

ROBERTSON LOIA ROOF

ARCHITECTS & ENGINEERS

Addendum Number Two

Hart County High School Field House
Hartwell, Georgia
RLR Project No. 22248
September 18, 2026

TO: Prospective Bidders

This addendum forms a part of the Contract Documents and modifies the Bidding Documents by additions, deletions, clarifications or corrections. Where a portion of the Bidding Documents is modified by this Addendum, the unaltered portions of the Bidding Documents shall remain in effect. Acknowledge receipt of this Addendum on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Three (3) items.

CHANGES TO SPECIFICATIONS:

ITEM NO. 01

Replace the below listed specification sections in their entirety.

- 07 54 23 TPO Roofing
 - Revised to include IKO Commercial as an acceptable manufacturer.
- 12 85 00 Auditorium Seating
 - Revised to include Hussey Seating Company as an acceptable manufacturer.
- 10 28 00 Toilet Bath Accessories
 - Revised to include Saniflow Corporation as an acceptable manufacturer.

CHANGES TO DRAWINGS:

ITEM NO. 02:

Replace sheet E7.1 ELECTRICAL SITE PLANS

- Add pole specification for exterior light fixtures.

ITEM NO. 03:

Replace sheet C-5 PROFILES

- Clarified pipe material for stormwater profile B.

END OF ADDENDUM #2

SECTION 07 54 23 - THERMOPLASTIC POLYOLEFIN (TPO) ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

- 1. Fully adhered thermoplastic polyolefin (TPO) roofing system.
- 2. Roof insulation.
- 3. Walkways.

- B. Section includes installation of sound-absorbing insulation strips in ribs of roof deck. Sound-absorbing insulation strips are furnished under Section 053100 "Steel Decking."

C. Related Requirements:

- 1. Section 061053 "Miscellaneous Rough Carpentry" for wood nailers, curbs, and blocking;
- 2. Section 076200 "Sheet Metal Flashing and Trim" for metal roof flashings and counterflashings.
- 3. Section 079200 "Joint Sealants" for joint sealants, joint fillers, and joint preparation.

1.3 DEFINITIONS

- A. Roofing Terminology: Definitions in ASTM D 1079 and glossary in NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to Work of this Section.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Roofing Conference: Conduct conference at Project site

- 1. Meet with Owner, Architect, Construction Manager, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
- 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.

3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
5. Review structural loading limitations of roof deck during and after roofing.
6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that affects roofing system.
7. Review governing regulations and requirements for insurance and certificates if applicable.
8. Review temporary protection requirements for roofing system during and after installation.
9. Review roof observation and repair procedures after roofing installation.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 1. For insulation and roof system component fasteners, include copy of FM Approvals' RoofNav listing.
- B. Shop Drawings: Include roof plans, sections, details, and attachments to other work, including the following:
 1. Layout and thickness of insulation.
 2. Base flashings and membrane termination details.
 3. Flashing details at penetrations.
 4. Tapered insulation layout, thickness, and slopes.
 5. Roof plan showing orientation of steel roof deck and orientation of roof membrane, fastening spacings, and patterns for mechanically fastened roofing system.
 6. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.
 7. Tie-in with adjoining air barrier.
- C. Samples for Verification: For the following products:
 1. Roof membrane and flashings, of color required.
 2. Walkway pads or rolls, of color required.
- D. Wind Uplift Resistance Submittal: For roofing system, indicating compliance with wind uplift performance requirements.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For **Installer** and **manufacturer**.
- B. Manufacturer Certificates:

1. Performance Requirement Certificate: Signed by roof membrane manufacturer, certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
 - a. Submit evidence of compliance with performance requirements.
 2. Special Warranty Certificate: Signed by roof membrane manufacturer, certifying that all materials supplied under this Section are acceptable for special warranty.
 - C. Product Test Reports: For roof membrane and insulation, for tests performed by a qualified testing agency, indicating compliance with specified requirements.
 - D. Evaluation Reports: For components of roofing system, from ICC-ES.
 - E. Field Test Reports:
 1. Fastener-pullout test results and manufacturer's revised requirements for fastener patterns.
 - F. Field quality-control reports.
 - G. Sample Warranties: For manufacturer's special warranties.
- 1.7 CLOSEOUT SUBMITTALS
- A. Maintenance Data: For roofing system to include in maintenance manuals.
 - B. Certified statement from existing roof membrane manufacturer stating that existing roof warranty has not been affected by Work performed under this Section.
- 1.8 QUALITY ASSURANCE
- A. Manufacturer Qualifications: A qualified manufacturer that is UL listed or listed in FM Approvals' RoofNav for roofing system identical to that used for this Project.
 - B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
- 1.9 DELIVERY, STORAGE, AND HANDLING
- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
 - B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.

1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials, and place equipment in a manner to avoid permanent deflection of deck.

1.10 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.11 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period.
 1. Special warranty includes roof membrane, base flashings, roof insulation, fasteners, cover boards, walkway product, and other components of roofing system.
 2. Warranty Period: **20** years from date of Substantial Completion.
- B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering the Work of this Section, including all components of roofing system such as roof membrane, base flashing, roof insulation, fasteners, cover boards, and walkway products, for the following warranty period:
 1. Warranty Period: **5** years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed roofing system and flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Roof system and flashings shall remain watertight.
 1. Accelerated Weathering: Roof membrane shall withstand 2000 hours of exposure when tested according to ASTM G 152, ASTM G 154, or ASTM G 155.
 2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D 3746, ASTM D 4272, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.

- B. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.
- C. Wind Uplift Resistance: Design roofing system to resist the following wind uplift pressures when tested according to FM Approvals 4474, UL 580, or UL 1897:
1. Zone 1 (Roof Area Field): as indicated on drawing
 2. Zone 2 (Roof Area Perimeter): **as indicated on drawing**
 - a. Location: From roof edge to inside roof edge **as indicated on drawing**
 3. Zone 3 (Roof Area Corners): **as indicated on drawing**
 - a. Location: in each direction from each building corner **as indicated on drawing.**
- D. FM Approvals' RoofNav Listing: Roof membrane, base flashings, and component materials shall comply with requirements in FM Approvals 4450 or FM Approvals 4470 as part of a roofing system, and shall be listed in FM Approvals' RoofNav for Class 1 or noncombustible construction, as applicable. Identify materials with FM Approvals Certification markings.
1. Fire/Windstorm Classification: [**Class 1A-90**]
 2. Hail-Resistance Rating: [**MH**]
- E. Energy Performance: Roofing system shall have an initial solar reflectance of not less than [**0.70**] and an emissivity of not less than [**0.75**] when tested according to CRRC-1.
- F. Exterior Fire-Test Exposure: ASTM E 108 or UL 790, [**Class B**] ; for application and roof slopes indicated; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- G. Fire-Resistance Ratings: Comply with fire-resistance-rated assembly designs indicated. Identify products with appropriate markings of applicable testing agency.

