for tile on floors of showers, toilet rooms and locker rooms on above grade locations: Waterproofing membrane and setting adhesive, **Hydroment "Ultra-Set"** Laticrete "Hydro Ban", two step application.
 - c. Setting bed for tile on gypsum board walls: Hydroment "Ultra-Set". Laticrete "Hydro Ban".
 - d. Setting tile over existing painted concrete block: Mapei Kerabond Premium Tile Mortar mixed with Keralastic Premium latex additive. Laticrete "254 Platinum".
- 3. Mortar Bed: Mixture of portland cement and sand, roughly in proportions of 1:5 with latex polymer as the liquid portion of the mixture.
 - a. Cleavage Membrane: Asphalt felt, ASTM D 226, Type I (No. 15); or polyethylene sheeting, ASTM D 4397, 4.0 mils thick.
 - b. Reinforcing: Galvanized, welded wire fabric, 2 by 2 inches by 0.062 inch diameter; comply with ASTM A 185 and ASTM A82 except for minimum wire size.
- 4. Polyethylene Membrane: Schluter "Ditra"
- 5. Grout
 - a. For glazed ceramic and mosaic tile: Acrylic latex modified grout meeting ANSI A118.6, Hydroment "Designer Series Ceramic Tile Grout" mixed with Hydroment "Multi-Purpose Acrylic Latex Grout Additive". Laticrete "Spectralock Pro Premium".
 - 1) Color: See Material Finish/Color Schedule, on Architectural Drawings To be selected by Architect from manufacturer's full line.

2.06 MISCELLANEOUS MATERIALS

- A. Sealant: One component silicone, color to match tile grout.
- B. Silicone sealer for tile joints: "Grout Sealer" at manufactured by Aqua Mix, Inc.
- C. Cleaners: As manufactured by Hillyard Chemical Company or American Olean.
- D. Crack/Joint isolation and waterproofing membrane: Laticrete Hydroban. Waterproofing membrane shall be used for tile on floors in toilet rooms, locker rooms and showers in above grade locations.
- E. Thresholds: Solid polymer made from homogeneous solid sheets of filled plastic resin complying with material and performance requirements in ANSI Z124.3, for Type 5 or Type 6, without precoated finish. Sizes as detailed on drawings. Colors as selected by Architect to match field color of tile.

- F. Metal Trim for Tile: As manufactured by Schluter Systems, LP or equal. Material: Brushed Aluminum.
 - 1. CT Corner Trim: (For use at outside corners of tile to tile and terminations of ceramic/porcelain tile to other materials). RONDEC profile RO x tile height x AE.
 - a. Provide, splice connectors, end caps, inside and outside corners as warranted by application.
 - 2. CT Corner Trim: (For use at inside corners of tile to tile and termination of ceramic/porcelain tile to other materials). DILEX-AHK/PHK.
 - a. Provide, splice connectors, end caps, inside and outside corners as warranted by application.
 - 3. CT Transition Strip:
 - a. Carpet to Ceramic/Porcelain Tile Transition: RENO-ETK x Tile Height.
 - b. Resilient Tile to Ceramic/Porcelain Tile Transition: RENO-EBU x Tile Height.

2.07 EXTRA STOCK

A. Furnish 1% of each type/shape//color of tile used on this project to Owner as maintenance stock.

PART 3: EXECUTION

3.01 EXAMINATION OF SURFACES

A. Inspect surfaces to which tile is to be applied. Commencement of work implies acceptance of surface and assumption of responsibility for satisfactory results.

3.02 MORTAR BEDS

- A. Mix and install mortar, cleavage membrane and reinforcing per ANSI A108.B, sloping top of mortar bed with a constant slope from walls to floor drains.
- B. Allow mortar bed to fully cure prior to commencing with tile work.

3.03 SETTING BEDS

- A. Floor tile over mortar bed: Thin set acrylic latex modified cement mortar (TCNA F111).
- B. Floor tile above grade over mortar bed: Thin set mortar over waterproofing membrane (TCNA F121).
- C. Wall Tile: Thinset (TCNA W202) on masonry, organic adhesive (TCNA W242) on gypsum board.

