



REVISED

Picayune Athletics

Picayune, MS

25068 **DPA PN:**

> 100% CDs 9/16/25



Dean Shaw Superintendent

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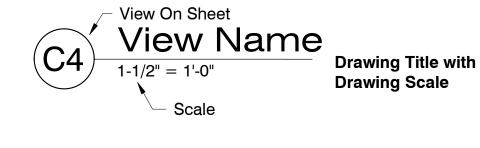
Picayune School District Owner Dale Bailey, an Association Structural Design Group The Power Source Architect Structural Electrical

Center Line Column Grid **Door Mark**

North Arrow

True North **Spot Elevation**

> **Room Name** and Number



+

Room name

1001

33 — Wall Type

Window Type Concrete

CMU (Plan) **Plywood**

Rigid Insulation

Batt Insulation Finished Wood _____ **Existing Wall to be Demolished**

> **Metal Stud Partition** 1 Hr Rated Wall Partition

2 Hr Rated Wall Partition (See Floor Plan) 3 Hr Rated Wall Partition

(See Floor Plan)

(See Floor Plan) **Sheet Keynote Sheet Number - Common** **Project Directory**

Project Information

Name: 25068 Picayune Athletics Address: 404 Union School Rd., Picayune, MS 39466 Phone: (601) 798-1380

Client

Picayune School District 706 Goodyear Blvd. Picayune, MS 39466 (601) 798-3230 Contact: Dean Shaw, Superintendent

Architect

Dale Bailey an Association One Jackson Place / Suite 250 188 East Capitol Street Jackson, MS 39201-2100 (601) 352-5411 Contact: Russ Blount (russblount@dalepartners.com)

Structural

Structural Design Group 220 Great Circle Road, Suite 106 Nashville, TN 37228 (615) 255-5537 Contact: Will Grigg (willg@sdg-structure.com)

Electrical

The Power Source

305 Highway 51 Ridgeland, MS 39157 (601) 605-4820 Contact: Chris Green (cgreen@thepowersource.us) General Project Notes

Project Summary

This project includes Project A, the installation of a new premanufactured metal building to serve as a hitting facility, located adjacent to the existing softball field. The hitting facility also includes sidewalks and site work. In addition, Project B, new tennis courts will be constructed, with lighting and perimeter fencing. The scope also includes the addition of new paved sidewalks throughout the site, along with accommodated drainage infrastructure for proper water management.

Project A: Hitting Facility 1. Base Bid: Sidewalks for access to the building and the rest of the site, pre-engineered metal building, and slab. All interior work as outlined within. Base bid system is 6" Insulation for roof and 4" insulation for

2. Add ALT 1: Change the roof to 26GA pbr galvalume. Fasteners will accommodate up to 4" insulation over the purlin. 6" Insulation is not recommended for a pbr

3. Add ALT 2: Add gutter and downspout to both sidewalls in 26GA smp color. Gutter style to be shadow. Downspouts are to be roll formed (one at every frameline). Downspouts to be taken underground into PVC boots sized to fit. Run Underground to nearby Ditch and Daylight.

Project B: Tennis Courts

1. Base Bid: All work for 2 complete tennis courts as outlined in contract documents, fencing, and lighting. This project also includes a large 10' drainage ditch that will go between the tennis courts and the rest of the site, taking water south to an existing drainage ditch.

2. Add ALT 1: Add two tennis courts, fencing, and lighting.

General Information

- 1. Do not scale drawings. If dimensions are in question, the contractor shall be responsible for obtaining clarification from the architect before continuing with the construction.
- 2. Contractors shall verify, on the site, all dimensions and equipment locations, and notify architect promptly in writing of any discrepancies.
- 3. Contractors shall be responsible to determine the on site conditions and perform all necessary work to complete the project.
- 4. Contractors shall maintain safe methods of egress in site area during construction.
- 5. Dimensions, notes, finishes, and fixtures shown on typical floor plans shall apply to similar, symmetrical, or opposite hand plans, sections, or details.
- 6. Typical, or typ., shall mean that condition is representative for similar conditions throughout, U.N.O. Details are usually keyed and noted "Typ." only one time when they first occur
- 7. Dimensions to masonry are to actual finish face U.N.O. 8. Owner to have right of refusal for all materials, furniture, fixtures and good within the limits of the construction contract.
- 9. Separate contracts. Document is separated into two (2) contracts. The work can be awarded to a single contractor or two (2) separate contractors. Contractors are expected to coordinate scopes that overlap between the two projects for successful delivery of both projects.

Code Requirements

1. Applicable Codes and Standards:

- A. IBC International Building Code (2018 edition) B. IMC - International Mechanical Code (2018 edition)
- C. IPC International Plumbing Code (2018 edition) D. IEC - International Electrical Code (2018 edition)
- E. IFC International Fire Code (2018 edition) F. ADA 2010- Americans with Disabilities Act
- 2. <u>Building Code Requirements (Project A)</u>
- A. Occupancy Classification
- Group B: Business
- B. General Building Heights and Area Group B, Type V-B; 9,000 SF allowed Area modifications for Fire Suppression not required.

C. Types of Construction

Construction Type V-B requirements: Primary Structural Frame - 0hr Bearing Walls Exterior - 0hr Interior - 0hr

Non-bearing Walls Interior - 0hr Floor Construction - 0hr Roof Construction - 0hr

D. Means of Egress Common Path of Egress Travel - 75 ft. Exit Access Travel Distance - 200 ft.

E. Fire Protection Systems Fire Suppression - none. Reference 903.2.1 Group B Building Area is Less Than 12,000 Square Feet Automatic Sprinkler System is Not Required.

F. Exterior Wall Fire Seperation Distance Exterior Walls less than 30' in distance must be 1 Hr.

G. Maximum Area of Exterior Wall Openings Based on Fire Separation Distance. Refer to Table 705.8 in IBC 2018

H. Accessory Use & Plumbing Fixtures Facility is an accessory to neighboring baseball athletics New building is less than 500' from the neighboring

building and connected with an accessible route. Neighboring building will be accessible during the same hours of operation as the new hitting facility. New building will use neighboring buildings water fountains and restrooms.

Drawing Index

AS-102 Sidewalk Plan

G-000 Cover Sheet Index & General Project Information G-300 Photographs

AS-101 Site Plan

A-A101 Softball Hitting Facility

B-A101 Tennis Court Layout B-A501 Tennis Court Details

Architects One Jackson Place 250 188 East Capitol Street Jackson, MS 39201

DALE

AN ASSOCIATION

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161 Lameuse St. Suite 201 Biloxi, MS 39530 p 228.374.1409

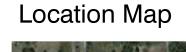
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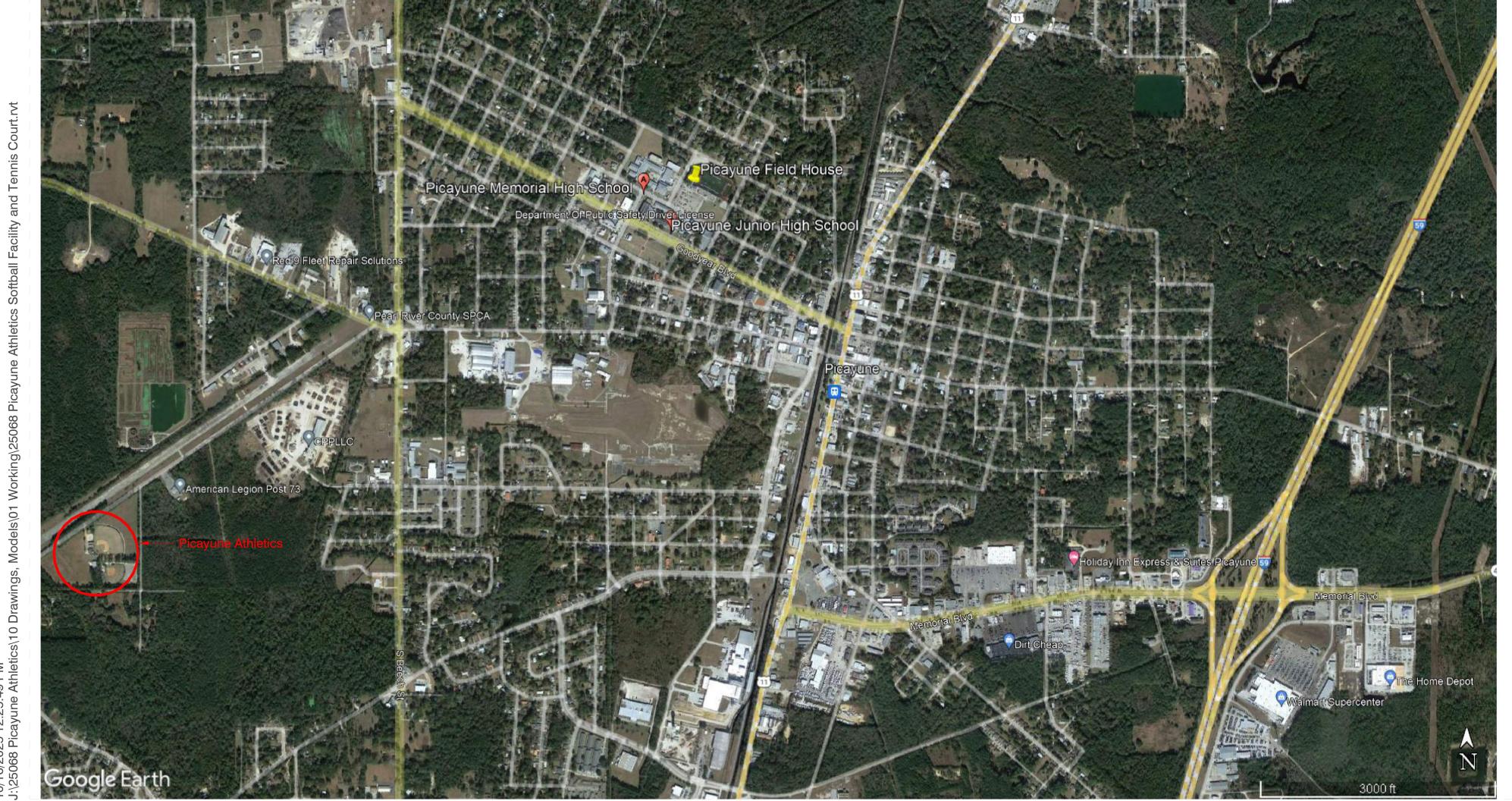


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9/16/25 **Rev Date**

Index & General Project





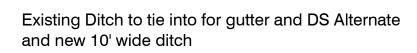








Tie in to existing sidewalk for Hitting Facility

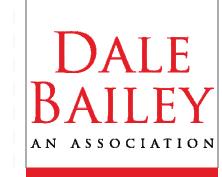






General Sheet Notes

Provided photos are just to show general site conditions.
 Contractor to verify all relevant site conditions on site.



Architects

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icayune Athletics

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Project No 25068

Date 9/16/25

Revisions Rev Date

G-300

1.1. Building Risk Category: II

Directionality Factor, K_d = 0.85

2. Design Loads

2.1. Uniform Floor Live Loads (reduced per Building Code, UNO)

General Areas 100 psf

2.2. Roof Loads

2.2.1. Uniform Roof Live Load (reduced per Building Code) 20 psf Concentrated Roof Live Load

2.3. Wind Loads: Basic Wind Speed V(ult) = 141 mph; V(asd) = 109 mph Wind Exposure C Internal Pressure Coefficient, GCpi = +/-0.18 (Enclosed Building)

2.3.1. Component and Cladding Pressures (psf) 2.3.2. Note: Positive Pressures act Toward the Surface; Negative Away. Note: Values based on Ultimate Wind Speed, for ASD multiply by 0.6. Note: Values based on K_d= 0.85 Note: Corner Zones, a = 5 ft

	Roof Pressures (psf)										
	Eff. Area (sq. ft.)	Zone 1	Zone 2	Zone 2'	Zone 3'						
ı	10	+17.8 / -47.4	+17.8 / -54.9	+17.8 / -66	+17.8 / -73.4	+17.8 / -103					
Ī	20	+16.7 / -47.4	+16.7 / -53.7	+16.7 / -64.9	+16.7 / -66.7	+16.7 / -91.9					
	50	+16 / -47.4	+16 / -52.3	+16 / -63.4	+16 / -57.8	+16 / -77.1					
	100	+16 / -47.4	+16 / -51.1	+16 / -62.3	+16 / -51.1	+16 / -66					
	200	+16 / -47.4	+16 / -51.1	+16 / -62.3	+16 / -51.1	+16 / -66					
	500	+16 / -47.4	+16 / -51.1	+16 / -62.3	+16 / -51.1	+16 / -66					
[1000	+16 / -47.4	+16 / -51.1	+16 / -62.3	+16 / -51.1	+16 / -66					

Wall Pressures (psf)								
Eff. Area (sq. ft.)	Zone 4	Zone 5						
10	+40 / -43.4	+40 / -53.4						
20	+38.3 / -41.6	+38.3 / -49.8						
50	+35.9 / -39.2	+35.9 / -45.1						
100	+34.1 / -37.5	+34.1 / -41.6						
200	+32.4 / -35.7	+32.4 / -38						
500	+30 / -33.4	+30 / -33.4						
1000	+30 / -33.4	+30 / -33.4						

2.4. Earthquake Loads:

Seismic Importance Factor, I = 1.00 Mapped Spectral Response Accelerations, $S_S = 0.093$ and $S_1 = 0.060$ Spectral Response Coefficients, $S_{DS} = 0.149$ and $S_{D1} = 0.143$ Seismic Design Category: B

3. Structural Engineer is not responsible for the design of steel stairs, handrails, curtain wall/window wall systems, cold-formed steel framing, or other systems not shown in the Structural Documents. Such systems shall be designed, furnished, and installed as required by other portions of the Construction

4. Steel floor and roof assemblies and individual beams shall be considered "Restrained" (ASTM E119, Standard Test Methods for Fire Tests of Building Construction and Materials) for determining

5. No explicit provisions have been made for future building expansion.

GENERAL

1. Reference to standards or specifications of technical societies, organizations, or associations means the standard or specification referenced by the governing Building Code shown on the Drawings, unless specifically noted otherwise.

2. Material, workmanship, and design shall conform to the referenced Building Code.

3. For dimensions not shown in the Structural Drawings, see the Architectural Drawings.

4. Contractor responsibilities include, but are not limited to, the following:

4.1 Coordinate the Structural Documents with the Architectural, Mechanical, Electrical, Plumbing, and Civil Documents. If there is a discrepancy or conflict in the documents, the case that results in the greatest cost of construction shall be assumed to control. Architect/Structural Engineer shall be notified of any discrepancy or omission prior to installation of associated

4.2 All of the miscellaneous steel required may not be shown in the Structural Documents. Coordinate the miscellaneous steel requirements with all the Construction Documents.

4.3 Coordinate Structural Documents with Architectural and MPE Documents for location and quantity of miscellaneous framing for items such as roof drains, suspended or supported mechanical units, etc. Refer to Architectural and MPE Documents for additional miscellaneous structural elements that may not appear in the Structural Documents.

4.4 Equipment/Framing Verification

4.4.1 Mechanical Equipment: Submit actual weights of equipment to be used for review at least 3 weeks prior to fabrication and construction. Coordinate opening sizes and locations with Mechanical Contractor.

4.4.2 Miscellaneous Framing: Verify framing shown on the Structural Drawings for mechanical equipment, Owner-furnished items, partitions, etc. is consistent with the requirements of such items.

4.5 The structure is stable only in its completed form. Temporary supports required for stability during all intermediate stages of construction shall be designed, furnished, and installed by the

4.6 Contractor has sole responsibility for jobsite safety and complying with all health and safety precautions as required by any regulatory agency. In performing construction observation visits to the jobsite, the Structural Engineer will have no control over, nor responsibility for, the Contractor's means, methods, sequences, techniques, or Procedures in performing the work.

4.7 Contractor is responsible for locating concrete reinforcement prior to installation of postinstalled anchors, through bolts, or other post-installed items in concrete. Existing reinforcement including post-tensioning tendons shall not be cut or otherwise damaged while installing post-installed anchors.

5. Contractor shall field verify all existing conditions, elevations, and site conditions prior to construction and fabrication. Contractor shall immediately notify Structural Engineer of any existing conditions that are in conflict with the Structural Documents.

SUBMITTALS

1. Shop Drawings and Submittals

1.1 Reproduction of Structural Drawings for shop drawings is not permitted

1.2 Electronic drawing files will not be provided to the Contractor.

1.3 Review of shop drawings will be for conformance with the Construction Documents regarding arrangement and sizes of members and the Contractor's interpretation of the design loads, if applicable, and Construction Document details. Such review shall not relieve the Contractor of the full responsibility to comply with the Construction Documents.

Submittals

2.1 The Structural Quality Assurance Plan and Specifications identify the required submittals. Prior to (or with) the first submittal, Contractor shall submit a list of all required submittals for Engineer's review.

3. Deferred Submittals

3.1 Deferred Submittals include those portions of the project that are furnished by the Contractor and designed by someone other than the Engineer of Record and are submitted at the time of the application. Deferred Submittals shall be submitted to the Building Official prior to fabrication and installation.

3.2 Submittal documents for Deferred Submittals:

Pre-engineered Canopies

3.2.1 Shall be included in the Contractor's scope of services and shall be sealed by an Engineer licensed in the project state. Design of Deferred Submittals shall be in accordance with the governing Building Code indicated above.

3.2.2 Shall be submitted to the registered design professional in responsible charge who shall review them and forward to the Building Official with a notation indicating the deferred submittal documents have been reviewed and that they have been found in general conformance with the design of the building. Deferred submittal items shall not be installed until the design and submittal documents have been approved by the

3.3 The following shall be considered Deferred Submittals: Steel Stairs and Handrails Metal Building System

FOUNDATION

1. Geotechnical Report: Kent Kirkland Field (Softball) Prepared by W Geot3echnical and Testing, Inc W Geotechnical Project No. G-1723Â Ladner Project No.083-25-A Dated August 27, 2025

1.1 The GEOTECHNICAL REPORT is a separate document (not part of contract documents) furnished by the project owner. The contractor should obtain a copy of the report for reference. as it describes sub-surface conditions that may be encountered during installation of foundations and contains other information pertinent to construction of the project.

2. Building Pad Preparation

2.1 Strip vegetation and topsoil.

2.2 Undercut the entire Tennis Court area to a depth of 3 feet below the bottom of the slab, extending 5 feet beyond the slab edge, and replace with compacted structural fill. Proofroll before structural fill placement. No undercut at the building is required.

2.3 Proofroll building areas and Tennis court area with a minimum of two complete coverages of a loaded dump-truck or scraper in each of two perpendicular directions. Replace soft areas with compacted

3. Soil Bearing Capacity: Isolated Footings Continuous Footings 2000 psf

REINFORCEMENT

1. Reinforcing Bars: ASTM A615, Grade 60

1.1 Reinforcing bars are not to be welded.

2. Welded Wire Reinforcement (WWR): ASTM A1064, 8" minimum side and end laps

3. Reinforcement Placement (UNO)

3.1 Concrete Reinforcement Cover

All Concrete Below Grade: Unformed See Details Slabs on Ground

In Aggressive Environments (see Specifications for definition):

Slabs on Ground 3.2 Reinforcement shall be adequately supported in the forms to prevent displacement by concrete placement or workers.