2.2 THERMOPLASTIC POLYOLEFIN (TPO) ROOFING

- A. TPO Sheet: ASTM D 6878/D 6878M, internally fabric, scrim-reinforced, fully-adhered TPO sheet.
1. Acceptable Manufacturers:

Carlisle SynTec Inc: Sure-Weld

Firestone Building Products Company: Ultra-Ply TPO

Johns Manville: JM TPO

GAF

Versico**Mule-Hide Products****IKO Commercial**

2. Source Limitations: Obtain components for roofing system from roof membrane manufacturer or manufacturers approved by roof membrane manufacturer.
3. Thickness: **80 mils** (1.5 mm)] nominal.
4. Exposed Face Color: [Gray]
5. Breaking Strength (ASTMD751, Grab Method): 200 lb. minimum
6. Tearing Strength (ASTM D751), Tongue Tear: 120 lbf (534 N)
7. Dimensional stability (ASTM D 1204): 6 hours at 158 deg. F (70 deg. C), 1.0 maximum
8. Low Temperature Bend: ASTM D 2136: -40 degrees F Maximum
9. Ply Adhesion: ASTM D 413, Strip specimen, Type A, Machine Method, 8.0 lbs per inch minimum

2.3 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with other roofing components.
 1. Adhesive and Sealants: Comply with VOC limits of authorities having jurisdiction.
- B. Sheet Flashing: Manufacturer's standard unreinforced TPO sheet flashing, [**80 mils (1.4 mm)**] thick, minimum, of same color as TPO sheet.
- C. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.
- D. Roof Vents: As recommended by roof membrane manufacturer.
 1. Size: Not less than 4-inch (100-mm) diameter.
- E. Bonding Adhesive: Manufacturer's standard.
- F. Slip Sheet: Manufacturer's standard, of thickness required for application.
- G. Metal Termination Bars: Manufacturer's standard, predrilled stainless steel or aluminum bars, approximately 1 by 1/8 inch (25 by 3 mm) thick; with anchors.
- H. Metal Battens: Manufacturer's standard, aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch thick (25 mm wide by 1.3 mm thick), prepunched.
- I. Ballast Retaining Bar: Perimeter securement system consisting of a slotted extruded-aluminum retention bar with an integrated compression fastening strip.

1. Fasteners: 1-1/2-inch (38-mm) stainless steel fasteners with neoprene washers.
- J. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roofing components to substrate, and acceptable to roofing system manufacturer.
- K. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

2.4 ROOF INSULATION

- A. General: Preformed roof insulation boards manufactured by TPO roof membrane manufacturer[, **approved for use in FM Approvals' RoofNav-listed roof assemblies**].
- B. Polyisocyanurate Board Insulation: ASTM C 1289, [**Type II, Class 1, Grade 2**] [**Type II, Class 2, Grade 2**], glass-fiber mat facer on both major surfaces.
 1. Compressive Strength: [**20 psi (138 kPa)**]
 2. Size: [**48 by 48 inches (1219 by 1219 mm)**] or [**48 by 96 inches (1219 by 2438 mm)**].
 3. Thickness:
 - a. Base Layer: [**1-1/2 inches (38 mm)**]
 - b. Upper Layer: as required by minimum overall **R-value 30**
- C. Tapered Insulation: Provide factory-tapered insulation boards.
 1. Material: [**Match roof insulation**] .
 2. Minimum Thickness: 1/4 inch (6.35 mm).
 3. Slope:
 - a. Roof Field: [**1/8 inch per foot**] unless otherwise indicated on Drawings.
 - b. Saddles and Crickets: [**1/4 inch per foot**] unless otherwise indicated on Drawings.

2.5 INSULATION ACCESSORIES

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with other roofing system components.
- B. Fasteners: Factory-coated steel fasteners with metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation[**and cover boards**] to substrate, and acceptable to roofing system manufacturer.
- C. Insulation Adhesive: Insulation manufacturer's recommended adhesive formulated to attach roof insulation to substrate or to another insulation layer as follows:

1. Modified asphaltic, asbestos-free, cold-applied adhesive.
2. Bead-applied, low-rise, one-component or multicomponent urethane adhesive.
3. Full-spread, spray-applied, low-rise, two-component urethane adhesive.

- D. Cover Board: ASTM C 1289 Type II, Class 4, Grade 1, 1/2-inch- (13-mm-) thick polyisocyanurate, with a minimum compressive strength of 80 psi (551 kPa).

2.6 WALKWAYS

- A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway [**pads**] [**or**] [**rolls**], approximately 3/16 inch (5 mm) thick and acceptable to and furnished by roofing system manufacturer.

1. Size: Approximately 30" min width
2. Location: As needed for access to all roof top equipment.
3. Color: Contrasting with roof membrane.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
1. Verify that roof openings and penetrations are in place, curbs are set and braced, and roof-drain bodies are securely clamped in place.
 2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
 3. Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Section 053100 "Steel Decking."
 4. Verify that minimum concrete drying period recommended by roofing system manufacturer has passed.
 5. Verify that concrete substrate is visibly dry and free of moisture, and that minimum concrete internal relative humidity is not more than [75] percent, or as recommended by roofing system manufacturer, when tested according to ASTM F 2170.
 - a. Test Frequency: One test probe per each [1000 sq. ft. (93 sq. m)] or portion thereof, of roof deck, with not less than three tests probes.
 - b. Submit test reports within 24 hours after performing tests.
 6. Verify that concrete-curing compounds that will impair adhesion of roofing components to roof deck have been removed.
 7. Verify that joints in precast concrete roof decks have been grouted flush with top of concrete.
 8. Verify that minimum curing period recommended by roofing system manufacturer for lightweight insulating concrete roof decks has passed.

9. Verify any damaged sections of cementitious wood-fiber decks have been repaired or replaced.
10. Verify adjacent cementitious wood-fiber panels are vertically aligned to within 1/8 inch (3.2 mm) at top surface.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing system installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Perform fastener-pullout tests according to roof system manufacturer's written instructions.
 1. Submit test result within 24 hours after performing tests.
 - a. Include manufacturer's requirements for any revision to previously submitted fastener patterns required to achieve specified wind uplift requirements.

3.3 ROOFING INSTALLATION, GENERAL

- A. Install roofing system according to roofing system manufacturer's written instructions, FM Approvals' RoofNav assembly requirements, and FM Global Property Loss Prevention Data Sheet 1-29.
- B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at end of workday or when rain is forecast. Remove and discard temporary seals before beginning Work on adjoining roofing.
- C. Install roof membrane and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition

3.4 INSULATION INSTALLATION

- A. Coordinate installing roofing system components so insulation is not exposed to precipitation or left exposed at end of workday.
- B. Comply with roofing system and roof insulation manufacturer's written instructions for installing roof insulation.
- C. Installation Over Metal Decking:

1. Install base layer of insulation with [**joints staggered not less than 24 inches (610 mm) in adjacent rows**] [**end joints staggered not less than 12 inches (305 mm) in adjacent rows**] [**and with long joints continuous at right angle to flutes of decking**].
 - a. Locate end joints over crests of decking.
 - b. Where installing composite and noncomposite insulation in two or more layers, install noncomposite board insulation for bottom layer and intermediate layers, if applicable, and install composite board insulation for top layer.
 - c. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
 - d. Make joints between adjacent insulation boards not more than 1/4 inch (6 mm) in width.
 - e. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches (610 mm).
 - 1) Trim insulation so that water flow is unrestricted.
 - f. Fill gaps exceeding 1/4 inch (6 mm) with insulation.
 - g. Cut and fit insulation within 1/4 inch (6 mm) of nailers, projections, and penetrations.
 - h. Loosely lay base layer of insulation units over substrate.
 - i. Mechanically attach base layer of insulation[**and substrate board**] using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to metal decks.
 - 1) Fasten insulation according to requirements in FM Approvals' RoofNav for specified Windstorm Resistance Classification.
 - 2) Fasten insulation to resist specified uplift pressure at corners, perimeter, and field of roof.
2. Install upper layers of insulation[**and tapered insulation**] with joints of each layer offset not less than 12 inches (305 mm) from previous layer of insulation.
 - a. Staggered end joints within each layer not less than 24 inches (610 mm) in adjacent rows.
 - b. Install with long joints continuous and with end joints staggered not less than 12 inches (305 mm) in adjacent rows.
 - c. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
 - d. Make joints between adjacent insulation boards not more than 1/4 inch (6 mm) in width.
 - e. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches (610 mm).
 - 1) Trim insulation so that water flow is unrestricted.
 - f. Fill gaps exceeding 1/4 inch (6 mm) with insulation.
 - g. Cut and fit insulation within 1/4 inch (6 mm) of nailers, projections, and penetrations.

