HURON-CLINTON METROPOLITAN AUTHORITY
STONY CREEK METROPARK
Stony Creek Landing

CONTRACT DOCUMENTS

ADDENDUM NO. 2 HCMA Project No. 509-16-532

April 25, 2017

Prepared By: AEW

BIDDER SHALL ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE BID FORM

This Addendum is issued before award of Contract to inform the Bidder of modifications to the Bidding Documents.

All requirements contained in the Bidding Documents shall apply to this Addendum, and the general character of the Work required in this Addendum shall be as originally set forth in the Bidding Documents for similar Work, unless otherwise specified herein. Incidental Work necessitated by this Addendum as required to complete the Work shall be included in the Bid, even though not particularly mentioned herein.

This Addendum is hereby made a part of the Bidding Documents and shall be included in the Contract Documents.

PART 1 - REVISED DOCUMENTS <u>ISSUED WITH THIS ADDENDUM</u>

1.1 REVISED SPECIFICATIONS AND OTHER PROJECT MANUAL DOCUMENTS

A. SECTION NO. 08112 – Hollow Metal Work SECTION NO. 08305 – Access Doors & Panels SECTION NO. 09300 – Tile Work

1.2 REVISED DRAWINGS (FULL SHEETS)

A. SHEET NUMBER C8 – Paving & Grading Plan

This sheet shows a change to the legend. 6" exposed aggregate concrete with thickened edge was removed from the legend because it is not detailed within the civil plans. This item is included in the architectural plans and paid for with Pay Item No. 90.

SHEET NUMBER C9 – Paving & Grading Plan

This sheet shows a change to the legend. 6" exposed aggregate concrete with thickened edge was removed from the legend because it is not detailed within the civil plans. This item is included in the architectural plans and paid for with Pay Item No. 90.

SHEET NUMBER C10 – Paving & Grading Plan

This sheet shows a change to the legend. 6" exposed aggregate concrete with thickened edge was removed from the legend because it is not detailed within the civil plans. This item is included in the architectural plans and paid for with Pay Item No. 90.

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SHEET NUMBER A9 – Interior Elevations

This sheet shows a change to Elevations to display the six inch tile cove base.

PART 2 - MISCELLANEOUS INFORMATION

2.1 ADD MISCELLANEOUS INFORMATION NOT TIED TO SPECIFIC SECTIONS

None

2.2 OTHER MISCELLANEOUS INFO. (EXAMPLE: GENERAL QUESTIONS)

The following questions have been raised by Bidders and are answered here for clarification of the issues.

- 1. Hollowmetal specs: exterior doors are called out in a lighter gauge than the interior doors (16ga vs. 14ga), please advise.
 - a. Bid as specified, no exterior hollow metal doors required.
- 2. Requesting approval for providing wood doors from a local manufacturer: Five Lakes Mfg. in Clinton Township.
 - a. Substitution date has expired, bid as specified.
- 3. Advise on sizes for the (3) access panels shown (2 @ 36 x 36, 1 @ 36 x 48??).
 - a. All ceiling attic access panels shall be 24"x30".
- 4. Bid Form Pay App Item 48 4" Thick exposed agg. Plan calls for 6" thick.
 - a. 4" exposed aggregate is at the entry to Stony Landing Building from the parking area and the Art Area; 6" exposed aggregate is only at the patio, and is included in Pay Item 90 Building Foundations and Flat Work
- 5. Bid Form Pay App Item 22 Gas Service. By Owner per Pre-Bid?
 - a. Gas main by owner, service fee by GC
- 6. Is the sign shown as 7/A4 (Entrance Sign) the sign shown on C14 off the south end of the parking lot ("Stony Creek Landing Sign / See Architectural Plans") or the sign at the entrance of the parking lot ("Entry Sign By Owner")
 - a. Sign at South end of parking lot "Stony Creek Landing Sign/See Architectural Plans"
- 7. Addendum #1 indicated Boat launch Contract work to be done October to December this coming fall but it also says they would utilize the existing drive. The existing drive is scheduled to be replaced in stages 3A and 3C which will have to be completed by this fall in order to meet the May 2018 completion date. If the southern portion of the existing drive is left in place until next spring, the Boat Launch contractor would still need to access it by driving over stage 3B and 5A work which will need to be completed this fall as well. The selected GC should be interested in how it will be determined who is responsible for damage to the completed work.
 - a. The Huron-Clinton Metroparks will have a full time field engineer on-site. If staging schedules prohibit the boat launch contractor from utilizing the existing drive, then the HCMA field engineer will be responsible for tracking damages to the new pavement. If a section of new pavement is damaged, the contractor responsible for damaging the new pavement will also be responsible for replacing it.

END OF ADDENDUM NO. 2

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SECTION 08112 - HOLLOW METAL WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

A. Attention is directed to Division 0, Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 DESCRIPTION OF WORK:

- A. The extent of hollow metal work is shown on the drawings and schedules.
- B. This section includes hollow metal doors and pressed steel frames for doors and related openings.

1.03 QUALITY ASSURANCE:

- A. Provide doors and frames complying with ANSI A258.8-1998 (SDI-100) "Recommended Specifications for Standard Steel Doors and Frames" and as herein specified.
- B. Fire-rated door assemblies shall be Underwriter Laboratory.: Where fire-rated door assemblies are indicated or required, provide fire-rated door and frame assemblies that comply with NFPA 80 "Standard for Fire Doors and Windows", and have been tested, listed, and labeled in accordance with ASTM E 152 "Standard Methods of Fire Tests for Door Assemblies". All metal labels to be riveted to door and frames mylar labels not acceptable.

1.04 SUBMITTALS:

- A. Product Data: Submit manufacturer's specifications for fabrication and installation, including data substantiating that products comply with requirements.
- B. Shop Drawings: Submit shop drawings for the fabrication and installation of hollow metal work. Include details of each frame type, elevations of door design types, conditions at openings, details of construction, location and installation requirements of finish hardware and reinforcements, and details of joints and connections.
 - Provide a schedule of doors and frames using same reference numbers for details and openings as those on the contract drawings.

1.05 DELIVERY, STORAGE AND HANDLING:

- A. Deliver hollow metal work cartoned or crated to provide protection during transit and job storage.
- B. Inspect hollow metal work upon delivery for damage. Minor damages may be repaired provided the finish items are equal in all respects to new work and acceptable to the Architect; otherwise remove and replace damaged items as directed.
- Place units on at least 4" high wood sills or on floors in a manner that will prevent rust and damage. Avoid the use of non-vented plastic or canvas shelters which could create a humidity chamber. If the cardboard wrappers on doors become wet, remove carton immediately. Provide 1/4" spaces between stacked doors to promote air circulation.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. ASTM A653/A653M Standard Specification for sheet steel, zinc coated (galvanized) or zinc-iron alloy-coated (galvannealed) by the hot dip process (A60). .
- B. ASTM A924 Specification for general requirements for steel sheet metallic coated by the hot dip process (A60).
- C. ASTM A 1009/A1008M Standard specification for steel sheet, cold rolled, carbon, high strength low-alloy, high strength low alloy with improved formability, solution hardened, and bake hardenable.
- D. Supports and Anchors: Fabricate of not less that 16 gage sheet metal. Galvanize after fabrication units to be built into exterior walls, complying with ASTM A 153, Class B.
- E. Inserts, Bolts and Fasteners: Manufacturer's standard units, except hot-dip galvanize items to be built into exterior walls, complying with ASTM A 153, Class C or D as applicable.
- F. Shop-Applied Paint: Rust-inhibitive enamel or paint, either air-drying or baking, suitable as base for specified finish paints on steel surfaces.