3.3 Wet-setting of reinforcement is not permitted.

4. Reinforcement Splices

4.1 Reinforcement marked "Continuous" can be spliced at locations determined by Contractor. All other reinforcement shall be spliced only at locations shown or noted, unless approved in writing by Structural Engineer.

4.2 Splice Lengths (UNO)

Concrete Reinforcement: Class B Tension Lap

POST-TENSIONED UNBONDED TENDONS

1. Post-Tensioning System: Unbonded, mono-strand tendon system

1.1. Tendons: Seven-wire strand, ASTM A416, 270 ksi min. ultimate strength

1.2. Provide encapsulated system.

2. Tendon Placement and Stressing

2.1. Tendon Support Bars and Bolsters: Secure to formwork to prevent displacement of tendons during concrete placement.

2.2. Tendon Height Tolerance: 1/8" at points dimensioned

2.3. Openings: Slab tendons may be moved laterally, but see Details for tie-back reinforcement.

2.4. Tendon Stressing: Stress after the concrete has obtained 3,000 psi min. compressive strength, but within 96 hours of concrete placement.

2.5. Broken Tendons/Blow-outs: Submit procedures for remedial work required to Structural

2.6. Tendon Extension Cutting: Cut only after Structural Engineer reviews the stressing records (use cutting method outlined in Specifications).

2.7. Exposed portion of the tendon and the gripping part of the anchorage shall be coated with an epoxy-resin compound before being dry-packed with a non-shrink grout.

Restrictions

3.1. Slab Coring: Not permitted without the written consent of Structural Engineer. Openings and sleeves must be shown on the shop drawings.

3.2. Additional openings not shown on the approved shop drawings must be reviewed and approved by the Structural Engineer prior to placement.

3.3. Post-Installed Anchors: Not permitted without written consent of Structural Engineer.

3.4. Powder Actuated Fasteners: 5/8" Embedment maximum.

3.5. Cast-in-place inserts shall be provided for the support of suspended and mechanical

CAST-IN-PLACE CONCRETE

1. Concrete Properties — Normalweight Concrete

Member	Specified Strength at	Ехро	osure	Cate	gory	Maximum w/cm	Air Content	Nominal Maximum
Wernber	28 days <i>f'_c</i> - psi	F	S	W	С	Ratio		Aggregate Size
Footings	3,500	F0	S0	W1	C1	0.50		1-in.
Slabs-on-Ground	3,500	F0	S0	W1	C1	0.48		3/4-in.
Piers	3,500	F0	S0	W1	C1	0.50		1-in.
Post-Tensioned Slabs	5,000	F2	SO	W2	C1	0.40	6 +/- 1 %	3/4-in.
Other Structural Concrete	4,000	F1	S0	W1	C1	0.48	5 +/- 1 %	3/4-in.

2. Construction Joint Locations: No horizontal construction joints are permitted except as shown on the

Structural Drawings. Obtain written consent for additional joints. 3. Pipes or ducts shall not exceed one-third the slab or wall thickness unless specifically detailed. See

mechanical and electrical drawings for location of sleeves, accessories, etc. 3.1 Conduit shall not be placed within the slab-on-ground. Conduit shall be installed below the slab-on-ground within the granular subbase.

4. Special Finishes: Refer to Architectural Drawings for molds, grooves, ornaments, clips or grounds required to be encased in concrete and for location of floor finishes and slab depressions.

5. Defect Repair: Honey-combing, spalls, cracks, etc. shall be repaired. Extent of defective area to be

determined by the Structural Engineer.

6.1 Begin curing procedures immediately following commencement of the finishing operation.

6.2 Concrete shall be moist cured in accordance with ACI 308. See Specification for additional

6.3 All concrete slabs that are to have exposed stained or polished concrete finish shall be wet cured a minimum of 7 days in strict accordance with ACI 301. The acceptable methods of wet curing are ponding, continuous fogging, continuous sprinkling; or application of mats or fabric

METAL BUILDING SYSTEM (SEE ARCHITECTURAL SPECIFICATIONS)

1. Design of Metal Building System shall be the sole responsibility of the Contractor. Submit shop drawings sealed by an Engineer licensed in the project state. Review of shop drawings shall be for conformance with the Contract Documents and the Contractor's interpretation of the design loads and Contract Document details. Such review shall not relieve the Contractor of full responsibility for the design of the Metal Building System.

2. Metal Building System includes the following:

Lateral Load Resisting System (X-bracing, portal frames, diaphragm, etc.) Column anchor bolts (type, number, diameter, and embedment, adhesive anchors shall not be Roof purlins

Wide flange/channel girt that distributes the lateral load from the top of the exterior wall to the metal building frame Roof and wall metal panels

3. Metal Building System shall be designed for the live, wind, and seismic loads as prescribed by the Building Code given in the CODE/DESIGN CRITERIA section above and the loads listed below. Load combinations shall be in accordance with the Building Code and the MBMA "Low Rise Building

Systems Manual".

3" clear

2" clear

Opening framing (doors, roof vents, etc.)

3.1.1 Weight of structural frame and all other materials of the building system. 3.1.2 Collateral dead load (not to be included in load combinations involving wind uplift) of 3

3.1.3 Suspended items such as mechanical equipment, plumbing, folding partitions, etc. identified in the Contract Documents.

4. Metal Building System shall meet the serviceability deflection and drift limits as given in the AISC "Steel Design Guide Series 3: Serviceability Design Considerations for Low Rise Buildings", except as modified below:

Lateral Drift/Deflection due to wind forces mandated by the Building Code (where H is the Building Height and L is the span length)

Building Frame H/60 4.1 Wind Columns H/120 Horizontal Girts L/90 Roof Purlins L/150

5. Metal Building manufacturer shall be accredited by the International Accreditation Service, Inc. (IAS), under the Inspection Programs for Manufacturers of Metal Building Systems by complying with

6. Structural steel sections and welded plate members shall be designed, fabricated and erected in accordance with the AISC "Specification for Structural Steel Buildings: Allowable Stress Design and Plastic Design" or the AISC "Load and Resistance Factor Design Specification for Structural Steel Buildings"; and the AISC "Code of Standard Practice for Steel Buildings and Bridges".

7. Light-gage, cold formed structural members and panels shall be designed in accordance with the AISI "Specification for the Design of Cold-Formed Steel Structural Members".

8. Footings have been designed based upon assumed column reactions and no base column moments. Shop Drawings shall clearly indicate foundation reactions for code required load combinations. Footing construction shall not begin until Structural Engineer reviews foundation reactions and returns reviewed shop drawings.

ANCHORAGE AND BRACING OF NON-STRUCTURAL COMPONENTS

1. Architectural, mechanical, and electrical components shall be properly anchored and braced to resist the seismic forces specified in the referenced Building Code. Refer to the architectural and MPE documents for specific details and additional information.

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STRUCTURAL INDEX

S-001 Structural Notes S-002 Structural Quality Assurance Plan S-101 Softball Hitting Facility Foundation and Roof Framing Plans

S-102 Tennis Court Foundation Plans

S-200 Foundation Sections and Details

S-201 Foundation Sections and Details

Revisions

Date 19 September 2025

Rev Date

Structural Design Group

Consulting Structural Engineers 220 Great Circle Road, Suite 106 Nashville, Tennessee 37228 *p*. 615.255.5537 www.sdg-structure.com

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SDG Project No. 2025-266.00

Structural Notes

STRUCTURAL QUALITY ASSURANCE PLAN

- This Structural Quality Assurance Plan includes:
- 1. The Statement of Special Inspections which defines the scope of testing and inspection that is required for this project.
- 2. The responsibilities of the Contractor.

Refer to other portions of the Construction Documents for Special Inspections required of architectural, mechanical, electrical, or other building components.

Special Inspector shall be hired by the Contractor and shall be approved by the Building Official and the Architect. Contractor shall submit with his bid the name and qualifications of the Structural Inspector(s).

Special Inspector shall maintain records of inspections in accordance with Chapter 17 of the Building Code and shall distribute these records to the Building Official, Architect, and Structural Engineer on a weekly basis, unless noted otherwise below. Reports shall indicate that work inspected/tested was done in conformance to the Construction Documents. Discrepancies shall be brought to the immediate attention of the Contractor for correction. If the discrepancies are not corrected, they shall be brought to the attention of the Building Official, Architect, and Structural Engineer prior to completion of that phase of the work.

At the conclusion of the project, the Special Inspector shall submit a final report documenting required special inspections and correction of any discrepancies noted in the inspections.

STATEMENT OF SPECIAL INSPECTIONS

E1155. See specifications.

Special Inspector shall perform the following tests and inspections of all structural elements included within this Statement of Special Inspections.

- 1. The following tables contain material, components and work that require special inspection or testing:
- a. Inspection Frequency, C Continuous special inspection. Special inspection by the special inspector who is present when and where the work to be inspected is being performed.
- b. Inspection Frequency, P Periodic special inspection. Special inspection by the special inspector who is intermittently present where the work to be inspected has been or is being performed. For structural steel, observe the items on a random basis.

SOILS		INSPECTION FREQUENCY	REFERENCED STANDARD
Verify materials below shallow four to achieve the design bearing capa		Р	
2. Verify excavations are extended to have reached proper material.	proper depth and	Р	Inspection is required after excavation is complete and prior to placement of structural fills.
 Perform classification and testing of materials. 	f compacted fill	Р	Perform laboratory tests of field samples provided by contractor for verification of in place densities.
 Verify use of proper materials, densitift thickness during placement and compacted fill. 		С	Refer to specification for lift thicknesses and compaction.
a. As a minimum, perform one te- every 2500 square feet of fill pl			
5. Prior to placement of compacted fill and verify that the site has been proproofrolling, etc.).		Р	

	proofrolling, etc.).		
	CONCRETE CONSTRUCTION	INCRECTION	DEFEDENCED STANDARD
	CONCRETE CONSTRUCTION	INSPECTION FREQUENCY	REFERENCED STANDARD
١.	Inspection of reinforcing steel placement and installation. Grade, size, quantity, quality, location, spacing, clearances.	Р	ACI 318 Ch. 20, 25.2, 25.3, 26.6.1-26.6.3
<u>2</u> .	Inspection of anchors cast in concrete. Verify compliance of the following: diameter, grade, type, length, number, placement, and embedment depth.	С	ACI 318 26.13.3/ AISC 360 N5.8
3.	Inspection of post-installed mechanical anchors installed in hardened concrete members. Verify anchor type, anchor dimensions, hole diameter and cleaning procedures, anchor spacing, edge distances, concrete minimum thickness, anchor embedment and tightening torque.		ACI 318 26.13.3 Use of post installed anchors must be approved by Structural Engineer
ļ.	Inspection of post-installed adhesive anchors and reinforcing steel installed in hardened concrete members		ACI 318 26.13 Use of post installed anchors must be approved by Structural Engineer
	a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads. Verify adhesive type, anchor rod dimensions, hole diameter and cleaning procedures, anchor spacing, edge distances, concrete minimum thickness, anchor embedment and tightening torque.	С	ACI 318 26.13.3.2
	 Adhesive anchors not defined above. Verify adhesive type, anchor rod dimensions, hole diameter and cleaning procedures, anchor spacing, edge distances, concrete minimum thickness, anchor embedment and tightening torque. 	Р	ACI 318 26.13.3.3
5.	Verify use of required design mix.	Р	ACI 318 Ch. 19, 26.4.3 26.4.4 / IBC 1904.1, 1904.2
) .	Sampling fresh concrete from concrete discharge. Mold one set of specimens for compressive strength testing for each 150 cubic yards or each 5,000 square feet of slab or wall surface area for each mix design placed in any one day. No fewer than five tests for a given class of concrete for the entire project. a. Mold (5) 4x8-inch compressive strength cylinders, break and report (1) at 7-days, (3) at 28-days, or mold (4) 6x12-inch compressive strength cylinders, break and report (1) at 7-days, (2) at 28-days. b. For post-tensioned concrete mold (7) 4x8-inch		ACI 318 26.5, 26.12 ASTM C31, ASTM C172
	compressive strength cylinders, break and report (3) prior to stressing, (3) at 28-days or mold (6) 6x12-inch compressive strength cylinders, break and report (2) prior to stressing, (2) at 28-days. c. Remaining specimens(s) shall be broken as	С	
	directed by the Structural Engineer if compressive strengths do not appear adequate. d. For each set molded, record:		
	i. Slump ii. Air Content iii. Unit Weight iv. Temperature, ambient and concrete		
	v. Batch and discharge timesvi. Location and placementvii. Any pertinent information, such as addition of water, addition of admixtures, etc.		
	e. Report in writing on the same day as tests are performed. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of concrete testing agency, concrete design compressive strength, location of concrete placement in structure, concrete mix proportions and materials, compressive breaking strength and type of break.		
7	f. Verify compliance with construction documents. Inspection of concrete conveying and placement for	C	ACI 318 26.5
	proper application techniques.		
). 	Verify maintenance of specified curing temperature and techniques.	Р	ACI 318 26.5.3-26.5.5
).	Perform testing of Floor Flatness and Levelness of concrete slab placements in accordance with ASTM F1155. See specifications	Р	ACI 117

	POST-TENSIONING TENDONS (INCLUDING BARRIER CABLES)	INSPECTION FREQUENCY	REFERENCED STANDARD
1. T	endon quantity, profile, location and support.	Р	ACI 318 Ch. 20, 25.2, 25.3, 26.6.1-26.6.3
2. lr	nspect for damage and repairs to damaged sheathing.	Р	PTI 20.2.6
3. T	endon systems are fully encapsulated.	Р	PTI 20.2.6
4. Ir	nspection of application of prestressing force.	С	ACI 318 26.10
	/erify in-situ concrete strength prior to stressing of tendons.	Р	ACI 26.11.2
te	Stressing records shall be made during the ensioning operation and shall contain the following lata:		
а	ı. Floor number and pour number.		
b	o. Tendon mark or identification.		
С	. Required elongation maximum and minimum.		
d	l. Gage pressure to achieve required elongation.	С	ACI 318 26.10 (items c, d and e)
е	e. Actual gage pressure.		
f.	Actual elongation achieved.		
g	Date of stressing operation.		
h	 Name and signature of the stressing operator or inspector. 		
i	Serial or identification number of jacking equipment.		
j.	Date of approved shop drawings used for installation and stressing.		
7. G	Grout compressive strength.	С	ACI 26.10
8. G	Grouting of bonded post-tensioned tendons.	С	ACI 26.10
9. Ir	nspect protective end cap prior to patching.	Р	PTI 20.2.6

PRE-ENGINEERED METAL BUILDINGSYSTEM	INSPECTION FREQUENCY	REFERENCED STANDARD
		e items on a random basis. Operations pending these inspections.
	Perf Perform these joint, or member.	tasks for each welded joint, bolted
Installation of rafter/beam flanges braces and column flange braces.	Р	
Installation of purlins and girts, including specified lapping.	Р	
Purlin and girt restraint/bridging/bracing.	Р	
Installation of X-bracing, tightened to remove any sag.	Р	
5. Inspection Tasks Prior to Bolting		
 Manufacturer's certifications available for fastener materials 	Obs.	
 Fasteners marked in accordance with ASTM requirements 	Obs.	
 Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane) 	Obs.	
d. Proper bolting procedure selected for joint detail	Obs.	
 Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements 	Obs.	
 f. Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used 	Perf.	
 g. Proper storage provided for bolts, nuts, washers and other fastener components 	Obs.	
6. Inspection Tasks During Bolting		
 Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are positioned as required. 	Obs.	
 b. Joint brought to the snug-tight condition prior to the pre-tensioning operation. 	Obs.	
 Fastener component not turned by the wrench prevented from rotating. 	Obs.	
 fasteners are pre-tensioned in accordance with the RCSC Specification, progressing systematically from the most rigid point toward the free edges. 	Obs.	
7. Inspection Tasks After Bolting		
Document acceptance or rejection of bolted connections.	Perf.	

S	TRUCTURAL SHOP-FABRICATED ITEMS	INSPECTION FREQUENCY	REFERENCED STANDARD
1.	Where fabrication of structural, load-bearing, or lateral load-resisting members or assemblies is being conducted on the premises of a fabricator's shop, special inspections of the fabricated items shall be performed during fabrication, except where the fabricator has been approved to perform work without special inspections.		IBC 1704.2.5
2.	Fabricator Approval shall be based upon:		IBC 1704.2.5.1 & 1704.5
	Review of the fabricator's written fabrication and quality control manuals that provide a basis for control of materials and workmanship.		
	 Periodic auditing of fabrication and quality control practices by an approved agency or the building official. 		
	c. At the completion of fabrication, the approved fabricator shall submit a certificate of compliance to the owner or owner's authorized agent for submittal to the building official stating that the work was performed in accordance with the approved construction documents.		

Special Inspector shall be responsible for additional Architectural and MPE inspections. See other disciplines for requirements.

CONTRACTOR RESPONSIBILITIES

- 1. Contractor shall submit to the Building Official, Owner, and the Architect a written statement of responsibility that
- a. Acknowledgment of awareness of the special requirements contained in the Statement of Special Inspections for the main wind force-resisting system or a wind-resisting component listed in the Statement of Special Inspections.
- 2. Contractor shall pay for any additional structural testing/inspection required for work or materials not complying with the Construction Documents due to negligence or nonconformance and shall pay for any additional structural
- 3. Contractor is responsible to ensure that the Special Inspector is on site as required to perform all tasks required by Statement of Special Inspection. Any work that requires special inspection and is performed without the Special Inspector
- being present is subject to being demolished and reconstructed. 4. Contractor has the following responsibilities to the Special Inspector:
- a. Provide copy of Construction Documents to Special Inspector and latest addenda (include change orders and field orders prior to inspection of work contained therein).
- b. Notify Special Inspector sufficiently in advance of operations to allow assignment of personnel and scheduling of tests. c. Cooperate with Special Inspector and provide access to work.
- d. Provide samples of materials to be tested in required quantities.
- e. Provide storage space for Special Inspector's exclusive use, such as for storing and curing concrete testing samples.
- f. Provide labor to assist Special Inspector in performing tests/inspections. Contractor shall perform the following:
- a. SOILS Identify soils to be used as structural fill.

testing/inspection required for his convenience.

- b. CAST-IN-PLACE CONCRETE
- i. Submit manufacturer's certification that reinforcing materials comply with Construction Documents. ii. Establish concrete mix design proportions in accordance with the specifications and ACI 318, Chapter 26.
- iii. Submit manufacturer's certification that concrete materials meet the requirements of the Construction Documents.
- iv. Submit manufacturer's data for tension and compression splicers. c. POST-TENSIONING TENDONS (INCLUDING BARRIER CABLES)
- i. Submit manufacturer's certification that tendon materials comply with Construction Documents. 1. For SFR Systems, submit certified mill test reports and typical stress- strain curves for each coil or pack of
 - strand. The report shall contain:
 - a. Heat number and identification. b. Standard chemical analysis for heat of steel.
 - c. Ultimate tensile strength. d. Yield strength at 1 percent extension under load.
 - e. Elongation at failure.
 - f. Modulus of elasticity.
 - g. Diameter and net area of strand.
 - h. Type of material (stress-relieved or low relaxation). i. Static and dynamic test data for the tendon and anchorage assembly in order to verify that the fatigue properties
 - are adequate to sustain the maximum number of stress variations of loads anticipated during the service life. The test requirements shall be as outlined in the PTI "Guide Specifications for Post-tensioning Materials".
- 2. Submit product data sheets for non-shrink grout that shows compliance with the Construction Documents. Submit mix design for grout.
- d. METAL BUILDING SYSTEM
- i. Submit certification that the Metal Building System manufacturer is accredited by the International Accreditation Service, Inc. (IAS), under the Inspection Programs for Manufacturers of Metal Building Systems by complying with AC472.

