COLLIN COUNTY

Office of the Purchasing Agent
2300 Bloomdale Road
Suite 3160
McKinney, Texas 75071
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COLLIN COUNTY, TEXAS

ADDENDUM No. FIVE (5) IFB No. 2021-239

INVITATION FOR BID

FOR

CONSTRUCTION, COLLIN COUNTY ADULT DETENTION FACILITY, PHASE 1 ADDITION

DATE: AUGUST 24, 2021

NOTICE TO ALL PROSPECTIVE BIDDERS:

PLEASE MAKE THE FOLLOWING CHANGES TO THE INVITATION FOR BID:

ADD DOCUMENT:	ARCHITECT'S ADDENDUM 3
DELETE DOCUMENT:	SECTION 01 03 00
REPLACE WITH:	SECTION 01 30 00 ADDENDUM 3
DELETE DOCUMENT:	SECTION 03 30 00
REPLACE WITH:	SECTION 03 30 00 ADDENDUM 3
DELETE DOCUMENT:	SECTION 03 45 00
REPLACE WITH:	SECTION 03 45 00 ADDENDUM 3
DELETE DOCUMENT:	SECTION 06 40 00
REPLACE WITH:	SECTION 06 40 00 ADDENDUM 3
DELETE DOCUMENT:	SECTION 09 67 23
REPLACE WITH:	SECTION 09 67 23 ADDENDUM 3
DELETE DOCUMENT:	SECTION 10 00 00 ADDENDUM 2
REPLACE WITH:	SECTION 10 00 00 ADDENDUM 3
DELETE DOCUMENT:	SECTION 10 80 00
REPLACE WITH:	SECTION 10 80 00 ADDENDUM 3
DELETE DOCUMENT:	SECTION 11 19 00 ADDENDUM 1
REPLACE WITH:	SECTION 11 19 00 ADDENDUM 3
DELETE DOCUMENT:	SECTION 22 42 00
REPLACE WITH:	SECTION 22 42 00 ADDENDUM 3
DELETE DOCUMENT:	SECTION 23 37 13
REPLACE WITH:	SECTION 23 37 13 ADDENDUM 3

DELETE DOCUMENT: A102
REPLACE WITH: A102 ADDENDUM 3

DELETE DOCUMENT: A229
REPLACE WITH: A229 ADDENDUM 3

DELETE DOCUMENT: A240
REPLACE WITH: A240 ADDENDUM 3

DELETE DOCUMENT: A288
REPLACE WITH: A288 ADDENDUM 3

DELETE DOCUMENT: A290 ADDENDUM 1
REPLACE WITH: A290 ADDENDUM 3

DELETE DOCUMENT: A401
REPLACE WITH: A401 ADDENDUM 3

DELETE DOCUMENT: A402
REPLACE WITH: A402 ADDENDUM 3

DELETE DOCUMENT: A800 ADDENDUM 2
REPLACE WITH: A800 ADDENDUM 3

DELETE DOCUMENT: D010
REPLACE WITH: D010 ADDENDUM 3

DELETE DOCUMENT: D020
REPLACE WITH: D020 ADDENDUM 3

DELETE DOCUMENT: D702 ADDENDUM 2
REPLACE WITH: D702 ADDENDUM 3

DELETE DOCUMENT: L2.00
REPLACE WITH: L2.00 ADDENDUM 2

DELETE DOCUMENT: S106
REPLACE WITH: S106 ADDENDUM 3

DELETE DOCUMENT: S231 ADDENDUM 2
REPLACE WITH: S231 ADDENDUM 3

DELETE DOCUMENT: S232
REPLACE WITH: S232 ADDENDUM 3

ADD DOCUMENT: S506 ADDENDUM 3

ADD BID LINE ITEM: #8, ALTERNATE #6

DELETE DOCUMENT: SECTION 004100-BID FORM ADDENDUM 4

REPLACE WITH: SECTION 004100-BID FORM ADDENDUM 5

ADD ATTRIBUTE: #24-ADDENDUM No. 5 ACKNOWLEDGEMENT

ALL OTHER TERMS AND CONDITIONS OF THE BID AND SPECIFICATIONS REMAIN THE SAME.

SINCERELY,
MICHELLE CHARNOSKI, NIGP-CPP, CPPB
PURCHASING AGENT

JDG

ADDENDUM NO. 3

TO

Collin Count Adult Detention Facility, Phase 1

McKinney, Texas

August 20, 2021

Project: 21913.00
From: Brinkley Sargent Wiginton Architects, Inc.
To: Bidders of Record

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents.

PROJECT MANUAL MODIFICATIONS

Item No. 1. **Section 01 03 00 Alternates**

A. Specification updated paragraph 1.04.

Item No. 2. **Section 03 30 00 Cast-in-Place Concrete**

A. Updated specification paragraph 2.02.L

Item No. 3. **Section 03 45 00 Precast Architectural Concrete**

A. Updated specification paragraph 1.4D.

Item No. 4. **Section 06 40 00 Architectural Woodwork**

A. Removed section 2.13.

Item No. 5. **Section 09 67 23 Resinous Flooring**

A. Updated specification paragraph 2.1.

Item No. 6. **Section 10 00 00 Miscellaneous Specialties**

A. Removed section 2.5.

B. Updated Section 2.15 and 2.16

Item No. 7. **Section 10 80 00 Toilet and Bath Accessories**

A. Specification updated paragraph 2.02.

Item No. 8. **Section 11 19 00**

A. Specification updated paragraph 1.05.

Item No. 9. **Section 23 37 13**

A. Added Airolite as approved equal substitution for louvers.

Item No. 10. **Section 22 42 00**

A. Added ACO as approved equal substitution for shower linear drain.

DRAWINGS MODIFICATIONS

Note to bidders on drawing modifications: Any revision made to a sheet as part of this Addendum, regardless of the scale of the modification, results in the reissuance of that full sheet. The description for the revisions follows below, but the full sheet is reissued to allow revised sheets to simply be substituted for the sheets originally issued.

Item No. 11. **Sheet – L2.00**

A. Mow strip reference removed.

Item No. 12. **Sheet – S106**

A. Deck connections updated to accommodate the alternate 6 roof equipment screens.

Item No. 13. **Sheet – S231**

A. Posts were added for support of the alternate 6 roof equipment screening.

Item No. 14. **Sheet – S232**

A. Posts were added for support of the alternate 6 roof equipment screening.

Item No. 15. **Sheet – S506**

A. Sheet was added to show details for alternate 6 roof equipment screening

Item No. 16. **Sheet – A102**

A. Updated detail 7.

Item No. 17. **Sheet – A229**

A. Notes added.

Item No. 18. **Sheet – A240**

A. Tags added to detail 1.

Item No. 19. **Sheet – A288**

A. Updated stair 12.

Item No. 20. **Sheet – A290, A401, A402**

A. Alternate #6 roof equipment screening added.

Item No. 21. **Sheet – A800**

A. Updated general notes.

Item No. 22. **Sheet – D010**

A. Updated detention equipment schedule.

Item No. 23. **Sheet – D020**

B. Updated typical detention mounting heights elevation.

Item No. 24. **Sheet – D702**

A. Updated detention framing elevation.

ADDENDUM 3 ATTACHMENTS:

Specification Sections as listed above

Drawing Sheets as listed above.

END OF ADDENDUM

SECTION 01 03 00 ALTERNATES* AD3

PART 1 GENERAL

1.01 Requirements Included

A. Identification and description of Alternate work.

1.02 Related Requirements

A. Bid Documents: Quotation of cost of each Alternative.

B. Owner-Contractor Agreement: Alternatives accepted by Owner for incorporation into the work.

C. Section of Specifications identified in each Alternative.

1.03 Description

A. This Section identifies each Alternative by number and describes the basic changes to be incorporated into the Work, only when that Alternative is made a part of the Work by specified provisions in writing by Owner.

B. Related Requirements Specified in Other Sections
1. Section 01010: Summary of Work.
2. Sections of the Specifications as listed under the respective Alternatives.

C. Referenced Sections of Specifications stipulate pertinent requirements for products and methods to achieve the work stipulated under each Alternative.

D. Coordinate pertinent related work and modify surrounding work as necessary to properly integrate work under each Alternative, and to provide complete construction required by Contract Documents.

1.04 Description of Alternates

1. Alternate # 1 – Female Housing Shell-out Space
a. State the cost to construct in its entirety and as shown on the construction documents, the shell-out space for future female housing area on the main level, southwest corner of the Phase 1 Addition.

2. Alternate # 2 – Fence and Gate at the East Side
a. State the cost to construct in its entirety an extended security fence enclosure along the south side of the property connecting to the existing Sheriff's Office, access gates, camera/ intercom pedestals and all associated conduit and wiring. Proposed alternate includes 11 spaces of parking on the south of the building. Refer to the architectural, civil, electrical and security electronics site plans and details.

3. Alternate # 3 – Generator
a. State the cost, in its entirety to modify the size of the generator from 900KW to 1250 KW; including related modifications to panelboards, wire size, and transfer switch.

4. Alternate # 4 – Showers
a. State the cost, in its entirety to modify the epoxy floor showers and epoxy drying areas to field applied epoxy terrazzo shower base in shower and drying area.

5. **Alternate # 5 – Violent Cells**
    a. State the cost in its entirety to modify cell 1119 in Booking and cell 1327 in Transfer from holding cells to padded (violent) cells as detailed. Refer to Section 11 79 05, Cell Padding.

6. * AD3 **Alternate # 6 – Roof Equipment Screening**
    a. State the cost in its entirety and as shown on the construction documents, the roof equipment screening.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:
   1. Footings.
   2. Foundation walls.
   3. Suspended slabs.
   4. Concrete toppings.
   5. Building frame members.
   6. Building walls.
   7. Drilled Piers

B. WORK INCLUDED
   1. Design, fabrication, erection, and stripping of formwork for cast-in-place concrete including shoring, reshoring, falsework, bracing, proprietary forming systems, prefabricated forms, void forms, permanent metal forms, bulkheads, keys, blockouts, sleeves, pockets, and accessories. Erection shall include installation in formwork of items furnished by other trades.
   2. Furnish all labor and materials required to fabricate, deliver and install reinforcement and embedded metal assemblies for cast-in-place concrete, including steel bars, welded steel wire fabric, ties and supports.
   3. Furnish all labor and materials required to perform the following:
      a. Cast-in-place concrete
      b. Concrete mix designs
      c. Grouting structural steel baseplates
      d. Concrete for drilled piers

C. Related Sections include the following:
   1. Division 31 Section “Drilled Piers” for drilled concrete piers.
   2. Division 32 Section “Concrete Paving” for concrete pavement and walks.

1.03 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, Slag Cement, and silica fume; subject to compliance with requirements.

1.04 SUBMITTALS

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

B. Design Mixtures: For each concrete mixture, submit proposed mix designs in accordance with ACI 318 requirements. Each proposed mix design shall be accompanied by a record of past performance.
   1. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
   2. Indicate amounts of mixing water to be withheld for later addition at Project site.

C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.
   1. Do not reproduce the structural drawings for use as shop drawings.
   2. Embedded metal assemblies: Submit shop drawings for fabrication and placement. Use standard AWS welding symbols.

D. Steel Reinforcement Submittals for Information: Mill test certificates of supplied concrete reinforcing, indicating physical and chemical analysis.

E. Formwork Shop Drawings: Prepared and sealed by a qualified professional engineer, licensed in the State where the project is located, detailing fabrication, assembly, and support of formwork.
   1. Shoring and Reshoring: Indicate proposed schedule and sequence of stripping formwork, shoring removal, and installing and removing reshoring.

F. Welding certificates.

G. Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:
   1. Aggregates.

H. Material Certificates: For each of the following, signed by manufacturers:
   1. Cementitious materials
   2. Admixtures
   3. Form materials and form-release agents
   4. Steel reinforcement and accessories
   5. Waterstops
   6. Curing compounds
   7. Floor and slab treatments
   8. Bonding agents
   9. Adhesives
   10. Vapor retarders
   11. Joint-filler strips
   12. Repair materials

I. Submit manufacturer's certification of maximum chloride ion content in admixtures.

J. Fly ash: Submit certification attesting to carbon content and compliance with ASTM C618.

K. Construction Joint Layout: Submit a diagram of proposed construction joint locations for horizontal framing that exceed the limits of a single placement as stated in the structural notes, other than those indicated on the Drawings.

L. Floor surface flatness and levelness measurements to determine compliance with specified tolerances.

M. Field quality-control test and inspection reports.

N. Minutes of preinstallation conference.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer who employs on Project personnel qualified as ACI-certified Flatwork Technician and Finisher and a supervisor who is an ACI-certified Concrete Flatwork Technician.

B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
   1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

C. Testing Agency Qualifications: An independent agency, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
   1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-01 or an equivalent certification program.
   2. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician - Grade I. Testing Agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician - Grade II.

D. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from one source, and obtain admixtures through one source from a single manufacturer.
E. Welding: Qualify procedures and personnel according to AWS D1.4, "Structural Welding Code--Reinforcing Steel."
F. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
   1. ACI 301, "Specification for Structural Concrete,"
   2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

G. Concrete Testing Service: Owner may engage a qualified independent testing agency to perform material evaluation tests.
H. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."
   1. Before submitting design mixtures, review concrete design mixture and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with cast-in-place concrete to attend, including the following:
      a. Contractor's superintendent.
      b. Independent testing agency responsible for concrete design mixtures.
      c. Ready-mix concrete manufacturer.
      d. Concrete subcontractor.

   2. Review special inspection and testing and inspecting agency procedures for field quality control, concrete finishes and finishing, cold- and hot-weather concreting procedures, curing procedures, construction contraction and isolation joints, and joint-filler strips, forms and form removal limitations, shoring and reshoring procedures, vapor-retarder installation, anchor rod and anchorage device installation tolerances, steel reinforcement installation, floor and slab flatness and levelness measurement, concrete repair procedures, and concrete protection.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage.
B. Waterstops: Store waterstops under cover to protect from moisture, sunlight, dirt, oil, and other contaminants.
C. Store all proprietary materials in accordance with manufacturer’s recommendations.

PART 2 - PRODUCTS

2.01 CONCRETE, GENERAL

A. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
   1. ACI 301 (ACI 301M).
   2. ACI 117 (ACI 117M).

2.02 FORM-FACING MATERIALS

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

1. Plywood, metal, or other approved panel materials.
2. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:
   a. High-density overlay, Class 1 or better.

3. Steel Forms

B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

C. Forms for Cylindrical Columns, Pedestals, and Supports: Metal, glass-fiber-reinforced plastic, paper, or fiber tubes that will produce surfaces with gradual or abrupt irregularities not exceeding specified formwork surface class. Provide units with sufficient wall thickness to resist plastic concrete loads without detrimental deformation.

D. Pan-Type Forms: Glass-fiber-reinforced plastic or formed steel, stiffened to resist plastic concrete loads without detrimental deformation.
1. Pans shall be free of dents, irregularities, sag, or other deterioration.
2. In areas permanently exposed to view, provide one-piece units, manufactured to length between beams or ribs, or segmented units with reinforced butt-joint splices.

E. Void Forms: Shall be the product of a reputable manufacturer regularly engaged in the commercial production of void forms.
1. Void form composition shall be of corrugated paper material with a moisture resistant exterior and an interior fabrication of a uniform cellular configuration, composed of components constructed of double-faced wax-impregnated (partially or fully), corrugated fiberboard that is laminated with moisture resistant adhesive.
2. Design and maintain void forms to support all vertical and lateral loads that might be applied during construction until such loads can be supported by the concrete structure.
3. Form material shall be designed to lose its strength under prolonged contact with the moisture which normally accumulates beneath slabs and beams on grade.
4. Void forms shall be used around the circular edges of all drilled piers at the intersection of the grade beams and/or structural slabs by using premanufactured, non-field cut, sealed void forms with curved edges adjacent to drilled piers.
5. Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, VoidForm Products, Inc., Englewood, Colorado.

F. Protection Board: For use over void forms under structural slabs. Hard-pressed cellulose fiber board, 1/8 inch minimum thickness.

G. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch, minimum.

H. Rustication Strips: Wood, metal, PVC, or rubber strips, kerfed for ease of form removal.

I. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
1. Formulate form-release agent with rust inhibitor for steel form-facing materials.

J. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
1. Furnish units that will leave no corrodible metal closer than 1 inch to the plane of exposed concrete surface.
2. Furnish ties that, when removed, will leave holes no larger than 1 inch in diameter in concrete surface.

3. Furnish ties with integral water-barrier plates to walls indicated to receive dampproofing or waterproofing.

K. Soil Retainers: Shall be provided where specified and shown on the drawings to prevent migration of backfill under suspended foundation elements:
   1. Retainers shall be composed of high density polypropylene materials that are not adversely affected by moisture. They must be flexible, impact resistant and have sufficient strength to resist lateral loads applied by soil.
      a. Thickness: 1/2" for void spaces greater than 8", but less than 12", inclusive.
      b. Soil retainers shall extend six inches above the void forms and a minimum of 3 inches below the void forms.
   2. Retainers shall be ribbed and made from high density polyethylene. Refer to the Drawings for additional information. Soil retainers shall be Motzblock by VoidForm Products, Inc.

* AD 3

L. Expanded Polystyrene (EPS) Geofoam:
   1. Lightweight expanded polystyrene with a minimum compressive strength of 2.2 pounds per square inch (psi) at a 1% deformation.
   2. Geofoam shall be in compliance with ASTM D 6817.
   3. Geofoam shall be shaped to provide continuous support for raised slabs or to act as a lightweight fill material at locations indicated on the drawings.
   4. All Geofoam blocks shall be treated by the manufacturer with a tested and proven termite treatment for below grade applications, 3 year minimum field exposure. The treatment shall be EPA registered, meet the requirements of ICC ES AC 239, and be recognized in an ICC ES report.
   5. Available Products:
      a. Foam-Control EPS Geofoam, AFM Corporation.
      b. InsulFoam GF, Insulfoam, LLC.

2.03 STEEL REINFORCEMENT

A. Recycled Content of Steel Products: Provide products with an average recycled content of steel products so postconsumer recycled content plus one-half of preconsumer recycled content is not less than 60 percent.
B. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
C. Low-Alloy-Steel Reinforcing Bars: ASTM A 706/A 706M, deformed.
D. Deformed-Bar Anchor: ASTM A1064/ A1064M.
E. Plain-Steel Welded-Wire Reinforcement: ASTM A1064/A1064M, plain, fabricated from as-drawn steel wire into flat sheets.

2.04 REINFORCEMENT ACCESSORIES

A. Joint Dowel Bars: ASTM A 615/A 615M, Grade 60, plain-steel bars, cut bars true to length with ends square and free of burrs.
B. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:
   1. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire or CRSI Class 2 stainless-steel bar supports.
   2. For slabs on grade and slabs on void forms, provide sand plates, horizontal runners, or precast concrete blocks on bottom where base material will not support chair legs or where vapor barrier has been specified.

2.05 MECHANICAL SPLICES

A. Provide mechanical splices designed to develop, in tension and compression, 125 percent of the minimum ASTM specified yield strength of the smaller bar being spliced. The following splicing systems are acceptable:
   1. Erico "Cadweld T-Series"
   2. Erico "Lenton"
   3. Dayton Barsplice "Bar-Grip"
   4. Dayton Barsplice "Grip-Twist"

2.06 DOWEL BAR ANCHORS

A. Provide dowel bar anchors and threaded dowels designed to develop, in tension and compression, 125 percent of the minimum ASTM specified yield strength of the dowel bars. Unless otherwise indicated, anchors shall be furnished with ACI standard 90 degree hooks. Dowels shall be furnished by the anchor supplier. The following dowel splicing systems are acceptable:
   1. Richmond Screw Anchor "Dowel Bar Splicer"
   2. Erico "Lenton Form Saver"
   3. Dayton Barsplice "Grip-Twist"

2.07 EMBEDDED METAL ASSEMBLIES

A. Steel Shapes and Plates: ASTM A36
B. Headed Studs: Heads welded by full-fusion process, as furnished by TRW Nelson Stud Welding Division.
C. Welded Deformed Bar Anchors: ASTM A1064/ A1064M: Welded by full fusion process, as furnished by TRW Nelson Stud Welding Division.
D. Reinforcing Bars to be Welded: ASTM A706.
E. Coatings
   1. Epoxy coating for metal assemblies shall be "Hi-Build Epoxoline," as manufactured by the Tnemec Company, Kansas City, Missouri, applied in accordance with manufacturer's recommendations.

2.08 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
   1. Portland Cement: ASTM C 150, Type I/II, gray. Supplement with the following:
      a. Fly Ash: ASTM C 618, Class F or C.
      b. Slag Cement: ASTM C 989, Grade 100 or 120.

B. Normal-Weight Aggregates: ASTM C 33, Class 3M coarse aggregate or better, graded. Provide aggregates from a single source.
   1. Maximum Coarse-Aggregate Size: As indicated on drawings.
   2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: ASTM C 1602/C 1602M and potable.

2.09 ADMIXTURES

A. Air-Entraining Admixture: ASTM C 260.
B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

   1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
   2. Retarding Admixture: ASTM C 494/C 494M, Type B.

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

2.10 WATERSTOPS

A. Waterstops: At all construction joints below grade. "Synko-Flex" Preformed Plastic Waterstop by the Henry Company, Inc., meeting the requirements of Federal Specification SSS-210.

2.11 VAPOR RETARDERS

A. Plastic Vapor Retarder: ASTM E 1745, Class A.
   1. Membrane shall have the following properties:
      a. Minimum 15 mils thickness.
      b. Permeance Rating: ASTM E96, 0.01 Perms [grains/(ft^2 * hr *- in Hg)] or lower as tested after mandatory conditioning (ASTM E 154 sections 8, 11, 12, 13)
      c. Installation shall be in accordance with ASTM E1643 and manufacturer's instructions.

   2. Products:
      a. Carlisle Coatings & Waterproofing, Inc.: Blackline 400.
      b. Epro; Ecoshield-E 15 mil.
      c. Inteplast Group; Barrier Bac VBC-350 Composite Vapor Retarder
      d. Reef Industries; Vaporguard.
      e. Stego Wrap 15 mil, by Stego.
      f. W.R. Meadows, Inc.: Premolded Membrane with Plasmatic Core (PMPC).

   3. Accessories
      a. Perimeter/seam sealing tape for use with membranes that are not self-adhering to the underside of concrete slabs on void forms:
         (1) Crete Claw detail tape by Stego Industries, LLC, for adhering vapor retarder membrane to the underside of concrete surface at slabs on carton void forms, 3-inch and 6-inch widths as noted in Part 3.
         (2) StegoTack double-sided adhesive tape by Stego Industries, LLC, for adhering membrane to concrete at gradebeams.
      b. Manufacturer's recommended standard adhesive or pressure sensitive tape for general use.

2.12 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
   1. Products:
      a. Axim Concrete Technologies; CATEXOL Cimfilm.
      b. BASF Construction Chemicals – Building Systems; Confilm.
      c. ChemMasters; Spray-Film.
      d. Conspec by Dayton Superior; Aquafilm.
      e. Dayton Superior Corporation; Sure Film (J-74).
      f. Edoco by Dayton Superior; BurkeFilm.
      g. Euclid Chemical Company (The), an RPM company; Eucobar.
      h. Kaufman Products, Inc.; Vapor Aid.
      i. Lambert Corporation; LAMBCO Skin.
      j. L&M Construction Chemicals, Inc.; E-Con.
      k. Meadows, W. R., Inc.; EVAPRE.

l. Metalcrete Industries; Waterhold.
m. Nox-Crete Products Group; Monofilm.
n. Sika Corporation, Inc.; SikaFilm.
o. SpecChem, LLC; Spec Film.
p. Symons by Dayton Superior; Finishing Aid.
q. TK Products, Division of Sierra Corporation; TK-2120 TRI-FILM.
r. Unitex; Pro-Film.
s. Vexcon Chemicals, Inc.; Certi-Vex Envio Set.

B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.
C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
D. Water: Potable.
E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.
1. Products:

a. Anti-Hydro International, Inc.; AH Curing Compound #2 DR WB.
b. BASF Construction Chemicals – Building Systems; Kure 200.
c. ChemMasters; Safe-Cure Clear.
d. Conspec by Dayton Superior; W.B. Resin Cure.
e. Dayton Superior Corporation; Day Chem Rez Cure (J-11-W).
f. Edoco by Dayton Superior; Res X Cure WB.
g. Euclid Chemical Company (The), an RPM company; Kurez W VOX; TAMMSCURE WB 30C.
h. Kaufman Products, Inc.; Thinfilm 420.
i. Lambert Corporation; Aqua Kure-Clear.
j. L&M Construction Chemicals, Inc.; L&M Cure R.
k. Meadows, W. R., Inc.; 1100 Clear.
l. Nox-Crete Products Group; Resin Cure E.
m. Right Pointe; Clear Water Resin.
n. SpecChem, LLC; Spec Rez Clear.
o. Symons by Dayton Superior; Resi-Chem Clear.
p. TK Products, Division of Sierra Corporation; TK-2519 DC WB.
q. Vexcon Chemicals, Inc.; Certi-Vex Enviocure 100.

F. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, nondissipating, certified by curing compound manufacturer to not interfere with bonding of floor covering.
1. Products:
a. Anti-Hydro International, Inc.; AH Clear Cure WB.
b. BASF Construction Chemicals – Building Systems; Kure-N-Seal WB.
c. ChemMasters; Safe-Cure & Seal 20.
d. Conspec by Dayton Superior; Cure and Seal WB.
e. Cresset Chemical Company; Crete-Trete 309-VOC Cure & Seal.
f. Dayton Superior Corporation; Safe Cure and Seal (J-18).
g. Edoco by Dayton Superior; Spartan Cote WB II.
h. Euclid Chemical Company (The), an RPM company; Aqua Cure VOX; Clearseal WB 150.
i. Kaufman Products, Inc.; Cure & Seal 309 Emulsion.
j. Lambert Corporation; Glazecote Sealer-20.
k. L&M Construction Chemicals, Inc.; Dress & Seal WB.
l. Meadows, W. R., Inc.; Vocomp-20.
m. Metalcrete Industries; Metcure.
n. Nox-Crete Products Group; Cure & Seal 150E.
o. Symons by Dayton Superior; Cure & Seal 18 Percent E.

p. TK Products, Division of Sierra Corporation; TK-2519 WB.
q. Vexcon Chemicals, Inc.; Starseal 309.

G. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, 18 to 25 percent solids, nondissipating**,** certified by curing compound manufacturer to not interfere with bonding of floor covering.
1. Products:
a. BASF Construction Chemicals – Building Systems; Kure-N-Seal W.
b. ChemMasters; Safe-Cure Clear.
c. Conspec by Dayton Superior; High Seal.
d. Dayton Superior Corporation; Safe Cure and Seal (J-19).
e. Edoco by Dayton Superior; Spartan Cote WB II 20 Percent.
f. Euclid Chemical Company (The), an RPM Company; Diamond Clear VOX; Clearseal WB STD.
g. Kaufman Products, Inc.; SureCure Emulsion.
h. Lambert Corporation; Glazecote Sealer-20.
i. L&M Construction Chemicals, Inc.; Dress & Seal WB.
j. Meadows, W. R., Inc.; Vocomp-20.
k. Metalcrete Industries; Metcure 0800.
l. Nox-Crete Products Group; Cure & Seal 200E.
m. Symons by Dayton Superior; Cure & Seal 18 Percent E.
n. Vexcon Chemicals, Inc.; Starseal 0800.

2.13 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.
B. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
C. Sleeves and Blockouts: Formed with galvanized metal, galvanized pipe, polyvinyl chloride pipe, fiber tubes, or wood.
D. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sized as required; of strength and character to maintain formwork in place while placing concrete.

2.14 REPAIR MATERIALS

A. Repair Mortar – Hand-Applied: Pre-packaged, cement-based, two-component, polymer-modified, trowel-grade mortar, enhanced with penetrating corrosion inhibitor.
1. Compressive Strength: 1200 psi minimum at 1 day; 6000 psi minimum at 28 days when tested according to ASTM C 109.
2. Bond Strength: 1800 psi minimum at 28 days when tested according to ASTM C 882 (Modified).
3. Product / Manufacturer: SikaTop 122 Plus or SikaTop 123 Plus, Sika Corporation, or approved equal.

B. Repair Mortar – Form and Pour or Pump: Pre-packaged, cement-based, single-component, polymer-modified, silica-fume-enhanced, cementitious mortar.
1. Compressive Strength: 3000 psi minimum at 1 day; 6500 psi at 28 days when tested according to ASTM C 109.
2. Bond Strength: 2200 psi at 28 days when tested according to ASTM C 882 (modified).
3. Product / Manufacturer: Sika MonoTop 611, Sika Corporation, or approved equal.

2.15 CONCRETE MIXTURES, GENERAL

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

1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.
2. Required average strength above specified strength:
    a. Based on a record of past performance: Determination of required average strength above specified strength shall be based on the standard deviation record of the results of at least 30 consecutive strength tests in accordance with ACI 318, Chapter 5.3 by the larger amount defined by formulas 5-1 and 5-2.
    b. Based on laboratory trial mixtures: Proportions shall be selected on the basis of laboratory trial batches prepared in accordance with ACI 318, Chapter 5.3.3.2 to produce an average strength greater than the specified strength f'c by the amount defined in table 5.3.2.2.
        (1) Proportions of ingredients for concrete mixes shall be determined by an independent testing laboratory or qualified concrete supplier.
        (2) For each proposed mixture, at least three compressive test cylinders shall be made and tested for strength at the specified age. Additional cylinders may be made for testing for information at earlier ages.

B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:
    1. Fly Ash: 20 percent.

C. Limit water-soluble, chloride-ion content in hardened concrete to 0.30 percent by weight of cement.
D. Admixtures: Use admixtures according to manufacturer's written instructions.
    1. Do not use admixtures which have not been incorporated and tested in accepted mixes.
    2. Use water-reducing admixture in concrete, as required, for placement and workability.
    3. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
    4. Use water-reducing admixture in pumped concrete, and concrete with a water-cementitious materials ratio below 0.50.

2.16 CONCRETE MIXTURES FOR BUILDING ELEMENTS

A. Proportion normal-weight concrete mixture as indicated on drawings.

2.17 FABRICATING REINFORCEMENT

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

2.18 FABRICATION OF EMBEDDED METAL ASSEMBLIES

A. Fabricate metal assemblies in the shop. Holes shall be made by drilling or punching. Holes shall not be made by or enlarged by burning. Welding shall be in accordance with AWS D1.1.
B. Welding of deformed bar anchors and headed stud anchors shall be done by full fusion process equal to that of TRW Nelson Stud Welding Division. A minimum of two headed studs shall be tested at the start of each production period for proper quality control. The studs shall be capable of being bent 45 degrees without failure.
C. Welding of reinforcement shall be done in accordance with AWS D1.4, using the recommended preheat temperature and electrode for the type of reinforcement being welded. Bars larger than no. 9 shall not be welded. Welding shall be subject to the observance and testing of the Testing Laboratory.
D. Metal assemblies exposed to earth, weather or moisture shall be hot dip galvanized. All other metal assemblies shall be either hot dip galvanized or painted with an epoxy paint. Repair galvanizing after welding with a Cold Galvanizing compound installed in accordance with the manufacturer's instructions. Repair painted assemblies after welding with same type of paint.

2.19 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94 and furnish batch ticket information.
   1. When air temperature is between 85 and 95 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 95 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.01 FORMWORK

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

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

   1. Vertical alignment:
      a. Lines, surfaces and arises less than 100 feet in height - 1 inch.
      b. Outside corner of exposed corner columns and control joints in concrete exposed to view less than 100 feet in height - 1/2 inch.
   2. Lateral alignment:
      a. Members - 1 inch.
      b. Centerline of openings 12 inches or smaller and edge location of larger openings in slabs - 1/2 inch.
      c. Sawcuts, joints, and weakened plane embedments in slabs - 3/4 inch.

   3. Level alignment:
      a. Elevation of slabs-on-grade - 3/4 inch.
      b. Elevation of top surfaces of formed slabs before removal of shores - 3/4 inch.
      c. Elevation of formed surfaces before removal of shores - 3/4 inch.
      d. Lintels, sills, parapets, horizontal grooves, and other lines exposed to view - 1/2 inch.

   4. Cross-sectional dimensions: Overall dimensions of beams, joists, and columns and thickness of walls and slabs.
      a. 12 inch dimension or less - plus 3/8 inch to minus 1/4 inch.
      b. Greater than 12 inch to 3 foot dimension - plus 1/2 inch to minus 3/8 inch.
      c. Greater than 3 foot dimension - plus 1 inch to minus 3/4 inch.

   5. Relative alignment:
      a. Stairs:
         (1) Difference in height between adjacent risers - 1/8 inch.
         (2) Difference in width between adjacent treads - 1/4 inch.
         (3) Maximum difference in height between risers in a flight of stairs - 3/8 inch.
         (4) Maximum difference in width between treads in a flight of stairs - 3/8 inch.

      b. Grooves:
         (1) Specified width 2 inches or less - 1/8 inch.
         (2) Specified width between 2 inches and 12 inches - 1/4 inch.

      c. Vertical alignment of outside corner of exposed corner columns and control joint grooves in concrete exposed to view - 1/4 inch in 10 feet.

d. All other conditions - 3/8 inch in 10 feet.

C. Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:
   1. Class A, 1/8 inch for smooth-formed finished surfaces.
   2. Class C, 1/2 inch for rough-formed finished surfaces.
   3. Class D, 1 inch for pan-formed finished surfaces.

D. Construct forms tight enough to prevent loss of concrete mortar.

E. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
   1. Install keyways, reglets, recesses, and the like, for easy removal.
   2. Do not use rust-stained steel form-facing material.

F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.

G. Provide elevation or camber in formwork as required for anticipated formwork deflections due to weight and pressures of concrete and construction loads.

H. Foundation Elements: The sides of all below grade portions of beams, pier caps, walls, and columns shall be formed straight and to the lines and grades specified. Foundation elements shall not be earth formed unless specifically indicated on the Drawings.

I. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

J. Chamfer exterior corners and edges of permanently exposed concrete.

K. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.

L. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.

M. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

N. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement, anchoring devices, and embedded items.
   1. Do not apply form release agent where concrete surfaces are scheduled to receive subsequent finishes which may be affected by agent. Soak contact surfaces of untreated forms with clean water. Keep surfaces wet prior to placing concrete.

3.02 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
   1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC's "Code of Standard Practice for Steel Buildings and Bridges."
      a. Spacing within a bolt group: 1/8"
      b. Location of bolt group (center): 1/2"
      c. Rotation of bolt group: 5 degrees
      d. Angle off vertical: 5 degrees
      e. Bolt projection: ± 3/8"
   2. Headed Studs: Heads welded by full-fusion process, as furnished by TRW Nelson Stud Welding Division.
   3. Welded Deformed Bar Anchors: ASTM A1064/ A1064M: Welded by full fusion process, as furnished by TRW Nelson Stud Welding Division.

3.03 VOID FORMS

A. Install void forms in all locations shown on the Drawings. In general, void forms shall be placed below all structural elements supported by piers to separate these elements from the earth.
B. Seal discontinuous ends of void forms and tape all joints with waterproof tape so that concrete will not enter the void space during placement of concrete. Do not leave gaps between void form sections.
C. Premanufactured void forms with circular edges shall be used around all drilled piers. Field fabrication of pier void forms is not permitted.
D. Do not allow any portion of void forms to fall within the circumference of piers causing a reduction in the bearing area.
E. Protect void forms from water. Do not install void forms during wet weather or on wet ground. Void forms which become saturated prior to placement of concrete shall be removed and replaced. Void forms shall not be wrapped in plastic, or other similar material to protect from moisture when installed.
F. Exercise care in placement of concrete to avoid collapse of void form. If void forms collapse, soil beneath the concrete shall be dug out and a proper void space shall be created by installing soil retainers on each side of element.
G. Void forms under slabs shall be protected by a layer of one-eighth inch thick protection board followed by a vapor barrier or retarder per the specifications. Do not install void forms under soil supported slabs on grade.

3.04 SOIL RETAINERS

A. Install soil retainers in straight, clean trenches at sides of void forms prior to concrete placement. The gaps between the trench and retainers must be properly positioned or backfilled prior to the placement of concrete. Do not cast the sides of concrete beams directly against the soil.
B. Affix the soil retainers to the concrete beam with adhesive, pin/washer/load, or concrete hard nails spaced on 24 inch centers.

3.05 REMOVING AND REUSING FORMS

A. General: Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 24 hours after placing concrete, if concrete is hard enough to not be damaged by form-removal operations and curing and protection operations are maintained.
    1. Leave formwork for beam soffits, joists, slabs, and other structural elements that supports weight of concrete in place until concrete has achieved at least 70 percent of its 28-day design compressive strength.
    2. Formwork supporting conventionally reinforced concrete shall not be removed until concrete has attained 85 percent of its specified 28 day compressive strength as established by tests of field cured cylinders. In the absence of cylinder tests, supporting formwork shall remain in place until the concrete has cured at a temperature of at least 50 degrees Fahrenheit (10 degrees Celsius) for the minimum cumulative time periods given in ACI 347, Section 3.7.2.3. When the surrounding air temperature is below 50 degrees Fahrenheit (10 degrees Celsius), that time period shall be added to the minimum listed time period. Formwork for two-way conventionally reinforced slabs shall remain in place for at least the minimum cumulative time periods specified for one-way slabs of the same maximum span.
    3. Two-way conventionally reinforced slabs shall be immediately reshored after formwork removal. Reshores shall remain until the concrete has attained the specified 28 day compressive strength.
    4. Minimum cumulative curing times may be reduced by the use of high-early strength cement or forming systems which allow form removal without disturbing shores, but only after the Contractor has demonstrated to the satisfaction of the Architect that the early removal of forms will not cause excessive sag, distortion or damage to the concrete elements.

5. Wood forms shall be completely removed. Provide temporary openings if required.
6. Provide adequate methods of curing and thermal protection of exposed concrete if forms are removed prior to completion of specified curing time.
7. Areas required to support construction loads in excess of 20 psf shall be reshored to properly distribute construction loading. Construction loads up to the rated live load capacity may be placed on unshored construction provided the concrete has attained the specified 28 day compressive strength.
8. Obtaining concrete compressive strength tests for the purposes of form removal shall be the responsibility of the Contractor.
9. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.

B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.

C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.

3.06 SHORES AND RESHORES

A. The Contractor shall be solely responsible for proper shoring and reshoring.

B. Comply with ACI 318 and ACI 301 for design, installation, and removal of shoring and reshoring.
1. Do not remove shoring or reshoring until measurement of slab tolerances is complete.

C. In multistory construction, extend shoring or reshoring over a sufficient number of stories to distribute loads in such a manner that no floor or member will be excessively loaded or will induce tensile stress in concrete members without sufficient steel reinforcement.
1. All structural framing required to support one or more subsequent levels of construction shall be reshored. Reshores shall be located in the same position on each floor. No construction loads shall be placed on the new construction until all supporting reshores have been installed.
2. Extend shores or reshored from ground to top level in structure three stories or less in height, unless noted otherwise.
3. In structures over three stories in height, extend reshores at least three levels under the level being placed. Extend shores beyond the minimum number of levels if required to ensure proper distribution of loads throughout the structure.
4. In crawl spaces or basements, shores or reshores shall extend to mud pads seated firmly on the soil or to on-grade construction.
5. Bottom tier of reshores shall remain in place until the supported concrete (at the uppermost level) has attained at least 85 percent of the specified 28 day compressive strength and construction loads in excess of 20 psf have been removed.
6. Conventionally reinforced uppermost floors do not need to be reshored provided forms supporting concrete are not removed until concrete has attained 85 percent of its specified 28 day compressive strength as established by tests of field cured cylinders.
7. All levels of reshores may be removed after formwork for the uppermost floor has been removed in accordance with these specifications.

D. Plan sequence of removal of shores and reshore to avoid damage to concrete. Locate and provide adequate reshoring to support construction without excessive stress or deflection.

3.07 VAPOR RETARDERS

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

B. Lap joints 6 inches and seal with tape as noted below.

1. Vapor retarder membrane seal at slabs on void forms for use with membranes that are not self-adhering to the underside of concrete slabs: Seal vapor retarder membrane to underside of slab using perimeter/seam seal tape applied continuously to perimeter of vapor retarder membrane at grade beams (3in. tape) and at the seams at interior conditions (6in. tape).
    a. Apply double-sided adhesive tape top surface of grade beam and adhere membrane to tape. Refer to the drawings for detail.
    b. Remove any dirt or debris from membrane prior to application of sealing tape.

2. General sealing and at slabs on grade: Use manufacturer's standard adhesive or pressure sensitive tape for sealing membrane at seams, pipe penetrations, tears, etc.

3.08 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
    1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.
C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
    1. Weld reinforcing bars according to AWS D1.4, where indicated. Only steel conforming to ASTM A706 may be welded.

D. Installation tolerances:
    1. Top and bottom bars in slabs, girders, beams and joists:
        a. Members 8" deep or less: ±3/8"
        b. Members more than 8" deep: ±1/2"

    2. Concrete Cover to Formed or Finished Surfaces: ±3/8" for members 8" deep or less; ±1/2" for members over 8" deep, except that tolerance for cover shall not exceed 1/3 of the specified cover.

E. Concrete Cover: Refer to the Structural Notes.
F. Splices: Provide standard reinforcement splices by lapping and tying ends. Comply with ACI 318 for minimum lap of spliced bars where not specified on the documents.
G. Mechanical Splices: Use for splicing of bars larger than no. 11 or where no. 11 bars are spliced to larger size bars and where indicated on the drawings. Comply with manufacturer's instructions for preparation of bars and installation procedures.
H. Field Welding of Embedded Metal Assemblies: All paint and galvanizing shall be removed in areas to receive field welds. All areas where paint or galvanizing has been removed shall be field repaired with the specified paint or cold galvanizing compound, respectively.
I. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
J. Install welded wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

3.09 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.

1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floors and slabs.
2. Form keyed joints as indicated. Embed keys at least 1-1/2 inches into concrete.
3. Locate joints for beams, slabs, joists, and girders in the middle third of spans. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
4. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.
5. Space vertical joints in walls as indicated. Locate joints beside piers integral with walls, near corners, and in concealed locations where possible.
6. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
7. Use epoxy-bonding adhesive at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated.

D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.
2. Terminate full-width joint-filler strips not less than 1/2 inch or more than 1 inch below finished concrete surface where joint sealants, specified in Division 7 Section "Joint Sealants," are indicated.
3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.

E. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt coat one-half of dowel length to prevent concrete bonding to one side of joint.

3.10 WATERSTOPS

A. Flexible Waterstops: Install in construction joints and at other joints indicated to form a continuous diaphragm. Install in longest lengths practicable. Support and protect exposed waterstops during progress of the Work. Field fabricate joints in waterstops according to manufacturer's written instructions.

3.11 CONCRETE PLACEMENT

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

B. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301, and only if specifically noted as withheld on the batch ticket.
1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
2. Water content shall not exceed the maximum specified water/cement ratio for the mix.

C. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
1. Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.

3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
4. Do not permit concrete to drop freely any distance greater than 20'-0" for concrete containing a high range water reducing admixture (superplasticizer) or 5'-0" for other concrete. Provide chute or tremie to place concrete where longer drops are necessary. Do not place concrete into excavations with standing water. If place of deposit cannot be pumped dry, pour concrete through a tremie with its outlet near the bottom of the place of deposit.
5. Pump priming grout shall be discarded and not used in the structure.

D. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
2. Maintain reinforcement in position on chairs during concrete placement.
3. Screed slab surfaces with a straightedge and strike off to correct elevations.
4. Slope surfaces uniformly to drains where required.
5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

E. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
1. When average high and low temperature is expected to fall below 40 deg F for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.

F. Hot-Weather Placement: Comply with ACI 305.1 and as follows:
1. Maintain concrete temperature below 95 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

3.12 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
1. Apply to concrete surfaces not exposed to public view >.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
1. Apply to concrete surfaces exposed to public view, to receive a rubbed finish, to be covered with a coating or covering material applied directly to concrete

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

3.13 MISCELLANEOUS CONCRETE ITEMS

A. Filling In: Fill in holes and openings left in concrete structures, unless otherwise indicated, after work of other trades is in place. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.

B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

C. Equipment Bases and Foundations: Provide machine and equipment bases and foundations as shown on Drawings. Set anchor bolts for machines and equipment at correct elevations, complying with diagrams or templates from manufacturer furnishing machines and equipment.
   1. Housekeeping pads: Concrete fill shall be normal weight concrete (3000 psi), reinforced with 4x4-W2.1xW2.1 welded wire mesh set at middepth of pad. Trowel concrete to a dense, smooth finish. Set anchor bolts for securing mechanical or electrical equipment during pouring of concrete fill.

D. Steel Pan Stairs: Provide concrete fill for steel pan stair treads, landings, and associated items. Cast-in inserts and accessories as shown on Drawings. Screed, tamp, and trowel-finish concrete surfaces.
   1. Mix one part Portland Cement and two parts crushed stone or gravel passing 3/8" sieve and retained on a 1/8" sieve, measured by volume with only sufficient water to produce a dry consistency for proper placing and finishing.
   2. Placing: Place fill and reinforcement in all steel pan treads and landings. Reinforcement shall be 4x4-W2.1xW2.1 welded wire mesh extending over the area of each tread and landings. Support reinforcement 3/4" above bottom of steel pans. After sufficient hardening of the concrete fill, steel trowel the exposed surface to a smooth finish.
   3. Abrasive aggregate: Sprinkle abrasive aggregate into the troweled concrete fill in two shakes at the rate of 1/4 pound per square foot and trowel lightly into the surface.

E. Protective slabs ("Mud slabs"): Concrete fill shall be normal weight concrete (2500 psi minimum) with a minimum thickness of 3 1/2". Reinforce protective slabs with 6x6-W2.9xW2.9 welded wire mesh reinforcing. Finish slab to a wood float finish.

3.14 INSTALLATION OF NON-SHRINK GROUT UNDER BASEPLATES

A. Grout under all bearing and baseplates. Comply with manufacturer's instructions. Do not dry pack.

B. Mixing: Use a mechanical mixer. Add only enough water to make grout placeable. Do not mix more grout than can be used in 20 minutes. Under no circumstances shall grout be retempered.

3.15 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 305.1 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
C. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.
D. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.
E. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
    1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
        a. Water.
        b. Continuous water-fog spray.
        c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.

    2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
        a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.
        b. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
        c. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer certifies will not interfere with bonding of floor covering used on Project.

    3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
        a. After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer.

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

3.16 CONCRETE SURFACE REPAIRS

A. Surface Defects in Concrete: Repair and patch defective areas when approved by Engineer. Remove and replace concrete that cannot be repaired and patched to Owner's approval.
B. Contractor shall submit a detailed, descriptive procedure listing proposed pre-packaged repair materials and methods for the repair of surface defects prior to the start of repair work.
C. Patching Mortar: Mix, place and finish pre-packaged repair mortar in accordance with manufacturer's instructions.
D. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, minor honeycombs and rock pockets with no exposed reinforcement, fins and

other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.

1. Immediately after form removal, cut out minor honeycombs, rock pockets, and voids more than 1/2 inch in any dimension in solid concrete, but not less than 1 inch in depth. Make edges of cuts perpendicular to concrete surface, 1/4 inch deep minimum. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
2. Repair defects on surfaces exposed to view using pre-packaged repair mortar so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.

E. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.

1. Repair finished surfaces containing defects. Surface defects include minor spalls, pop outs, honeycombs and rock pockets with no exposed reinforcement, crazing and cracks in excess of 0.01 inch wide that do not penetrate to reinforcement, and other objectionable conditions.
2. After concrete has cured at least 14 days, correct high areas by grinding.
3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
4. Correct other low areas scheduled to receive floor coverings with a repair underlayment. Prepare, mix, and apply repair underlayment and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor elevations.
5. Correct other low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure a minimum repair topping depth of 1/4 inch to match adjacent floor elevations. Prepare, mix, and apply repair topping and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.
6. Repair defective areas, except random cracks and single holes 1 inch or less in diameter, by cutting out and replacing with patching mortar. Remove defective areas with clean, square cuts, ¼" deep minimum. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Place, compact, and finish patching mortar to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
7. Repair random cracks and single holes 1 inch or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.
8. Unapproved and defective repairs shall be removed and replaced in accordance with requirements provided by the Engineer at no additional cost to the Owner.

3.17 STRUCTURAL REPAIRS

A. Structurally Defective Concrete: Structural defects include spalls, honeycombs or rock pockets with exposed reinforcement, hollow-sounding concrete, cracks that penetrate to the reinforcement or completely through concrete elements, inadequate cover over reinforcement, and other conditions that affect the structural performance or durability of the concrete as determined by the Engineer.

B. Repair structural defects in concrete in accordance with plans, specifications, details, etc. provided by the Engineer.

1. The cost of the additional services provided by the Engineer to prepare the repair documents, and to oversee the repair work shall be borne by the Contractor.

C. Unapproved and defective repairs shall be removed and replaced in accordance with requirements provided by the Engineer at no additional cost to the Owner.

3.18 CLEANUP

A. Imperfect or damaged work or any material damaged or determined to be defective before final completion and acceptance of the entire job shall be satisfactorily replaced at the Contractor's expense, and in conformity with all of the requirements of the Drawings and Specifications. Removal and replacement of concrete work shall be done in such manner as not to impair the appearance or strength of the structure in any way.

B. Cleaning: Upon completion of the work all forms, equipment, protective coverings and any rubbish resulting therefrom shall be removed from the site. After sweeping floors, wash floors with clean water. Finished concrete surfaces shall be left in a clean condition, satisfactory to the Owner.

3.19 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner may engage a special inspector and/or a qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.

B. Inspections may include:
   1. Steel reinforcement placement.
   2. Steel reinforcement welding.
   3. Headed bolts and studs.
   4. Verification of use of required design mixture.
   5. Concrete placement, including conveying and depositing.
   6. Curing procedures and maintenance of curing temperature.
   7. Verification of concrete strength before removal of shores and forms from beams and slabs.

C. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
   1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.
   2. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. or fraction thereof of each concrete mixture placed each day.
      a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.

   3. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
   4. Air Content: ASTM C 231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
   5. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F and below and when 80 deg F and above, and one test for each composite sample.
   6. Compression Test Specimens: ASTM C 31/C 31M.
      a. Cast and laboratory cure four cylinders for each composite sample.
         1) Do not transport field-cast cylinders until they have cured for a minimum of 24 hours.

7. Compressive-Strength Tests: ASTM C 39/C 39M;
   a. Test one cylinder at 7 days
   b. Test two cylinders at 28 days
   c. Test one cylinder at 56 days
   d. If 4" by 8" cylinders are used, provide 1 additional cylinder at each stage
8. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
9. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
10. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
11. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42/C 42M or by other methods as directed by Architect.
    a. When the strength level of the concrete for any portion of the structure, as indicated by cylinder tests, falls below the specified requirements, the Contractor shall provide improved curing conditions and/or adjustments to the mix design as required to obtain the required strength. If the average strength of the laboratory control cylinders falls so low as to be deemed unacceptable, the Contractor shall follow the core test procedure set forth in ACI 301, Section 1.6. Locations of core tests shall be approved by the Architect. Core sampling and testing shall be at Contractors expense.
    b. If the results of the core tests indicate that the strength of the structure is inadequate, any replacement, load testing, or strengthening as may be ordered by the Architect shall be provided by the Contractor without cost to the Owner.

12. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
13. Correct deficiencies in the Work that test reports and inspections indicate does not comply with the Contract Documents.

END OF SECTION

SECTION 03 45 00 PRECAST ARCHITECTURAL CONCRETE*[AD 3]

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes architectural precast concrete units.
   1. The appearance of the new panels shall match the existing [in the opinion of the Architect].

B. Related Sections
   1. Division 3: Concrete
   2. Division 5: Steel
   3. Division 9: Paint

1.2 DEFINITIONS

A. Design Reference Sample: Sample of approved architectural precast concrete color, finish and texture, preapproved by Architect and Owner.

1.3 PRE-INSTALLATION MEETINGS

A. Pre-installation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Design Mixtures: For each precast concrete mixture. Include compressive strength and water-absorption tests.

C. Shop Drawings:
   1. Detail fabrication and installation of architectural precast concrete units.
   2. Indicate locations, plans, elevations, dimensions, shapes, and cross sections of each unit.
   3. Indicate joints, reveals, drips, chamfers, and extent and location of each surface finish.
   4. Indicate details at building corners.
   5. Connection details, coordinated with structural portions being connected to.

D. *[AD 3]Samples: Design reference samples for initial verification of design intent, for each type of finish indicated on exposed surfaces of architectural precast concrete units, one sample of the color specified and two tones in each direction for a total of five samples, representative of finish, color, and texture variations expected; approximately 12 by 12 by 2 inches (300 by 300 by 50 mm).