2.02 FABRICATION, GENERAL:

- A. Fabricate hollow metal units to be rigid, neat in appearance, and free from defects, warp or buckle. Accurately form metal to required sizes and profiles. Wherever practicable, fit and assemble units in the manufacturer's plant. Clearly identify work that cannot be permanently factory-assembled before shipment to assure proper assembly at the project site. Weld exposed joints continuously; grind, dress, and make smooth, flush, and invisible. Metallic filler to conceal manufacturing defects is not acceptable.
- B. Exposed Fasteners: Unless otherwise indicated, provide countersunk flat Phillips or Jackson heads for exposed screws and bolts.
- C. Finish Hardware Preparation:
 - 1. Prepare hollow metal units to receive mortised and concealed finish hardware, including cutouts, reinforcing, drilling, and tapping in accordance with final Finish Hardware Schedule and templates provided by hardware supplier. Comply with applicable requirements of ANSI A 115 series specifications for door and frame preparation for hardware.
 - 2. Reinforce hollow metal units to receive surfaceapplied hardware. Drilling and tapping for surfaceapplied finish hardware may be done at project site.
 - 3. Locate finish hardware as shown on final shop drawings, or if not shown, in accordance with "Recommended Locations for Builder's Hardware", published by Door and Hardware Institute.

D. Shop Painting:

- 1. Clean, treat and paint exposed surfaces of fabricated hollow metal units, including galvanized surfaces.
- Clean steel surfaces of mill scale, rust, oil, grease, dirt and other foreign materials before application of paint.
- 3. Apply pretreatment to cleaned metal surfaces, using cold phosphate solution (SSPC-PT-2), hot phosphate solution (SSPC-PT4) or basic zinc chromate-vinyl butyral solution (SSPC-PT3).

- 4. Apply shop coat or prime paint within time limits recommended by pretreatment manufacturer. Apply a smooth coat of even consistency to provide a uniform dry film thickness of not less than 2.0 mils, comply with ANSI A250.18.
- E. Manufacturer: Provide hollow metal work by one of the following:
 - 1. Ceco Door Products
 - 2. Amweld Building Products
 - 3. Steelcraft (Allegion)
 - 4. Or approved equal

2.03 DOORS:

A. General:

- 1. Provide flush design doors, 1-3/4" thick, seamless hollow construction, unless otherwise indicated. Bevel both vertical edges 1/8" in 2".
- 2. Insulated doors: Interior core of doors to be foamed in place, closed cell, polyurethane foam chemically bonded to door face sheets. Voids in foam will not exceed 1/2" in any direction. Compressive strength of polyurethane to be minimum of 20 PSI. Foam density not less than 1-8 PCF. Polystyrene core doors not acceptable. Doors to have R factor of not less than 14.81 U factor of .068.

B. Interior Doors:

- 1. Fabricate interior doors of two outer, cold-rolled, stretcher-leveled steel sheets not less than 14 gage. Construct doors with smooth, flush surfaces, without visible joints or seams on exposed faces or stile edges except around glazed or louvered panel inserts.
- 2. Reinforce inside of doors with vertical, hot-rolled, not less than 22 gage steel sections. Space vertical reinforcing 6" o.c. and extend full door height. Spot weld at not more than 5" o.c. to both face sheets.
 - a. Continuous truss-form inner core of 28 gage sheet metal reinforcing may be provided as inner reinforcement in lieu of above. Spot-weld truss-form reinforcement 3" o.c. vertically and horizontally over entire surface of both sides.

- 3. Reinforce tops and bottoms of doors with 14 gage, horizontal steel channels, welded continuously to outer sheets.
- C. Finish Hardware Reinforcement: Reinforce doors for required finish hardware as follows:
 - 1. Hinges: Steel plate 3/16" thick x 1-1/2" wide x 6" longer than hinge, secured by not less than 6 spotwelds.
 - 2. Mortise Locksets and Dead Bolts: 14 gage steel sheet, secured with not less than two spot-welds.
 - 3. Cylinder Locks: 12 gage steel sheet, secured with not less than two spot-welds.
 - 4. Flush Bolts: 12 gage steel sheet, secured with not less than two spot-welds.
 - 5. Surface-Applied Closers: 12 gage steel sheet, secured with not less than six spot-welds.
 - 6. Plush Plates and Bars: 16 gage steel sheet (except when through bolts are shown or specified), secured with not less than two spot-welds.
 - 7. Surface Panic Devices: 14 gage sheet steel (except when through bolts are shown or specified), secured with not less than two spot-welds.

2.04 FRAMES:

- A. Provide hollow metal frames for doors, side-lights, borrowed lights, and other openings of sizes and profiles as indicated.
- B. Fabricate frames of full-welded unit construction with corners mitered, reinforced, continuously welded full depth and width of frame, unless otherwise indicated.
 - 1. Knock-down type frames are not acceptable.
- C. Form frames of galvanized steel sheets for exterior and either cold or hot-rolled sheet steel for interior.
 - 1. Gage: Not less than 14, for exterior openings up to and including 4'-0" wide.
 - 2. Gage: Not less than 14, for interior openings up to and including 4'-0" wide.

- 3. For openings over 4'-0" wide: Not less than 12 gauge.
- D. Finish Hardware Reinforcement: Reinforce frames for required finish hardware as follows:
 - 1. Hinges and Pivots: Steel plate 3/16" thick x 1-1/2" wide x 6" longer than hinge, secured by not less than six spot-welds.
 - 2. Strike Plate Clips: Steel plate 3/16" thick x 1-1/2" wide x 3" long.
 - 3. Surface-Applied Closers: 12 gage steel sheet, secured with not less than six spot-welds.
 - 4. Concealed Closers: Removable steel access plate, 12 gage internal reinforcement of size and shape required, and enclosing housing to keep closer pocket free of mortar or other materials.
- E. Head Reinforcing: Where installed in masonry, leave vertical mullions in frames open at top for grouting.
- F. Jamb Anchors: Furnish jamb anchors as required to secure frames to adjacent construction, formed of not less than 18 gage galvanized steel.
 - 1. Masonry Construction: Adjustable, flat, corrugated or perforated T-shaped to suit frame size, with leg not less than 2" wide by 10" long. Furnish at least three anchors per jamb up to 7'-6" height; four anchors up to 8'-0" jamb height; one additional anchor for each 24" or fraction thereof over 8'-0" height.
 - 2. Metal Stud Partitions: Insert type with notched clip to engage metal stud, welded to back of frames. Provide at least four anchors for each jamb for frames up to 7'-6" in height; five anchors up to 8'-0" jamb height; one additional anchor each 24" or fraction thereof over 8'-0" height.
 - 3. In-Place Concrete or Masonry: Anchor frame jambs with minimum 3/8" concealed bolts into expansion shields or inserts at 6" from top and bottom and 26" o.c., unless otherwise shown. Reinforce frames at anchor locations. Apply removable stop to cover anchor bolts unless otherwise indicated.
- G. Floor Anchors: Provide floor anchors for each jamb and

mullion which extends to floor, formed of not less than 14 gage galvanized steel sheet as follows:

- 1. Monolithic Concrete Slabs: Clip type anchors with two holes to receive fasteners, welded to bottom of jambs and mullions.
- H. Head Anchors: Provide two anchors at head of frames exceeding 42" wide for frames mounted in steel stud walls.
- I. Head Strut Supports: Provide 3/8" x 2" vertical steel struts extending from top of frame at each jamb to supporting construction above, unless frame is anchored to masonry or to other structural support at each jamb. Bend top of struts to provide flush contact for securing to supporting construction above. Provide adjustable bolted anchorage to frame jamb members.
- J. Structural Reinforcing Members: Provide as part of frame assembly, where indicated at mullions, transoms, or other locations which are to be built into frame.
- K. Head Reinforcing: For frames over 4'-0" wide in masonry wall openings, provide continuous steel channel or angle stiffener not less than 12 gage for full width of opening welded to back of frame at head.
- L. Spreader Bars: Provide removable spreader bar across bottom of frames, tack welded to jambs and mullions.
- M. Rubber Door Silencers: Except on weatherstripped doors, drill stops to receive three silencers on single-door frames and four silencers on double door frames. Install plastic plugs to keep holes clear during construction.
- N. Plaster Guards: Provide 26 gage steel plaster guards or dust cover boxes, welded to frame at back of finish hardware cutouts where mortar or other materials might obstruct hardware installation.