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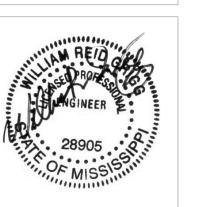
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Date 19 September 2025

Structural Design Group

Consulting Structural Engineers 220 Great Circle Road, Suite 106 Nashville, Tennessee 37228 *p*. 615.255.5537 www.sdg-structure.com SDG Project No. 2025-266.00

Structural Quality

Assurance Plan

- 1. ALL DIMENSIONS ARE TO BE VERIFIED WITH ARCHITECTURAL DRAWINGS BEFORE DETAILING AND CONSTRUCTION ARE TO BEGIN. FOR DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS. DIMENSIONS SHOWN ARE TO EDGE OF SLAB.
- 2. DO NOT LOCATE PLUMBING LINES WITHIN CONCRETE FOOTINGS.
- 3. CONTRACTOR SHALL SUBMIT THE LOCATIONS OF ALL THE MECHANICAL WALL OPENINGS FOR REVIEW AND APPROVAL BEFORE THE START OF WALL CONSTRUCTION.

PEMB PLAN NOTES

PRE-ENGINEERED METAL BUILDING SYSTEM. REFER TO STRUCTURAL NOTES AND SPECULATIONS FOR REQUIREMENTS. DESIGN STRUCTURE TO SUPPORT ALL ITEMS ATTACHED TO THE STRUCTURE SUCH AS CEILING, MECHANICAL EQUIPMENT, LIGHTING ETC. COORDINATE WITH THE STRUCTURAL, ARCHITECTURAL AND MPE DOCUMENTS COORDINATE DEPTH OF MEMBERS WITH ARCHITECTURAL DOCUMENTS.

(COLUMN FOOTING SCHEDULE									
MARK	SIZE	BOTTOM REINF. EACH WAY (UNO)								
F5	5' - 0" x 5' - 0" x 1' - 6"	5-#6								



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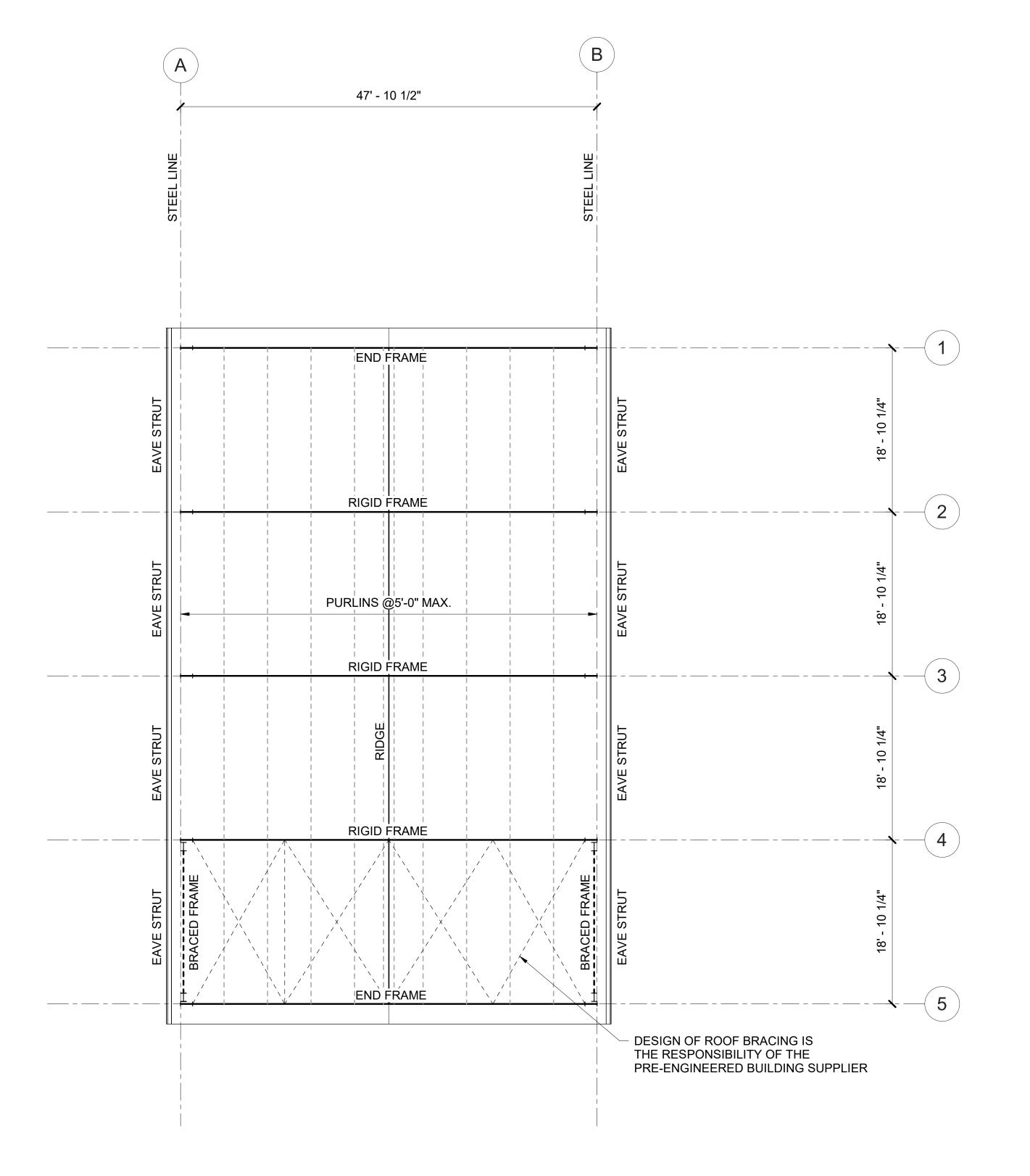


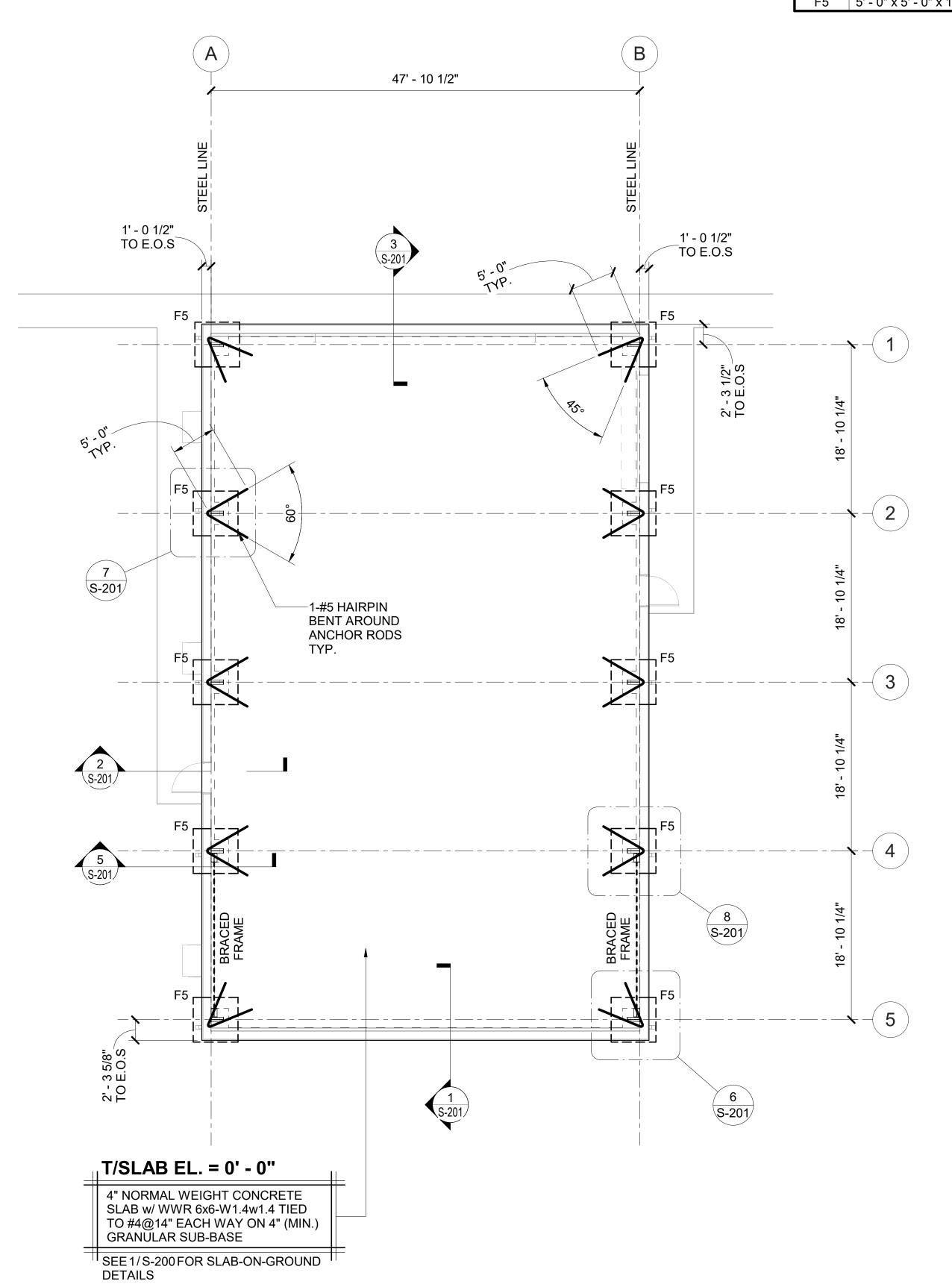
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Date 19 September 2025 Rev Date Revisions

Structural Design Group

Softball Hitting Facility Foundation and Roof Framing Plans





Softball Hitting Facility Roof Framing Plan

1/8" = 1'-0"

Softball Hitting Facility Foundation Plan

1/8" = 1'-0"

Consulting Structural Engineers
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Nashville, Tennessee 37228 p. 615.255.5537 www.sdg-structure.com SDG Project No. 2025-266.00 © 2025

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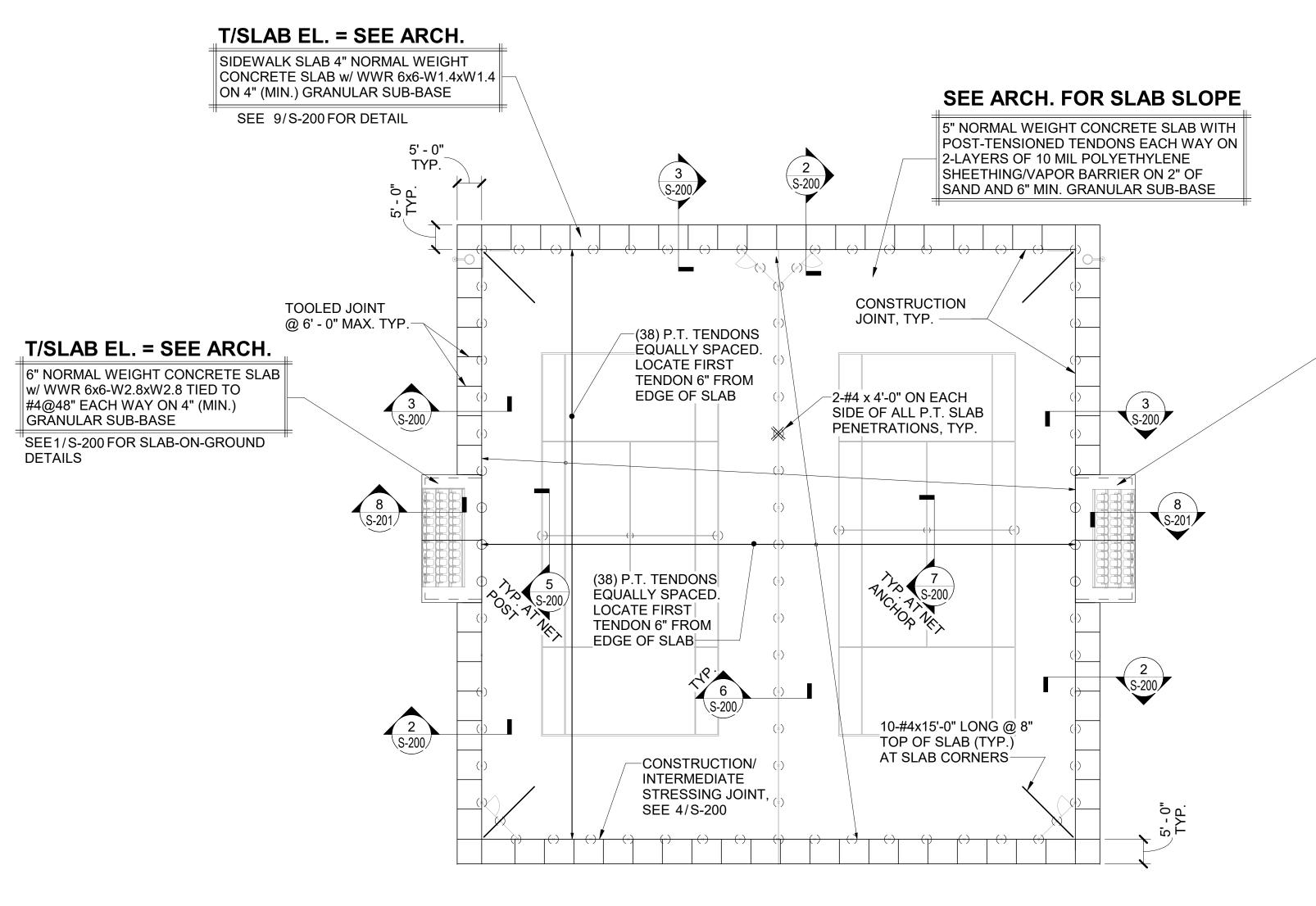
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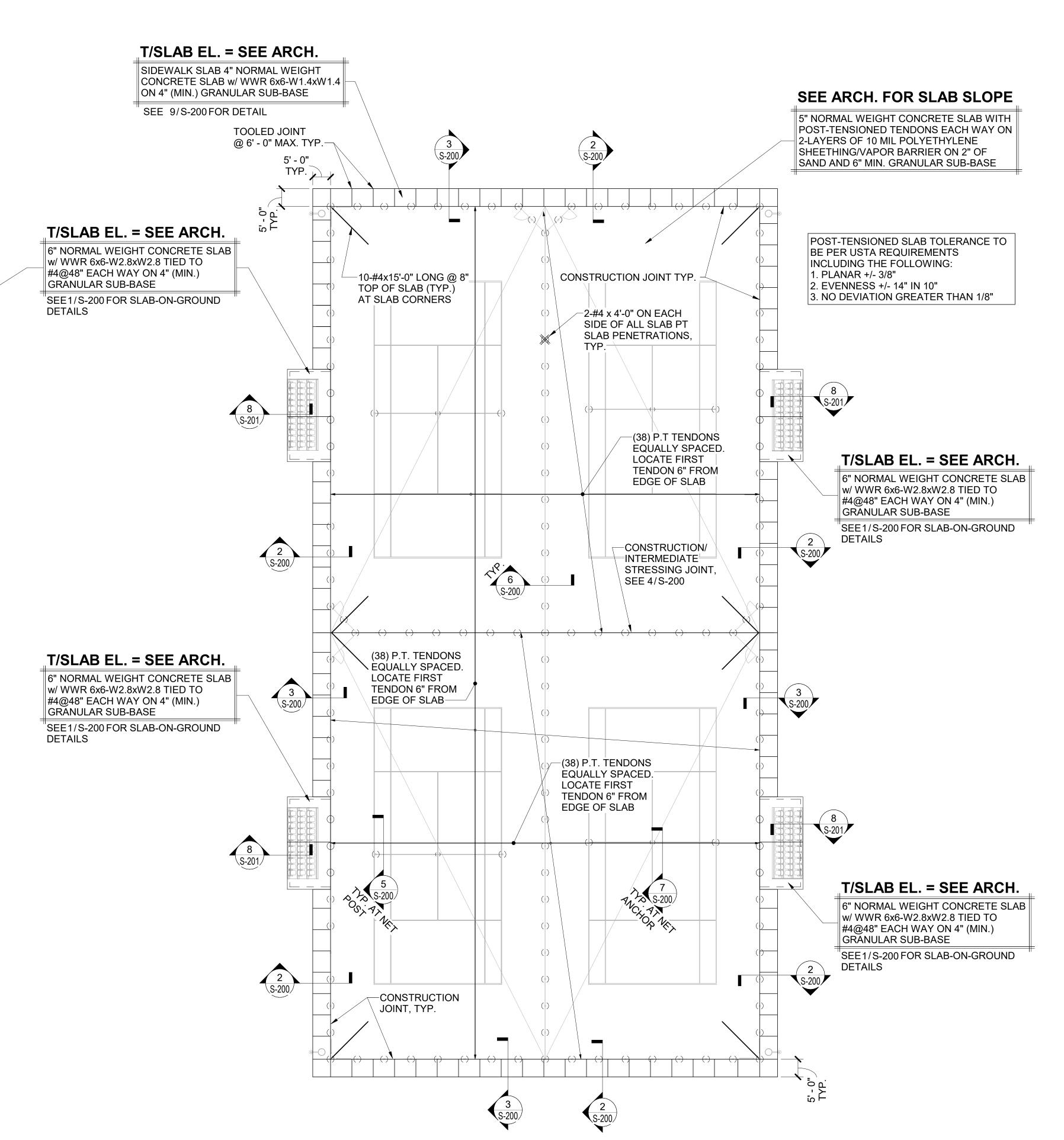
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Tennis Court Foundation Plans



2 Base Bid Foundation Plan

1/16" = 1'-0"



Base Bid & ADD ALT #1 Foundation Plan

1/16" = 1'-0"

SDG Project No. 2025-266.00

CONSTRUCTION JOINT DETAIL

VARIES

-WWR CENTERED IN SIDEWALK SLAB

4 4 1 44

2% MAX. CROSS SLOPE →

SIDEWALK TYPICAL SECTION

WWR CENTERED IN

SIDEWALK SLAB

SIDEWALK CONTROL JOINT DETAIL

-WWR CENTERED IN

SIDEWALK EXPANSION JOINT DETAL

SIDEWALK SLAB DETAILS

SECTION AT SLAB EDGE

SIDEWALK SLAB

SILICONE JOINT

SEALANT-

FINISHED GRADE,

SEE ARCH./CIVIL DWGS

1/2"x1/2" BEVELED NOTCH (MAX. SPACING OF 5' O/C)