E. Delegated-Design Submittal: For architectural precast concrete indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 INFORMATIONAL SUBMITTALS

A. Welding certificates.

B. Material certificates.

C. Material Test Reports: For aggregates.

D. Field quality-control reports.

1.6 QUALITY ASSURANCE

A. Fabricator Qualifications: A firm that assumes responsibility for engineering architectural precast concrete units to comply with performance requirements. This responsibility includes preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer.
   1. Designated as a PCI-certified plant for Group A, Category A1 - Architectural Cladding and Load Bearing Units at time of bidding and is designated as an APA-certified plant for production of architectural precast concrete products.

B. Quality-Control Standard: For manufacturing procedures and testing requirements, quality-control recommendations, and dimensional tolerances for types of units required, comply with PCI MNL 117, "Manual for Quality Control for Plants and Production of Architectural Precast Concrete Products."

C. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D.1.1M, "Structural Welding Code - Steel"; and AWS D1.4/D1.4M, "Structural Welding Code - Reinforcing Steel."

D. Sample Panels: After sample approval and before fabricating architectural precast concrete units, produce a minimum of two sample panels approximately [16 sq. ft. (1.5 sq. m)] in area for review by Architect. Incorporate full-scale details of architectural features, finishes, textures, and transitions in sample panels.

1.7 COORDINATION

A. Furnish loose connection hardware and anchorage items to be embedded in or attached to other construction without delaying the Work. Provide locations, setting diagrams, templates, instructions, and directions, as required, for installation.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer to design architectural precast concrete units.

B. Design Standards: Comply with ACI 318 (ACI 318M) and design recommendations of PCI MNL 120, "PCI Design Handbook - Precast and Pre-stressed Concrete," applicable to types of architectural precast concrete units indicated.

C. Calculated Fire-Test-Response Characteristics: Provide architectural precast concrete units with fire-resistance rating indicated as calculated according to ACI 216.1 and acceptable to authorities having jurisdiction.

D. Structural Performance: Provide architectural precast concrete units and connections capable of withstanding design loads indicated within limits and under conditions indicated on structural drawings.

E. Thermal Performance: min. 2" insulation with R 5 min. per inch thickness. Edges of panels to be encapsulated in concrete.

2.2 REINFORCING MATERIALS

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.

B. Low-Alloy-Steel Reinforcing Bars: ASTM A 706/A 706M, deformed.

C. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, fabricated from galvanized steel wire into flat sheets.

D. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.

E. Supports: Suspend reinforcement from back of mold or use bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place according to PCI MNL 117.

2.3 PRE-STRESSING TENDONS

A. Pre-stressing Strand: ASTM A 416/A 416M, Grade 270 (Grade 1860), uncoated, seven-wire, low-relaxation strand.
   1. Coat un-bonded post-tensioning strand with post-tensioning coating complying with ACI 423.7 and sheath with polypropylene tendon sheathing complying with ACI 423.7. Include anchorage devices and coupler assemblies.

2.4 CONCRETE MATERIALS

A. Portland Cement: ASTM C 150/C 150M, Type I or Type III, white, unless otherwise indicated.
   1. For surfaces exposed to view in finished structure, use gray or white cement, of same type, brand, and mill source.

B. Normal-Weight Aggregates: Except as modified by PCI MNL 117, ASTM C 33/C 33M, with coarse aggregates complying with Class 5S. Stockpile fine and coarse aggregates for each type of exposed finish from a single source (pit or quarry) for Project.
   1. Face-Mixture-Coarse Aggregates: Selected, hard, and durable; free of material that reacts with cement or causes staining; to match selected existing finish sample.
      a. Gradation: To match design reference sample- existing building.
   2. Face-Mixture-Fine Aggregates: Selected, natural or manufactured sand compatible with coarse aggregate; to match approved finish sample.

C. Coloring Admixture: ASTM C 979/C 979M, synthetic or natural mineral-oxide pigments or colored water-reducing admixtures, temperature stable, and nonfading.

D. *[AD 3]Integral Colorant – Face mix of exterior precast panels shall be a buff color matching Coreslab Structures (OKLA) Inc. mix design 'N-78AW' (County Buff) with a light sand blasted finish. Samples and mockups shall be submitted to the Architect per section 1.4 of this specification along with joint grout to be used with a color matching that of the face mix.

E. Water: Potable; free from deleterious material that may affect color stability, setting, or strength of concrete and complying with chemical limits of PCI MNL 117.

F. Air-Entraining Admixture: ASTM C 260, certified by manufacturer to be compatible with other required admixtures.

G. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and to not contain calcium chloride, or more than 0.15 percent chloride ions or other salts by weight of admixture.

2.5 STEEL CONNECTION MATERIALS

A. Carbon-Steel Shapes and Plates: ASTM A 36/A 36M.

B. Carbon-Steel-Headed Studs: ASTM A 108, AISI 1018 through AISI 1020, cold finished, AWS D1.1/D1.1M, Type A or Type B, with arc shields and with minimum mechanical properties of PCI MNL 117, Table 3.2.3.

C. Carbon-Steel Plate: ASTM A 283/A 283M, Grade C.

D. Malleable Iron Castings: ASTM A 47/A 47M, Grade 32510 or Grade 35028.

E. Carbon-Steel Castings: ASTM A 27/A 27M, Grade 60-30 (Grade 415-205).

F. High-Strength, Low-Alloy Structural Steel: ASTM A 572/A 572M.

G. Carbon-Steel Structural Tubing: ASTM A 500/A 500M, Grade B or Grade C.

H. Wrought Carbon-Steel Bars: ASTM A 675/A 675M, Grade 65 (Grade 450).

I. Deformed-Steel Wire or Bar Anchors: ASTM A 496/A 496M or ASTM A 706/A 706M.

J. Carbon-Steel Bolts and Studs: ASTM A 307, Grade A or ASTM F 1554, Grade 36 (ASTM F 568M, Property Class 4.6); carbon-steel, hex-head bolts and studs; carbon-steel nuts, ASTM A 563 (ASTM A 563M); and flat, unhardened steel washers, ASTM F 844.

K. High-Strength Bolts and Nuts: ASTM A 325 (ASTM A 325M), Type 1, heavy hex steel structural bolts; heavy hex carbon-steel nuts, ASTM A 563 (ASTM A 563M); and hardened carbon-steel washers, ASTM F 436 (ASTM F 436M).

L. Zinc-Coated Finish: For exterior steel items, steel in exterior walls, and items indicated for galvanizing, apply zinc coating by hot-dip process according to ASTM A 123/A 123M.
   1. Galvanizing Repair Paint: High-zinc-dust-content paint with dry film containing not less than 94 percent zinc dust by weight, and complying with DOD-P-21035B or SSPC-Paint 20.

M. Shop-Primed Finish: Prepare surfaces of non-galvanized steel items, except those surfaces to be embedded in concrete, according to requirements in SSPC-SP 3 and shop-apply lead- and chromate-free, rust-inhibitive primer, complying with performance requirements in MPI 79 according to SSPC-PA 1.

2.6 GROUT MATERIALS

A. Sand-Cement Grout: Portland cement, ASTM C 150/C 150M, Type I, and clean, natural sand, ASTM C 144 or ASTM C 404. Mix at ratio of 1 part cement to 2-1/2 to 3 parts sand, by volume, with

minimum water required for placement and hydration. Water-soluble chloride ion content less than 0.06 percent by weight of cement when tested according to ASTM C 1218/C 1218M.

B. Nonmetallic, Non-shrink Grout: Packaged, nonmetallic, noncorrosive, non-staining grout containing selected silica sands, portland cement, shrinkage-compensating agents, plasticizing and water-reducing agents, complying with ASTM C 1107/C 1107M, Grade A for drypack and Grades B and C for flowable grout and of consistency suitable for application within a 30-minute working time. Water-soluble chloride ion content less than 0.06 percent by weight of cement when tested according to ASTM C 1218/C 1218M.

C. Epoxy-Resin Grout: Two-component, mineral-filled epoxy resin; ASTM C 881/C 881M, of type, grade, and class to suit requirements.

2.7 CONCRETE MIXTURES

A. Prepare design mixtures for each type of precast concrete required.

B. Design mixtures may be prepared by a qualified independent testing agency or by qualified precast plant personnel at architectural precast concrete fabricator's option.

C. Limit water-soluble chloride ions to maximum percentage by weight of cement permitted by ACI 318 (ACI 318M) or PCI MNL 117 when tested according to ASTM C 1218/C 1218M.

D. Normal-Weight Concrete Mixtures: Proportion mixtures by either laboratory trial batch or field test data methods according to ACI 211.1, with materials to be used on Project, to provide normal-weight concrete with the following properties:
   1. Compressive Strength (28 Days): 5000 psi (34.5 MPa) minimum.

E. Water Absorption: 6 percent by weight or 14 percent by volume, tested according to ASTM C 642, except for boiling requirement.

F. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having an air content complying with PCI MNL 117.

G. When included in design mixtures, add other admixtures to concrete mixtures according to manufacturer's written instructions.

H. Facing panels/ layers shall have the same properties as any back-up layers.

2.8 FABRICATION

A. Cast-in Anchors, Inserts, Plates, Angles, and Other Anchorage Hardware: Fabricate anchorage hardware with sufficient anchorage and embedment to comply with design requirements. Accurately position for attachment of loose hardware, and secure in place during pre-casting operations. Locate anchorage hardware where it does not affect position of main reinforcement or concrete placement.
   1. Weld-headed studs and deformed bar anchors used for anchorage according to AWS D1.1/D1.1M and AWS C5.4, "Recommended Practices for Stud Welding."

B. Furnish loose hardware items including steel plates, clip angles, seat angles, anchors, dowels, cramps, hangers, and other hardware shapes for securing architectural precast concrete units to supporting and adjacent construction.

C. Cast-in reglets, slots, holes, and other accessories in architectural precast concrete units as indicated on the Contract Drawings.

D. Reinforcement: Comply with recommendations in PCI MNL 117 for fabricating, placing, and supporting reinforcement.

E. Reinforce architectural precast concrete units to resist handling, transportation, and erection stresses and specified in-place loads.

F. Pre-stress tendons for architectural precast concrete units by either pre-tensioning or post-tensioning methods. Comply with PCI MNL 117.

G. Comply with requirements in PCI MNL 117 and requirements in this Section for measuring, mixing, transporting, and placing concrete. After concrete batching, no additional water may be added.

H. Place face mixture to a minimum thickness after consolidation of the greater of 1 inch (25 mm) or 1.5 times the maximum aggregate size, but not less than the minimum reinforcing cover specified.

I. Place concrete in a continuous operation to prevent cold joints or planes of weakness from forming in precast concrete units.
   1. Place backup concrete mixture to ensure bond with face-mixture concrete.

J. Thoroughly consolidate placed concrete by internal and external vibration without dislocating or damaging reinforcement and built-in items, and minimize pour lines, honeycombing, or entrapped air voids on surfaces. Use equipment and procedures complying with PCI MNL 117.
   1. Place self-consolidating concrete without vibration according to PCI TR-6, "Interim Guidelines for the Use of Self-Consolidating Concrete in Precast/Pre-stressed Concrete Institute Member Plants." Ensure adequate bond between face and backup concrete, if used.

K. Comply with PCI MNL 117 for hot- and cold-weather concrete placement.

L. Identify pickup points of architectural precast concrete units and orientation in structure with permanent markings, complying with markings indicated on Shop Drawings. Imprint or permanently mark casting date on each architectural precast concrete unit on a surface that does not show in finished structure.

M. Cure concrete, according to requirements in PCI MNL 117, by moisture retention without heat or by accelerated heat curing using low-pressure live steam or radiant heat and moisture. Cure units until compressive strength is high enough to ensure that stripping does not have an effect on performance or appearance of final product.

N. Discard and replace architectural precast concrete units that do not comply with requirements, including structural, manufacturing tolerance, and appearance, unless repairs meet requirements in PCI MNL 117 and Architect's approval.

O. The interior side of the panels shall have a smooth, consistent finish as they will be exposed to inmates.

2.9 FABRICATION TOLERANCES

A. Fabricate architectural precast concrete units to shapes, lines, and dimensions indicated so each finished unit complies with PCI MNL 117 product tolerances as well as position tolerances for cast-in items.

2.10 FINISHES

A. Exposed faces shall be free of joint marks, grain, and other obvious defects. Corners, including false joints shall be uniform, straight, and sharp. Finish exposed-face surfaces of architectural precast concrete units to match approved design reference sample.

B. Finish exposed back surfaces of architectural precast concrete units with smooth, steel-trowel finish.

C. Finish unexposed surfaces of architectural precast concrete units with as cast finish.

2.11 SOURCE QUALITY CONTROL

A. Quality-Control Testing: Test and inspect precast concrete according to PCI MNL 117 requirements. If using self-consolidating concrete, also test and inspect according to PCI TR-6, ASTM C 1610/C 1610M, ASTM C 1611/C 1611M, ASTM C 1621/C 1621M, and ASTM C 1712.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install clips, hangers, bearing pads, and other accessories required for connecting architectural precast concrete units to supporting members and backup materials.

B. Erect architectural precast concrete level, plumb, and square within specified allowable tolerances. Provide temporary supports and bracing as required to maintain position, stability, and alignment of units until permanent connections are completed.
   1. Maintain horizontal and vertical joint alignment and uniform joint width as erection progresses.
   2. Unless otherwise indicated, maintain uniform joint widths of 3/4 inch (19 mm).

C. Connect architectural precast concrete units in position by bolting, welding, grouting, or as otherwise indicated on Shop Drawings. Remove temporary shims, wedges, and spacers as soon as practical after connecting and grouting are completed.

D. Welding: Comply with applicable requirements in AWS D1.1/D1.1M and AWS D1.4/D1.4M for welding, welding electrodes, appearance, quality of welds, and methods used in correcting welding work.

E. At bolted connections, use lock washers, tack welding, or other approved means to prevent loosening of nuts after final adjustment.

F. Grouting or Dry-Packing Connections and Joints: Grout connections where required or indicated. Retain flowable grout in place until hard enough to support itself. Alternatively, pack spaces with stiff dry-pack grout material, tamping until voids are completely filled. Place grout and finish smooth, level, and plumb with adjacent concrete surfaces. Promptly remove grout material from exposed surfaces before it affects finishes or hardens. Keep grouted joints damp for not less than 24 hours after initial set.

3.2 ERECTION TOLERANCES

A. Erect architectural precast concrete units level, plumb, square, and in alignment without exceeding the noncumulative erection tolerances of PCI MNL 117, Appendix I.

3.3 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections and prepare test reports.

B. Visually inspect field welds and test according to ASTM E 165 or to ASTM E 709 and ASTM E 1444. High-strength bolted connections are subject to inspections.

C. Testing agency will report test results promptly and in writing to Contractor and Architect.

D. Repair or remove and replace work where tests and inspections indicate that it does not comply with specified requirements.

E. Additional testing and inspecting, at Contractor's expense, shall be performed to determine compliance of replaced or additional work with specified requirements.

3.4 REPAIRS

A. Repair architectural precast concrete units if permitted by Architect. Architect reserves the right to reject repaired units that do not comply with requirements.

B. Mix patching materials and repair units so cured patches blend with color, texture, and uniformity of adjacent exposed surfaces and show no apparent line of demarcation between original and repaired work, when viewed in typical daylight illumination from a distance of 20 feet (6 m).

C. Prepare and repair damaged galvanized coatings with galvanizing repair paint according to ASTM A 780/A 780M.

D. Wire brush, clean, and paint damaged prime-painted components with same type of shop primer.

E. Remove and replace damaged architectural precast concrete units when repairs do not comply with requirements.

3.5 CLEANING

A. Clean surfaces of precast concrete units exposed to view.

B. Clean mortar, plaster, fireproofing, weld slag, and other deleterious material from concrete surfaces and adjacent materials immediately.

C. Clean exposed surfaces of precast concrete units after erection and completion of joint treatment to remove weld marks, other markings, dirt, and stains.
   1. Perform cleaning procedures, if necessary, according to precast concrete fabricator's recommendations. Protect other work from staining or damage due to cleaning operations.
   2. Do not use cleaning materials or processes that could change the appearance of exposed concrete finishes or damage adjacent materials.

END OF SECTION

SECTION 06 40 00 ARCHITECTURAL WOODWORK* AD3

PART 1 – GENERAL

1.01 DESCRIPTION

A. Work included: Provide all architectural woodwork shown on the Drawings, complete in place, as specified herein, including casework and millwork.

1.02 QUALITY ASSURANCE

A. Qualifications of the manufacturer: Products used in the work of this Section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the Architect.

B. Qualifications of installers: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

C. Comply with architectural woodwork standards of the Architectural Woodwork Institute, latest edition.

1.03 SUBMITTALS

A. Product data: Within 90 calendar days after Notice to Proceed, submit:
   1. Complete materials list of all items proposed to be furnished and installed under this section.
   2. Sufficient other data to demonstrate compliance with the specified requirements.
   3. Shop Drawings showing each of the items to be provided under this Section, complete detailing joinery and other construction, including anchorage.
   4. Manufacturer's recommended installation procedures: The manufacturer's recommended installation procedures, as approved by the Architect, together with the approved samples, will become the basis for inspecting and accepting or rejecting actual installation procedures used on the Work.
   5. Prepare shop drawings in order of architectural drawings and/ or provide a cross- reference index at beginning of submittal. Provide one complete submittal package.

1.04 PRODUCT HANDLING

A. Protection: Use all means necessary to protect materials of this Section before, during, and after installation and to protect the work and materials of all other trades.

B. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART 2 – PRODUCTS

2.01 PLASTIC LAMINATE AND WOOD CLAD CABINETS

A. Plastic Laminate: Shall comply with NEMA LD-3 for type, thickness, color, pattern and finish indicated for each application, or if not indicated, as selected by Architect from manufacturer's standard products.

B. All cabinet doors shall be covered on the front face and all four edges with 0.028" thick plastic laminate, as selected at dark colored laminates; PVC edges at all doors and edges of panels with light colored laminates. All drawer fronts shall be covered on the front face and all four edges with 0.028" thick plastic laminate, as selected at dark colored laminates; PVC edges at all doors and edges of panels with light colored laminates. The case ends, bottoms, tops at high cases, partitions, shelves, and backs shall be fabricated with 3/4" thickness medium density particleboard (minimum 45 psi) ANSI 208.2; backs to be ¼" thick. Paint tops of all cabinetry semi-gloss white. All interior surfaces of cases, with doors, except as specified otherwise shall

be faced with white plastic laminate liner. All interior surfaces of cases without doors shall be finished with 0.028" thick plastic laminate and all edges shall be banded with 0.050" thick plastic laminate to match adjacent surface conditions. Color shall be as indicated, or if not indicated, as selected by Architect.

C. All exposed edges shall be banded with 0.050" thick plastic laminate.

D. Drawer fronts and cabinet doors shall be flush overlay type; fronts shall be a minimum of 3/4" thick. Plastic laminate faces 0.030" thick and plastic laminate backing sheets 0.030" thick, shall be simultaneously laminated. Exposed edges shall be thermo-bonded with the same material used on faces of doors and drawers at wood clad and at dark colored laminates; PVC edges at all doors and edges of panels with light colored laminates.

E. Adhesives shall be non-flammable contact, semi-rigid or polyvinyl cement. Follow adhesive manufacturer's recommendations.

F. All solid stock lumber used throughout cabinetwork shall be "Custom" grade hardwood to conform to requirements of A.W.I., latest edition.

G. Filler strips between cabinets and walls shall be plastic laminate covered 3/4" medium density fiberboard, color and pattern of plastic as selected by Architect.

H. Drawers: Interiors of all drawers, except drawer face, shall receive white melamine.

2.02 Phenolic, Engineered Stone and Laminate Countertops

A. Unless specifically indicated otherwise, furnish and install phenolic tops and splashes. If specifically indicated furnish and install plastic laminate tops those locations only. Backsplash work, including end returns, shall be made with phenolic at phenolic tops and plastic laminate at plastic laminate tope. Phenolic shall be a min. of 3 CM at tops and 2 CM at splashes and window ledges. Plastic laminate shall be minimum 0.050" thick for flat surfaces and 0.042" for post-formed work. In addition to top surfaces and edges, apply plastic laminate to the underside of countertops and at back of backsplash exposed to public view; similar with phenolic at phenolic top locations.
   1. Plastic laminate countertop base and solid surface material countertop and splash for all sink tops shall be 3/4" thick, Moisture Resistant Medium Density Fiberboard Panels made with NAF Resin. Basis of Design: Medex by Roseburg Forest Products Company. Standards Compliance: ANSI A208.2 - Grade 155; MR50 and ASTM D1037-06a: Passed the 6-Cycle Accelerated Aging Test.
   2. Adhesives used to secure plastic laminate to fiberboard backing shall be non-flammable contact, semi-rigid or polyvinyl cement. Follow adhesive manufacturer's recommendations.
   3. Back cut all joints to 89.75 degrees to insure flush fit at the junction to the top where plastic sheets meet joints. Joints shall be secured whether by a series of 1/8" x 3/4" cold rolled steel straps 3" o.c. through entire joint or by wedge type fasteners. No joints shall be made through sink openings or other openings where water is to be used. Where no splash occurs, scribe back or edge of countertop to the wall.
   4. At locations wider than 5' provide workstation brackets for intermediate support to preclude countertop sagging when loaded; utilize size as appropriate for installation 18"h x 24"v for typical 24" deep countertop; Rakks http://rakks.com/counter-support-brackets/ 800-828-6006; EH-1824 or size as appropriate.

B. Openings shall be accurately cut in countertops to receive sinks installed under Plumbing Section.

C. Stainless steel "T" shaped "clamp-down" type sink rings shall be furnished and installed under Plumbing Section. Contractor shall make necessary provisions for installation thereof and coordinate this part of work with others as required.

D. Seal exposed core around sink cut-outs and along the front and back edges near cut-outs with Formica No. 102 cement or approved equal. In addition, all edges of plywood core which are not plastic veneered shall be coated with mastic equal to 3M Co. E-C 1012 or Miracle Adhesives Corp., Type H.

2.02 PLASTIC LAMINATE AND WOOD CLAD SHELVES

A. Unless indicated otherwise, furnish and install plastic laminate on all edges of shelving. Plastic laminate shall be as scheduled and be a minimum of 0.050" thick.
   1. All shelving shall be 3/4" thick, 45-pound medium density particleboard.
   2. Adhesives to be non-flammable contact, semi-rigid or polyvinyl cement. Follow adhesive manufacturer's recommendations.

2.03 Hardware as herein specified shall be furnished in brushed chrome US26 unless noted otherwise. Verify finish with Architect prior to delivery.

A. Hinged Doors
   1. Doors shall have concealed, self-closing, European type hinges; Grass 1006 or Blum 95M5550, nickel plated, 110-degree opening angle. Doors more than 48" shall be at least 3 hinges per door. Doors shall show a maximum of 3/32" clearance between adjacent doors or drawers and between door and end panel when the hinge is installed.
   2. Pulls shall be Colonial Bronze Co. 753 or EPCO MC-4024BL (810-767-2050), 4” c-c, matte black. On doors over 14 inches high install pulls vertically 3 1/2 inches up/down and 1 1/2 inch over from an intersecting corner. Center pulls vertically in drawers less than 9 inches high, 4 inches from the top in taller drawers; center horizontally.
   3. Locks shall be very heavy duty; CompX Timberline - Cam Locks. Key as directed by owner, as directed by Architect. Provide catch for opposite door when used with pairs of doors.
      a. All locks in a room shall be keyed alike; all rooms shall be keyed differently.

B. Drawers: All drawers to operate on Accuride Box Drawer Slide; Series AC3832, 100 lb. capacity. Provide Pendaflex inserts at all file drawers. Stevens Royal Hardware SA204.

C. Adjustable Shelving
   1. Shelves in cabinets with doors shall be supported on metal brackets in flush mounted metal standards, adjustable 1/2" o.c. Shelves over 48" long shall be fitted with an additional support of full-width metal brackets in metal standard attached to cabinet back. Where indicated, provide K & V No 187 x 10" brackets with No. 87 standards for 1" adjustment. Brushed chrome finish on both brackets and standards.
   2. Shelving in cabinets without doors shall be supported on Hafele 282.04.711 shelf supports.

2.04 FINISHING

A. No finishing required on color-sealed hardboard surfaces. No finish, except cleaning, required on plastic laminate surfaces. Wood surfaces shall receive AWI 1500 TR4 conversion varnish finish system, stained to match sample in Architect's office unless noted otherwise. Factory pre-finish all paneling and wood clad millwork; finish all wood prior to installing.

2.05 MANUFACTURER OF PLASTIC LAMINATE

A. Acceptable Manufacturers of Plastic Laminate: As scheduled on drawings.

2.06 WIRE ACCESS GROMMETS

A. Provide wire access grommets as manufactured by Doug Mockett & Company, Manhattan Beach, California, standard grommet "TG", black UNO, in locations as directed in the field by Architect.

2.07 SEALANT

A. Provide colored sealant at joints between architectural woodwork/millwork and adjacent surfaces. Color of sealant to match millwork; install sample for Architect's approval before proceeding with this work.

2.08 CLOSET RODS

A. Rod: Stainless steel clad tubing, 1 1/16" outside diameter x length as required, Knape and Vogt "660" rod with "734" flanges.

2.09 PEGBOARD

A. Masonite Corp. Flame Test pegboard panels, with 1x2 white pine painted wood trim.

2.10 STAINLESS STEEL COUNTERTOPS WITH SPLASH

A. Formed countertops with rolled edges, splashes and closure pieces of 14-gauge type 304 or 316 stainless steel. Stainless steel continuously welded into monolith with exposed welds ground smooth. Provide 3/4-inch-thick continuous fiberboard support under all tops to support 150 lb./ft. loads or reinforce on the underside with 16-gauge carbon steel or stainless steel channels spaced to prevent oil- canning; twisting or buckling. Provide 12" x 14" x 7-1/2" integral sink; coordinate trim. Splash shall be 4” high formed into a 1” thick channel shape; provide a similar condition at edges. Countertop shall extend to the face of drawer units beneath.

B. All welds shall be ground smooth and polished to a uniform satin finish over the entire top and sink assembly. Soldering of the sinks, curbs or splash rails to the top will not be permitted. Mechanical joints or field joints, where made necessary by size, shall be a tight butt joint of the top surfaces, reinforced and held in alignment with steel reinforcements.

2.11 PLEXIGLAS

A. Black plexiglass; thickness as shown on drawings, 1/8" minimum.

2.12 SOLID SURFACE MATERIAL

A. As scheduled on the Room Finish Schedule.

2.13 * AD3 REMOVED

2.14 WORK OF OTHER TRADES INCLUDES

A. Under Plumbing Section, furnishing and installation in cabinet work of all sinks, faucets, trim, strainers, traps, stops and any and all other items therein specified for installation of cabinet work.

B. Under Heating, Ventilating and Air Conditioning Section, furnishing and installation of all items specified therein for installation in cabinetwork which may be related to Heating, Ventilating and Air Conditioning.

C. Under Electrical Section, furnishing, installation, and making all connections of all materials and items herein specified for installation in cabinet work which may be related to electrical work.

PART 3 – EXECUTION

3.01 FABRICATION

A. Fabricate cabinetwork in the shop with experienced journeymen personnel under the supervision of a thoroughly experienced foreman who will be totally responsible for work. Each cabinet shall be complete, self-supporting unit with a solid top or a supporting web as cabinet condition may require.

B. Bottoms, tops, fixed shelves, partitions, and webs shall be tendoned the full width of each part, glued and blind nailed into end panels, partitions, tops and bottoms in a continuous blind rabbet. Use reinforcing screw cleats and glue blocks as indicated on Drawings or specified herein.

C. Backs of fixed wall cabinets shall be housed into end panels and fastened at maximum 4" o.c. with 1-1/8" diverging, resin-coated staples.

D. Fixed wall cabinets 60" or more in height shall have three 1/2" x 3" anchor strips at backs for reinforcement and securing of the cabinet to the wall. Counter height fixed cabinets (wall) shall have two of the same anchor strips.

E. Full overlay type drawers shall be of dovetail construction at front and back. Drawer bottoms shall be housed into sides; backs and fronts shall be reinforced with glue blocks.

F. All cabinets shall be completed in the shop, including finishing and shall be delivered to site as a single unit. No assembly work will be permitted at the site, except by written authorization of Architect.

G. All required hardware, as specified above, shall be furnished and installed after all finish work has been completed. Drill holes to accept hardware prior to finishing. Inspect all drilling operations for surface splinters and delamination. Any piece bearing such imperfections will be rejected.

3.02 INSTALLATION

A. Inspection: Examine the areas and conditions under which work of this Section will be installed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

B. All fixed cabinets shall be leveled with shims and fastened securely to walls and/or floor with the proper fastening device. Verify location of all in-wall backing supports for cabinet work. All sized cabinets shall be fastened directly to studs or in-wall supports through wall finishes. Use No. 10 cadmium plated flat head wood screws of appropriate length to penetrate backing at least 1- 1/2". Use expansion shields at masonry walls. Countersink screws and provide laminate plugs at all exposed fasteners.

C. All casework shall be anchored to the building in conformance with requirements of the Architect. Casework shall be anchored to walls to withstand a horizontal load in any direction equal to 50% of the weight of the casework and contents (a minimum of 50 pounds per square foot of horizontal projection per shelf).

D. Furnish and properly install prefinished molding and/or panels required to close openings between cabinets and walls or other surfaces. Moldings and/or panels to match adjacent cabinets in materials and finish.

E. Install sealant at the junction of plastic laminate to the wall at all areas exposed to view.

F. Cleaning and adjustment: Upon completion of the installation, visually inspect each installed item, thoroughly clean all surfaces by using the cleaning materials recommended by the manufacturer of the finish being cleaned, and carefully adjust all operating components for optimum operation.

3.03 PLASTIC LAMINATE COLORS

A. Colors as scheduled on drawings; if not scheduled, as selected by Architect.

END OF SECTION

SECTION 09 67 23 RESINOUS FLOORING* AD 3

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes resinous flooring system consisting of an epoxy mortar and a high-performance general service epoxy sealer. These product are for use in the jail; including kitchen, showers and wet areas.

B. Application Method: Trowel, squeegee, backroll.

C. Related Sections:
1. Section 03 30 00: Cast-In-Place Concrete
2. Section 07 19 50: Vapor Barrier

1.2 SUBMITTALS

A. Product Data: For each type of product indicated. Include manufacturer's technical data, application instructions, and recommendations for each resinous flooring component required.

B. Samples for Verification: For each resinous flooring system required, 6 inches square, applied to a rigid backing by Installer for this Project.

C. Product Schedule: Use resinous flooring designations indicated in Part 2 and room designations indicated on Drawings in product schedule.

D. Installer Certificates: Signed by the manufacturer certifying that installers comply with specified requirements.

E. Maintenance Data: For resinous flooring to include in maintenance manuals.

1.3 QUALITY ASSURANCE

A. No request for substitution shall be considered that would change the generic type of floor system specified, consisting of a 1/4” general service epoxy mortar with a general service epoxy sealer.

B. Request for substitution will only be considered only if submitted 14 days prior to bid date. Request will be subject to specification requirements described in this section.

C. Installer Qualifications: Engage an experienced installer (applicator) who is experienced in applying resinous flooring systems similar in material, design, and the extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance, and who is acceptable to resinous flooring manufacturer.
1. Engage an installer who is certified in writing by resinous flooring manufacturer as qualified to apply resinous flooring systems indicated.
2. Contractor shall have completed at least 10 projects of similar size and complexity.

D. Source Limitations: Obtain primary resinous flooring materials, including primers, resins, hardening agents, grouting coats, and topcoats, through one source from a single manufacturer, with not less than ten years of successful experience in manufacturing and installing principal materials described in this section. Provide secondary materials, including patching and fill material, joint sealant, and repair materials, of type and from a source recommended by the manufacturer of primary materials.

E. Manufacturer Field Technical Service Representatives: Resinous flooring manufacture shall retain the services of Field Technical Service Representatives who are trained specifically on installing the system to be used on the project.

1. Field Technical Services Representatives shall be employed by the system manufacturer to assist in the quality assurance and quality control process of the installation and shall be available to perform field problem-solving issues with the installer.

F. Preinstallation Conference:
1. General contractor shall arrange a meeting not less than thirty days prior to starting work. Meeting shall be just prior a regularly scheduled progress meeting.
2. Attendance:
   a. General Contractor
   b. Architect/Owner's Representative.
   c. Manufacturer/Installer's Representative.
   d. Installer.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages and containers, with seals unbroken, bearing manufacturer's labels indicating brand name and directions for storage and mixing with other components.

B. Store materials to prevent deterioration from moisture, heat, cold, direct sunlight, or other detrimental effects.

C. All materials used shall be factory pre-weighed and pre-packaged in single, easy to manage batches to eliminate on-site mixing errors. No on site weighing or volumetric measurements allowed.

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Comply with resinous flooring manufacturer's written instructions for substrate temperature, ambient temperature, moisture, ventilation, and other conditions affecting resinous flooring application.

B. Lighting: Simulate permanent lighting conditions during resinous flooring application.

C. Close spaces to traffic during resinous flooring application and for not less than 24 hours after application, unless the manufacturer recommends a longer period.

D. Concrete substrate shall be properly cured for a minimum of 30 days. A vapor barrier must be present for concrete subfloors on or below grade. Otherwise, provide a manufacturer recommended osmotic pressure resistant grout; installed prior to the resinous flooring.

PART 2 - PRODUCTS

2.1 RESINOUS FLOORING - RES 1: [Use at showers, toilets and detox cells]

A. Products: Subject to compliance with requirements; StonHard Stonclad GS with Stonkote GS4 coating [Basis of Design]
1. Nominal 1/4” thick system comprised of a penetrating, moisture tolerant, two-component epoxy primer, a high performance, three-component mortar consisting of epoxy resin, curing agent and selected,

graded aggregates blended with inorganic pigments and a two-component, 100% solids, general service, epoxy coating
a. [Basis of Design] Stonclad GS/GS4 [214.680.2494]
b. AD 3Other Manufacturer: Steri-Flor by Dudick, and Prime Coat Coating Systems

B. System Characteristics:
1. Color and Pattern: As scheduled.
2. Wearing Surface: As scheduled.
3. Integral Cove Base: 8” high [to the block course], UNO
4. Slip- Resistant Surface texture: provide a light sand to make for a slip resistant finish at kitchen, laundry, jail and any other wet locations.

C. System Components: Manufacturer's standard components that are compatible with each other and as follows.
1. Body Coat(s):
a. Material Basis: Stonclad GS
b. Resin: Epoxy
c. Formulation Description: Three component epoxy mortar.
d. Application Method: Trowel
1) Thickness of Coats 3/16”
2) Number of Coats: (1)
2. Topcoats;
a. Material Basis: StonkoteGS4
b. Resin: Epoxy
c. Formulation Description: (2) component epoxy
d. Color: Pewter
e. Finish: Semi-gloss- Texture 2
f. Number of Coats: (1)

2.2 ACCESSORY MATERIALS

A. Primer: Type recommended by the manufacturer for substrate and body coats indicated. Formulation Description: Stonhard Standard Primer.

B. Patching and Fill Material: Resinous product of or approved by resinous flooring manufacturer and recommended by the manufacturer for application indicated.

C. Joint Sealant: Type recommended or produced by resinous flooring manufacturer for type of service and joint condition indicated. Allowances should be included for Stonflex MP7 joint fill material.

2.3 MAINTENANCE MATERIAL

A. Provide one box of each type of flooring and 10’ of each base.

PART 3 - EXECUTION

3.1 PREPARATION

A. General: Prepare and clean substrates according to resinous flooring manufacturer's written instructions for substrate indicated. Provide clean, dry, and neutral Ph substrate for resinous flooring application.

B. Concrete Substrates: Provide sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form release agents, dust, dirt, grease, oil, and other contaminants incompatible with resinous flooring.
   1. Mechanically prepare substrates as follows:
      a. Mechanically prepare with the use of Diamond grinding equipment to provide surface sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form release agents, dust, dirt, grease, oil, and other contaminants incompatible with resinous flooring. Or,
      b. Shot-blast surfaces with an apparatus that abrades the concrete surface, contains the dispensed shot within the apparatus and recirculates the shot by vacuum pickup.
      c. Comply with ASTM C 811 requirements, unless the manufacturer's written instructions are more stringent.
   2. Repair damaged and deteriorated concrete according to resinous flooring manufacturer's written recommendations.
   3. Verify that concrete substrate are dry.
      a. Perform in situ probe test, ASTM F 2170. Proceed with application only after substrates do not exceed a maximum potential equilibrium relative humidity of 80 percent.
      b. Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with application only after substrates have a maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. of the slab in 24 hours.
      c. Perform additional moisture tests recommended by the manufacturer. Proceed with application only after substrates pass testing.
   4. Verify that concrete substrates have neutral Ph and that resinous flooring will adhere to them. Perform tests recommended by the manufacturer. Proceed with application only after substrates pass testing.

C. Resinous Materials: Mix components and prepare materials according to resinous flooring manufacturer's written instructions.

D. Use patching and fill material to fill holes and depressions in substrates according to manufacturer's written instructions.

E. Treat control joints and other nonmoving substrate cracks to prevent cracks from reflecting through resinous flooring according to manufacturer's written recommendations. Allowances should be included for Stonflex MP7 joint fill material.

F. Store all components between 60 to 85˚F/16 to 30˚C in a dry area. Avoid excessive heat and do not freeze.

3.2 APPLICATION

A. General: Apply components of resinous flooring system according to manufacturer's written instructions to produce a uniform, monolithic wearing surface of thickness indicated.
   1. Coordinate application of components to provide optimum adhesion of resinous flooring system to substrate, and optimum intercoat adhesion.
   2. Cure resinous flooring components according to manufacturer's written instructions. Prevent contamination during application and curing processes.
   3. At substrate expansion and isolation joints, provide joint in resinous flooring to comply with resinous flooring manufacturer's written recommendations.
      a. Apply joint sealant to comply with manufacturer's written recommendations.

B. Mix and apply primer over properly prepared substrate with strict adherence to manufacturer's installation procedures and coverage rates

C. Body coat: Mix base material according to manufacturer's recommended procedures. Uniformly spread mixed material over the previously primed substrate using manufacturer's installation tool.

D. Sealer Coat: mix and apply sealer coat in accordance with manufacturers written application instructions.

E. High Humidity Applications: It is common to have installation difficulties when applying URT Undercoat and Stonseal CA7 under high humidity conditions. The working time of the URT Undercoat and Stonseal CA7 are inversely related to the relative humidity level. Under these conditions, the working time of the material is greatly reduced as the excessive moisture present in the atmosphere accelerates the cure. To slow down the cure rate, limit the amount of moisture coming in contact with the material. It is common practice, once materials are mixed, to pour the entire bucket onto the floor. Though this is advantageous when working with epoxies, it is potentially detrimental when working with these unique urethanes. Increase the open time by pouring only a portion of the material onto the floor while leaving the rest in the bucket until it is ready to be applied. This limits the amount of material being exposed to the moisture in the air at one time. The cure rate of these urethane materials is not accelerated when sitting in the bucket, unlike epoxy materials. Also, NEVER mix multiple mixes at once; only mix one mix at a time!

F. Low humidity will likely affect this product in the opposite way. When the humidity is low it is not unusual for the undercoat to take more than 4 hours to cure. It may even stay slightly soft for up to 12 hours. Reportedly this will not affect the overall performance of the finished system. As the material cures the physical properties shall develop to their full potential.

3.3 TERMINATIONS

A. Chase edges to “lock” the coating system into the concrete substrate along lines of termination.

B. Penetration Treatment: Lap and seal coating onto the perimeter of the penetrating item by bridging over compatible elastomer at the interface to compensate for possible movement.

C. Trenches: Continue coating system into trenches to maintain monolithic protection. Treat cold joints to assure bridging of potential cracks.

D. Treat floor drains by chasing the coating to lock in place at the point of termination.

3.4 JOINTS AND CRACKS

A. Treat control joints to bridge potential cracks and to maintain monolithic protection.

B. Treat cold joints and construction joints to bridge potential cracks and to maintain monolithic protection on horizontal and vertical surfaces as well as horizontal and vertical interfaces.

C. Discontinue floor coating system at vertical and horizontal contraction and expansion joints by installing the backer rod and compatible sealant after coating installation is completed. Provide sealant type recommended by the manufacturer for traffic conditions and chemical exposures to be encountered.

3.5 FIELD QUALITY CONTROL

A. Material Sampling: Owner may at any time and any numbers of times during resinous flooring application require material samples for testing for compliance with requirements.
   1. Owner will engage an independent testing agency to take samples of materials being used. Material samples will be taken, identified, sealed, and certified in presence of Contractor.
   2. Testing agency will test samples for compliance with requirements, using applicable referenced testing procedures or, if not referenced, using testing procedures listed in manufacturer's product data.
   3. If test results show applied materials do not comply with specified requirements, pay for testing, remove noncomplying materials, prepare surfaces coated with unacceptable materials, and reapply flooring materials to comply with requirements.

3.6 CLEANING, PROTECTING, AND CURING

A. Cure resinous flooring materials in compliance with manufacturer's directions, taking care to prevent contamination during stages of application and prior to completion of the curing process. Close area of application for a minimum of 18 hours.

B. Protect resinous flooring materials from damage and wear during construction operation. Where temporary covering is required for this purpose, comply with manufacturer's recommendations for protective materials and method of application. General Contractor is responsible for protection and cleaning of surfaces after final coats.

C. Cleaning: Remove temporary covering and clean resinous flooring just prior to final inspection. Use cleaning materials and procedures recommended by resinous flooring manufacturer.

END OF SECTION

SECTION 10 00 00 MISCELLANEOUS SPECIALTIES*[AD 2] [AD 3]

PART 1 GENERAL

1.1 SUMMARY

A. Provide items as outlined below. Scope of Work includes blocking as specified in Section 06 10 00.

1.2 QUALITY ASSURANCE

A. Use adequate number of skilled workmen who are trained and experienced in the necessary crafts and who are completely familiar with the requirements and the methods needed for proper installation of the work of this Section.

1.3 PRODUCT HANDLING

A. Protection: Use all means necessary to protect the Owner furnished items before, during and after installation.

1.4 QUALITY ASSURANCE

A. Meeting ASTM-E84 Class I rating.

PART 2 PRODUCTS

2.1 CG - CORNERGUARDS: Full height with closure caps where appropriate, Start at top of base.
A. Surface-mounted: Construction Specialties SSM-20N Acrovyn, color as noted on finish schedule.
B. Provide 2% maintenance stock for all types of cornerguards utilized on this project.

2.2 CRASH RAILS: Model SCR-48N with PVC-free Acrovyn 3000; 6” high with end caps; refer to drawings for double rail installation detail and mounting heights. Coordinate end caps at light switches, thermostats, corner guards, and other mounted equipment, etc.; color as scheduled. [Construction Specialties; www.c-sgroup.com]

2.3 BLINDS: Hunter Douglas, Model Modern Precious Metals, aluminum blinds with cordless SimpleLift operating system. Bottom hold down bracket and tilt rod.

2.4 KNOX BOX – Provide and install a Knox Company, Newport Beach, CA Model 3200 Knox switch or Knox Pad Lock at site entry gates per Fire Marshal direction. Provide 3200 Knox Box recessed into exterior face of building per City direction at the fire riser room. Additionally, provide Knox elevator box at level 1 of each elevator with firefighter control keys and elevator emergency door keys.

2.5 *[AD 3]REMOVED

2.6 SPLASH BLOCKS: Provide precast concrete splash blocks at all overflow and roof drain downspouts and scupper locations that empty onto landscaping [unpaved areas] or roofing. 16” x 36”.

2.7 EQ 360 “Z” LOCKER: Bradley www.bradleycorp.com Lenoxzlocker Lenox “Z” Locker, solid plastic. Size as indicated in drawing scheduled. Provide padlock hasps, 4” high lenoxbase, number plates, wall hooks, and lenoxfiller filler ends.

2.8 EQ-614: EYEWASH AND BODY SHOWER: Bradley [Menomonee Falls, WI 800-272-3539, [www.bradleycorp.com] Model S19-310AC, complies with ANSI/ISEA Standard Z358.1, Galvanized Steel

Protected with Safety Yellow Coating, construction with all stainless steel fittings. Drench shower to exceed 20 GPM, Eye/Face wash to exceed 3 GPM.

2.9 *AD 2 EQ 1217-4 PNEUMATIC TUBE SYSTEM: Eagle Pneumatic, Inc. Model: Mark II. Provide a complete system for a 4" tube system connecting 3 stations. Manufacture from heavy steel for durability. Pressure vacume system includes two systems, 4" powered end stations, two in Property Storage room, Two non-powered in Records/Bond Office room, and Booking room to have one intermediate station. System design to be reviewed by owner and architect. For system information contact: Patrick Evans at 863.644.4870x223 at sales@ http://eaglepneumatic.com. Carrier to be compatible with system type. Carrier selection to be made by architect and owner from full product line of PTS system available options. Provide one carrier per tube connection. Provide one carrier as attic stock.

2.10 EQ-1231-1016: DEAL TRAY – C.R. Laurence Co., Inc. Standard Drop-In Deal Tray, Model # CTD08, 8" wide x 10" deep x 1 3/4" h; flush drop-in design with 16ga stainless steel, #3 satin brushed finish. [www.crlaurence.com] or by Armortex

2.11 EQ-1241: DEAL DRAWER – C. R. Laurence Standard High Brushed Stainless Steel Deal Drawer, Model #DD1616; 15-3/4" wide x 22-1/4" deep x 4-15/16" h; flush drop-in design. [www.crlaurence.com]

2.12 EQ-1262: PASS-THRU HOPPER – C. R. Laurence Co., Inc. Brushed Stainless Thru-Wall Pass-Thru Hopper, Model # H0P1611TW; 18" wide x 9" deep x 12" h. [www.crlaurence.com]

2.13 EQ-1541, 1542 and 1543 - FIRE EXTINGUISHERS AND CABINETS – J.L. Industries , Larsen, or Potter Roemer. Extinguisher to be 10 pound ABC, UL-4A-60BC, Larsen MP10; wall bracket B2 at locations noted "1541"; semi recessed cabinet 2409-R4 with recessed handle and die cut lettering at "1542", cabinets to solid doors. At locations noted "1542D" provide semi-recessed detention cabinet, DEC 2409-R4. Mount cabinet so extinguisher is not taller than 48" AFF, with a projecting sign (Larson PTD-182 or equal) above. Provide at locations shown on drawings and min. at all electric rooms and elevator equipment rooms. If not shown on drawings provide min. 1 for each 3000 square feet of gross building space. At Data Room(s) provide a Type FE-36 extinguisher and wall bracket.

2.14 EQ-1561: FIRE HOSE CABINET – Detention Cabinet shall be Model No.DC-1810 as manufactured by Potter Roemer Fire Pro, City of Industry, CA 800-366-FIRE. Wall mounting to be recessed. Door to be flush solid metal with security lock. Install the cabinet plumb and level where indicated on the drawings, at heights acceptable to the authority having jurisdiction and ADA compliant. Verify class of cabinet and type with Fire Marshal and TCJS.

2.15 *AD 3 EQ-2233-A: CONVEYOR 1: PROPERTY STORAGE ROOM – Basis of Design: White Conveyors, Inc. Model Number: JND-408-U3. Up and Down, double tier conveyor equipped with 3 slot steel frames measuring 12 inches in length. Double aluminum yoke chain assemblies rated at 60 pounds capacity per foot. Equipped with (2) 2HP caterpillar drive units with inverter drive controls pre wired for 208V/3PH/60HZ. Conveyor is equipped with an arm mounted 600 series keyboard and an arm mounted 601 hand switch. Conveyor painted surfaces are gloss black and equipped with 8 tooth sprockets. Conveyor capacity is as follows; JND-408-U3; (408) frames x 3 slot x 2 tiers = 2,448 individual slots. Bags – 2,448 inmate property storage bags, Style: Duramesh Ultra featuring full mesh front and back panel with locking D ring zipper. Includes 3"x3" clear vinyl window on both sides of gusset.

Other Manufacturer: Up and Down double tier SRS All Flex Conveyor Model Number: AF-420-DT equipped with 3 slot links measuring 12 inches in length. Enclosed track conveyor completes with zinc plated steel chain rated for 100 pounds capacity per foot. Equipped with (2) 2HP caterpillar drive units with inverter drive to control speed prewired 208/3PH/60HZ. Conveyorwill be equipped with a hand control for manual operation and S-100 series touch controller for quick retrieval by typing slot number and ability to pre input a queue of up to six locations. Conveyor color is zinc plated with shiny smooth finish. Conveyor capacity is 2,520 bags (420 links x 3 slots x 2 tiers). Bags-2520 inmate property storage bags full mesh front and back panel with locking D ring zipper. Includes 3"x3" clear vinyl window on both sides of gusset.

2.16 *[AD 4] EQ-2233-B: CONVEYOR 2: SECURE PROPERTY STORAGE ROOM – Basis of Design: White Conveyors, Inc. Model Number: NDU-1240-U. Up and Down, double tier conveyor equipped with 10 slot steel frames measuring 12 inches in length. Single aluminum yoke chain assemblies rated at 30 pounds capacity per foot. Equipped with 1HP direct drive unit with inverter drive controls pre wired for 208V/3PH/60HZ. Conveyor is equipped with an arm mounted 600 series keyboard and an arm mounted 601 hand switch. Conveyor painted surfaces are gloss black and equipped with 6 tooth sprockets. Conveyor capacity is as follows; NDU-1240-U; (124) frames x 10 slot x 2 tiers = 2,480 individual slots. Bags – 2,448 12" locking canvas zipper bags with D ring.

Other Manufacturer: Up and Down double tier SRS All Flex Conveyor Model Number: AF-124-DT equipped with 10 slot links measuring 12 inches in length. Enclosed track conveyor completes with zinc plated steel chain rated for 100 pounds capacity per foot. Equipped with (1) 1HP caterpillar drive unit with inverter drive to control speed prewired 208/3PH/60HZ. Conveyor will be equipped with a hand control for manual operation and S-100 series touch controller for quick retrieval by typing slot number and ability to pre input a queue of up to six locations. Conveyor color is zinc plated with shiny smooth finish. Conveyor capacity is 2480 bags (124 links x 10 slots x 2 tiers). Bags-2480 locking canvas zipper bags with D rings

2.17 EQ-2432: WORK TABLE WITH SINK – Regency. Model Number 600STCB3096L/R. Durable 16 gauge type 304 stainless steel top, 20 gauge, 304 series stainless steel cross braces, a 12" deep stainless steel sink with a deck mounted faucet, 5" backsplash, stainless steel legs and sockets, adjustable bullet feet.

2.18 EQ-3321: RESIDENTIAL WASHER – Residential washing machine, General Electric Model Number WCVH6800JWW. [www.geappliances.com]

2.19 EQ-3331: RESIDENTIAL DRYER – Residential Dryer, General Electric Model Number DCVH680EJWW. [www.geappliances.com]

2.20 EQ-3515: SIDE BY SIDE REFRIGERATOR – Refrigerator, General Electric Model Number PFS22MIWWW. [www.geappliances.com]

2.21 EQ-4221: BASKETBALL BACKBOARD AND RIM: By Draper or Porter; stationary, powder coated steel, fixed height at 12' AFF, fan- shaped backboard 54"W x 35" with pre- drilled holes for flush mount to wall; with complete goal mounting assembly; fixed ring/ rim; cotton net.

2.22 EQ-5423: ELECTRONIC KEY CABINET: By Real Time Networks; 2 module cabinet for 40 key capacity with 32 module and 8 module. 16 ga. Powder-coated stainless steel with 0.06" thick housing and 0.10" thick lock door without window. Authentication options for pin code, RFID, proximity card, biometric, IrisID, or smart phone. 110V power with battery backup for 24-48 hours.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install per manufacturer's recommendations.

B. All applications to be true and plumb.

END OF SECTION

SECTION 10 80 00 TOILET AND BATH ACCESSORIES*[AD 3]

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes
   1. Toilet and bath accessories listed herein.
   2. Rough-in frames supplies to other sections.
   3. Attachment hardware and related blocking.

B. Related Sections
   1. Section 04 22 00: Concrete Unit Masonry.
   2. Section 09 29 00: Gypsum Board System.
   3. Section 10 15 50: Toilet Compartments.

1.02 REFERENCE STANDARDS

A. ASTM A-167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip.

B. ASTM A-336 - Cold-rolled Carbon Steel Sheets, Commercial Quality.

1.03 PRODUCT DATA

A. Submit manufacturer's product data in accordance with Section 01300.

B. Data to illustrate each accessory at large scale and show installation method.

1.04 DELIVERY, STORAGE AND HANDLING

A. Do not deliver accessories to site until rooms in which they are to be installed are ready to receive them.

B. Pack accessories individually in a manner to protect accessory and its finish.

C. Protect adjacent or adjoining finished surfaces and work from damage during installation of work of this Section.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS, subject to the requirements stated herein.

A. Bobrick Washroom Equipment, Inc.
B. Bradley Corporation
C. American Specialties, Inc.
D. Acorn Engineering Company (for detention accessories)
E. Norix (for detention accessories)

2.02 SCHEDULE OF ACCESSORIES [Bobrick numbers, U.N.O.]

TA-01: Surface Mounted Paper Towel Dispenser: Owner Provided Owner Installed.