2.05 STOPS AND MOLDINGS:

- A. Provide stops around glazed panels in hollow metal units and in frames to receive doors where indicated.
- B. Form fixed stops integral with frame, unless otherwise indicated.
- C. Provide removable stops and molds where indicated or required, formed of not less than 20 gage steel sheets

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matching steel on frames. Secure with countersunk machine screws spaced uniformly not more than 12 o.c.. Form corners with butted hairline joints.

PART 3 - EXECUTION

3.01 INSPECTION:

A. Installer must examine substrate and conditions under which hollow metal work is to be installed and must notify the General Contractor, in writing, of any conditions detrimental to proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

3.02 INSTALLATION:

- A. Install hollow metal units and accessories in accordance with final shop drawings, manufacturer's data, and as herein specified.
- B. Setting Masonry Anchorage Devices:
 - Provide masonry anchorage devices where required for securing hollow metal frames to in-place concrete or masonry construction.
 - 2. Set anchorage devices opposite each anchor location, in accordance with details on final shop drawings and anchorage device manufacturer's instructions. Leave drilled holes rough, not reamed, and free from dust and debris.
 - 3. Floor anchors may be set with powder-actuated fasteners instead of masonry anchorage devices and machine screws, if so indicated on final shop drawings.

C. Placing Frames:

- Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After all construction is complete, remove temporary braces and spreaders leaving surfaces smooth and undamaged.
- 2. Protective Coating: In masonry walls, protect inside (concealed) faces of door frames using fibered asphalt emulsion coating. Apply approximately 1/8" thick over

shop primer and allow to dry before handling.

- 3. In masonry construction, building-in of anchors and grouting of frames is included in Section 04300 'Masonry Work' of these specifications.
- 4. At in-place concrete or masonry construction, set frames and secure in place with machine screws and masonry anchorage devices.
- 5. Place frames at fire-rated openings in accordance with NFPA Standard No. 80.
- 6. Make field splices in frames as detailed on final shop drawings, welded and finished to match factory work.
- 7. Remove spreader bars only after frames or bucks have been properly set and secured.

D. Door Installation:

- 1. Fit hollow metal doors accurately in their respective frames with the following clearances:
 - a. Jambs and Head: 3/32".
 - b. Meeting Edges, Pairs of Doors: 1/8".
 - c. Bottom: 1/4" at threshold or carpet.
 - d. Bottom: $\frac{1}{4}$ " to threshold or tile
 - e. Bottom: 1/8" to bottom of head or transom panel.
- 2. Place fire-rated doors with clearances as specified in NFPA Standard No. 80.
- 3. Finish Hardware installation is specified in Section 08710.

3.03 ADJUST AND CLEAN:

- A. Final Adjustments: Check and re-adjust operating finish hardware items in hollow metal work just prior to final inspection. Leave work in complete and proper operating conditions. Remove and replace defective work, including doors or frames which are warped, bowed or otherwise unacceptable.
- B. Prime Coat Touch-Up: Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.

END OF SECTION 08112

SECTION 08305 - ACCESS DOORS & PANELS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

A. Attention is directed to Division 0, Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 DESCRIPTION OF WORK:

- A. The extent, location and size of each type of access door required is shown on the drawings.
- B. Related work specified elsewhere:
 - 1. Gypsum Drywall Section 09250
 - 2. Division 15 Mechanical
 - 3. Division 16 Electrical

1.03 QUALITY ASSURANCE:

- A. Fire-Resistance Ratings: Wherever a fire-resistance classification is indicated, provide access door assembly with panel door, frame, hinge, and latch from manufacturer listed in Underwriters' Laboratories, Inc. 'Classified Building Materials Index' for the rating shown.
 - 1. Provide UL label on each fire-rated access door.
- B. Size Variations: Obtain Architects' acceptance of manufacturer's standard size units which may vary slightly from sizes indicated.
- C. Manufacturer: Provide access doors as manufactured by one of the following:
 - 1. Larsens
 - 2. Karp Associates Inc.
 - 3. Milcor
 - 4. Or approved equal
- D. Inserts and Anchorages:
 - Furnish inserts and anchoring devices which must be built into other work for the installation of access doors. Coordinate delivery with other work

to avoid delay.

1.04 SUBMITTALS:

A. Manufacturer's Data:

- 1. For information only, submit 2 copies of manufacturer's technical data and installation instructions for each type of access door assembly. Transmit copy of each instruction to the Installer.
 - a. Provide setting drawings, templates, instructions and directions for installation of anchorage devices.

PART 2 - PRODUCTS

2.01 MATERIALS & FABRICATION:

- A. General: Furnish access door assemblies manufactured as an integral unit, complete with all parts and ready for installation.
- B. Steel Access Doors and Frames: Fabricate units of continuous welded steel construction, unless otherwise indicated. Grind welds smooth and flush with adjacent surfaces. Furnish attachment devices and fasteners of the type required to secure access panels to the types of support shown.

C. Frames:

- 1. Fabricate from 12 gauge steel (16 gauge for ceiling applications). Hot dip galvanize (per ASTM A123) frames which are to be installed on the exterior.
- 2. Fabricate frame with exposed flange approximately 1'' wide around perimeter of frame for units installed in the following construction.
 - Exposed masonry.
 - b. Drywall finish.
- 3. For installation in masonry construction, furnish frames with adjustable metal masonry anchors.

D. Flush Panel Doors:

- 1. Fabricate from not less than 12 gage sheet steel (16 gage for ceiling applications) with concealed spring hinges set to open to 175 degrees. Finish with manufacturer's factory-applied prime paint. Hot dip galvanize (per ASTM A123) which are to be installed on the exterior.
- 2. Provide flush panel doors, unless otherwise indicated.
- 3. For fire-rated units, provide manufacturer's standard insulated flush panel doors.

E. Locking Devices:

- Interior: Furnish flush, spanner head cam locks of the number required to hold door in flush, smooth plane when closed.
- 2. Exterior: Furnish flush, mortise locks of the number required to hold door in a flush smooth plane when closed.
- F. Schedule: Provide the following types of access panels (basis of design is Larsens):
 - 1. Wall Applications: Model L-DPM minimum size 36" x 36" with masonry anchors where required and prep for spanner head cam lock provided by Larsens. Provide where indicated on mechanical/electrical/architectural drawings or required by code to access existing/new valves, junction boxes, etc.
 - a. At fire rated locations provide Model L-DPFB (with masonry anchors for wall applications where required) and prep for spanner head cam lock provided by Larsens. 36" x 36" minimum for wall applications. Rating shall be same as wall fire rating on drawings.
 - 2. Ceiling Application: Model L-CPA minimum size 24" x 30" with prep for spanner head cam lock provided by Larsens. Provide where indicated on mechanical/electrical drawings or required by code to access existing/new valves, junction boxes, etc.

a. At fire rated locations provide model L-FRAP and prep for spanner head cam lock provided by Larsens. 24" x 24" for ceiling applications. Rating shall be same as ceiling fire rating on drawings.

PART 3 - EXECUTION

3.01 INSPECTION:

A. Installer must examine the conditions under which access doors are to be installed and notify the General Contractor, in writing, of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.