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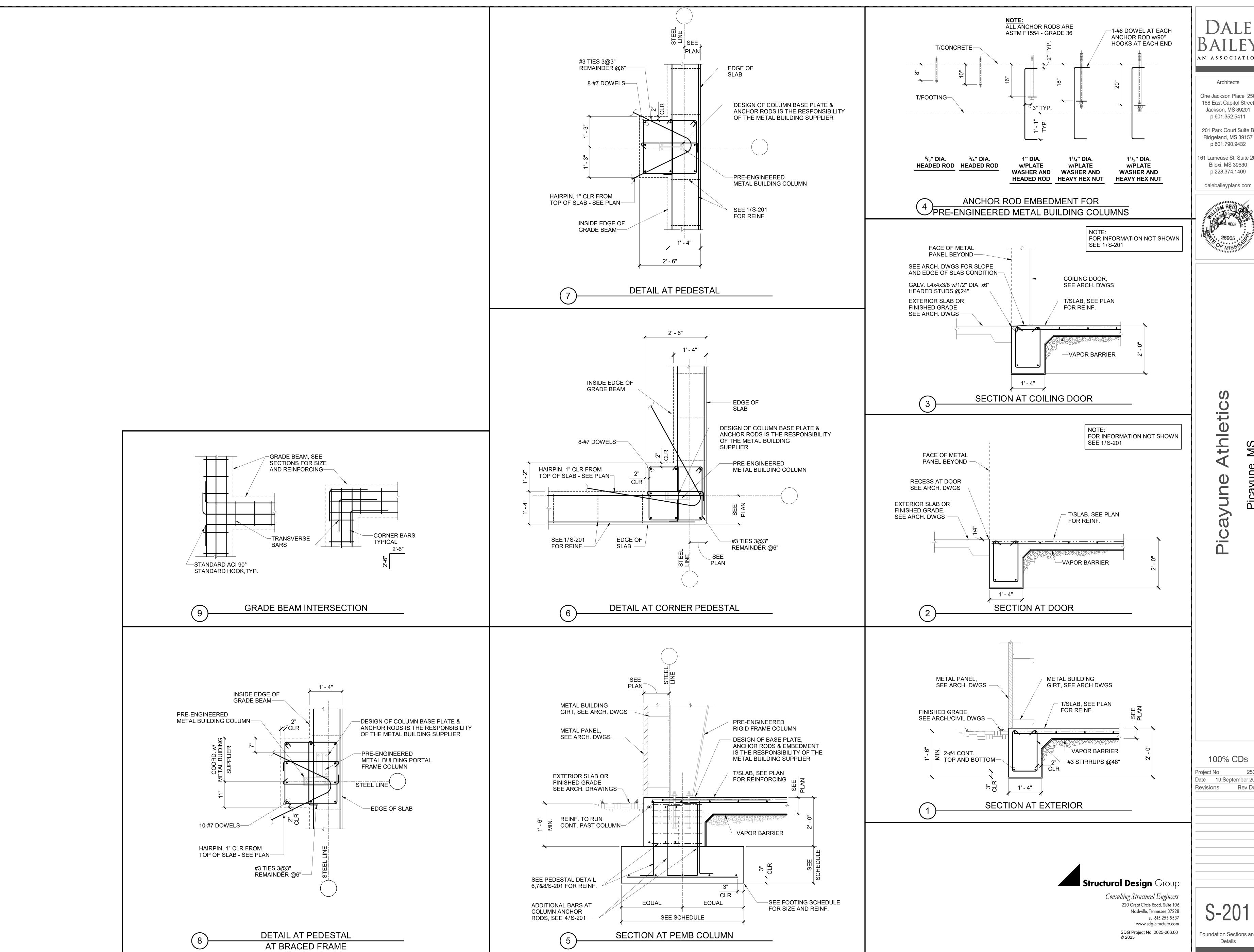
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Foundation Sections and Details



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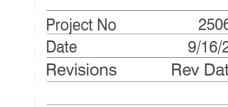
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Foundation Sections and Details



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Scope Breakdown

and assembled on-site.

6. Electrical panel per Electrical.

slab and fencing structures.

grading. 5. Slab per Structural.

Project B - Tennis Court

court surface.

Project A - Hitting Facility

1. Premanufactured metal building delivered

2. Concrete sidewalks from adjacent areas to building doors and around building.

1. Soil compaction and stabilization to support

2. 5" thick reinforced concrete slab for tennis

5. Installation of light poles around the court

6. 12-foot perimeter fencing: Chain-link or mesh fencing around the court.

8. Sloped slab to prevent water pooling.

direct it to nearby ditch.

Site Work Note for Both Projects:

7. Access gates for players and maintenance.

9. Pipe culvert beneath access path to channel

10. Graded inlet structure to collect runoff and

The building pad and surrounding area, as well as tennis court slab area, shall be excavated to

excavated an additional 3 feet below the bottom

technical recommendations. The over-excavated

engineered fill material placed in uniform lifts and

compacted to a minimum of 95% of the Modified

Proctor Maximum Dry Density (ASTM D1557), in

accordance with the recommendations of the

Site to be sodded for first 5' around building or

the required subgrade elevation and over-

of footing elevation, extending beyond the building footprint in all directions per Geo-

area shall be backfilled with approved

project geotechnical report.

slab, remaining to be seeded.

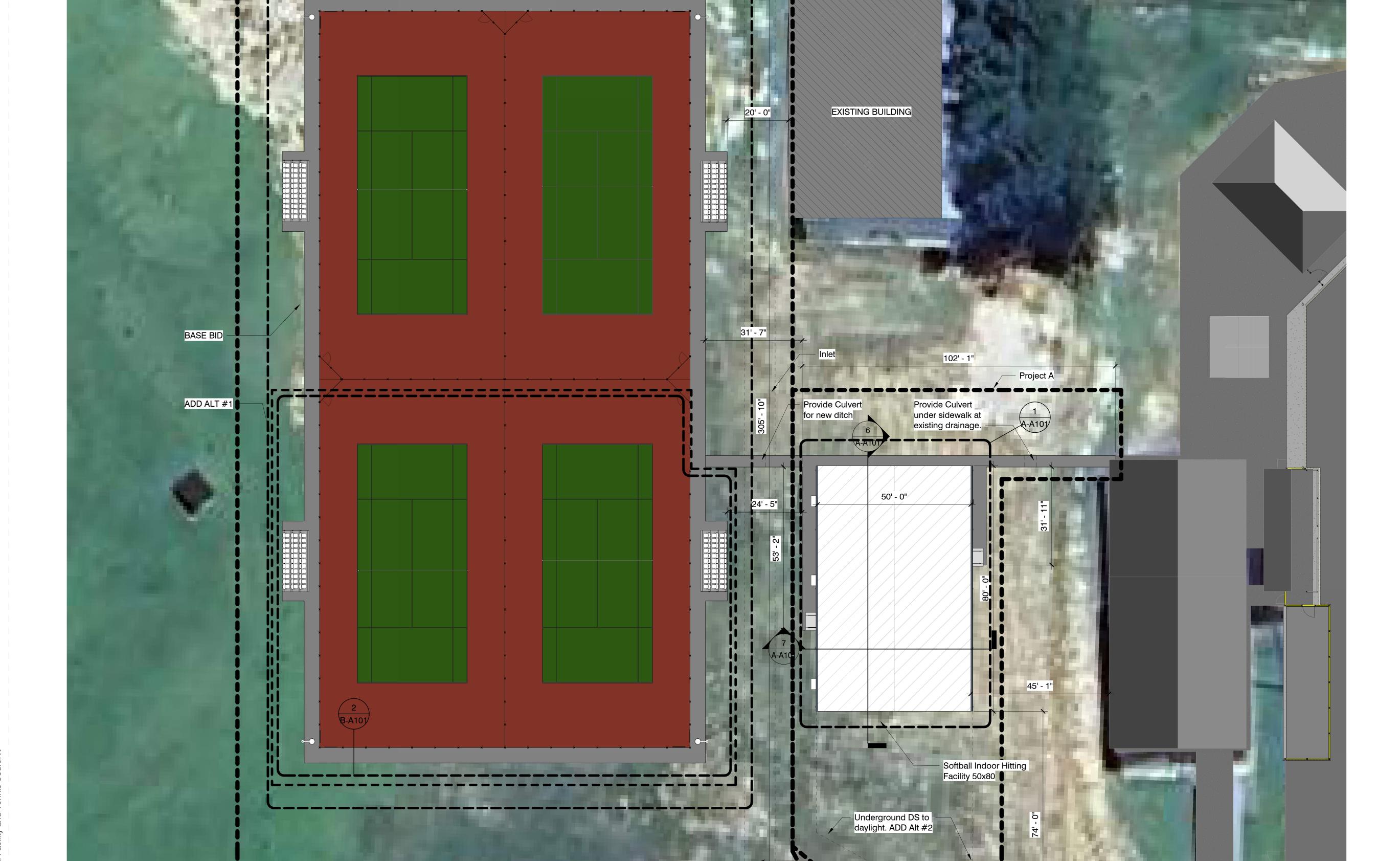
3. concrete slab area to support bleacher

4. Regulation tennis court lines painted.

3. ADA-compliant slopes and transitions. 4. Expansion joints and proper drainage







Provide new 10' ditch with 5'

Provide underground drainage

for downspout. sloped to drain to existing. Daylight in existing ditch.
ADD Alt #2

clearance either side to

building or slab.

Note: Contractors must coordinate site access at all times. It is also expected that contractors will coordinate any work that overlaps in order to deliver a successful project.

Slope ditch to drain south

Project B

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Tennis Specific Notes

fence is provided.

slope allowed.

6. Fence to be 12' tall.

regulation.

like or better.

hitting facility.

specification.

1. Courts to meet USTA regulations.

2. Installer to have 5 years experience in tennis

3. Provide black vinyl coated fence where new

4. Slope court 1" per 10', no greater than 1%

texture. Include all striping per USTA

7. Colors to be selected by owner; general

8. Include poles and netting per attached

9. Tennis lighting provided by MS power.

10. Provide post-tensioned slab per structural

11. Excavate additional 3' below, replace w/new infill and compact per slab requirements.

white, rest of court to be brown.

5. Provide elastomeric paint on court with slight

guidelines. Court to be green, lines to be

example. Example is basis of design, provide

Contractor to install poles, lights, and provide

whip. Contractor to run power to power box in

court installation. Provide proof of experience

General Site Notes

from the building

required.

3. All Sidewalks to be 5' wide.

1. All paving and grades at perimeter of building to have

4. Provide 8" PVC pipe through sidewalk where culvert is

2. All grassed areas shall be graded to drain to the

positve slope away from structures and towards drainage

appropriate inlet or slope to ensure positive drainage away

General Note: provide control joints in sidewalks every 5' with an expansion joint every 20'

- 3000 PSI MIN Concrete w Brushed Finish

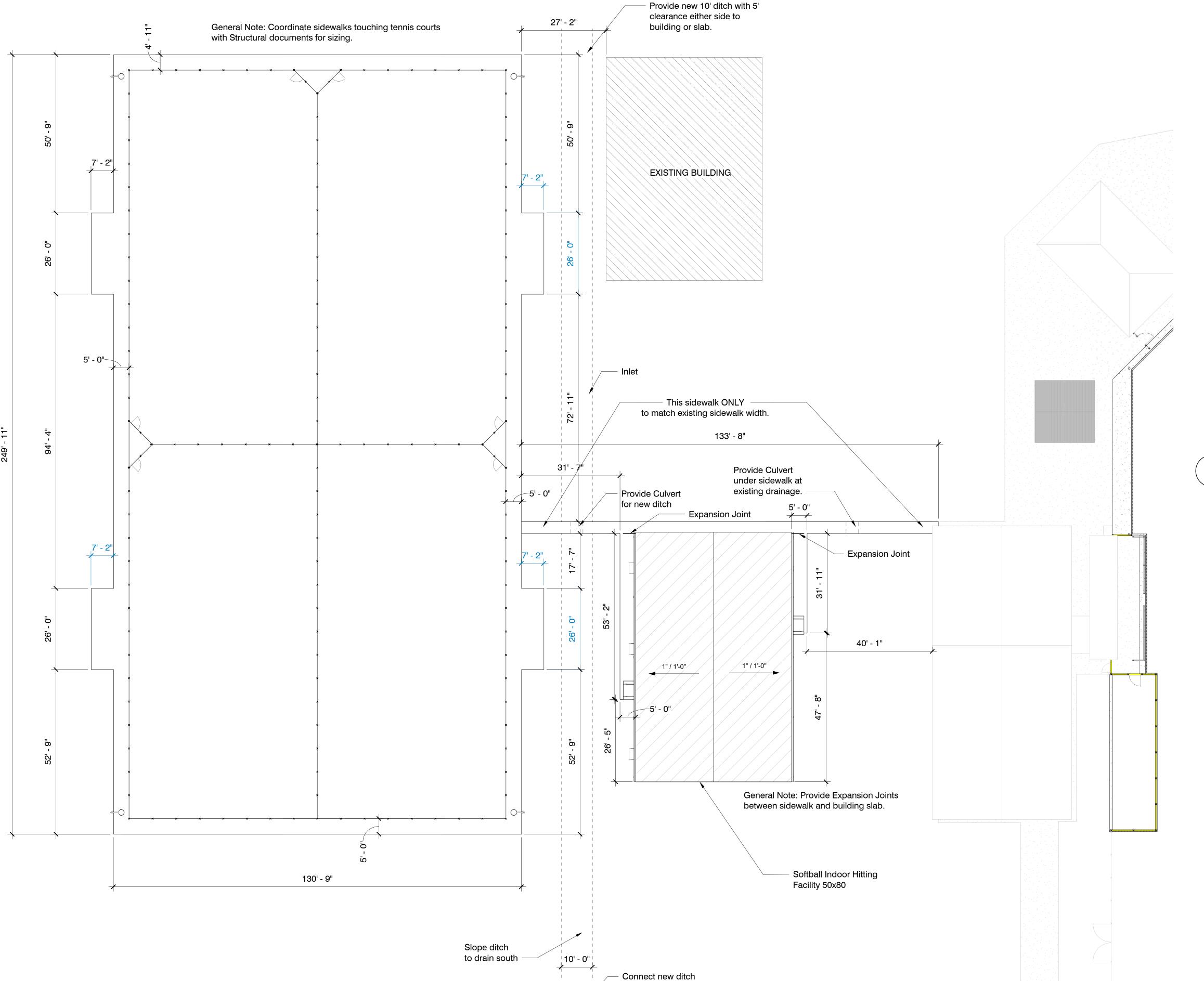
Include Control Joint @ 5' CC

5' - 0" Unless Noted Otherwise

Wire Remesh

Typical Sidewalk Detail

9/16/25 **Rev Date**

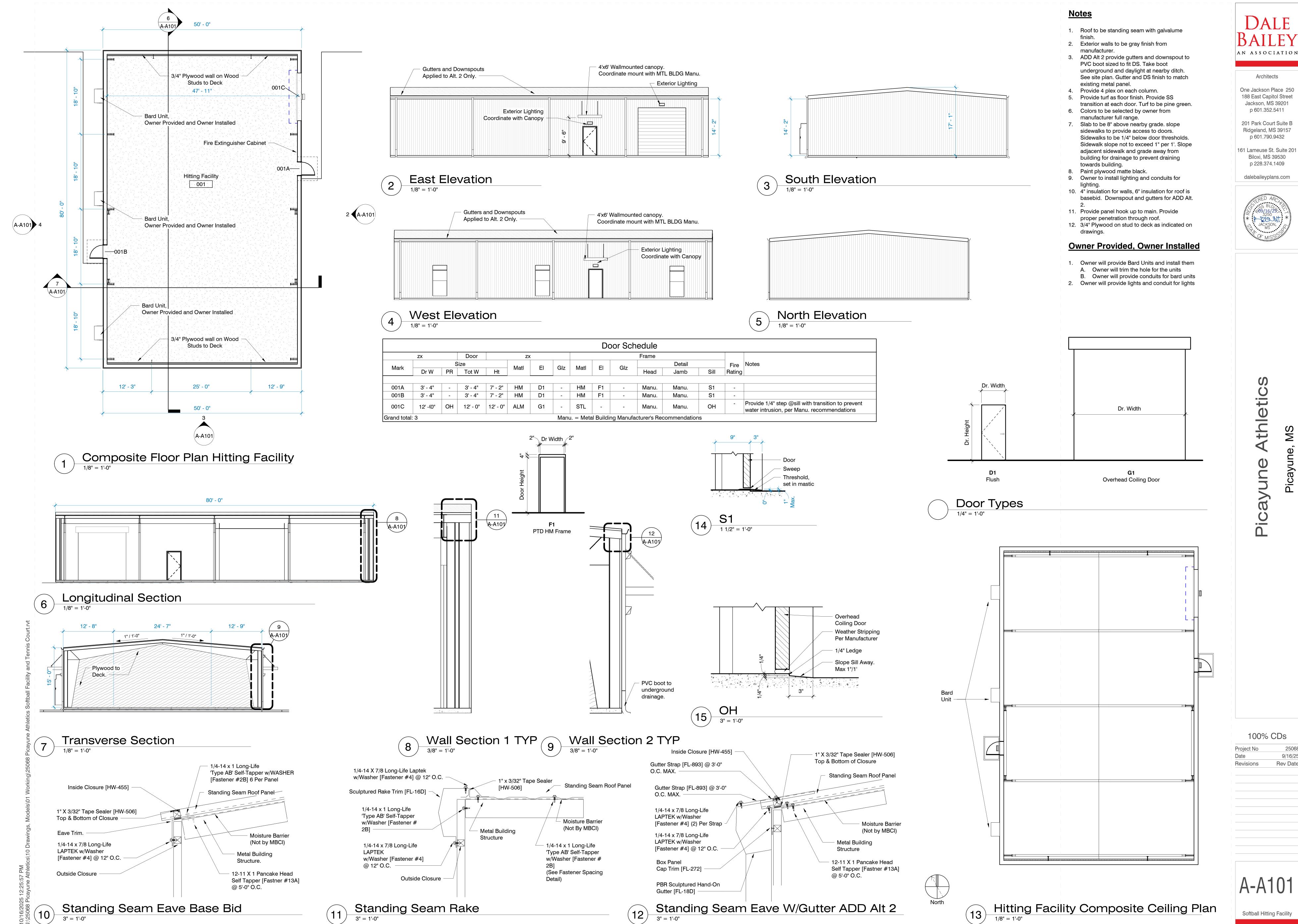


to existing ditch.

General Note: See Site Plan for delineation between project scopes.

