



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
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June 23, 2015

Contract No. T200612502.01
FTA Federal Number 5311-2006 (01)
Lewes Park and Ride & Maintenance Facility
Sussex County

Ladies and Gentlemen:

Enclosed is Addendum No. 3 for the referenced contract consisting of the following:

1. Eight (8) pages, Appendix A, Technical Specifications, Section 033543 - Polished Concrete, pages 033543 - 1 through 033543 - 8, new, to be added to the Proposal.
2. Four (4) pages, Appendix A, Technical Specifications, Section 113100 - Residential Appliances, pages 113100 - 3 through 113100 - 6, revised to be substituted for the same pages in the Proposal.
3. Four (4) pages, Appendix A, Technical Specifications, Section 221114 - Automotive Lubrication Fluids, pages 221114 - 9, 221114 - 10, 221114 -13 and 221114 - 14, revised to be substituted for the same pages in the Proposal.
4. One (1) page, Appendix A, Technical Specifications, Section 233113 - Metal Ducts, page 233113 - 14, revised, to be substituted for the same page in the Proposal.
5. Three (3) sheets, Construction Plans, sheets 65, 77, and 85, revised, to be substituted for the same sheets in the Plan Set.

Please note the revisions listed above and submit your bid based upon this information.

Sincerely,

signature on file

James H. Hoagland
Contract Services Administrator

:jhh
Enclosures

SECTION 033543 - POLISHED CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Products and procedures for diamond polishing concrete floors using multi-step wet/dry mechanical process, and accessories indicated, specified, or required to complete polishing.

1.2 DEFINITIONS

- A. Terminology: As defined by CPAA.

1.3 SUBMITTALS

- A. Product Data: Manufacturer's technical literature for each product indicated, specified, or required. Include manufacturer's technical data, application instructions, and recommendations.
- B. Installer Qualifications: Data for company, principal personnel, experience, and training specified in PART 1 "Quality Assurance" Article.
- C. Field Quality Control – Static Coefficient of Friction Test Reports: Reports of testing specified in PART 3 "Field Quality Control" Article.
- D. Maintenance Data: For inclusion in maintenance manual required by Division 01.
 - 1. Include manufacturer's instructions for maintenance of installed work, including methods and frequency recommended for maintaining optimum condition under anticipated use.
 - 2. Include precautions against cleaning products and methods which may be detrimental to finishes and performance.

1.4 QUALITY ASSURANCE

- A. Polisher Qualifications:
 - 1. Experience: Company experienced in performing specified work similar in design, products, and extent to scope of this Project; with a record of successful in-service performance; and with sufficient production capability, facilities, and personnel to produce specified work.
 - 2. Supervision: Maintain competent supervisor who is at Project during times specified work is in progress, and is currently certified as Craftsman or Master Craftsman by CPAA.
 - 3. Manufacturer Qualification: Approved by manufacturer to apply liquid applied products.

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- B. Walkway Auditor: Certified by NFSI to test polished floors for static coefficient of friction according to NFSI 101-A.
- C. Static Coefficient of Friction: Achieve not less than 0.5 for level floor surfaces as determined by quality control testing according to NFSI 101-A.
- D. Field Mock-up for Aesthetic Purposes: Before performing work of this Section, provide as many field mock-ups required to verify selections made under submittals and to demonstrate aesthetic effects of polishing. Approval does not constitute approval of deviations from Contract Documents, unless such deviations are specifically approved by Architect in writing.
 - 1. Grind, hone, and polish 10 ft square floor area for each finish approved under sample submittals; include edges and joints.
 - 2. Use same personnel, including supervisors, which will perform work.
 - 3. Install products and materials according to specified requirements.
 - 4. Work shall be representative of those to be expected for work.
 - 5. Finish various components to show maximum variation that will exist in work.
 - 6. Approval is for following aesthetic qualities:
 - a. Compliance with approved submittals.
 - b. Uniformity of exposed aggregate.
 - c. Uniformity of sheen.
 - d. Uniformity of color.
 - 7. Obtain Architect's approval before starting work on Project.
 - 8. Protect approved field mock-ups from elements with weather resistant covering.
 - 9. Maintain field mock-ups during construction in an undisturbed condition as a standard for judging completed work.
 - 10. Do not demolish, alter, or remove field mock-ups until acceptable to Owner and Architect.
- E. Pre-Installation of Concrete Conference: Prior to placing concrete for areas scheduled for polishing, conduct conference at Project to comply with requirements of applicable Division 01 Sections.
 - 1. Required Attendees:
 - a. Owner.
 - b. Architect.
 - c. Contractor, including supervisor.
 - d. Concrete producer.
 - e. Concrete finisher, including supervisor.
 - f. Concrete polisher, including supervisor.
 - g. Technical representative of liquid applied product manufacturers.
 - h. Walkway auditor.