3.02 INSTALLATION:

- A. Comply with manufacturer's instructions for installation of access doors.
- B. Coordinate installation with work of other trades.
- C. Set frames accurately in position and securely attach to supports with face panels plumb or level in relation to adjacent finish surfaces.
- D. Adjust hardware and panels after installation for proper operation.
- E. Remove and replace panels or frames which are warped, bowed or otherwise damaged.

END OF SECTION 08305

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SECTION 09300 - TILE WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Attention is directed to Division 0, Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 DESCRIPTION OF WORK:

A. The extent of tile work is shown on drawings and in schedules.

1.03 QUALITY ASSURANCE:

- A. Qualifications of Installers:
 - For installation of ceramic tile, use only thoroughly trained and experienced personnel completely familiar with specified products, manufacturer's recommended methods of installation and requirements established for this work.

B. Codes and Standards:

- Comply with recommendations of "Handbook for Ceramic Tile Installation" published by Tile Council of America.
- Comply with ANSI and ASTM Standards listed within this Section.
- C. Proprietary Materials: Handle, store, mix and apply proprietary setting and grouting materials in compliance with manufacturer's instructions.

1.04 SUBMITTALS:

- A. Product Data:
 - 1. For information only, submit two (2) copies of manufacturer's technical information and install instructions for all materials required, except bulk materials. Include certifications and other data as may be required to show compliance with these specifications. Transmit a copy of each instruction to the Installer.

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2. Accompany materials list with two (2) copies of manufacturer's current recommended method of installation for each item. These recommendations, after review by Contractor and Architect/Engineer, shall form basis for acceptance or rejection of installed work.

B. Samples:

1. Submit three (3) samples of each type and color of new tile required, not less than 12" square on plywood or hardboard backing and grouted. Submit samples of trim and 6" long sample of marble threshold. Review will be for color, pattern and texture only. Compliance with all other requirements is the exclusive responsibility of the Contractor.

1.05 DELIVERY AND STORAGE:

A. Deliver packaged materials and store in original containers with seals unbroken and labels in tact until time of use, in accordance with manufacturer's instructions.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. Hard Tile (HT-1)

- 1. Shall meet requirements of TCA 137.1 and requirements of this Section.
- 2. Porcelain ceramic tile for Warming Area floors and walls shall be:
 - a. Floor: Astor Ceramiche Fusion, Color Ochres, Sizes 24"x48", 24"x24" and 12"x24" random pattern, Distributed by Virginia Tile, or approved equal.
 - b. Walls: Astor Ceramiche Fusion, Color Ochres, Sizes - 24"x48", 24"x24" and 12"x24" random pattern, Distributed by Virginia Tile, or approved equal.
 - c. Provide with 6"cove base, Color Blox, A1114 Tree House, by Crossville, and all other trim pieces for a complete project. Or approved equal.

- B. Porcelain Ceramic Tile (HT-1)
 - 1. Shall meet requirements of TCA 137.1 and requirements of this Section.
 - 2. Porcelain ceramic tile for Men's Restroom/Changing Room, Women's Restroom/Changing Room, and Family Restroom floors and walls shall be:
 - a. Floor: Astor Ceramiche Fusion, Color Ochres, Sizes 24"x48", 24"x24" and 12"x24" random pattern, Distributed by Virginia Tile, or approved equal.
 - b. Walls: Astor Ceramiche Fusion, Color Ochres, Sizes - 6"x30", Distributed by Virginia Tile, or approved equal.
 - c. Provide with 6"cove base, Color Blox, A1114 Tree House, by Crossville, and all other trim pieces for a complete project. Or approved equal.
- C. Quarry Tile (QT-1)
 - 1. Shall meet requirements of TCA 137.1 and requirements of this Section.
 - 2. Quarry tile for Kitchen area shall be:
 - a. Field tile: 8"x8"Quarry Tile by American Olean, Color - Canyon Red, or approved equal.
 - b. Provide with all required trim pieces and cove base for a complete project.
- D. Marble Thresholds: Marble thresholds shall be 1/2" inch high with chamfered edges of a uniform, fine to medium grained white stone with gray veining and conform to ASTM C503 with a minimum abrasion resistance of ten (10) per ASTM C1353 or ASTM C241 and with a honed finish.

2.02 SETTING MATERIALS

- A. Portland Cement Mortar Installation Materials: Provide materials complying with ANSI A108.1A and as specified below:
 - Cleavage Membrane: Asphalt felt, ASTM D226, Type 1 (No. 15), or polyethylene sheeting ASTM D4397, 4.0 mils thick.
 - 2. Reinforcing Wire Fabric: Galvanized, welded wire

fabric, 2 by 2 inches by 0.062 inch diameter with ASTM A185 and ASTM A82, except for minimum wire size.

- B. Latex-Portland Cement Mortar: ANSI A118.4, composed as follows:
 - 1. Mixture of Dry-Mortar Mix and Latex Additive: Mixture the prepackaged dry-mortar mix and liquid-latex additive complying with the following requirements: a. Latex Additive: Acrylic resin.
 - 2. Provide one of the following products:
 - a. ProSpec (formerly Bonsal Branded Products), Charlotte, NC; "Floor Thin Set Mortar/B-730 Acrylic Additive.
 - b. Bostik, Middletown, MA: Tile-mate $710/713/{\rm Hydroment}$ 425
 - c. C-Cure, Houston, TX; Perma Bond 902/ANSI A118.4, Section F.2.1.2.
 - d. Laticrete, Bethany, CT; Laticrete 317/Laticrete 3701 Grout and Mortar mix.
 - e. Mapei, Elk Grove Village, IL; Keraset/Keraply
 - f. TEC, Palatine, IL; Thin Set Mortar 335/36/Full Bond
 - g. Or approved equal.
- C. Waterproofing and Crack Isolation Membrane: Provide materials complying with ANSI Al18.10 and as specified below: (Note: All porcelain tile to be installed on crack isolation membrane).
 - 1. Hydraflex as manufactured by TEC. Ready to use, flexible, mold and mildew resistant waterproofing and crack isolation membrane for interior and exterior applications. (Note: All porcelain tile to be installed on crack isolation membrane). (or approved equal)
 - Custom building products RedGard waterproofing and crack prevention membrane (or approved equal).
 - 3. Hydroment ultra-set advanced as manufactured by Bostik, Inc. (or approved equal).
 - 4. B-6000 waterproof crack isolation membrane as manufactured by ProSpec (formerly Bonsal Branded Products) (or approved equal).
 - 5. Hydro-Ban waterproofing/anti-fracture membrane as

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manufactured by Laticrete International, Inc., Bethany, CT (or approved equal).

6. Mapelastic aqua defense as manufactured by MAPEI Corp. (or approved equal)

2.03 GROUTING MATERIALS

- A. Epoxy-modified Grout Admixture: Complying with ANSI A118.8 and A118.3.
 - 1. Provide one of the following manufacturers:
 - a. ProSpec (formerly Bonsal Branded Products), Charlotte, NC; B-700 epoxy mortar and grout.
 - b. Bostik, Middletown, MA; Hydroment 1900 epoxymodified grout and mortar admixture.
 - c. C-cure Houston TX; epox set 933
 - d. TEC Accucolor EFX epoxy special effects
 - e. Laticrete, Bethany, CT, Spectralock Pro Grout.
 - f. Or approved equal
- B. Color: As selected by Architect.