Sidewalk Plan

1/16" = 1'-0"



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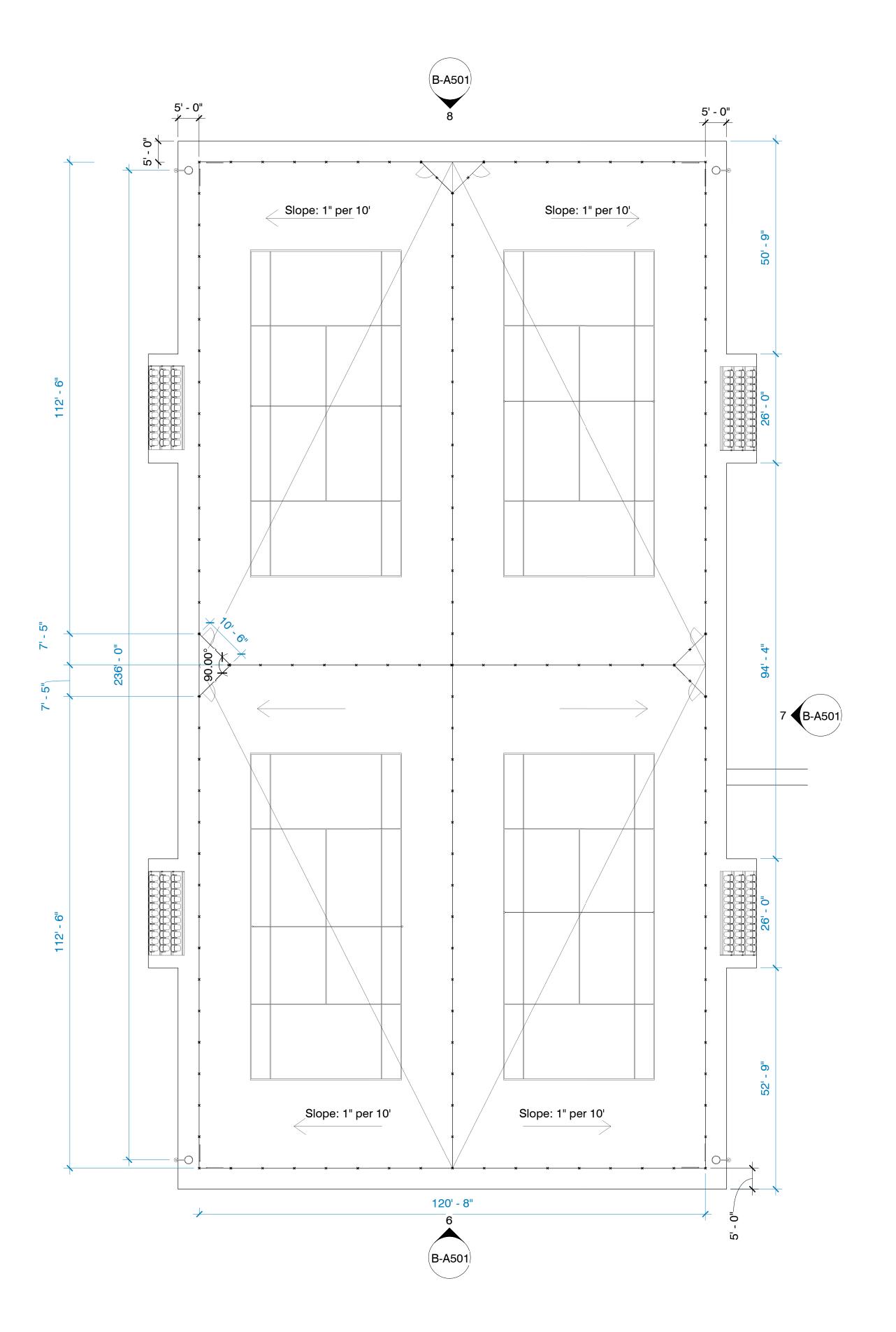
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9/16/25 Rev Date

A-A101

Softball Hitting Facility

2 Base Bid
1/16" = 1'-0"



1 Base Bid & ADD ALT #1

<u>Notes</u>

- 1. Courts to meet USTA regulations.
- Installer to have 5 years experience in tennis court installation. Provide proof of experience with Bid
- Provide black vinyl coated fence where new fence is provided.
- Slope court 1" per 10', no greater than 1% slope allowed.
- slope allowed.

 5. Provide elastomeric paint on court with slight texture. Include all striping per USTA
- regulation.
 6. Fence to be 12' tall.
- 7. Colors to be selected by owner; general guidelines. Court to be green, lines to be white, rest of court to be brown.
- 8. Include poles and netting per attached example. Example is basis of design, provide like or better.
- Tennis lighting provided by MS power.
 Contractor to install poles, lights, and provide whip. Contractor to run power to power box in hitting facility.
 A. Coordinate lighting number and location
- with local power company.
- B. Coordinate required underground conduit size, guage, and required length with power company.
- Provide post-tensioned slab per structural specification.
- 11. Provide empty conduit from Hitting Facility building to fence post inside of fence at each center court for others to provide power. Run conduit underground and follow electrical engineer's requirements for conduit and run.

Tennis Equipment Basis of Design

- Tennis Poles: (at each court)
 A. Douglas Premier XS Tennis Posts 2-7/8"
 OD, Stainless Steel Gears by National Sports Products.
- Tennis Nets: (at each court)
 A. PLTN 28 Platform Tennis Net, 3ft x 23ft by National Sports Products.
- Integrated Scoring System: (1 per court)
 A. Putterman Slide Tennis Scoreboard
 a. installed on tennis pole.
- B. Coordinate with Owner on desired location per court.

Owner Provided, Owner Installed

1. Bleachers

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Picayune Ath

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specification.

with local power company. B. Coordinate required underground

11. Provide empty conduit from Hitting Facility building to fence post inside of fence at each center court for others to provide power. Run conduit underground and follow electrical engineer's requirements for conduit and run.

Tennis Equipment Basis of Design

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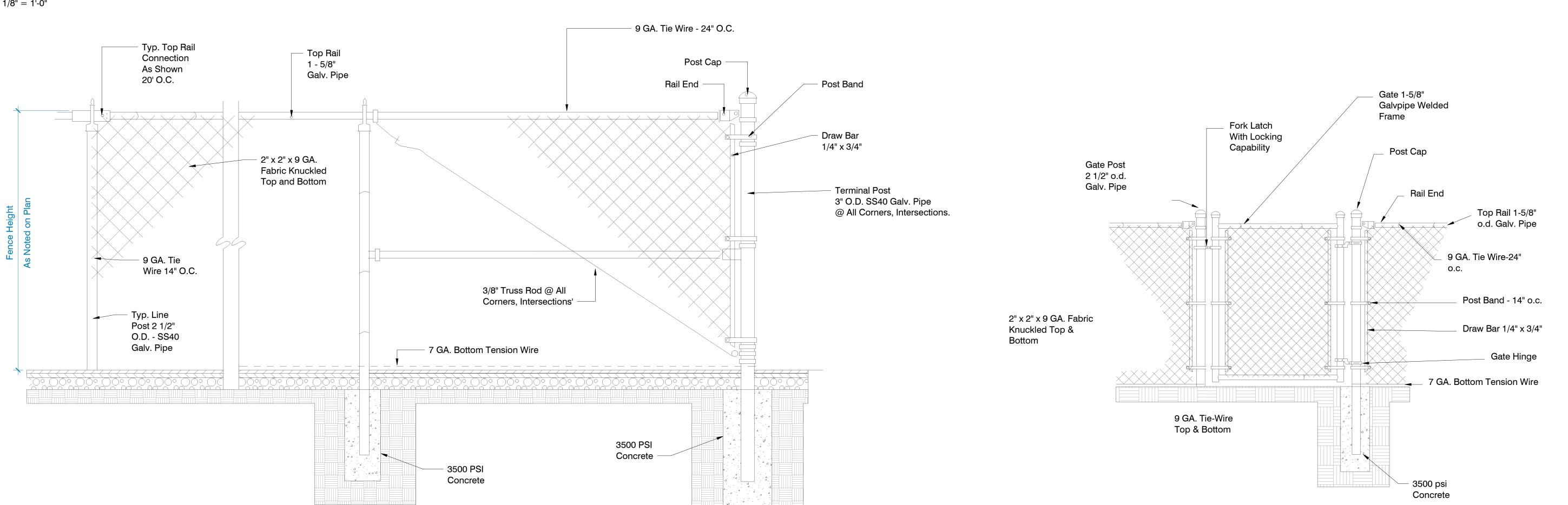
A. Coordinate lighting number and location



North Elevation

South Elevation

Elevation 2 - a



Tennis Court Gate Detail TYP

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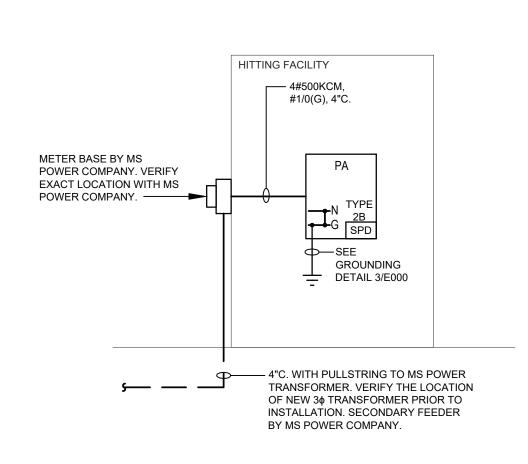
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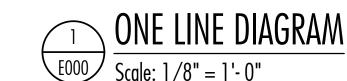
Revisions

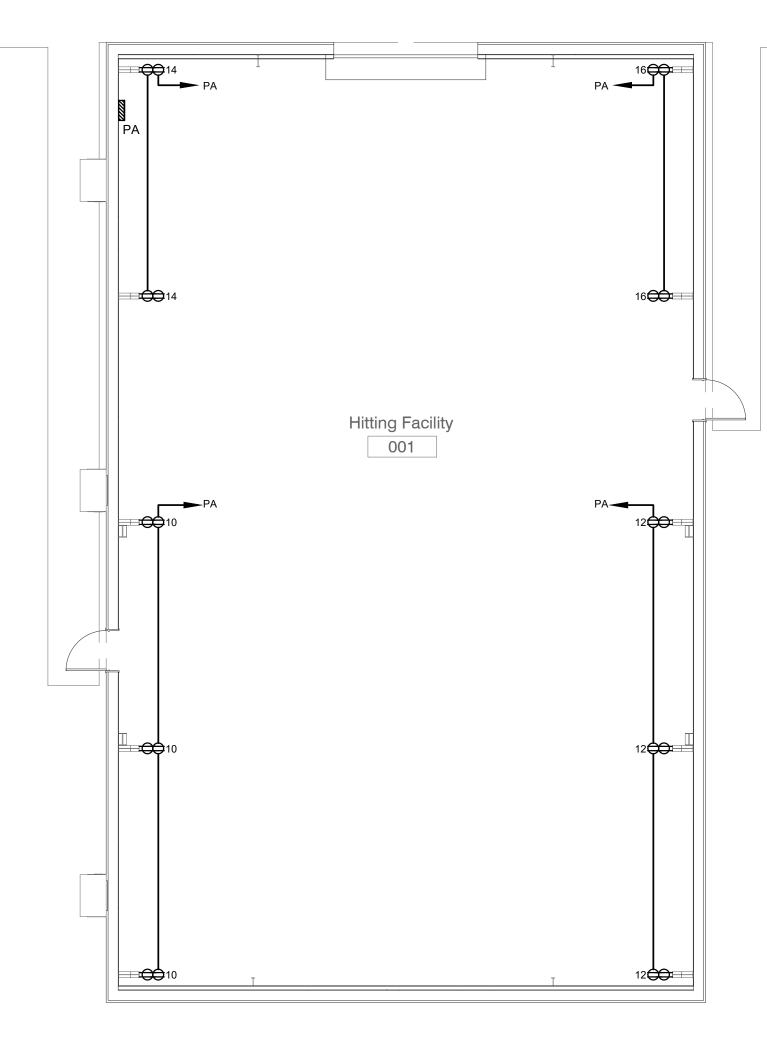
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Tennis Court Details

ELECTRICA	AL LE	GE	:ND		
GENERAL NOTES			CONDUIT AND WI	RING	
 ALL EQUIPMENT AND DEVICES ARE TO BE FLUSH MOUNTED UNLESS OTHERWISE NOTED. DEVICES NOTED AS "GFI" SHALL BE GROUND FAULT CIRCUIT INTERRUPTING DEVICES. DEVICES NOTED AS "WP" SHALL BE WEATHERPROOF WHILE—IN—USE. DEVICES NOTED AS "DL" SHALL BE RATED FOR DAMP LOCATION. DEVICES NOTED AS "NL" SHALL BE NIGHT LIGHTS. PROVIDE UNSWITCHED POWER TO FIXTURE. DEVICES NOTED AS "WG" SHALL BE PROVIDED AND INSTALLED WITH A WIRE GUARD. DEVICES NOTED AS "TR" SHALL BE TAMPER RESISTANT. PROVIDE UNSWITCHED POWER TO EMERGENCY BATTERY PACKS. "W/E" INDICATES DEVICE/DISCONNECT PROVIDED WITH THE EQUIPMENT BY OTHERS. 	CONDUCTORS IN CONDUIT CONCEATE OF CEILING. TIC MARKS INDICATE NUTTHE EQUIPMENT GROUNDING CONING BUT SHALL BE PROVIDED. SIZE GROUNDING CONDUCTOR AND THE THE ABSENCE OF TIC MARKS SIGN CONDUCTORS PLUS AN EQUIPMENT SHOULD BE PROVIDED. FOR EXAMINE LEFT SIGNIFY THAT THREE CONDUCTORS THAT SHALL BE THE CONDUCTORS THAT SHALL BE THE ABSENCE OF TEXT SIGNIFIES			UMBER OF CONDUCTORS. DUCTOR IS NOT SHOWN, THE EQUIPMENT E CONDUIT PER THE NEC. INIFIES THAT TWO IT GROUNDING CONDUCTOR AMPLE, THE MARKINGS TO ONDUCTORS PLUS AN OR SHOULD BE PROVIDED. ATES THE AWG SIZE OF E RUN IN THE CONDUIT.	
RECEPTACLES	-		ULD BE #12 AWG.	THAT THE CONDOCTORS	
→ 2 DUPLEX RECEPTACLE, NEMA 5-20R, MOUNTED 18" A.F.F. TO		EXP(CUITRY RUN IN STRAIGHT LINE DSED SURFACE—MOUNTED RAG CIFICATIONS).		
CENTERLINE OF BOX UNLESS NOTED OTHERWISE. ? DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, ONE COVER PLATE, MOUNTED 18" A.F.F. TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE.		FLOC THE BUT GRO	DUCTORS IN CONDUIT CONCE DR. TIC MARKS INDICATE NU EQUIPMENT GROUNDING CON SHALL BE PROVIDED. SIZE UNDING CONDUCTOR AND THE	MBER OF CONDUCTORS. DUCTOR IS NOT SHOWN, THE EQUIPMENT E CONDUIT PER THE NEC.	
GEAR]	CON	ABSENCE OF TIC MARKS SIG DUCTORS PLUS AN EQUIPMEN ULD BE PROVIDED. THE MAR	IT GROUNDING CONDUCTOR	
? PANELBOARD.		SIGN	IIFY THAT THREE CONDUCTORS UNDING CONDUCTOR SHOULD	S PLUS AN EQUIPMENT	
MISCELLANEOUS	LA-1	HOMERUN TO PANELBOARD. ARC DENOTES CONCEALED CIRCUITRY. TEXT DENOTES PANELBOARD NAME WITH CIRCUIT NUMBER. DEVICES HAVING CIRCUIT NUMBERS			
① CEILING MOUNTED JUNCTION BOX.			ATED BESIDE THEM MAY NOT BERS AT THE HOMERUN ARRO		
\odot wall mounted junction box. \sim flexible connection to equipment.	LA-1	HOM	TIAL HOMERUN TO PANELBOAF ERUNS THAT ARE ON THE SA PRIOR TO ENTERING THE PA	ME CIRCUIT IN A JUNCTION	
	VOLTA	GE	DROP CHART FOR 2	20A, 1Ø CIRCUITS	
	Voltag	е	Circuit Length	Conductor Size (AWG)	
	120		< 50'	#12	
	120		> 50'	#10	
	120		> 90'	#8	
	120		> 140'	#6	
	277		< 130'	#12	
	277		> 130'	#10	
	277		> 200'	#8	
	277		> 330'	#6	
	1) CIRCUIT	SIZES	HART NOTES: INDICATED ON THE DRAWING: REFER TO THIS CHART FOR	S ARE MINIMUM UPSIZING CONDUCTORS AS	









BOND TO GROUND BUSHING ON ALL FEEDER CONDUITS.	GROUNDING AND BONDING SHALL COMPLY WITH NEC ARTICLE 250.
BOND BETWEEN SPRINKLER PIPING AND BUILDING WITH #6 CONDUCTOR. USE PIPE GROUND CLAMP. BOND TO BUILDING STEEL. USE EXOTHERMIC WELD.	#1/0 GREEN THWN, 1" PVC C. BOND TO GAS PIPING WITHIN 10' AFTER IT ENTERS THE BUILDING. USE PIPE GROUND CLAMP. BOND TO WATER PIPING WITHIN 5' AFTER IT ENTERS INTO BUILDING. USE PIPE GROUND CLAMP.
	1/0 BARE COPPER EXOTHERMIC WELD (TYPICAL OF ALL)
REINFORG OR LONG	20' MIN. 20' MIN. 20' MIN. 20' MIN. 20' MIN. 20' MIN. 30' MIN. 20' MIN. 40' MIN. 20' MIN. 50' MIN. 20'
$\underbrace{3}_{5000}$ GI	ROUNDING DETAIL ale: NONE

2) DO NOT CONNECT CONDUCTORS LARGER THAN #10 DIRECTLY TO A RECEPTACLE OR A SWITCH. PROVIDE A JUNCTION BOX TO DOWNSIZE THE CONDUCTOR TO #12 AT THE DEVICE.

3) FOR CIRCUITS LONGER THAN THOSE LISTED ABOVE, CONSULT WITH THE ENGINEER FOR CONDUCTOR SIZES.