- h. Loosely lay each layer of insulation units over substrate.
- i. Adhere each layer of insulation to substrate using adhesive according to FM Approvals' RoofNav assembly requirements and FM Global Property Loss Prevention Data Sheet 1-29 for specified Windstorm Resistance Classification, as follows:
 - 1) Set each layer of insulation in a solid mopping of hot roofing asphalt, applied within plus or minus 25 deg F (14 deg C) of equiviscous temperature.
 - 2) Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
 - 3) Set each layer of insulation in a uniform coverage of full-spread insulation adhesive, firmly pressing and maintaining insulation in place.

3.5 INSTALLATION OF COVER BOARDS

- A. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches (150 mm) in each direction.
 - 1. Trim cover board neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
 - 2. At internal roof drains, conform to slope of drain sump.
 - a. Trim cover board so that water flow is unrestricted.
 - 3. Cut and fit cover board tight to nailers, projections, and penetrations.
 - 4. Loosely lay cover board over substrate.
 - 5. Adhere cover board to substrate using adhesive according to FM Approvals' RoofNav assembly requirements and FM Global Property Loss Prevention Data Sheet 1-29 for specified Windstorm Resistance Classification, as follows:
 - a. Set cover board in a solid mopping of hot roofing asphalt, applied within plus or minus 25 deg F (14 deg C) of equiviscous temperature.
 - b. Set cover board in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
 - c. Set cover board in a uniform coverage of full-spread insulation adhesive, firmly pressing and maintaining insulation in place.

3.6 ADHERED ROOFING INSTALLATION

- A. Adhere roof membrane over area to receive roofing according to roofing system manufacturer's written instructions.
- B. Unroll roof membrane and allow to relax before installing.
- C. Start installation of roofing in presence of roofing system manufacturer's technical personnel

- D. Accurately align roof membrane, and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- E. Bonding Adhesive: Apply to substrate and underside of roof membrane at rate required by manufacturer, and allow to partially dry before installing roof membrane. Do not apply to splice area of roof membrane.
- F. Hot Roofing Asphalt: Apply a solid mopping of hot roofing asphalt to substrate at temperature and rate required by manufacturer, and install fabric-backed roof membrane. Do not apply to splice area of roof membrane.
- G. Fabric-Backed Roof Membrane Adhesive: Apply to substrate at rate required by manufacturer, and install fabric-backed roof membrane.
- H. In addition to adhering, mechanically fasten roof membrane securely at terminations, penetrations, and perimeter of roofing.
- I. Apply roof membrane with side laps shingled with slope of roof deck where possible.
- J. Seams: Clean seam areas, overlap roof membrane, and hot-air weld side and end laps of roof membrane and sheet flashings, to ensure a watertight seam installation.
 - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of roof membrane and sheet flashings.
 - 2. Verify field strength of seams a minimum of twice daily, and repair seam sample areas.
 - 3. Repair tears, voids, and lapped seams in roof membrane that do not comply with requirements.
- K. Spread sealant bed over deck-drain flange at roof drains, and securely seal roof membrane in place with clamping ring.

3.7 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories, and adhere to substrates according to roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate, and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

3.8 WALKWAY INSTALLATION

A. Flexible Walkways:

1. Install flexible walkways at the following locations:
 - a. Retain one or more subparagraphs below. Revise to suit Project.
 - b. Perimeter of each rooftop unit.
 - c. Between each rooftop unit location, creating a continuous path connecting rooftop unit locations.
 - d. Between each roof hatch and each rooftop unit location or path connecting rooftop unit locations.
 - e. Top and bottom of each roof access ladder.
 - f. Between each roof access ladder and each rooftop unit location or path connecting rooftop unit locations.
 - g. Locations indicated on Drawings.
 - h. As required by roof membrane manufacturer's warranty requirements.
2. Provide 6-inch (76-mm) clearance between adjoining pads.
3. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.9 FIELD QUALITY CONTROL

- A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion, in presence of Architect, and to prepare inspection report.
- B. Repair or remove and replace components of roofing system where inspections indicate that they do not comply with specified requirements.
- C. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.

3.10 PROTECTING AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction does not affect or endanger roofing system, inspect roofing system for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. ntial Completion and according to warranty requirements.
- D. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

3.11 ROOFING INSTALLER'S WARRANTY

- A. WHEREAS _____ of _____, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
1. Owner:
 2. Address:
 3. Building Name/Type:
 4. Address:
 5. Area of Work:
 6. Acceptance Date: _____.
 7. Warranty Period: 5 Years
 8. Expiration Date: _____.
- B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period Roofing Installer will, at Roofing Installer's own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:
1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
 - a. lightning;
 - b. peak gust wind speed exceeding **90 mph**;
 - c. fire;
 - d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
 - e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
 - f. vapor condensation on bottom of roofing; and
 - g. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
 2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
 3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.

4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this _____ day of _____, _____.

1. Authorized Signature: _____.
2. Name: _____.
3. Title: _____.

END OF SECTION 075423

SECTION 10 28 00 - TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes toilet and bath accessory items as scheduled.
- B. Related Sections: The following sections contain requirements that relate to this Section:
 - 1. Division 4 Section "Unit Masonry Assemblies" for substrate to which accessories are attached.

1.02 SUBMITTALS

- A. Product data for each toilet accessory item specified, including construction details relative to materials, dimensions, gages, profiles, mounting method, specified options, and finishes.
- B. Setting drawings where cutouts are required in other work, including templates, substrate preparation instructions, and directions for preparing cutouts and installing anchorage devices.
- C. Maintenance instructions including replaceable parts and service recommendations.

1.03 QUALITY ASSURANCE

- A. Inserts and Anchorages: Furnish accessory manufacturers' standard inserts and anchoring devices that must be set in concrete or built into masonry. Coordinate delivery with other work to avoid delay.
- B. Single-Source Responsibility: Provide products of same manufacturer for each type of accessory unit and for units exposed to view in same areas, unless otherwise acceptable to Architect.

1.04 PROJECT CONDITIONS

- A. Coordination: Coordinate accessory locations, installation, and sequencing with other work to avoid interference with and ensure proper installation, operation, adjustment, cleaning, and servicing of toilet accessory items.

1.05 WARRANTY

- A. Warranty: Submit a written warranty executed by mirror manufacturer, agreeing to replace any mirrors that develop visible silver spoilage defects within warranty period.
- B. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 SCHEDULED ACCESSORIES

- A. Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of accessory are scheduled on the Drawings. Products are identified by using hardware designation numbers of **Bobrick Washroom Equipment, Inc.**
- B. Manufacturer's Product Designations: The product designation and manufacturer listed is for the purpose of establishing minimum requirements. Provide either;
 - 1. Product designated or, provide the comparable product of one of the other acceptable manufacturers.
- C. Acceptable Manufacturers: Subject to compliance with requirements, provide toilet accessories designated or by one of the following:
 - 1. American Specialties, Inc.
 - 2. Bradley Corporation.
 - 3. Bobrick Washroom Equipment, Inc.
 - 4. ASI
 - 5. Bradley Corporation
 - 6. Saniflow Corporation

2.02 MATERIALS, GENERAL

- A. Stainless Steel: AISI Type 302/304, with polished No. 4 finish, 0.034-inch (22-gage) minimum thickness.
- B. Sheet Steel: Cold-rolled, commercial quality ASTM A 366, 0.04-inch (20-gage) minimum. Surface preparation and metal pretreatment as required for applied finish.
- C. Galvanized Steel Sheet: ASTM A 527, G60.
- D. Mirror Glass: Nominal 6.0-mm (0.23-inch) thick, conforming to ASTM C 1036, Type I, Class 1, Quality q2, and with silvering, electro-plated copper coating, and protective organic coating.
- E. Galvanized Steel Mounting Devices: ASTM A 153, hot-dip galvanized after fabrication.
- F. Fasteners: Screws, bolts, and other devices of same material as accessory unit, or of galvanized steel where concealed.