2.04 MISCELLANEOUS MATERIAL

- A. Latex Underlayment: Quick set type, as recommended by membrane manufacturer, as required to provide positive drainage to floor drains.
- B. Sealants for control joints in floors and walls, use one part fungicidal silicone rubber to match grout, Dow Corning 784, or Laticrete Latasil silicone sealant meeting Fed. Spec. TT-S-001543, Class A or B. (or approved equal)

PART 3 - EXECUTION

3.01 INSPECTION:

A. Installer must examine the areas and conditions under which tile work is to be installed and notify the General Contractor, in writing, of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.

3.02 PREPARATION:

A. Prepare substrate to receive setting bed and tile recommended both by the manufacturer of the tile and of the setting bed materials.

- 1. Fill cracks, holes and depressions with trowelable leveling and patching compound according to tile setting material manufacturer's written instructions.
- 2. Remove protrusions, bumps and ridges by sanding or grinding.
- 3. Provide concrete substrates for tile floors that comply with flatness tolerances specified in ANSI Alo8.
- B. Clean substrate as required and recommended to achieve bond using cleaners, detergents, etc.
- C. Neutralize and seal substrates as recommended.

3.03 INSTALLATION:

- A. Tile Installation General:
 - Provide installation of ceramic tile in accordance with Tile Council of America's "Handbook for Ceramic Tile Installation."
 - 2. Fit tile carefully against trim and around pipes, electrical boxes and other built-up fixtures so that escutcheons, plates and collars will completely overlap cut edges.
 - 3. Smooth exposed edges and clean tile before installation.
 - 4. Install porcelain ceramic tile with a 1/8" joint.
 - 5. Joint designs shall be symmetrical within room or area; border tile be not less than 1/2 normal width. Floor tile shall be set in straight line design, with wall joints in alignment with floor tile where possible.
 - 6. At junction of base tile and wall tile, at projections through tile and at junctions of tile to shower receptors, urinals, corner guards and similar equipment, leave joint ungrouted for sealing.
 - 7. When using tile sheets, minimize tearing sheets apart.

3.04 SETTING METHODS

A. Method and typical detailing for tile work shall be in

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accordance with the following TCA alphanumeric method, listing from the "Handbook for Ceramic Tile Installation", latest edition, by the Tile Council of America.

B. Concrete Subfloors

Slabs on grade (thin-set method): TCA setting method F115-09 (provide with waterproof and crack isolation membrane) thin set Portland Cement mortar, epoxy grout complying with tile installation specification ANSI A108.5 and epoxy grout installation specification ANSI A108.6.

C. Walls

1. Masonry (Cement Mortar Bond Method): TCA Setting Method W202-09 latex-Portland Cement mortar, install per Tile Installation Specification ANSI A108.5. Install crack isolation membrane per manufacturer's specs.

3.05 GROUTING

- A. Grouting shall be installed in accordance with ANSI A108.10 and the manufacturer's recommended procedures and precautions during application and cleaning.
- B. Rinse tilework thoroughly with clean water before and after using chemical cleaners.
- C. Base Installation:
 - Over concrete and masonry, install base using dry-set portland cement mortar in accord with ANSI A108.5. Grout using same grout specified for related tile floor.
- D. Jointing Pattern: Lay tile in pattern indicated. Layout tile work and enter tile fields both directions in such space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint width, unless otherwise shown.
- E. Expansion and Control Joints: Provide as indicated on drawings and as recommended by TCA and by tile and setting bed and grouting material manufacturer and as follows:
 - 1. Control Joints Locations: Comply with the Tile Council of America. (TCA) and where indicated.

- a. Interior Locations (horizontal and vertical):
 - Over any expansion joint, control joint, cold joint or seismic joint in the building structure.
 - Expansion joints 24 feet to 36 feet in each direction.
 - 3. Expansion joints 8 feet to 12 feet where tile work located in direct sunlight or moisture locations.
 - 4. Where tile abuts restraining surfaces such as perimeter walls, dissimilar floors, curbs, columns, pipes, ceiling and where changes occur in backing materials.
 - 5. Coordinate joint locations with the Architect and for other areas indicated or required.
 - 6. Joint width shall be 3/8 inch, unless otherwise indicated.
 - 7. Provide under-layment systems.
 - 8. Install compatible sealant and color approved by the Architect.
- F. Grout all tile using commercial epoxy grout as specified.
 - 1. Temporarily protect tile as required to prevent staining.

3.04 ADJUST AND CLEAN:

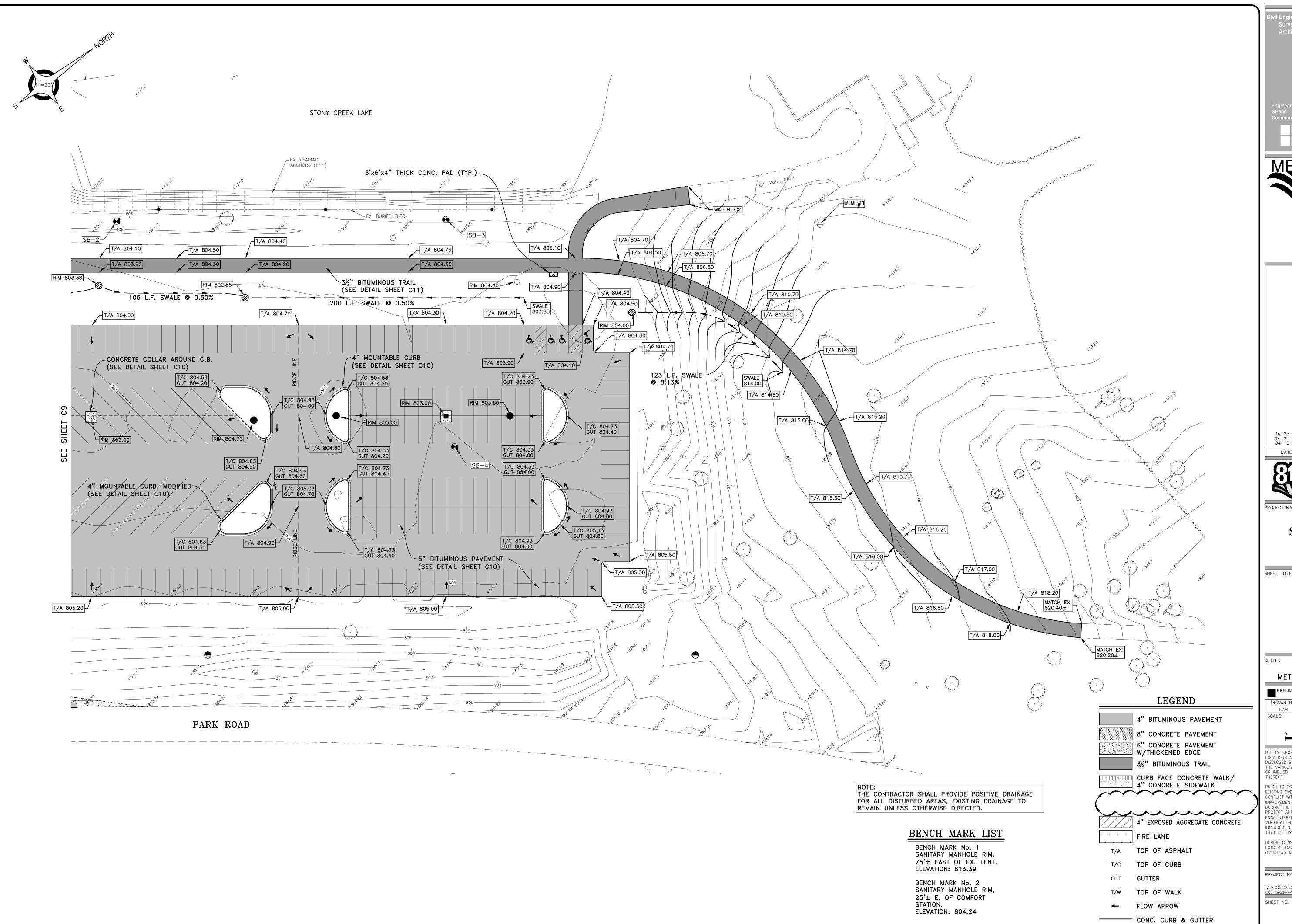
- A. Cleaning:
 - Clean grout and setting materials from face of tile while materials are workable. Leave tile face clean and free of all foreign matter.
 - 2. Tile may be cleaned with acid solutions only when permitted by the tile and grout manufacturer's printed instructions, but not sooner than 14 days after installation. Protect metal surfaces, cast iron, and vitreous plumbing fixtures from effects of acid cleaning. Flush the surface with clean water before and after cleaning.
- B. Finished Tile Work:
 - Leave finished installation clean and free of cracked, chipped, broken, unbonded, or otherwise defective tile work.
- C. Protection:
 - 1. Apply a protective coat of neutral protective cleaner