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2. Minimum Agenda: Polisher shall demonstrate understanding of work required by reviewing and discussing procedures for, but not limited to, following:
 - a. Tour mock-up and representative areas of required work, discuss and evaluate for compliance with Contract Documents, including substrate conditions, surface preparations, sequence of procedures, and other preparatory work performed by other installers.
 - b. Review Contract Document requirements.
 - c. Review approved submittals.
 - d. Review procedures, including, but not limited to:
 - 1) Details of each step of grinding, honing, and polishing operations.
 - 2) Application of liquid applied products.
 - 3) Protecting concrete floor surfaces until polishing work begins.
 - 4) Protecting polished concrete floors after polishing work is completed.
3. Reports: Record discussions, including decisions and agreements reached, and furnish copy of record to each party attending.

1.5 FIELD CONDITIONS

- A. Damage and Stain Prevention: Take precautions to prevent damage and staining of concrete surfaces to be polished.
 1. Prohibit vehicle parking over concrete surfaces to be polished.
 2. Prohibit pipe cutting operations over concrete surfaces to be polished.
 3. Prohibit storage of any items over concrete surfaces to be polished for not less than 28 days after concrete placement.
 4. Prohibit ferrous metals storage over concrete surfaces to be polished.
 5. Protect from petroleum, oil, hydraulic fluid, or other liquid dripping from equipment working over concrete surfaces to be polished.
 6. Protect from acids and acidic detergents contacting concrete surfaces to be polished.
 7. Protect from painting activities over concrete surfaces to be polished.
 8. Provide physical protection of polished floors with a composite membrane after completion of grinding, honing, polishing, burnishing and sealing. Membrane shall be a multi-ply textured membrane laminated with a non-woven polypropylene geotextile. Overlap the edges by a least two inches, and bond with manufacture approved seaming tape. Do not apply seaming tape to the floor itself. Keep covered floors free of other materials and debris until contract completion. Protect finished work in accordance with the manufacturer's recommendations.

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- B. Environmental Limitations: Comply with manufacturer's written instructions for substrate temperature, ambient temperature, moisture, ventilation, and other conditions affecting liquid applied product application.

PART 2 - PRODUCTS

2.1 LIQUID APPLIED PRODUCTS

- A. Liquid Densifier: Odorless, non-hazardous, silicate that penetrates concrete to react with free lime and calcium hydroxide to produce permanent chemical reaction that hardens and densifies concrete surface.
- B. Polish Guard: Non-film forming, stain resistant, food resistant, chemical stain resistant, impregnating sealant designed to be used on concrete surfaces previously densified.

2.2 ACCESSORIES

- A. Patching Compound: Compound composed of 40 percent portland cement, 45 percent limestone, and 15 percent vinyl acetate copolymer, when mixed with dust salvaged from grinding process forms a paste that hardens when surface imperfections are filled.
- B. Grout Material: Clear modified silicate sealant, containing no pore clogging latex, when mixed with dust salvaged from grinding process forms a paste that reacts with calcium hydroxide in concrete that hardens when surface imperfections are filled.
- C. Protective Cover: Non-woven, puncture and tear resistant, polypropylene fibers laminated with a multi-ply, textured membrane, not less than 18 mils in thickness.

2.3 POLISHING EQUIPMENT

- A. Field Grinding and Polishing Equipment:
 - 1. Variable speed, multiple head, counter-rotating, walk-behind machine with not less than 600 pounds of down pressure on grinding or diamond polishing pads.
 - 2. If dry grinding, honing, or polishing, use dust extraction equipment with flow rate suitable for dust generated, with squeegee attachments.
- B. Edge Grinding and Polishing Equipment: Hand-held or walk-behind machines which produces same results, without noticeable differences, as field grinding and polishing equipment.
- C. Burnishing Equipment: High speed walk-behind or ride-on machines capable of generating 1000 to 2000 revolutions per minute and with sufficient head pressure of not less than 20 pounds to raise floor temperature by 20 degrees F.