3.04 TILE INSTALLATION

A. General

- Installation and workmanship shall be in accordance with ANSI Specifications and as specified herein. The
 printed instructions of the tile manufacturer and the manufacturer of proprietary mortars and grouts shall be
 followed where applicable.
- Before commencing work, establish field pattern and border line locations and center the work symmetrically
 so that no tile need be cut to less than half size. Cut tile at base so top of base is level around entire room.
 Joints in wall tile shall be aligned vertically and horizontally; staggered joints will not be accepted. Rub
 exposed edges smooth.
- 3. Do not install any cracked or chipped tiles.

B. Movement Joints

- 1. Install joints to control the effects of substrate movement on tile finishes.
- Construct joints in tile work according to movement joint details" EJ171" as published in TCNA "Handbook for Ceramic Tile Installation."
- 3. Locate movement joints at the following locations:
 - a. Interior: 20' to 25' maximum in each direction.
 - b. Exterior and Interior tile work exposed to direct sunlight or moisture: 8' to 12' maximum in each direction.
 - c. Where tile work abuts restraining surfaces including but not limited to perimeter walls, dissimilar floors, curbs, columns, pipes, ceilings, inside corners of abutting walls, and where changes occur in backing materials.
 - d. All expansion, control, construction, cold and seismic joints in the structure. Expansion joints in tile work must match width of joint in building structure.
- C. Crack isolation membrane: Install over minor cracks and non-structural slab joints to prevent transmission of cracking to tile. Strictly follow membrane and mortar manufacturers' printed instructions.
- D. Waterproofing membrane: Install per manufacturers printed instructions, including two wet on wet applications @ 20-30 mils thick. Full bonding to metal and PVC.
 - 1. Perform 24-hour flood testing. Repeat application as required until flood test passes.
- E. Install thresholds at transition from ceramic tile floors to other flooring materials and as shown on drawings.
- F. Remove concrete curing compound with shot blasting or other appropriate mechanical means and vacuum floor on installations without mortar bed.
- G. Existing Surface Preparation: Completely remove all paint, soap scum, wax, coatings, oil, etc. from existing surfaces to receive tile. Perform mechanical abrasion with a carborundum disk followed by a clear water wash. Use other cleaning methods of soapless detergents, commercial tile cleaners or solvents or acids if required to adequately prep surfaces. Substrate must be thoroughly rinsed and dry before setting the new tile.

3.05 CLEANING, PATCHING, PROTECTION, SEALING

- A. After completion, clean all work, point open joints and replace defective work.
- B. Cleaning and Sealing
 - 1. Quarry tile Floors and Base: Clean floor once with a 2X strength of oil-based cleaning solution, such as Murphy's Oil Soap, Janitor in a Drum, Pinesol. Mop liberally over floor and allow to dry.
 - 2. Ceramic Porcelain Tile Walls, Floors and Base: Clean with water, rinse and allow to dry. Apply one coat of silicone sealer. Wipe excess sealer from face of tile.

C. Protection

- 1. Floors: Close off workspaces to traffic during installation and at least 48 hours after completion of work.
- Finished tile floors: Covered with clean building paper before foot traffic is permitted on them. Place board walkways on floors that are to be continuously used as passageways by workmen. Protect tiled vertical outside corners with board corner strips in areas used as passageways by workmen.
- 3. Remove protection just prior to substantial completion and re-clean tile as necessary.

END OF SECTION 09 30 00

SECTION 10 28 13

TOILET ACCESSORIES

PART 1: GENERAL

1.01 RELATED DOCUMENTS

A. Drawings, Details of Construction and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification Sections, apply to work specified in this section.

1.02 SUMMARY

- A. Section includes: Toilet accessories where shown on the Drawings and specified herein.
- B. Related work specified in other sections:
 - 1. Blocking Section 06 10 53.
 - 2. Coat hook/bumpers for installation in partitions Section 10 21 13/10 21 15.