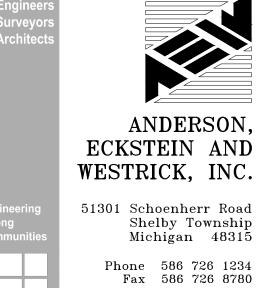
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to completed tile work.

- 2. Protect installed tile work with Kraft paper or other heavy covering during the construction period to prevent damage and wear.
- 3. Prohibit all foot and wheel traffic from using tiled floors for at least 3 days, preferably 7 days.
- 4. Before final inspection, remove protective coverings and rinse neutral cleaner from all tile surfaces.

END OF SECTION 09300





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NAH CMD FEBRUARY 2017 1" = 30'

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DURING THE CONSTRUCTION, THE CONTRACTOR SHALL
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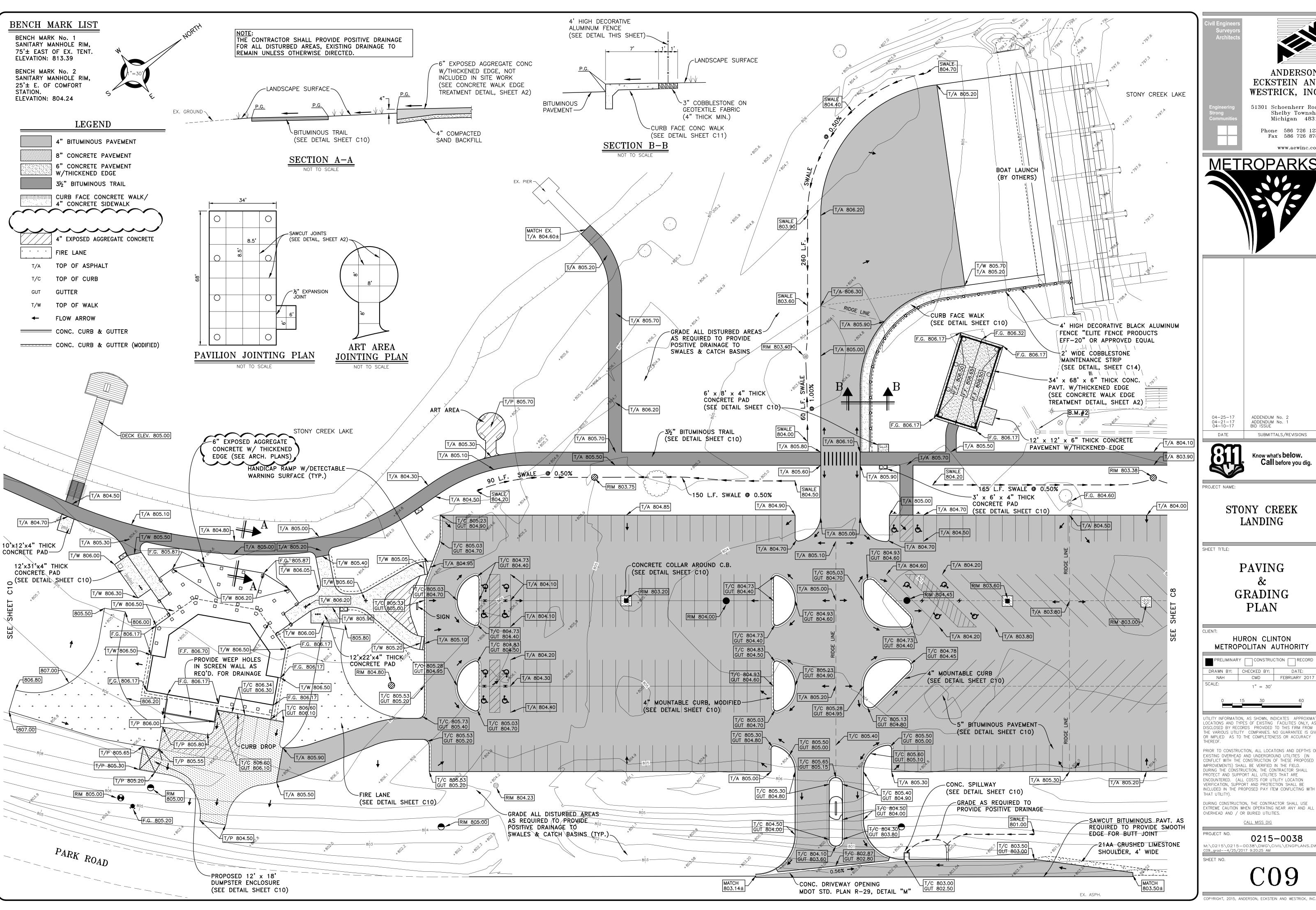
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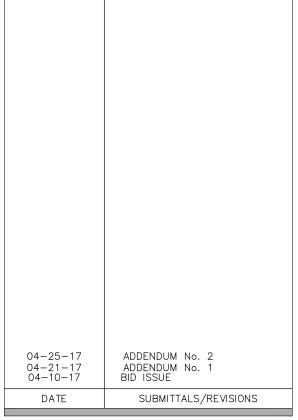