TA-02A: Semi-Recessed Paper Towel Dispenser/Waste Receptacle: B3944
   1. Typical, where indicated (stainless steel)
   2. Mount with slot 48" AFF

TA-03: Recessed Convertible Paper Towel Dispenser And Waste Receptacle: B39003
   1. Typical, where indicated (stainless steel)

2. Mount with slot 48" AFF

TA-04: Recessed Waste Receptacle: 344
1. Typical, where indicated (stainless steel)
2. Mount with slot 48" AFF

TA-05: Toilet Tissue Dispenser for Two Rolls: B2740
1. Provide one for every water closet
2. Mount top at 28” AFF

TA-05X: Toilet Paper Dispenser: Bradley SA11 at chase locations, Bradley SA12 at wall mount locations
1. Provide one for every water closet
2. Mount top at 28” AFF

TA-06X: Recessed Detention Shelf: Willoughby RS2
1. Provide where indicated
2. Mount Shelf Surface at 56” AFF

TA-07: Electric Hand Dryer: World Dryer “VERDEdri”
1. Provide minimum of one at each toilet room with toilet partitions;.
1. Coordinate requirements with electrical [at time of submittal].
2. Surface mount, with maximum 4” projection from wall (ADA compliant).
3. Vandal resistant cast iron construction with brushed stainless steel finish.
4. Automatic function.

TA-09X: Grab Bar, 18" at jail locations: Bradley SA70 series
1. Provide where indicated
2. Mount at 34" to centerline AFF, max. 6" from the side wall

TA-10: Grab Bar, 24": B5806 x 24 with snap flange
1. Provide where indicated
2. Mount at 34" to centerline AFF, max. 6" from the side wall

TA-10X: Grab Bar, 24" at jail locations: Bradley SA70 series
1. Provide where indicated
2. Mount at 34" to centerline AFF, max. 6" from the side wall

TA-11: Grab Bar, 36": B5806 x 36 with snap flange
1. Provide where indicated
2. Mount at 34" to centerline AFF, max. 6" from the side wall

TA-11X: Grab Bar at jail locations, 36": Bradley SA70 series
1. Provide where indicated
2. Mount at 34" to centerline AFF, max. 6" from the side wall

TA-12: Grab Bar, 42": B5806 x 42 with snap flange
1. Provide where indicated
2. Mount at 34" to centerline AFF, minimum 12" from the rear wall

TA-12X: Grab Bar at jail locations, 42": Bradley SA70 series
1. Provide where indicated
2. Mount at 34" to centerline AFF, minimum 12" from the rear wall

TA-13: Grab Bar, 48": B5806 x 48 with snap flange
1. Provide where indicated
2. Mount at 34" to centerline AFF, minimum 12" from the rear wall

TA-14: Shower Grab Bar, 36” W x 32” D": GAMCO Model 150S-40 U-shaped; or another custom bar to match project requirements.
1. Provide where indicated
2. Mount at 34" to centerline AFF.

TA-15: Two-Wall Tub/Shower Toilet Compartment Grab Bar: L-Shaped (24x36) B58616
1. Provide at each accessible shower
2. Mount (consistently) at 33"-36” to centerline AFF

TA-15X: Two-Wall Tub/Shower Toilet Compartment Grab Bar: Bradley SA70 series
1. Provide at each accessible shower
2. Mount (consistently) at 33"-36” to centerline AFF

TA-20: Welded-Frame Mirror: B290 1836 with tempered glass

TA-20X: Welded-Frame Mirror: Similar to B290 1830 but using laminated glass

TA-21: Welded-Frame Mirror Full Height: B165 2060

TA-21X: Welded-Frame Mirror Full Height: Similar to B165 2060 but using laminated glass

TA-23XA: Security Framed Wall Mirror: Acorn 1812 HC (chase mounted), or 1813 HC (wall mounted)
1. Provide one at each detention water closet
2. Furnish mirror of 20 gauge sheet steel, type 400 stainless steel polished to a mirror finish with 1/2" thick fiberboard backing. Frame to be 12" x 16" & 12” x 22 ½” steel framing with satin chrome finish.

TA-23XB: Security Framed Wall Mirror: Acorn 1810 (chase mounted), or 1811 (wall mounted)
1. Provide one at each detention water closet
2. Furnish mirror of 20 gauge sheet steel, type 400 stainless steel polished to a mirror finish with 1/2" thick fiberboard backing. Frame to be 12" x 16" & 12” x 22 ½” steel framing with satin chrome finish
3. Provide an additional mirror at TAS height at accessible cells, shower rooms, and holding cells

TA-24: Frameless Mirror: Refer to elevations

TA-30: Counter Mounted Soap Dispenser: Owner Furnished Owner Installed.
1. Provide at all sinks and lavatories

TA-31: Wall Surface Mounted Soap Dispenser: B2111 Classic Series (Not used)

TA-35: Double Robe Hook: B7672
1. Provide one at each shower stall and where shown on drawings
2. Coordinate blocking to occur behind these hooks

TA-35X-1: Ball Clothes Hook: Norix S565-528
1. Provide at locations shown on drawings
2. Coordinate blocking to occur behind these hooks; 60 lb. load

TA-35X-4: Ball Clothes Hook: Norix S565-531
1. Provide at locations shown on drawings
2. Coordinate blocking to occur behind these hooks; 60 lb. load

TA-36: Utility Hook Strip: Datum Series 929 Utility Hook Strip (6 hooks)

1. Provide one at Jail Master Control

TA-39: Child Seat: (Not used)

TA-40: Diaper Changing Station: BKB110-SSWM

TA-41: Shower Seat:

*[AD 3]TA-41XR: Detention Shower Seat, folding, removable: Norix Model ISS-200. [Norix; www.norix.com]. Or fabricate per detail referenced in drawing schedule, contractor's option.

TA-42: Shower Rod and Curtain, provide where indicated.
1. Shower Rod, B6047
2. Mounting height: 6'-8" clear AFF, showers coordinated to go to the curb or floor
3. Shower curtain, B204-2, heavy duty vinyl, opaque, matte white vinyl w/stainless steel grommets, quantity to fit stalls
4. Provide an appropriate number of stainless steel curtain hooks, B204-1, for proper installation

TA-43A: Surface-Mounted Sanitary Napkin Disposal: B254
1. Surface-mounted. Provide where indicated in walls
2. Where not indicated, assume one applicable disposal at each female toilet

TA-50: Mop and Broom Holder: B223 x 36
1. Mount adjacent to mop sinks so drippings go into the sink.

TA-51: Hose Rack: (Not Used)

TA-52: ADA Bench, 42"W x 20"D
1. ADA Bench Kits by WB Manufacturing (www.wibenchmfg.com), or approved equal. Lacquer finished hardwood benches with stainless steel pedestals and brackets and fasteners.
2. TA-52A: Wall-mounted, provide stainless steel wall cleat and brackets securely attached to wall. Provide blocking or grouted CMU cells in wall as appropriate.
3. TA-52B: Free-standing, provide with hardwood back rest and stainless steel pedestals and supports.

TA-52X: 20"x42" Detention Wall Mount ADA Bench: Refer to details on J-D922.

TA-60X: Modesty Panels - Stainless steel modesty panel system- consisting of wall anchors, min. 2 floor posts, all securely anchored with vandal proof installation. 14 gauge screen panels, min. 2 x 2 x 10 ga. square tube supports. Smooth all sharp edges; all surfaces to be flat and true. Refer to J-D020 for length and orientation. [PDI; www.pdidet.com] [Kane Innovations; www.kanesterling.com]

2.03 FINISH

A. Exposed Metal: Stainless steel satin finish, unless otherwise noted in the schedule.

2.04 ATTACHMENT COMPONENTS

A. Adhesives: Epoxy-type contact cement.

B. Fasteners, Screws and Bolts: Hot-dip galvanized.

C. Expansion Shields: Fiber, lead or rubber as recommended by the accessory manufacturer.

2.05 FABRICATION

A. Weld and grind smooth all joints.

B. Form exposed surfaces from one sheet of stock, free of joints.

C. Provide steel anchor plates and anchor components for installation on building finishes.

D. Form surfaces flat without distortions. Maintain flat surfaces without scratches or dents.

E. Back paint components where contact is made with building finishes.

F. Hot dip galvanized ferrous metal anchors and fastening devices.

G. Shop assemble components and package complete with anchors and fittings.

PART 3 – EXECUTION

3.01 PREPARATION

A. Deliver inserts and rough-in frames to job site at an appropriate time for building-in. Provide templates and rough-in measurements as required.

B. Before starting work, notify Architect in writing of any conflicts detrimental to installation or operation of units.

C. Verify with Architect exact location of accessories if not shown on Drawings.

D. Coordinate and provide blocking behind accessories as required for heavy duty service/ use.

3.02 INSTALLATION

A. Install fixtures, accessories and items in accordance with manufacturer's printed instructions.

B. Install true, plumb and level, securely and rigidly anchored to substrate for long life under hard use.

END OF SECTION

SECTION 11 19 00 DETENTION * AD 1, AD 3

PART1 – GENERAL

1.01 SECTION INCLUDES

A. Detention equipment and systems including:
   1. Furnishing of embeds required for proper installation of detention equipment and coordination with other phases of the work for Detention Equipment Contractor (DEC). Furnished items only.
   2. Anchors, accessories, inserts, fasteners and welding necessary for proper installation of detention equipment, unless otherwise noted.
   3. Supervision during installation of detention equipment and embeds.
   4. Steel plates and supports where indicated or required for use with specified detention equipment.
   5. Miscellaneous detention equipment & furnishings.
   6. Steel plate access panels.
   7. Filling voids and open joints between metal surfaces where contraband could be concealed such as field assembled joints not completely closed by welding. Voids shall be filled with epoxy joint filler. (Pick-Proof)

B. Detention (security) hollow metal including:
   1. Detention hollow metal doors and windows, and frames for doors, windows, side lites, skylight guards, borrowed lites, windows and related openings.
   2. Metal trim, closures and light boxes used in conjunction with detention hollow metal work.

C. Detention (security) hardware including:
   1. Detention grade hinges, pulls, push plates, closers and doorstops.
   2. Detention grade electric and mechanical locks and monitoring switches.
   3. Weather-stripping, thresholds and smoke/fire gaskets.

D. Security glazing and accessories.

1.02 RELATED SECTIONS

A. Final field painting of shop primed steel items - Section 09 90 00.

B. Electronic security system – Section 28 05 10.

C. Electrical power supply and raceway systems - Division 26

1.03 REFERENCES

A. ASTM Standards
   1. ASTM A36 - Structural Steel.
   2. ASTM A167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
   3. ASTM A366 - Steel, Carbon, Cold-Rolled Sheet, Commercial Quality.
   4. ASTM A525 - General Requirements for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process.
   5. ASTM A526 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Commercial Quality.
   6. ASTM A568 - General Requirements for Steel, Carbon and High-Strength Low-Alloy Hot-Rolled Sheet and Cold-Rolled Sheet.
   7. ASTM A569 - Steel, Carbon (0.15 Maximum, Percent), Hot-Rolled Sheet and Strip, Commercial Quality.
   8. ASTM A627 - Homogeneous Tool-Resisting Steel Bars for Security Applications.
   9. ASTM A629 - Tool-Resisting Steel Flat Bars and Shapes for Security Applications.
   10. ASTM B209 - Aluminum and Aluminum-Alloy Sheet and Plate.
   11. ASTM B221 - Aluminum and Aluminum-Alloy Bar, Rod and Wire. 11 1900 - 2
   12. ASTM E152 - Fire Tests of Door Assemblies.

B. HMMA 840-87 - Installation and Storage of Hollow Metal Doors and Frames.

C. HMMA 863-87 - Detention Security Hollow Metal Doors and Frames.

1.04 SUBMITTALS

A. Procedures for submittals: Division 1.

B. Product Data: Manufacturer's product data sheets or standard details for:
   1. Stock equipment items and products.
   2. Hardware items.
   3. Security fasteners.
   4. Sealant, shop primer and similar products.
   5. Security glazing and accessories.

C. Shop Drawings:
   1. Shop drawings must exhibit all dimensions, configurations of material, sizes, assembly methods, spacing of anchors and embeds, joinery, finishes, alloy, thickness of material hardware and joinery with adjacent work.
   2. Shop drawing submittal package shall contain as a minimum the following:
      a. Key plan for all detention doors, access panels, and other devices with detention locks. Show side-lites and borrowed lite windows and include glazing types.
      b. Hardware schedule for all detention doors indicating architects door number and hardware set number, list of hardware contained within each set number, finishes, degree of opening of each door and a catalog data sheet on each piece of hardware.
      c. Detention hollow metal schedule and drawings including detail and section drawings, anchorage details and elevations of each door type indicating glazing openings, food passes, shutters and any other required door options.
      d. Embed plan indicating dimensioned location of all embeds to be located in floor slab, walls and roof deck with details of each embed type.
      e. Equipment floor plans identifying each piece of equipment and location of it.
      f. Equipment drawings showing sizes, finishes and details of all furniture and equipment.
      g. Any other applicable schedules and specifications sheets.
   3. Indicate welding requirements and other means of providing anchorage and attachment of equipment.
   4. Wiring diagram and electrical characteristics for each locking device.
   5. Setting diagrams and dimensional layouts indicating location and proper installation of embeds.

D. Detention Door Hardware Schedule:
   1. Indicate hardware items for each detention hardware set heading.
   2. Schedule shall be in a vertical format, coded schedules are not acceptable.
   3. Provide product data sheets illustrating each detention hardware item.
   4. Complete Keying Schedule.

E. Glazing: provide two samples of each type of glazing used; 12” x 12”.

F. Templates: upon receipt of the approved hardware schedule, the DEC shall promptly provide the hardware manufacturer's templates to the hollow metal door manufacturer and any others requiring said information.

G. Packing and Marking: Each item of detention hardware shall be packaged and marked according to the set numbers on the approved hardware schedule. Shipping cartons shall be marked "Detention Hardware - (project name)".

H. Quality Control Submittals: For information only.

1. Certificates: Certification that fire rated door assemblies bear UL or Warnock Hersey Label for scheduled fire rating.
2. Test Reports: Certified test reports of an independent testing laboratory evidencing that detention hollow metal doors meet or exceed specified design criteria and that security glazing meets specification requirements.
3. Label Construction Certification: Manufacturer’s certification for oversize doors or doors not otherwise suitable for fire rating. Certify that door and frame assembly has been constructed with materials and methods equivalent to requirements for labeled openings per ASTM E152.
4. HMMA 840-87 - Installation and Storage of Hollow Metal Doors and Frames.
5. HMMA 863-87 - Detention Security Hollow Metal Doors and Frames.
    a. Scheduled fire rating.
    b. Test Reports: Certified test reports of an independent testing laboratory evidencing that detention hollow metal doors meet or exceed specified design criteria and that security glazing meets specification requirements.
    c. Label Construction Certification: Manufacturer’s certification for oversize doors or doors not otherwise suitable for fire rating. Certify that door and frame assembly has been constructed with materials and methods equivalent to requirements for labeled openings per ASTM E152.
    d. Manufacturer's installation instructions.

I. Contract Closeout Submittals: Refer to Section 01 70 00.
1. Operating and maintenance data: Include following, as applicable, for each type of detention door operating and locking system and detention hardware:
    a. Operating instructions.
    b. Record wiring diagram for locking device wiring.
    c. Lubrication and maintenance requirements.
    d. Spare parts list.
2. Owner instruction reports.
3. Warranty.
4. Letter verifying that extra materials have been delivered.

1.05 QUALITY ASSURANCE

A. In order to establish the standard of quality required, and to help assure a coordinated project, only DEC's with a proven record of successful projects shall be considered for this portion of the work. The following DEC's are pre-qualified to perform the work described in this section of specifications:
1. Sustainable Security Solutions, San Antonio
2. Pauly Jail Building Company, Noblesville, Indiana
3. CML Security – San Antonio, Texas
4. *AD 3 Southern Folger

B. Any qualified DEC not listed above as pre-qualified and wishing to submit a bid on this section of the specifications must have an established reputation for dependable performance, quality products, prompt maintenance service and readily available spare parts. Bidders for this section must further be prepared to satisfy the Owner and the Architect that they possess adequate staff, facilities and finances to complete this work timely. Applications to become a DEC pre-qualified to bid this work shall be submitted in writing, not less than fourteen (14) days prior to bid date. Only pre-qualified DEC's listed above, or approved by Addendum, will be allowed to bid on this project. Verbal approval will not satisfy this requirement. All DEC's, whether pre-qualified or added by addendum, must comply with all state laws concerning work in the state where project is located. Applications to become a pre-qualified DEC shall contain the following information:
1. A list of ten (10) installations, equal to or larger in scope than this project and constructed with products similar to those specified herein, in which the firm furnished and installed the detention equipment. The minimum period of operation for each of the facilities shall be twelve (12) months.
2. For each of these ten (10) facilities list:
    a. Name and location of project
    b. Date of occupancy by the Owner

c. Name, address and phone number of the Architect, Owner's representative, and General Contractor
d. Dollar amount of the detention contract
e. List, with phone numbers, of suppliers of hollow metal and locking devices, if other than applicant

3. A list of all jobs in the past five - (5) years in which the applicant firm has been involved in litigation or been assessed liquidated damages and the status thereof.
4. An audited financial statement, covering the applicant firm's most recently completed fiscal year, which reflects a net worth at least equal to the value of this section of the work.
5. Letter from Surety Company verifying that applicant firm has bonding capacity available in excess of the value of this project that will be allocated to this project if subject DEC is awarded the job.

C. The Owner or Architect reserve the right to disqualify any applicant that does not comply with all of the requirements of this section.

D. Voluntary alternates will be cause for disqualification of DEC.

E. Detention Equipment Manufacturers: Detention equipment will be accepted only from manufacturers listed or accepted in accordance with these Specifications. Provide products of a single manufacturer for each item of detention equipment.

F. Regulatory Requirements: Provide work in compliance with latest editions (and revisions thereto) of following codes and requirements:
1. Federal, state and local codes and ordinances bearing on work at project location.
2. National Electric Code.
3. ADA/TAS.
4. Requirements of regulatory agencies having jurisdiction at project location.

G. Detention Hollow Metal Door Design Criteria: 3'-0" x 7'-0" x 2 in. thick door weighing not more than 13 lbs. per sq. ft. shall meet or exceed following design criteria when tested by an independent testing laboratory.
1. Static Load: Under a static load of 14,000 lbs., at quarter points, maximum permitted center span deflection of 0.58 in. with maximum permanent deflection of 0.015 in.
2. Rack (twist): Under a concentrated load of 7500 lbs., on one unsupported corner, maximum deflection of door shall not exceed 3.55 in. with no failure of construction or welds.
3. Test 3 - Impact Load Test: A 3'-0" x 7'-0" door, frame, and hardware assembly shall be constructed and rigidly mounted in vertical position such that door and locking hardware are operable. The door shall swing on 1-1/2 pair of full mortised butt hinges, and shall be locked using a Folger Adam #60, 70 or 80 series lock with bolt size not to exceed 2 in. high x 3/4 in. wide, and latch throw not to exceed 3/4 in.
   a. A door ram pendulum system capable of delivering consistent impacts of up to 200-ft. lbs. shall be constructed such that impacts may be delivered to any area of assembly. The pendulum ram system shall be positioned opposite door side of assembly such that door swings away from ram. While hanging at rest, the ram shall be positioned such that striking nose shall be made from C1010-1020 low carbon steel, the striking surface area which shall not exceed 4.0 sq. in.
   b. With the door closed and locked and above testing arrangement secured, following series of impacts shall be performed on the assembly:

of Energy Position and Order of Impact	Impacts (ft. lbs.)
On door within 6 in. of bolt	400
On door within 6 in. of middle hinge	50
	200
	200

   c. The door shall remain closed and locked throughout testing procedure, and assembly shall not be damaged such that the forcible egress can be obtained. After testing is completed, the door shall be capable of being unlocked and operated such that normal egress can be obtained.
4. Removable Glazing Stop: No more than one broken fastener when tested in accordance with NAAMM Standard HMDF-1-85, paragraph 1.04D.

H. Coordination Responsibilities:

1. Provide coordination between detention equipment work, electronic systems and related mechanical and electrical work to insure that functioning elements of detention equipment and mechanical and electrical systems are properly interfaced and connected to electronic systems.
2. Coordinate Progress Schedules, including dates for submittals and for delivery of products.
3. Participate in progress meetings and coordination meetings. Report on progress of work subject to coordination requirements, and any needed changes in schedules. Transmit minutes of meetings to concerned entities.
4. Review shop drawings, product data, wiring diagrams, templates, and sample submittals for coordination with detention equipment and hardware. Verify that electronics equipment and controls are interfaced to properly operate and monitor detention hardware.

1.06 DELIVERY, STORAGE AND HANDLING

A. For items of equipment to be installed as a part of work under other sections of Specifications, deliver such items to project site in a timely manner so as to not delay the normal progress of work.

B. Protect materials from damage in transit and at the job site.

C. Store materials at a job site in dry, well-ventilated area, off ground, and under cover to protect from damage by weather. Take special care to prevent damage of operable equipment and controls as applicable.

D. Storage:
1. Protect all materials during storage on the job and during and after installation.
2. Store all materials in a secure, dry, locked storage area.
3. Place all material on planking or blocking, at least 4" off ground, 2" off a paved area or floor slab.
4. Provide, by means of wood strips, a space of at least 1/4" between all units for air circulation.
5. Do not stack material flat. Store doors and frames in an upright position with heads uppermost.
6. Place no more than five (5) single opening frames and three (3) multi-opening frames in a group.
7. Do not permit cardboard or paper containers or wrappings to become wet. If this should occur, remove them immediately.
8. Adhere to manufacturers recommendations for storage.

E. Handling:
1. The DEC is responsible to unload, and distribute to installation locations the detention hollow metal doors and frames, embeds, and other miscellaneous detention items.
2. Coordinate with the Construction Manager to have the applicable Contractor install all embeds, anchor plates, hollow metal frames, access door frames and back boxes for electronic equipment.
3. Remove protective materials, and clean all finished surfaces using clear water and a nonabrasive detergent.

1.07 PROJECT CONDITIONS

A. Drawings show arrangement and location of items of equipment. If it is necessary to vary from arrangement shown, because of structural, mechanical, electrical or other considerations, make such variations only after approval of Architect and at no additional expense to Owner.

B. Field verifies dimensions.

C. Measure recesses and openings and provide trim pieces, fillers, closures in sizes required.

D. Furnish reviewed Shop Drawings, setting diagrams and other information required for proper installation of detention equipment specified to be installed under other sections.

1.08 WARRANTY

A. Provide joint written warranty of Contractor and equipment manufacturer, on a single document, which shall warrant detention equipment provided under this Section of Specifications for a period of one year from date of Final Acceptance.

B. Provide a written warranty on security glazing warranting against plastic and glass delamination coating failure, yellowing and loss of light transmission for a period of five years from the date of final acceptance.

C. Warranty shall cover defects in fabrication, installation and system design, including costs involved to repair or replace the damaged or defective item(s).

1.09 MAINTENANCE CONTRACT

A. As a part of Work of this Section, provide Owner with maintenance service on detention hardware, at no additional cost, for a period of 12 months after Final Acceptance.

B. Service shall include adjustment and repair or replacement of worn or defective parts, components, or equipment including labor, freight and related expenses. Normal service shall be performed within 7 days after each written request from Owner. Service does not include repairs resulting from misuse or abuse.

C. The DEC shall also provide emergency service during the warranty period, including a maximum 48-hour response time to calls requiring visits to the facility.

PART 2 - PRODUCTS

2.01 MANUFACTURERS, subject to the requirements stated herein;

A. Detention Equipment & Furniture: may be furnished by any pre-qualified detention equipment contractor. Pre-qualification does not relieve firm from supplying all equipment in compliance with plans and specifications.

B. Detention Hollow Metal Doors and Frames (including frames for security-glazed vision panels):
   1. Trussbilt Incorporated
   2. American Steel Products
   3. Titan Steel Door Company.
   4. * AD1 Claborn Manufacturing.

C. Detention (Security) Wire Mesh and Frames:
   1. The G-S Company
      a. [Basis of Design] Sure-Guard severe duty partition
   2. Kane Manufacturing Company
   3. Peterson Detention Inc.
   4. Any pre-qualified detention equipment contractor
   5. * AD 1 Claborn Manufacturing.

D. Detention Door Locks and Hardware: Detention hardware items as scheduled in Detention Door Hardware Schedule:
   1. Southern Folger Company
   2. R. R. Brink Locking Systems
   3. AirTeq

E. Security Glazing:

1. Global Security Glazing
2. Allied Protective Glazing / LTI Group

F. Commercial Non-Detention Hardware: Heavy-duty closers, doorstop, aluminum thresholds, plate and weather-stripping are based on products and catalog numbers from the following manufacturers:
1. LCN or Norton (for door closers) except as otherwise scheduled
2. Glynn Johnson, Stanley or Hager (for doorstops)
3. Pemko (for thresholds and weather-stripping), Rockwood, National Guard, or Reese

G. Locks and hardware items of same type shall be products of a single manufacturer unless otherwise noted.

H. Modesty Panels: Peterson/Viking Detention stainless steel – as detailed.
1. * AD 1 Claborn Manufacturing.

I. Substitutions: Under provisions of Division 1.

J. Detention Furnishings
1. Southern Folger
2. Viking
3. Norix
4. Fabcor
5. Bob Barker.
6. * AD 1 Claborn Manufacturing.

K. Detention Windows.
1. Sherwood Windows Group sherwoodwindows.com [Basis of Design]
2. Hopes

2.02 MATERIALS

A. General:
1. Material required for specified work shall be new and produced especially for detention use and shall conform to accepted standards of detention equipment industry, but in no case of lesser quality than specified requirement.
2. Electrical components, including motors, switches, relays, and controls, shall be best of their kind and quality, manufactured by recognized manufacturers, and constructed to operate on electrical current characteristics as indicated on Drawings for such work.

B. Steel (except stainless steel):
1. Steel Plate: Mild steel plate, ASTM A36, thickness scheduled.
2. Steel Shapes: Mild steel, ASTM A36, unless otherwise noted.
3. Sheet Steel (for hollow metal security/detention doors, frames and other sheet fabrication): Commercial quality carbon steel, cold rolled, ASTM A366 or hot rolled ASTM A569, and complying with ASTM A568. Provide stretcher leveled steel sheet for faces of hollow metal detention doors.
4. Galvanized Sheet Steel: Commercial quality carbon steel zinc coated, ASTM A526 and ASTM A525 with minimum A90 zinc-alloy coating or G90 zinc coating, mill phosphatized. Provide stretcher leveled steel sheet for faces of hollow metal detention doors.

C. Stainless Steel: ASTM A167, Type 304 or 316, gauge (thickness) as specified or noted on Drawings; 14 gage minimum.

D. Shop Primer:
1. Steel Surfaces: Top quality, rust-resistant metal primer, free of lead, compatible with finish coats.
2. Galvanized Surfaces: Dust-zinc oxide primer.

E. Fasteners and Anchors:
   1. As recommended and furnished by detention equipment manufacturer for each condition adequate to maintain integrity of security or detention provided by item to be fastened or anchored.
   2. Exposed fasteners shall be tamper-resistant security fasteners, torx head with pin configuration. Provide one style fastener throughout. Furnish Owner with quantity of 3 special tools required to remove tamper-resistant security fasteners.

F. Epoxy Joint Filler: Epoxy sealant; paintable.

G. Galvanized Repair Coating: Carbo Zinc No. 11 by Carboline; Galv-Weld Alloy by Galv-Weld Products, or ZRC Cold Galvanizing Compound by ZRC Chemical Products Company.

2.03 DETENTION HOLLOW METAL FABRICATION, GENERAL

A. General:
   1. Fabricate detention hollow metal and steel units rigid, neat in appearance and free of defects, warp or buckle. Accurately form metal to required sizes and profiles.
   2. 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 project site.
   3. Weld exposed joints continuously, grind, dress, and make smooth, flush and invisible. Metallic filler to conceal manufacturing defects is not acceptable.

B. Hardware Preparation:
   1. Prepare doors and frames to receive mortised and concealed detention hardware, including cutouts, reinforcing, drilling and tapping in accordance with templates supplied with hardware.
   2. Reinforce units to receive surface-applied hardware. Drilling and tapping for surface-applied hardware may be done at project site.
   3. Where electrically operated hardware is required, provide hardware enclosures and junction boxes and interconnect using UL approved ¾" diameter conduit, elbows and connectors.
   4. Provide junction boxes to facilitate proper installation of wiring. Coordinate with Construction Manager if access plates required. Access plates if required shall be same gauge as frame and fastened with a minimum of six #10-32 allen or torx head with pin drive tamperproof machines screws, but not to exceed 6 in. o.c. Debur conduit ends at factory.
   5. Connect conduit to lock pockets and boxes with compression type, grout tight, fittings.

C. Shop Painting:
   1. Clean, treat and paint exposed surfaces of fabricated hollow metal units, including galvanized surfaces.
   2. Clean steel surfaces of mill scale, rust, oil, grease, dirt and other foreign materials before the application of the shop coat of paint.
   3. Apply pretreatment to cleaned metal surfaces; using cold phosphate solution (SSPC-PT2), hot phosphate solution (SSPC-PT4) or basic zinc chromate-vinyl butyral solution (SSPC-PT3).
   4. Apply shop coat of 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.
   5. Fire-Rated Assemblies: Provide fire-rated hollow metal doors and frames inspected and tested as fire door assemblies, complete with type of fire door hardware to be used. Identify each fire door and frame with a recognized label, indicating applicable fire rating of both door and frame, based on ASTM E152 for exposures scheduled.

2.04 DETENTION HOLLOW METAL DOORS AND PANELS

A. Qualities: Doors and panels fabricated to at a minimum meet the specified detention door performance criteria and Guide Specifications for Detention Security Hollow Metal Doors and Frames – NAAM Standard HMMA 863-04.

B. Fabrication:

1. Provide flush design doors and panels, 2-in. thick, seamless hollow construction, unless otherwise indicated.
2. Fabricate from commercial quality leveled cold or hot rolled face sheets.
   a. Exterior doors and frames: Galvanized steel, ASTM-A653 G60 coated or Galvaneeled steel, ASTM A653, A60 coated. Utilize this at kitchen doors and frames.
   b. Shower and wet area doors and frames: Galvanized steel, ASTM-A653 G90 coated or Galvaneeled steel, ASTM A653, A90 coated
   c. Interior doors and frames: Cold or hot rolled steel, ASTM-A366/A366M or ASTM-A569/A569M.
3. Provide sound insulation filler of fiberboard, mineral-wool or other approved noncombustible material solidly packed full door height to fill voids between inner core reinforcing members.
4. Construct panels and doors with smooth, flush surfaces, without visible joints or seams on exposed faces or stile edges. Edges at top, bottom and sides shall finish flush.
5. Reinforce inside of doors and panels with vertical, hot-rolled or formed, not less than 28 gauge steel channel-shaped sections. Space vertical reinforcing not to exceed 4-in. o.c. and extend full door height. Spot-weld at not more than 2 ¾" o.c horizontally and 3" o.c. vertically to both face sheets.

C. Metal Gauges, Face Sheets: 14 gauge typical; with 12 gauge at jail perimeter doors.

D. Door Edges:
1. Reinforce tops, sides and bottoms of doors and panels with 10 ga. thick, steel channels, spot-welded to outer sheets.
2. Return outer edges of door face sheets at edges to a close fit and continuously weld and grind smooth.
3. Finish top and bottom of doors closed flush.
4. Provide overlapping astragals where scheduled.

E. Hardware Reinforcement: Reinforcement door for required hardware, as follows:
1. Provide a reinforced pocket in each door receiving mortised locks. Protect lock on each side with 1/8-in. thick steel plate welded inside door faces.
2. Provide a ¼" thick hinge-reinforcing channel, swaged where required (but not more than necessary) to pass mortise butts. Securely weld an additional 3/16 in. x 1½" x 10 in. angle, drilled and tapped to receive mortise template hinges, inside edge channel at top butt location.
3. Weld reinforcing plate, minimum 3/8 in. x 1-1/2 in. x 10 in., inside door for pull reinforcing.
4. Provide minimum 12 ga. reinforcing, welded inside door faces for other hardware items.
5. Where electrical wiring (for limit switches, electrical locks, electric hinges) pass through doors, provide factory-installed junction boxes and conduit or raceways.

F. Clearances: Fabricate hollow metal doors accurately with following clearances:
1. Jambs and Head: 1/8 in.
2. Meeting Edges, Pairs of Doors: 1/8 in.
3. Bottom: ¾", where no threshold.
4. Bottom: Over threshold 1/8 in.

G. Speaking Apertures: Consisting of a rectangular pattern, minimum 1 inch high by 4 inches wide (25 mm high by 102 mm wide), of 1/4-inch- (6-mm-) diameter holes. Locate holes in both face sheets directly across from each other and spaced not more than 1 inch (25 mm) o.c. vertically and horizontally. Provide 0.067-inch- (1.7-mm-) thick, pressed-steel baffles in interior of detention door between hole patterns to prevent passage of objects.
1. Provide at all inmate holding room doors and where noted.
2. At doors with shutters these should occur within the shuttered/ covered portion.

2.05 DETENTION HOLLOW METAL FRAMES

A. Fabrication: Provide security hollow metal frames for doors, windows, transoms, side-lights, borrowed lights and other scheduled openings.
1. Fabricate frames of full-welded unit construction, with corners mitered, reinforced, continuously welded full depth and width of frame, unless otherwise indicated.

2. Fabricate from commercial quality leveled cold or hot rolled face sheets:
   a. Exterior Frames: Galvanized steel, ASTM A525, G90 coated.
   b. Interior Frames: Cold or hot rolled steel, ASTM A366 or A569; G90 at wet locations like kitchens, laundry, rooms with shower within 15 feet of the door and other wet locations.

B. Metal Gauges: 12 gauge.

C. Hardware Reinforcement: Reinforcement frames for required hardware, as follows:
   1. For mortise butts, provide a minimum ¼" x 1½" x 10-in. reinforcing plate, offset at each hinge location and factory drilled and tapped. Brace top hinge reinforcement additionally with a 3/16-in. back-up angle welded behind the offset reinforcement and to inside of frame trim.
   2. Provide lock or keeper preparation in accordance with the recommendations of lock manufacturer, with minimum 10 gauge steel reinforcement. Protect cut-outs and reinforcements with pressed steel mortar guards on inside of frame. Lock pocket cover plate to be flush mounted.

D. Mullions and Transom Bars:
   1. Provide closed or tubular mullions and transom bars where indicated, with no visible seams or joints on faces.
   2. Fasten mullions and transom bars at crossings and to jambs by welding.

E. Reinforce joints between frame members with concealed clip angles or sleeves of same metal and thickness as frame.

F. Guards: Provide 26 gauge steel mortar guards or dust cover boxes, welded to frame, at back of finish hardware and electrical cutouts. Provide mortar guards at all screw holes.

G. Electrical Requirements: Provide a factory-installed junction box or enclosure behind each item of electrical hardware and connecting conduit between junction boxes on same frame.

H. Fire-rated Assemblies: Provide fire-rated hollow metal doors and frames inspected and tested as fire door assemblies, complete with type of fire hardware to be used. Identify each fire door and frame with a recognized label, indicating applicable fire rating of both door and frame. Construct assemblies to comply with NFPA Standard No. 80, and as herein specified. Where "clean" labels are not possible due to security considerations, provide doors and frames with metal labels certifying that the construction conforms to label requirements. Where door assembly is indicated to be fire-rated but cannot for any reason, DEC shall make it known to architect before fabrication.

2.06 DETENTION HOLLOW METAL ANCHORS

A. Jamb Anchors: Furnish jamb anchors to secure frames to adjacent construction, formed of minimum 10 gauge galvanized sheet steel.
   1. Masonry Construction: Adjustable, non-removable, flat steel, not less than 1½" in. wide by 8 in. long (Adjust length and profile as needed for different wall conditions). Furnish at least 4 anchors per jamb up to 7'-6" height; 5 anchors up to 8'-0" jamb height; one additional anchor for each 18 in. or fraction thereof over 8'-0" height. Anchors shall be tied into masonry walls with vertical reinforcing rods.
   2. In-Place Concrete or Masonry: Anchor frame jambs with minimum 3/8 in. concealed bolts into expansion shields or inserts at 6 in. from top and bottom and 16 in. o.c., unless otherwise shown. Reinforce frames at anchor locations. Apply removable stop to cover anchor bolts, otherwise, weld bolt head, fill and grind smooth.
   3. Fire-rated Assemblies: Provide strap anchors required to meet UL requirements.

B. Floor Anchors: Provide floor anchors for each jamb and mullion, which extends to the floor, formed of minimum 12 gauge steel sheet. Clip type anchors, with 2 holes to receive fasteners, welded to the bottom of jambs and mullions.

C. Head Reinforcing: For frames over 4'-0" wide in masonry wall openings, provide continuous steel channel or angle stiffener, minimum 12 gauge for the full width of the opening, welded to the back of frame at the head. Do not use such head stiffeners as lintels or load-carrying members.

D. Spreader Bars: Provide removable spreader bar across the bottom of frames, tack welded to jambs and mullions.

2.07 DETENTION HOLLOW METAL STOPS AND MISCELLANEOUS TRIM

A. Provide stops around solid and glazed panels in hollow metal units. Provide flashing, metal closures and miscellaneous trim used in conjunction with hollow metal.

B. Form stops, flashing, closures and miscellaneous trim of steel of the same gauge as associated items to which they are installed, but not less than 10 gage in thickness.

C. Provide non-removable stops on detention inmate side and removable stops opposite. Factory drill stops for round head or button head machine screws and secure at factory with slotted flat head machine screws. Provide tamper resistant security fasteners to install glass and panels in field. Locate fasteners not more than 2 in. from each end of stop and not more than 8 in. on center.

2.08 DETENTION HARDWARE: (Not All Locks Listed Are Necessarily Used On This Project)

A. General Requirements: Provide hardware for detention doors and other detention equipment as indicated in Detention Hardware Schedule and Contract Documents
   1. Hardware Finish: US32D unless otherwise noted.
   2. Aluminum Finish: Clear anodized finish on thresholds, weather seal items and closers.
   3. Fire Rated Openings: Provide hardware for fire-rated openings in accordance with NFPA Standard 80. Provide only hardware which has been tested and listed by UL and bears appropriate label or symbol for types and sizes of doors required and complies with requirements of door and frame label and function of opening.

B. Acceptable Manufacturer: Except as otherwise specified herein, or in the General Conditions, the equipment and materials of this Section shall be products of the following manufacturers, subject to compliance with specification requirements and provided each manufacturer meets all requirements of the Quality Assurance Section of this specification. Supply products of one manufacturer for each type of item required.
   1. Detention Locks: Southern Folger, R. R. Brink, AirTeq. With a preference to a local manufacturer [within 120 miles]. If not a local manufacturer provide 3 times as many maintenance locks.
   2. Locking Devices and Operators: Southern Folger, R. R. Brink, AirTeq
   3. Door Position & Monitoring Switches: Southern Folger, Willo, R. R. Brink, AirTeq
   4. Pulls and Hinges: Southern Folger, Willo, R. R. Brink, AirTeq
   5. Closers: LCN, Norton
   6. Thresholds: Reese, National Guard (NG), Pemko, Rockwood
   7. Weather-stripping and Smoke Gaskets: Reese, National Guard (NG), Pemko
   8. Stops: Glynn Johnson (GJ), Hager & Stanley, AirTeq; DonJo; Viking; wall mounted only and shall provide open-door-to-wall clearances as required by the TCJS.

C. For the purpose of conciseness the hardware specified herein is listed using product numbers as manufactured by Southern Folger of San Antonio, Texas. Successful acceptable manufacturer shall provide products, which are equivalent in quality and function to the Southern Folger products listed herein in every respect.

D. Fasteners:
   1. Manufacturer hardware to conform to published template, generally prepared for machine screw installation. Do not provide hardware, which has been prepared for self-tapping or sheet metal screws.

2. Furnish screws for installation with each hardware item. Exposed screw heads, whether door is open or closed, shall be torx head with pin security Screws shall be finished to match applied hardware item. Provide two sets of security wrenches for each size screw used.

2.09 DETENTION HARDWARE SETS (SWING DOORS AND REMOTELY CONTROLLED SWINGING DOORS)

A. Reference Detention Door Hardware – General Requirements for additional information.

B. Lock:
1. Provide G90 galvanized bodies at all locks.
2. Provide appropriate lock mounting for locks in hollow metal, plate and wood doors.
3. Provide lever handles at all mortise locks.
4. Provide half cycle holdback at typical doors, D function at fire doors. Provide mechanical key holdback at holding area cell doors; provide electric key function where designated.

C. Reference Detention Door Hardware - General Requirements for additional information.

D. Provide appropriate lock mounting for locks in hollow metal, plate and wood doors.

E. Provide internal door position switches to monitor lockbolt and deadlock actuator.

F. Provide key cylinder extension at locks keyed both sides or stop side.
1. Molex connectors: Provide prewired molex connectors at all electrical locks. Provide half cycle holdback feature for unlock [instance] and open [remaining unlocked continuously, until switched back to locked position].
2. Lock voltages: Provide 24 V locks unless indicated otherwise.

G. Detention Hardware Sets (Provide half-cycle holdback on all locks where allowed)

D-01

4- SS 204 FMSS x 4 ½ X 4 ½ Hinges
1- SS 10120AM-1 Electro-Mechanical Deadlock – half cycle holdback
1- LCN 2215- DPS Concealed Closer with DPS
1- Recessed Flush Pull (Push side) SS 2145
1- Surface mounted pull SS 212C
4- Ives SR 64 Silencers
1- Detention Door Stop- typical- at locations where walls occur at 90 degree open position provide the Viking stop mounted near the top of the door [above 6’-8’]; at corridor and other locations provide DonJo 1463, mounted with 6” clear beneath leading edge of door and adjacent walls.
1- SS 1017A-1 Food Pass Lock
1- Stanley 314 Heavy Duty Piano Hinge – Stainless Steel

D-2

4- SS 204 FMSS x 4 ½ X 4 ½ Hinges
1- SS 10120AM-1 Electro-Mechanical Deadlock – half cycle holdback
1- LCN 2215- DPS Concealed Closer with DPS
1- Recessed Flush Pull (Push side) SS 2145 or built into the door
1- Surface mounted pull SS 212C
4- Ives SR 64 Silencers
1- Detention Door Stop
1- SS 1017A-1 Food Pass Lock
1- Stanley 314 Heavy Duty Piano Hinge – Stainless Steel
1- Pass-Proof Threshold

D-03

4- SS 204 FMSS x 4 ½ X 4 ½ Hinges
1- SS 10120AM-1 Electro-Mechanical Deadlock – half cycle holdback
1- LCN 2215- DPS Concealed Closer with DPS
1- Recessed Flush Pull (Push side) SS 2145
1- Surface mounted pull SS 212C
4- Ives SR 64 Silencers
1- Detention Door Stop

D-04

4- SS 204 FMSS x 4 ½ X 4 ½ Hinges
1- SS 10120AM-1 Electro-Mechanical Deadlock – half cycle holdback
1- LCN 2215- DPS Concealed Closer with DPS
1- Recessed Flush Pull (Push side) SS 2145 or built into the door
1- Surface mounted pull SS 212C
4- Ives SR 64 Silencers
1- Detention Door Stop
1- Pass-Proof Threshold

D-05

4- SS 204 FMSS x 4 ½ X 4 ½ Hinges
1- SS 10120AM-2 Electro-Mechanical Deadlock – half cycle holdback
1- LCN 2215-DPS concealed closer with DPS
2- Surface mounted pull SS 212C
4- Ives SR 64 Silencers
1- Detention Door Stop

D-06

4- SS 204 FMSS x 4 ½ X 4 ½ Hinges
1- SS 10120 AM- 2 Electro-Mechanical Deadlock
1- LCN 2215-DPS concealed closer with DPS
2- Surface mounted pull SS 212C
3- Ives SR 64 Silencers
1- Detention Door Stop
1- Threshold
1- Weatherstripping
1- Door Sweep
1- Rain Drip at exterior doors

D-07

4- SS 204 FMSS x 4 ½ X 4 ½ Hinges
1- SS 10300M-1 Electro-Mechanical Deadlock
1- LCN 2215-DPS concealed closer with DPS
1- Recessed Flush Pull (Push side) SS 2145
1- Surface mounted pull SS 212C
4- Ives SR 64 Silencers
1- Detention Door Stop

D-08

4- SS 204 FMSS x 4 ½ X 4 ½ Hinges
1- SS 10300M-1 Electro-Mechanical Deadlock – half cycle holdback, and electric key function (LEK)
1- LCN 2215-DPS concealed closer with DPS
1- Recessed Flush Pull (Push side) SS 2145
1- Surface mounted pull SS 212C
4- Ives SR 64 Silencers
1- Detention Door Stop
1- Pass-Proof Threshold

D-09 Slider
1- 3165 LX.6 – 2 Electric Locking System
Note: At fire rated doors to vehicle sally port provide door bottom sweep, threshold and weather stripping at jambs.

D-10 4- SS 204 FMSS x 4 ½ X 4 ½ Hinges, one electric
SS 10603E Electrically Operated Institutional Mortise Lockset Storeroom/passage function.
1- LCN 2215- DPS Concealed Closer with DPS
4- Ives SR 64 Silencers
1- Pemko 315DN Door Sweep
1- Detention Door Stop

D-11 4- SS 204 FMSS x 4 ½ X 4 ½ Hinges, one electric
SS 10605E Electrically Operated Institutional Mortise Lockset Storeroom/Storeroom function.
1- LCN 2215- DPS Concealed Closer with DPS
4- Ives SR 64 Silencers
1- Pemko 315DN Door Sweep
1- Detention Door Stop

D-12 4- SS 204 FMSS x 4 ½ X 4 ½ Hinges
1- SS 1080-2 Deadlock, 804CL
2- Surface mounted pull SS 212C
1- Overhead stop/ hold-open
1- Weatherstripping
1- Pemko 315DN Door Sweep
1- Threshold
1- Rain Drip
1- Detention Door Stop
200 MRS Door Position Switch

D-13 4- 204FMSS hinges
1- 1080A-1 Deadlock
1- 4CL Keeper Switch
1- LCN 2215- DPS Concealed Closer with DPS
1- 200MRS DPS
1- 214S Recess Door pull
1- Detention Door Stop
4- Door silencers

D-14

2 204 FMSS hinges
1 1010AM Deadlock
1 4CL Keeper Switch
1 200 MRS Door Position Switch
1 212C Door Pull
1 Detention Door Stop
Door silencers

D-15

1 SS 1080-2 Deadlock, 804CL, keyed two sides
No padlock
Hinges per roof hatch manufacturer
1 200 MRS Door Position Switch
Micro switch
1 4CL Keeper Switch
Door silencers
Keyway weather protector cover plate at exterior

H. Functions

1. Locks to operate electrically through either constant duty motors, or constant duty solenoids. Locks to be remotely unlocked electrically by momentary contact switch, or mechanically operated by key at the lock.
2. Refer to the requirements of the Emergency Release function of the door control system. The electrically controlled locks shall be furnished with the capabilities of a half cycle function when controlled with the Emergency Release control function and a full cycle function with the normal door control function.
3. Full Cycle Operation (Standard)
   a. When a momentary signal is applied to the full cycle input, the latchbolt shall retract, locking the door if closed and allowing the door to be slam-locked if open.
   b. When a maintained signal is applied to the full cycle input, the latchbolt shall retract. The latchbolt shall remain mechanically retracted as long as the full cycle input is present. When the signal is removed, the latchbolt shall extend, locking the door if closed and allowing the door to be slam-locked if open.
4. Half Cycle Operation
   c. When a momentary signal is applied to the unlock input, the latchbolt shall retract. The latchbolt shall remain mechanically retracted. When power is removed, the latchbolt remains retracted.
   d. When a momentary signal is applied to the lock input, the latchbolt shall extend, locking the door if closed and allowing the door to be slam-locked if open.
5. Manual Operation
   e. Each lock shall have local manual key override lock/unlock feature. Keyed one side (K1), Keyed two sides (K2).
   f. Rotating the key shall mechanically retract the latchbolt. Removing the key shall extend the bolt, locking the door if closed and allowing the door to be slam-locked if open.
6. Mechanical
   g. Lock shall operate as a fail-secure slam-lock. Unlocks when energized.
   h. Lock body shall be made of steel or stainless steel.
   i. Lock shall be supplied with a security ring to protect the key cylinder. The security ring will be supplied unpainted for installation in the hollow metal frame by the hollow metal manufacturer.
   j. Cylinder extensions shall be provided for locks keyed two sides or keyed stop side.
7. Electrical
   k. Lock shall operate when supplied with 24 VDC + 10%, – 5%.
   l. Power consumption: 3.3A stalled; .32A running.
   m. Lock shall be provided with a lock status switch to provide interlocking capabilities.

n. Switches shall be of the snap acting mechanical type, UL listed and rated at 5 amps.
o. Locks shall be factory wired to a plug disconnect.
p. Lock status switch shall be capable of providing the following indications:
1). Deadlocked indication
2). Unsecured indication

8. Features: Where specified by the security hardware/door schedule, the following features shall be provided:
q. Remote Latch Holdback (RLHB): Latchbolt is retracted by the push of a button at the control panel and remains mechanically retracted until button is pushed a second time.
r. Key Operated Mechanical Latch Holdback (KLHB): Latchbolt is retracted locally by key and remains mechanically retracted until relocked by key.
s. Key Switch (KS): Door is electrically unlocked by key operated switch at the lock.

I. Access Door Lock – Southern/Folger 1010AM: For swinging doors. Lock shall have the following:
1. Size - 4¼" x 1¼" x 3"
2. Finish - Electroplated, zinc
3. Case - 8620 mild steel
4. Cover - - Cold rolled steel
~~5.~~ Cylinder – Mogul

J. Food Pass Latchbolt – Southern/Folger 1017AM: For hinged food pass doors. Lock shall have the following:
1. Size - 4" x 1¼" x 2¾"
2. Finish - Electroplated, zinc
3. Case - Stainless steel
4. Cover - Cold rolled steel
5. Cylinder - Mogul

K. Door Closer/Door Position Switch – LCN 2210AVB D.P.S. Series: Heavy-duty hydraulic concealed door closer with adjustable position switch mounted integrally within the closer unit. Unit shall be designed to mortise in 4" head of detention hollow metal frame and standard 2" detention hollow metal door.
1. Closer shall have the following features:
a. Full rack and pinion hydraulic operation.
b. Separate hydraulic control of closing and latching speeds.
c. Adjustable hydraulic back check to cushion opening swing.
d. Tamper-proof regulation switch adjustment.
e. Adjustable spring power (may be increased 50%).
f. High strength cast iron cylinder.
g. Quiet low friction track and roller combination.
h. Total concealment when door is closed.
i. Heavy duty arm.
j. Allow up to 170 degrees of opening - maximum.
2. Door Position Switch shall have following features:
a. Positive mechanical indication.
b. Switch shall be factory adjusted to monitor door position within 1/2" from the leading edge of the door to the doorstop, but can be field adjusted by simple rack and pinion mechanism.
c. Self-adjusting over-travel.
d. Switch is single pole, double throw micro type with a rating of 5 amps at 125V to 250V. Shall be suitable for 24 VDC systems with battery backup.
e. Furnish with color-coded wires with a pair of cable connectors.
3. Finish - Faceplate shall be US32D with matching security screws. Arm shall be painted.

L. Continuous Piano Hinge - Stanley 314: Heavy-duty hinge for use on food passes, access panels, etc.
1. Made of extra heavy steel for welding to frame and door.
2. Finish –Stainless Steel.

M. Institutional Hinges – Southern/Folger 204 FMSS Hinge: Each door shall be hung FM (Full Mortise) as follows:
   1. Hinges to 4½" X 4½" with .180 leaf thickness having a minimum tensile strength exceeding 62,000 psi and a minimum yield strength of 52,000 psi.
   2. Each hinge to have 2 sets of permanently lubricated stanite and #300 series stainless steel anti-friction bearings for high frequency heavy weight doors. Stainless steel pintles to be through hardened and centerless ground and have a single shear strength exceeding 5,600 lbs.
   3. Stainless steel cross pin through pintle to prevent disassembly, must be positioned so as to be inaccessible when doors are closed and must not extend though the entire barrel.
   4. All hinges to conform to ANSI A156.7 "Template Hinge Dimensions," and exceed requirements of ANSI A156.1 "Butts and Hinges" for Grade 1 heavy weight anti-friction bearing hinges.
   5. Furnish flat head torx security machine screws, stainless steel.
   6. Overall hinge thickness 7/16"; clearance between leaves 1/16"; depth of mortises .180".
   7. Furnish 1-1/2 pair per door except provide one additional hinge on doors over 3'-0" wide and over 90" high.
   8. Finish - US32D.