1.03 SUBMITTALS

- A. Brochure: Submit brochure and schedule of materials in accordance with Section 01 33 00.
- B. Submit a sample of each item dispensed by each type dispensing accessory machine or accessory to Construction Manager.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver items in manufacturer's original unopened protective packaging.
- B. Store materials in original protective packaging to prevent soiling, physical damage, or wetting.
- C. Handle so as to prevent damage to finished surfaces.
- D. Protection:
 - 1. Maintain protective covers on all units until installation is complete.
 - 2. Remove protective covers at final clean-up of installation.

PART 2: PRODUCTS

2.01 MANUFACTURER

A. The products of Bobrick are specified, comparable products of Bradley are acceptable. All units and trim stainless steel, #4 finish.

2.02 ACCESSORIES

- A. Grab Bars (Field verify sizes)
 - 1. G.B. No. 1: B-6806 x 42" horizontal and B-6806 x 18" vertical.
 - 2. G.B. No. 2: B-6806 x 36".
 - 3. G.B. No. 6: B-68616 'L' shaped 24" x 36".
- B. Mirrors
 - 1. M No. 4: B290 6036.
- C. Coat Hook: B-677 (locate at each toilet compartment and each shower compartment.
- D. Shower Seat:
 - a. #1: B-5181 Reversible folding 'L' shaped seat.