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DRAWN BY:	CHECKED BY:	DATE:
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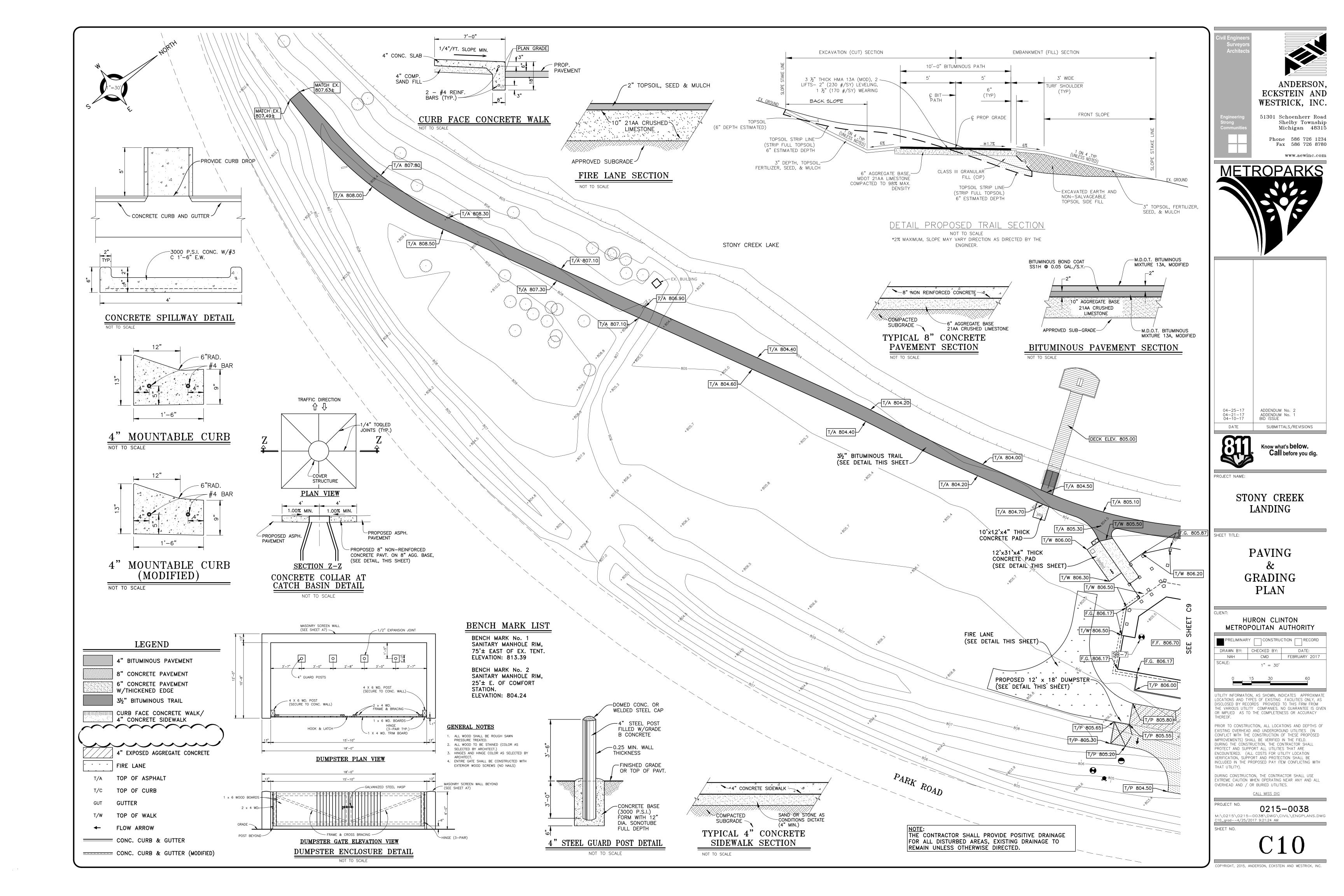
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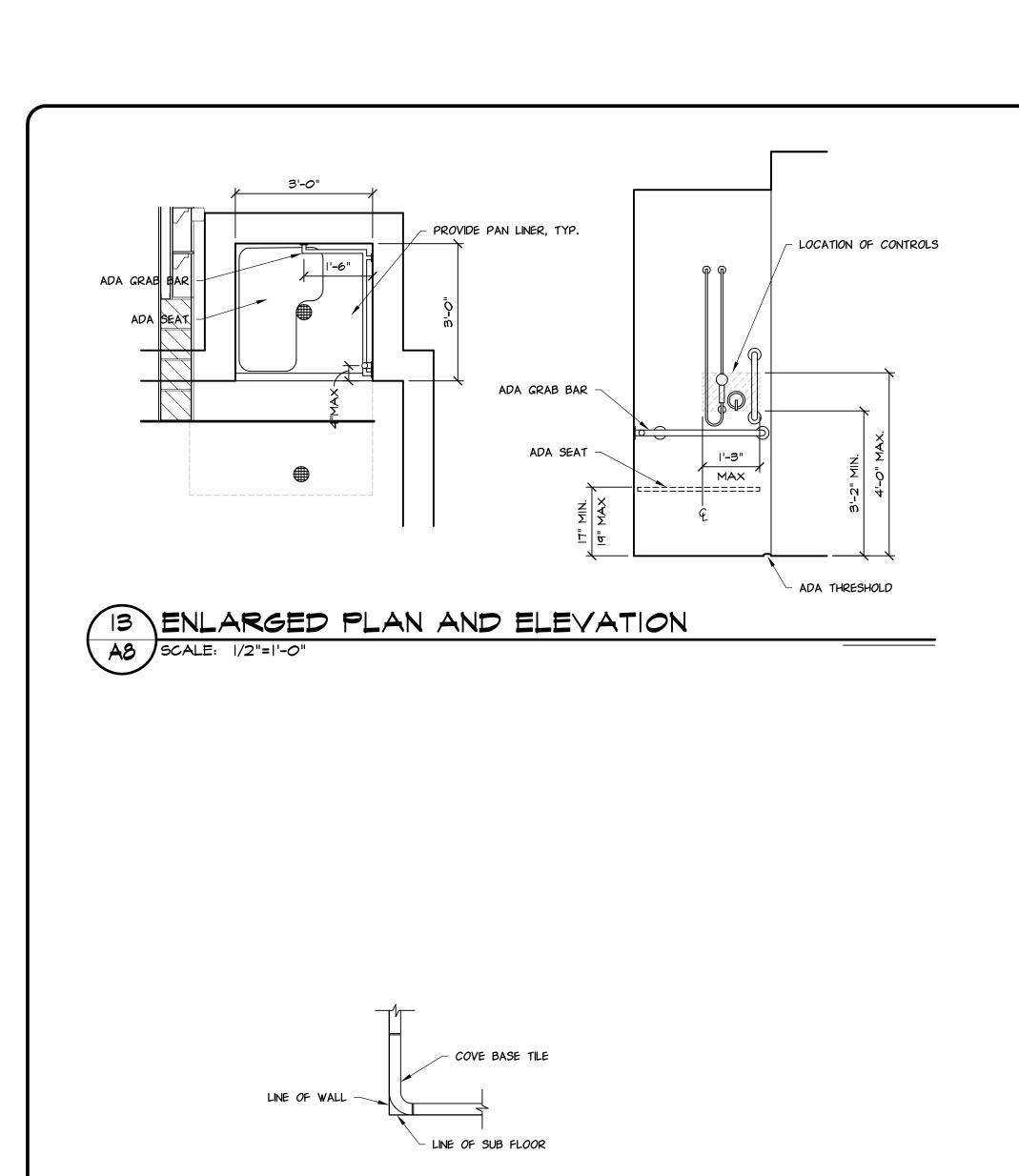
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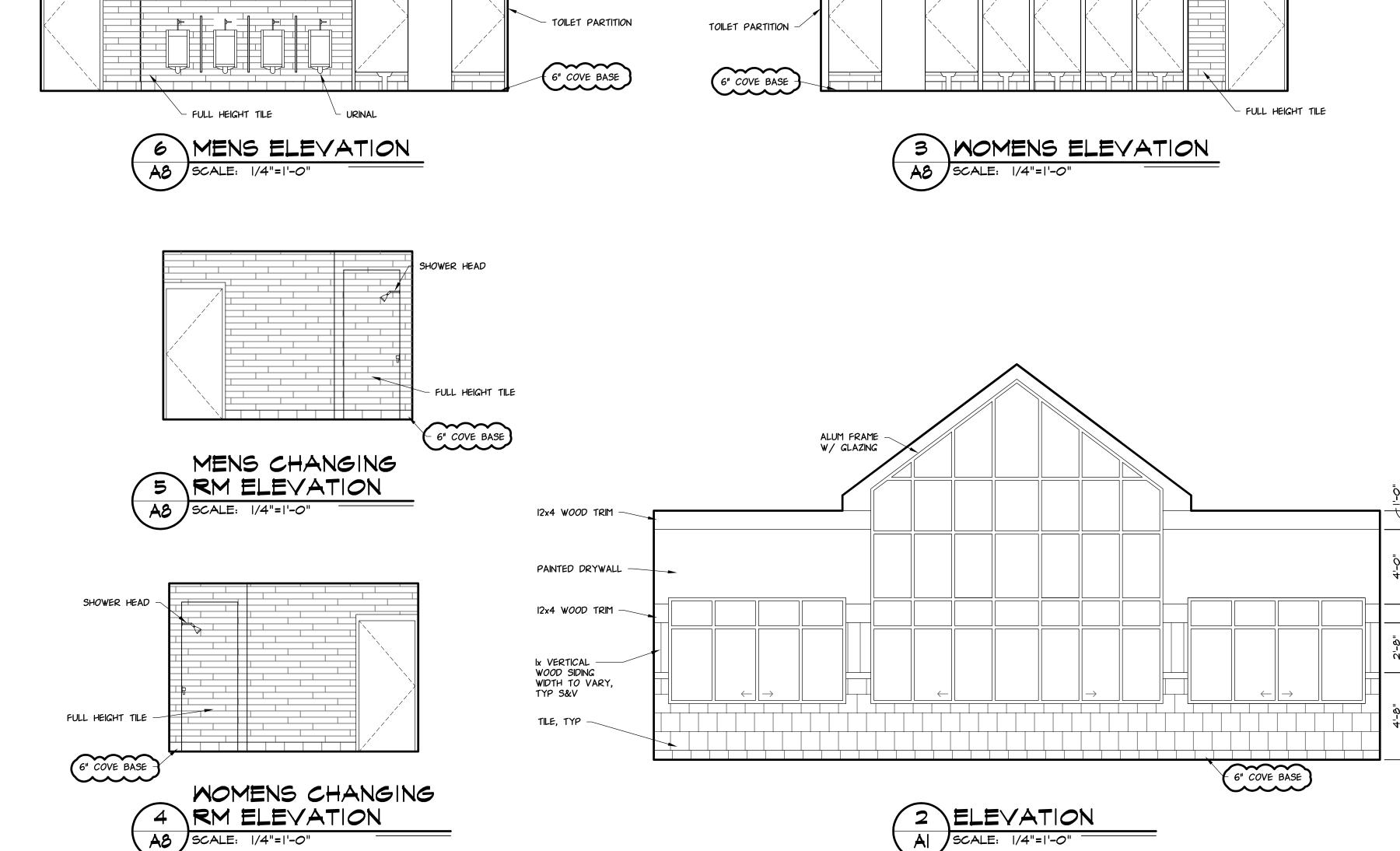
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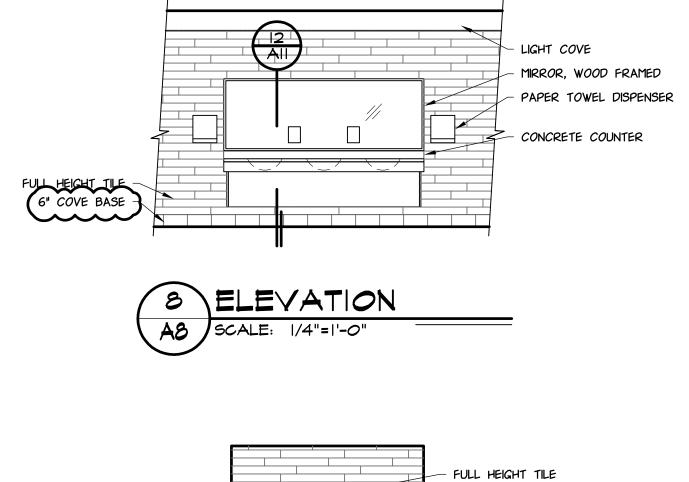