PANEL PA		1	HITTING FACILITY	LUG LOCATION: BOTTOM FEED						UL LISTED FOR SERVICE ENTRANCE				
		VOLT: BUS:	208Y/120V, 3Ø, 4W 400A	MAIN BUS: 400A MAIN BREAKER MOUNTING: SURFACE				KER		PANELBOARD SCCR R	ATING (A):	22,000)	
CIRCUIT	BRE	AKER	DESCRIPTION		F	PHASE L	OAD (KV	4)		DESCRIPTION	BRE	AKER	CIRCUIT	
NO.	AMPS	POLES	DESCRIPTION	А			В			DESCRIPTION	AMPS	POLES	NO.	
1	60	3	FUTURE BARD UNIT	5.4	5.6					FUTURE TENNIS COURT LIGHTS	80	2	2	
3	-	-	-	1		5.4	5.6	1		-	-	-	4	
5	-	-	-	1			1	5.4	5.6	FUTURE TENNIS COURT LIGHTS	80	2	6	
7	60	3	FUTURE BARD UNIT	5.4	5.6					-	-	-	8	
9	-	-	-			5.4	1.1	1		REC. HITTING FACILITY 001	20	1	10	
11	-	-	-	1			•	5.4	1.1	REC. HITTING FACILITY 001	20	1	12	
13	60	3	FUTURE BARD UNIT	5.4	0.7					REC. HITTING FACILITY 001	20	1	14	
15	-	-	-			5.4	0.7	1		REC. HITTING FACILITY 001	20	1	16	
17	-	-	-	1			•	5.4	0.0	SPARE	20	1	18	
19	20	1	FUTURE LIGHTS. INTERIOR / EXTERIOR WALL	1.5	0.0					SPARE	20	1	20	
21	20	1	SPARE			0.0	0.0			SPARE	20	1	22	
23	20	1	SPARE				•	0.0	0.0	SPARE	20	1	24	
25	20	1	SPARE	0.0	0.0					SPARE	20	1	26	
27	20	1	SPARE			0.0	0.0			SPARE	20	1	28	
29	20	1	SPARE	1				0.0	0.0	SPARE	20	1	30	
31	20	1	SPARE	0.0	0.0					SPARE	20	1	32	
33	20	1	SPARE	1		0.0	0.0	1		SPARE	20	1	34	
35	20	1	SPARE	1			•	0.0	0.0	SPARE	20	1	36	
37	20	1	SPARE	0.0	0.0					SPARE	20	1	38	
39	20	1	SPARE	1		0.0	0.0	1		SPARE	20	1	40	
41	20	1	SPARE	1			•	0.0	0.0	SPARE	20	1	42	
TOTAL				29	5	2:	3.5	22	2.8					

DALE BAILEY AN ASSOCIATIO

POWER SOURCE

305 HIGHWAY 51 RIDGELAND, MS 39157

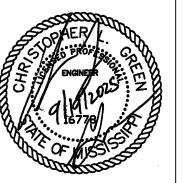
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Picayune, MS

Construction
Documents

Project No 25068

Date 19 September 2025

Revisions Rev Date

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ELECTRICAL PLANS AND DETAILS

1.1 GENERAL

A. All work shall conform to the latest editions of the National Electrical Code (NEC) [National Fire Protection Association (NFPA) 70], the Standard for Electrical Safety in the Workplace (NFPA 70E), the Life-Safety Code (NFPA 101), the International Building Code, the Americans with Disabilities Act, and all other applicable federal, state, and local codes and regulations.

ELECTRICAL GENERAL AND WORK IN EXISTING FACILITIES

B. All work shall be performed in strict compliance with NFPA 70E. Submission of bid shall stand as an agreement by the Contractor to indemnify and hold harmless the Engineer and Owner from all liability related to damage and/or injury to personnel and equipment during the installation of the

- The contract documents are schematic in nature and are intended to convey the intent of the electrical work to be performed on this project. Provide all material, labor, equipment, etc., necessary to provide complete and operable electrical systems.
- D. The General Conditions, Supplementary Conditions, General Requirements, Information to Bidders, and all other parts of this set of Contract Documents are hereby adopted and are applicable to the Division 26, 27, and 28 Contractor.
- 1.2 SCOPE OF WORK
- A. Visit site prior to bid. Devise a plan for installation of complete and operable electrical systems meeting the requirements and intent of the Contract Documents. Submission of Bid stands as evidence that the Contractor accepts the Contract Documents as sufficient and complete for the work to be performed. Notify the engineer at least two weeks prior to bid of any discrepancies between the Contract Documents and actual field conditions. No change orders will be granted due to existing conditions that could have been observed during a site visit.
- B. Provide temporary power and lighting during construction. Coordinate with the General Contractor for the exact requirements.
- Electrical switchgear and panelboard layouts are based on sizes of Square D equipment. Equipment manufactured by General Electric, Siemens, and Cutler Hammer are equally acceptable. However, the Electrical Contractor is responsible for selecting and furnishing gear that will fit in the spaces provided and shall be responsible for arranging the gear to meet the required code clearances. Regardless of the manufacturer, the Electrical Contractor shall provide a drawn-to-scale electrical layout with the equipment brochures for all rooms in which panelboards, motor control centers, switchboards, or switchgear are placed. The drawings shall include the work of all other trades including mechanical system piping, ductwork, sprinkler piping, etc. No conduits shall be installed until layouts have been approved.
- D. Locate junction boxes, pull boxes, disconnects, and other equipment requiring access in such a manner that they are accessible at the end of construction. Notify the Architect where it is impossible to plan conduit routing or equipment placement in such a manner, and provide the necessary access panels in the ceiling or wall as required. The access panel type and style shall be subject to the Architect's approval. Employ a painter to provide the appropriate coatings as directed by the Architect.
- E. Relocate, or recircuit, all electrical equipment, conduit, and circuitry conflicting with or obstructing work on this project. Where the electrical systems are owned by other entities, pay them to relocate, or recircuit, their facilities.
- F. Arrange for connection of service to all electrical systems by the appropriate utility company. Coordinate completely with all utility company requirements even if they are different than the contract documents. If utility company requirements are different from the contract documents, notify the engineer at least ten days prior to bid. Pay all utility company charges necessary for installation and connection of service. No change orders will be granted for utility company connection fees.
- G. Provide all necessary equipment, raceway, circuitry, fittings, lugs, terminations, labor, etc. and connect to all equipment and appliances requiring electrical connections furnished herein, by the Owner, or by other Contractors. Prior to ordering electrical equipment and roughing in for equipment furnished by the Owner or other Contractors, verify all connection types, connection locations, connection heights, voltages, number of phases, conductor sizes, disconnecting means, breaker sizes, etc. Furnish the proper electrical equipment for the equipment actually being supplied.
- 1.3 WORK IN EXISTING FACILITIES
- A. All work shall be scheduled and coordinated through the General Contractor with the Owner. Provide necessary costs for all work during both normal and premium work hours in bid.
- B. Provide continuous uninterrupted power to all existing facilities to remain during the entire construction process. Any required power outages must be scheduled and approved by the Owner in writing at least three days prior to the outage.

1.4 SCOPE OF WORK IN EXISTING FACILITIES

- A. Prior to beginning work, survey existing electrical systems. Document, in writing, signed by the Owner any portions of existing systems that are not operating properly before construction begins. Any electrical systems found inoperable at the end of the construction process that has not been so documented shall be repaired at the end of construction
- B. Remove electrical equipment in areas being demolished and electrical equipment feeding other equipment being demolished. Remove raceways and circuitry back to the panel of origination. Where raceways are installed in inaccessible areas, remove conductors back to the panel of origination. Where circuits are not being completely demolished, remove conductors back to a junction box or other connection point outside of the renovated area and recircuit existing electrical equipment that is to remain as required. Where necessary, completely refeed existing electrical equipment that is to remain. It is the intent of this specification that all existing equipment to remain be left completely operable at the end of the
- Survey existing panel board circuitry and provide new typewritten directories giving complete as-built circuitry information for all pane Iboards affected by the construction on this project.
- D. Where new circuit breakers are installed in existing equipment, the new circuit breakers shall be manufactured for installation in that equipment The Amperes Interrupting Current (AIC) Rating shall equal the AIC rating of the existing equipment. A breaker with a lower AIC rating may be used if the contractor provides calculations showing that the breaker rating is sufficient to handle the available fault current. Submit these calculations for approval prior to ordering the breaker. An AIC rating on an existing breaker in the panelboard or switchboard does not demonstrate sufficient proof that the available fault current is less than that breaker's AIC rating.

1.5 SUBMITTALS AND SHOP DRAWINGS

- A. Within 30 days after award of Contract and prior to beginning work, provide six bound copies of manufacturers' cut sheets containing information concerning each article of electrical equipment to be furnished on this project. These cut sheets shall contain sufficient information to prove compliance with the contract documents. Information addressing the requirements of the contract documents shall be highlighted. Each bound set shall bear the stamp of the Electrical Contractor as well as the General Contractor.
- B. Within 30 days after award of Contract and prior to beginning work, provide six sets of full size shop drawings showing exact equipment locations with all equipment drawn to scale. Show all raceways with their junction boxes and pull boxes. Show all connection types, locations, and heights to equipment. Provide mounting and support details for all raceways and equipment. Coordinate with all other trades to ensure that there are no conflicts between systems. Each set of shop drawings shall bear the stamp of the Electrical Contractor, the General Contractor, and all Project Sub-Contractors. Failure to submit these Shop Drawings will render the Electrical Contractor responsible for resolving all conflicts between trades at
- C. Submittals and Shop Drawings are reviewed to determine quality of materials. Approval of submittals and shop drawings does not relieve the Contractor of meeting the requirements and intent of the Contract Documents.
- D. Outlet, light fixture, and device locations are shown in their approximate locations on the drawings. Coordinate with Architectural drawings to get final locations. Mount all electrical outlets shown at counters such that the bottom of the box is two inches above the backsplash or six inches above a counter with no backsplash. The Owner reserves the right to relocate outlets, light fixtures, and devices a distance not to exceed twenty feet prior to the installation of outlet boxes.

PART 2 - PRODUCTS

his own expense.

- 2.1 All electrical equipment and materials shall be new. All equipment and materials shall be stored on the job site in weatherproof enclosures. Electronic equipment shall be stored in facilities where the temperature and humidity are controlled. In addition, comply completely with all manufacturers' requirements for storage and handling.
- 2.2 All equipment shall be UL listed for the application in which it is used and shall be labeled as evidence of its UL listing.
- 2.3 Each circuit breaker supplying a multiwire branch circuit shall be installed with a manufacturer supplied handle tie to simultaneously disconnect all ungrounded conductors. Each multi-wire branch circuit shall comply with NEC article 210.4.
- 2.4 Products shall be selected to maintain or improve the aesthetics of the facility. Gain approval of the Architect or Engineer prior to ordering or installing any electrical equipment or raceway.

PART 3 - EXECUTION

3.1 WORKMANSHIF

All work shall be performed with an emphasis on neatness. The Engineer, Architect, and Owner retain the right to reject work that is, in their judgment, unsatisfactory.

3.2 EXPERIENCE

- The Contractor shall have completed at least two jobs of similar size and scope within the past five years. The Engineer reserves the right to reject Contractors based on their inability to submit evidence of their experience, or based on experience with the Contractor on previous projects.
- 3.3 PERMITS

Obtain and pay for all permits required for work.

- 3.4 FIREPROOFING A. Fireproof all penetrations through firewalls with a fireproofing compound listed to maintain the rating of the wall through which the raceway
- B. The fire-stopping caulk shall be a one-part, intumescent, latex elastomer. The caulk shall be capable of expanding a minimum of 3 times at 1000°F. The material shall be thixotropic and be applicable to overhead, vertical and horizontal fire-stops. The caulk shall be listed by independent test agencies such as UL or FM and be tested to, and pass the criteria of, ASTM E 814 Fire Test, tested under positive pressure. It shall comply with the requirements of the NEC (NFPA-70), BOCA, ICBO, SBCCI and NFPA Code 101. Fire-stopping caulk shall be paintable, but shall be non-hardening. Fire-stopping caulk shall be 3M Fire barrier CP or approved equal.
- C. The fireproofing materials shall be installed by individuals certified to perform such work. Submit evidence of personnel certifications with electrical equipment brochures.
- D. Where cable trays are shown crossing firewalls, terminate the cable tray on each side of the wall and run the conductors through conduits installed in the wall. Fireproof around the conductors after installation.
- E. Provide mineral wool packing and all other materials recommended by the manufacturer for a complete installation.
- Provide all necessary equipment and flash all roof penetrations in such a manner to ensure that all penetrations are completely sealed and all roof warranties remain in effect. Where there are no roof warranties, the Electrical Contractor shall guarantee the electrical penetrations against leaking for a period of one year from project completion. Employ a professional roofing contractor to perform all flashing.

3.5 FLASHING

- A. Keep energized equipment covered during all phases of construction. Use enclosures, doors, covers, etc., to ensure that neither personnel nor machinery contact live electrical equipment.
- B. Replace electrical equipment that is damaged during construction.

3.7 DAMAGED FACILITIES

- A. Locate all existing site equipment and utilities prior to beginning construction. Repair all equipment and utilities damaged during construction, or pay for the repair of the equipment and utilities where required by the Owner of the damaged facilities.
- B. Coordinate the routing of all circuits and the locations of all devices with the Architect or Engineer and the Owner. Shop drawings shall describe completely the locations and elevations of all raceways, boxes, fittings, and equipment.

ELECTRICAL GENERAL AND WORK IN EXISTING FACILITIES (CONT.)

3.8 EXCAVATION AND BACKFILL

- A. Excavate in such a manner as to minimize erosion of the soil. Backfill trenches around conduits with fine sand that is free of rocks, clods, and debris. Fill sand a minimum of 4" over conduits. Backfill the rest of the trench in six inch increments, wetted, and tamped. Final compaction shall be a minimum of 95% of that of the adjacent earth. Resurface the grade with the same material as that excavated from the grade whether it be paving, concrete, sod, etc. Repair work shall be comparable to the quality of the original site prior to excavation.
- B. Provide a 3" wide plastic labeled marker tape 12" below grade over all electrical conduits buried underground. Tapes for power circuits shall have a warning such as "Caution: Buried Electrical Line Below." Labels on tapes for telephone, data, cable television, and other facilities shall adequately describe the line over which they are buried.
- C. Provide a #12 AWG wire in each buried conduit run labeled accordingly on each end.

3.9 IDENTIFICATION

- A. Label all switchboards, panel boards, motor starters, disconnects, and motor control centers furnished under Division 26, 27, and 28 and other divisions of this contract with engraved rigid plastic nameplates having letters at least 1/4 inch high. Nameplates shall be bolted to the enclosure. All labels shall indicate the voltage, number of phases, the AIC rating, and the panelboard and circuit number from which the device is fed.
- B. All circuit breakers in Switchboards, Motor Control Centers, Square D I-Line, and similar pane Iboards shall be labeled with plastic nameplates (as described in Part A) providing the name of the load served and the ampacity and number of poles of the breaker.
- C. All Square D NQOD, NF and similar panel boards shall have typewritten circuit directories.
- D. Label all conductors at all junction boxes, pull boxes, and terminations with typewritten adhesive markers indicating the panel board or switchboard name and circuit number of the conductor. Labels shall be Brady Datatab or approved equal.
- E. Label all junction boxes and pull boxes with stenciled painted letters containing the name of the panel board and circuit numbers of the circuits contained within. Use black paint for normal circuits, red paint for emergency circuits, and orange paint for fire alarm circuits. The Contractor may select other colors for junction boxes and pull boxes for auxiliary systems.
- F. Label all conduits in the most likely direction of access and view every 50' and on both ends of each bend with stenciled painted letters containing the name of the panel board and circuit numbers of the circuits contained within. Use black paint for normal circuits, red paint for emergency circuits, and orange paint for fire alarm circuits. The Contractor may select other colors for conduits for auxiliary systems. 3.10 AS-BUILT DRAWINGS
- Maintain one set of drawings during construction for as-built markings. Mark these drawings in red to indicate field changes. Provide these drawings to the Engineer at the end of the construction process. Where required under the General Conditions, Special Conditions, or other portions of this contract, provide revised computer drawn as-built drawings to the Engineer at the end of construction.
- A. Test all systems, or pay testing agencies as required, for compliance with the requirements of all regulatory agencies.
- B. Test the electrical power service ground using a Biddle Three-Terminal Ground Resistance Tester, or approved equal. Grounds shall meet the requirements of the NEC, or of Specification 26 05 26, whichever is more stringent. Test grounds only when the earth is dry. Provide additional ground rods as necessary to achieve the required results.
- C. Prior to making final equipment connections, test all service, feeder, and branch circuit conductors for continuity, phase-to-phase faults, and phase-to-ground faults using a Megger BM100 or approved equal test instrument generating 500 Vdc. Insulation resistance shall be a minimum of 500,000 Ohms between any conductor and ground and 1,000,000 Ohms between any two conductors
- D. Test other systems as required in their respective specifications.
- E. Provide three bound copies of all test results to the Engineer at the end of the construction process. No Recommendation of Substantial Completion will be granted until all testing reports have been submitted.

3.12 WARRANTY

3.11 TESTING

Provide the Owner a written guarantee to repair, or replace, all faulty equipment and systems for a period of one year from date of Substantial Completion. During this one-year period, a representative of the Contractor shall be on the site actively working on the repairs within 24 hours of the Owner's telephone call. During this period of time, the Owner shall not be charged for any repair work or expenses related with the repair work unless the Contractor can prove that the Owner has damaged the equipment or system. END OF SECTION

SECTION 26-05-19 LOW-VOLTAGE POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

Provide all circuitry, terminations, splices, connectors, lugs, and other equipment necessary for connection of all equipment requiring electrical

- PART 2 PRODUCTS 2.1 All electrical conductors shall be soft-drawn annealed copper having 98% conductivity and an insulation rating of 600V.
- 2.2 Conductors shall be UL listed for installation in the raceway in which they are to be installed.
- 2.3 Conductors shall be rated 90 degrees C for use in residential, commercial, industrial, and institutional facilities, and shall be listed as 105 degrees C appliance wire. Conductors shall be listed under UL 83, UL 1063, and UL 758. If XLP or EPR insulation is used, conductors shall be listed under UL 44 and NEMA WC7.
- 2.4 Conductors used for branch circuits, feeders, auxiliary systems, and controls run in dry locations shall have PVC insulation and a Nylon outer jacket. They shall be THHN/THWN or XHHW-2.
- 2.5 Conductors used for branch circuits, feeders, auxiliary systems, and controls run in wet locations shall have XLP or EPR insulation and be type
- 2.6 Conductors used for operating room isolation panels and associated branch circuits shall be copper stranded conductor having a cross-linked polyethylene insulation or equivalent with a dielectric constant of 3.5 or less. Wire-pulling compounds that increase the dielectric constant shall not be used on the secondary conductors of isolation panels. The isolated circuit conductors shall be identified as follows:
- For 125 volt, 15 & 20 ampere receptacles: The orange conductor shall be connected to the terminal on the receptacle that is identified in accordance with NEC 200.10(B) for
- connection to the grounded circuit conductor. 2.7 Conductors used for services shall be type SE for aerial services or type USE-2 for underground services.
- 2.8 Sizes #10 and #12 shall be solid conductors except where used for controls. All controls conductors shall be stranded.
- 2.9 Use minimum #14 AWG conductors for controls and auxiliary circuits. Use larger conductors as required to compensate for voltage drops exceeding 3% of the system voltage.
- 2.10 Conductors shall be furnished in the colors described below unless local ordinances require different colors. Conductors #8 and smaller shall be furnished with colored insulation; conductors larger than #8 shall be taped with the appropriately colored tape for a length of at least 2" at each panelboard, junction box, pull box, load, or other exposed location. Ground conductors shall be taped green for their entire exposed length.

SYSTEM	208Y/120V,	120/240V,	480Y/277V,
VOLTAGE	3 PHASE, 4 WIRE	3 PHASE, 4 WIRE	3 PHASE, 4 WIR
PHASE A	BLACK	BLACK	BROWN
PHASE B	RED	ORANGE	ORANGE
PHASE C	BLUE	BLUE	YELLOW
NEUTRAL	WHITE	WHITE	WHITE
GROUND	GREEN	GREEN	GREEN
	VOLTAGE PHASE A PHASE B PHASE C NEUTRAL	VOLTAGE 3 PHASE, 4 WIRE PHASE A BLACK PHASE B RED PHASE C BLUE NEUTRAL WHITE	VOLTAGE 3 PHASE, 4 WIRE 3 PHASE, 4 WIRE PHASE A BLACK BLACK PHASE B RED ORANGE PHASE C BLUE BLUE NEUTRAL WHITE WHITE

2.11 Conductor sizing chart:

Isolated Circuit #1 - Orange

Isolated Circuit #2 - Brown

- A. Circuit sizes indicated on the drawings are minimum NEC requirements. Refer to this chart for upsizing conductors based on circuit length. B. Do not connect conductors larger than #10 directly to a receptacle or a switch. Provide a junction box to downsize the conductor to #12 at the
- C. For circuits longer than those listed above, consult with the Engineer for conductor sizes.