N. Door Pull: Southern/Folger - 212: - Raised door pull for detention use, shall be of high strength and ample size and shape to handle heavy doors and resist abuse.
   1. Unit shall be cast of solid manganese bronze.
   2. Size - 8-1/4" long X 2-1/4" deep.
   3. Furnish with two 3/18"-16 flathead security screws.
   4. Finish to be US32D.

O. Flush Pull: Southern/Folger - 214: - Recessed door pull for use on sliding doors where pull must be flush and for the inmate side of doors to eliminate protruding knobs or handles in high security areas.
   1. Unit shall be a 5" high X 4" wide x 1/8" thick solid bronze casting.
   2. Integral pocket grip shall be recessed a depth of 1".
   3. Furnish with four ¼"-20 flathead security screws.
   4. Finish to be US32D.

P. Thresholds: Standard heavy-duty aluminum weatherseal thresholds with maximum ½" height.

Q. Weatherseals: Gasketing for rated doors and sound doors- at head and jambs, Pemko Manufacturing Co. No. S88 Silicone Seal or Reese No. 797. After installation, razor cut gasketing into pieces not over 12 in. lengths at doors with inmate access.

R. Door stops: Position wall mounted and frame mounted stops to occur very near to the top of the door and near to fully extended location of the door- with full face of stop engaging the door. Utilize wall mounted stops at locations where wall occur within 8" of the hinge face of the frame [butt side end of the door]. Utilize frame stops at interior locations where perpendicular walls don't occur. Utilize floor stops at exterior locations where perpendicular walls do not occur, and where noted.
   1. Floor Stops: Don Jo 1463
   2. Wall Stops: Viking DS 2000. 2½" diameter stop protruding 6" from face of wall.
   3. Frame Stops: Viking DS 3000; welded to frame prior to any field painting.

S. Door position switch: Southern Steel 200MRS – tamper-proof unit with actuating magnet mortised into door and frame head.

T. Viewers at Doors: Door Scope model DS/2000 www.doorscope.com 2 3/8" diameter with 168 degree view. Black, UNO.

U. Fasteners: Hardware shall be complete with all necessary security screws, bolts, anchors or other fastenings for proper application. Such fastenings shall be of suitable size and type, and shall harmonize wit hardware as to material and finish. Security screws shall be used to install smoke gaskets, door bottoms and weather-stripping.

V. Finishes: Typically all exposed hardware shall have US32D finish.

2.10 KEYING

A. Keys and keying:
1. Establish separate key system for security hardware.
2. Keying will be determined at a joint meeting of Architect/Owner and Detention Equipment subcontractor.
3. Following meeting. Detention Equipment Subcontractor will submit complete keying schedule for Architect/Owner review and approval
4. Each key shall be stamped with keying identification number.
5. Furnish six keys for each key code and three master keys (and grand masters if desired).
6. Keys shall be delivered only to Owner's representative and a signed receipt obtained.

B. Key control system:
1. Cabinet Telkee
   a. Provide high security manipulation resistant combination lock
   b. Provide appropriate leaves for system.
   c. Provide fillings and accessories
2. Install in Master Control Room
3. Provide complete system set up.
   a. Install keys
   b. Provide dual tag system
   c. Provide 3-way cross index system
   d. Instruct Owner’s personnel in proper usage
4. Capacity:
   a. Provide sufficient space in cabinet to accommodate all keys to be kept at that location including master and extra keys.
   b. Cabinet to accommodate paracentric, mogul and standard sized keys.
   c. Provide for 25 percent expansion for each key type and for additional keys.

2.11 SLIDING CORRIDOR DOOR DEVICES

A. Components:
1. Rack and pinion drive system standard size doors. Motors shall be 1/20 horsepower, single phase 60 Hertz as produced by a nationally recognized manufacturer at typical doors.
2. All roller chain drives are to be No.41 size.
3. Hanger guides to be ¼” thick steel plate.
4. Cover to interlock with track support and a clearance of not more than ¼”.
5. Hanger support rollers to be turned from solid steel, 3¾” O.D. grooved 3/8 IN deep to engage ½” cold drawn track. Formed track not acceptable.
6. Rollers to have anti-friction ball bearing with hardened members and grease shield on both sides.
7. Door hanger bolts to be high alloy treated steel with eccentric brushing for adjustment and an automatic type self-locking nut.
8. Paint entire assembly except track, lockhead assembly, rollers, and drive mechanism with rust inhibiting primer.

B. Mechanism housing:
1. The horizontal mechanism housings shall be constructed of 7 GA mild sheet steel.
2. Housing covers shall be constructed of 10 GA sheet steel. All openings in housings are to be baffled.
3. All removable housing covers will be fastened to the track box with minimum 3/8 IN diameter tamper-resistant fasteners spaced 2 IN from edges and 12 IN O.C.
4. The vertical lock column housing shall be constructed of 7 GA sheet steel. The vertical lock column cover shall be constructed of 10 GA sheet steel, removable only when the horizontal cover has been removed.

C. Provide electrical terminal blocks in mechanical housings. Provide required wire from electrical components to terminal blocks and terminate at this point. Contractor to supply and terminate all other wire as indicated.
   1. All connections mechanically secure.
   2. Terminate all stranded wire with solderless, crimp on, insulated terminals properly sized for gauge and type wire and screw terminal.
   3. Coordinate with Division 26 and 28.
      a. Base:
         (1) Southern/Folger 3165LX.b at 3’-0” to 4’-6” wide doors. 115V
         (2) Southern Folger D Corridor model at wider doors. 208V
      b. Optional:
         (1) Brink
         (2) AirTeq
      c. Function:
         (1) Unlock, open and lock open a 3 FT - 0 IN wide door opening in not more than five seconds.
         (2) Unlock, close and deadlock close a 3 FT - 0 IN wide door opening in not more than five seconds.
         (3) Stop movement of any door in mid-travel without interrupting operation of other doors, leaving the door fixed at that point, so the door cannot be moved by hand in either direction.
         (4) Instantly reverse the direction of movement of any single door without disrupting the movement of the remaining doors in the group.
         (5) Blocking of one door shall not interfere with the operation of any other door in the group. When blocking object is removed, the door will automatically continue movement to the open or closed position.
         (6) Sallyport or vestibule doors shall be interlocked so that only one door can be opened at a time.
         (7) Normal force exerted by a door in travel is 40 LBS plus 10 percent.
         (8) Each door shall automatically deadlock closed at two concealed points at the rear of the door. Front locking will not be acceptable.
         (9) Individual doors may be unlocked manually at the door without interfering with the electrical operation of other doors.
         (10) Door weight not to exceed 350 LBS.
      d. Key functions. Typically controlled by locking control panel. No LEK local locking function unless specifically indicated. Emergency mechanical key release both sides P-2; pilaster; paracentric.

2.12 SPARE STOCK: DEC shall provide additional locks and hardware, neatly packaged and clearly identified, for future use by the Owner as follows:

A. Two (2) Electro-Mechanical Locks of each type and two (2) mechanical locks of each type (one of each hand for each lock type). 2 locks with keys on one side and 2 with keys on both sides. See also requirement for additional locks if not a local manufacturer.

B. Six (6) hinges of each type.

C. Two (2) closer/DPS (one each hand)

D. Twenty-five (25) of each type, size, and finish of security screws used on the installed detention equipment and three (3) sets of all wrenches required.

E. DEC shall inventory spare stock with Owner at project completion and obtain a signed receipt.

2.13 TOOL RESISTANT STEEL GRATINGS

A. Horizontal bars:
   1. 2-1/4 IN x 3/8 IN TR flat steel bars, ASTM-A627
   2. Produced especially for security use.
B. Vertical bars:
   1. 7/8 IN diameter TR ribbed steel bars, ASTM-A629
C. Steel Grating Door, fabrication:
   1. Space ribbed round bars at 6 IN OC.
   2. Space flat bars at 12 IN OC.
   3. Pass ribbed round bars through flat bars.
   4. Interlock intersections without reducing bar diameter.
   5. Pipe sleeves, swedging, calking, friction or welding at intersections of bars is not permitted.
   6. Provide grating frame fabricated of flat bars to match other flat bars.
   7. Weld all bars to frame.
   8. When flat bar length exceeds 4 FT provide WT 4 x 6.5 intermediate support member at right angles.
D. Steel Grating doors:
   1. Refer to Drawings and details for location of steel grating doors and mode of operation.
   2. Materials and construction same as for gratings.
   3. Furnish stops and frames of similar material.
   4. Provide mounting boxes for hardware, conduit raceway for electric locks, keeper switches, and door position switches.
   5. Provide drilled and tapped holes in door members and reinforcing plates to receive all hardware and operating devices.
   6. Provide steel grating doors per DOOR SCHEDULE
E. Factory finish (primer):
   1. Clean all surfaces.
   2. Apply phosphate coating.
   3. Apply rust inhibitive primer, thickness as recommended by manufacturer.

2.14 SECURITY MESH

A. Woven Wire Security Mesh:
   1. Manufacturers: Viking Products www.vikingfab.com or Kane.
   2. Wire mesh: 2¼" x 2¼" x ¼" diameter double crimpled wire mesh
   3. Frame: 2½" x 1¾" x 12 gauge.
   4. Finish: Galvanized G90, or powder coated
   5. Frame shall be laser cut and notched for wire rods to pass through (min. 1"), rods shall be welded to the inside of the frame. Frame corners shall be mitered, and continuously welded and ground smooth.

2.15 DETENTION FURNISHINGS AND ACCESSORIES

A. Drawings: Refer to plans for locations and detailing for construction and setting of all security furnishings and accessories.

B. Speaking Devices in Glass: Refer to 10 00 00 Miscellaneous Specialties

C. Transaction Drawer: Refer to 10 00 00 Miscellaneous Specialties

D. Mirrors: Refer to 10 80 00 Toilet and Bath Accessories

E. Food and Cuff Passes: 16" wide and 5" high clear opening, doors where indicated on the drawings. SS203FP hinge, SS262 Food Pass door or similar.

F. Door Shutter: Hinged 10 gauge bent sheet steel shutters shall be mounted over observation windows and/or speaking devices where indicated on the drawings. Shutters shall be hung on continuous piano

hinges of suitable size and strength and shall be equipped with a hand pull and latch. (Latches to be friction-type). Sliding shutters are not allowed.

G. Package Pass: Refer to 10 00 00 Miscellaneous Specialties

H. Shower Seat: Refer to 10 80 00 Toilet and Bath Accessories

I. Detention Grab-bars: Refer to 10 80 00 Toilet and Bath Accessories

J. Safety Clothes Hook: Refer to 10 80 00 Toilet and Bath Accessories

K. Drawings: Refer to plans for locations and detailing for construction and setting of all security furnishings and accessories.

L. Finish: For security furnishings and accessories all tool marks and surface imperfections shall be dressed clean by grinding, filling and sanding as necessary to make all faces, edges, and connections smooth, level, and free of all irregularities. All surfaces shall be thoroughly cleaned of rust, oil or other impurities, treated to insure maximum paint adhesion and coated on all exposed surfaces with a rust inhibitive primer.

M. EQ-701: DETENTION BUNK: As detailed on the drawings; mounted or wall mounted units as shown on drawings
   1. Frame and/or brackets: min. 14 gauge square steel tubing, sizes as follows:
   2. Frames: min. 1 ½" with closer caps welded in place
   3. Wall brackets (where required): min. 7 gauge steel wall gussets securely welded to bunk deck
   4. Deck: One piece sheet steel, min. 10 gauge, with end and sides turned up and hemmed down to form 6 gauge vertical section. Deck attaches to each post or bracket with 3/8" thick connector plates and 2 tamper resistant bolts.
   5. Bed deck to be capable of supporting 1,500 pounds with deflection at center of side rail not to exceed ¼" and no permanent deformation.
   6. Bunking Hardware: Sleeve connector with tamper-proof fastener for each post. Provide one set for every two beds.
   7. Floor Connectors: formed angles attached to each leg with punched hole for attachment to floor.
   8. Provide continuous embeds for all wall mounted bunk brackets

N. EQ-702-W: DETENTION WALL MOUNTED BENCH – Norix Model IBW-XX. Last two digits indicate length. Stainless Steel detention bench with w/12 gauge top and fully welded construction, without cuff rings. Secure bench to wall. [Norix; www.norix.com]. Or fabricate per detail referenced in drawing schedule, contractor's option.

O. EQ-704: FLOOR MOUNTED STOOL – Model SF1000. Stainless Steel stool with 14 ga. Stainless steel 12" diameter top. 11 ga. Steel pipe support. Welded construction and secured to recessed embed plated in floor. 18" high. [Viking Products; www.vikingfab.com]

P. EQ-706-X: WALL MOUNTED SWING STOOL – Model SW2000. Last two digits indicate length of arm. Stainless steel stool with steel wall mount. 14 ga. Stainless steel 12" diameter top secured to hinged support, fully welded steel construction with steel pivot block and steel pivot rod. Mount at 18" AFF. [Viking Products; www.vikingfab.com] Refer to plan for swing arm length from wall to center of seat.

Q. EQ-709: WALL MOUNTED DESK - Norix Model D560-401. Maintain 6" horizontal clearance between front edge of desk and front edge of stool. Or fabricate per detail referenced in drawing schedule, contractor's option.

R. EQ-711: SECURITY ACCESS PANELS - Door to be fabricated from 3/16" steel plate with continuous 3/16" thick angle frame embedded in masonry. Provide continuous piano type hinge and a detention deadbolt lock (SS 1010) with keys. Refer to detail referenced in drawing schedule.

S. EQ-720: VIDEO VISITATION – Vendor furnished, vendor installed.

T. EQ-721: ATTORNEY VIDEO VISITATION – Owner furnished, owner installed, provide rough-in for owner installation, refer to electrical and technology drawings.

U. EQ-2561-R6: DETENTION PISTOL LOCKER – Southern Folger, Model 605-6. Fully recessed, 6 compartment. Cut, formed, welded and ground smooth steel. Primed Finish Body front and sides: 7 gauge steel. Body back: 10 gauge steel. Drawer fronts: 7 gauge steel. Drawer sides and backs: 10 gauge steel. Compartment size 6” H x 1’-1-1/2” W x 4-1/2” D with individually keyed and master keyed pin tumbler snap lock. [www.southernfolger.com]

V. EQ-5462-4: 4-SEAT TABLE – Model TS40000. Stainless Steel 4 person spider table with 14 ga. Stainless steel seat and table tops. 14 ga. Table supports, welded construction and secured to recessed embed plated in floor. [Viking Products; www.vikingfab.com]

2.16 SECURITY GLAZING

A. Materials:
   1. General requirements:
      a. All glass and other glazing materials shall be from new stock, free from chips, cracks, scratches, or other defects that mar appearance or impair strength and performance. Factory label each pane showing type, thickness and identifying "attack" side of glazing units.
      b. Sealants and glazing tapes shall be compatible with all plastics and interlayers of laminated glass. Consult glazing manufacturer.
   2. Products:
      a. Tempered Glass: Thickness as scheduled; shall meet or exceed the requirements of ANSI Standard Z97.1. Clear or reflective as scheduled.
      b. Laminated Glass: Thickness as scheduled; shall meet or exceed the requirements of ANSI Standard Z97.1.
      c. Wired Glass: 1/4" thick; welded diamond mesh.
      d. Monolithic & Laminated polycarbonate: Thickness and color shall be as scheduled and must be tested and approved as a CC-1 rated light transmitting plastic by the ICC. All polycarbonate to have a minimum 10 year warranty on delamination, coating failure, yellowing, breakage, abrasion resistance and loss of light transmission.
      e. Chemically Strengthened Glass. Clear. ASTM C1422. Use only with laminated applications.
   3. Glass Schedule:
      a. Glazing Type **H**: Multi-ply clear glass laminate with mar-resistant laminated polycarbonate glazing; ASTM 1915, Grade 1;; 26.29 lbs./s.f.
         (1) Thickness: 2.350” nominal.
         (2) Global DBP 08
         (3) At locations designated **HM or H1** provide a mirrored layer facing the corridor/detainee in addition to the makeup indicated.
         (4) At locations designated **H2** an insulated divided light in addition to the makeup indicated.
      b. Glazing Type **M**: Clear glass clad laminated polycarbonate glazing; ASTM 1915; 6.1 lbs./s.f.
         (1) Thickness: .647”- .778”. ¾” nominal.
         (2) Global SP 019.
         (3) At locations designated with **MM or M1** [mirrored/reflective] provide a one way mirror in addition to the makeup indicated.
         (4) At locations designated **MMI** provide a one way mirror and an insulated divided light.
         (5) At locations designated **TM** provide Type M glazing inboard incorporated into an insulated unit with a ½” air space and a ¼” clear tempered outboard lite. Exterior glazed, unless noted otherwise.

c. Glazing Type **L**: 7/16” laminated glass. Used at cell doors and other locations with small borrowed lites that are not perimeter doors [5” of less dimension]. Chemically- strengthened clear glass laminated to each side of 1/8” polycarbonate. Clear.
(1) At locations noted **L1** provide an additional ¼” thick mirror makeup.
d. Glazing Type **F.** UL labeled for rating as scheduled. Global Clear Inferno-Lite FRP-4540 for ¾ hour installations; 1” composite thickness.
e. Insulated Glass- at locations shown.

B. Execution:
1. Preparation:
a. Verify that other trades have completed their work. Check that glazing angles and glass are free of imperfections or damage that would prevent proper installation of glass. Products shall be installed only in a window system with fully functioning weep system.
b. Examine surfaces to ascertain that surfaces are dry, free of oils, waxes and foreign substances.
c. Report any surfaces or defects that would impair a satisfactory installation. Proceed only after all defects corrected. Starting work shall constitute acceptance of surfaces.
d. Verify sizes required prior to cutting or fabrication of glazing material specified. Coordinate with supplier and installers of framing, windows, doors, etc., to receive glass. Field measure as required for accurate fit within tolerances established by material manufacturers.
e. No attempt shall be made to change the size of the security glass units after they leave the factory. All glass must be clean cut. Nipping to remove flares or to reduce oversized dimensions of any type glass will not be permitted.
f. Do not install if temperature is below 40 degrees F.
2. Installation:
a. Install all glazing material and related glazing accessories in strict accordance with manufacturer's instructions outlined for this project and approved submittals. Provide watertight and airtight installation where exposed to weather. Provide airtight installation for interior locations.
b. Set and secure glazing material without springing. Install plumb, straight, square and level and in proper alignment with related work. Install securely to prevent rattling, breakage or displacement and while allowing for expansion and contraction. Maintain required clearances and support for glazing units preapproved shop drawings and manufacturer's instructions, and notify Architect immediately, in writing, if discrepancies exist beyond tolerances coordinated by material manufacturers on approved submittals.
c. Place ¼” thick setting blocks under the bottom edge of the glazing units at the unit's quarter points. The setting blocks shall be slightly wider than the glazing unit.
d. Apply glazing tape to the fixed frame and removable stop in continuous strips. Hold top of tape 1/8" down from top of glazing stops.
e. Verify proper orientation of Glazing Units in the opening to ensure "attack" side is on the proper side as noted or as directed by Architect.
f. Use all sealing and glazing accessories in strict accordance with recommendations and instructions of glass fabricator for conditions applicable to this project. Clean and prepare contact surfaces as recommended by manufacturer.
3. Adjust and Clean:
a. Check installed glazing material for looseness and weather tightness. Correct deficiencies.
b. Clean all glazing materials before acceptance in accordance with applicable manufacturer's instructions and recommendations.
c. Replace all broken, scratched, chipped, marred or otherwise damaged glazing units.

2.17 INTERIOR DETENTION SEALANTS/CAULK

A. Interior Detention Sealant/Caulk:
1. Description: Two component, 100 percent solids epoxy sealant; identified by manufacturer as resistant to being picked by sharp tools. Product shall be compatible with epoxy paint.
2. Movement: For moving joints, use product with movement capabilities.

3. Available Manufacturers and Products:
    a. Dayton Superior; Prison-Loc
    b. Euclid Chemical Company; EUCO #452-P.
    c. Sika Corp.; Sikadur No. 23, Lo-Mod Gel
    d. Sika Corp.; Sikadur No. 31, Hi-Mod Gel

2.18 EXTERIOR DETENTION WINDOWS

A. Sherwood Window Group www.sherwoodwindows.com Model DSW 6060; fixed, fully thermally broken, aluminum detention security windows with a stainless steel interior cladding
    1. Interior glazing- type M
    2. Exterior glazing 1" insulated; bronze tinted with Low e coating at #2 surface Guardian SunGuard SNX 62/27

2.19 FABRICATION:

A. General:
    1. Fabricate items to be rigid, neat in appearance and free of defects, warp or buckle. Accurately form metal to required sizes and profiles. Weld exposed joints continuously, grind, dress, and make smooth, flush and invisible.
    2. Fabricate components of detention equipment in accordance with Specification requirements and reviewed Shop Drawings.
    3. Form exposed work true in line and level with accurate angles and surfaces and straight sharp edges. Ease exposed edges to a radius of approximately 1/32-in. unless otherwise shown. Form bent-metal corners to the smallest radius possible without causing grain separation or otherwise impairing the work.
    4. Welding shall be in accordance with recommendations and standards of American Welding Society. Provide arc welding in fabrication work where practical and where scheduled on Drawings. Weld corners and seams continuously.
    5. Clean surfaces to be welded free of loose scale, rust, oil, grease, paint, or other foreign matter. Welds shall show uniform section and smoothness of weld metal without overlaps and craters.
    6. Grind exposed welds smooth and flush to match and blend with adjoining surfaces. Plug welds shall be ground smooth where exposed to view.
    7. Visual inspection of edges and fillets and butt joint welds shall indicate good fusion width and penetration into base metals. Precautions shall be taken to minimize stresses and distortions due to heat.
    8. Grind smooth burrs, edges, and rough spots.
    Carefully match exposed work to produce continuity of line and profiles. Work that cannot be permanently assembled in shop shall be fitted, disassembled for shipment.
    9. Cut, reinforce, drill and tap metal work indicated to receive finish hardware and similar items or work. Cut holes in strict accordance with templates.

B. Shop Painting:
    1. Provide shop primer on detention equipment except aluminum, bronze, or stainless steel finish hardware or other accessory items and parts of work scheduled to be furnished enameled or plated.
    2. Prepare surfaces by solvent cleaning (SSPC SP1) and power tool cleaning (SSPC SP3) to remove oil, grease, loose scale, rust, weld spatters and other foreign matter.
    3. Pretreat surfaces using cold phosphate solution (SSPC-PT2) hot phosphate solution (SSPC-PT4).
    4. Apply one shop coat of rust-resistant metallic primer, minimum 2.0 dry mil film thickness.

PART 3 EXECUTION

3.01 EXAMINATION AND PREPARATION FOR INSTALLATION

5. Prior to start of building construction, coordinate size and location of openings to be provided in building walls to permit transfer of detention equipment into buildings for installation.

6. Examine surface and conditions of building in field, which relate to installation of detention equipment.

7. Lay out work accurately and completely. Verify dimensions.

8. Do not proceed with installation until discrepancies or unsatisfactory conditions are corrected.

9. Coordinate electrical work required to be connected to detention equipment items.

3.02 INSTALLATION

A. Installation: The DEC shall install all detention hardware. All butts, locks, plates, strikes, pulls, closers, etc. shall be neatly and accurately mortised flush, properly placed and accurately aligned to provide smooth and quiet operation without sticking, binding, handing, or rattling. All doors shall be hung with equal clearance at jambs and heads.

B. Install detention equipment in accordance with reviewed Shop Drawings, manufacturer's printed instructions, and as specified, under direct supervision of subcontractor's full time installation supervisor.

C. Do not start detention equipment installation until building areas to receive detention equipment are broom clean and properly lighted, exterior enclosing walls are in place, exterior windows glazed, and roof completely installed to prevent weather damage to locking mechanisms and other mechanical parts of detention equipment.

D. Cut holes necessary in detention equipment for proper installation of plumbing, fire protection, mechanical and electrical work.
   1. Lay out and cut holes during installation of detention equipment and prior to finish painting.
   2. Holes sized and located accurately on the detention equipment by subcontractor requiring such holes.

E. Attachment and Connection of Detention Equipment:
   1. Provide as detailed and required to complete installation and maintain the security provisions of detention equipment. Install items plumb, level, square and aligned accurately with related construction. Provide welding, riveting, bolting or other fasteners as applicable, noted and approved for connections and attachments.
   2. Riveting and Bolting: Rivets not otherwise specified shall be 3/8 in. diameter, accurately spaced from 4 in. to 6 in. o.c., as nature of the work required, and well driven down to completely fill holes. Holes shall be punched not to exceed 1/16 in. larger in diameter than rivet used and holes not matching properly shall be reamed. Countersunk flathead rivets or clipped heads may be used where necessary for mechanical or other reasons. Where legs of stiffening angles or other shapes are not exposed to inmates or to public view, they may be bolted together where practical with 3/8-in. diameter bolts spaced not more than 6-in. o.c. Where bolted work does not reduce security, special 3/8 in. diameter tamper-resistant security bolts may be used where heads are exposed to inmates and where nuts are not accessible to inmates or exposed to view. Other recognized detention equipment manufacturers' standard shapes, connections and methods of construction may be used subject to Architect's approval.
   3. Welding: Electric arc and resistance welding may be used in erection of this work where practical and where security is equal to or stronger that riveting and where reasonably neat workmanship is possible. Welding shall be executed in a neat workmanlike manner in accordance with standards established by the American Welding Society. Clean loose scale, rust, oil or other foreign matter.

Weld shall show uniform sections, good penetration, smoothness of weld metal and minimum of craters, porosity and clinkers. Exposed welds shall be ground smooth.

4. Exposed screws used for attachment of hardware items and other detention equipment shall be specified tamper-resistant security screws.
5. Effectively isolate dissimilar metals and materials where necessary to prevent corrosion by electrolytic action or other causes.
6. Install hardware furnished under this section in accordance with reviewed hardware schedule and hardware templates furnished by hardware manufacturer.
7. Coordinate work provided with other work relating to detention equipment.

F. Detention Hollow Metal:
   1. Install detention hollow metal units and accessories in accordance with reviewed Shop Drawings, HMMA 840, and as specified and detailed.
   2. Set work accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces and spreaders leaving surfaces smooth and undamaged.
   3. Securely anchor detention door frames, door sidelight frames, and detention window frames to adjacent construction with anchors or welding as detailed and required for rigid attachment. Where welding is required for anchorage to detention frames, provide 1 in. welds at maximum 8 in. o.c. unless otherwise noted on the Drawings.
   4. Fit exposed connections accurately together to form tight hairline joints. Weld connections, which are not to be left as exposed joints, but cannot be shop welded because of shipping size limitations. Grind exposed joints smooth and touch-up shop paint coat. Touch-up galvanized surfaces with galvanized repair coating.
   5. Fill detention doorframes, sidelights and detention window frames in masonry or concrete walls solid with mortar.

G. Detention Access Doors: Set plumb, level and secure in accordance with reviewed Shop Drawings. Coordinate locations with other work.

3.03 INTERIOR DETENTION SEALANT SCHEDULE

A. Rooms
   1. Cells of every type; holding rooms.
   2. Dayrooms, including adjacent toilets and showers.
   3. Processing rooms, or any other rooms where inmates would routinely be left unescorted or continuously supervised.

B. Locations: Floor, wall, and ceiling joints, spaces, cracks between similar and dissimilar materials, including, but not limited to following:
   1. Open floor-to-wall, wall-to-wall, and wall-to-ceiling joints.
   2. Metal door frames.
   3. Metal window frames.
   4. Detention furniture.
   5. Plumbing fixtures.
   6. Toilet accessories.
   7. Toilet partitions and privacy screens.
   8. Air diffusers and grilles.
   9. Brackets and mounting plates for equipment.
   10. Benches.
   11. Block control/expansion joints.

C. Paint all sealant to match adjacent wall surfaces- utilize compatible epoxy type paint.

3.04 CLEAN AND ADJUST

A. After installation of detention equipment, clean surfaces to receive field painting. Clean prefinished material in accordance with manufacturer's instructions. Touch-up damaged shop primer with shop primer. Use galvanized repair paint at galvanized finishes.

B. Check operation of movable items of equipment for proper operation and coordinate checking of electrical signals and controls for proper operation. Make adjustments required prior to Final Inspection Acceptance and Substantial Completion.

C. Test and adjust door position and locking device status switches in conjunction with electronic systems testing.

D. Adjust operable and hardware for proper operation. Leave doors and operating hardware in complete, operating order and free of defects.

3.05 FIELD QUALITY CONTROL

A. Field Quality Control Tests: Conduct performance tests on each locking device and control lock to ensure that systems operate properly, free of defects. Conduct tests in presence of Owner, Architect and entities supplying system components.

3.06 DEMONSTRATION

A. Instruct Owner's designated personnel on proper operation and maintenance of detention equipment, including hands-on demonstration. Instruct Owner on removal and replacement of locks.

B. Use operating and maintenance manual as basis of instruction and demonstration.

C. Deliver to Owner keys and special tools required for operation and maintenance of equipment and accessories at time of instruction and demonstration.

D. Video instructions, edit and then deliver to Owner.

E. Provide minimum of 8 hours of instruction prior to Substantial Completion and 4 after.

END OF SECTION

SECTION 22 42 00 COMMERCIAL PLUMBING FIXTURES * AD3

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to the Work in this Section.

1.2 SUMMARY

A. Provide all equipment, materials, labor, supervision and services necessary for or incidental to the installation of a complete and operating plumbing system inside the building and to points outside the building as indicated on the drawings and as specified.

B. Work Included
1. Plumbing fixtures.
2. Plumbing accessories.
3. Plumbing equipment.

C. Submittals**: Provide submittals as required in Section 22 00 10, "Submittal Process".**

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Without additional cost to the Owner, provide such other labor and materials as are required to complete the work of this Section in accordance with the requirements of governmental agencies having jurisdiction, regardless of whether such materials and associated labor are called for elsewhere in these Contract Documents.

C. When requested, provide the Architect with manufacturer's certificate that materials meet or exceed minimum requirements as specified. All work shall conform to the requirements of applicable codes.

PART 2 - PRODUCTS

2.1 PLUMBING FIXTURES

A. Furnish and install all plumbing fixtures and equipment as scheduled and shown on drawings and required for proper operation. All plumbing fixture brass trim shall be so designed that all wearing parts are to be in a standardized renewable operating unit which can be removed without detaching the supply fixture or faucet proper. The standardized renewable operating units are to be interchangeable with all supply fixtures and faucets. All exposed metal parts of all fixtures, including faucets, waste fittings, waste plugs, strainers, flush valves, traps, supplies, nipples and escutcheons shall be chromium plated brass, unless other materials or finish is specified. Angle stops with S.P.S. brass nipples from wall to stops shall be provided on all water supplies to fixtures. Fixture trim must be that of the fixture manufacturer wherever possible and must bear a permanent impression of the manufacturer.

B. Floor drains shall be as scheduled and in accordance with ANSI A112.6.3. Provide caulking flange for connection to cast iron pipe, screwed outlets for connection to steel pipe, and side outlet when shown. Provide suitable clamping device and extensions if required, where installed in connection with waterproofing membrane. (Submit detailed shop drawings for these drains). Double drainage pattern floor drains shall have integral seepage pan for embedding in floor construction, and weep holes to provide adequate drainage from pan to drain pipe. In detention areas drains shall have torx head screws with center dimple to secure top.

C. Furnish and install all commercial plumbing fixtures specified herein and shown on plans. Kohler and Just fixtures are specified. Sloan Valves and Moen Faucets are specified. T&S and Chicago faucets are acceptable manufactures. Contractor shall submit on trim as well as fixtures. Substitutions are allowed only with pre-approved fixtures.

D. Wall hung fixtures where scheduled on drawings are to be supported by Josam, Wade, Smith or pre-approved equal chair carriers with integral adjustable fittings.

2.2 PLUMBING SPECIALTIES

A. Clean-outs

1. Provide drainage lines with properly specified clean-outs. Locate clean-outs in runs at not more than 75' on center or as required by local codes. Provide clean-outs at base of each soil and waste stack and whenever necessary to make accessible all parts of drainage soil and waste systems whether or not indicated on drawings. Extend clean-outs within chases to near wall and provide access cover compatible with wall construction. Provide clean-outs of required size with flashing flange where installed with membrane water proofing.
2. Exterior Surfaced Areas: Round cast nickel bronze access frame and vandal proof non-skid cover; Model 4245 as manufactured by JR Smith or approved equal.
3. Exterior Unsurfaced Areas: Ferrule type with coated cast iron body and round tapered thread bronze cover; Model 4280 as manufactured by JR Smith or approved equal.
4. Interior Finished Floor Areas: Coated cast iron body, round with scoriated cover Model 4025C in service areas, square with bronze foot traffic cover Model 4045C compatible with floor finish in finished floor areas or carpet clean-out cover where required; clean-outs shall be as manufactured by JR Smith or approved equal.
5. Interior Linear shower drain to be Blucher, ACO or approved equal.
6. Interior Finished Wall Areas: Cast iron body, cast iron plug, and round flat stainless steel access cover secured with machine screw; Model 4402 as manufactured by JR Smith or approved equal.
7. Interior Unfinished Accessible Areas: Cast iron tee with threaded plug. Provide bolted stack clean-outs on vertical rainwater leaders.

B. Access Boxes (Coordinate all locations with Architect prior to installation): Provide 18 gauge steel frame and door with heavy duty piano hinge and keyed cam-lock.

1. Access doors mounted in painted surfaces shall be of Milcor (Inland-Ryerson Construction Products Company) manufacturer, Style K for plastered surfaces and Style M or DW for non-plastered surfaces. The Style K doors shall be set so that the finished surface of the door is even with the finished surfaces of the adjacent finishes. Access doors mounted on tile surfaces shall be stainless steel materials. Access doors shall be a minimum of 18" x 18" in size.
2. Walls:
   a. Provide square frame and secured cover with brushed chrome plate finish in tile walls.
   b. Provide square frame and cover with bonderized prime-coated steel face and lock in walls of other finished rooms.
3. Ceilings:
   a. Provide square frame and cover with bonderized prime-coated steel face and lock.
4. Floors:
   a. Provide plain steel frame with plain nickel-bronze scoriated cover.

C. Provide cast brass "P" traps on all sanitary branch waste connections from fixtures or equipment not

provided with traps. Exposed traps shall be polished brass chromium plated with nipple and set screw escutcheons. Concealed traps may be wrought cast brass. Slip joints not permitted on sewer side of trap. Traps shall correspond to fittings on cast iron soil pipe or steel pipe respectively, and size shall be as required by connected service or fixture, or as scheduled.

PART 3 - EXECUTION

3.1 INSPECTION

A. Review millwork and other related shop drawings for coordination and ADA requirements. Confirm location and size of fixture and/or opening before rough-in and installation.
B. Verify adjacent construction is ready to receive rough in and finish work of this Section

3.2 INSTALLATION OF PLUMBING PIPING

A. The plumbing piping system shall be installed as specified in Section 22 1300, “Facility Sanitary Sewerage”.

B. Lubricate threaded clean-out plugs. Provide clearance at clean-out for rodding of drainage system.

C. Encase exterior clean-outs in concrete flush with grade.

3.3 INSTALLATION OF PLUMBING FIXTURES

A. Install each fixture with trap, easily removable for servicing and cleaning.

B. Provide chrome plated rigid or flexible supplies to fixtures with ¼ turn stops, reducers, and escutcheons to make a watertight finished connection.

C. Fixture heights will be defined on the Architectural Drawings. Where the mounting heights vary, the defined heights as shown on the Architectural Drawings shall prevail. Install components level and plumb.

D. All fixtures must be securely fastened to the floor or walls by means of inserts or expansion bolts in concrete work, and by means of expansion bolts, toggle bolts or through bolts in masonry work, and by means of framing and screws in frame construction, to the satisfaction of the Architect.

E. Drains
1. Contractor shall install all floor and roof drains according to manufacturer's recommendations. Provide and install all flashing and weatherproofing as required. Adjust extension sections on all drains as required for proper height adjustment.
2. All floor drains to be trapped. Connect floor drains to sanitary waste piping as indicated on plans.
3. Each AC equipment drain opening which normally discharges water (such as air conditioning unit drains, overflows, and similar drips and drains) shall be connected to the drain openings by means of an indirect drain or piped down directly over the floor drains which are provided for this purpose.
4. Each water relief valve discharge shall be piped down to 6 inches above floor, but not necessarily over a floor drain or connected to a drain opening, unless otherwise indicated. No drain piping is required from the discharges or drain valves, unless otherwise indicated.
5. All drains, overflow, condensate and relief, to be routed to nearest trapped hub or floor drain if not shown on drawings.

3.4 ADJUSTING AND CLEANING

A. Adjust stops and regulating valves for intended water flow rate to fixtures without splashing, noise, or overflow.

B. At completion, clean plumbing fixtures and equipment.

END OF SECTION

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SECTION 23 37 13 DIFFUSERS, REGISTERS AND GRILLES * AD3

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to the Work in this Section.

1.2 SUMMARY

A. Provide all equipment, materials, labor, supervision, and services necessary for or incidental to the installation of all necessary air handling items as shown on the drawings and/or specified.

B. Work Included:
1. Air Supply and Grilles.
2. Louvers.

C. **Submittals: Provide submittals as required in section 23 00 10, "Submittal Process."**
1. Submit schedule of outlets and inlets indicating type, size, location, application, and noise level.
2. Review requirements of outlets and inlets as to size, finish, and type of mounting prior to submitting product data and schedules of outlets and inlets.

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Under no circumstances shall OBD's or butterfly dampers be used on any registers. In accessible areas manual dampers shall be used. In hard lid ceiling areas remote cable dampers shall be used. Access panels shall not be used to access any damper in a hard lid ceiling.

C. Without additional cost to the Owner, provide such other labor and materials as are required to complete the work of this Section in accordance with the requirements of governmental agencies having jurisdiction, regardless of whether such materials and associated labor are called for elsewhere in these Contract Documents. When requested, provide Architect with manufacturer's certificate that materials meet or exceed minimum requirements as specified.

D. Test and rate performance of air outlets and inlets in accordance with ADC Equipment Test Code 1062 and ASHRAE 70.

E. Test and rate performance of louvers in accordance with AMCA 500.

PART 2 - PRODUCTS

2.1 AIR SUPPLIES AND RETURNS:

A. Grilles, registers and ceiling outlets shall be as scheduled on the Drawings. Devices shall be the type, size, capacity, performance, and by the manufacturer scheduled or pre-approved equal. If a manufacturer other than the one scheduled is used, the sizes shown on the Drawings shall be checked for performance, noise level, face velocity, throw, pressure drop, etc., before the submittal is made. Selections shall meet the manufacturer's own published data for the above performance criteria. The throw shall be such that the velocity at the end of the throw in the five foot occupancy zone will be not more than 50 FPM nor less than 25 FPM. Noise levels shall not exceed those published in the ASHRAE Guide for the type of space being served (NC level).

B. Locations of outlets on Drawings are approximate and shall be coordinated with other trades to make symmetrical patterns and shall be governed by the established pattern of the lighting fixtures or architectural reflected ceiling plan. Where called for on the schedules, the grilles, registers and ceiling outlets shall be provided with deflecting devices and manual damper. These shall be the standard product of the manufacturer, subject to review by the Architect, and equal to brand scheduled.

C. All adjustable pattern lay-in type-ceiling diffusers shall be adjustable without the use of tools.

D. All ceiling mounted devices shall be provided with frames compatible with the ceiling type. Coordinate air device frame type and color with architectural reflected ceiling plans and Architect's room finish schedule to match adjacent surface in which the device will be installed.

E. Acceptable Manufacturers:
1. Kees
2. Price
3. Titus
4. MetalAire
5. Pre-Approved Equal

2.2 LOUVERS

A. Aluminum fixed blade louvers shall be extruded aluminum with a drain gutter in each blade. Blades and frames shall be minimum 0.1 inch thick with reinforcing bosses and shall be of 6063-T5 alloy. Head, jamb and sill shall be of one piece structural member of 6063-T5 Alloy with integral calking slot and retaining bead. Supports and blades shall have provision for expansion and contraction. All fastenings shall be stainless steel or aluminum. Louvers shall be free of all scratches, blemishes and defects. Sizes shall be as shown on the Drawings.

B. Structural supports shall be provided and designed by the louver manufacturer to carry a wind load of not less than twenty five pounds per square inch (25 psi).

C. Provide louvers with removable bird screens, consisting of aluminum frame with mitered corners and 0.063 inch (1.6 mm) diameter 1/2 inch aluminum wire mesh. Bird screen shall be attached to interior of louver with sheet metal screws or clips.

D. Louver finish shall be as directed by Architect.

E. Acceptable Manufacturers:
1. Greenheck
2. Ruskin
3. Pottorff
4. The Airolite Company
5. Pre-Approved Equal

2.3 LOW SILHOUTTE ROOF HOODS

A. Gravity roof ventilators shall be constructed of heavy gauge aluminum. Hoods shall be constructed of precision formed, arched panels with interlocking seams. Bases shall be constructed so that the curb cap is 8 in. larger that the throat size. Hood support members shall be constructed of galvanized steel and fastened so that the hood can be either removed completely from the base or hinged open.

B. Birdscreens constructed of 0.5 in. galvanized steel mesh shall be mounted horizontally across the intake area of the hood. Intake units with throat widths through 42 in. shall ship assembled when throat lengths do not exceed 84 in.

C. Mount unit on minimum 12 inch high curb base with insulation between duct and curb. Bases shall be furnished for intake applications to restrict entry of moisture and for all applications where rain and snow may accumulate on the roof deck.

D. Make hood outlet area minimum of twice throat area.

E. Acceptable Manufactures
   1. Greenheck
   2. Kees, Inc.
   3. Penn Venilation
   4. Pre-Approved Equal

2.4 GOOSENECKS

A. Fabricate in accordance with SMACNA Low Pressure Duct Construction Standards of minimum 18 gage galvanized steel.

B. Mount on minimum 14 inch high curb base where size exceeds 9 x 9 inch

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install items in accordance with manufacturer's instructions.

B. Check location of outlets and inlets and make necessary adjustments in position to conform to architectural features, symmetry, and lighting arrangement.

C. Install diffusers to ductwork with air tight connection.

D. Provide balancing dampers on duct take-off to diffusers, and grilles and registers, regardless of whether dampers are specified as part of the diffuser, or grille and register assembly.

E. Paint ductwork visible behind air outlets and inlets matte black. If grille is not ducted then provide insulated boot with side opening in order to prevent visible systems above the ceiling.

F. Grille security level shall match or exceed the type of ceiling/wall the grille is installed in.

END OF SECTION

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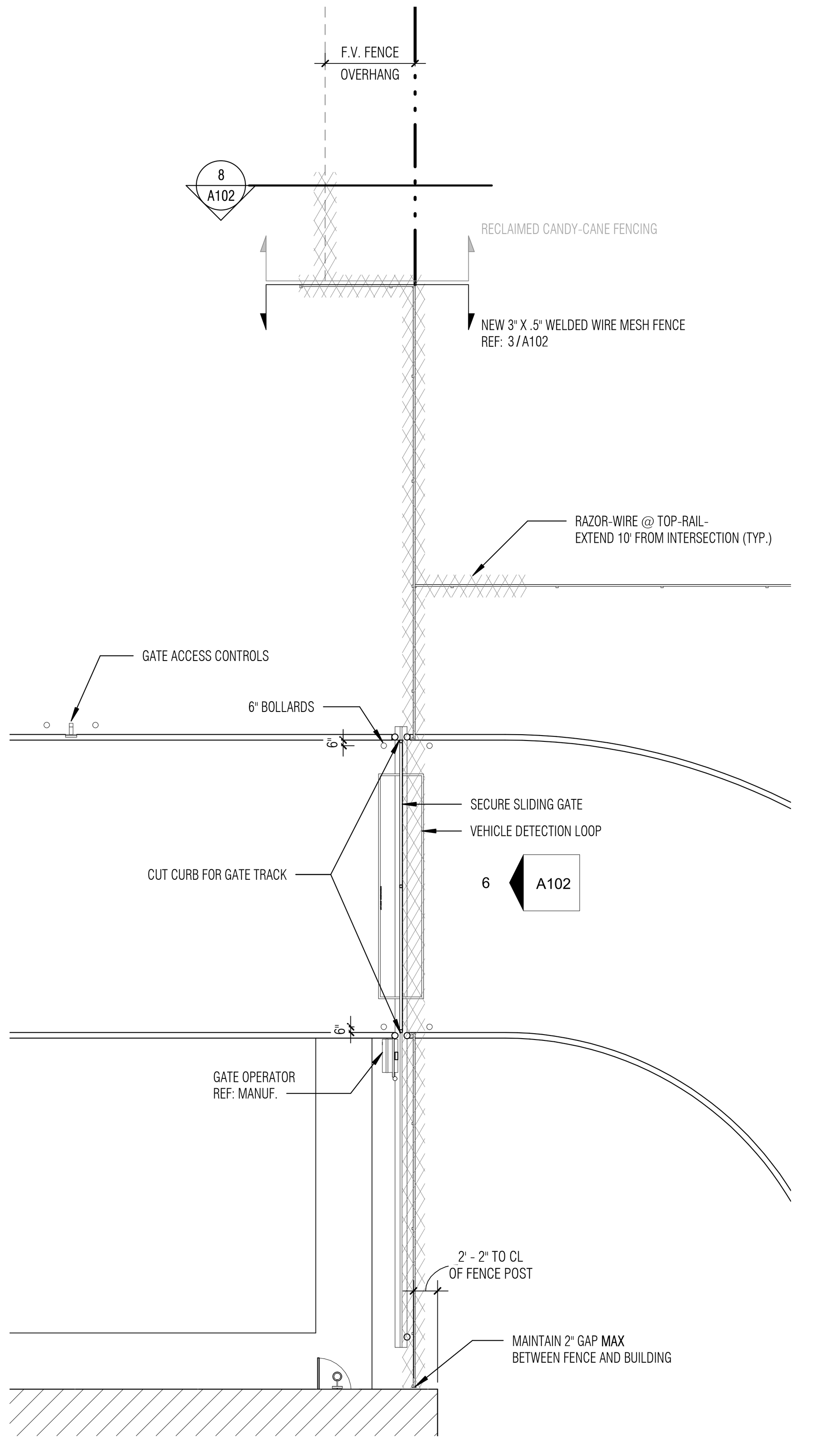

1 ENLARGED SITE PLAN
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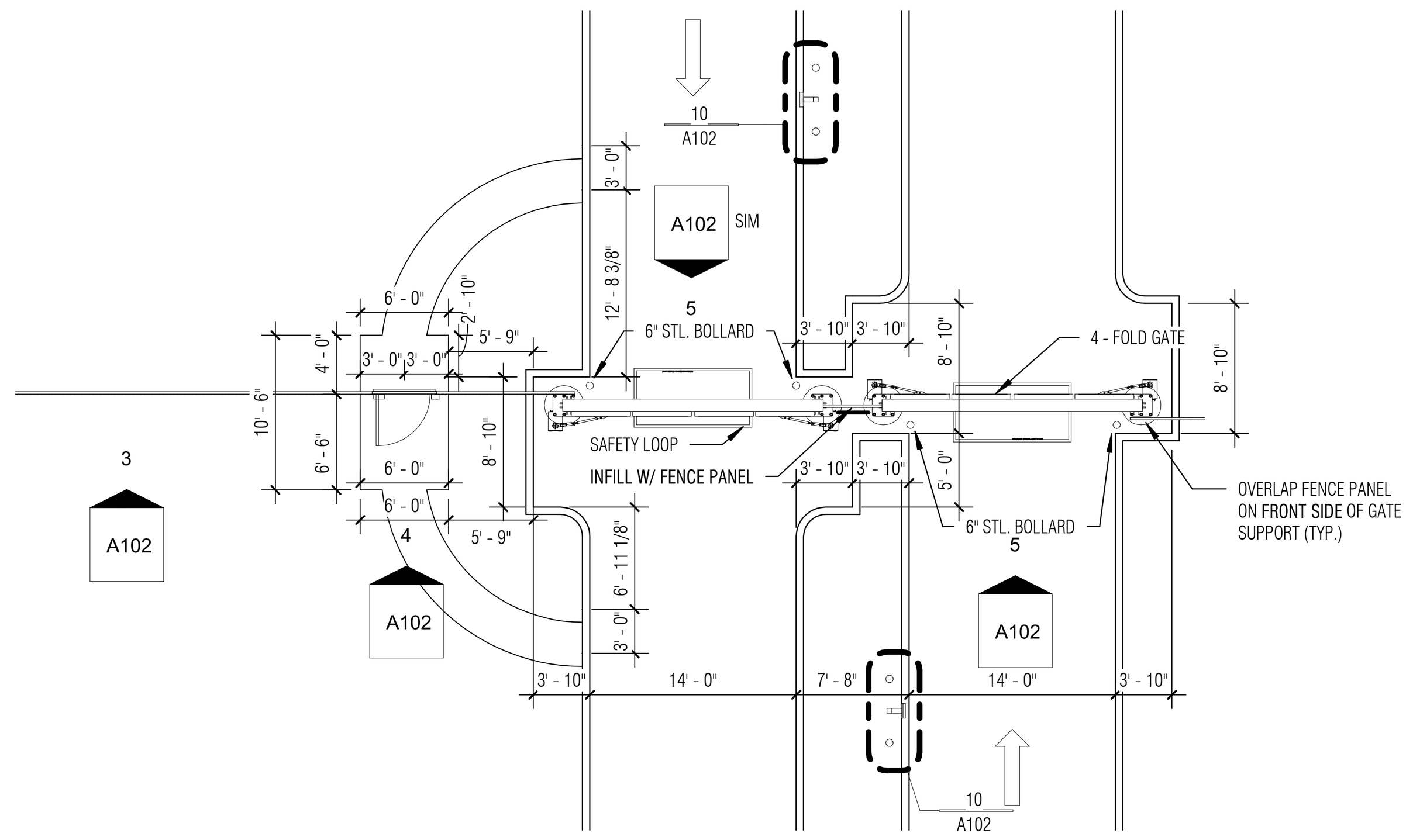
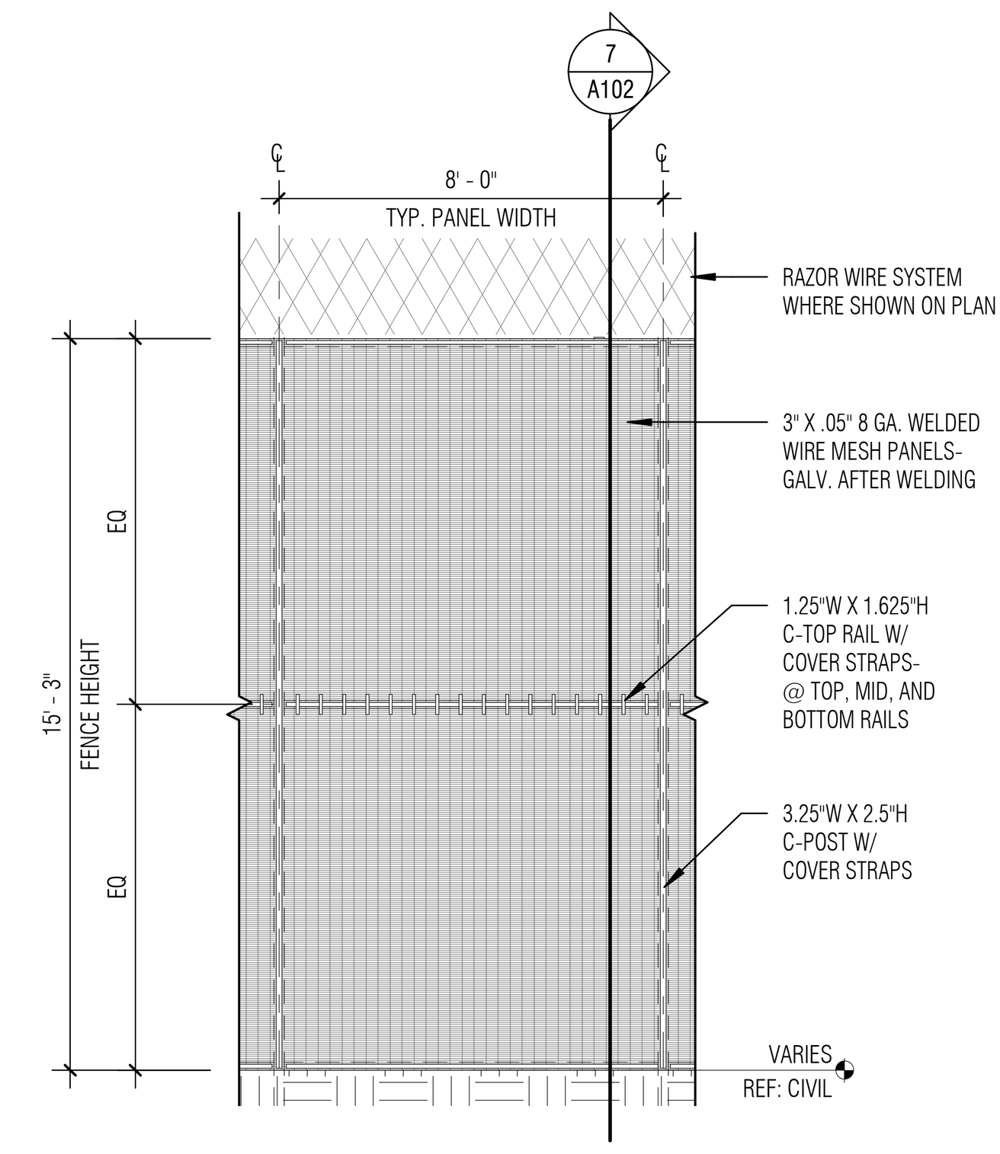
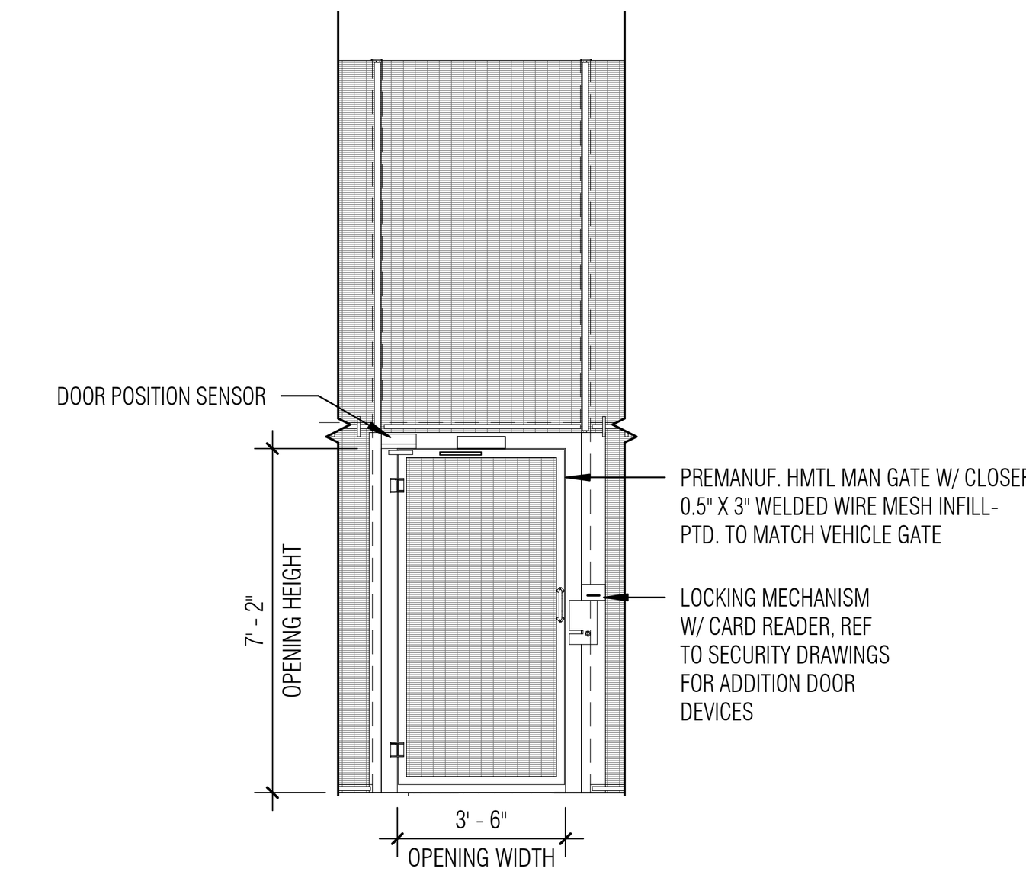