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- D. Metal Bonded Pads: Grinding pads with embedded industrial grade diamonds of varying grits fabricated for mounting on equipment.
- E. Resin Bonded Pads: Polishing pads with embedded industrial grade diamonds of varying grits fabricated for mounting on equipment.
- F. Burnishing Pads: Maintenance pads for use with high speed burnishing equipment.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Acceptance of Surfaces and Conditions:
 - 1. Examine substrates to be polished for compliance with requirements and other conditions affecting performance.
 - 2. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents.
 - 3. Starting work within a particular area will be construed as acceptance of surface conditions.

3.2 PREPARATION

- A. Cleaning New Concrete Surfaces:
 - 1. Prepare and clean concrete surfaces.
 - 2. Provide sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, paint splatter, and other contaminants incompatible with liquid applied products and polishing.

3.3 VAPOR TESTING CONCRETE FLOORS

- A. Alkalinity:
 - 1. Test Method: Measure pH according to method indicated in ASTM F 710.
 - 2. Acceptable Results: pH between 8 and 10.
- B. Moisture Vapor Transmission Rate:
 - 1. Test Method: Perform anhydrous calcium chloride test according to ASTM F 1869.
 - 2. Acceptable Results: Not more than 5 pounds per 1000 square feet in 24 hours.

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C. Relative Humidity:

1. Test Method: Perform relative humidity test using in situ probes according to ASTM F 2170.
2. Acceptable Results: Not more than 75 percent.

3.4 POLISHING CONCRETE FLOORS

A. Sequence of Polishing: Perform polishing before partition studs are erected.

B. Initial Grinding:

1. Use grinding equipment with metal bonded grinding pads.
2. Begin grinding in one direction using sufficient size grit pad.
3. Make sequential passes with each pass perpendicular to previous pass using finer grit pad with each pass, up to 150 grit.
4. Achieve maximum refinement with each pass before proceeding to finer grit pads.
5. Vacuum floor using squeegee vacuum attachment after each pass.
6. Continue grinding until aggregate exposure matches approved field mock-ups.

C. Treating Surface Imperfections:

1. Mix patching compound and grout material with dust created by grinding operations to match color of adjacent concrete surface.
2. Fill surface imperfections including, but not limited to, holes, surface damage, small and micro cracks, air holes, pop-outs, and voids.
3. Work compound and treatment until color differences between concrete surface and filled surface imperfections are not reasonably noticeable when viewed from 10 feet away under lighting conditions that will be present after construction.

D. Liquid Densifier Application: Apply undiluted to point of rejection, remove excess liquid, and allow to cure according to manufacturer's instructions.

E. Grout Grinding:

1. Use grinding equipment and appropriate grit grinding pads.
2. While applying fresh grout material prior to, grind concrete in direction perpendicular to initial grinding to remove scratches.
3. Vacuum floor using squeegee vacuum attachment after each pass.

F. Honing:

1. Use grinding equipment with resin bonded grinding pads.
2. Grind concrete in one direction starting with 50 grit pad and make as many sequential passes required to remove scratches, each pass

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perpendicular to previous pass, up to 400 grit pad reaching maximum refinement with each pass before proceeding to finer grit pads.

3. Auto scrub or vacuum floor using squeegee vacuum attachment after each pass.

G. Polishing:

1. Use polishing equipment with resin bonded polishing and burnishing pads.
2. Begin polishing in one direction starting with 800 grit pad.
3. Make sequential passes with each pass perpendicular to previous pass using finer grit pad with each pass, up to 3000 grit.
4. Achieve maximum refinement with each pass before proceeding to finer grit pads.
5. Auto scrub or vacuum floor using squeegee vacuum attachment after each pass.
6. Continue polishing until gloss appearance, as measured according to ASTM E 430, matches approved field mock-ups.

H. Polish Guard: Uniformly apply and remove excessive liquid according to manufacturer's instructions.

I. Final Polish: Using burnishing equipment and finest grit burnishing pads, burnish to uniform sheen matching approved mock-up.

J. Final Polished Concrete Floor Finish:

1. Class A – Cream Finish: Polish portland cement paste resulting in little or no aggregate exposure.
2. Level 3 – High Gloss Appearance:
 - a. Procedure: Not less than 6 steps with full refinement of each diamond pad up to 1500 grit resin bonded pad with one application of densifier.
 - b. Gloss Reading: Not less than 60 according to ASTM E 430 before polish guard application.