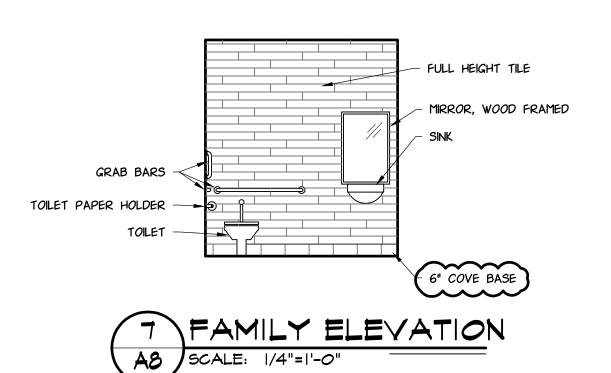
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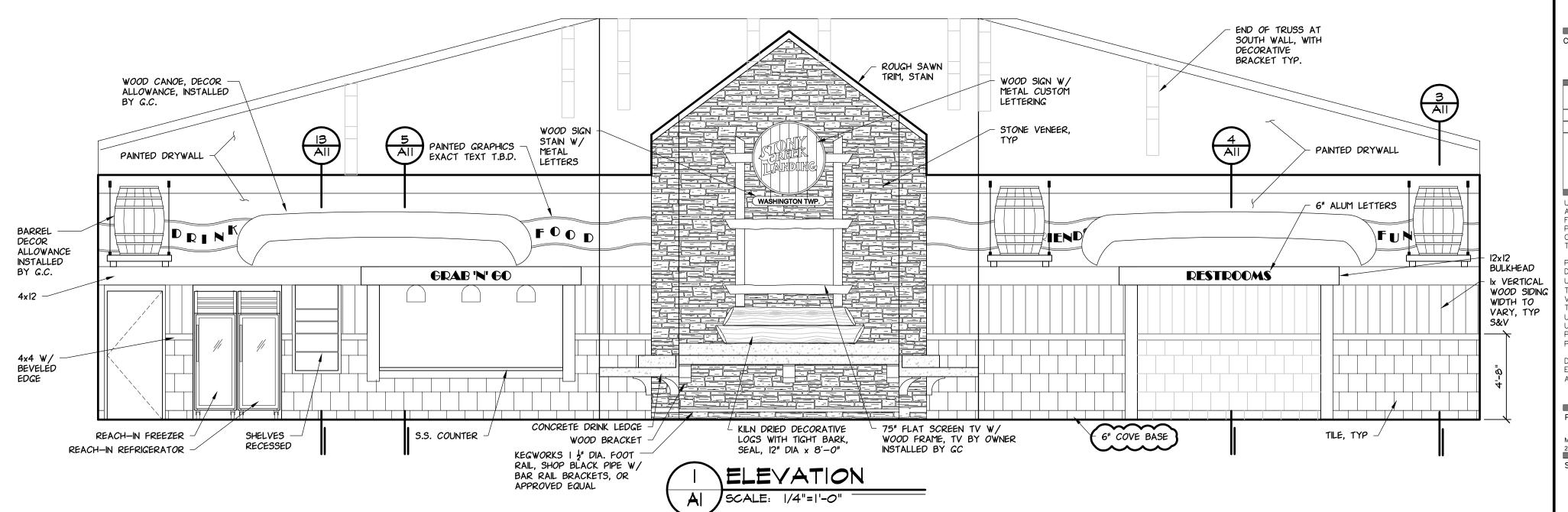
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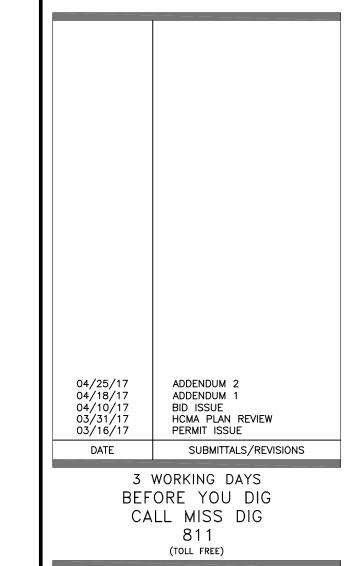
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COVE WALL BASE DETAIL









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PROJECT NAME:

INTERIOR ELEVATIONS

HURON-CLINTON
METROPOLITAN AUTHORITY

PRELIMINARY CONSTRUCTION RECORD

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