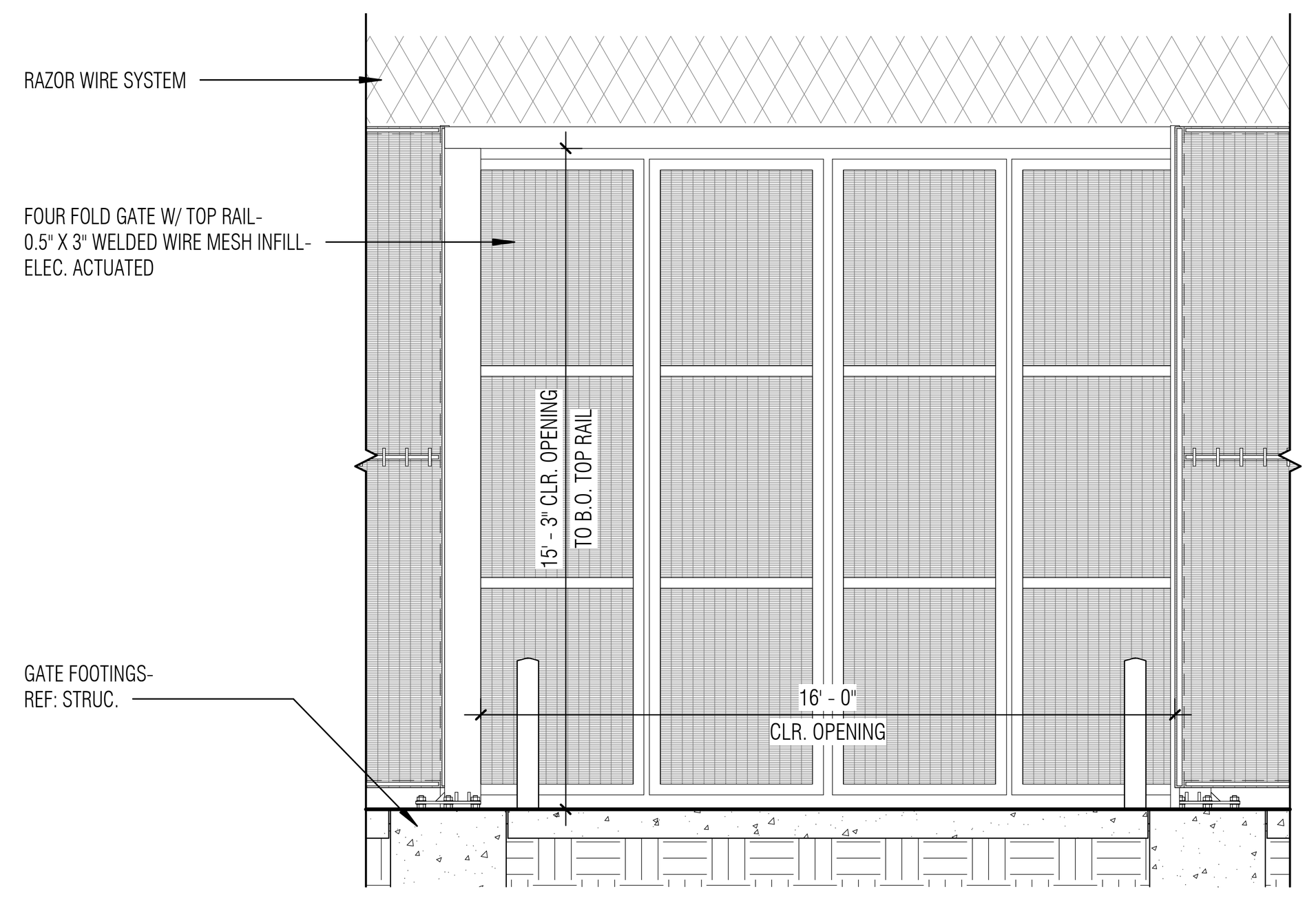
2 ENLARGED SITE PLAN - GATES & PANELS (ALT. #2)
SCALE: 1" = 10'-0"



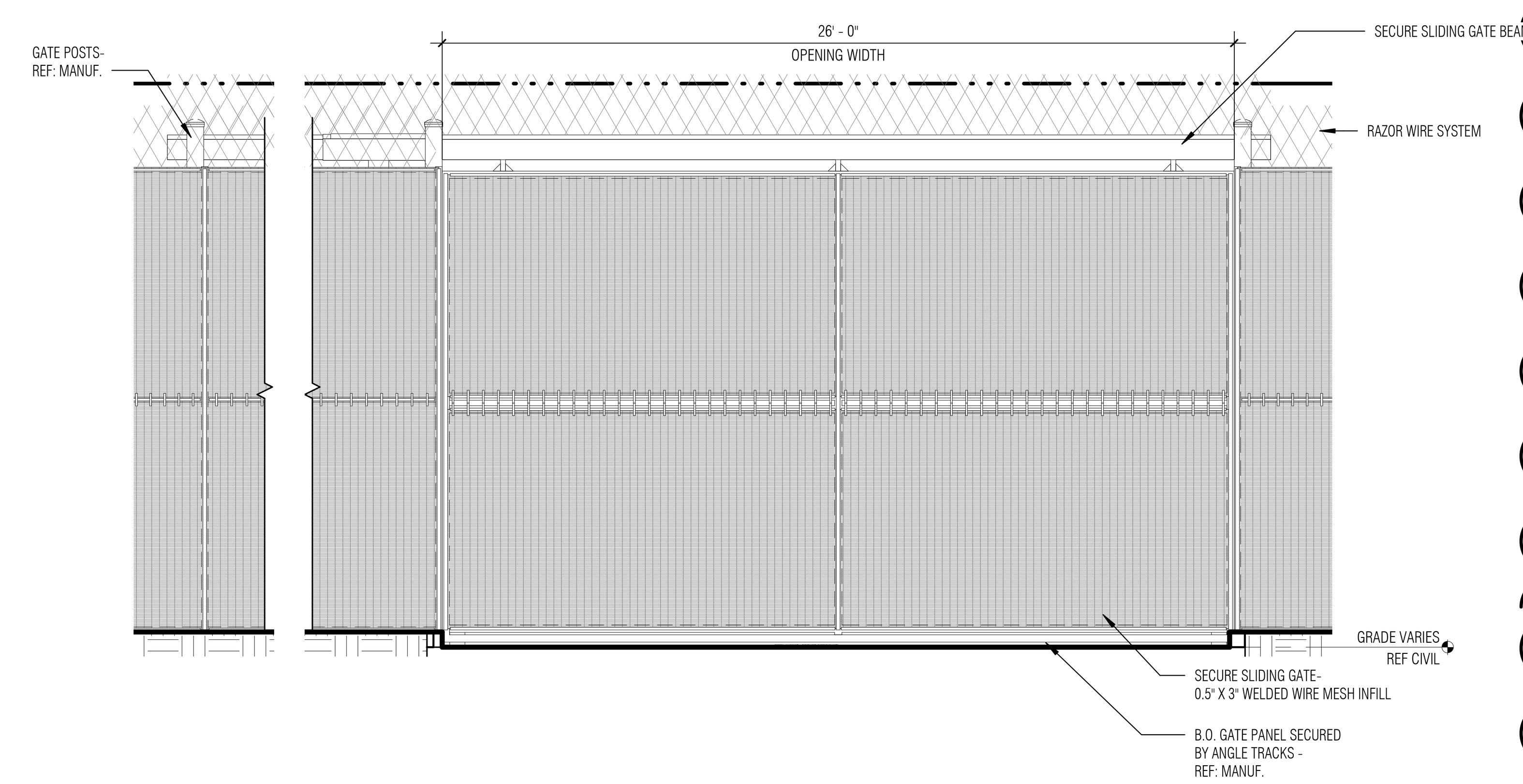
3 ELEVATION - PERIMETER FENCE PANE
SCALE: 1/4" = 1'-0"



4 ELEVATION - MAN GATE (ALT. #2)
SCALE: 1/4" = 1'-0"



5 ELEVATION - FOUR-FOLD GATE (ALT. #2)
SCALE: 1/4" = 1'-0"



6 ELEVATION - SECURE SLIDING GATE
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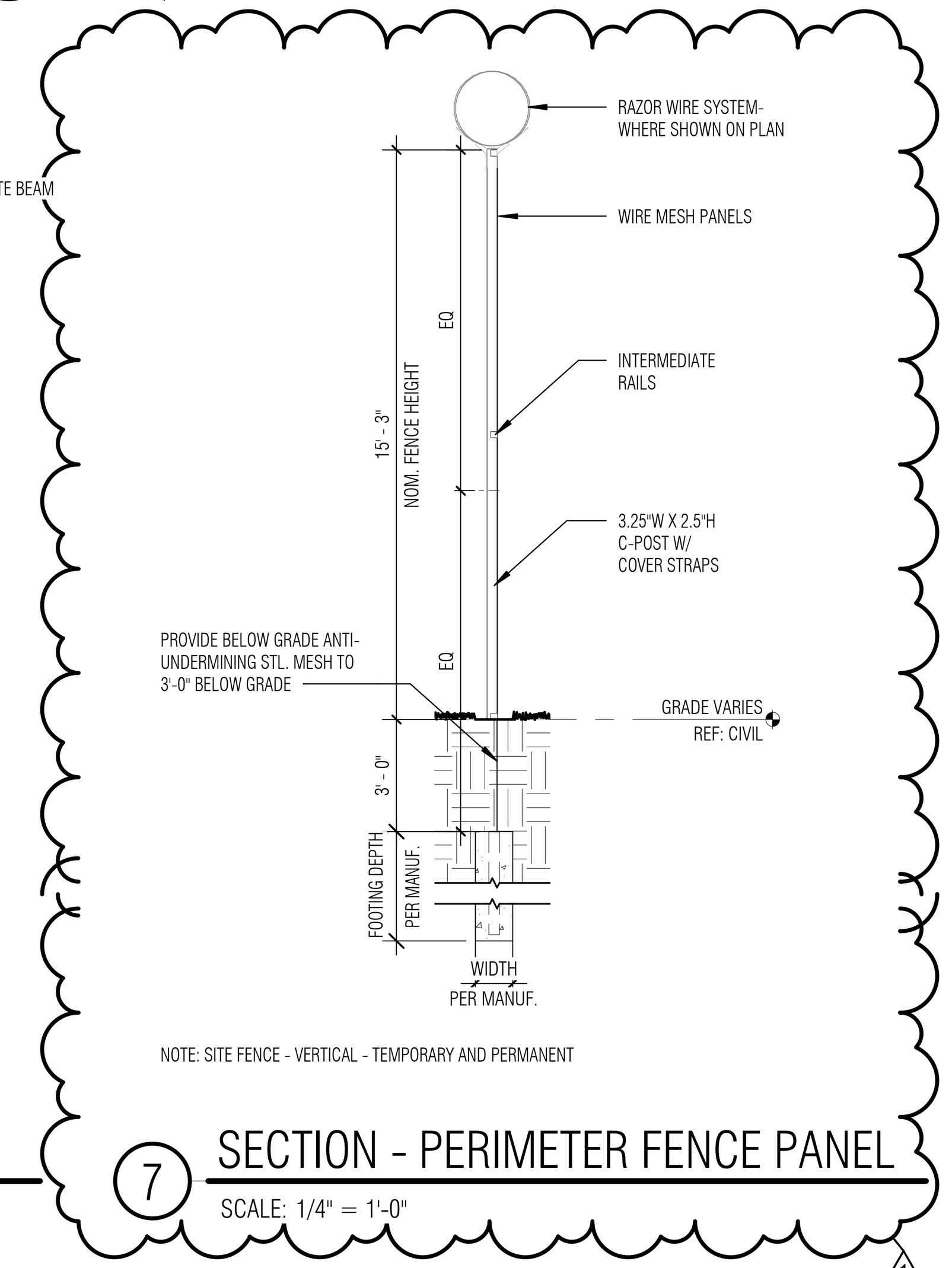
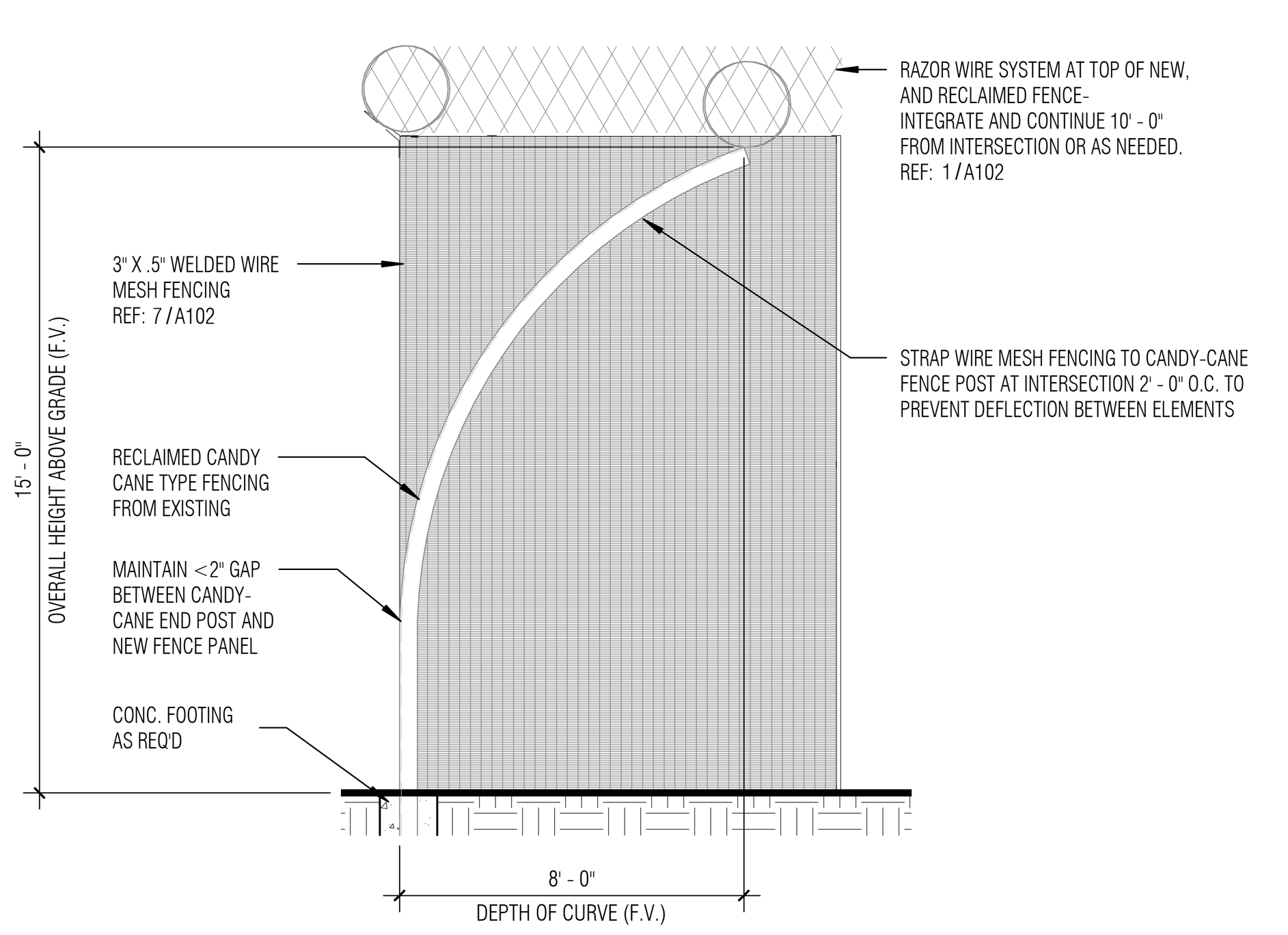
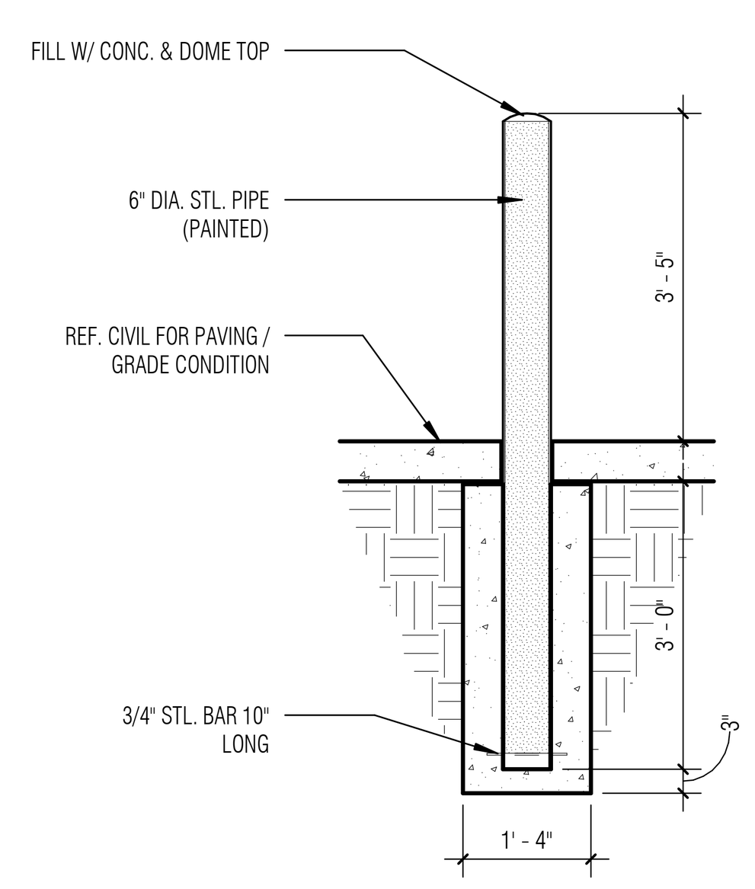


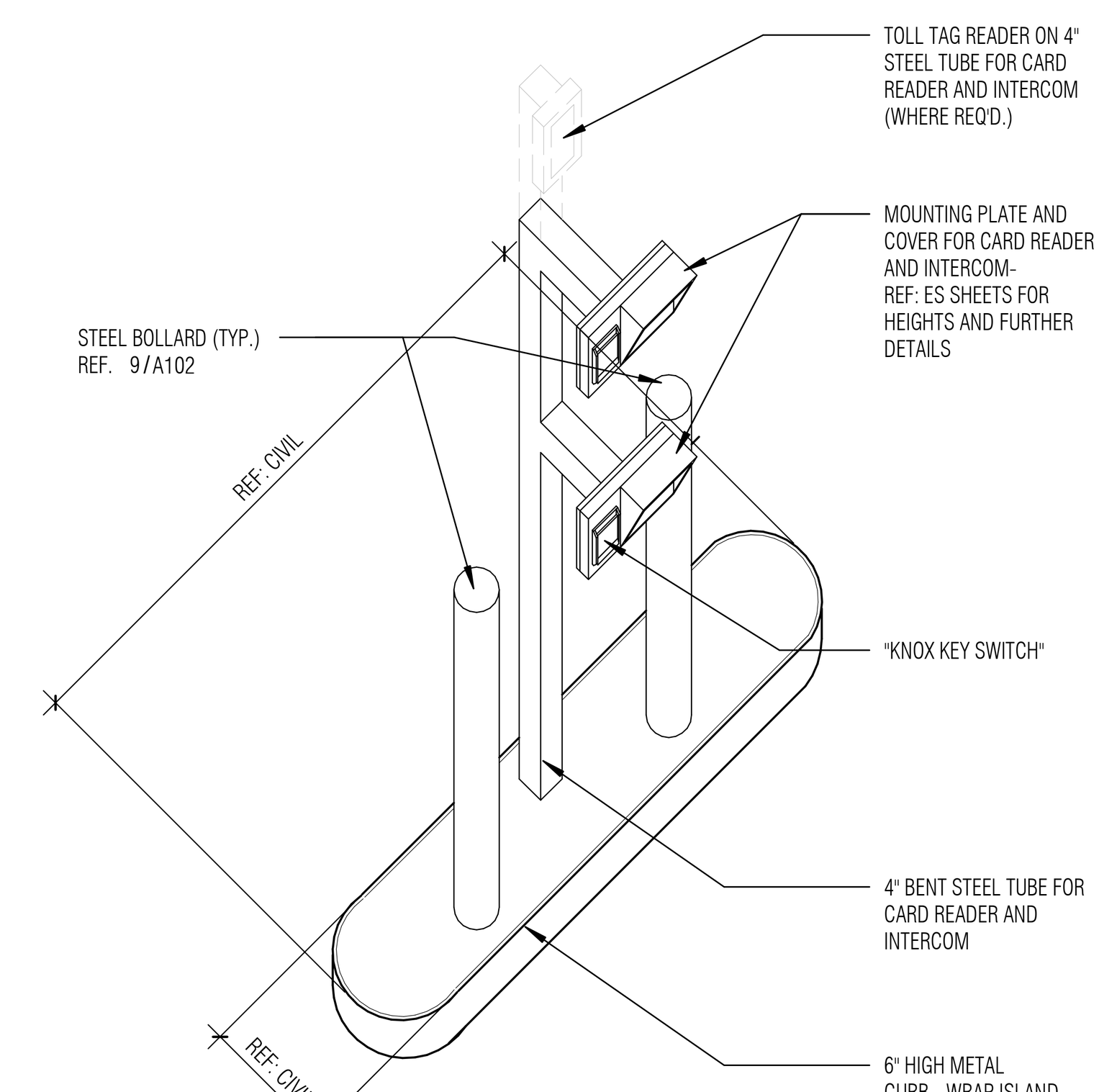
7 SECTION - PERIMETER FENCE PANEL
SCALE: 1/4" = 1'-0"



8 SECTION @ EXISTING FENCE INTERSECTION
SCALE: 1/4" = 1'-0"



9 SITE BOLLARD PIPE TYP
SCALE: 1/2" = 1'-0"



10 GATE CONTROL
SCALE: 1/2" = 1'-0"

11 ACCESSIBLE PARKING SIGN
SCALE: NTS

BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: Pacheco Koch (214) 451-2765
Structural: JQ Engineering (214) 752-9098
MEP / IT: MD Engineering (469) 467-0200
Security: LattaTech (972) 633-5850

COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

HISTORY

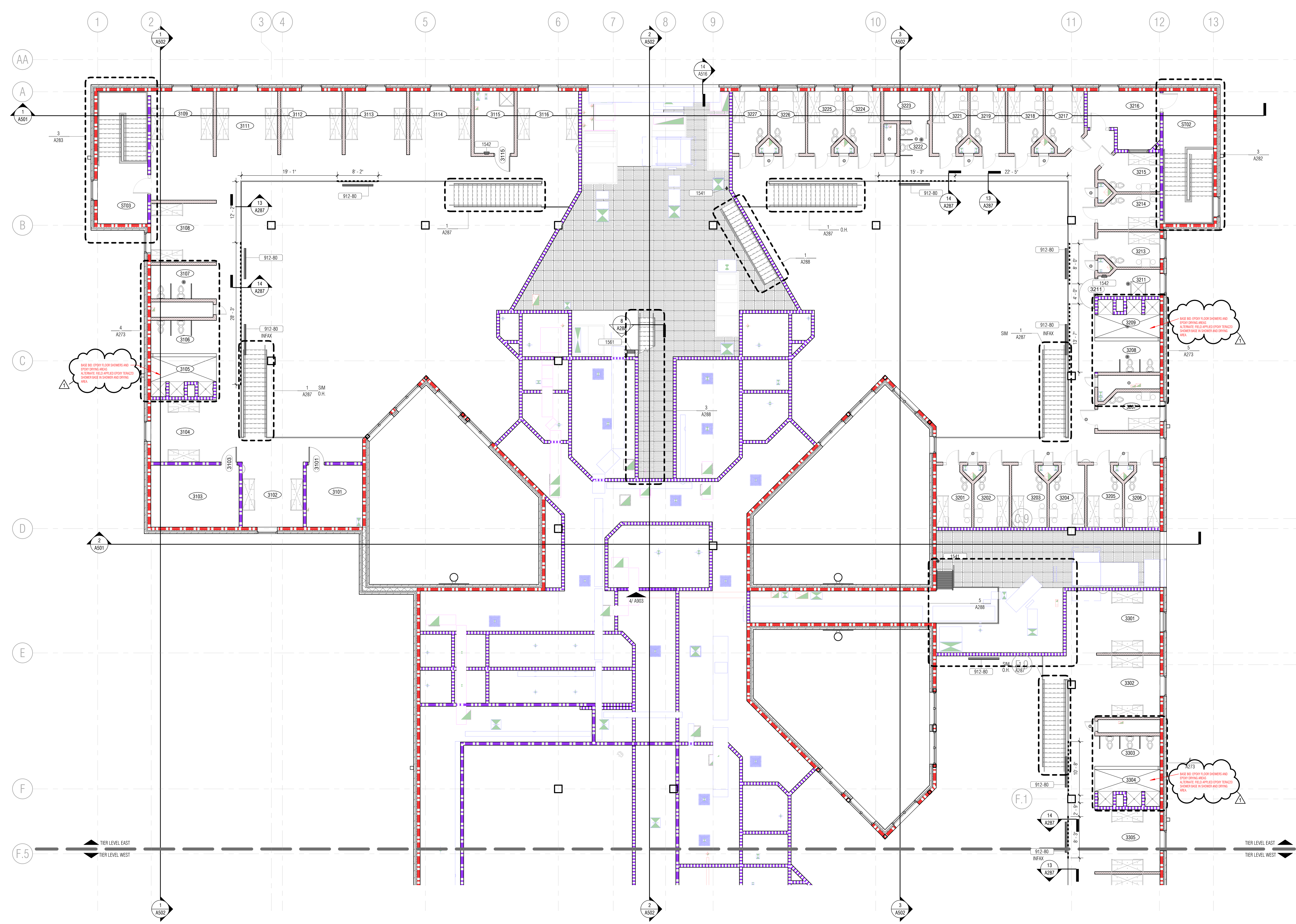
#	DATE	DESCRIPTION
1	08/20/2021	ADDENDUM #3

07/13/2021

ENLARGED SITE PLANS & SITE DETAILS

21913
07/13/2021
A102

FOR BID



1 TIER LEVEL EAST - EQUIPMENT, INTERIOR ELEV.

SCALE: 1/8" = 1'-0"

NORTH

0' 4' 8'

ROOM SCHEDULE (TIER LEVEL)	
NUMBER	ROOM NAME
3101	STORAGE
3102	DORMITORY
3103	STORAGE
3104	DORMITORY
3105	SHOWER/ CHANGING
3106	INMATE RESTROOM
3107	INMATE RESTROOM
3108	DORMITORY
3109	DORMITORY
3111	DORMITORY
3112	DORMITORY
3113	DORMITORY

ROOM SCHEDULE (TIER LEVEL)	
NUMBER	ROOM NAME
3114	DORMITORY
3115	JAN.
3116	DORMITORY
3201	DBL. OCC. CELL
3202	DBL. OCC. CELL
3203	DBL. OCC. CELL
3204	DBL. OCC. CELL
3205	DBL. OCC. CELL
3206	DBL. OCC. CELL
3207	DBL. OCC. CELL
3208	INMATE TOILET
3209	INMATE SHOWERS

ROOM SCHEDULE (TIER LEVEL)	
NUMBER	ROOM NAME
3211	JAN.
3213	DBL. OCC. CELL
3214	DBL. OCC. CELL
3215	DBL. OCC. CELL
3216	SAFETY VESTIBULE
3217	DBL. OCC. CELL
3218	DBL. OCC. CELL
3219	DBL. OCC. CELL
3221	DBL. OCC. CELL
3222	INMATE TOILET
3223	STORAGE
3224	DBL. OCC. CELL

ROOM SCHEDULE (TIER LEVEL)	
NUMBER	ROOM NAME
3225	DBL. OCC. CELL
3226	DBL. OCC. CELL
3227	DBL. OCC. CELL
3301	DORMITORY
3302	DORMITORY
3303	INMATE TOILET
3304	INMATE SHOWER
3305	HC DORMITORY
3306	DORMITORY
3307	J.C
3308	STORAGE

EQUIPMENT PLAN NOTES

FOR EQUIPMENT SCHEDULE SEE SHEET A821

GUARD RAIL TYPE LEGEND

TYPICAL RAILING

PERFORATED PANEL

BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: Pacheco Koch (214) 451-2765
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MEP / IT: MD Engineering (469) 467-0200
Security: Latitech (972) 633-5850

COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

HISTORY

#	DATE	DESCRIPTION
1	08/20/2021	ADDENDUM #3

REGISTERED ARCHITECT CHARLES L. GOODMAN 21598 STATE OF TEXAS

07/13/2021

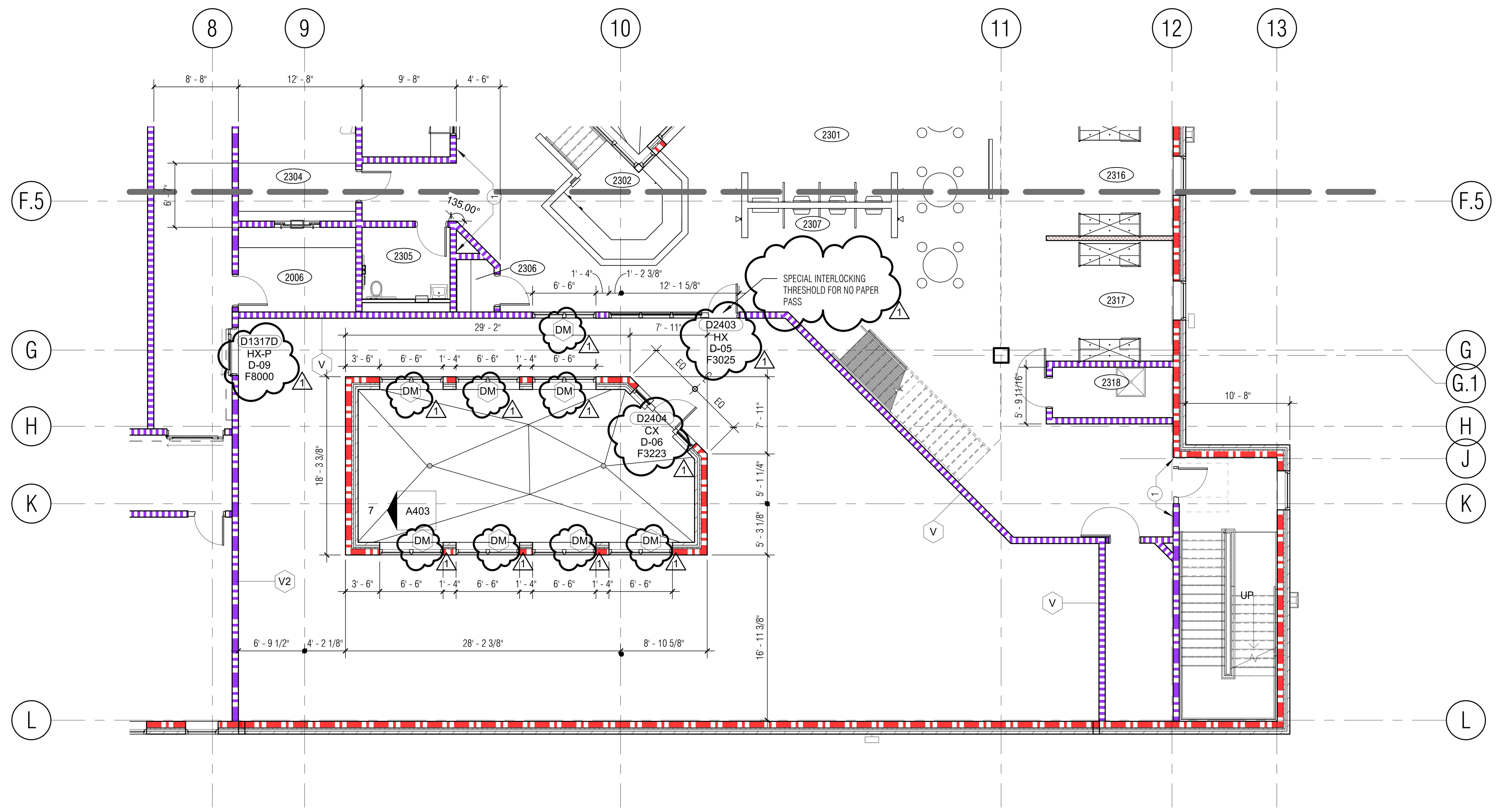
TIER LEVEL EAST - FLOOR PLAN - EQUIPMENT, INTERIOR ELEVATIONS

21913

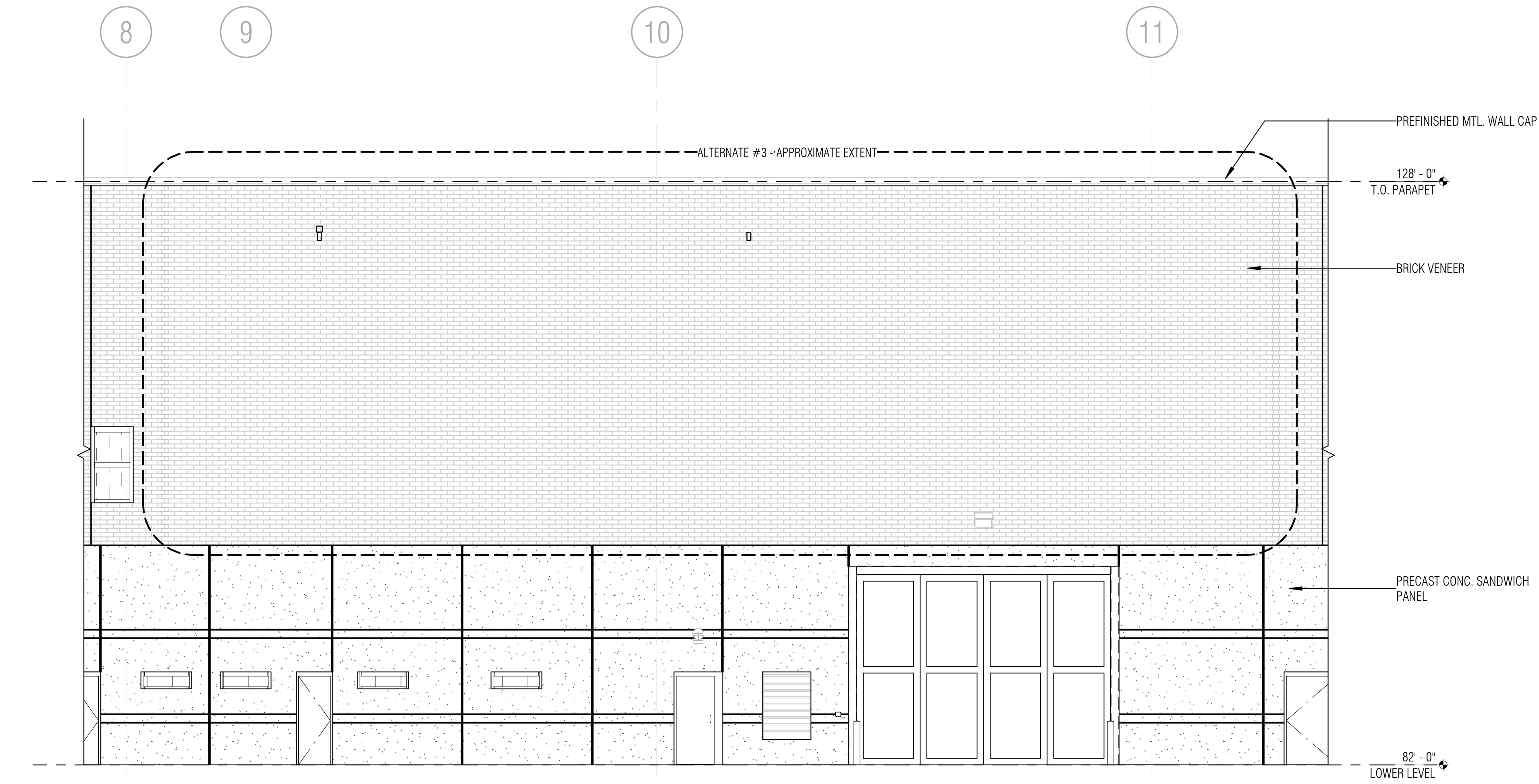
07/13/2021

A229

FOR BID



1 LEVEL 1 WEST (ALT) - WALL TAGS, DIMS
SCALE: 1/8" = 1'-0"
NORTH



3 BUILDING ELEVATION - ALTERNATE #1
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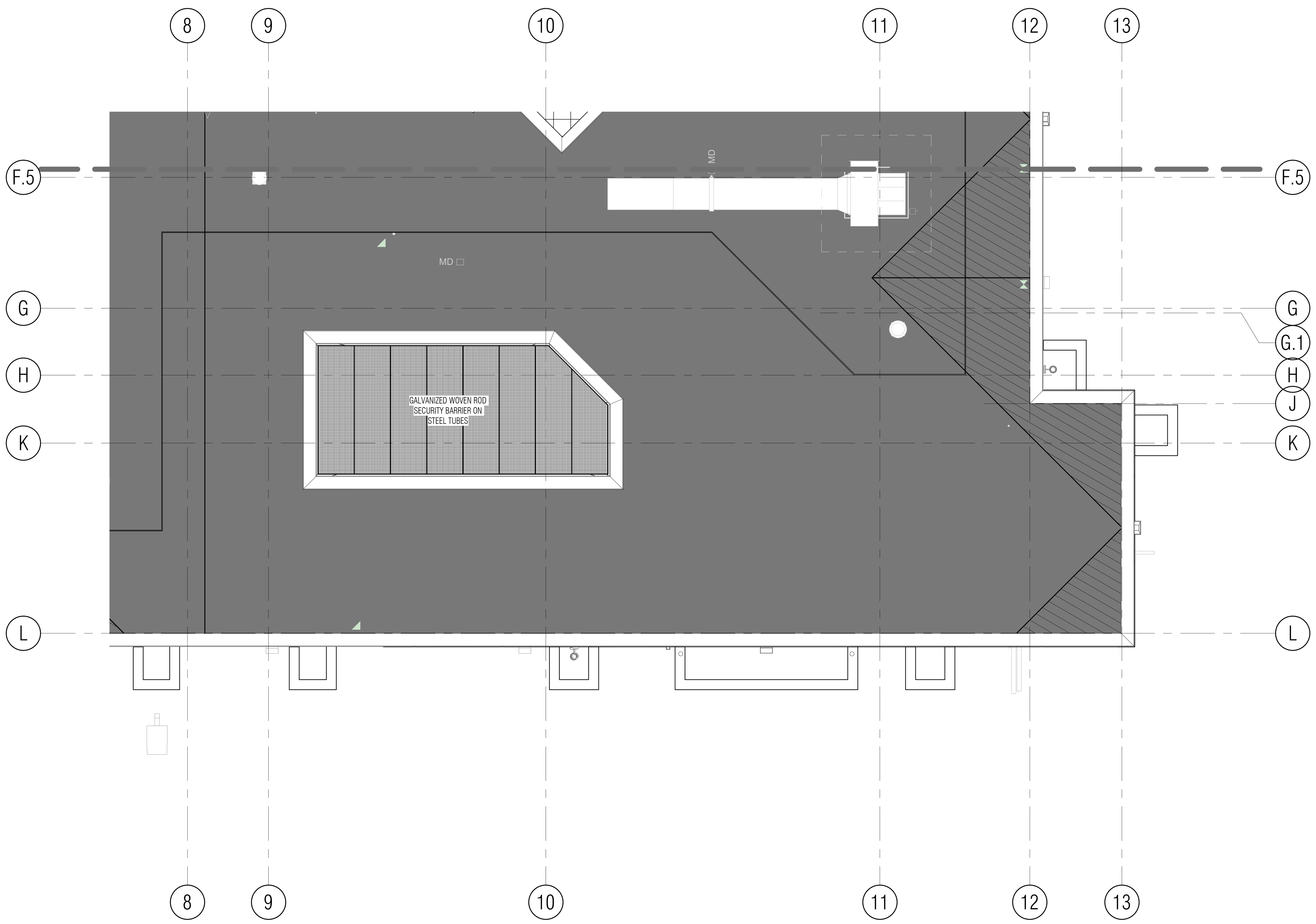

2 ROOF PLAN (ALT)
SCALE: 1/8" = 1'-0"
NORTH

BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
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COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

HISTORY

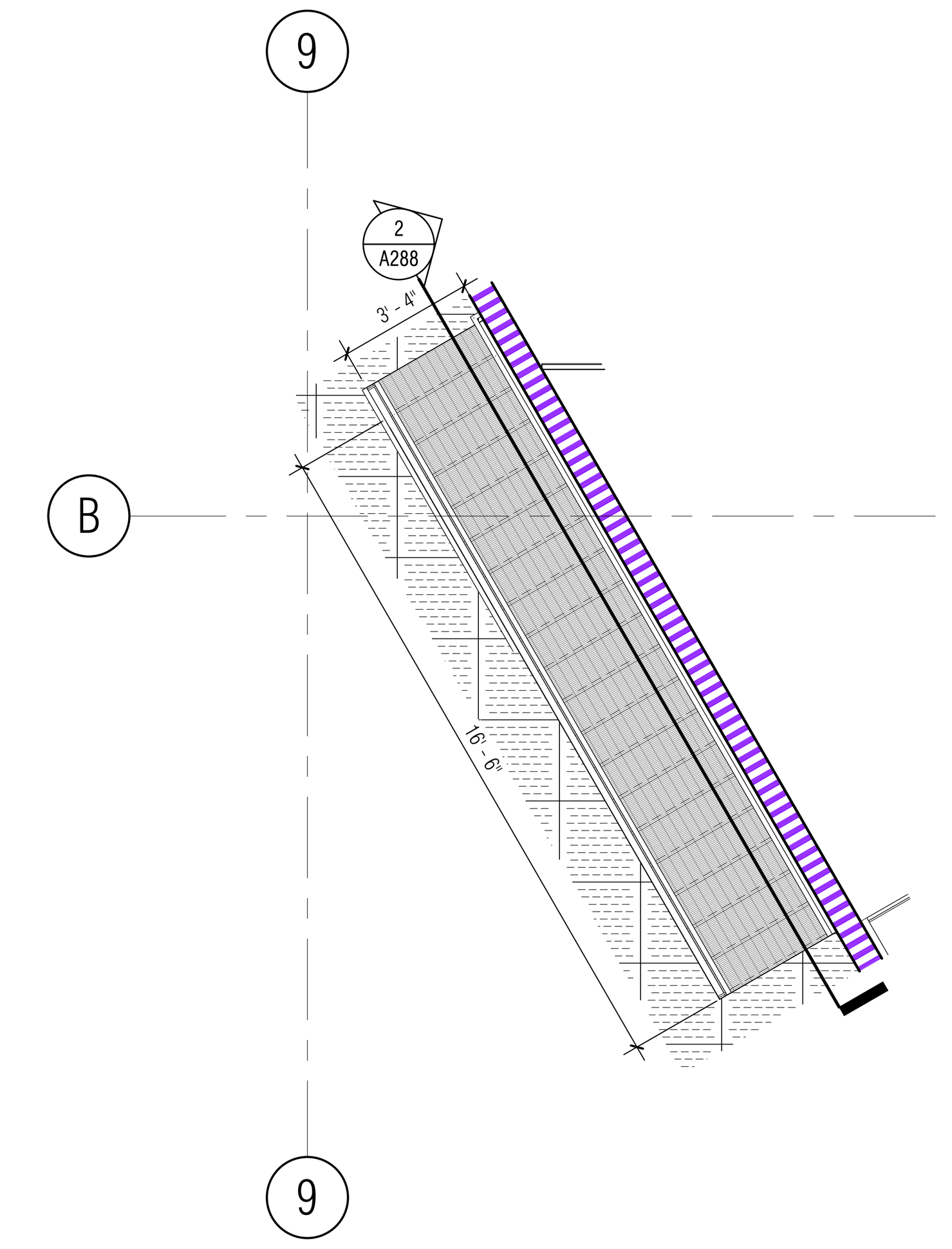
#	DATE	DESCRIPTION
1	08/20/2021	ADDENDUM #3

REGISTERED ARCHITECT STATE OF TEXAS
07/13/2021

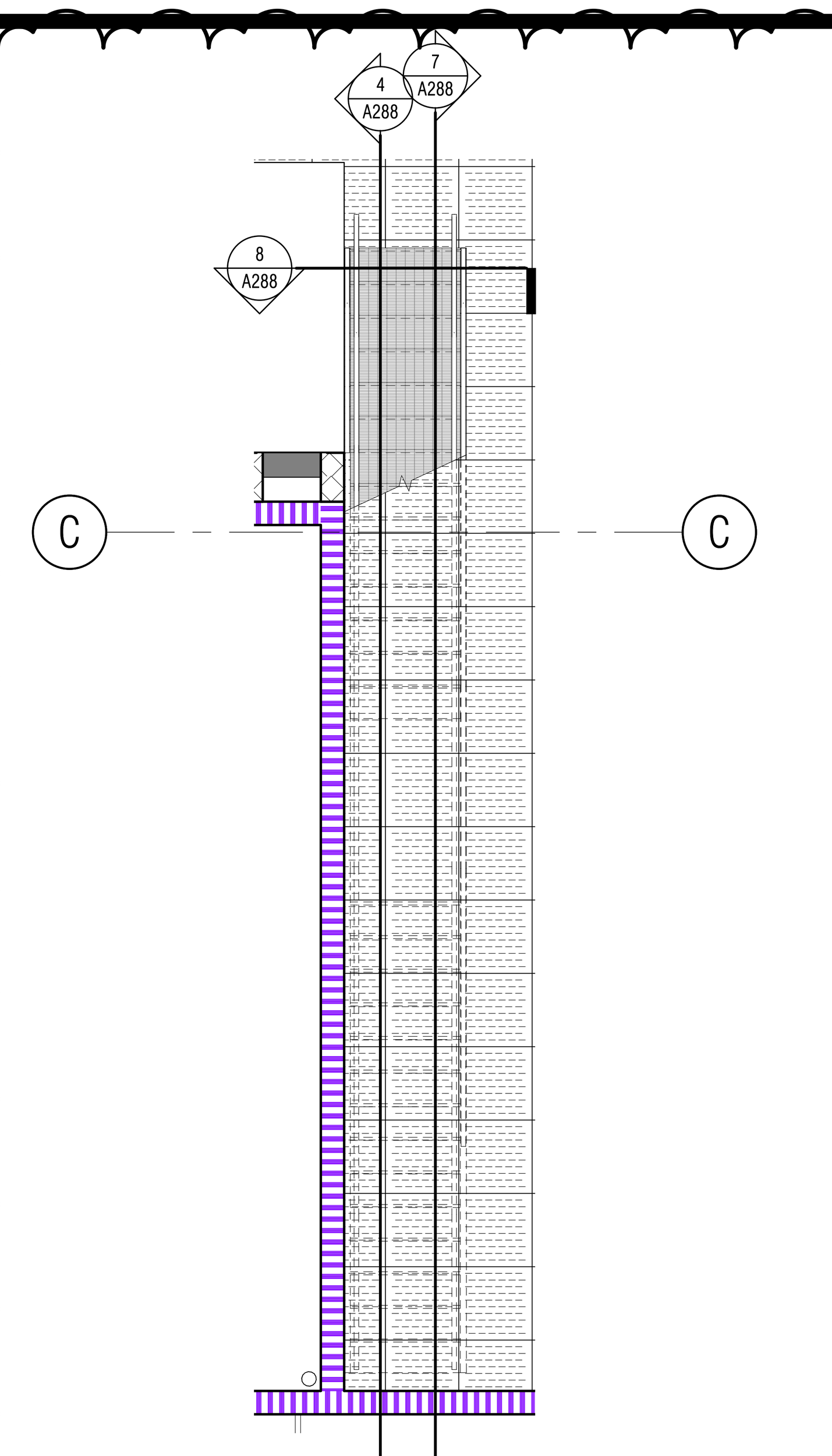
ALTERNATE #1 - FLOOR PLANS & ROOF PLAN

21913
07/13/2021
A240

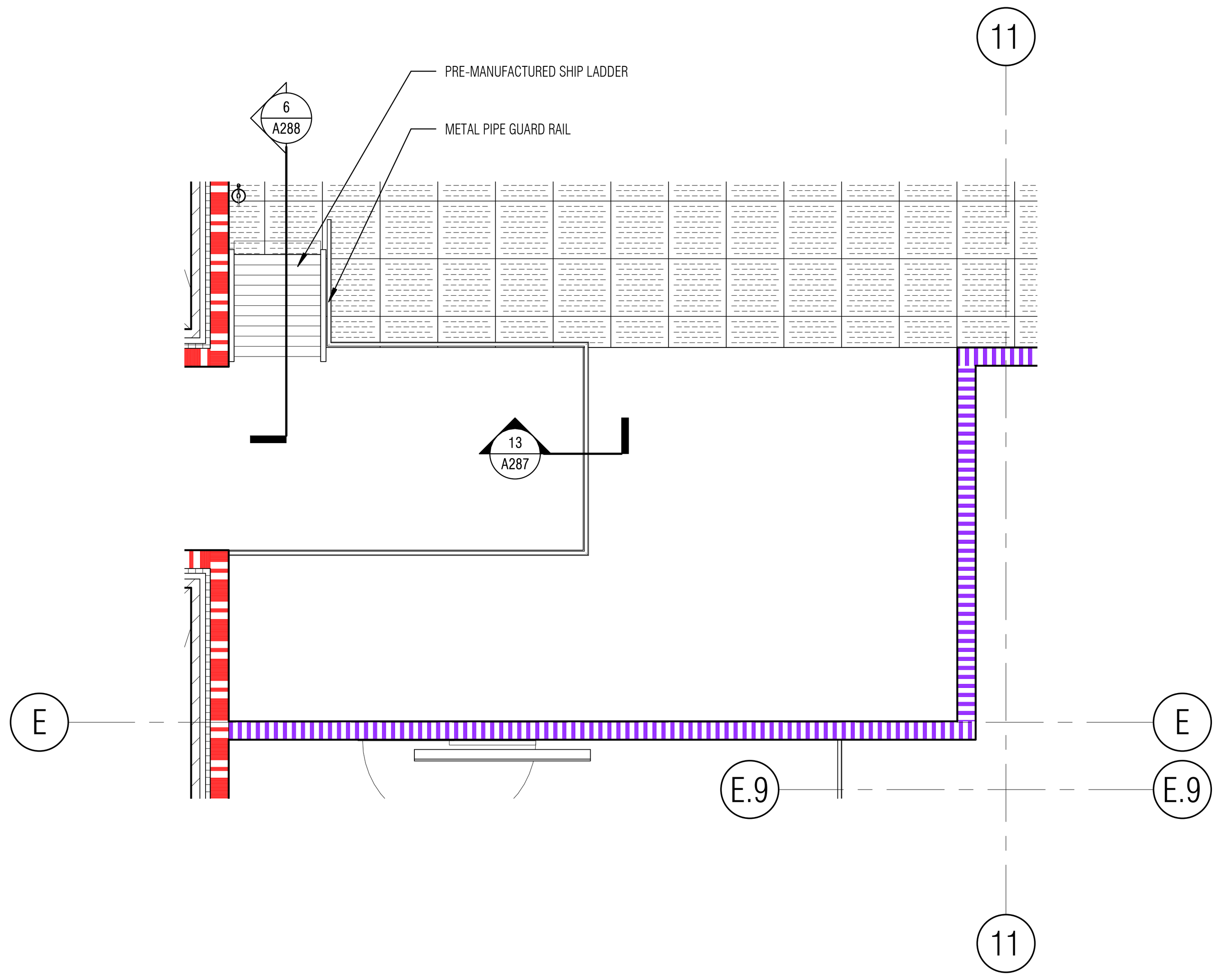
FOR BID



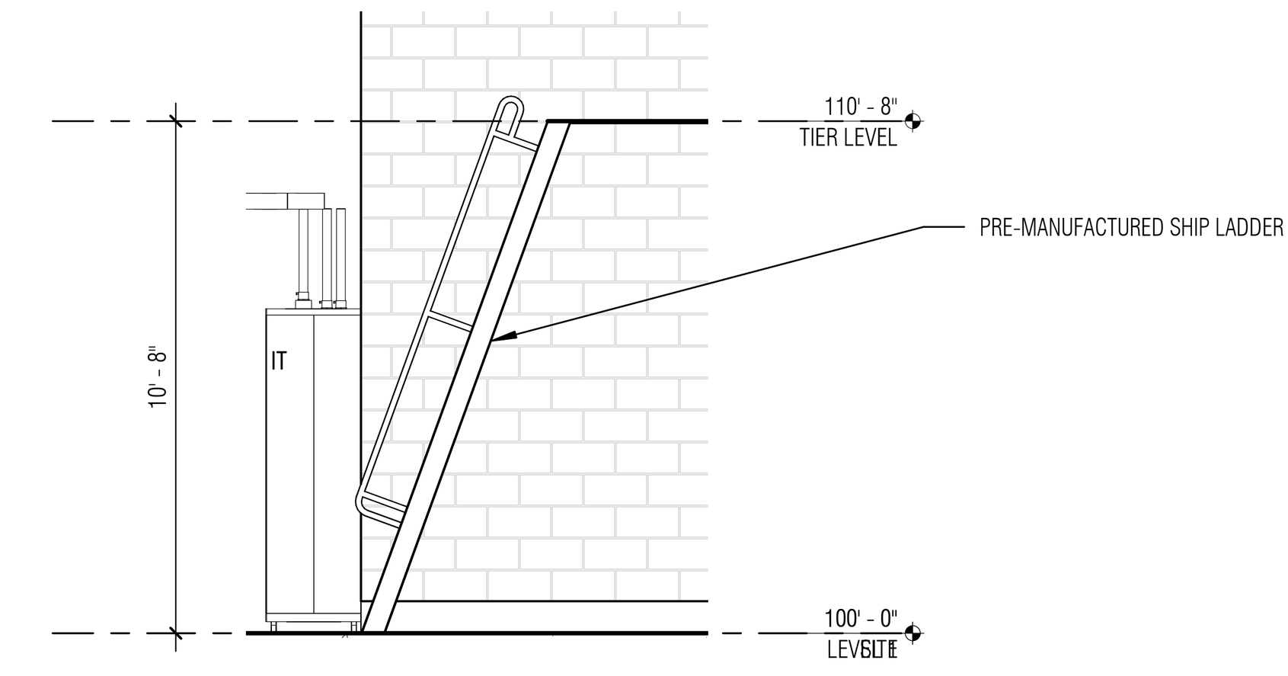
1 STAIR PLAN TIER LEVEL STAIR 11
SCALE: 1/4" = 1'-0"