3.5 FIELD QUALITY CONTROL

A. Field Testing: Engage a qualified walkway auditor to perform field testing according to NFSI 101-A to determine if polished concrete floor finish complies with specified static coefficient of friction.

3.6 CLOSEOUT ACTIVITIES

A. Maintenance Training: CPAA Master Craftsman shall train Owner's designated personnel in proper procedures for maintaining polished concrete floor.

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3.7 PROTECTION

- A. Covering: After completion of polishing, protect polished floors from subsequent construction activities with protective covering.

END OF SECTION

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B. Microwave Oven **MO-1**:

1. Mounting: Undercabinet.
2. Type: Conventional.
3. Dimensions:
 - a. Width: 30 inches.
 - b. Depth: 19-1/2 inches.
 - c. Height: 18 inches.
4. Capacity: 2.0 cu. ft..
5. Oven Door: Door with observation window and pull handle
6. Exhaust Fan: Variable-speed fan, nonvented, recirculating type with charcoal filter and with manufacturer's standard capacity.
7. Microwave Power Rating: 1000 W.
8. Electric Power Supply: 120 V, 60 Hz, 1 phase, 15 A.
9. Controls: Digital panel controls and timer display.
10. Other Features: Turntable.
11. Material: Stainless steel .

2.2 REFRIGERATOR/FREEZERS

A. Manufacturers: Subject to compliance with requirements, provide the basis of design product or products by one of the following:

1. **Maytag; a division of Whirlpool Corporation**
2. Amana; a division of Whirlpool Corporation.
3. BOSCH Home Appliances.
4. Electrolux Home Products (Frigidaire).
5. General Electric Company (GE).
6. Jenn-Air; a division of Whirlpool Corporation.
7. KitchenAid; a division of Whirlpool Corporation.
8. LG Appliances.
9. Samsung.
10. Sub-Zero, Inc.
11. Viking Range Corporation.

B. Refrigerator/Freezer **RF-1**: Two-door refrigerator/freezer with freezer on ~~top~~ **bottom** and complying with AHAM HRF-1.

1. **Basis of Design Model: Maytag Model No. MFT2776DEM**
2. Type: Freestanding.
3. Dimensions:
 - a. Width: ~~30~~**36** inches **maximum**.
 - b. Depth: 36 inches maximum.
 - c. Height: 73 inches maximum.

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4. Storage Capacity:
 - a. Refrigeration Compartment Volume: 14.0 cu. ft. minimum.
 - b. Freezer Volume: 5.13 cu. ft. minimum
 - c. Shelf Area: ~~Three~~ adjustable glass shelves.
5. General Features:
 - a. Door Configuration: Overlay.
 - b. Dispenser in door for ice and cold water.
 - c. Built-in water filtration system.
 - d. Dual refrigeration systems.
6. Refrigerator Features:
 - a. Interior light in refrigeration compartment.
 - b. Door Storage: Modular compartments.
 - c. Temperature-controlled meat/deli bin.
7. Freezer Features: One freezer compartment(s) with door(s).
 - a. Automatic defrost.
 - b. Interior light in freezer compartment.
 - c. Automatic icemaker and storage bin.
8. Energy Performance, ENERGY STAR: Provide appliances that qualify for the EPA/DOE ENERGY STAR product labeling program.
9. Front Panel(s): Stainless steel.
10. Appliance Color/Finish: Stainless steel.

2.3 CLOTHES WASHERS AND DRYERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. **Maytag; a division of Whirlpool Corporation**
 2. Amana; a division of Whirlpool Corporation.
 3. BOSCH Home Appliances.
 4. Electrolux Home Products (Frigidaire).
 5. General Electric Company (GE).
 6. KitchenAid; a division of Whirlpool Corporation.
 7. LG Appliances.
 8. Samsung.
- B. Clothes Washer **CW-1**: Complying with ASSE 1007.
 1. Type: Freestanding, **top or** front-loading unit.
 2. Dimensions:

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- a. Width: ~~30~~ 42 inches maximum.
 - b. ~~Depth: 31 inches.~~
 - c. ~~Height: 36 inches maximum for top loading units.~~
3. Drum: Perforated stainless steel.
 - a. Capacity: 3.8 cu. ft. minimum.
 4. Controls: Touch-pad controls for water-fill levels, wash/rinse water temperatures, and variable-speed and fabric selectors.
 - a. Wash Cycles: Six wash cycles including regular, delicate, and permanent press.
 - b. Wash Temperatures: Three settings.
 5. Electrical Power: 120 V, 60 Hz, 1 phase, 15 A.
 6. Motor: Manufacturer's standard with built-in overload protector.
 7. Features:
 - a. Self-cleaning lint filter.
 - b. Unbalanced-load compensator.
 - c. Inlet Hoses: Minimum length 60 inches.
 - d. Drain Hoses: Minimum length 48 inches.
 - e. Self-leveling legs.
 - f. Automatic dispenser for detergent.
 - g. Spin-cycle safety switch.
 - h. End-of-cycle signal.
 - i. Extra-rinse option.
 - j. Delay-wash option.
 - k. Electronic temperature control.
 - l. Water levels automatically set.
 8. Energy Performance, ENERGY STAR: Provide appliances that qualify for the EPA/DOE ENERGY STAR product labeling program.
 9. Water-Efficient Clothes Washer: Provide clothes washer with modified energy factor greater than or equal to 2.0 and water factor less than 5.5.
 10. Appliance Finish: Porcelain enamel on top and lid; baked enamel on front and sides.
 - a. Color: White.
 11. Front-Panel Finish: Porcelain enamel.
 - a. Panel Color: White.
- C. Clothes Dryer **CD-1**: Complying with AHAM HLD-1.
1. Type: Freestanding, frontloading, electric unit.
 2. Dimensions:

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- a. Width: ~~27~~ 42 inches maximum.
- b. ~~Depth: 31 inches.~~
- c. ~~Height: 36 inches.~~

3. Drum: Perforated stainless steel.

- a. Capacity: 5.7 cu. ft. minimum.

4. Controls: Touch-pad controls for drying cycle, temperatures, and fabric selectors.

5. Electric-Dryer Power: 240 V, 60 Hz, 1 phase, 30 A.

6. Features:

- a. Removable lint filter.
- b. Electronic temperature and moisture level sensor control.
- c. End-of-cycle signal.
- d. Interior drum light.
- e. Self-leveling legs.
- f. Antibacterial cycle.
- g. Auxiliary drying rack.
- h. Built-in electrical power fuse.

7. Appliance Finish: Porcelain enamel on top and lid; baked enamel on front and sides.

- a. Color: White.

8. Front-Panel Finish: Porcelain enamel.

- a. Panel Color: White.

2.4 GENERAL FINISH REQUIREMENTS

- A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances, power connections, and other conditions affecting installation and performance of residential appliances.

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2.10 LUBRICATION FLUIDS STORAGE TANK PIPING SPECIALTIES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Containment Solutions, Inc.
 - 2. ~~Maenaught.~~
 - 3. Legacy Manufacturing Company
- B. Fitting Materials: Cast iron, malleable iron, brass, or corrosion-resistant metal; suitable for lubrication-oil service.
 - 1. Aboveground-Mounted Fittings: Weatherproof.
- C. Spill-Containment Fill Boxes: 7 gallon surface mounting, with drainage feature to drain oil into tank, threaded fill-pipe connection, and wrench operation.
- D. Pipe Adapters and Extensions: Compatible with piping and fittings.
- E. Weatherproof Vent Cap: Cast- or malleable-iron increaser fitting with corrosion-resistant wire screen, with free area at least equal to cross-sectional area of connecting pipe and threaded-end connection.

2.11 LUBRICATION FLUIDS TRANSFER PUMPS (ATF, EO, 5/20, GO)

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Balcrank Products Model Panter HP 1131-010 pump or comparable product by one of the following:
 - 1. Graco Inc.
 - 2. Liquidynamics.
 - 3. Lubeq Corporation.
 - 4. ~~Maenaught.~~
- B. Description: Tank Mounted Pneumatically operated 5:1 ratio positive displacement oil pump, 4.25" diameter air motor, hard coated aluminum and corrosive resistant steel, with pressure relief valve kit and a runaway valve. Pump shall in-line design with a 1 NPS inlet down tube. Maximum fluid pressure 500 psi. Comply with UL 343, and HI M109. Provide with pump package with all accessories, adapter, air hose, and fluid hose.

2.12 LUBRICATION FLUIDS TRANSFER PUMP (GO)

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Balcrank Products Model Panther HP 1131-008 pump or comparable product by one of the following:
 - 1. Graco Inc.