- E. Shower Curtain Rod and Shower Curtain
 - 1. Shower Curtain Rod: HDWT-AO458 by lengths shown.
 - 2. Shower Curtain: HDWP-COMAK.
- F. Mounting Kits: Provided with each unit shall suit wall construction.
- G. Peaestal Bench: Lenoxpedestal

PART 3: EXECUTION

3.01 INSPECTION

- A. Check opening scheduled to receive recessed units for correct dimensions, plumbness of blocking or frames, preparation that would affect installation of accessories.
- B. Check areas to receive surface mounted units for conditions that would affect quality and execution of work.
- C. Verify spacing of plumbing fixtures and toilet partitions that affect installation of accessories.
- D. Coordinate blocking requirements with Section 06 10 53, prior to enclosure of walls.
- E. Do not begin installation of washroom accessories until openings and surfaces are acceptable.

3.02 INSTALLATION

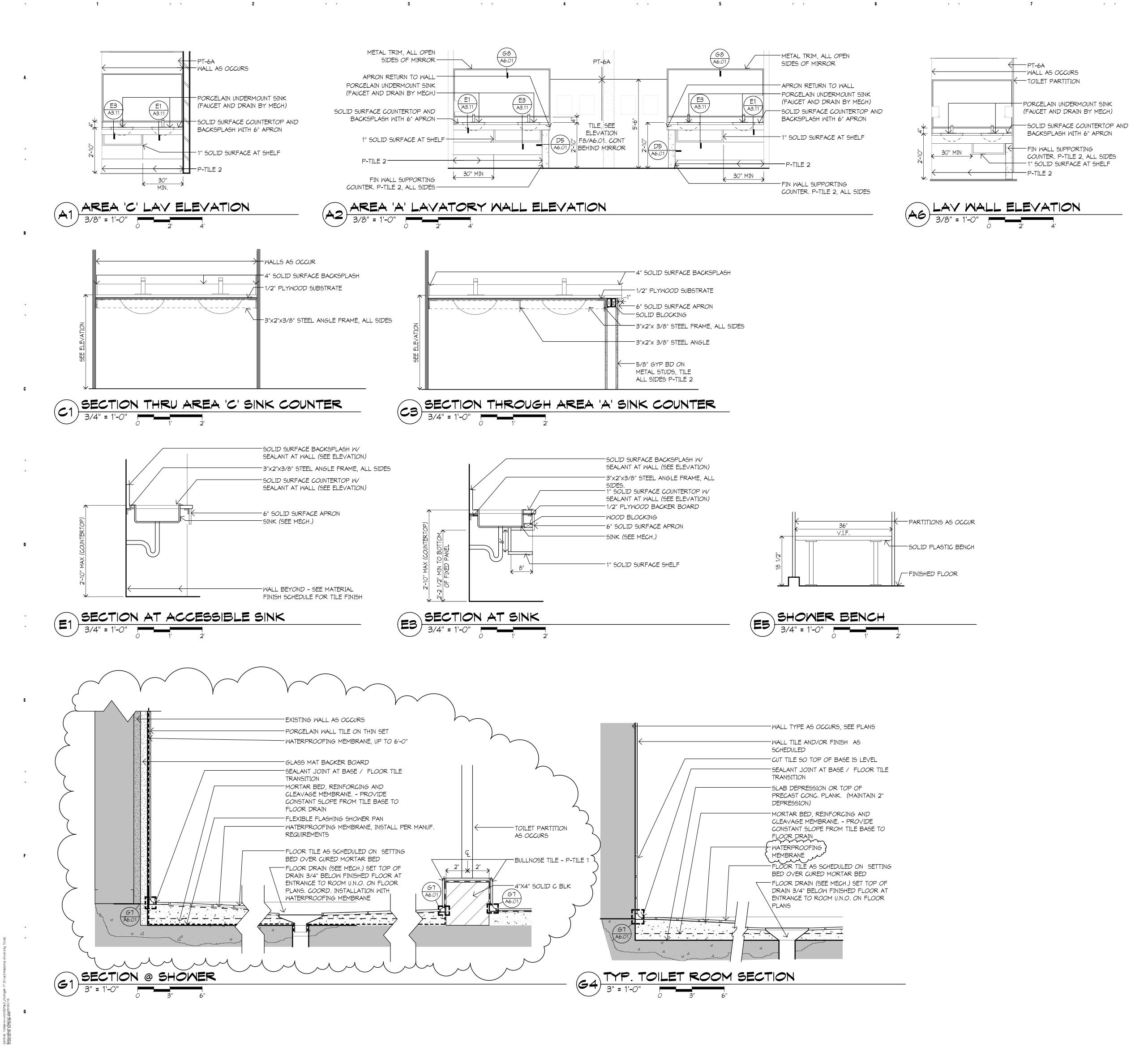
- A. Drill holes according to manufacturer's mounting templates or printed instructions.
- B. Mount recessed accessories into wall openings with wood screws through cabinet side into wood blocking, or sheet metal screws into metal frames.
- C. Mount surface mounted accessories to back up with toggle bolts, plumb and align.