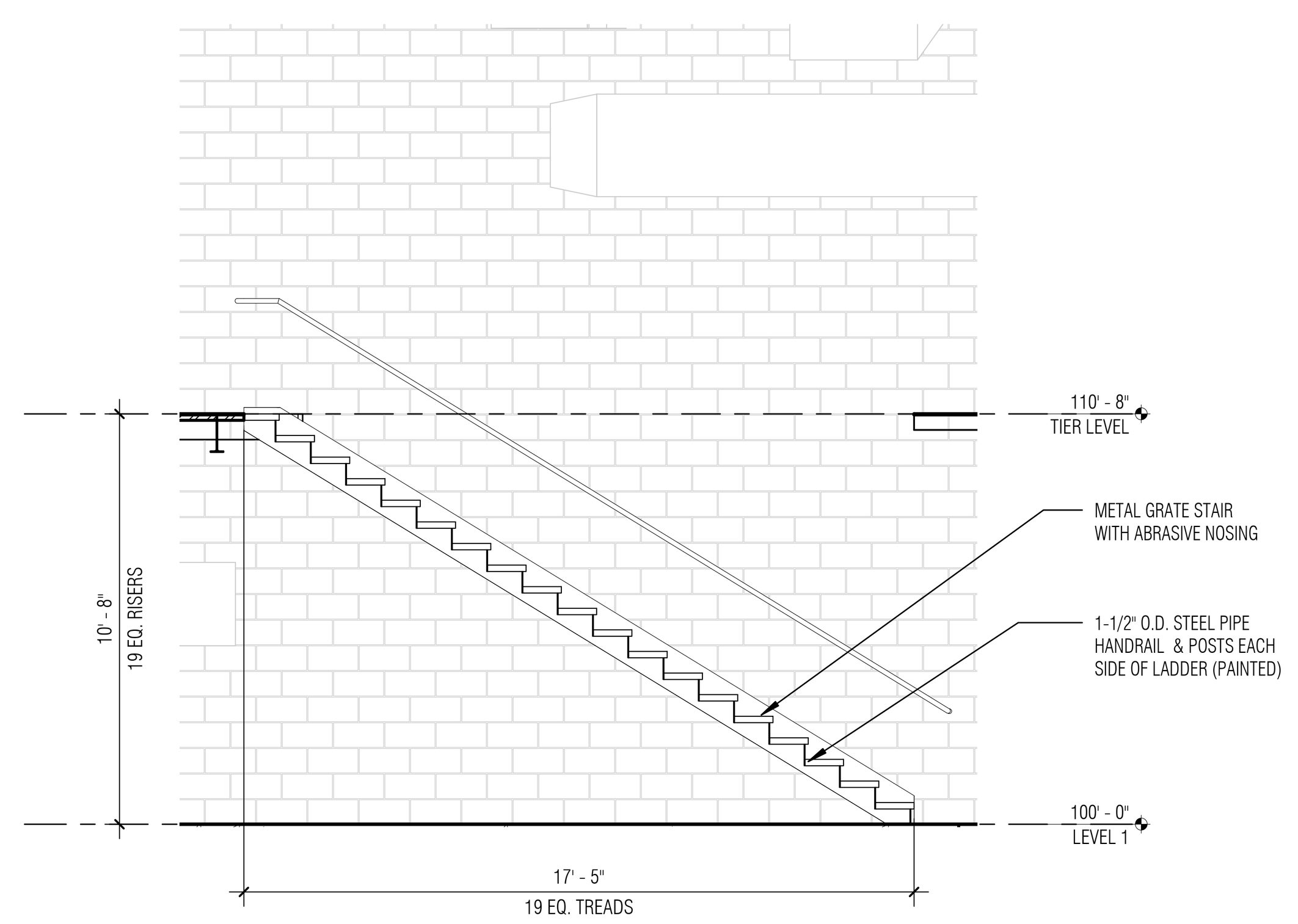
3 STAIR PLAN TIER TO ROOF STAIR 12
SCALE: 1/4" = 1'-0"



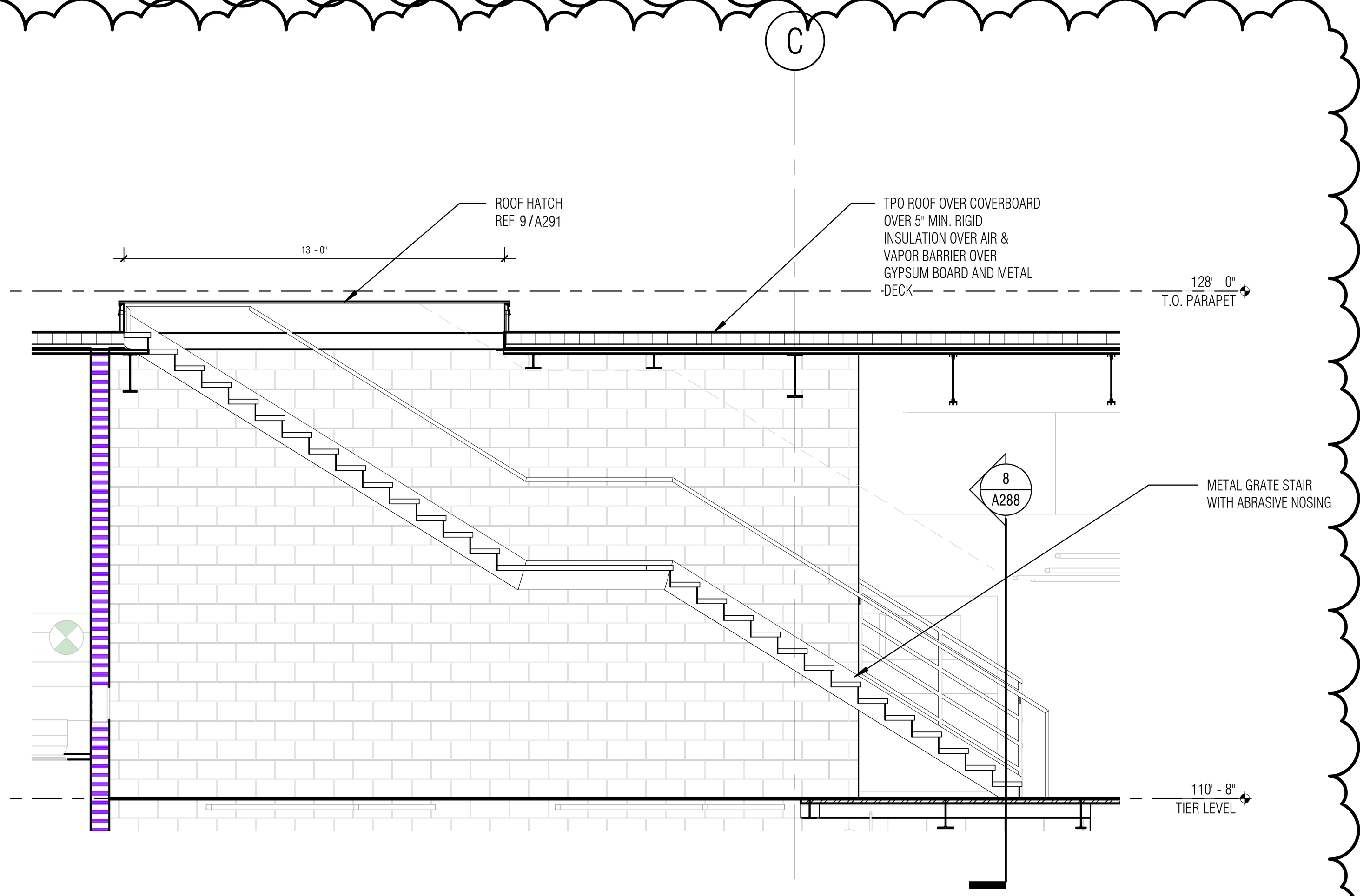
5 STAIR PLAN TIER LEVEL STAIR 13
SCALE: 1/4" = 1'-0"



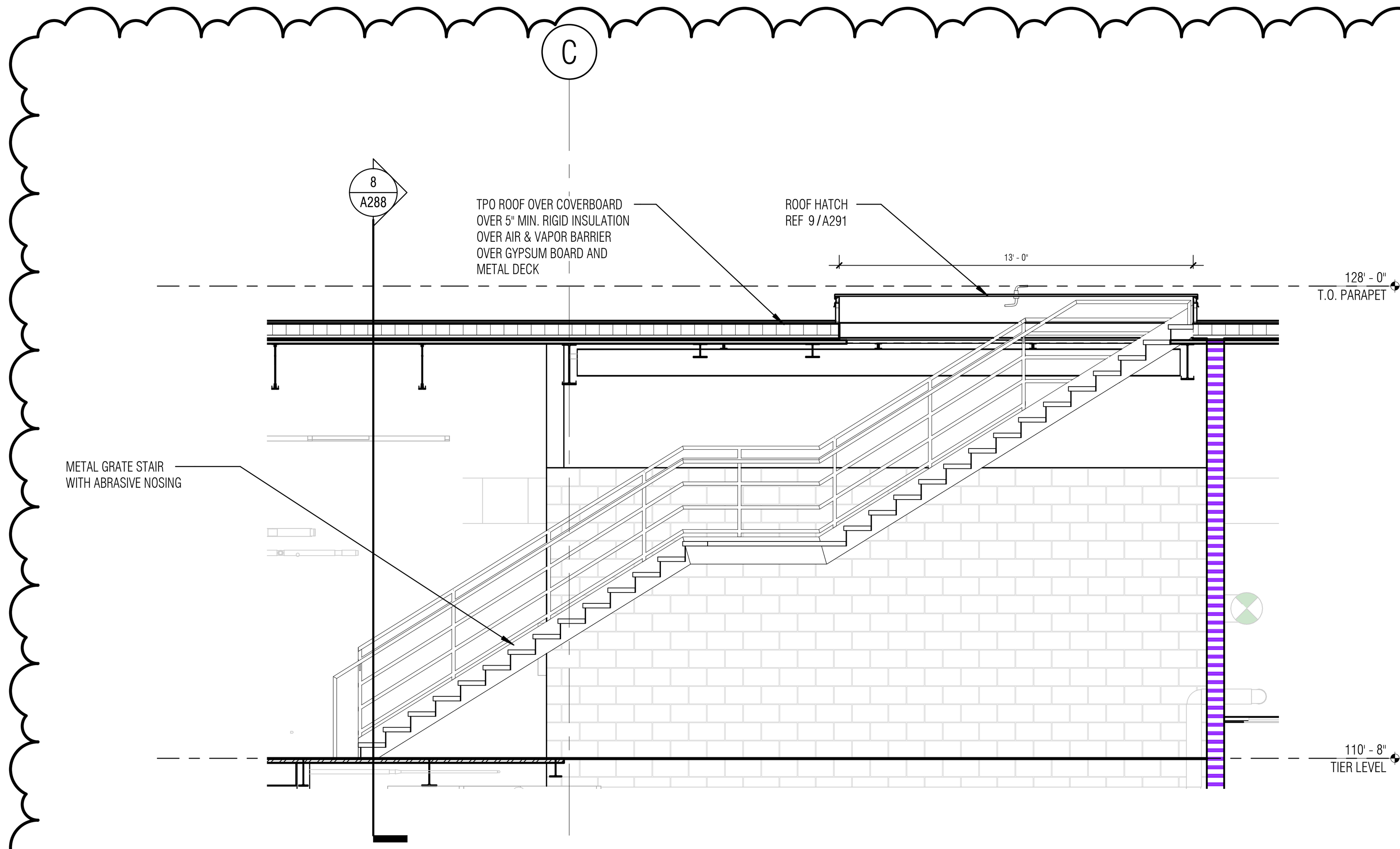
6 STAIR PLAN TIER LEVEL STAIR 13
SCALE: 1/4" = 1'-0"



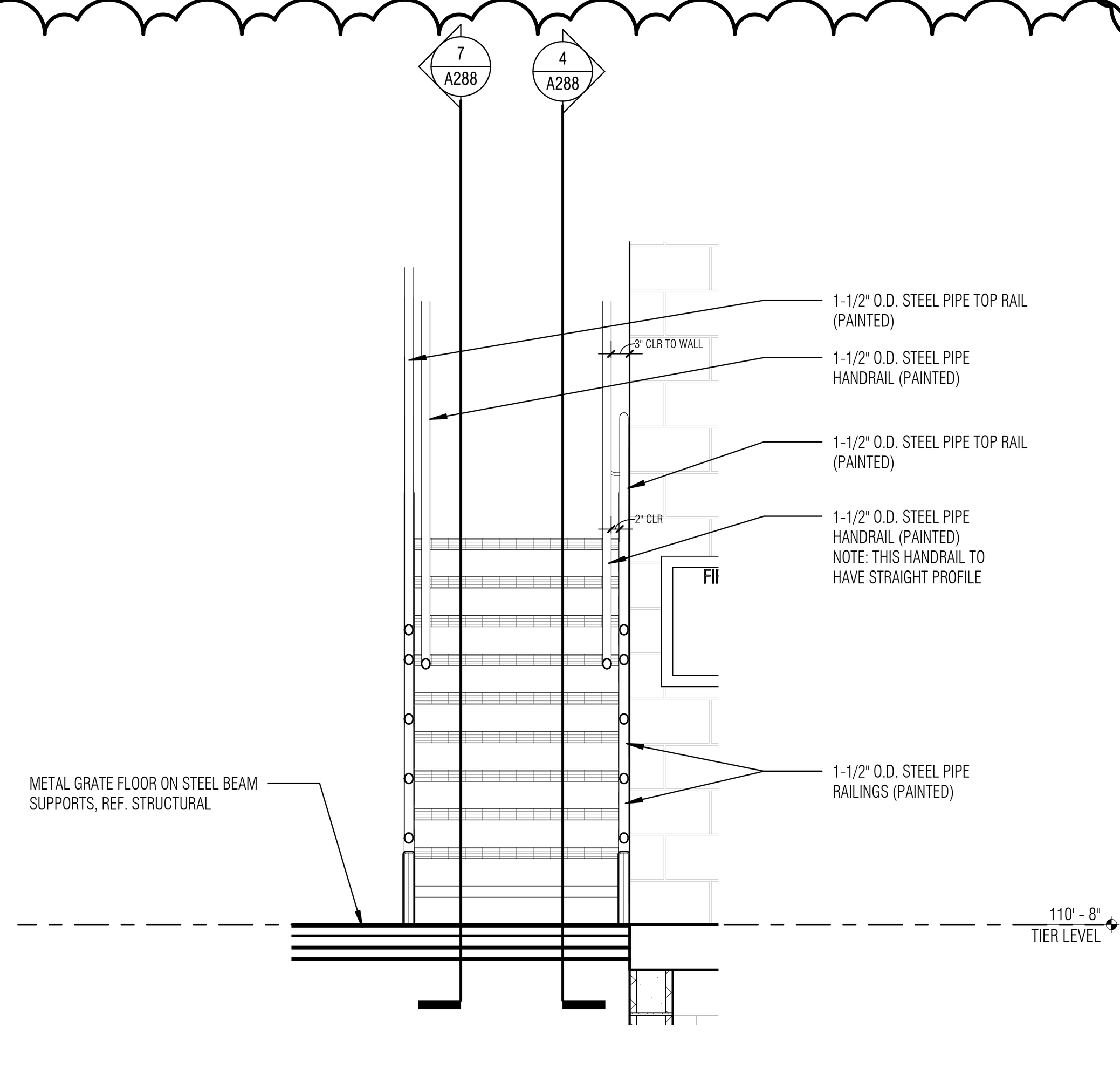
2 STAIR SECTION TIER LEVEL STAIR 11
SCALE: 1/4" = 1'-0"



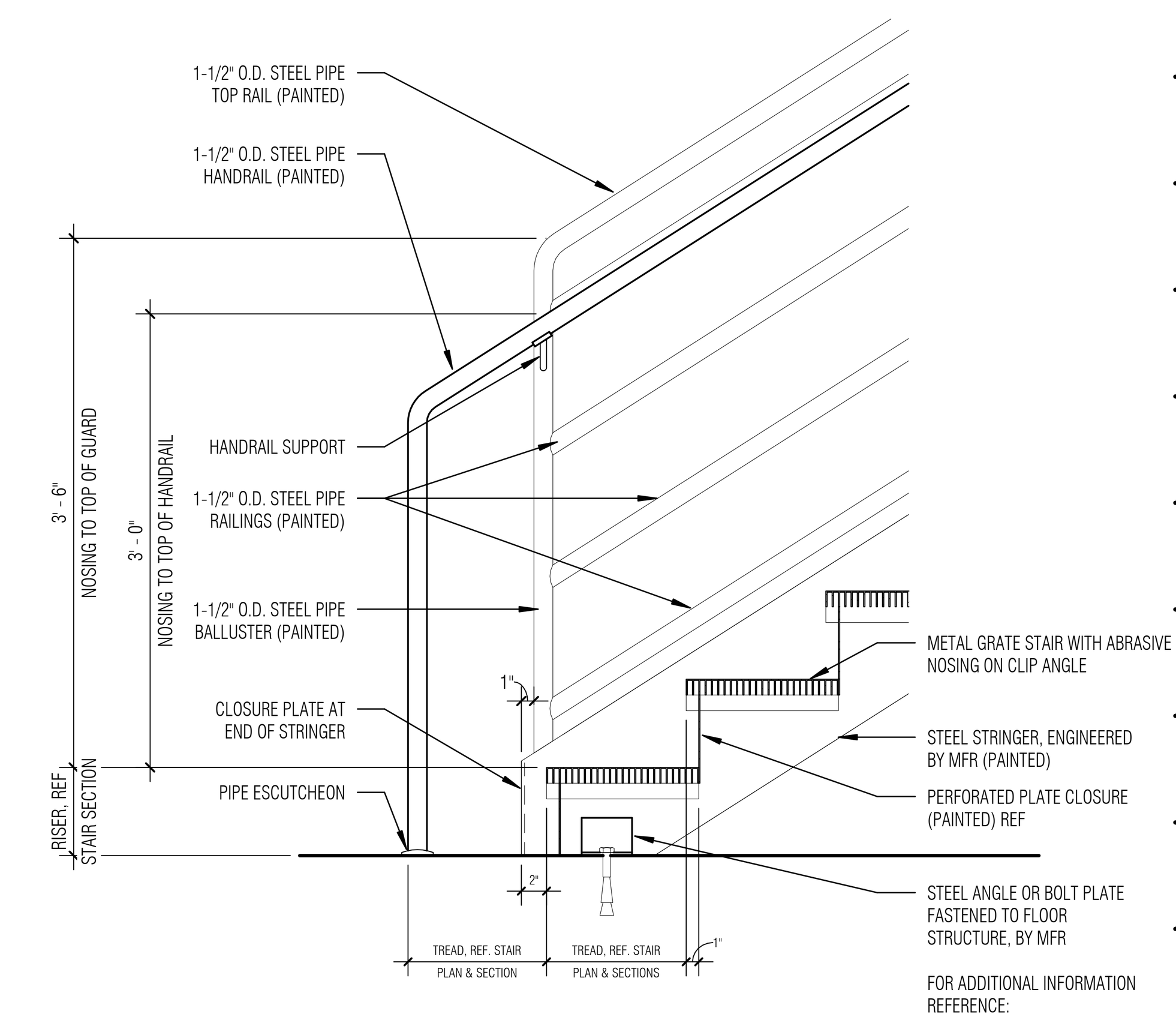
4 STAIR SECTION TIER TO ROOF STAIR 12
SCALE: 1/4" = 1'-0"



7 STAIR SECTION TIER TO ROOF STAIR 12.
SCALE: 1/4" = 1'-0"



8 STAIR SECTION TIER TO ROOF STAIR 12 - CROSS SETION
SCALE: 1/2" = 1'-0"



9 STAIR 12 BASE DETAIL
SCALE: 1" = 1'-0"

BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect:	Brinkley Sargent Wiginton Architects	(972) 960-9970
Civil:	Pacheco Koch	(214) 451-2765
Structural:	JQ Engineering	(214) 752-9098
MEP / IT:	MD Engineering	(469)467-0200
Security:	LattaTech	(972) 633-5850

COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

HISTORY

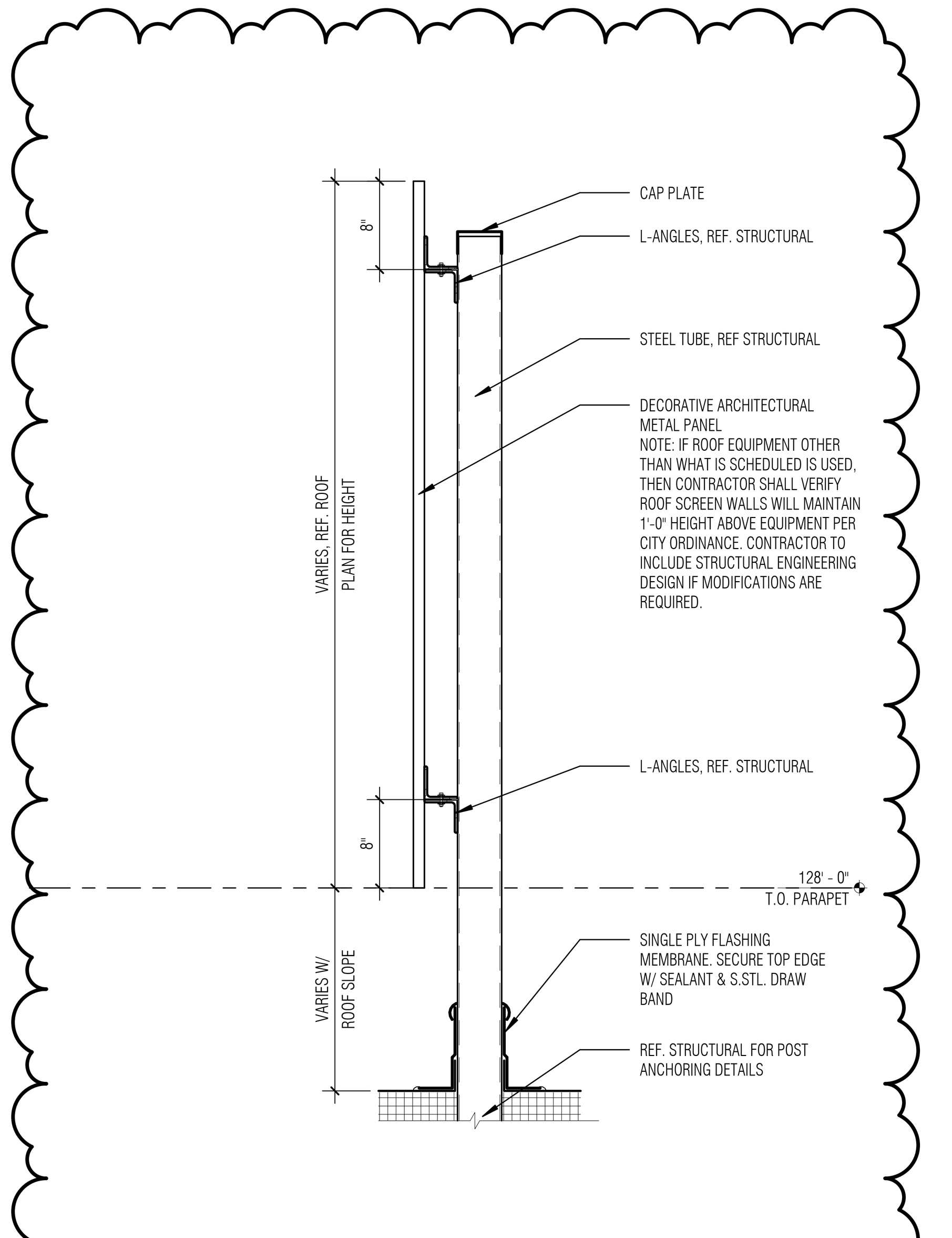
#	DATE	DESCRIPTION
1	08/20/2021	ADDENDUM #3

REGISTERED ARCHITECT STATE OF TEXAS
07/13/2021

MECHANICAL STAIR PLANS, SECTIONS, DETAILS

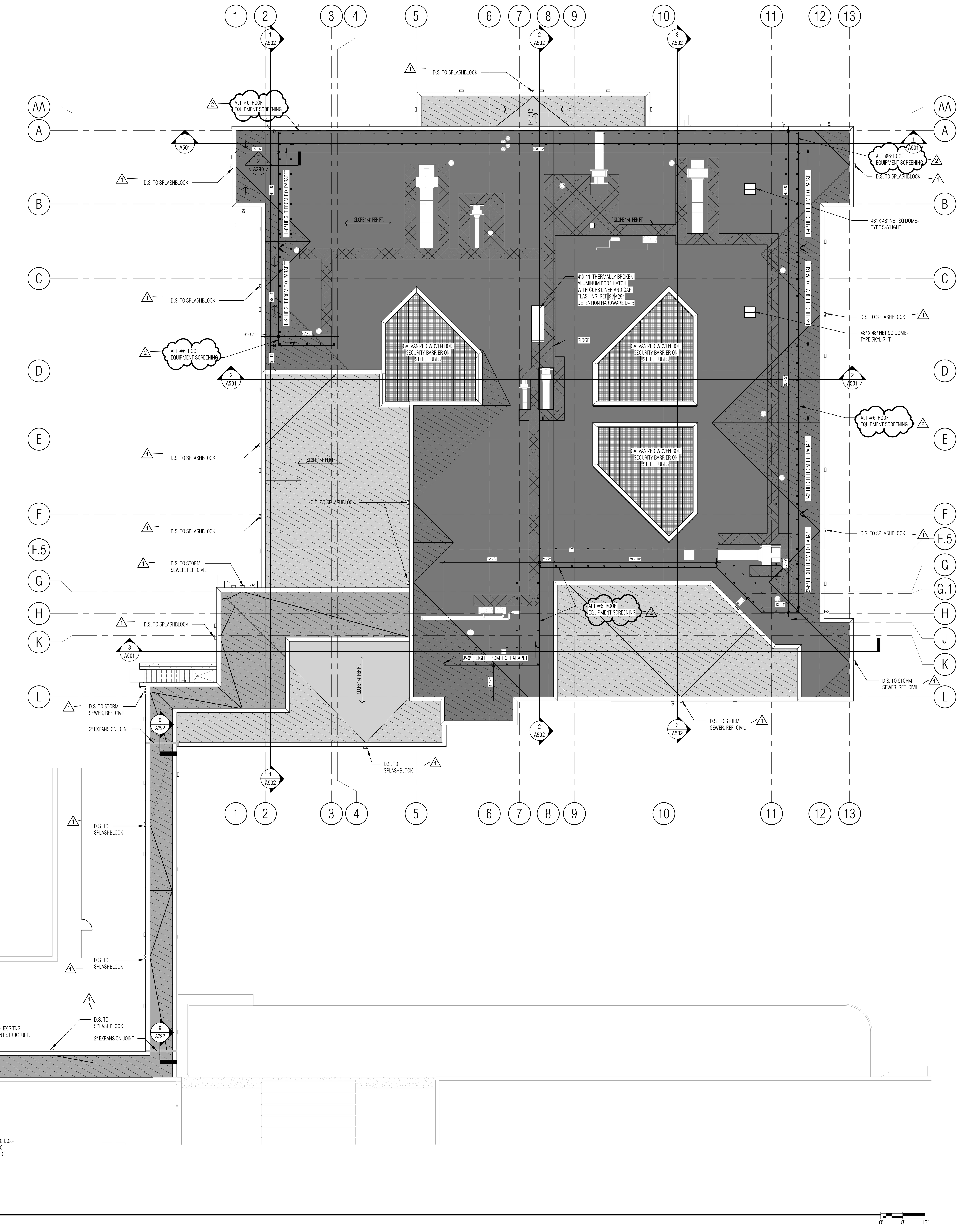
21913
07/13/2021
A288

FOR BID



2 ROOF SCREENING SECTION

SCALE: 1" = 1'-0"



1 ROOF PLAN

SCALE: 1/16" = 1'-0"

ROOF LEGEND

- ROOF SLOPE
- CRICKET
- TPO ROOF WALK PATHWAY
- MECHANICAL EXHAUST, REF. MECH
- MECHANICAL EXHAUST, REF. MECH
- MECHANICAL CONDENSING UNIT, REF. MECH
- MECHANICAL CONDENSING UNIT, REF. MECH

LEGEND

- HIGH ROOF
- MIDDLE ROOF
- LOWER ROOF
- ROOFING MATERIAL: TPO

SHEET NOTES:

1. CRICKETS TO SLOPE TWO TIMES OR GREATER THAN ROOF, U.N.O.
2. PROVIDE CRICKETS FOR ALL ROOF TOP EQUIPMENT AND OTHER ITEMS REQUIRING CRICKETS.
3. REF. A291 / A292 FOR TYPICAL ROOF DETAILS
4. PROVIDE FALL ARREST SYSTEM CONNECTOR DEVICES FOR ROOF SERVICE AREAS WITHIN 10'-0" OF ROOF EDGE. COMPLY WITH 2018 IBC 1015.6 AND 1015.7, AND ANSI/ASSE Z 359.1. REFER TO DETAIL 11 / A292

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: Pacheco Koch (214) 451-2765
Structural: JQ Engineering (214) 752-9098
MEP / IT: MD Engineering (469)467-0200
Security: LattaTech (972) 633-5850

BRINKLEY SARGENT WIGINTON ARCHITECTS

COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

HISTORY

#	DATE	DESCRIPTION
1	08/06/2021	ADDENDUM #1
2	08/20/2021	ADDENDUM #3

REGISTERED ARCHITECT CHARLES L. GOODMAN 21598 STATE OF TEXAS

07/13/2021

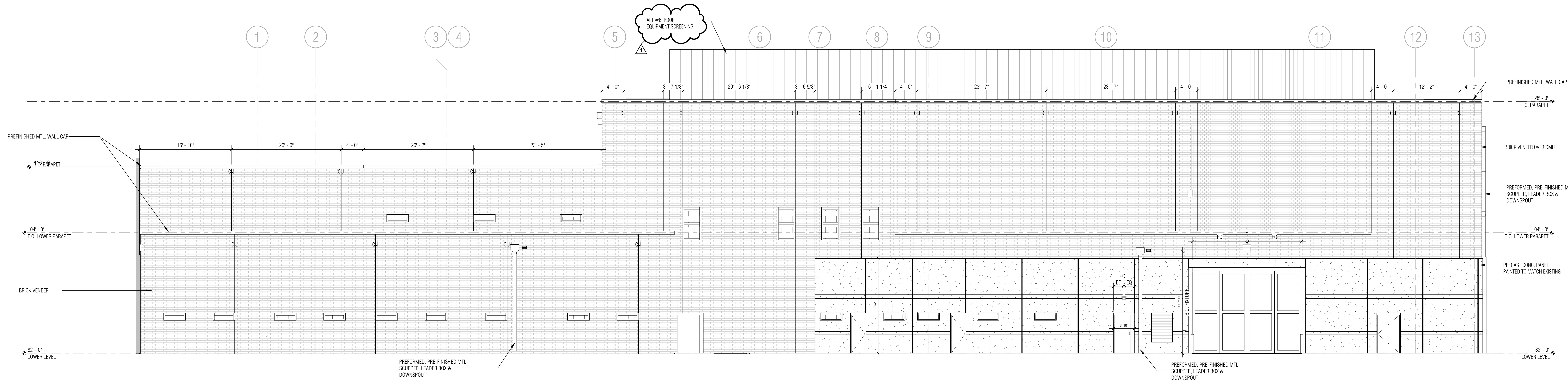
ROOF PLAN

21913

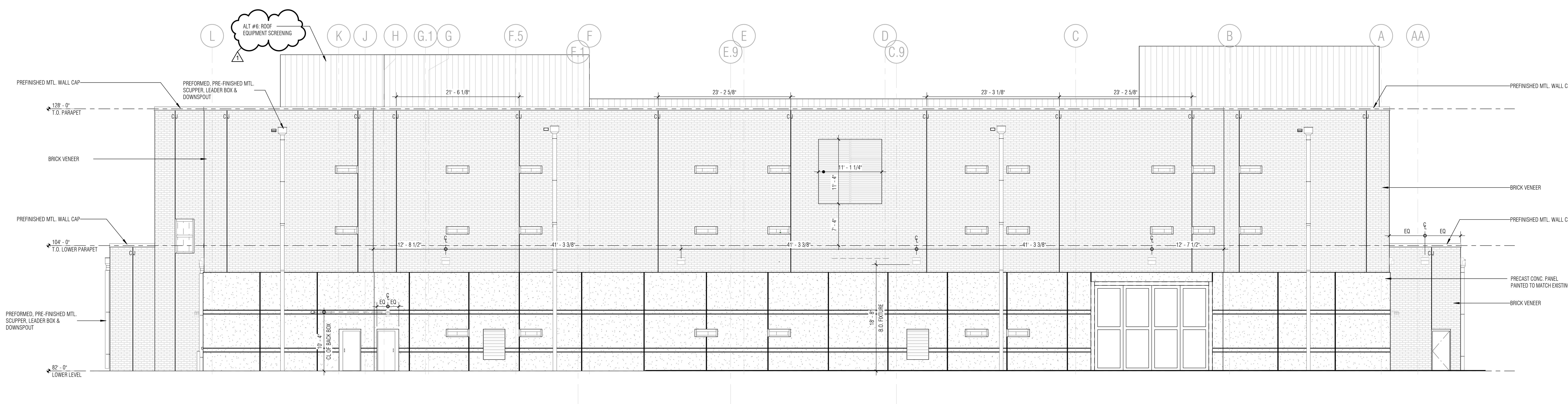
07/13/2021

A290

FOR BID



(1) BUILDING ELEVATION - WEST
SCALE: 1/8" = 1'-0"



(2) BUILDING ELEVATION - SOUTH
SCALE: 1/8" = 1'-0"

ELEVATION GENERAL NOTES

1. TYPICAL CONTROL JOINT SPACING IS APPROXIMATELY 4'-0" FROM CORNERS AT THE NEAREST BRICK VERTICAL COURSE, U.N.O.
2. CONTROL JOINTS IN EXTERIOR MASONRY ARE TO BE 3/8" WIDE
3. MASON TO BEING ALL EXTERIOR MASONRY COURSING FROM OUTSIDE CORNERS AND WORK INWARD.
4. ALIGN ALL REVEALS WITH WINDOW FRAMES AND DOOR OPENING U.N.O.

GLAZING SCHEDULE (DETENTION)

NO.	TYPE
L	SECURITY GLAZING - 5/8" TEMPERED GLASS
M	SECURITY GLAZING - LAMINATE
M1	SECURITY GLAZING - LAMINATE - MIRRORED ON ATTACK SIDE
TM	INSULATED GLAZING, CLEAR LAMINATED SECURITY GLAZING

SHEET NOTES:
1. ALL EXTERIOR GLAZING TYPE 'TM' UNLESS NOTED OTHERWISE

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: Pacheco Koch (214) 451-2765
Structural: JQ Engineering (214) 752-9098
MEP / IT: MD Engineering (469)467-0200
Security: LattaTech (972) 633-5850

BRINKLEY SARGENT WIGINTON ARCHITECTS

COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

HISTORY

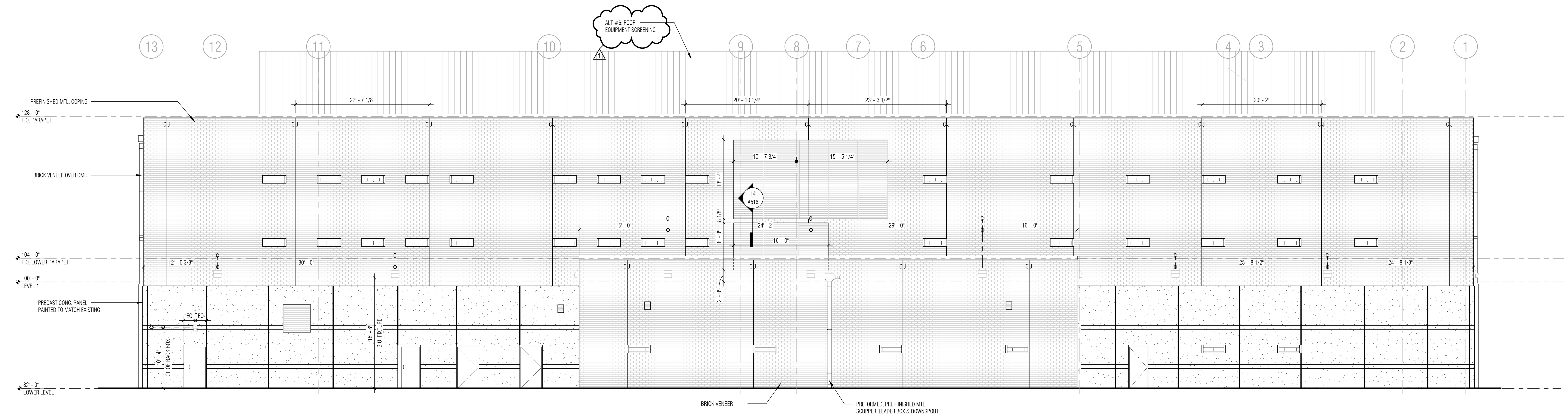
#	DATE	DESCRIPTION
1	08/20/2021	ADDENDUM #3

07/13/2021

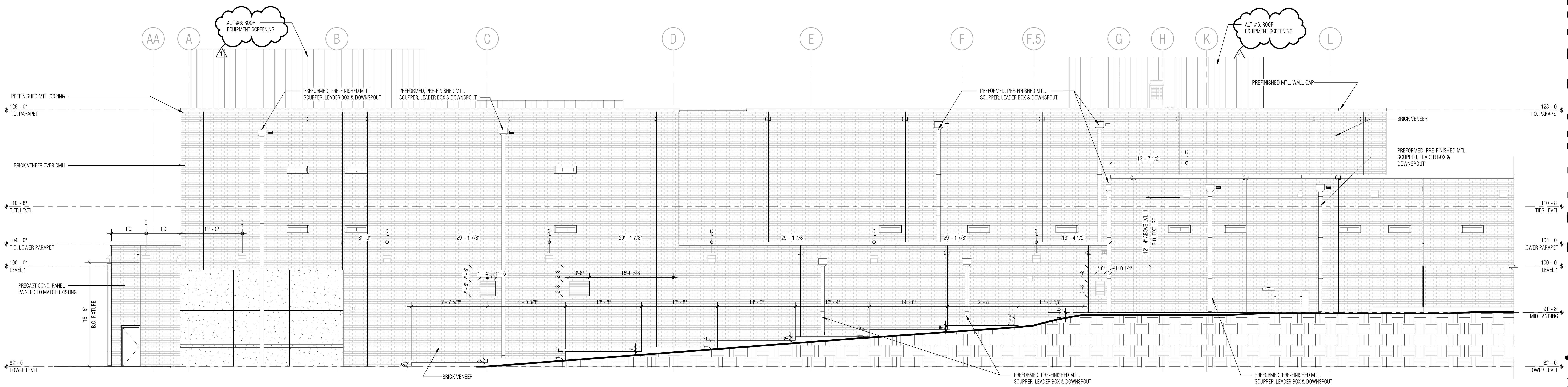
BUILDING ELEVATIONS

21913
07/13/2021
A401

FOR BID



1 BUILDING ELEVATION - EAST
SCALE: 1/8" = 1'-0"



2 BUILDING ELEVATION - NORTH
SCALE: 1/8" = 1'-0"

ELEVATION GENERAL NOTES

1. TYPICAL CONTROL JOINT SPACING IS APPROXIMATELY 4'-0" FROM CORNERS AT THE NEAREST BRICK VERTICAL COURSE, U.N.O.
2. CONTROL JOINTS IN EXTERIOR MASONRY ARE TO BE 3/8" WIDE
3. MASON TO BEING ALL EXTERIOR MASONRY COURSING FROM OUTSIDE CORNERS AND WORK INWARD.
4. ALIGN ALL REVEALS WITH WINDOW FRAMES AND DOOR OPENING U.N.O.

GLAZING SCHEDULE (DETENTION)

NO.	TYPE
L	SECURITY GLAZING - 5/8" TEMPERED GLASS
M	SECURITY GLAZING - LAMINATE
M1	SECURITY GLAZING - LAMINATE - MIRRORED ON ATTACK SIDE
TM	INSULATED GLAZING, CLEAR LAMINATED SECURITY GLAZING

SHEET NOTES:
1. ALL EXTERIOR GLAZING TYPE 'TM' UNLESS NOTED OTHERWISE

BRINKLEY SARGENT WIGINTON ARCHITECTS
Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: Pacheco Koch (214) 451-2765
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COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