2.03 GRAB BARS

- A. Stainless Steel Type: Provide grab bars with wall thickness not less than 0.05 inch (18 gage) and as follows:
 - 1. —Mounting: ~~Exposed~~Concealed, manufacturer's standard flanges and anchorages.
 - 2. Clearance: 1-1/2-inch clearance between wall surface and inside face of bar.
 - 3. Heavy-Duty Size: Outside diameter of 1-1/4" inches.

2.04 FABRICATION

- A. General: Maximum 1-1/4"-inch-diameter, unobtrusive stamped manufacturer logo is permitted on exposed face of toilet or bath accessory units. On either interior surface not exposed to view or back surface, provide additional identification by either a printed, waterproof label or a stamped nameplate, indicating manufacturer's name and product model number.
- B. Surface-Mounted Toilet Accessories, General: Except where otherwise indicated, fabricate units with tight seams and joints, exposed edges rolled. Hang doors or access panels with continuous stainless steel piano hinge. Provide concealed anchorage wherever possible.
- C. Framed Mirror Units, General: Fabricate frames for glass mirror units to accommodate wood, felt, plastic, or other glass edge protection material. Provide mirror backing and support system that will permit rigid, tamperproof glass installation and prevent moisture accumulation, as follows:
 - 1. —Provide galvanized-steel backing sheet, not less than 0.034 inch (22 gage) and full mirror size, with non-absorptive filler material. Corrugated cardboard is not an acceptable filler material.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine conditions for compliance with requirements for installation tolerances and other specific conditions affecting installation.
- B. Do not proceed until unsatisfactory conditions have been corrected.
- C. Beginning of installation means acceptance of conditions.

3.02 INSTALLATION

- A. Install toilet accessory units according to manufacturers' instructions, using fasteners appropriate to substrate as recommended by unit manufacturer. Install units plumb and level, firmly anchored in locations and at heights indicated.

- B. Secure mirrors to walls in concealed, tamperproof manner with special hangers, toggle bolts, or screws. Set units plumb, level, and square at locations indicated, according to manufacturer's instructions for type of substrate involved.
- C. Install grab bars to withstand a downward load of at least 250 lbf, complying with ASTM F 446.
- D. Installation Schedule (Below)

Installation Heights Schedule				
ITEM	2 - 4 yrs.	5 - 12 yrs.	Adult	Age
	Pre-K	K - 5th	6th - 12th	Grade
Grab Bars	20"	25"	34"	A.F.F. to centerline
Mirror 18" X 24"	34"	34"	n/a	A.F.F. to bottom
Mirror 24" X 36"	n/a	n/a	40"	A.F.F. to bottom
Mirror - ADA 18" X 24"	34"	34"	n/a	A.F.F. to bottom
Mirror - ADA 24" X 36"	n/a	n/a	40"	A.F.F. to bottom
Toilet Tissue Dispensers	14"	17"	19"	A.F.F. to centerline
Paper Towel Dispenser	36"	40"	52"	A.F.F. to bottom
Electric Hand Dryer	48"	48"	48"	A.F.F. to centerline of control
Soap Dispenser	36"	40"	40"	A.F.F. to centerline of button
Towel Bar	48"	48"	48"	A.F.F. to centerline
Robe Hook	36"	42"	72"	A.F.F. to centerline
Shower Seat	12"	16"	18"	A.F.F. to centerline
Shower Rod	76"			A.F.F. to centerline

3.03 ADJUSTING AND CLEANING

- A. Adjust toilet accessories for proper operation and verify that mechanisms function smoothly. Replace damaged or defective items.
- B. Clean and polish all exposed surfaces strictly according to manufacturer's recommendations after removing temporary labels and protective coatings.

END OF SECTION 10 21 13.17

SECTION 12 85 00 AUDITORIUM SEATING**PART 1 - GENERAL****1.1 SCOPE**

- A. Seating shall be floor mounted or riser mounted, with common upright support assemblies with upholstered seat and back cushions. The fixed back shall accommodate three pitch positions at 16°, 20° and 24°. The back cushion is protected by an injection-molded polypropylene back shroud wraps around the edge of the inner structure board and the foam. The seat cushion shall be counter-balanced with a gravity lift to ensure an automatic return to a full fold position. Embroidered School Logo on Seat Back.

1.2 COMPLIANCE:

- A. "Performer" Model LS-13601NC seating shall be designed and manufactured in compliance with BIFMA X5.4-2012 performance criteria.

1.3 FIELD VERIFICATION

- A. Conditions directly affecting the seating installation must be field verified according to IBC (International Building Code) and ADA (Americans with Disability Act).

1.4 SHOP DRAWING REVIEW

- A. Indicate fixed auditorium seating layout. Shop drawing should be produced to comply with the contract. Show all fixed auditorium seats, including sizes, dimension drawing, foot plate drawing, elevation drawing, aisle widths, available user space, row to row spacing, and reserved numbering on the seating plan.

1.5 SIZES

- A. All seats should be produced in three chair widths (from hole to hole of the foot plate, 20", 21" and 22") to match the approved seating plan.

1.6 MANUFACTURER'S QUALIFICATION

- A. Warranty: manufacturers' limited warranty for materials and workmanship for a period of Five (5) years from the date of substantial completion
- B. Product Liability Coverage:
- a) Insurance coverage: The Insured's legal liability in respect of
 - Accidental injury to persons
 - Accidental damage to property
 - b) Maximum Liability: USD 2,000,000 any one occurrence and in aggregate.

1.7 APPROVED MANUFACTURERS

- 1. Leadcom Performer – Basis of Design
- 2. Navetta
- 3. Sedia Seating
- 4. Hussey Seating Company, U.S.A.

PART 2 - FABRICATION

2.1: MATERIAL

- A. **STEEL:** All steel shall have smooth surfaces and be of sufficient gauge thickness and designed to withstand strains of normal use
- B. **PADDING:** Seat and back padding material shall be of cold molded polyurethane foam. Raw material should be from BASF Germany. Flame-retardant treatment should comply with California Technical Information Bulletin 117 - 2013 Section 3. TB 117 Requirements, Test Procedure and Apparatus for Testing the Smolder Resistance of Materials Used in Upholstered Furniture - 2013 Section 3 – Resilient Filling Material Test. California Technical Bulletin 133 and British Standard 5852 are optional
- C. **PLASTIC:** Plastic shall be injection molded, high density polyethylene with good wearing resistance and anti - aging performance at Class 4, excellent durability and ease of maintenance, 100% new material, recyclable.
- D. **WOOD:** Plywood, exposed or concealed shall be hard wood. All plywood shall be hot press laminated using high frequency process. Wood moisture content shall be no more than 10%.
- a) Abrasion resistance of the wood color coating shall be 1000 RPM at Class 2 or better.
 - b) Impact strength at height h=50mm at Class 3 or better.
 - c) No flaking black spots, cracks, and bubbles by cigarette burning.
- E. **PLASTIC LAMINATE:** Plastic laminate shall be composed of MDF core with laminate finish and PVC banding (18 MM MDF and 0.8MM laminate)
- F. **FINISH:**
- a) **METAL PARTS:** All steels are of finest quality. All welding parts are robot welded to ensure the welding workmanship. Hardness of the metals should be no less than 4H. Seat frame and stanchion are made of the cold-rolled steel sheet or molded punch forming. Surface should be treated for rust prevention, electrophoresis 18 micron coating should be applied to against corrosion. Epoxy resin 60-80 micron coating, no rust during test in 400 hours of salt spray or 100 hours of salt bath, coating film adhesion exceeds Class 2.
 - b) **WOOD PARTS:** All exposed surfaces shall be stained to color selected and coated with lacquer of sufficient film depth to provide wear resistance of institutional quality and oven baked. Surface coated with high-quality environment friendly polyurethane paint, the content of harmful substances are up to the green environmental protection standards, film adhesion should be Class 2. Formaldehyde emission should be E1.
 - c) **PLASTIC PARTS:** Color of plastic shall be selected from manufacturers standard color range.
 - d) **FABRIC:** Shall be selected from manufacturer's standard fabric selection. Flame-retardant treatment should comply with California Technical Information Bulletin 117-2013 Section 1. TB 117 Requirements, Test Procedure and Apparatus for Testing the Smolder Resistance of Materials Used in Upholstered Furniture-2013 Section 1-Cover Fabric Test. (California Technical Bulletin 133 and British Standard 5852 are optional)
 - e) **HARDWARE:** All assembly hardware shall be rust resistant, black plated