	VOLTAGE DROP CHART FOR 20amp SINGLE			
	POLE CIRCUITS			
	VOLTAGE	CIRCUIT	CONDUCTOR	
		LENGTH	SIZE (AWG)	
	120	< 90'	#12	
	120	> 90'	#10	
	120	> 145'	#8	
	120	> 230'	#6	
	277	< 200'	#12	
	277	> 200'	#10	
	277	> 325'	#8	
	277	> 525'	#6	

PART 3 - EXECUTION

- 3.1 Install conductors carefully using a minimum of two tradesmen one feeding the conductors into the conduit, and the other pulling the conductors into the conduit
- 3.2 Join stranded conductors with appropriate mechanical or compression lugs. Wire nuts may be used for solid conductors only.
- 3.3 Splices shall only be made in approved enclosures. Splices shall not be pulled inside conduits.
- 3.4 Provide cable supports and strain relief connectors as required by the NEC.
- 3.5 Furnish junction boxes, pull boxes, handholes, manholes, etc. as required to ensure that the maximum number of bends allowed by the NEC are not exceeded and to ensure that the cables are not damaged during installation. END OF SECTION

SECTION 26-05-26 GROUNDING AND BONDING

PART 1 - GENERAL

1.1 GENERAL

Ground all equipment, systems, structures, etc., per the latest edition of the National Electrical Code (NEC).

PART 2 - PRODUCTS

2.1 Use mechanical bolted connections in dry locations that are accessible.

- 2.2 Use exothermic welds in wet locations and locations that will be inaccessible at the end of construction.
- 2.3 Ground rods shall be UL listed 3/4" x 10' copper-clad steel ground rods with a minimum copper cladding thickness of 10 mils. **PART 3 - EXECUTION**
- 3.1 Ground rods shall be installed with their tops no less than 6" below grade.
- 3.2 Bond ground connections to metal raceways at each end of the conduit run. Provide grounding bushings where required by the NEC. Where cable trays are used, bond the ground conductor to each section and fitting of the tray.
- 3.3 Provide all circuits with an equipment grounding conductor sized per the NEC, or as shown on the drawings. Circuitry shown on drawings does not include the required equipment grounding conductor. Where multiple circuits are run with a common neutral, only one equipment grounding conductor is needed. The equipment grounding conductor shall be furnished with green insulation for conductors #8 AWG and smaller; where larger than #8, the equipment grounding conductor shall be taped green for its entire exposed length.
- 3.4 The grounding electrode conductor(s) shall be bare or shall be colored green for its entire exposed length.
- 3.5 Individual ground conductors shall be installed in PVC conduit sized per the NEC.
- 3.6 Provide receptacles, luminaires, and other devices with a green conductor that bonds the receptacle grounding screw or pigtail, the outlet box grounding screw, and the equipment grounding conductor together.
- conductor shall bond these different panel boards together. 3.8 Telephone, cable television, and other auxiliary systems shall be bonded to the electrical building service ground using a conductor no smaller than #6 AWG.

3.7 In health care facilities, where two or more different panel boards serve the same patient-care area, an 8 AWG insulated continuous copper

END OF SECTION

SECTION 26-05-33

RACEWAYS OUTLET BOXES AND JUNCTION BOXES

PART 1 - GENERAL

1.1 GENERAL

A. All electrical systems circuitry shall be contained in raceways unless expressly listed in the specification for that system. B. Outlet Boxes and Junction Boxes

- 1. Furnish and install all outlet boxes and junction boxes in accordance with this specification and the requirements of the NEC.
- 2. Provide outlet boxes for all switches, receptacles, luminaires, telephone jacks, cable jacks, and other devices furnished in this Contract. Provide all necessary hardware including, but not limited to, additional structural support, support brackets, screws, bolts, fixture studs, etc.
- 3. Outlet boxes and junction boxes in dry locations shall be galvanized stamped steel boxes sized per the latest edition of the National Electrical Code (NEC), but no less than 4" x 4" x 2 1/8" deep. The thickness of the steel shall be in compliance with the requirements of the
- NEC. Provide stamped steel covers for all junction boxes manufactured to fit the particular box on which it is used.
- 4. Outlet boxes used in concrete and masonry walls and ceilings shall be of the concrete type manufactured for such applications. 5. Outlet boxes and junction boxes in wet locations shall be of cast metal construction with gasketed waterproof covers. All conduit
- 6. Wall outlet boxes shall be 4" x 4" x 2 1/8", or larger as required, with plaster rings provided for final flush installation. Plaster rings shall have single-gang openings unless the equipment mounted inside requires two-gang installation.
- 7. Floor boxes in slabs on grade shall be deep rectangular, cast iron, fully adjustable boxes with brass rings. Covers shall be made of brass and shall provide flip top access to the power or data jacks inside. Screw-on covers are not acceptable unless a flip-top cover is unavailable for the device installed in the floor box. Provide the box sized as required for the number of devices shown installed. Boxes shall be as
- follows, or approved equal: a. Single-Gang Boxes: Hubbell B2436
- b. Single-Gang Cover Plates: Hubbell S3825 c. Double-Gang Boxes: Hubbell B4233
- d. Double-Gang Cover Plates: Two Hubbell S3825 Cover Plates e. Triple-Gang Boxes: Hubbell B4333 f. Triple-Gang Cover Plates: Three Hubbell S3825 Cover Plates
- 8. In slabs above grade, use cast iron, semi-adjustable shallow boxes as follows, or approved equal:
- a. Single-Gang Boxes: Hubbell B2414 b. Two-Gang Boxes: Hubbell B4214 c. Three-Gang Boxes: Hubbell B4314
- 9. Receptacles installed in floor boxes shall be as described in Specification 26 09 23, Switches and Receptacles. Data, Telephone, or Combination Data and Telephone Outlets shall consist of Category 5 rated RJ45 jacks mounted in a Hubbell DJOI strap for use under a S3825 flip top cover plate.
- 10. In existing above grade, use poke thru boxes as follows, or equal:
- a. Hubbell System One
- 11. Size all boxes per the requirements of the latest NEC. 1.2 SCOPE OF WORK

A. Raceways

1. Provide all raceways, fittings, couplings, anchors, supports, hangers, etc. for complete raceway systems. 2. Size all conduit per the requirements of the NEC: however, minimum conduit size shall be 3/4" nominal trade size. 3. Use Schedule 40 polyvinyl chloride (PVC) conduit for circuits run underground and in slabs on grade level. Provide PVC-coated galvanized

rigid steel elbows and PVC-coated galvanized rigid steel conduit for all vertical runs extending to a point at least 6" above grade. Galvanized

- Rigid steel conduit coated with two complete coats of asphaltum or bituminous paint may be used in lieu of PVC-coated galvanized rigid
- 4. Use Galvanized Rigid Steel (GRS) conduit for all applications where circuits are run above ground exposed to the weather. 5. Use Intermediate Metal Conduit (IMC) for all branch circuits, feeders, and auxiliary circuits requiring conduit 1 1/4" nominal trade size or
- larger in dry locations. 6. Use Electrical Metallic Tubing (EMT) for all branch circuits and feeders less than 1 ¼" nominal trade size in dry locations and in slabs above

PART 2 - PRODUCTS

- 2.1 Products for Raceways A. PVC conduits, fittings, couplings, adapters, and accessories shall be UL listed and approved for use with 90 degree Celsius conductors. The UL label shall be affixed to each ten foot length of conduit and each fitting. Conduits shall comply with NEMA Specification TC-2 and UL 651.
- Fittings shall comply with NEMA TC-3 and UL 514b. B. PVC-coated conduits, fittings, couplings, adapters, and accessories shall be UL listed with PVC as the primary corrosion protection. They shall be hot dipped galvanized rigid steel conduit with threads electro-galvanized after cutting. The conduit shall meet UL 6. The fittings shall meet UL 514B. The PVC coating shall be uniformly applied to the interior and exterior of all conduit and fittings. The coating shall be nominally 2 mils thick. The PVC coating shall extend one pipe diameter or two inches, whichever is less, at every male fitting except unions to fit over the joining female connection. Couplings shall contain a series of longitudinal ribs, 40 mils in thickness, to protect the coating from damage by tools during installation. PVC-coated conduits shall be ETL Verified PVC-001. Fittings shall be manufactured to the same standard. PVC-coated conduit shall be Robroy Plastibond or approved equal.
- C. GRS conduits, fittings, couplings, adapters, and accessories shall be UL listed. They shall be hot-dipped galvanized steel. They shall meet the safety standards of UL 6, and shall be manufactured to ANSI C80.1. Threads shall be hot galvanized after cutting.
- D. IMC conduits, fittings, couplings, adapters, and accessories shall be UL listed. They shall be hot-galvanized steel. Fittings, couplings, adapters, and accessories shall be the same as those for GRS conduit described above. IMC shall meet UL 1242 and ANSI C80.6. Threads shall be hot galvanized after cutting. The inside of the conduit shall be finished with a corrosion-resistant coating.

E. EMT conduits, fittings, couplings, adapters, and accessories shall be UL listed. They shall be hot galvanized steel and shall be produced in

F. Conduit fittings used with EMT conduits may be set screw indenter type or compression type. All metallic fittings for IMC and Rigid conduit shall

accordance with UL 797 and ANSI C80.3. The inside shall be finished with a corrosion-resistant lubricating coating.

- G.Flexible metallic conduit shall be constructed of galvanized steel and shall be UL listed as compliant with UL 1 and UL 1479. H. Liquidtight flexible conduit shall be constructed of galvanized steel and shall be coated with a PVC jacket to resist liquids, dirt, grease, and oils. All fittings shall be designed, constructed, and installed to maintain the integrity of the liquidtight connections. Liquidtight flexible conduit sha comply with UL 360.
- 2.2 Acceptable Manufacturers for Outlet Boxes and Junction Boxes.
- A. Outlet boxes and junction boxes shall be manufactured by Raco, Steel City, Crouse Hinds, or Appleton.

SECTION 26-05-33

RACEWAYS OUTLET BOXES AND JUNCTION BOXES

A. Conduits run underground shall be buried no less than 24" deep. Services and primary conduits feeding transformers shall be buried no less

B. Do not install conduits in or below ground floor slabs, except for service conduits, site lighting, and where specifically indicated on

D. PVC-coated conduits may be field-bent provided that manufacturer-approved tools are used. Individuals installing PVC-coated conduits shall be

E. Support and install all conduits per the latest edition of the National Electrical Code. Support groups of conduits with electrical strut supported

by threaded rods anchored to the building structure. Supports shall be designed to hold no less than twice the weight of the conduit and

I. Cap all conduits during installation. Pull a mandrel sized for that conduit and a cleaning brush through each conduit before installation of any

K. Provide final connections to equipment with flexible metallic conduit. In wet or damp locations, use liquidtight flexible conduit. Flexible conduit

O. Where conduits are run through the ceiling and are required to make connections to equipment within the room that is not located near a wall, support the conduit from the structural ceiling and provide a flange bolted to the floor. Install a tee conduit fitting in the vertical run of conduit,

Q. Provide EMT conduit sleeves where conduits pass through walls, floors, or footings sized a minimum of two nominal trade sizes larger than the

A. All devices shall be flush mounted unless specific written permission is obtained from the Engineer for a particular device in a particular

B. Install outlet boxes in walls, and provide plaster rings such that wall finish contractor's finish is flush against the edge of the plaster ring.

C. Use round or square ceiling outlet boxes as required for the device being installed. The ceiling shall be finished flush against the box; the

D. Provide junction boxes, pull boxes, and conduit fittings where required by the NEC to limit the number of bends in the raceway, and where

E. Junction boxes and pull boxes installed in the ground outside shall be Quazite Composolite or approved equal. Mount the boxes over 24" of

connections shall be watertight. In addition, all conductor splices shall be made watertight using an appropriate splice kit as manufactured by

washed gravel fill. It splices are to be made inside the boxes, the boxes shall be of the type furnished with a bottom, and all condu

SECTION 26-09-23

SWITCHES AND RECEPTACLES

A. Switches and receptacles shall be specification grade. They shall have ampacity and voltage ratings suitable for the application in which they are

D. Light switches shall be 20 Ampere, 120-277V back-wired and side-wired toggle switches. They shall be rated up to 2 HP at 240V. Each switch

G. Weatherproof while-in-use cover plates shall be Teddico #34017-7 or approved equal. Cover plates shall be single gang, lockable, and

I. All 15 and 20 ampere, 125 and 250V non-locking receptacles installed in wet or damp locations shall be listed as the weather-resistant type.

3.1 Flush mount all devices unless specific written permission is obtained from the Engineer for a particular device in a particular location.

Workmanship will not be accepted where the hole in the wall shows behind the cover plate, or the wall finish is uneven or unpainted at the edge

fixture shall completely cover the box and mount tight against the ceiling. Coordinate the requirements of the fixture prior to installing the box.

L. Terminate conduits entering boxes with a locknut inside the box and a locknut outside the box. Provide protective bushings on all conduit

M.Use grounding bushings on all feeder conduits, all underground conduits, and where required by the National Electrical Code.

and make the connection to the equipment with a piece of flexible conduit extending from the tee conduit fitting to the equipment.

P. Provide expansion fittings where conduits cross building expansion joints. Provide grounding jumpers between the conduits.

C. Do not install conduits within 6" of the deck where a screw down type roof system is utilized.

conductors to be supported plus an additional 250 pounds at midspan.

F. All conduits shall be grouped and run parallel to each other and to building walls.

threads. Use watertight hubs where conduit terminations are exposed to moisture.

G. All conduits shall be assembled according to the manufacturer's instructions.

H. Conduits run underground shall be assembled to be watertight.

N. Conduits shall be run no closer than 12" to hot water pipes.

required to prevent damage to conductors due to long runs.

B. Consult architect or engineer for device colors prior to ordering devices.

E. Duplex NEMA 5-20R receptacles shall be Hubbell HBL 5362A or approved equal.

F. Duplex GFI NEMA 5-20R receptacles shall be Hubbell HBL GF5362A or approved equal.

conduit that must pass through the sleeve.

3.2 Execution for Outlet Boxes and Junction Boxes.

3M, or an approved equal.

2.1 ACCEPTABLE MANUFACTURERS

constructed of heavy duty die cast metal.

3.3 Install receptacles with the ground slot up.

END OF SECTION

PART 1 - GENERAL

PART 2 - PRODUCTS

2.2 GENERAL

PART 3 - EXECUTION

END OF SECTION

trained for installation by factory-certified trainers. Provide evidence of training with equipment brochures.

J. Conduits that are obviously damaged and field bends that are obviously out of round shall be replaced.

R. Equip all empty conduits with a pullwire or string capable of withstanding 200 pounds of pulling tension.

Furnish and install all switches and receptacles in accordance with this specification and the requirements of the NEC.

Switches and receptacles shall be manufactured by Hubbell, Cooper Wiring Devices, Leviton, or Pass & Seymour.

C. Provide brushed stainless steel cover plates for all devices. A single cover plate shall cover all devices in one box.

shall be equipped with a grounding screw. Switches shall be Hubbell CSB series or approved equal.

H. All 125V, 15 and 20 ampere receptacles installed in dwelling units shall be of the tamper-resistant type.

J. Devices furnished in this Contract, but not listed above, shall be of the same standard of quality as those items listed.

3.2 Install all devices vertically unless the drawings specifically state that the particular device should be mounted horizontally.

PART 3 - EXECUTION

3.1 Conduit Execution

POWER SOURCE 305 Highway 51 RIDGELAND, MS 39157

VOICE (601) 605-4820

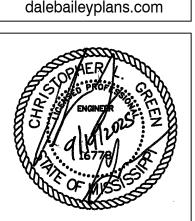
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Construction Documents

19 September 2025

Revisions

ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL

1.1 Furnish and install all panelboards, complete with their circuit breakers, phase buses, neutral buses, ground buses, structural supports, and other equipment necessary for complete systems.

1.2 The equipment vendor shall perform all calculations necessary and provide complete Arc Flash Labels as required by the National Electrical Cod (NEC) and the drawings. Note: The drawings typically require more detail than required by the NEC.

PART 2 - PRODUCTS

2.1 GENERAL

A. Panelboards shall be designed, manufactured, and tested to be in compliance with NEMA PB 1, UL 50, UL 67, UL 489, NFPA 70, and the ASTM.

B. Circuit breakers shall be designed, manufactured, and tested to be in compliance with NEMA AB 1, UL 489, and Federal Specification

C. Panelboards shall be UL listed for service entrance where used for that purpose.

D. Panelboard ampere interrupting current (AIC) ratings shall equal the lowest rated device in the panelboard. Provide panelboards with the AIC ratings shown on the Contract Drawings. Buses shall be braced to withstand the AIC rating shown on the drawings. Series ratings shall only be used where shown on the panelboard schedules.

E. All panelboards shall be furnished with dead-front, door-in-door construction.

F. Lug locations shall be determined during the creation of shop drawings for proper arrangement with the raceway system.

G. Buses shall be constructed of 98% conductivity copper or equivalently rated aluminum.

H. Panelboard enclosures shall be NEMA 1 when they are to be mounted indoors, and NEMA 3R when they are to be mounted outdoors. Provide special enclosures where shown on the Contract Drawings.

2.2 ACCEPTABLE MANUFACTURERS Panelboards shall be manufactured by Siemens, Square D, General Electric, or Cutler Hammer.

2.3 PANELBOARD CLASSES

A. Power distribution panelboards shall be available with mains and branch devices up to 1200 amperes. AIC ratings shall be available up to 200,000 Amperes. Power distribution panelboards shall be equipped with a nameplate containing the appropriate system voltage, number of wires, and number of phases for the system on which they are installed.

B. In 480Vac and less applications where a main breaker not exceeding 600 Amperes is required, the AIC rating does not exceed 65,000 Amperes, and no branch breakers exceed 125Amperes, Square D NF and equivalent panelboards may be used.

C. In 480Vac and less applications where a main breaker not exceeding 225 Amperes is required, the AIC rating does not exceed 14,000 Amperes, and no branch breakers exceed 100Amperes, Square D NEHB and equivalent panelboards may be used.

D. In 240Vac and less applications where a main breaker not exceeding 400 Amperes or main lugs not exceeding 600 Amperes is required, the

AIC rating does not exceed 22,000 Amperes, and no branch breakers exceed 125 Amperes, Square D NQOD and equivalent panelboards may be

2.4 CIRCUIT BREAKERS

A. Circuit breakers shall be thermal magnetic, molded-case with quick-make, quick-break contact action. They shall have thermal and magnetic tripping elements on each pole. Breakers with multiple poles shall have common tripping of all poles. Circuit breaker ampere ratings shall be stamped on the handle. Interrupting ratings of the circuit breakers shall be equivalent to the specified AIC rating of the panelboard. Breakers handles shall reside in a position between "ON" and "OFF" after a trip condition. Breakers shall be rated HACR when used for heating, air-conditioning, and refrigeration; HID when used with High Intensity Discharge fixtures; and shall be rated SWD when used for switching duty.