HISTORY

#	DATE	DESCRIPTION
1	08/20/2021	ADDENDUM #3

REGISTERED ARCHITECT CHARLES L. GOODMAN 21598 STATE OF TEXAS
07/13/2021

BUILDING ELEVATIONS

21913
07/13/2021
A402

FOR BID

ROOM FINISH SCHEDULE

#	NAME	FLOOR	BASE	WALL				FINISH NOTES
				N	S	E	W	
1001	VEHICLE SALLYPORT	SC	PB1	P1	P1	P1	P1	
1002	SAFETY VEST.	CPT1	RB1	P2	P2	P2	P2	
1003	PRE-BOOKING WAITING	VS1	RB1	--	--	--	--	5
1004	PRE-BOOKING	VS1	RB1	P1	P1	P1	P1	
1005	ARRESTING OFF. WK AREA	VS1	RB1	--	--	--	--	5
1006	INTOX.	SC	--	P1	P1, P4	P1	P1	6
1007	HOLDING CELL ADA [4]	SC	--	P3	P3	P3	P3	
1008	HOLDING CELL [1]	SC	--	P3	P3	P3	P3	
1009	HOLDING CELL [1]	SC	--	P3	P3	P3	P3	
1011	HOLDING CELL [1]	SC	--	P3	P3	P3	P3	
1012	STAFF RR	RES1	B1	EP1	EP1	EP1	EP1	
1014	PRINT	VS1	RB1	P1	P1	P1	P1	
1015	STO.	VS1	RB1	P1	P1	P1	P1	
1016	JAN.	SC	--	P1	P1	P1	P1	
1017	INMATE RR	RES1	B1	EP1	EP1	EP1	EP1	
1018	INMATE RR	RES1	B1	EP1	EP1	EP1	EP1	
1021	HEALTH SCREEN	VS1	RB1	P1	P1	P1	P1	
1022	HEALTH SCREEN	VS1	RB1	P1	P1	P1	P1	
1023	PRE-BOOKING	VS1	RB1	P1	P1	P1	P1	
1024	HOLDING CELL ADA (4)	SC	--	P3	P3	P3	P3	
1025	FIRE	SC	--	--	--	--	--	
1026	ELEC	SC	--	--	--	--	--	
1027	MECH	SC	--	--	--	--	--	
1028	STORAGE	SC	--	--	--	--	--	
1029	PUMP	SC	--	--	--	--	--	
1101	SAFETY VEST.	CPT1	RB1	P2	P2	P2	P2	
1102	BOOKING WORK AREA	VS1	RB1	P1	P1	P1	P1	
1103	BOOKING COORD. (SGT.)	CPT2	RB1	--	--	--	--	
1104	BOOKING	VS1	RB1	P1	P1	P1	P1	5
1105	FEMALE OPEN WAITING	CPT2	RB1	--	--	--	P2	
1106	MALE OPEN WAITING	CPT2	RB1	--	--	P2	--	
1107	AFIS/ FINGER	VS1	RB1	P1	P1	P1	P1	
1108	BOOKING/ RELEASE/ CLASS. SUPV.	CPT2	RB1	P1	P1	P1	P1	
1109	JAN.	SC	--	P1	P1	P1	P1	
1110	ADMISSIONS/ RELEASE MGR.	CPT2	RB1	P1	P1	P1	P1	
1111	OFFICE	CPT2	RB1	P1	P1	P1	P1	
1112	PRINT/ COPY/ WORK ALCOVE	VS1	RB1	P1	P1	P1	P1	
1113	STAFF BREAK ROOM	VS1	RB1	P1	P1	P1	P1	
1114	STAFF RR	VS1	RB1	EP1	EP1	EP1	EP1	
1115	STAFF RR	VS1	RB1	EP1	EP1	EP1	EP1	
1116	JAN.	SC	--	P1	P1	P1	P1	
1117	CORRIDOR	VS1	RB1	P1	P1	P1	P1	
1118	HC DETOX CELL [5]	SC	--	P3	P3	P3	P3	
1119	DETOX CELL [2]	SC	--	P3	P3	P3	P3	
1121	HOLDING CELL [3]	SC	--	P3	P3	P3	P3	
1122	HOLDING CELL [3]	SC	--	P3	P3	P3	P3	
1123	HOLDING CELL [3]	SC	--	P3	P3	P3	P3	
1124	HOLDING CELL ADA [5]	SC	--	P3	P3	P3	P3	
1125	HOLDING CELL [5]	SC	--	P3	P3	P3	P3	
1126	HOLDING CELL [5]	SC	--	P3	P3	P3	P3	
1127	INMATE RR	RES1	B1	EP1	EP1	EP1	EP1	
1128	ADA INMATE RR	RES1	B1	EP1	EP1	EP1	EP1	
1129	COURT ROOM	CPT2	RB1	P3	P1	P1	P1	
1130	SAFETY VEST.	CPT1	RB1	P2	P2	P2	P2	
1131	INTERVIEW	CPT2	RB1	WC1	P1	WC1	P1	
1132	INTERVIEW	CPT2	RB1	WC1	P1	WC1	P1	
1133	INTERVIEW	CPT2	RB1	WC1	P1	WC1	P1	
1134	MED STO.	VS1	RB1	P1	P1	P1	P1	
1135	MENTAL HEALTH SCREENING	VS1	RB1	P1	P1	P1	P3	
1136	MENTAL HEALTH SCREENING	VS1	RB1	P1	P1	P1	P3	
1137	ADA INMATE RR	RES1	B1	EP1	EP1	EP1	EP1	
1138	INMATE RR	RES1	B1	EP1	EP1	EP1	EP1	
1139	HEALTH EXAM	VS1	RB1	P1	P1	P1	P3	
1140	HEALTH EXAM	VS1	RB1	P1	P1	P1	P3	
1141	BODY SCAN/ MTL. DETC.	VS1	RB1	P1	P1	P1	P1	
1200	TRANSFER STAGING	VS1	RB1	P1	P1	P1	P1	
1201	JAN	SC	--	P1	P1	P1	P1	
1202	RELEASE STAGING	VS1	RB1	P1	--	P1	P1	
1203	PROPERTY STORAGE ROOM	VS1	RB1	P1	P1	P1	--	
1204	PROPERTY COLLECTION	VS1	RB1	--	P1	P1	P1	
1205	VAL PROP. STO	VS1	RB1	P1	P1	P1	P1	
1206	JAIL CLOTHING STORAGE	VS1	RB1	P1	P1	P1	P1	
1207	LAUNDRY	VS1	RB1	P1	P1	P1	P1	
1208	CORRIDOR	VS1	RB1	P2	P2	P2	P2	
1209	STAFF RR	VS1	RB1	EP1	EP1	EP1	EP1	
1210	FEMALE SHOWER/ SEARCH	VS1/ RES1	RB1/ B1	EP1	EP1	EP1	EP1	4
1211	MALE SHOWER/ SEARCH	VS1/ RES1	RB1/ B1	EP1	EP1	EP1	EP1	4
1213	IT	SD1	RB1	P1	P1	P1	P1	
1301	CORRIDOR	VS1	RB1	P2	P2	P2	P2	
1302	INMATE VISIT	SC1	PB1	P1	P1	P1	P1	
1303	INMATE VISIT	SC1	PB1	P1	P1	P1	P1	
1304	FEMALE CHANGING CUBICLES	VS1	RB1	P1	P1	P1	P1	
1305	MALE CHANGING CUBICLES	VS1	RB1	P1	P1	P1	P1	
1306	RR STAFF	VS1	RB1	EP1	EP1	EP1	EP1	
1307	ELEC. MON. VEND.	VS1	RB1	P1	P1	P1	P1	
1308	RECORDS/ BOND OFFICE STATION	CPT2	RB1	P1	P1	P1	P1	
1309	BONDING SUPV.	CPT2	RB1	P1	P1	P1	P1	
1311	RELEASE PROCESSING STATION	CPT2	RB1	P1	P1	P1	P1	
1312	INMATE RR	RES1	B1	EP1	EP1	EP1	EP1	
1313	SAFETY VEST.	VS1	RB1	P2	P2	P2	P2	
1314	OPEN WAIT. - SELF REPORTS	VS1	RB1	P1	P1	P1	P1	
1315	INMATE RR	RES1	B1	EP1	EP1	EP1	EP1	
1316	SAFETY VEST.	VS1	RB1	P2	P2	P2	P2	
1317	SAFETY VEST	VS1	RB1	P2	P2	P2	P2	
1318	ELEV. MACHINE ROOM	VS1	RB1	P2	P2	P2	P2	
1319	OPEN WAITING TRANSFER	VS1	RB1	--	--	--	--	
1320	TRANSFER	VS1	RB1	P1	P1	P1	P1	
1321	TRANSFER COORD.	VS1	RB1	P1	P1	P1	--	
1322	HOLDING CELL [3]	SC	--	P3	P3	P3	P3	
1323	SECURE HOLDING CELL ADA [8]	SC	--	P3	P3	P3	P3	
1324	SAFETY VEST.	CPT1	RB1	P2	P2	P2	P2	
1325	SECURE HOLDING CELL ADA [7]	SC	--	P3	P3	P3	P3	
1326	SECURE HOLDING CELL [8]	SC	--	P3	P3	P3	P3	
1327	HOLDING CELL [3]	SC	--	P3	P3	P3	P3	
1328	HOLDING CELL [3]	SC	--	P3	P3	P3	P3	
1329	HOLDING CELL ADA [3]	SC	--	P3	P3	P3	P3	
1330	HOLDING CELL [3]	SC	--	P3	P3	P3	P3	
1331	MALE CHANGING	VS1/ RES1	RB1/ B1	P1	P1	P1	P1	4
1332	JAN.	SC	--	P1	P1	P1	P1	
1333	FEMALE CHANGING	VS1/ RES1	RB1/ B1	P1	P1	P1	P1	4
1402	ATTY. VISIT	VS1	RB1	P1	P1	P1	P1	
1403	ATTY. VISIT	VS1	RB1	P1	P1	P1	P1	
1404	ELEC.	SC	--	P1	P1	P1	P1	
1405	CORRIDOR	VS1	RB1	P2	P2	P2	P2	
1406	CORRIDOR	VS1	RB1	P2	P2	P2	P2	
2001	CORR.	VS1	RB1	P2	P2	P2	P2	
2002	STORAGE ROOM	VS1	RB1	P1	P1	P1	P1	
2003	BREAK ROOM	VS1	RB1	P1	P1	P1	P1	
2004	STAFF TOILET	VS1	RB1	EP1	EP1	EP1	EP1	
2005	CORR.	VS1	RB1	P2	P2	P2	P2	
2007	CORR.	VS1	RB1	P1	P2	P2	P2	1
2008	CORR.	VS1	RB1	P1, P2	P1, P2	P1, P2	P1, P2	1
2009	VISIT	SC	PB1	P1	P1	P1	P1	
2010	VISIT	SC	PB1	P1	P1	P1	P1	
2011	VISIT	SC	PB1	P1	P1	P1	P1	
2012	CLUSTER CONTROL STATION	CPT2	RB1	P1	P1	P1	P1	
2013	MATTRESS STORAGE	VS1	RB1	P1	P1	P1	P1	
2014	MECH.	SC	--	--	--	--	--	
2015	IT	SD1	RB1	P1	P1	P1	P1	
2017	IT	SC	--	--	--	--	--	
2018	SAFETY VEST.	VS1	RB1	P2	P2	P2	P2	
2019	VISIT	VS1	RB1	P1	P1	P1	P1	
2020	VISIT	VS1	RB1	P1	P1	P1	P1	
2021	VISIT	VS1	RB1	P1	P1	P1	P1	
2022	CORR.	VS1	RB1	P2	P2	P2	P2	
2023	CORR.	VS1	RB1	P2	P2	P2	P2	
2024	INMATE TRANSFER/CIRCULATION	VS1	RB1	P2	P2, CR1	P2	P2	
2101	DAYROOM/ DINING/ TV	SC/ CPT3	PB1	P1	P1, VWC1	P1	P1	1, 8
2102	HOUSING OFFICER WK.STATION	CPT3	PB1	P1	P1	P1	P1	
2103	MED. DISTR.	VS1	RB1	P1	P1	P1	P1	
2104	MULTIPURPOSE	VS2	RB1	P1	P1	P3	P1	
2105	STAFF RESTROOM	RES1	B1	EP1	EP1	EP1	EP1	
2106	ELECT. STO./ RECHARGE	SC	--	P1	P1	P1	P1	
2107	MULTIFUNCTIONAL KIOSK	VS2	RB1	P1	P1	P1	P1	
2108	OUTDOOR EXERCISE YARD	SC	--	BRICK	BRICK	BRICK	BRICK	
2110	STORAGE	SC	--	P1	P1	P1	P1	
2111	DORMITORY	SC	PB1	P3	P3	--	P3	
2112	STORAGE	VS1	RB1	P2	P2	P2	P2	
2113	DORMITORY	SC	PB1	P3	--	P3	P3	
2114	SHOWER	RES2	B2	EP1	--	EP1	EP1	4
2115	INMATE RESTROOM	RES2	B2	EP1	--	EP1	EP1	
2116	INMATE RESTROOM	RES2	B2	EP1	--	EP1	EP1	
2117	HC DORMITORY	SC	PB1	P3	--	P3	P3	
2118	DORMITORY	SC	PB1	P3	P3	P3	--	
2119	DORMITORY	SC	PB1	P3	P3	P3	--	
2121	DORMITORY	SC	PB1	P3	P3	P3	--	
2122	DORMITORY	SC	PB1	P3	P3	P3	--	
2123	DORMITORY	SC	PB1	P3	P3	P3	--	
2124	JAN.	SC	--	P1	P1	P1	P1	
2125	DORMITORY	SC	PB1	P3	P3	P3	--	
2201	DAYROOM/ DINING/ TV	SC/ CPT3	PB1	P1, VWC1	P1	P1	P1	1, 8
2202	HOUSING OFFICER WK.STATION	CPT3	PB1	P1	P1	P1	P1	
2203	MED. DISTR.	VS1	RB1	P1	P1	P1	P1	
2204	MULTIPURPOSE	VS2	RB1	P1	P1	P3	P1	
2205	STAFF RESTROOM	RES1	B1	EP1	EP1	EP1	EP1	
2206	ELECT. STO./ RECHARGE	SC	--	P1	P1	P1	P1	
2207	MULTIFUNCTIONAL KIOSK	CPT3	RB1	P1	P1	P1	P1	
2208	OUTDOOR EXERCISE YARD	SC	--	BRICK	BRICK	BRICK	BRICK	
2209	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2211	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2212	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2213	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2214	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2215	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2216	HC DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2217	INMATE TOILET	RES2	B2	--	EP1	EP1	EP1	
2218	SHOWER	RES2	B2	--	EP1	EP1	EP1	4
2219	JAN.	SC	--	P1	P1	P1	P1	
2221	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2222	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2223	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2225	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2226	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2227	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2228	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2229	INMATE TOILET	RES2	B2	EP1	EP1	EP1	EP1	
2231	STORAGE	SC	--	P1	P1	P1	P1	
2232	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2233	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2234	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2235	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
2301	DAYROOM/ DINING/ TV	SC/ CPT3	PB1	P1	P1	P1	P1, VWC1	1, 8
2302	HOUSING OFFICER WK.STATION	CPT3	PB1	P1	P1	P1	P1	
2303	MED. DISTR.	VS1	RB1	P1	P1	P1	P1	
2304	MULTIPURPOSE ROOM	CPT3	PB1	P1	P1	P1	P3	
2305	STAFF RESTROOM	RES2	B2	EP1	EP1	EP1	EP1	
2306	ELECT. STO./ RECHARGE	SC	--	P1	P1	P1	P1	
2307	MULTIFUNCTIONAL KIOSK	CPT3	PB1	P1	P1	P1	P1	
2308	OUTDOOR EXERCISE YARD	SC	--	BRICK	BRICK	BRICK	BRICK	
2309	STORAGE	SC	--	P1	P1	P1	P1	
2311	DORMITORY	SC	PB1	P3	P3	P3	--	
2312	DORMITORY	SC	PB1	P3	P3	P3	P3	
2313	DORMITORY	SC	PB1	--	P3	P3	P3	
2314	INMATE TOILET	RES2	B2	--	EP1	EP1	EP1	
2315	INMATE SHOWER	RES2	B2	--	EP1	EP1	EP1	4
2316	HC DORMITORY	RES2	B2	--	P3	P3	P3	
2317	DORMITORY	SC	PB1	--	P3	P3	P3	
2318	J.C	SC	--	P1	P1	P1	P1	
2319	STORAGE	SC	PB1	P1	P1	P1	P1	
3101	STORAGE	SC	--	P1	P1	P1	P1	
3102	DORMITORY	SC	PB1	P3	P3	--	P3	
3103	STORAGE	SC	--	P1	P1	P1	P1	
3104	DORMITORY	SC	PB1	P3	--	P3	P3	
3105	SHOWER/ CHANGING	RES2	B2	EP1	--	EP1	EP1	4
3106	INMATE RESTROOM	RES2	B2	EP1	--	EP1	EP1	
3107	INMATE RESTROOM	RES2	B2	EP1	--	EP1	EP1	
3108	DORMITORY	SC	PB1	P3	--	P3	P3	
3109	DORMITORY	SC	PB1	P3	P3	P3	--	
3111	DORMITORY	SC	PB1	P3	P3	P3	--	
3112	DORMITORY	SC	PB1	P3	P3	P3	--	
3113	DORMITORY	SC	PB1	P3	P3	P3	--	
3114	DORMITORY	SC	PB1	P3	P3	P3	--	
3115	JAN.	SC	--	P1	P1	P1	P1	
3116	DORMITORY	SC	PB1	P3	P3	P3	--	
3201	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3202	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3203	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3205	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3206	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3207	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3208	INMATE TOILET	RES2	B2	--	EP1	EP1	EP1	
3209	INMATE SHOWERS	RES2	B2	--	EP1	EP1	EP1	4
3211	JAN.	SC	--	P1	P1	P1	P1	
3213	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3214	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3215	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3217	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3218	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3219	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3221	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3222	INMATE TOILET	RES2	B2	EP1	EP1	EP1	EP1	
3223	STORAGE	SC	--	P1	P1	P1	P1	
3224	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3225	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3226	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3227	DBL. OCC. CELL	SC	PB1	P3	P3	P3	P3	
3301	DORMITORY	SC	PB1	P3	P3	P3	P3	
3302	DORMITORY	SC	PB1	P3	P3	P3	P3	
3303	INMATE TOILET	RES2	B2	--	EP1	EP1	EP1	
3304	INMATE SHOWER	RES2	B2	--	EP1	EP1	EP1	4
3305	HC DORMITORY	SC	PB1	--	P3	P3	P3	
3306	DORMITORY	SC	PB1	--	P3	P3	P3	
3307	J.C	SC	PB1	P1	P1	P1	P1	
3308	STORAGE	SC	PB1	P1	P1	P1	P1	
EL01	ELEV.	VS1	RB1	PL1	PL1	PL1	PL1	
OS1A	CORRIDOR	VS1	RB1	P2	P2	P2	P2	
OS1B	STAIR	--	--	P2	P2	P2	P2	
ST01	STAIR	RF1	RB1	P2	P2	P2	P2	7
ST02	STAIR	RF1	RB1	P2	P2	P2	P2	7
ST03	STAIR	RF1	RB1	P2	P2	P2	P2	7
ST04	STAIR	SC	--	--	--	--	--	7
ST05	STAIR	RF1	RB1	P2	P2	P2	P2	7
ST06	STAIR	RF1	RB1	P2	P2	P2	P2	7
ST07	STAIR	RF1	RB1	P2	P2	P2	P2	7
ST07	STAIR	RF1	RB1	P2	P2	P2	P2	7

GENERAL NOTES

1. REF. REFLECTED CEILING PLANS FOR EXTENT / LAYOUT OF FINISHES.
2. PREPARE ALL EXPOSED STEEL TO SMOOTH FINISH PRIOR TO PAINTING.
3. CONTRACTOR TO PROVIDE TRANSITION STRIPS AT ALL FLOORING MATERIAL CHANGES AS NEEDED.
4. ALL COUNTERTOPS TO BE SOLID PHENOLIC AND ALL UPPER AND LOWER CASEWORK TO BE FACED WITH PLASTIC LAMINATE WITH MATCHING EDGEBAND.
5. NOTE: ALL CASEWORK DOORS AND DRAWERS ARE TO BE LOCKABLE WITH HEAVY DUTY LOCKS. ALL LOCKS IN A ROOM KEYED THE SAME, ALL ROOMS KEYED DIFFERENTLY.
2 PROVIDE TWO LOCKS AT DOUBLE DOOR CABINETS, ONE EACH SIDE.
6. ALL CASEWORK EXPOSED OUTSIDE CORNERS TO RECEIVE STAINLESS CORNER GUARDS.
7. ALL CASEWORK DOORS AND DRAWERS TO ACCEPT BEST CYLINDERS AND SMALL FORMAT KEY CORES. BEST CYLINDERS TO BE OFOI.
8. CHASES TO HAVE UNFINISHED WALLS AND FLOORS.
9. PRECAST PANELS EXPOSED TO VIEW TO HAVE POWER TROWELED FINISH WITH PICK PROOF SEALANT AT PANEL JOINTS IN INMATE AREAS.
10. DOOR FRAME NAMING AND NUMBERING TO BE CENTERED ON HEADER FRAME ON LATCH SIDE OF DOOR, HELVETICA MEDIUM FONT, .75" H ON STANDARD FRAMES AND 1" H ON DETENTION FRAMES, COLOR WHITE. NUMBERING TO START WITH THE NEW CLUSTER DESIGNATION LETTER "J".
11. DOOR NAMING AND NUMBERING TO BE CENTERED HORIZONTALLY ON LATCH SIDE OF DOOR. NHUMBER/ LETTER HEIGHT AND VERTICAL POSITION TO MATCH EXISTING.
12. LOWER LEVEL HM DOORS, FRAMES AND WINDOW FRAMES TO BE PAINTED P3.
13. LEVEL 1 HM DOORS, FRAMES AND WINDOW FRAMES TO BE PAINTED P5.
14. PAINT COLOR ON COLUMNS NOTED TO RECEIVE INTUMESCENT PAINT TO MATCH ADJACENT WALL COLOR.
15. ALL CONCRETE BENCHES TO BE FINISHED WITH EPOXY PAINT ALL SIDES.
16. USE HIGH MOISTURE CONTENT GLUE AT ALL OTHER GLUED DOWN FLOOR SURFACES.
1 17. CLASS "A" MIN. WALL AND CEILING FINISHES AT STAIRS AND EXITS, CLASS "C" MIN. ELSEWHERE.

FINISH NOTES

1. REF. FINISH PLANS FOR EXTENT / LAYOUT OF FINISHES.
2. REF. BUILDING SECTIONS/ INTERIOR ELEVATIONS FOR FURTHER INFORMATION.
3. REF. REFLECTED CEILING PLANS FOR EXTENT/LAYOUT OF FINISHES.
4. SHOWER WALLS TO BE GLAZED CMU BLOCK (GCB). SHOWER FLOORS TO BE RESINOUS FLOORING OVER CONCRETE.
5. SEE FINISH PLAN FOR EXTENT OF VWC1 ON GYP. BD. SOFFIT THIS ROOM.
6. SEE FINISH PLAN AND INTERIOR ELEVATION FOR REQUIRED FLOOR AND WALL MARKINGS.
7. STEEL PIPE HANDRAILS, GUARD RAILS, STRINGERS, ETC. TO BE PAINTED P3.
8. STEEL PIPE HANDRAILS, GUARD RAILS, STRINGERS, ETC. TO BE PAINTED P5.

FINISH LEGEND

FLOORING

CARPET TILE

CPT1	WALK-OFF CARPET TILES - VESTIBULES SHAW, ENTREE TILE, NAVY, 24"X24"
CPT2	CARPET TILE (COUNTY STANDARD) TANDUS CENTIVA, AFTERMATH II #03026, 23512 TAPESTRY, 24"X24" LOWER LEVEL & STAFF AREAS AS DESIGNATED ON FINISH PLAN & ROOM FINISH SCHEDULE
CPT3	FLOCKED VINYL SHEET FLOORING FORBO, STRATUS 540014, ECLIPSE LEVEL 1 INMATE AREAS AS DESIGNATED ON FINISH PLAN & ROOM FINISH SCHEDULE

PADDED FLOOR
** ALTERNATE #5 **

PF	REFER TO SPECIFICATIONS FOR PRODUCT INFORMATION

RESINOUS FLOORING

RES1	RESTROOMS, SHOWERS & DRESSING ROOMS STONHARD, STONCLAD GS/ GS4 WITH TEXTURE 2, STEEL GRAY REFER TO FINISH DETAILS
RES2	INMATE RESTROOMS & SHOWERS STONHARD, STONCLAD GS/ GS4 WITH TEXTURE 2, STEEL GRAY REFER TO FINISH DETAILS

RUBBER FLOORING

RF1	RUBBER FLOORING - STAIR TREADS & LANDINGS NORA, NORAMENT STAIR TREAD ROUND, DUST GRAY

SEALED CONCRETE

SC	REFER TO SPECIFICATIONS FOR FURTHER INFORMATION

STATIC DISSIPATIVE TILE

SD1	STATIC STOP, FREESTYLE ESD PLUS, GRAY-3 GLUE DOWN TILES, 18.5"X18.5"

TERRAZZO FLOORING
** ALTERNATE SHOWER FLOOR FINISH **

TZ1	REFER TO SPECIFICATIONS FOR FURTHER INFORMATION

VINYL SHEET FLOORING

VS1	SHAW, REED SHEET, STROLL, 6.5' X 68'

WALLS

CRASH RAILS

CR1	ACROVYN SCR-48N, BRUSHED SILVER, 6" HIGH REFER TO FINISH DETAILS FOR DOUBLE RAIL INSTALLATION DETAIL

EPOXY PAINT

EP1	MARINE GRADE EPOXY PAINT - TOILET ROOM WALLS COLOR TO BE P2 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION
EP2	MARINE GRADE EPOXY PAINT - SHOWER CEILINGS COLOR TO BE P6 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION

GLAZED CMU BLOCK

GCB	SHOWER WALLS REFER TO SPECIFICATIONS FOR PRODUCT INFORMATION COLOR - ASTRA-GLAZE ROTHWELL BLUE

PADDED WALLS
** ALTERNATE #5 **

PW	REFER TO SPECIFICATIONS FOR PRODUCT INFORMATION

PAINT
(SHERWIN WILLIAMS IS COUNTY STANDARD BRAND)

P1	SHERWIN WILLIAMS, PASSIVE SW 7064
P2	SHERWIN WILLIAMS, NETWORK GRAY SW 7073
P3	SHERWIN WILLIAMS, DISTANCE SW 6243
P4	SHERWIN WILLIAMS, TRICORN BLACK SW 6258
P5	SHERWIN WILLIAMS, HOPSACK SW 6109
P6	SHERWIN WILLIAMS, CEILING BRIGHT WHITE SW 7007 TYP. ALL GYP. BD. OR HARD CEILINGS TO RECEIVE PAINT

VINYL WALLCOVERING

VWC1	MDC WALLCOVERING, LIVING WELL MURALS, ZEN * FILL GROUT JOINTS TO SMOOTH FINISH BEFORE APPLING VINYL WALLCOVERING

WALL CARPET

WC1	TRI-KES, SILENCE, WARM GRAY * FILL GROUT JOINTS TO SMOOTH FINISH BEFORE APPLING WALL CARPET

CASEWORK

PLASTIC LAMINATE

PL1	ALL UPPER AND LOWER CABINETS WILSONART, COSMIC STRANDZ

SOLID PHENOLIC (SPC)

SP1	ALL COUNTERTOPS AND WALL CAPS DURCON, BRITTANY BLUE

* NOTE * PROVIDE GROMMETS AT EACH WORKSTATION COUNTERTOP ABOVE KNEE SPACE AND AS REQUIRED BY OWNER. PROVIDE WIRE MANAGEMENT BELOW COUNTERTOP AT KNEE SPACE. BASIS OF DESIGN: MOCKETT G-SHAPE WIREMOLD CABLE MANAGER.

WALL BASE

INTEGRAL BASE

B1	TOILET ROOMS, SHOWERS & DRESSING ROOMS COORDINATE TO RES1 (OR TZ1 ALTERNATE FINISH) REFER TO FINISH DETAILS
B2	INMATE TOILET ROOMS & SHOWERS COORDINATE TO RES2 (OR TZ1 ALTERNATE FINISH) REFER TO FINISH DETAILS

PAINTED BASE

PB1	BOTTOM COURSE OF CMU TO BE PAINTED CONTRASTING COLOR TO WALLS (P3)

RUBBER BASE

RB1	MANNINGTON, BURKE COLLECTION, 204 GRAY TYPE TP, 4"H COVE BASE

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: Pacheco Koch (214) 451-2765
Structural: JQ Engineering (214) 752-9098
MEP / IT: MD Engineering (469)467-0200
Security: LattaTech (972) 633-5850

BRINKLEY SARGENT WIGINTON ARCHITECTS

COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

HISTORY

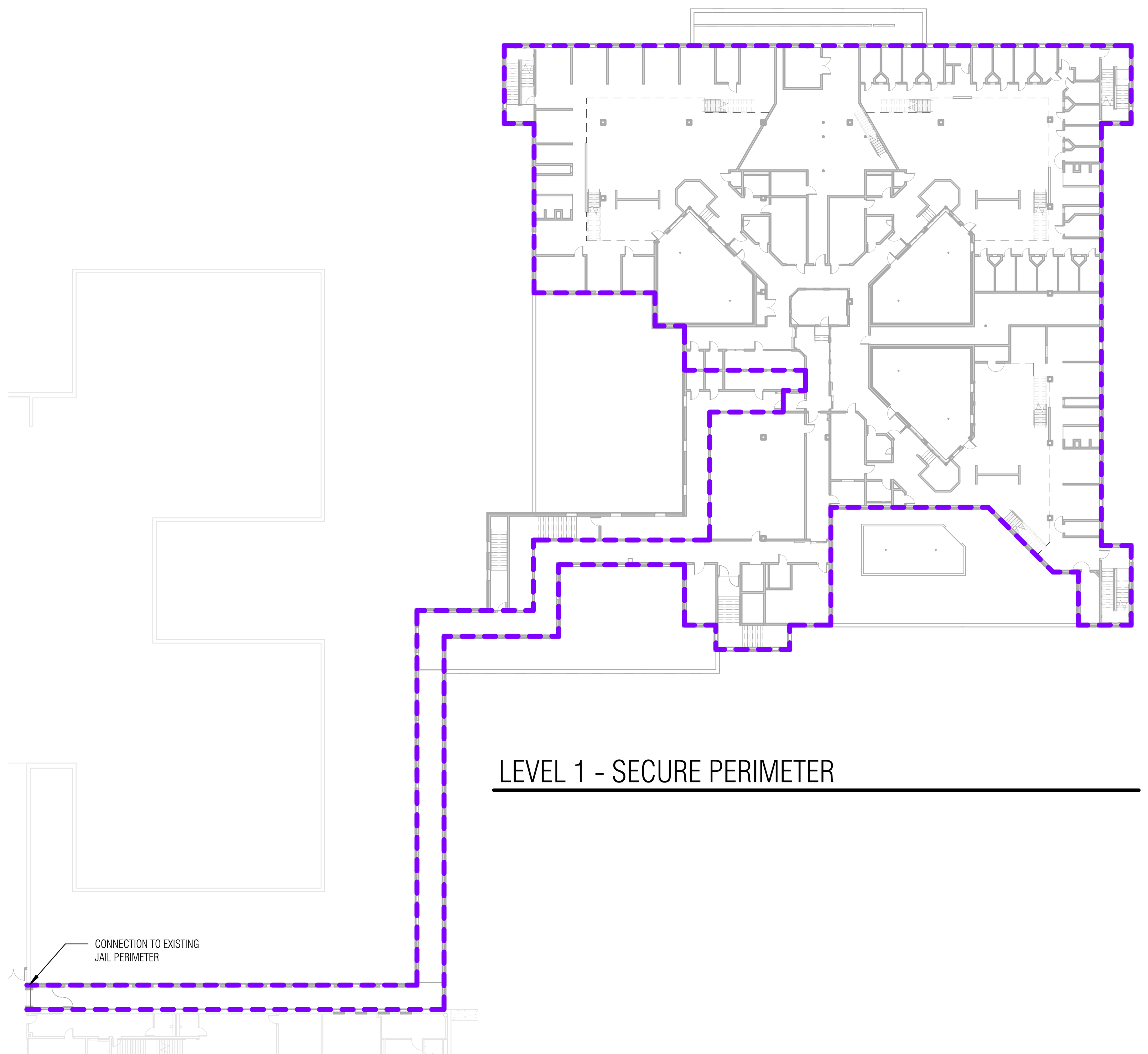
#	DATE	DESCRIPTION
1	08/18/2021	ADDENDUM #2
2	08/20/2021	ADDENDUM #3

CHARLES L. GOODMAN
07/13/2021

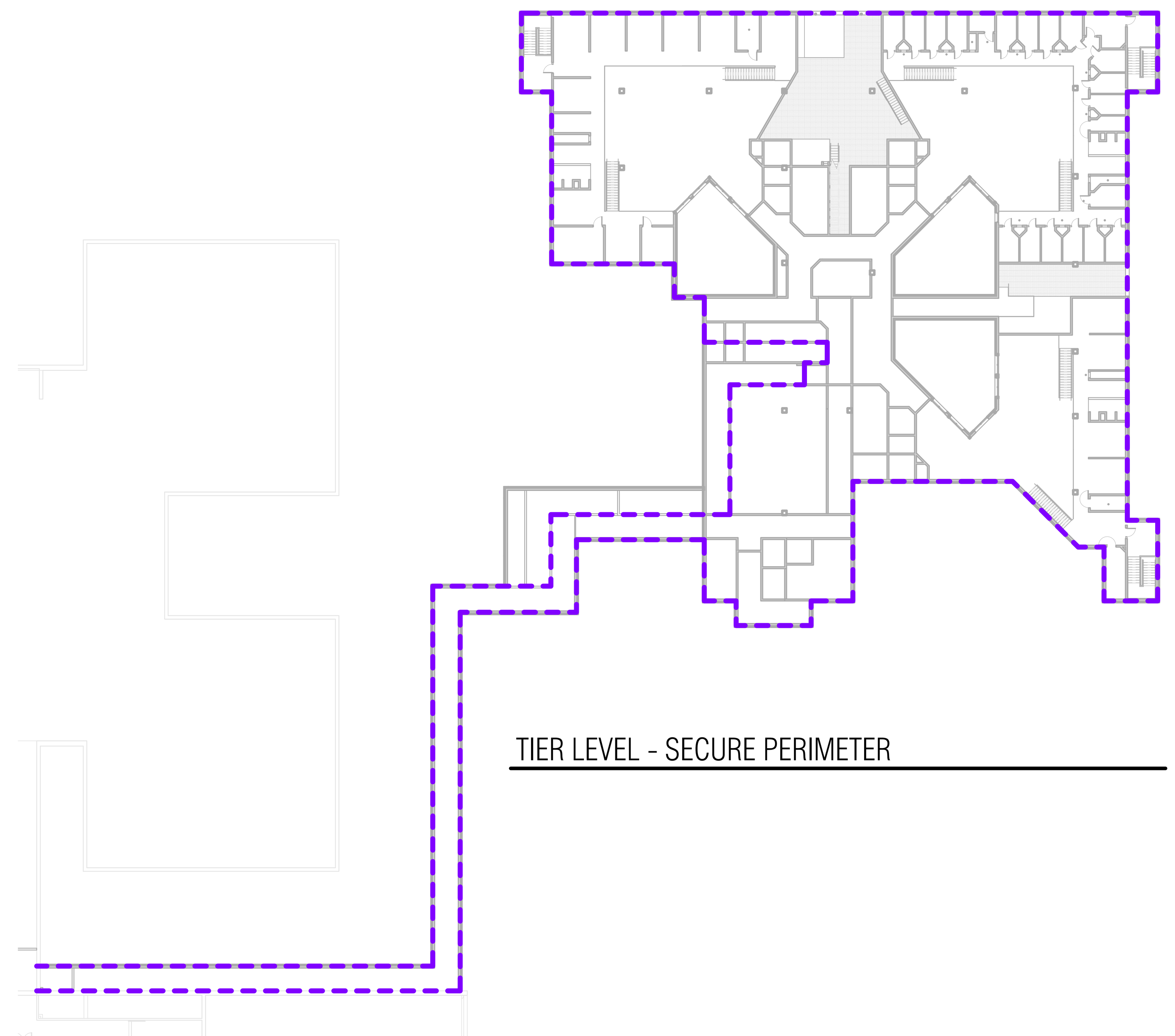
FINISH SCHEDULE, NOTES & LEGEND

21913
07/13/2021
A800

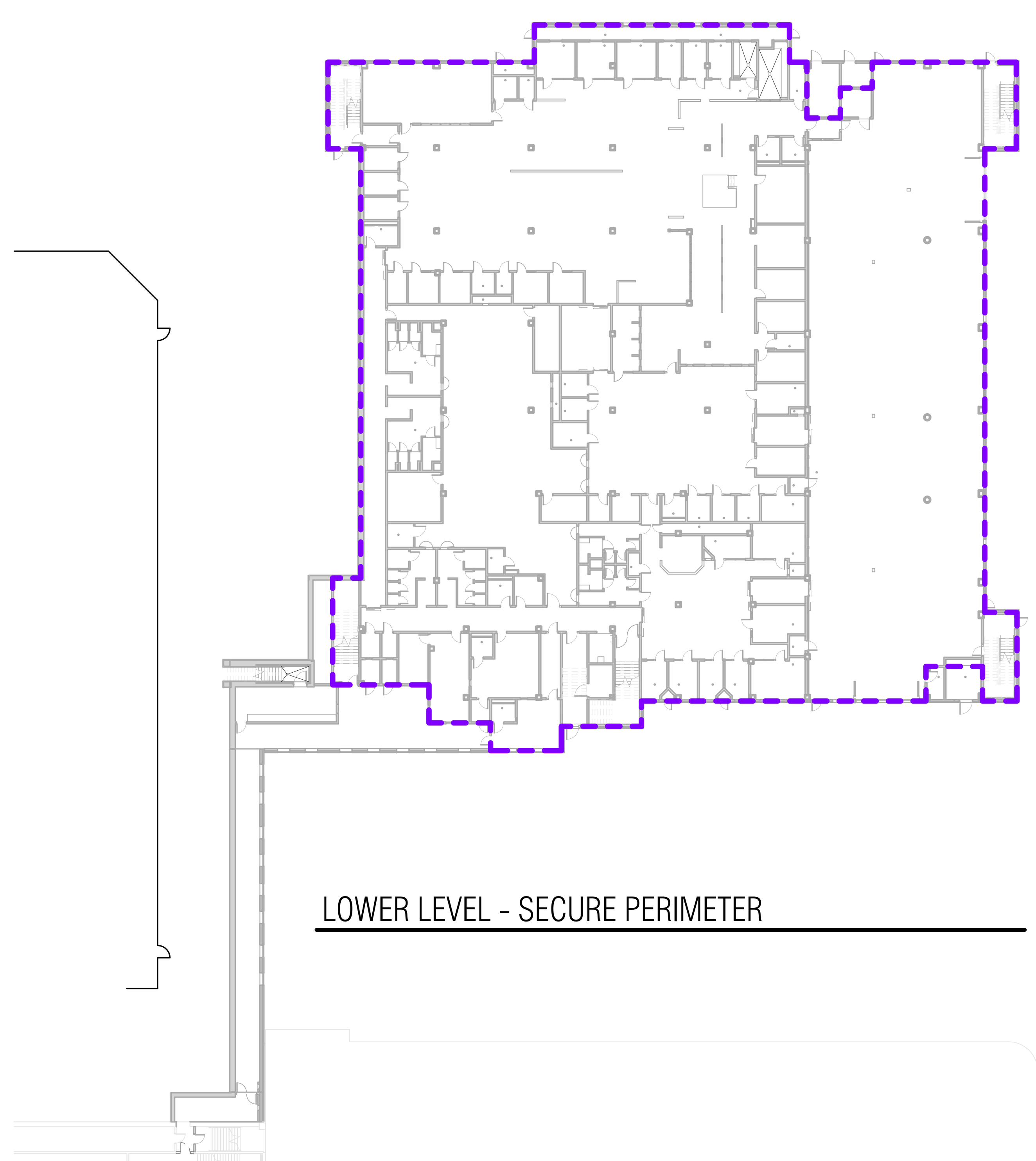
FOR BID



LEVEL 1 - SECURE PERIMETER



TIER LEVEL - SECURE PERIMETER



LOWER LEVEL - SECURE PERIMETER

LEGEND

SECURE PERIMETER

SHEET NOTES:
1. REFERENCE 1/A701 FOR PARTITION TYPES
2. WALL TYPES, LOCATIONS, & EXTENTS REFERENCED IN THIS LEGEND ARE FOR INFORMATION ONLY. DETAILED WALL TYPES, LOCATIONS AND EXTENTS FOR FINAL DESIGN MUST BE BASED ON DRAWINGS ON THE ARCHITECTURAL SHEETS.

DETENTION EQUIPMENT SCHEDULE

EQNUM	DESCRIPTION	MANUFACTURER	PROVIDER	WIDTH	DEPTH	HEIGHT	MECH REQD	ELEC REQD	PLUM REQD	DATA REQD
701	STEEL BED - FLOOR MOUNT - DOUBLE BUNK	REF. 10/D721	CFCI	6' - 4"	2' - 6"	5' - 4"				
701-O	STEEL BED - FLOOR MOUNT - DOUBLE BUNK	TBD - BY OWNER	OFCI	6' - 4"	2' - 6"	5' - 4"				
702-W	STAINLESS STEEL WALL MOUNTED DETENTION BENCH	REF. 14/D721	CFCI	0"	REF: PLANS	0"				
704	STAINLESS STEEL STOOL, FLOOR MOUNTED	VIKING PRODUCTS #SF1000	CFCI	1' - 0"	1' - 0"	1' - 6"				
706-18	STAINLESS STEEL SWING STOOL, WALL MOUNTED, 18" ARM	VIKING PRODUCTS #SW2000	CFCI	1' - 0"	1' - 6"	1' - 6"				
706-24	STAINLESS STEEL SWING STOOL, WALL MOUNTED, 24" ARM	VIKING PRODUCTS #SW2000	CFCI	1' - 0"	2' - 0"	1' - 6"				
709-ADA	WALL HUNG DETENTION DESK - ACCESSIBLE	REF. 19/D721 & 20/D721	CFCI	1' - 8"	1' - 8"	8"				
711	DETENTION SECURITY ACCESS PANEL	REF. 5/D722 & 6/D722	CFCI	2' - 0"	3"	4' - 0"				
720	VIDEO VISTATION UNIT	SIM. SOUTHERN FOLGER SECUREVU	1 OFOI	1' - 9"	7"	1' - 8"		Y		Y
721	ATTORNEY VISIT DX-80 SECURE CASE KIT	CYBERDATA #011416	OFOI	2' - 8"	9"	2' - 4"		Y		Y
722	WELLO STATION WITH WALL MOUNT SHROUD	REF 11/D722 & 14/D722	OFCI	1' - 2"	3"	1' - 0"		Y		Y
2561-6R	PISTOL LOCKER, 6-COMPARTMENT, RECESSED	SOUTHERN FOLGER #605	CFCI	2' - 11"	6"	2' - 6"				
2585	SHACKLE STORAGE CABINET	SOUTHWEST SOLUTIONS GROUP, UWR	CFCI	3' - 6"	1' - 4"	7' - 0"				
5413-H24	24" HALF HEMISPHERICAL MIRROR	NORIX	CFCI	2' - 2"	7"	1' - 1"				
5462-4-O	STAINLESS STEEL 4-SEAT TABLE - ROUND	VIKING PRODUCTS #TS4000	OFOI	6' - 3"	6' - 3"	2' - 8"				
5462-4ADA-O	STAINLESS STEEL ADA 4-SEAT TABLE - ROUND	VIKING PRODUCTS #TS4000	OFOI	6' - 3"	6' - 3"	2' - 8"				

EQUIPMENT LEGEND

PROVIDER:
CF = CONTRACTOR FURNISHED
CI = CONTRACTOR INSTALLED
OF = OWNER FURNISHED
OI = OWNER INSTALLED
VF = VENDOR FURNISHED
VI = VENDOR INSTALLED
AV = REFERENCE AV DRAWINGS FOR INFORMATION REGARDING INCLUSION IN THE CONSTRUCTION CONTRACT
TECH= REFERENCE TECHNOLOGY DRAWINGS FOR INFORMATION REGARDING INCLUSION IN THE CONSTRUCTION CONTRACT
ELEC = REFERENCE ELECTRICAL DRAWINGS FOR INFORMATION REGARDING INCLUSION IN THE CONSTRUCTION CONTRACT
MECH= REFERENCE MECHANICAL DRAWINGS FOR INFORMATION REGARDING INCLUSION IN THE CONSTRUCTION CONTRACT

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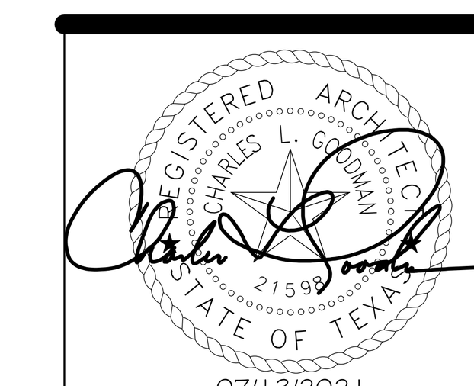
BRINKLEY SARGENT WIGINTON ARCHITECTS

COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

HISTORY

#	DATE	DESCRIPTION
1	08/20/2021	ADDENDUM #3



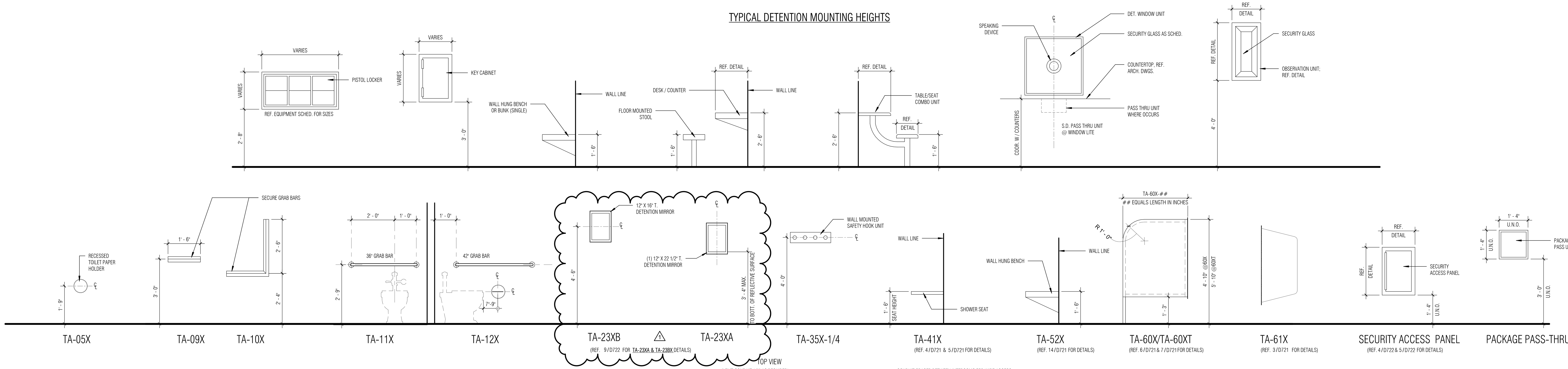
SECURE PERIMETER PLAN & DETENTION EQUIPMENT SCHEDULE

21913
07/13/2021

D010

FOR BID

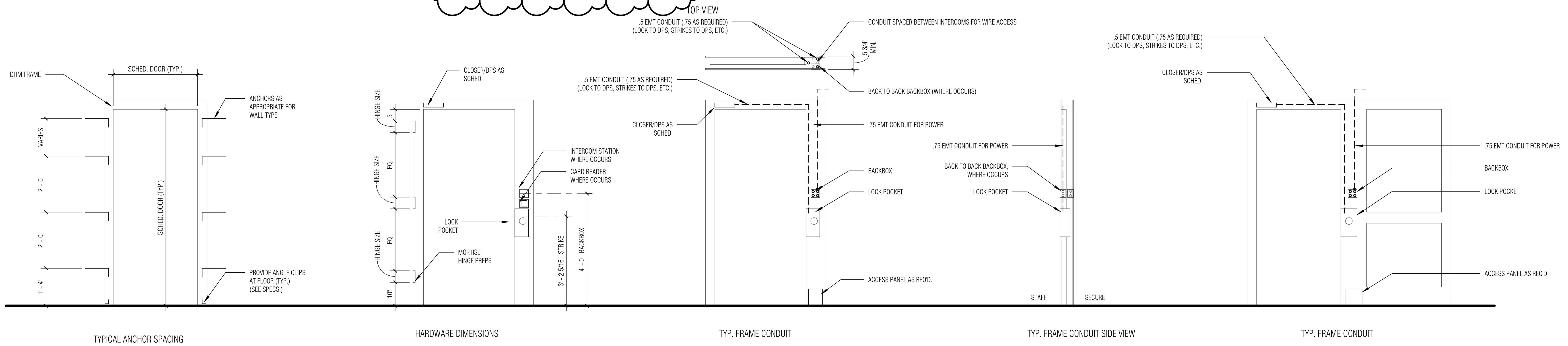
TYPICAL DETENTION MOUNTING HEIGHTS



VARIES
PISTOL LOCKER
REF. EQUIPMENT SCHED. FOR SIZES
KEY CABINET
WALL LINE
WALL HUNG BENCH OR BUNK (SINGLE)
DESK / COUNTER
FLOOR MOUNTED STOOL
REF. DETAIL
TABLE/SEAT COMBO UNIT
SPEAKING DEVICE
DET. WINDOW UNIT
SECURITY GLASS AS SCHED.
COUNTERTOP, REF. ARCH. DWGS.
PASS THRU UNIT WHERE OCCURS
S.D. PASS THRU UNIT @ WINDOW LITE
SECURITY GLASS
OBSERVATION UNIT; REF. DETAIL
SECURE GRAB BARS
RECESSED TOILET PAPER HOLDER
36" GRAB BAR
42" GRAB BAR
12" X 16" T. DETENTION MIRROR
(1) 12" X 22 1/2" T. DETENTION MIRROR
WALL MOUNTED SAFETY HOOK UNIT
SHOWER SEAT
WALL HUNG BENCH
TA-60X-##
EQUALS LENGTH IN INCHES
SECURITY ACCESS PANEL
PACKAGE PASS UNIT
U.N.O.
TA-05X
TA-09X
TA-10X
TA-11X
TA-12X
TA-23XB
TA-23XA
(REF. 9/D722 FOR TA-23XA & TA-23XB DETAILS)
TA-35X-1/4
TA-41X
(REF. 4/D721 & 5/D721 FOR DETAILS)
TA-52X
(REF. 14/D721 FOR DETAILS)
TA-60X/TA-60XT
(REF. 6/D721 & 7/D721 FOR DETAILS)
TA-61X
(REF. 3/D721 FOR DETAILS)
SECURITY ACCESS PANEL
(REF. 4/D722 & 5/D722 FOR DETAILS)
PACKAGE PASS-THRU

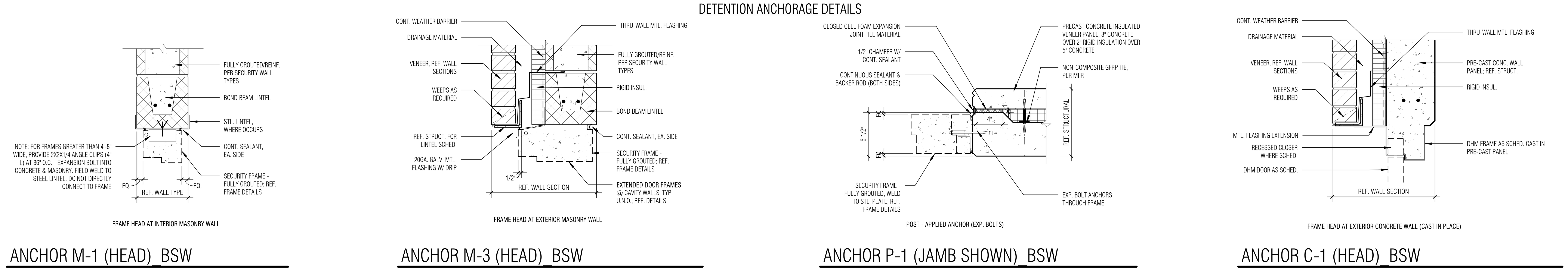
NOTE:
ALL SETTING DIAGRAMS BASED ON STANDARD CONDITIONS. DEC SHALL COORDINATE ALL WORK WITH FIELD CONDITIONS.