2.2: CONSTRUCTION

A. SEAT CUSHION: The seat assembly shall be constructed of an inner ABS seat frame with serpentine spring and covered with molded urethane foam cushion in thickness ranges from 1.2"/30MM (Minimum)-4.3"/110MM (maximum) thickness. Ergonomic seat cushion design with serpentine spring frame to deliver optimal support and comfort. Serpentine spring is $\Phi 4, R10, 65Mn, 15.4"/392mm$ long. The seat cushion shall be counter-balanced with a gravity lift to ensure an automatic return to a full fold position and long-lasting operation. The bottom shall be covered by an injection-molded polypropylene seat shroud. All pivoting and positioning shall be accomplished within the seat cushion assembly, thereby eliminating all pinch points.

- 1) Foam density shall be $55 \pm 5 kg/m^3$. (3.4lb per cubic foot)
- 2) Foam raw material is from BASF (Germany)
- 3) The foam meets flammability requirements of CAL117/CAL133/BS5852

B. SEAT PAN: The seat pan shall be manufactured of 0.16"/4MM thick injected plastic with a textured, non-reflective, easy-to-maintain finish. The self-lifting mechanism shall be a counter balance system which utilizes a weight to the interior of the seat pan which allows the seat pan to return to a full fold position.

C. BACK: Plastic outer back. **INCLUDE EMROIDERED SCHOOL LOGO ON BACK**

a) Plastic outer back shell:

- 1) Structural back shall be an 11-ply, 15MM thick molded plywood bonded to polyurethane foam ranges from 1.5"/38MM (Minimum)-2.2"/55MM(maximum) thickness. The upholstery fabric shall be attached to the foam and board using glue upholstery methods.
- 2) An injection-molded polypropylene back shroud wraps around the edge of the inner structure board and the foam. The fixed back assembly with integral shroud is mounted to the uprights by four screws bolted through the structural 14-gauge/2.0MM steel inner back brackets. Three pitch options shall be available, 16°, 20°, and 24°, to be set during installation. Overall back height for low back model shall be 845/825/800MM (33.3/32.5/31.5").

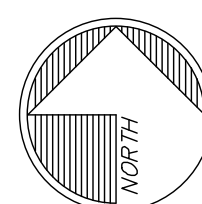
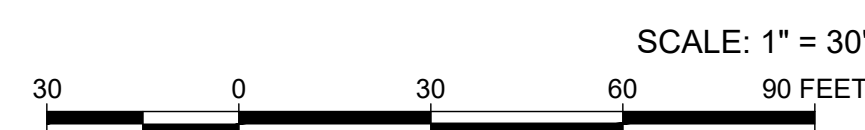
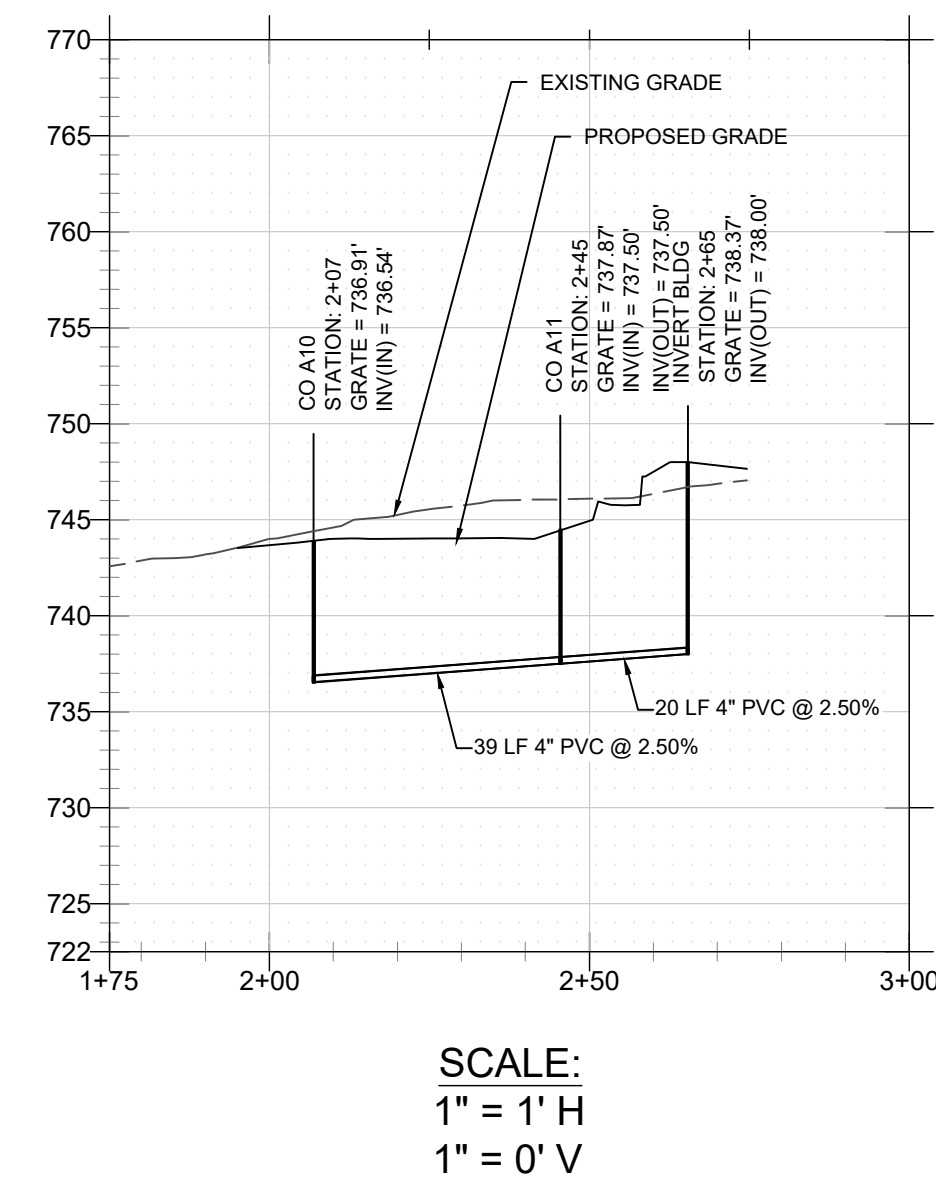
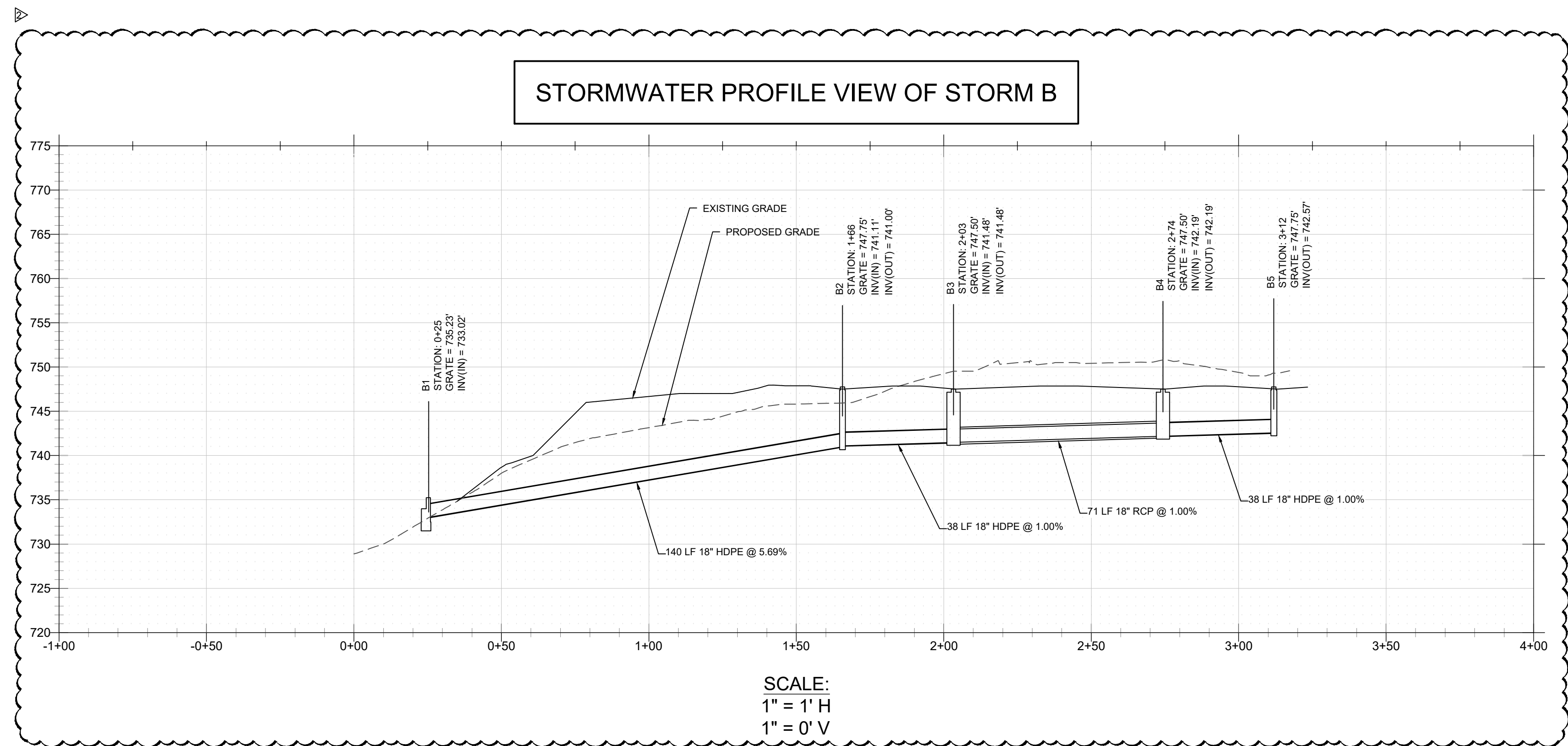
- 1) Foam density shall be $55 \pm 5 kg/m^3$. (3.4lb per cubic foot)
- 2) Foam raw material is from BASF (Germany)
- 3) Foam meets flammability requirements of CAL117/CAL133/BS5852