D. Anchor grab bars to through-wall anchor plates.

3.03 ADJUST AND CLEAN

- A. Adjust accessories for proper operation.
- B. After completion of installation, clean and polish all exposed surfaces.
- C. Deliver keys and instruction sheets to Owner's Representative.

END OF SECTION 10 28 13



MI

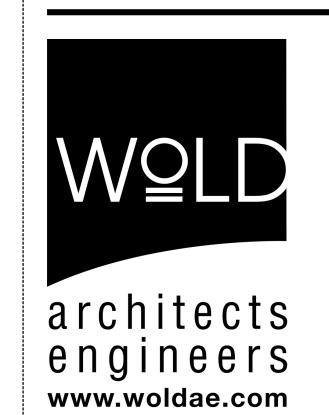
MADONNA UNIVERSITY UNIVERSITY CENTER TOILET / SHOWER RENOVATIONS

144012

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MADONNA UNIVERSITY 36600 Schoolcraft Road, Livonia, MI 48150



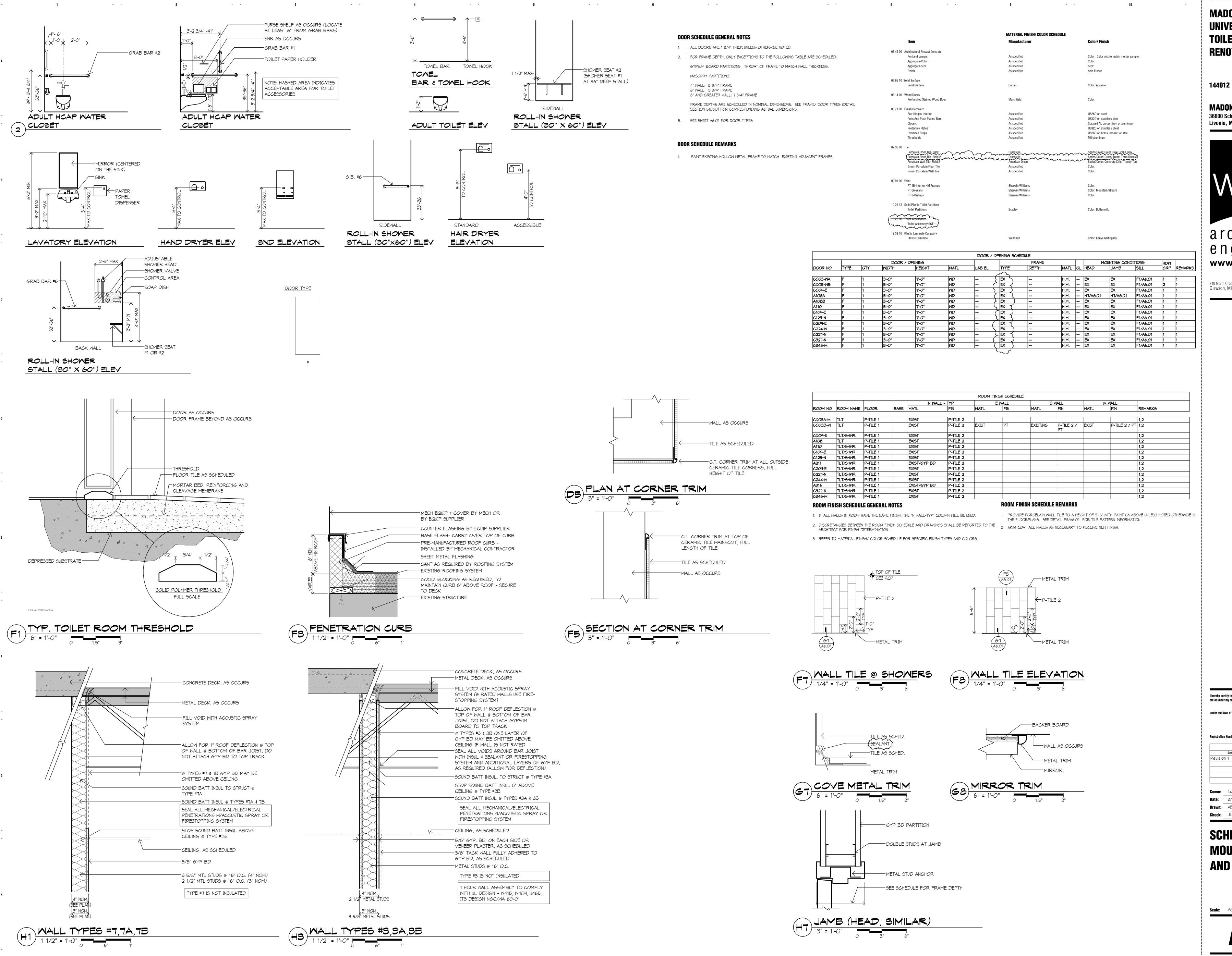
tel 248 284 0611 710 North Crooks Road **fax** 248 284 0615 Clawson, MI 48017 mail@woldae.com

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed ARCHITECT under the laws of the State of MICHIGAN

Registration Number 1301047592 **Date** 10/31/15

Date: 3/6/15

INTERIOR **ELEVATIONS AND DETAILS**



A

MADONNA UNIVERSITY
UNIVERSITY CENTER
TOILET / SHOWER
RENOVATIONS

MADONNA UNIVERSITY 36600 Schoolcraft Road, Livonia, MI 48150



engineers www.woldae.com

710 North Crooks Road Clawson, MI 48017 fax 248 284 0615 mail@woldae.com

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed

ARCHITECT

under the laws of the State of MICHIGAN

Registration Number 13/01/047592 Date 10/31/15

| Revisions | Date | Number | Number

 Comm:
 144012

 Date:
 3/6/15

 Drawn:
 AE√L

 Check:
 JL/MK

SCHEDULES, MOUNTING HEIGHTS AND DETAILS

Scale: As indicated

A6.01



March 20, 2015

Ms. Vicki Smith-Lichocki Wold Architects and Engineers 710 North Crooks Road Clawson, MI 48017

Re: Madonna University

Dear Vicki,

Please include the following in an Addendum.