B. Circuit breaker sizes for motor loads are based on Square D recommendations for use of their breakers at the motor horsepowers listed on the mechanical drawings. If equipment is used other than Square D, adjust breaker sizes per the manufacturer's recommendations.

C. Each circuit breaker supplying a multiwire branch circuit shall be installed with a manufacturer supplied handle tie to simultaneously disconnect all ungrounded conductors. Each multiwire branch circuit shall comply with NEC article 210.4.

D. Circuit breakers with slash ratings, such as 120/240V or 480Y/277V, shall be used in solidly grounded systems where the nominal voltage of any conductor to ground does not exceed the lower of the two values of the breaker's voltage rating and the nominal voltage between any two conductors does not exceed the higher value of the circuit breaker's voltage rating.

E. Circuit breakers with straight voltage ratings, such as 240V or 480V, shall be used in systems other than solidly grounded systems (Corner-Grounded Delta, Ungrounded, Impedance Grounded, etc.) where the nominal voltage between any two conductors does not exceed the circuit breaker's voltage rating. A two-pole circuit breaker shall not be used to protect a three-phase, Corner-Grounded Delta system unless the circuit breaker is marked 1Φ-3Φ.

PART 3 - EXECUTION

3.1 Install panelboards in complete compliance with all manufacturers' installation instructions.

3.2 Install conductors neatly in panelboards. Group and tie-wrap circuits that share a common neutral.

3.3 Number circuits exactly as shown on the contract drawings. END OF SECTION

SECTION 26-28-00

DISCONNECTS AND SEPARATELY-MOUNTED CIRCUIT BREAKERS

PART 1 - GENERAL

Furnish and install all disconnects and separately mounted circuit breakers as shown on the drawings, specified herein, and required by the NEC. **PART 2 - PRODUCTS**

2.1 GENERAL

A. Disconnects shall be of the heavy-duty type, and shall be UL listed for service entrance use. They shall meet or exceed the requirements of NEMA Standard KS1. Provide fuses sized to appropriately protect the load served. Equipment manufacturer's recommendations shall take precedence over the Contract Drawings.

B. Fuses shall be dual element, time-delay, Class J fuses. They shall be Bussman Low-Peak or approved equal.

C. Circuit breakers shall be thermal magnetic, molded-case with quick-make, quick-break contact action. They shall have thermal and magnetic tripping elements on each pole. Breakers with multiple poles shall have common tripping of all poles. Circuit breaker ampere ratings shall be stamped on the handle. Interrupting ratings of the circuit breakers shall be equivalent to the specified AIC rating of the panelboard. Breakers handles shall reside in a position between "ON" and "OFF" after a trip condition. Breakers shall be rated HACR when used for heating, air-conditioning, and refrigeration; HID when used with High Intensity Discharge fixtures; and shall be rated SWD when used for switching duty.

D. Circuit breaker sizes for motor loads are based on Square D recommendations for use of their breakers at the motor horsepowers listed on the mechanical drawings. If equipment is used other than Square D, adjust breaker sizes per the manufacturer's recommendations.

E. Circuit breakers with slash ratings, such as 120/240V or 480Y/277V, shall be used in solidly grounded systems where the nominal voltage of any conductor to ground does not exceed the lower of the two values of the breaker's voltage rating and the nominal voltage between any two conductors does not exceed the higher value of the circuit breaker's voltage rating.

F. Circuit breakers with straight voltage ratings, such as 240V or 480V, shall be used in systems other than solidly grounded systems (Corner-Grounded Delta, Ungrounded, Impedance Grounded, etc.) where the nominal voltage between any two conductors does not exceed the circuit breaker's voltage rating. A two-pole circuit breaker shall not be used to protect a three-phase, Corner-Grounded Delta system unless the circuit breaker is marked 1Φ-3Φ.

G. Disconnect and individually-mounted circuit breaker ampere interrupting current (AIC) ratings shall equal the rating of the panelboard from which they are fed unless otherwise noted.

H. Buses shall be constructed of 98% conductivity copper or equivalently rated aluminum.

I. Switches shall be horsepower rated where used to serve motors.

J. Enclosures shall be NEMA 1 when they are to be mounted indoors, NEMA 3R when they are to be mounted outdoors, and NEMA 4X where they are subject to washdown. Provide special enclosures where shown on the Contract Drawings. 2.2 ACCEPTABLE MANUFACTURERS

Disconnects and separately-mounted circuit breakers shall be manufactured by Siemens, Square D, General Electric, or Cutler Hammer. **PART 3 - EXECUTION**

3.1 Install disconnects and individually-mounted circuit breakers in complete compliance with all manufacturers' installation instructions. Where necessary, provide structural supports and bracing for installation.

3.2 Disconnects are to be surface-mounted.

3.3 Individually-mounted circuit breakers are to be flush-mounted unless otherwise shown.

END OF SECTION

SECTION 26-43-00

SURGE PROTECTIVE DEVICE (SPD)

PART 1 - GENERAL

1.1 SCOPE

A. The Contractor shall furnish and install the Surge Protective Device (SPD) equipment having the electrical characteristics, ratings, and modifications as specified herein and as shown on the contract drawings. To maximize performance and reliability and to obtain the lowest possible let-through voltages, the ac surge protection shall be integrated into electrical distribution equipment such as switchgear, switchboards, panelboards, busway (integrated within bus plug), or motor control centers. Refer to related sections for surge requirements in:

1.2 RELATED SECTIONS

A. Section 26 24 00 - Panelboards

1.3 REFERENCES

A. SPD units and all components shall be designed, manufactured, and tested in accordance with the latest applicable UL standard (ANSI/UL 1449

1.4 SUBMITTALS - For Review/Approval

A. The following information shall be submitted to the Engineer:

Provide verification that the SPD complies with the required ANSI/UL 1449 3rd Edition listing by Underwriters Laboratories (UL) or other Nationally Recognized Testing Laboratory (NRTL). Compliance may be in the form of a file number that can be verified on UL's website or on any other NRTL's website, as long as the website contains the following information at a minimum; model number, SPD Type, system voltage, phases, modes of protection, Voltage Protection Rating (VPR), and Nominal Discharge Current (In). 2. For sidemount mounting applications (SPD mounted external to electrical assembly), electrical/mechanical drawings showing unit dimensions, weights, installation instruction details, and wiring configuration.

B. Where applicable the following additional information shall be submitted to the engineer:

Descriptive bulletins Product sheets

1.5 Submittals - for Construction

A. The following information shall be submitted for record purposes:

1. Final as-built drawings and information for items listed in Section 1.04 and shall incorporate all changes made during the manufacturing

1.6 QUALIFICATIONS

A. The manufacturer of the assembly shall be the manufacturer of the major components within the assembly.

 For the equipment specified herein, the manufacturer shall be ISO 9001 or 9002 certified. The manufacturer of this equipment shall have produced similar electrical equipment for a minimum period of five (5) years. When requested by the Engineer, an acceptable list of installations with similar equipment shall be provided demonstrating compliance with this requirement.

D. The SPD shall be compliant with the Restriction of Hazardous Substances (RoHS) Directive 2002/95/EC.

1.7 DELIVERY, STORAGE AND HANDLING

A. Equipment shall be handled and stored in accordance with manufacturer's instructions. One (1) copy of manufacturer's instructions shall be included with the equipment at time of shipment.

1.8 OPERATION AND MAINTENANCE MANUALS

A. Operation and maintenance manuals shall be provided with each SPD shipped.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Eaton Cutler-Hammer

The listing of specific manufacturers above does not imply acceptance of their products that do not meet the specified ratings, features, and functions. manufactured by others not named will be considered only if pre-approved by the Engineer ten (10) days prior to bid date.

2.2 VOLTAGE SURGE SUPPRESSION - GENERAL

B. Electrical Requirements

Unit Operating Voltage - Refer to drawings for operating voltage and unit configuration.

Maximum Continuous Operating Voltage (MCOV) - The MCOV shall not be less than 125% of the nominal system operating voltage. The suppression system shall incorporate thermally protected metal-oxide varistors (MOVs) as the core surge suppression component for the service entrance and all other distribution levels. The system shall not utilize silicon avalanche diodes, selenium cells, air gaps, or other components that may crowbar the system voltage leading to system upset or create any environmental hazards. 4. Protection Modes - The SPD must protect all modes of the electrical system being utilized. The required protection modes are indicated by bullets in the following table:

	PROTECTION MODES			
CONFIGURATION	L-N	L-G	L-L	N-G
WYE	•	•	•	•
DELTA	NA	•	•	NA
SINGLE SPLIT PHASE	•	•	•	•
HIGH LEG DELTA	•	•	•	•

5. Nominal Discharge Current (In) - All SPDs applied to the distribution system shall have a 20kA In rating regardless of their SPD Type (includes Types 1 and 2) or operating voltage. SPDs having an In less than 20kA shall be rejected.

6. ANSI/UL 1449 3rd Edition Voltage Protection Rating (VPR) - The maximum ANSI/UL 1449 3rd Edition VPR for the device shall not exceed

MODES	208Y/120V	480Y/277V	600Y/347V
L-N; L-G; N-G	700	1200	1500
L-L	1200	2000	3000

C. SPD Design

the following:

Maintenance Free Design - The SPD shall be maintenance free and shall not require any user intervention throughout its life. SPDs containing items such as replaceable modules, replaceable fuses, or replaceable batteries shall not be accepted. SPDs requiring any maintenance of any sort such as periodic tightening of connections shall not be accepted. SPDs requiring user intervention to test the unit via a diagnostic test kit or similar device shall not be accepted.

maximum performance. The surge suppression platform must provide equal impedance paths to each matched MOV. Designs incorporating replaceable SPD modules shall not be accepted. 3. Electrical Noise Filter - Each unit shall include a high-performance EMI/RFI noise rejection filter. Noise attenuation for electric line noise shall be up to 50 dB from 10 kHz to 100 MHz using the MIL-STD-220A insertion loss test method. Products unable able to meet this

specification shall not be accepted. Internal Connections - No plug-in component modules or printed circuit boards shall be used as surge current conductors. All internal components shall be soldered, hardwired with connections utilizing low impedance conductors.

2. Balanced Suppression Platform - The surge current shall be equally distributed to all MOV components to ensure equal stressing and

Monitoring Diagnostics - Each SPD shall provide the following integral monitoring options: a. Protection Status Indicators - Each unit shall have a green / red solid-state indicator light that reports the status of the protection on each

For wye configured units, the indicator lights must report the status of all protection elements and circuitry in the L-N and L-G modes. Wye configured units shall also contain an additional green / red solid-state indicator light that reports the status of the protection elements and circuitry in the N-G mode. SPDs that indicate only the status of the L-N and L-G modes shall not be accepted.

ii. For delta configured units, the indicator lights must report the status of all protection elements and circuitry in the L-G and L-L modes. iii. The absence of a green light and the presence of a red light shall indicate that damage has occurred on the respective phase or mode. All protection status indicators must indicate the actual status of the protection on each phase or mode. If power is removed from any one phase, the indicator lights must continue to indicate the status of the protection on all other phases and protection modes.

Diagnostics packages that simply indicate whether power is present on a particular phase shall not be accepted. b. Remote Status Monitor - The SPD must include Form C dry contacts (one NO and one NC) for remote annunciation of its status. Both the NO and NC contacts shall change state under any fault condition. c. Audible Alarm and Silence Button - The SPD shall contain an audible alarm that will be activated under any fault condition. There shall also be an audible alarm silence button used to silence the audible alarm after it has been activated. d. Surge Counter - The SPD shall be equipped with an LCD display that indicates to the user how many surges have occurred at the

location. The surge counter shall trigger each time a surge event with a peak current magnitude of a minimum of 50 ± 20A occurs. A reset pushbutton shall also be standard, allowing the surge counter to be zeroed. The reset button shall contain a mechanism to

prevent accidental resetting of the counter via a single, short-duration button press. In order to prevent accidental resetting, the surge counter reset button shall be depressed for a minimum of 2 seconds in order to clear the surge count total. . The ongoing surge count shall be stored in non-volatile memory. If power to the SPD is completely interrupted, the ongoing count indicated on the surge counter's display prior to the interruption shall be stored in non-volatile memory and displayed after power is

restored. The surge counter's memory shall not require a backup battery in order to achieve this functionality.

SECTION 26-43-00 SURGE PROTECTIVE DEVICE (SPD) (CONT.)

6. Overcurrent Protection

a. The unit shall contain thermally protected MOVs. These thermally protected MOVs shall have a thermal protection element packaged together with the MOV in order to achieve overcurrent protection of the MOV. The thermal protection element shall disconnect the MOV(s) from the system in a fail-safe manner should a condition occur that would cause them to enter a thermal runaway condition.

7. Fully Integrated Component Design - All of the SPD's components and diagnostics shall be contained within one discrete assembly. SPDs or individual SPD modules that must be ganged together in order to achieve higher surge current ratings or other functionality shall

8. Safety Requirements

a. The SPD shall minimize potential arc flash hazards by containing no user serviceable / replaceable parts and shall be maintenance free. SPDs containing items such as replaceable modules, replaceable fuses, or replaceable batteries shall not be accepted. SPDs requiring any maintenance of any sort such as periodic tightening of connections shall not be accepted. SPDs requiring user intervention to test the unit via a diagnostic test kit or similar device shall not be accepted.

b. SPDs designed to interface with the electrical assembly via conductors shall require no user contact with the inside of the unit. Such units shall have any required conductors be factory installed.

c. Sidemount SPDs shall be factory sealed in order to prevent access to the inside of the unit. Sidemount SPDs shall have factory installed phase, neutral, ground and remote status contact conductors factory installed and shall have a pigtail of conductors protruding outside of the enclosure for field installation.

2.3 SYSTEM APPLICATION

A. The SPD applications covered under this section include distribution and branch panel locations, busway, motor control centers (MCC), switchgear, and switchboard assemblies. All SPDs shall be tested and demonstrate suitability for application within ANSI/IEEE C62.41 Category C, B, and A environments.

B. Surge Current Capacity - The minimum surge current capacity the device is capable of withstanding shall be as shown in the following table:

MINIMUM SURGE CURRENT CAPACITY BASED ON ANSI / IEEE C62.41 LOCATION CATERGORY			
CATEGORY	APPLICATION	PER PHASE	PER MODE
С	SERVICE ENTRANCE LOCATIONS (SWITCHBOARDS, SWITCHGEAR, MCC, MAIN ENTRANCE)	250 kA	125 kA
В	HIGH EXPOSURE ROOF TOP LOCATIONS (DISTRIBUTION PANELBOARDS.	160 kA	80 kA
А	BRANCH LOCATIONS (PANELBOARDS, MCCs, BUSWAY)	120 kA	60 kA

C. SPD Type - all SPDs installed on the line side of the service entrance disconnect shall be Type 1 SPDs. All SPDs installed on the load side of the service entrance disconnect shall be Type 1 or Type 2 SPDs.

2.4 Lighting and Distribution Panelboard Requirements

A. The SPD application covered under this section includes lighting and distribution panelboards. The SPD units shall be tested and demonstrate suitability for application within ANSI/IEEE C62.41 Category B environments.

1. The SPD shall not limit the use of through-feed lugs, sub-feed lugs, and sub-feed breaker options.

2. SPDs shall be installed immediately following the load side of the main breaker. SPDs installed in main lug only panelboards shall be installed immediately following the incoming main lugs.

3. The panelboard shall be capable of re-energizing upon removal of the SPD. 4. The SPD shall be interfaced to the panelboard via a direct bus bar connection. Alternately, an SPD connected to a 30A circuit breaker for

conductor length shall be trimmed in order to minimize let-through voltage. The installer shall comply with the manufacturer's

disconnecting purposes may be installed using short lengths of conductors as long as the conductors originate integrally to the SPD. The SPD shall be located directly adjacent to the 30A circuit breaker.

5. The SPD shall be included and mounted within the panelboard by the manufacturer of the panelboard. 6. The SPD shall be of the same manufacturer as the panelboard.

7. The complete panelboard including the SPD shall be UL67 listed.

B. Sidemount Mounting Applications Installation (SPD mounted external to electrical assembly) 1. Lead length between the breaker and suppressor shall be kept as short as possible to ensure optimum performance. Any excess

recommended installation and wiring practices. C. Switchgear, Switchboard, MCC and Busway Requirements

1. The SPD application covered under this section is for switchgear, switchboard, MCC, and busway locations. Service entrance located SPDs shall be tested and demonstrate suitability for application within ANSI/IEEE C62.41 Category C environments. 2. The SPD shall be of the same manufacturer as the switchgear, switchboard, MCC, and busway

3. The SPD shall be factory installed inside the switchgear, switchboard, MCC, and/or bus plug at the assembly point by the original

4. Locate the SPD on the load side of the main disconnect device, as close as possible to the phase conductors and the ground/neutral bar. 5. The SPD shall be connected through a disconnect (30A circuit breaker). The disconnect shall be located in immediate proximity to the

SPD. Connection shall be made via bus, conductors, or other connections originating in the SPD and shall be kept as short as possible. 6. The SPD shall be integral to switchgear, switchboard, MCC, and/or bus plug as a factory standardized design. 7. All monitoring and diagnostic features shall be visible from the front of the equipment.

2.5 EnclosureS

A. All enclosed equipment shall have NEMA 1 general purpose enclosures, unless otherwise noted. Provide enclosures suitable for locations as indicated on the drawings and as described below:

1. NEMA 1 - Constructed of a polymer (units integrated within electrical assemblies) or steel (sidemount units only), intended for indoor use to provide a degree of protection to personal access to hazardous parts and provide a degree of protection against the ingress of solid foreign objects (falling dirt). 2. NEMA 4 - Constructed of steel intended for either indoor or outdoor use to provide a degree of protection against access to hazardous

dust); to provide a degree of protection with respect to the harmful effects on the equipment due to the ingress of water (rain, sleet, snow, splashing water, and hose directed water); and that will be undamaged by the external formation of ice on the enclosure. (sidemount units

3. NEMA 4X - Constructed of stainless steel providing the same level of protection as the NEMA 4 enclosure with the addition of corrosion

parts; to provide a degree of protection of the equipment inside the enclosure against ingress of solid foreign objects (dirt and windblown

PART 3 - EXECUTION

protection. (sidemount units only)

3.1 EXAMINATION

3.2 FACTORY TESTING A. Standard factory tests shall be performed on the equipment under this section. All tests shall be in accordance with the latest version of NEMA

and UL standards. 3.3 INSTALLATION

3.4 WARRANTY

A. The Contractor shall install all equipment per the manufacturer's recommendations and the contract drawings.

A. The manufacturer shall provide a full ten (10) year warranty from the date of shipment against any SPD part failure when installed in compliance with manufacturer's written instructions and any applicable national or local code. END OF SECTION





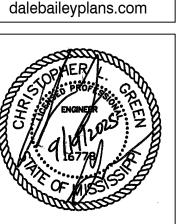
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Construction

Documents

19 September 2025

ELECTRICAL SPECIFICATIONS