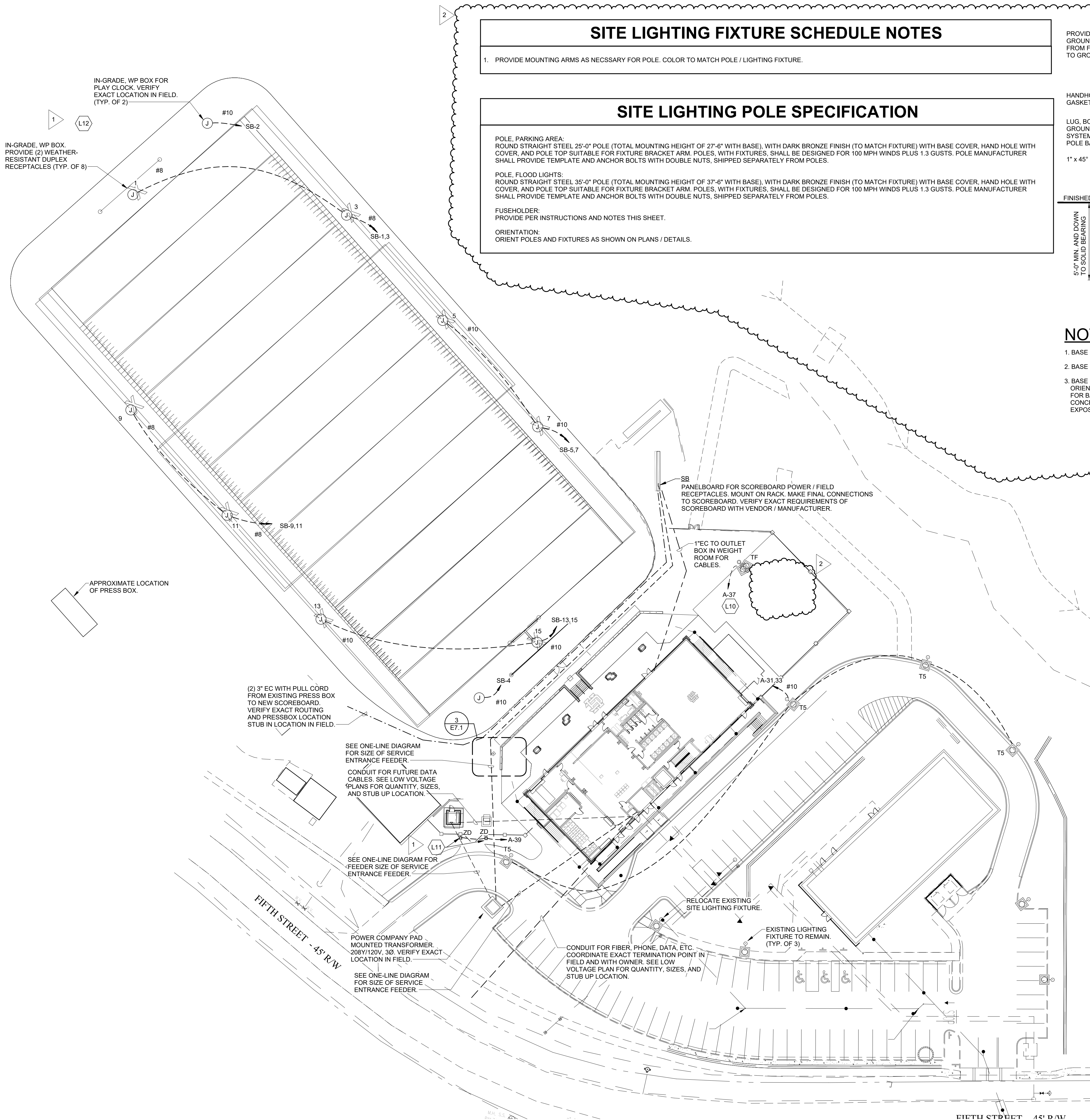
D. STANDARDS: The standards shall be pedestal design made by a rectangular tubular, 1" (W) x 3" (L)* 1/16" thick(1.5MM) of sufficient gauge steel. Pivot bracket for seat pivot support, shall be 3/16"(5MM) steel. Back bracket support attached to the back and stanchion shall be made of no less than 14-gauge sheet steel. Triangle bracket attached to stanchion and armrest support for strengthening purpose is made of 11-gauge/3.0MM steel sheet. Welded to the top of the stanchion shall be 14-gauge/2.0 MM thick steel for armrest support. Foot plate with anchor hole, welded to the bottom of the stanchion shall be made of 11-gauge/3.0MM steel sheet.