MECHANICAL

Item M1 Refer to Sheet M2.1 and Area "B" mechanical revisions. Provide lavatory L-2 as stated below:

L- 2: WALL HUNG LAVATORY: American Standard #0356.421 Lucerne, nominal 20"x18" white vitreous china, front overflow, faucet ledge, "D" shaped bowl, self draining deck, single hole on center, constructed for concealed arm carrier and ADA compliant. Fitting shall include American Standard SEVA 1480.150.002 washerless single metal handle faucet with 0.5 gpm flow device, grid drain, P-trap, wheel handle stops, tailpiece, all polished chrome finish, undersink protective pipe covers, provide Zurn concealed arm carrier with floor support in men's toilet room and provide wall hanger for lavatory in women's toilet room. Install thermostatic mixing valve that is ASSE 1070 listed under each lavatory, pipe to hot water side of faucet, and adjust to 105 degree hot water maximum at faucet.

Item M2 Refer to Sheet M1.1 and Keyed Note #8.

Demolish existing roof curb, exhaust fans, steel support channel, existing motorized dampers, actuator and associated wiring for ability to install new exhaust fans. Five existing exhaust fans are under one exhaust enclosure. The entire existing enclosure and roof curb shall be removed. See attached sketch R1/M1.1. Field verify all existing sizes.

Item M3 Refer to Sheet M2.1 and Third Floor Area "A".

Install all new exhaust fans with new roof curb to give a minimum of 12" clear from finished roof to top of roof curb cap. Connect new exhaust ductwork to existing ductwork and extend exhaust ductwork up to new exhaust fan. A steel plate will be installed over existing openings/voids as necessary and provided installed/installed by General Trades. Refer to Architectural.

Ms. Vicki Smith-Lichocki March 20, 2015 Page 2

ELECTRICAL

Refer to Sheet E2.1, Area B Electrical revisions. Furnish and install a Type "AE" light fixture in both toilet areas. (1) Type "AE" shall be installed in each space in lieu of the Type "A" light fixture that is shown.

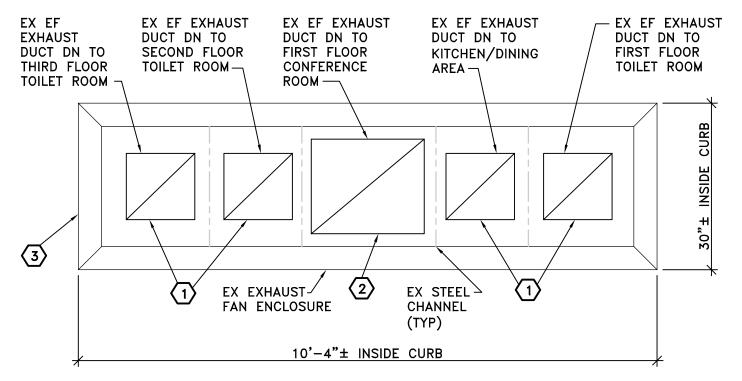
Sincerely,

MacMillan Associates, Inc.

Gary R. Steffen P.E.

GRS:vls

File: 2014-9007.003



KEYED NOTES

- 1) REMOVE EXISTING EXHAUST FAN, DUCTWORK AND MOTORIZED DAMPER AS NECESSARY TO INSTALL NEW ROOF CURB AND EXHAUST FAN.
- (2) REMOVE EXISTING EXHAUST FAN, DUCTWORK AND MOTORIZED DAMPER AND CAP EXHAUST DUCTWORK BELOW ROOF.
- REMOVE EXISTING ROOF CURB AND EXHAUST FAN ENCLOSURE FOR ABILITY TO INSTALL NEW EXHAUST FANS. REFER TO ARCHITECTURAL FOR ALL ROOF WORK. COORDINATE EXACT SIZE OF DUCTWORK AND ENCLOSURE IN FIELD.

EXHAUST DEMOLITION DETAIL

PROJECT: MADONNA UNIVERSITY CENTER TOILET RENOVATIONS

DATE: 03/06/15 REVISIONS: / 1 ADDENDUM #1

COMMISSION NO: 144012 **REV. DATE: MARCH 20, 2015**