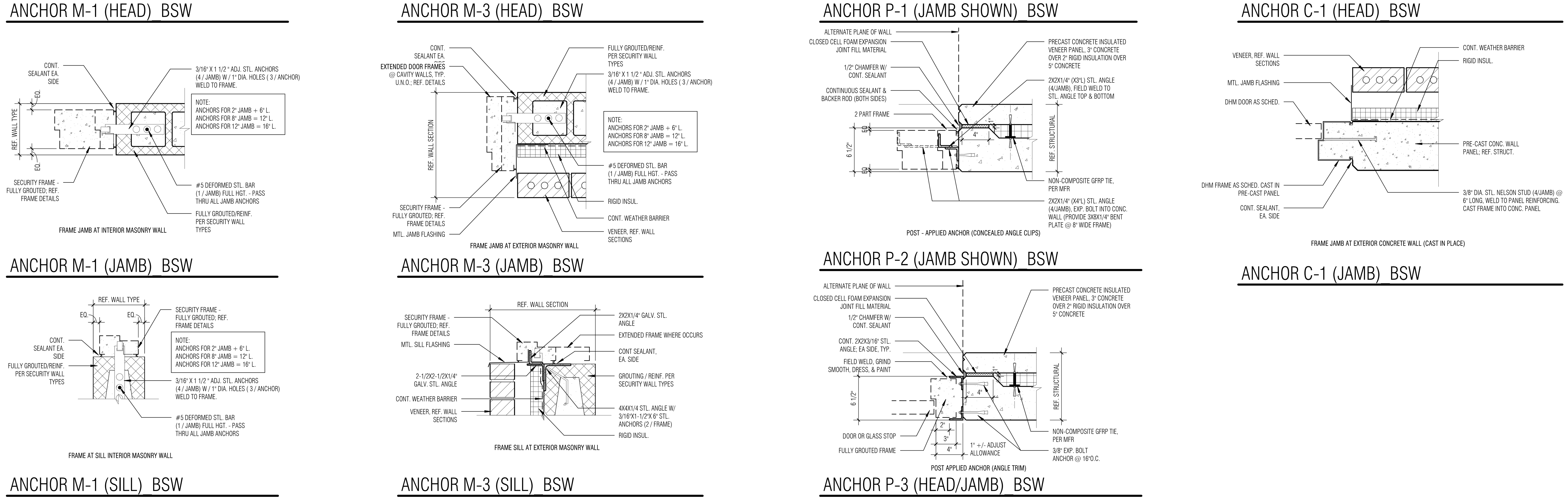
NOTES:
1. NOT ALL ELEMENTS SHOWN ARE NECESSARILY USED ON THIS PROJECT
2. ALL SETTING DIAGRAMS BASED ON STANDARD CONDITIONS. DEC SHALL COORDINATE ALL WORK WITH FIELD CONDITIONS.
3. TA-60X/60XT - REF. 6/D721 .7/D721



DHM FRAME
SCHED. DOOR (TYP.)
ANCHORS AS APPROPRIATE FOR WALL TYPE
PROVIDE ANGLE CLIPS AT FLOOR (TYP.) (SEE SPECS.)
TYPICAL ANCHOR SPACING
CLOSER/DPS AS SCHED.
INTERCOM STATION WHERE OCCURS
CARD READER WHERE OCCURS
LOCK POCKET
MORTISE HINGE PREPS
HARDWARE DIMENSIONS
TOP VIEW
.5 EMT CONDUIT (.75 AS REQUIRED) (LOCK TO DPS, STRIKES TO DPS, ETC.)
CONDUIT SPACER BETWEEN INTERCOMS FOR WIRE ACCESS
BACK TO BACK BACKBOX (WHERE OCCURS)
.75 EMT CONDUIT FOR POWER
BACKBOX
ACCESS PANEL AS REQ'D.
TYP. FRAME CONDUIT
BACK TO BACK BACKBOX, WHERE OCCURS
STAFF
SECURE
TYP. FRAME CONDUIT SIDE VIEW
TYP. FRAME CONDUIT

DETENTION ANCHORAGE DETAILS





FRAME JAMB AT INTERIOR MASONRY WALL
ANCHOR M-1 (JAMB) BSW
FRAME JAMB AT EXTERIOR MASONRY WALL
ANCHOR M-3 (JAMB) BSW
POST - APPLIED ANCHOR (CONCEALED ANGLE CLIPS)
ANCHOR P-2 (JAMB SHOWN) BSW
FRAME JAMB AT EXTERIOR CONCRETE WALL (CAST IN PLACE)
ANCHOR C-1 (JAMB) BSW
FRAME AT SILL INTERIOR MASONRY WALL
ANCHOR M-1 (SILL) BSW
FRAME SILL AT EXTERIOR MASONRY WALL
ANCHOR M-3 (SILL) BSW
POST APPLIED ANCHOR (ANGLE TRIM)
ANCHOR P-3 (HEAD/JAMB) BSW

BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: Pacheco Koch (214) 451-2765
Structural: JQ Engineering (214) 752-9098
MEP / IT: MD Engineering (469) 467-0200
Security: LattaTech (972) 633-5850

COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

HISTORY

#	DATE	DESCRIPTION
1	08/20/2021	ADDENDUM #3

07/13/2021

DETENTION ANCHORAGE DETAILS & MOUNTING HEIGHTS

21913
07/13/2021
D020

FOR BID

DHM DOOR SCHEDULE

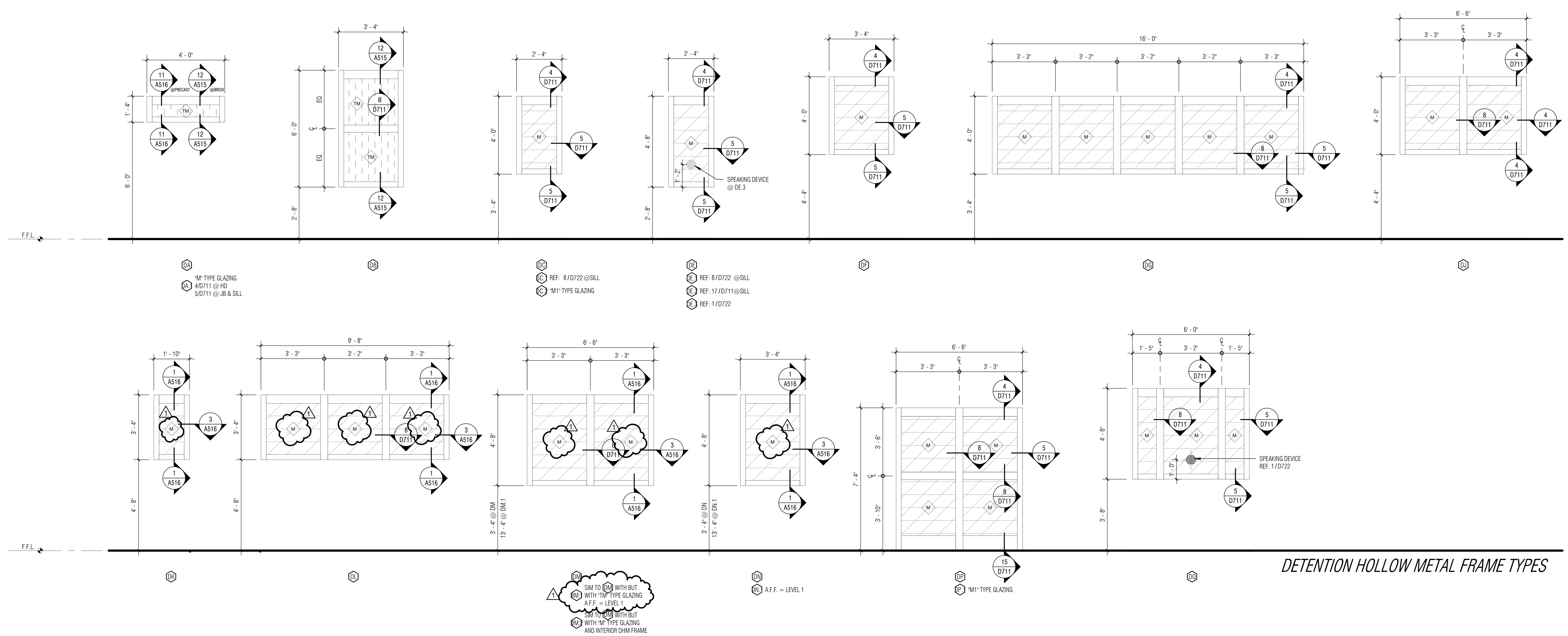
#	DOOR TYPE	DOOR SIZE HEIGHT	DOOR SIZE WIDTH	DOOR CONSTRUCTION DOOR MATERIAL	DOOR CONSTRUCTION GLAZING TYPE	FRAME TYPE	FRAME SIZE HEIGHT	FRAME SIZE WIDTH	FRAME CONSTRUCTION FRAME MATERIAL	FRAME CONSTRUCTION GLAZING TYPE	FIRE RATING	HW SET NO.	REMARKS
D1001C	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	45	D-06	
D1001D	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	45	D-06	
D1001E	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	45	D-06	
D1003A	HX-P	7' - 0"	4' - 0"	DHM	M	F8000	7' - 4"	4' - 11"	DHM	--	90	D-09	
D1003B	HX	7' - 0"	4' - 0"	DHM	M	F8000	7' - 4"	4' - 11"	DHM	--	--	D-09	
D1006	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	--	D-05	
D1007	CX-X	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	7' - 0"	DHM	M	--	D-01	
D1008	CX-X	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	M	--	D-01	
D1009	CX-X	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	M	--	D-01	
D1011	CX-X	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	M	--	D-01	
D1022	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	20	D-03	
D1024	HX	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	--	--	D-01	
D1101A	BHCX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	90	D-05	
D1101B	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	--	D-06	
D1118	CX-X	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	M	--	D-01	
D1119	CX-X	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	5' - 0"	DHM	M	--	D-01	
D1121	CX-X	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	M	--	D-01	
D1122	CX-X	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	M	--	D-01	
D1123	CX-X	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	M	--	D-01	
D1124	CX-X	7' - 0"	3' - 0"	DHM	M	F3004	7' - 4"	10' - 2"	DHM	M	--	D-01	
D1125	CX-X	7' - 0"	3' - 0"	DHM	M	F3004	7' - 4"	10' - 2"	DHM	M	--	D-01	
D1126	CX-X	7' - 0"	3' - 0"	DHM	M	F3004	7' - 4"	10' - 2"	DHM	M	--	D-01	
D1129A	HX	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	M	--	D-05	
D1129B	CX	7' - 0"	3' - 0"	DHM	M	F3000	7' - 4"	3' - 10"	DHM	--	--	D-05	
D1130A	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	--	D-05	
D1130B	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	90	D-05	
D1141A	HX	7' - 0"	4' - 0"	DHM	M	F8000	7' - 4"	4' - 11"	DHM	--	--	D-09	
D1141B	HX	7' - 0"	4' - 0"	DHM	M	F8000	7' - 4"	4' - 11"	DHM	--	20	D-09	
D1200A	AX	7' - 0"	4' - 0"	DHM	--	F3000	7' - 4"	4' - 10"	DHM	--	--	D-05	
D1204A	AX	3' - 8 1/2"	2' - 2"	DHM	--	DPT	4' - 0"	2' - 6"	DHM	STL. MESH	--	D-14	REF: 10/D722 & 11/D722
D1204B	AX	3' - 8 1/2"	2' - 2"	DHM	--	DPT	4' - 0"	2' - 6"	DHM	STL. MESH	--	D-14	REF: 10/D722 & 11/D722
D1208A	HX	7' - 0"	4' - 0"	DHM	M	F8000	7' - 4"	4' - 11"	DHM	--	20	D-09	
D1208B	HX	7' - 0"	4' - 0"	DHM	M	F8000	7' - 4"	4' - 11"	DHM	--	90	D-09	
D1209	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	--	D-05	
D1210	AX	3' - 8 1/2"	2' - 2"	DHM	--	DPT	4' - 0"	2' - 6"	DHM	STL. MESH	--	D-14	REF: 10/D722 & 11/D722
D1211	AX	3' - 8 1/2"	2' - 2"	DHM	--	DPT	4' - 0"	2' - 6"	DHM	STL. MESH	--	D-14	REF: 10/D722 & 11/D722
D1302	BX-S	7' - 0"	3' - 0"	DHM	M	F1000	7' - 4"	3' - 4"	DHM	--	--	D-07	
D1303	BX-S	7' - 0"	3' - 0"	DHM	M	F1000	7' - 4"	3' - 4"	DHM	--	--	D-07	
D1304	AX	3' - 8 1/2"	2' - 2"	DHM	--	DPT	4' - 0"	2' - 6"	DHM	STL. MESH	--	D-14	REF: 10/D722 & 11/D722
D1305	AX	3' - 8 1/2"	2' - 2"	DHM	--	DPT	4' - 0"	2' - 6"	DHM	STL. MESH	--	D-14	REF: 10/D722 & 11/D722
D1313A	BHCX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	--	D-05	
D1313B	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	90	D-05	
D1314	BX	7' - 0"	3' - 0"	DHM	M	F3000	7' - 4"	3' - 10"	DHM	--	90	D-05	
D1316A	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	--	D-05	
D1316B	BHCX	7' - 0"	3' - 0"	DHM	M	F3000	7' - 4"	3' - 10"	DHM	--	--	D-05	
D1317A	BHCX	7' - 0"	3' - 6"	DHM	M	F3000	7' - 4"	4' - 4"	DHM	--	--	D-05	
D1317B	AX	7' - 0"	4' - 0"	DHM	--	F3000	7' - 4"	4' - 10"	DHM	--	45	D-06	
D1319A	HX	7' - 0"	4' - 0"	DHM	M	F8000	7' - 4"	4' - 11"	DHM	--	--	D-09	SLIDING DOOR

DHM DOOR SCHEDULE

#	DOOR TYPE	DOOR SIZE HEIGHT	DOOR SIZE WIDTH	DOOR CONSTRUCTION DOOR MATERIAL	DOOR CONSTRUCTION GLAZING TYPE	FRAME TYPE	FRAME SIZE HEIGHT	FRAME SIZE WIDTH	FRAME CONSTRUCTION FRAME MATERIAL	FRAME CONSTRUCTION GLAZING TYPE	FIRE RATING	HW SET NO.	REMARKS
D1319B	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	--	D-05	
D1322	CX-X	7' - 0"	3' - 0"	DHM	M	F3004	7' - 4"	10' - 2"	DHM	M	--	D-01	
D1323	CX-X	7' - 0"	3' - 0"	DHM	M	F3004	7' - 4"	10' - 2"	DHM	M	--	D-01	
D1324A	HX-P	7' - 0"	4' - 0"	DHM	M	F8000	7' - 4"	4' - 11"	DHM	--	90	D-09	
D1324B	HX	7' - 0"	4' - 0"	DHM	M	F8000	7' - 4"	4' - 11"	DHM	--	--	D-09	
D1325	CX-X	7' - 0"	3' - 0"	DHM	M	F3213	7' - 4"	8' - 4"	DHM	M	--	D-01	
D1326	CX-X	7' - 0"	3' - 0"	DHM	M	F3004	7' - 4"	10' - 2"	DHM	M	--	D-01	
D1327	CX-X	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	M	--	D-01	
D1328	CX-X	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	M	--	D-01	
D1329	CX-X	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	M	--	D-01	
D1330	CX-X	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	M	--	D-01	
D1331B	AX	3' - 8 1/2"	2' - 2"	DHM	--	DPT	4' - 0"	2' - 6"	DHM	STL. MESH	--	D-14	REF: 10/D722 & 11/D722
D1333B	AX	3' - 8 1/2"	2' - 2"	DHM	--	DPT	4' - 0"	2' - 6"	DHM	STL. MESH	--	D-14	REF: 10/D722 & 11/D722
D2003	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	--	D-05	
D2005A	HX	7' - 0"	5' - 0"	DHM	M	F8000	7' - 4"	5' - 11"	DHM	--	--	D-09	
D2005B	AX	7' - 0"	3' - 6"	DHM	--	F3000	7' - 4"	4' - 4"	DHM	--	90	D-05	
D2007A	HX	7' - 0"	4' - 0"	DHM	M	F8000	7' - 4"	4' - 11"	DHM	--	--	D-09	
D2007B	AX	7' - 0"	3' - 0"	DHM	M	F8003	7' - 4"	7' - 1"	DHM	--	--	D-09	
D2008	HX	7' - 0"	3' - 0"	DHM	M1	F3005	7' - 4"	13' - 4"	DHM	M1	--	D-04	
D2010	CX	7' - 0"	3' - 0"	DHM	--	F1000	7' - 4"	3' - 4"	DHM	--	--	D-08	
D2011	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	--	D-05	
D2013	AX	7' - 0"	3' - 6"	DHM	--	F3000	7' - 4"	4' - 4"	DHM	--	20	D-05	
D2015	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	--	D-05	
D2016A	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	--	D-05	
D2016B	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	90	D-05	
D2019	CX	7' - 0"	3' - 0"	DHM	--	F1000	7' - 4"	3' - 4"	DHM	--	--	D-08	
D2095	AX	7' - 0"	3' - 0"	DHM	--	F1000	7' - 4"	3' - 4"	DHM	--	--	D-08	
D2101	HX-P	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	M	20	D-01	
D2103B	AX	3' - 8 1/2"	2' - 2"	DHM	--	DPT	4' - 0"	2' - 6"	DHM	M	--	D-14	REF: 10/D722 SIM & 12/D722
D2104B	HX	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 10"	DHM	M	20	D-05	
D2108A	CX	7' - 8"	3' - 0"	DHM	M	F3000	8' - 0"	3' - 10"	DHM	M	45	D-06	
D2108B	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	45	D-06	
D2201	HX-P	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	M	20	D-01	
D2203B	AX	3' - 8 1/2"	2' - 2"	DHM	--	DPT	4' - 0"	2' - 6"	DHM	M	--	D-14	REF: 10/D722 SIM & 12/D722
D2204B	HX	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 10"	DHM	M	20	D-05	
D2208A	CX	7' - 8"	3' - 0"	DHM	M	F3000	8' - 0"	3' - 10"	DHM	M	45	D-06	
D2208B	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	45	D-06	
D2209	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2211	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2212	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2213	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2214	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2215	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2216	BX-X-S	7' - 0"	3' - 0"	DHM	M	F3000	7' - 4"	3' - 10"	DHM	--	--	D-01	
D2221	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2222	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2223	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2224	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	--	D-05	

DHM DOOR SCHEDULE

#	DOOR TYPE	DOOR SIZE HEIGHT	DOOR SIZE WIDTH	DOOR CONSTRUCTION DOOR MATERIAL	DOOR CONSTRUCTION GLAZING TYPE	FRAME TYPE	FRAME SIZE HEIGHT	FRAME SIZE WIDTH	FRAME CONSTRUCTION FRAME MATERIAL	FRAME CONSTRUCTION GLAZING TYPE	FIRE RATING	HW SET NO.	REMARKS
D2225	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2226	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2227	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2228	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2231	AX	7' - 0"	3' - 0"	DHM	M	F1000	7' - 4"	3' - 4"	DHM	--	--	D-13	
D2232	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2233	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2234	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2235	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D2301	HX-P	7' - 0"	3' - 0"	DHM	M	F3003	7' - 4"	6' - 0"	DHM	M	20	D-01	
D2303B	AX	3' - 8 1/2"	2' - 2"	DHM	--	DPT	4' - 0"	2' - 6"	DHM	M	--	D-14	REF: 10/D722 SIM & 12/D722
D2304B	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	20	D-05	
D2308A	AX	7' - 8"	3' - 0"	DHM	M	F3000	8' - 0"	3' - 10"	DHM	--	45	D-06	
D2308B	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	45	D-06	
D3201	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3202	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3203	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3204	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3205	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3206	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3207	BX-X-S	7' - 0"	3' - 0"	DHM	M	F3000	7' - 4"	3' - 10"	DHM	--	--	D-01	
D3213	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3214	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3215	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3216	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	--	D-05	
D3217	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3218	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3219	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3221	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3223	AX	7' - 0"	3' - 0"	DHM	M	F1000	7' - 4"	3' - 4"	DHM	--	--	D-13	
D3224	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3225	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3226	BX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
D3227	BHCX-X-S	7' - 0"	2' - 6"	DHM	M	F3000	7' - 4"	3' - 4"	DHM	--	--	D-01	
DST01A	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	90	D-05	
DST01B	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	60 (1)	D-06	
DST01C	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	90	D-05	
DST01D	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	90	D-05	
DST02A	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	60 (1)	D-06	
DST02B	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	90	D-05	
DST02C	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	90	D-05	
DST03A	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	60 (1)	D-06	
DST03B	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	90	D-05	
DST03C	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	90	D-05	
DST05A	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	90	D-05	
DST05B	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	60 (1)	D-06	
DST06A	BX	7' - 0"	3' - 0"	DHM	M	F3000	7' - 4"	3' - 10"	DHM	--	90	D-05	
DST07B	AX	7' - 0"	3' - 0"	DHM	--	F3000	7' - 4"	3' - 10"	DHM	--	60 (1)	D-06	



DETENTION HOLLOW METAL FRAME TYPES

GLAZING SCHEDULE (DETENTION)

NO.	TYPE
L	SECURITY GLAZING - 5/8" TEMPERED GLASS
M	SECURITY GLAZING - LAMINATE
M1	SECURITY GLAZING - LAMINATE - MIRRORED ON ATTACK SIDE
TM	INSULATED GLAZING, CLEAR LAMINATED SECURITY GLAZING

SHEET NOTES:
1. ALL EXTERIOR GLAZING TYPE 'TM' UNLESS NOTED OTHERWISE

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: Pacheco Koch (214) 451-2765
Structural: JQ Engineering (214) 752-9098
MEP / IT: MD Engineering (469)467-0200
Security: LattaTech (972) 633-5850

BRINKLEY SARGENT WIGINTON ARCHITECTS

COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

HISTORY

#	DATE	DESCRIPTION
1	08/18/2021	ADDENDUM #2

07/13/2021

DETENTION DOOR SCHEDULE & DHM FRAME ELEVATIONS

21913

07/13/2021

D702

FOR BID

MCKINNEY LANDSCAPE REQUIREMENTS

LIMIT OF CONSTRUCTION LANDSCAPE AREA (10% MIN OF DEVELOPED SITE TO BE PERMANENT LANDSCAPE AREA)			
TOTAL SITE AREA	SITE AREA X 10%	REQUIRED	PROVIDED
293,772 SF	293,772 X .10 =	29,377 SF	169,000 SF
STREET FRONTAGE BUFFER (MIN 20 FT LANDSCAPE BUFFER ADJACENT TO MAJOR THOROUGHFARES)			
PROJECT SETBACK, 140' FROM MAJOR THOROUGHFARE			
VEHICULAR USE BUFFER (MIN 5 FT LANDSCAPE BUFFER BETWEEN PROPERTY LINE AND EDGE OF PARKING AREAS)			
PROPOSED PARKING AREAS ARE MIN. 5FT FROM PROPERTY BOUNDARIES			
CORNER CLIP LANDSCAPE BUFFER (30 FT LANDSCAPE BUFFER PARALLEL TO THE 25'X25' CORNER CLIP ROW DEDICATION)			
NO CORNER CLIP LANDSCAPE BUFFER REQUIRED			
STREET YARD LANDSCAPE AREA (15% MIN OF STREET YARD TO BE PERMANENT LANDSCAPE AREA)			
TOTAL STREET YARD	STREET YARD X 15%	REQUIRED	PROVIDED
N/A	N/A	N/A	N/A
STREET TREES (1 TREE FOR EVERY 40 LF OF STREET FRONTAGE)			
STREET NAME	LINEAL FEET / 40	REQUIRED	PROVIDED
COMMUNITY AVENUE	150 LF / 40	4	4 EXISTING TREES
	TOTAL STREET TREES	4	4
PARKING LOT TREES			
EACH PARKING SPACE MUST BE WITHIN 65' OF A TREE.			
ONE CANOPY TREE MUST BE PROVIDED IN THE PLANTING AREA FOR EVERY 10 PARKING SPACES.			
A LANDSCAPE ISLAND MUST BE LOCATED AT THE TERMINUS OF EACH PARKING ROW AND INCLUDE AT LEAST ONE CANOPY TREE.			
REQUIRED (16 PARKING SPOTS)		PROVIDED	
4		4	
PARKING LOT SCREENING (75% OF TOTAL PARKING LOT FRONTAGE TO BE SCREENED)			
TOTAL PARKING LOT FRONTAGE	SITE AREA X 10%	REQUIRED	PROVIDED
N/A	N/A	N/A	N/A
LOADING DOCK SCREENING (LOADING DOCKS OR STRUCTURES, BAYS AND BAY DOORS MUST BE SCREEN FROM THE R.O.W.)			
REQUIRED		PROVIDED	
N/A		N/A	

ALL REQUIRED LANDSCAPE AREAS SHALL BE PROVIDED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM WITH RAIN AND FREEZE SENSORS AND SAID IRRIGATION SYSTEM SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL AND INSTALLED BY A LICENSED IRRIGATOR.

REFERENCE NOTES SCHEDULE

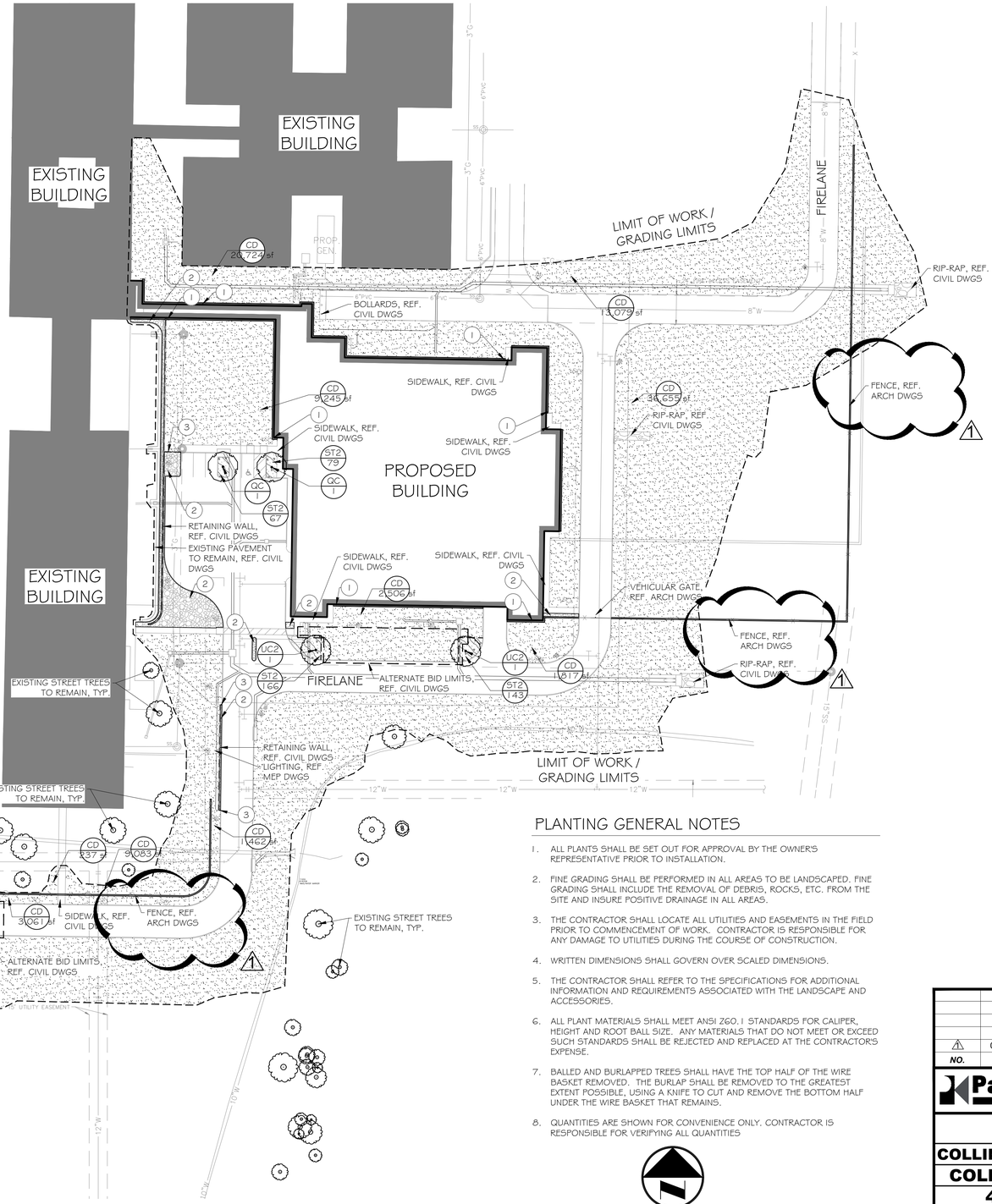
SYMBOL	DESCRIPTION	QTY	DETAIL
1	18" CONCRETE BUILDING APRON	1,369 SF	1/L2.01
2	COBBLE, DFW STONE SUPPLY, ARKANSAS RIVER ROCK, 3-4" SIZE	2,884 SF	2/L2.01
3	STEEL EDGING	29 LF	3/L2.01
4	COBBLE, DFW STONE SUPPLY, ARKANSAS RIVER ROCK, 3-4" SIZE, BID ALTERNATE	373 SF	2/L2.01
	BID ALTERNATE AREA, REFER TO CIVIL DRAWINGS		

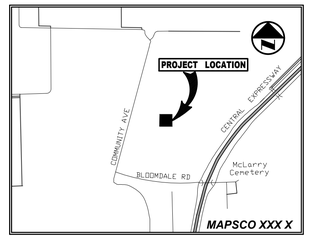
PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME	SIZE/COND.	REMARKS
QC	2	QUERCUS VIRGINIANA `SDLN` TM CATHEDRAL LIVE OAK	65 GAL	4" CAL., 12` HT. MIN., SINGLE, STRAIGHT LEADER, MATCHING
UC2	2	ULMUS CRASSIFOLIA CEDAR ELM	65 GAL	4" CAL., 12` HT. MIN., MATCHED, WELL BRANCHED, STRONG CENTRAL LEADER

GROUND COVERS	QTY	BOTANICAL / COMMON NAME	SIZE	SPACING	REMARKS
ST2	455	STIPA TENACISSIMA MEXICAN FEATHER GRASS	1 GAL	18" o.c.	FULL, MATCHING

SOD/SEED	QTY	BOTANICAL / COMMON NAME	SIZE	SPACING	REMARKS
CD	175,096 SF	CYNODON DACTYLON BERMUDA GRASS	SOD		SOLID, ROLLED TIGHT, SAND FILLED JOINTS, 100% WEED, PEST AND DISEASE FREE





VICINITY MAP

08/20/2021

APPLICANT
COLLIN COUNTY DETENTION FACILITY
4300 COMMUNITY AVENUE
972-548-4100

LANDSCAPE ARCHITECT
TRICIA WOLIVER, PLA
LICENSE# 2225
TWOLIVER@PKCE.COM
214-451-2765

Pacheco Koch
118 N. OHIO STREET
CELINA, TX 75009 • 214.451.2765
TX REG. ENGINEERING FIRM F-469
TX REG. SURVEYING FIRM LS-10008000
TX REG. ARCHITECTURAL FIRM BR 2430

PLANTING GENERAL NOTES

1. ALL PLANTS SHALL BE SET OUT FOR APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
2. FINE GRADING SHALL BE PERFORMED IN ALL AREAS TO BE LANDSCAPED. FINE GRADING SHALL INCLUDE THE REMOVAL OF DEBRIS, ROCKS, ETC. FROM THE SITE AND INSURE POSITIVE DRAINAGE IN ALL AREAS.
3. THE CONTRACTOR SHALL LOCATE ALL UTILITIES AND EASEMENTS IN THE FIELD PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES DURING THE COURSE OF CONSTRUCTION.
4. WRITTEN DIMENSIONS SHALL GOVERN OVER SCALED DIMENSIONS.
5. THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS ASSOCIATED WITH THE LANDSCAPE AND ACCESSORIES.
6. ALL PLANT MATERIALS SHALL MEET ANSI Z60.1 STANDARDS FOR CALIPER, HEIGHT AND ROOT BALL SIZE. ANY MATERIALS THAT DO NOT MEET OR EXCEED SUCH STANDARDS SHALL BE REJECTED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
7. BALLED AND BURLAPPED TREES SHALL HAVE THE TOP HALF OF THE WIRE BASKET REMOVED. THE BURLAP SHALL BE REMOVED TO THE GREATEST EXTENT POSSIBLE, USING A KNIFE TO CUT AND REMOVE THE BOTTOM HALF UNDER THE WIRE BASKET THAT REMAINS.
8. QUANTITIES ARE SHOWN FOR CONVENIENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES

1 PLANTING PLAN
1" = 50'-0"

0 25 50 100 150
GRAPHIC SCALE IN FEET

NO.	DATE	REVISION
1	08/20/2021	ADDENDUM #3

Pacheco Koch
118 N. OHIO STREET
CELINA, TX 75009 214.451.2765
TX REG. ENGINEERING FIRM F-469
TX REG. SURVEYING FIRM LS-10008000

PLANTING PLAN

COLLIN COUNTY ADF - PHASE 1 ADDITION

COLLIN COUNTY JUSTICE CENTER

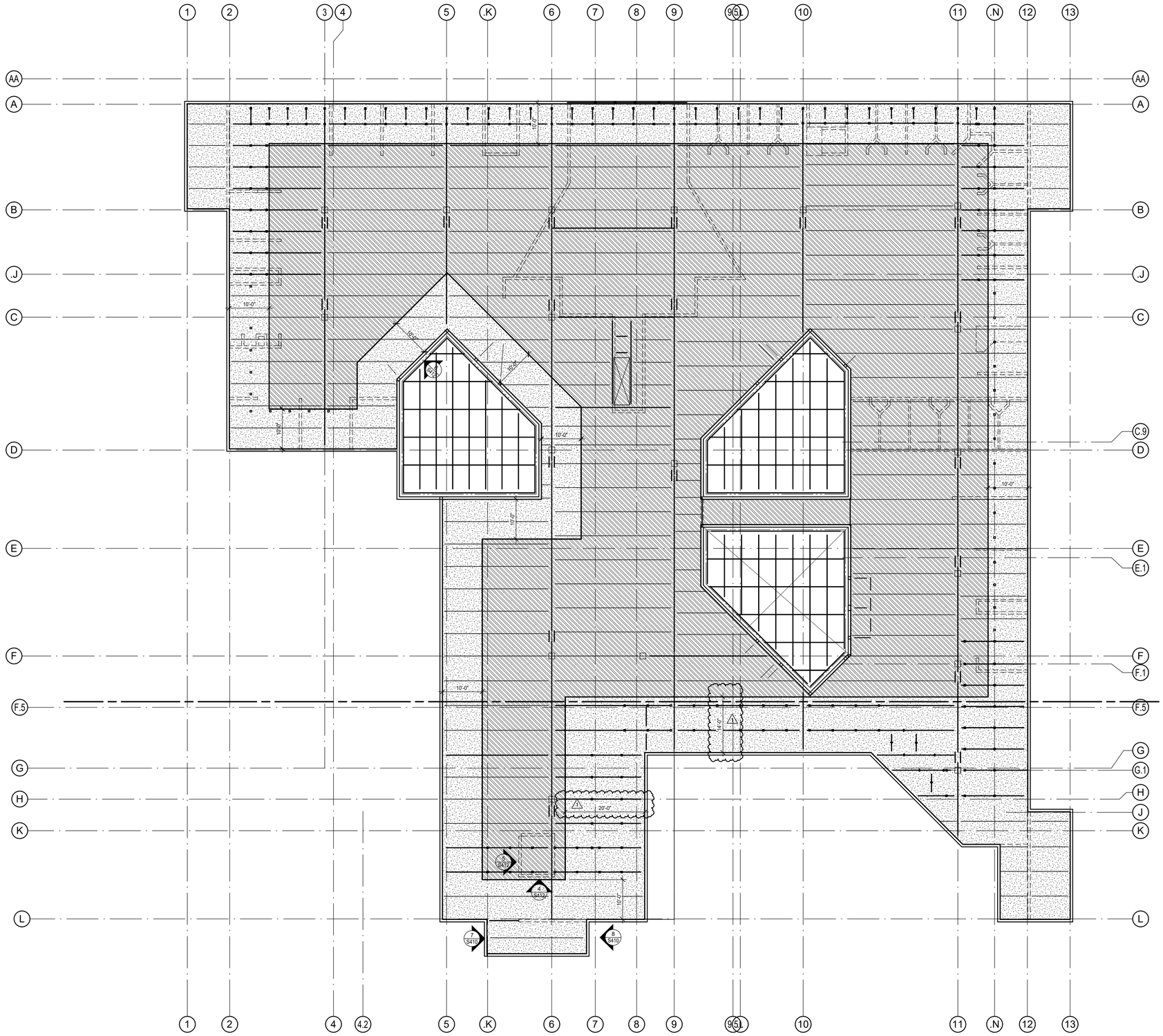
4300 COMMUNITY AVENUE

CITY OF MCKINNEY, COLLIN COUNTY, TEXAS

DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
TAW	SRR	AUG 2021	AS SHOWN			L2.00

COLLIN COUNTY ADF - PHASE 1 ADDITION

PK FILE: 2477-20.345



1 HIGH ROOF DECK ATTACHEMENT PLAN

SCALE: 3/32" = 1'-0"

	SUPPORT CONN. PATTERN	SUPPORT FASTENER	SIDELAP FASTENER (NO. PER SPAN)
░	36/7 ⚠1	5/8 P.W.	#10 TEK/6
▨	36/4	5/8 P.W.	#10 TEK/3

BRINKLEY SARGENT WIGINTONARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
Civil: Pacheco Koch (214) 451-2765
Structural: JQ Engineering (214) 752-9098
MEP / IT: MD Engineering (469)467-0200
Security: LattaTech (972) 633-5850

COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

History

#	Date	Description
1	8/20/2021	Addendum 3

8/20/21
MICHAEL LAVI
129526
07/13/2021

shaping the built environment
JQ ENGINEERING, LLP
108 WILD BASIN RD, SUITE 350
512.474.9094
AUSTIN, TEXAS 78746
JQENG.COM
PROJECT NO: 3200110
TBPE FIRM F-1294

HIGH ROOF DECK ATTACHMENT PLAN

21913
07/13/2021
S106

BID SET

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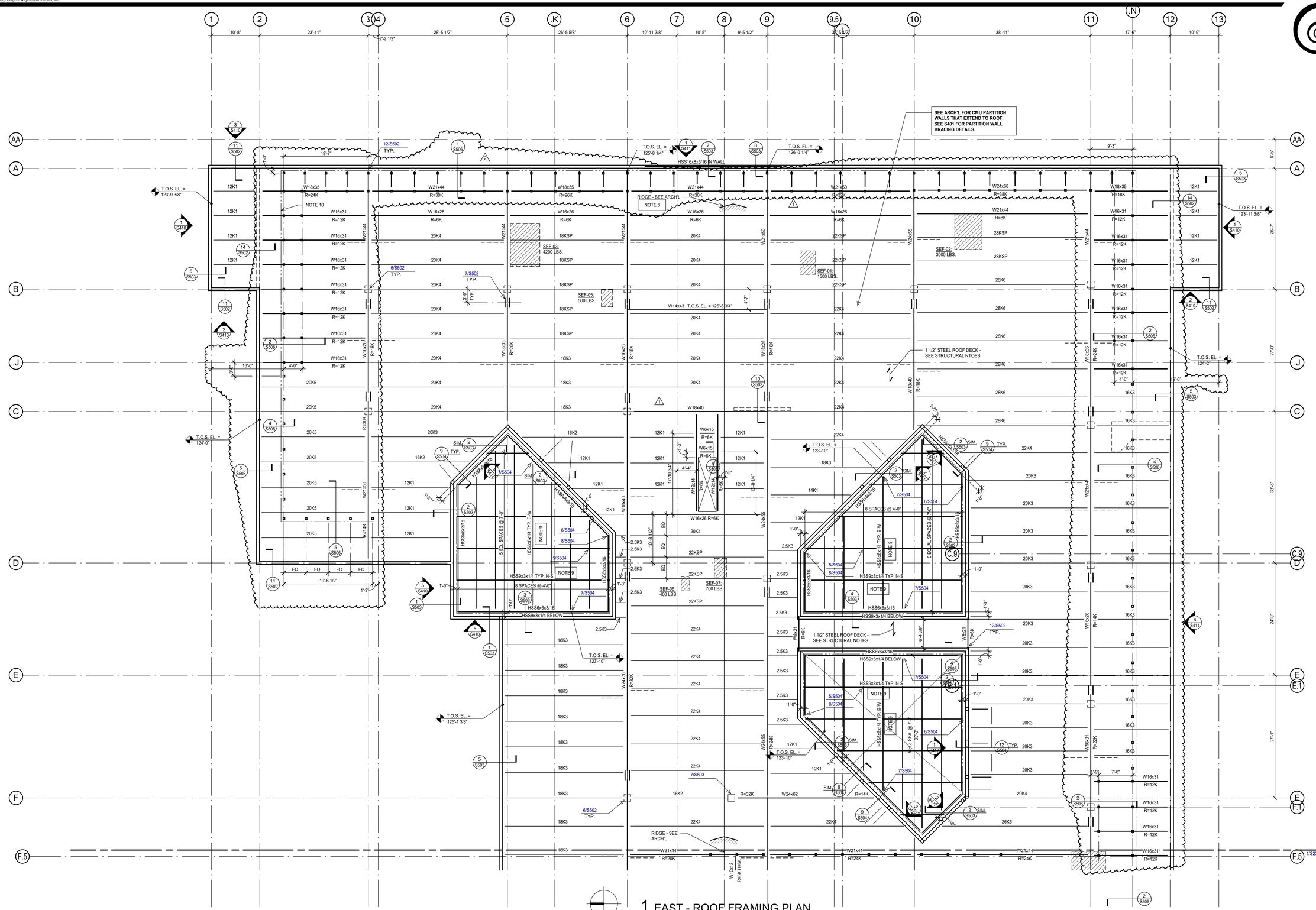

1 EAST - ROOF FRAMING PLAN

SCALE: 1/8" = 1'-0"

PLAN NOTES:

1. TOP OF ROOF STRUCTURE IS SLOPED FOR DRAINAGE. SEE ELEVATIONS NOTED ON THE PLAN. SLOPES SHALL BE UNIFORM BETWEEN COLUMN CENTERLINES, UNLESS NOTED OTHERWISE.
2. TOP OF STEEL ELEVATION (T.O.S. EL.) = TOP OF BEAM, JOIST, OR MEMBER SUPPORTING ROOF DECK = BOTTOM OF DECK.
3. SEE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR LOCATION AND DIMENSIONS OF ROOF PENETRATIONS NOT DIMENSIONED ON PLAN. CONTRACTOR TO COORDINATE.
4. STEEL JOISTS SHALL BE CENTERED ON AND EQUALLY SPACED BETWEEN COLUMN CENTERLINES, UNLESS NOTED OTHERWISE.
5. JOISTS NOTED AS "SP" ARE SPECIAL DESIGNS TO BE PROVIDED BY SUPPLIER FOR LOADINGS INDICATED. JOIST UNIFORM LOADS: TL=260 PLF, LL=130 PLF (SERVICE LOADS)
6. SEE SHEET 1/S105 FOR NET UPLIFT LOADS FOR JOIST DESIGN.
7. PROVIDE BEAM FLANGE BRACING AT ALL GIRDERS PER 14/S501 .
8. PROVIDE TAPERED INSULATION BETWEEN GRIDS 6 & 9 AS REQUIRED FOR ROOF SLOPE.
9. ALL SECURITY BARRIER SUPPORT FRAMING TO BE HOT DIP GALVNIZED.
10. ALTERNATE #5: ROOF EQUIPMENT SCREENING. SEE ARCHITECTURAL FOR LOCATION.

SHEET INDEX:

STRUCTURAL NOTES	- S101, S102
TYPICAL MASONRY DETAILS	- S401, S402
TYPCIAL STEEL DETAILS	- S501, S502
CONC. COLUMN SCHEDULE	- S601

NOTE:
SEE ARCHITECTURAL FOR DIMENSIONS, LOCATIONS, AND TYPES OF ALL CMU WALLS. DO NOT SCALE STRUCTURAL DRAWINGS OR ELECTRONIC MEDIA.

COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

Architect: Brinkley Sargent Wginton Architects (972) 960-9970
Civil: Pacheco Koch (214) 451-2765
Structural: JQ Engineering (214) 752-9098
MEP / IT: MD Engineering (469) 467-0200
Security: LaftaTech (972) 633-3850

BRINKLEY SARGENT WIGINTON ARCHITECTS

History		
#	Date	Description
1	8/18/2021	Addendum 2
2	8/20/2021	Addendum 3

8/20/21

STATE OF TEXAS
MICHAEL LAVI
129526
LICENSED PROFESSIONAL ENGINEER
07/13/2021

ROOF EAST - FRAMING PLAN

BID SET

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JQ ENGINEERING, LLP
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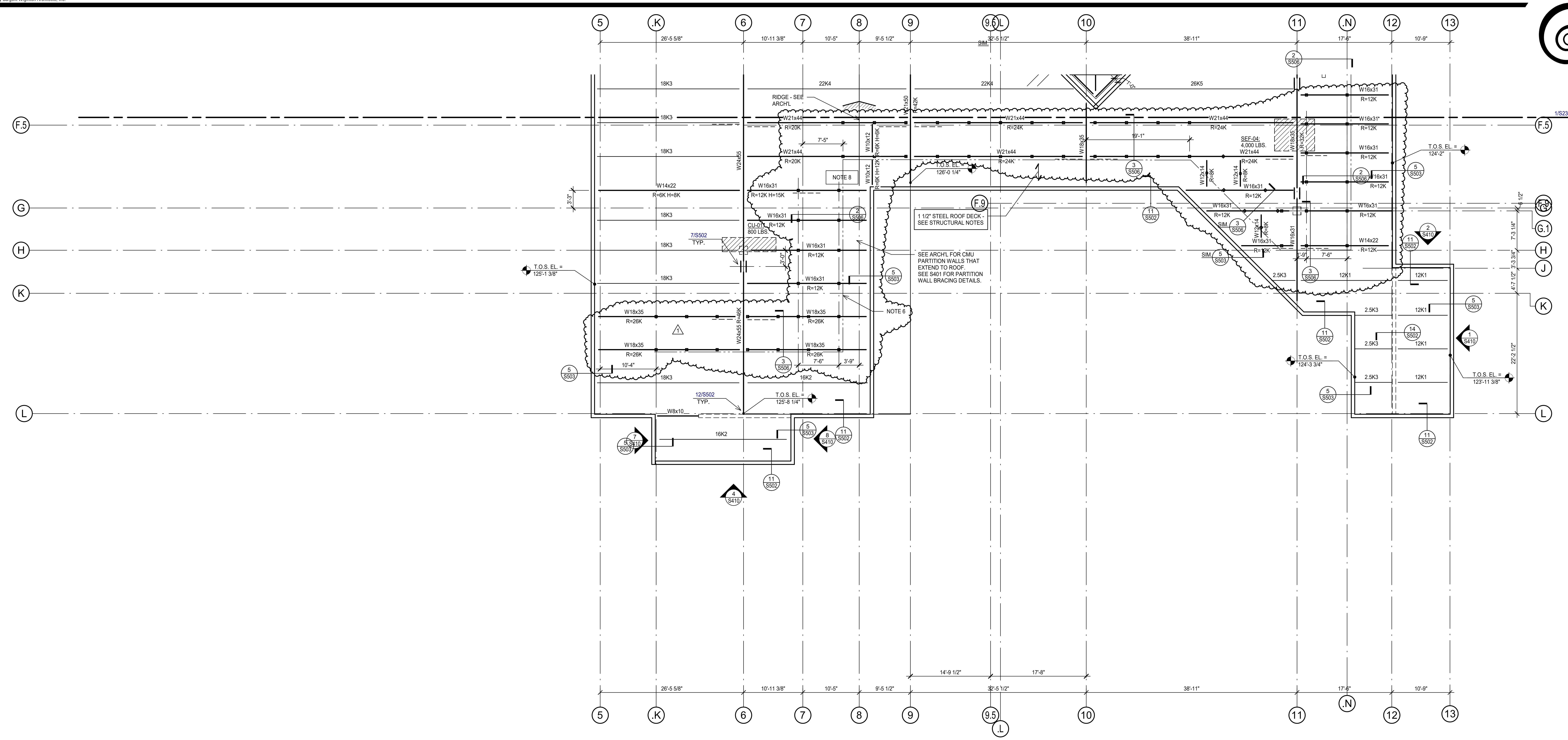
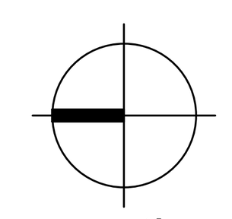
AUSTIN, TEXAS 78746
JQENG.COM
TBPE FIRM F-1294
PROJECT NO: 3200110

21913 | 07/13/2021 | S231





1 WEST - ROOF FRAMING PLAN

SCALE: 1/8" = 1'-0"

PLAN NOTES:

1. TOP OF ROOF STRUCTURE IS SLOPED FOR DRAINAGE. SEE ELEVATIONS NOTED ON THE PLAN. SLOPES SHALL BE UNIFORM BETWEEN COLUMN CENTERLINES, UNLESS NOTED OTHERWISE.
2. TOP OF STEEL ELEVATION (T.O.S. EL.) = TOP OF BEAM, JOIST, OR MEMBER SUPPORTING ROOF DECK = BOTTOM OF DECK.
3. SEE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR LOCATION AND DIMENSIONS OF ROOF PENETRATIONS NOT DIMENSIONED ON PLAN. CONTRACTOR TO COORDINATE.
4. STEEL JOISTS SHALL BE CENTERED ON AND EQUALLY SPACED BETWEEN COLUMN CENTERLINES, UNLESS NOTED OTHERWISE.
5. JOISTS NOTED AS "SP" ARE SPECIAL DESIGNS TO BE PROVIDED BY SUPPLIER FOR LOADINGS INDICATED.
6. ALTERNATE #6: ROOF EQUIPMENT SCREENING. SEE ARCHITECTURAL FOR LOCATION. (1)
7. PROVIDE BEAM FLANGE BRACING PER 14/S501 WHERE NOTED "*" ON PLAN.
8. PROVIDE TAPERED INSULATION BETWEEN GRIDS 6 & 9 AS REQIRED FOR ROOF SLOPE.

SHEET INDEX:

STRUCTURAL NOTES	- S101, S102
TYPICAL MASONRY DETAILS	- S401, S402
TYPCIAL STEEL DETAILS	- S501, S502
CONC. COLUMN SCHEDULE	- S601

NOTE:
SEE ARCHITECTURAL FOR DIMENSIONS, LOCATIONS, AND TYPES OF ALL CMU WALLS. DO NOT SCALE STRUCTURAL DRAWINGS OR ELECTRONIC MEDIA.

BRINKLEY SARGENT WIGINTON ARCHITECTS

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
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Security: LaMaTech (972) 633-5850

COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

History

#	Date	Description
1	8/20/2021	Addendum 3

8/20/21
STATE OF TEXAS
MICHAEL LAVI
129526
LICENSED PROFESSIONAL ENGINEER
07/13/2021

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512.474.9094 JQENG.COM
PROJECT NO: 3200110
TBPE FIRM F-1294

ROOF WEST - FRAMING PLAN

21913
07/13/2021
S232

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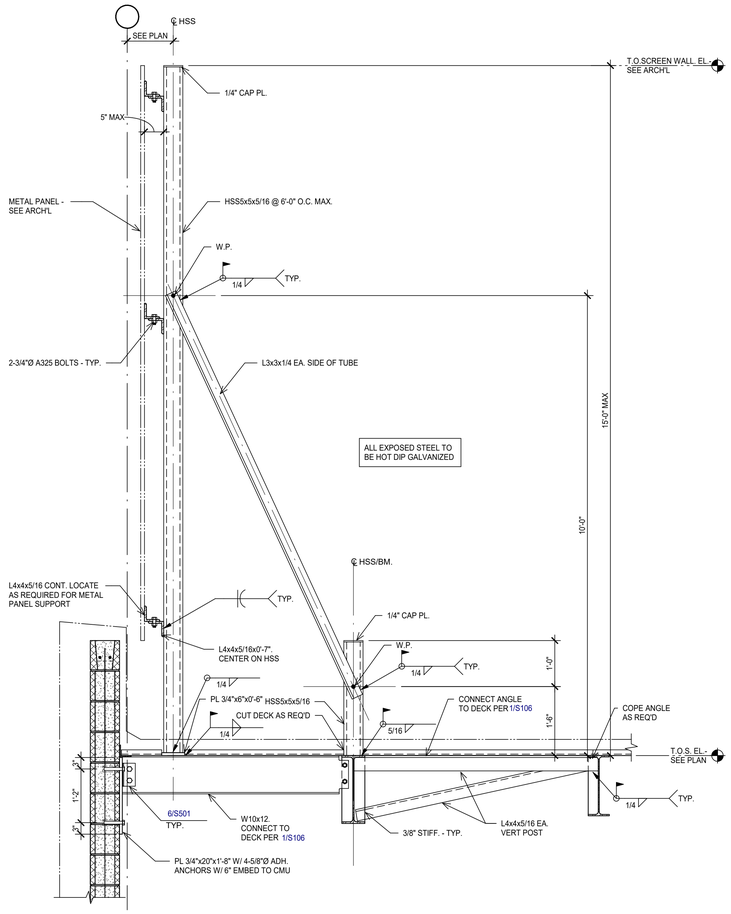
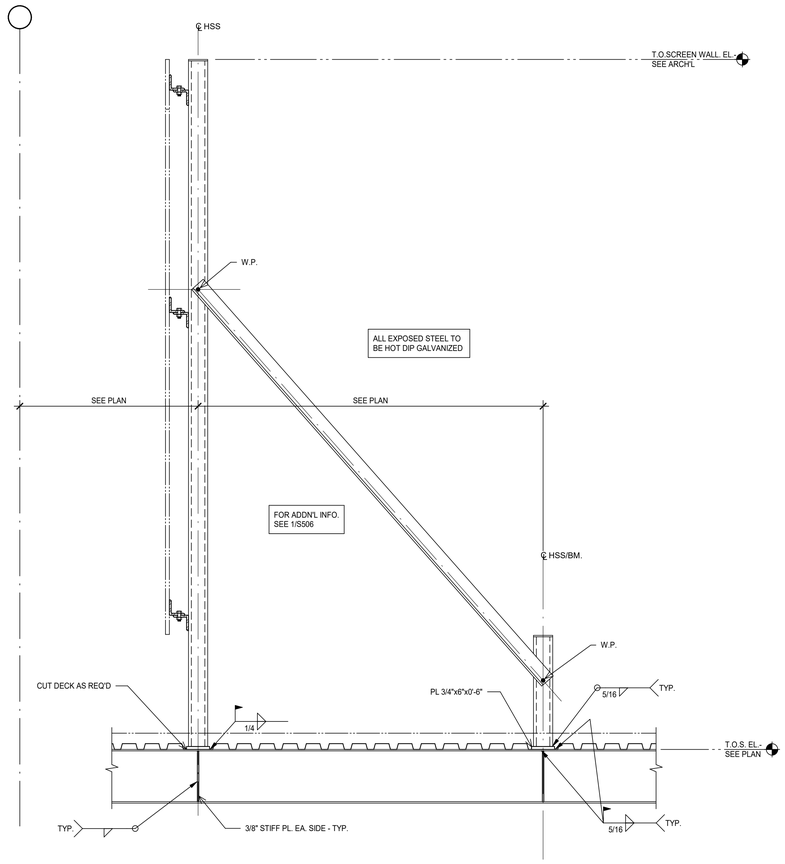
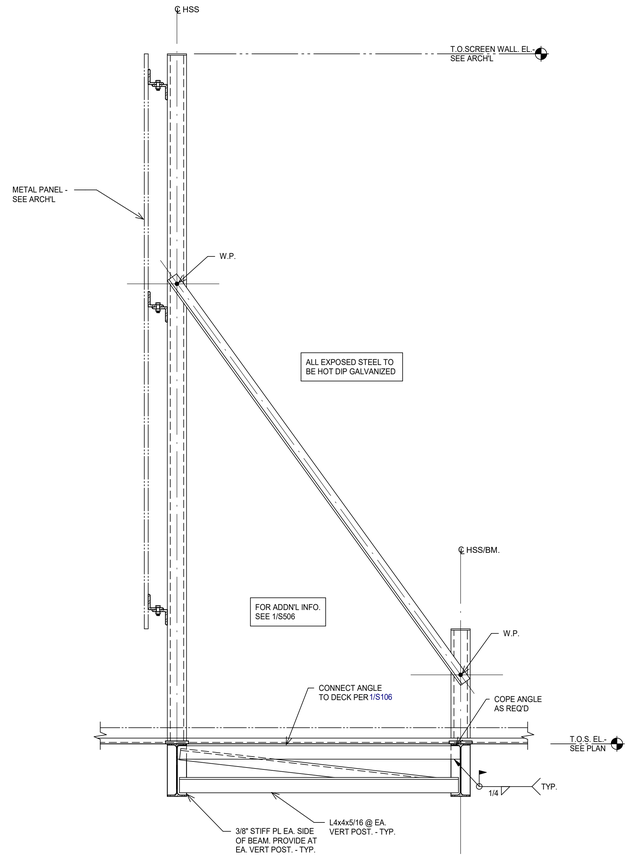


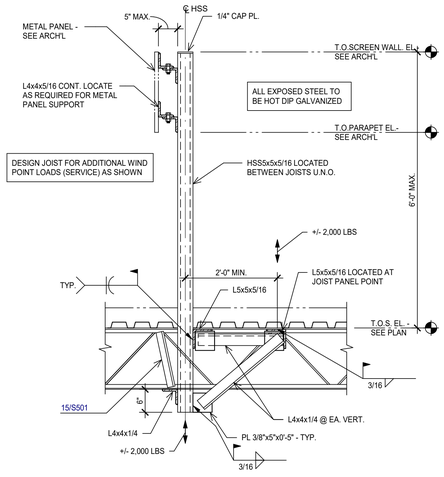
1 ROOF SCREEN WALL SECTION
SCALE: 3/4" = 1'-0"



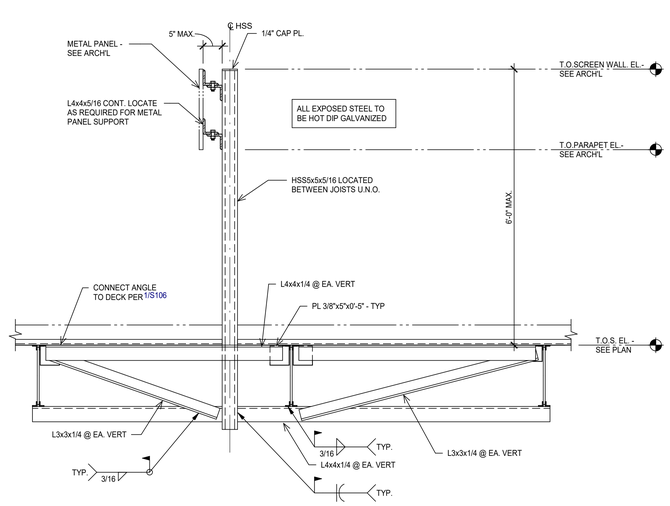
2 ROOF SCREEN WALL SECTION
SCALE: 3/4" = 1'-0"



3 ROOF SCREEN WALL SECTION
SCALE: 3/4" = 1'-0"



4 SCREEN WALL SECTION
SCALE: 3/4" = 1'-0"



5 SCREEN WALL SECTION
SCALE: 3/4" = 1'-0"

Architect: Brinkley Sargent Wiginton Architects (972) 960-9970
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Security: LaftaTech (972) 633-3850

BRINKLEY SARGENT WIGINTON ARCHITECTS

COLLIN COUNTY ADF - PHASE 1 ADDITION

4300 COMMUNITY AVE, MCKINNEY, TX 75071

History		
#	Date	Description
1	8/20/2021	Addendum 3

8/20/21
STATE OF TEXAS
MICHAEL LAVI
129526
LICENSED PROFESSIONAL ENGINEER
07/13/2021

STEEL DETAILS

BID SET

shaping the built environment
JQ ENGINEERING, LLP
108 WILD BASIN RD, SUITE 350
512.474.9094
AUSTIN, TEXAS 78746
JQENG.COM
PROJECT NO: 3200110
TBPE FIRM F-1294

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07/13/2021
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