E. END PANEL (for all end standards):

- a) Laminate end panel: MDF core with laminate finish and PVC banding (MDF-0.71"/18MM thick, laminate-0.32"/0.8MM thick), attached to the standard with four screws.
- F. **ARMREST:** Polypropylene - Black
 - a) Injection-molded polypropylene armcap: 305MM(L)*60MM(W)* 25.4MM(H) and attached to the armcap support with 4 concealed screws.
- G. **ADA ARM:** ADA arm is set to provide easy access for limited mobility occupants, by armcap support being hinged at rear to allow armrest to be flipped up.
- H. **FOLDING TABLET ARMS: (PROVIDE TABLET ARMS AT EVERY OTHER SEAT):**
Tablet shall be self-storing, gravity activated, one-motion tablet arm, consisting of a storable writing tabletop constructed of a 11-ply plywood with high pressure plastic laminate on face. Tablet arm to measure 15-1/4" x 10-3/8". Tablet arm mechanism shall consist of a pivot arm, pivot mount bracket, and support bracket constructed of 14 gauge steel. Tablet arm will store between the seats, without interfering with the seat.
- I. **SEAT NUMBER AND ROW LETTER:** Black numbers and letters, all are brass or aluminum plate, seat numbers shall be 18*42*0.3MM (0.7*1.7*0.12"), recessed on the front of the seat pan with two screws. Letter plate shall be located at the end panel secured with two screws.
- J. **ATHC STOCK:** Provide a quantity of seat and back component parts equal to two percent(2%) of the total amount installed distributed in varying sizes

END SECTION





SITE LIGHTING FIXTURE SCHEDULE NOTES

1. PROVIDE MOUNTING ARMS AS NECESSARY FOR POLE. COLOR TO MATCH POLE / LIGHTING FIXTURE.

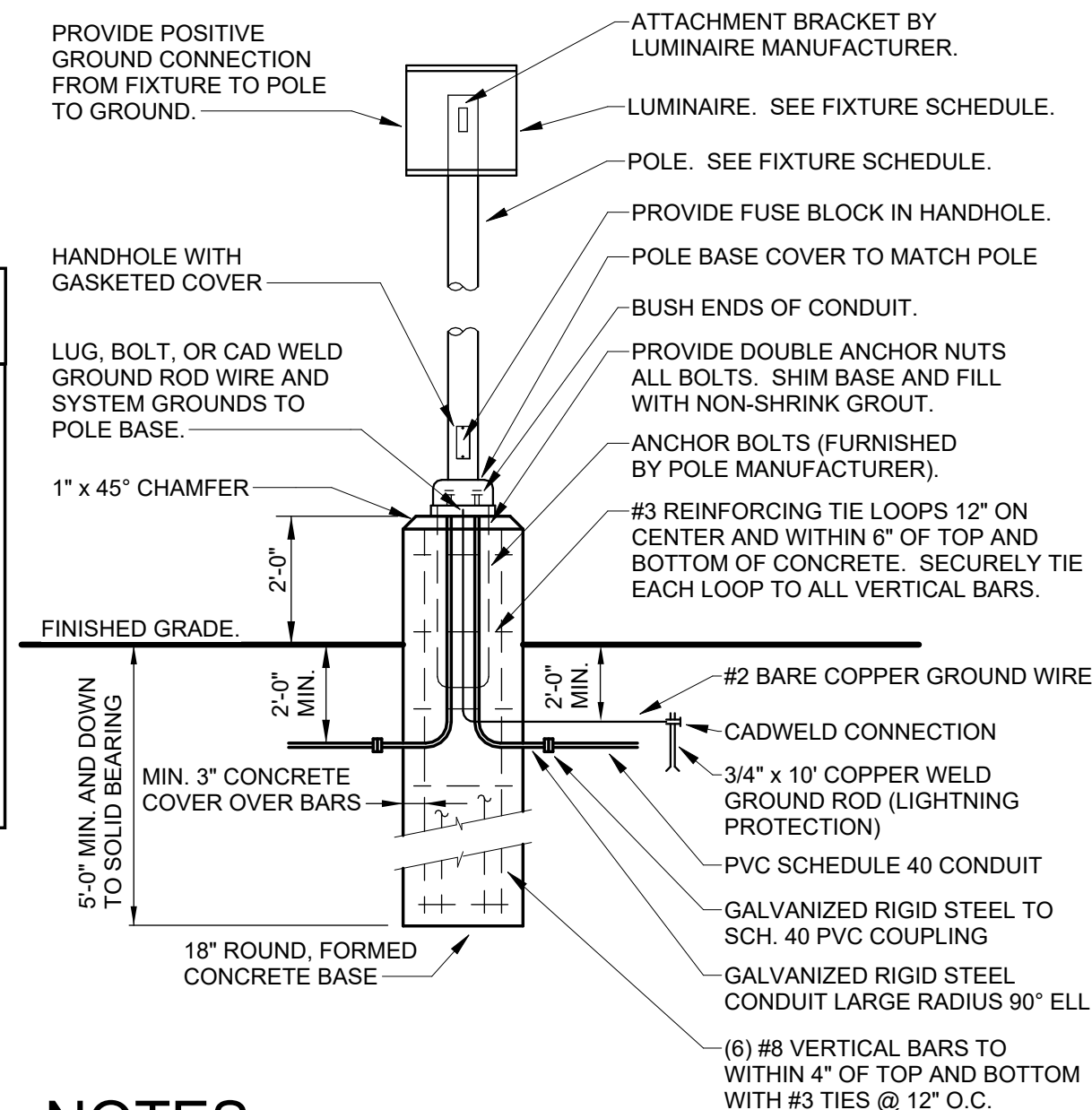
SITE LIGHTING POLE SPECIFICATION

POLE, PARKING AREA:
ROUND STRAIGHT STEEL 25'-0" POLE (TOTAL MOUNTING HEIGHT OF 27'-6" WITH BASE), WITH DARK BRONZE FINISH (TO MATCH FIXTURE) WITH BASE COVER, HAND HOLE WITH COVER, AND POLE TOP SUITABLE FOR FIXTURE BRACKET ARM. POLES, WITH FIXTURES, SHALL BE DESIGNED FOR 100 MPH WINDS PLUS 1.3 GUSTS. POLE MANUFACTURER SHALL PROVIDE TEMPLATE AND ANCHOR BOLTS WITH DOUBLE NUTS, SHIPPED SEPARATELY FROM POLES.

POLE, FLOOD LIGHTS:
ROUND STRAIGHT STEEL 35'-0" POLE (TOTAL MOUNTING HEIGHT OF 37'-6" WITH BASE), WITH DARK BRONZE FINISH (TO MATCH FIXTURE) WITH BASE COVER, HAND HOLE WITH COVER, AND POLE TOP SUITABLE FOR FIXTURE BRACKET ARM. POLES, WITH FIXTURES, SHALL BE DESIGNED FOR 100 MPH WINDS PLUS 1.3 GUSTS. POLE MANUFACTURER SHALL PROVIDE TEMPLATE AND ANCHOR BOLTS WITH DOUBLE NUTS, SHIPPED SEPARATELY FROM POLES.

FUSEHOLDER:
PROVIDE PER INSTRUCTIONS AND NOTES THIS SHEET.

ORIENTATION:
ORIENT POLES AND FIXTURES AS SHOWN ON PLANS / DETAILS.



NOTES:

1. BASE SHALL BE FORMED AND POURED ON SITE.
2. BASE SHALL BE LEVEL (VERTICAL) AND TRUE.
3. BASE SHALL BE ORIENTED CAREFULLY FOR PROPER PLACEMENT AND ORIENTATION OF FIXTURES TO MEET REQUIREMENTS. CONCRETE USED FOR BASE SHALL BE 3000 PSI @ FIXTURES TO MEET REQUIREMENTS. CONCRETE USED FOR BASE SHALL BE 3000 PSI @ 28 DAYS. PAINT EXPOSED CONCRETE TO MATCH POLE.

POLE BASE DETAIL
NOT TO SCALE

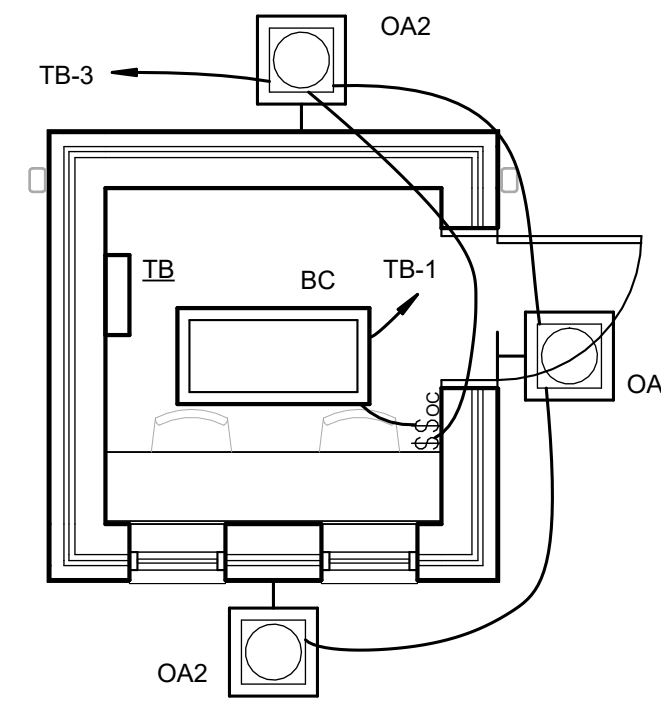
SITE ELECTRICAL NOTES

1. REFER TO CIVIL PLANS FOR NAMES / ADDRESSES OF OWNER AND UTILITIES. REFER TO CIVIL PLANS FOR TYPES OF PAVING.
2. PROVIDE FUSE HOLDER IN HANDHOLE OF POLE. SECURE HANDHOLE COVER. FUSE HOLDER SHALL BE BUSSMAN "TRON" No. HEB-JK WITH WEATHERPROOF BOOT AND 20 AMP "KIT" FUSE FOR EACH UNGROUNDED CONDUCTOR. SECURELY TAPE OVER COMPLETE HOLDER TO INSULATE FROM METAL PARTS.
3. PROVIDE #12 AWG INSULATED WIRING FROM FUSE HOLDER TO FIXTURE. PROVIDE #12 GROUND FROM POLE BASE GROUND LUG TO FIXTURE HOUSING AND GROUND METAL PARTS.
4. PROVIDE PERMANENT WEATHERPROOF LABELS FOR ALL ELECTRICAL EQUIPMENT. SEE SPECIFICATIONS.
5. TRENCHING AND/OR DUCT WORK SHALL NOT EXTEND BEYOND PROPERTY LINES EXCEPT FOR UTILITY CONNECTIONS.
6. TRANSFORMER PADS SHALL BE IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS AND SHALL BE LOCATED TO MEET UTILITY COMPANY CLEARANCES.
7. BALANCE LIGHTING LOADS ON CIRCUITS ACCORDING TO QUANTITIES AND FEEDER DISTANCES. ALTERNATE ON PHASES THROUGHOUT THE RUN FOR EACH BRANCH CIRCUIT.
8. ALL WIRE AND CABLE SHALL BE COPPER. UNDERGROUND CONDUIT SHALL BE SCH. 40 PVC AT 2'-6" BELOW GRADE WITH EQUIPMENT GROUND CONDUCTOR EXCEPT AS OTHERWISE NOTED. OVERSIZE WIRING, WHERE INDICATED, IS UTILIZED FOR VOLTAGE DROP PURPOSES.
9. REFER TO BUILDING ELECTRICAL PLANS FOR SOURCE PANELS, CIRCUITS, AND CONTROLS RELATING TO SITE LIGHTING AND PYLON SIGNS.
10. COORDINATE THE WORK SHOWN ON THIS PLAN WITH UTILITIES AND OTHER TRADES TO AVOID INTERFERENCE AND TO ASSURE A SUITABLE INSTALLATION. ADDITIONAL COST TO THE OWNER WILL NOT BE ALLOWED FOR FAILURE TO COORDINATE.
11. ALL OPEN CONDUIT ENDS SHALL BE SEALED UNTIL USED. PROVIDE PULL CORD IN EMPTY CONDUIT.
12. REFER TO ELECTRICAL BUILDING PLANS FOR STUB UP LOCATIONS OF CONDUITS FOR LOW VOLTAGE SYSTEMS.

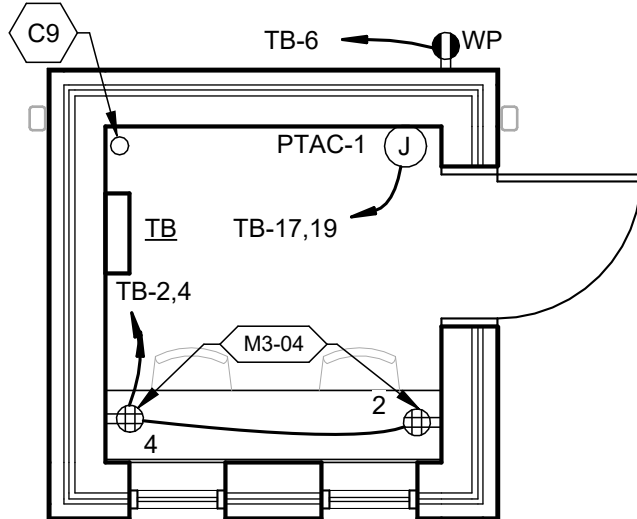
ELECTRICAL KEYNOTES

VALUE	NOTE
C9	STUB UP LOCATION FOR DATA CONDUITS / CABLES. SEE LOW VOLTAGE PLAN AND ELECTRICAL SITE PLAN.
L10	ROUTE TROUGH SWITCH AND CONTACTOR IN ELECTRICAL ROOM.
L11	MOUNT ON ARCH. SEE ARCHITECTURAL DRAWINGS / ELEVATIONS FOR MOUNTING LOCATION.
L12	PROVIDE (2) TYPE '2D' LIGHTING FIXTURES ON EXISTING ARCH. VERIFY EXACT LOATION IN FIELD.

LIGHTING PLAN - TICKET BOOTH
1/4" = 1'-0"



POWER PLAN - TICKET BOOTH
1/4" = 1'-0"



ELECTRICAL SITE PLAN
1" = 30'-0"



FLAG POLE LIGHTING
1" = 10'-0"