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2. Liquidynamics.
3. Lubeq Corporation.
4. ~~Macnaught.~~

B. Description: Wall Mounted Pneumatically operated 5:1 ratio positive displacement oil pump, 4.25 inch diameter air motor, hard coated aluminum and corrosive resistant steel, with pressure relief valve kit and a runaway vale. Pump shall be in-line design with a 1 NPS inlet down tube. Maximum fluid pressure 500 psi. Comply with UL 343, and HI M109. Provide with wall mounting bracket and suction tube kit, air hose and adapter.

2.13 STATIONARY CHASSIS GREASE PUMP INDUCTOR SYSTEM (CG)

A. Basis-of-Design Product: Subject to compliance with requirements, provide Balcrank Products Model Lion HP 1151-012 pump or comparable product by one of the following:

1. Graco Inc.

B. Description: Pneumatically operated 50:1 ratio positive displacement grease pump, 3" diameter air motor, hard coated aluminum and corrosive resistant steel. Stationary topper-inducer package for 400 lb grease container, package includes fluid/air hose kits, lift assembly, inlet screen on down tube induction plate and base. Maximum fluid pressure 5000 psi. Comply with UL 343, and HI M109. Provide with low level shut off.

2.14 WASTE OIL EVACUATION SYSTEM (WO)

A. Basis-of-Design Product: Subject to compliance with requirements, provide Balcrank Products Model 1121-018 (Evacuation Package) or comparable product by one of the following:

1. Graco Inc.

B. Description: Pneumatically operated 1:1 ratio UL listed diaphragm waste oil pump with wall mount bracket, air control kit, fluid hose, compressed air solenoid valve, ¾"x 12'-0" long waste oil suction hose with quick disconnect fitting and shut-off valve at receiver. Provide high level shut-off system to automatically shut-off pump when waste oil tank is full.

C. Diaphragm pump:

1. Balcrank Products pump Series CF30, Model 1120-026.
2. Wall bracket.
3. Pump specialties:
 - a. Compressed air solenoid valve.
 - b. Compressed air flexible hose connection.
 - c. Waste oil discharge flexible hose connection.

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2. Liquidynamics.
 3. Lubeq Corporation.
 4. ~~Macnaught.~~
- B. Description: Overhead Open Type Hose reels shall have a minimum capacity of 50 feet of hose. The hose reel base will be a 10 gauge, heavy-duty, single pedestal frame with welded joints and formed ribs, include mounting channel and hose kit. A rewind motor spring will provide uniform tension throughout the usable range.
- C. Mounting bracket kit for (2) hose reels:
1. Balcrank Products Model 2230-004.
- D. Mounting bracket kit for (4) hose reels:
1. Balcrank Products Model 2230-006.
- E. Mounting bracket kit for (6) hose reels:
1. Balcrank Products Model 2230-008.
- F. Open Type Hose Reel for Engine Oil, Gear Oil, Automatic Transmission Fluid and Windshield Washer Fluid:
1. Balcrank Products Model 2140-014.
 2. 1/2 NPS lubrication fluids shut-off valve.
 3. Lubrication fluids inlet hose kit.
 4. 1/2" diameter hose 50' in length.
 5. Provide Mylar self-adhesive labels 1"x 5" identifying type of fluid.
- G. Open Type Hose Reel for Chassis Grease:
1. Balcrank Products Model 2140-020.
 2. 1/2 NPS lubrication-oil shut-off valve.
 3. Lubrication-oil inlet hose kit.
 4. 3/8" diameter hose 50' in length with 1/4" outlet fitting.
 5. Provide Mylar self-adhesive labels 1"x 5" indentifying type of fluid.
- 2.19 METERED LUBRICATION FLUIDS DISPENSER NOZZLE FOR ENGINE OIL 5/20, GEAR OIL, AUTOMATIC TRANSMISSION FLUID & WINDSHIELD WASHER FLUID.
- A. Basis-of-Design Product: Subject to compliance with requirements, provide Balcrank Products Model 3330-054 with 3332-040 extension or comparable product by one of the following:
1. Preset electric metered dispenser nozzles:
 - a. Graco Inc.

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- b. Liquidynamics.
- c. Lubeq Corporation.
- d. ~~Maenaught.~~

- B. Description: Preset electric metered dispenser nozzles operated by AA batteries with control pad displays, trigger guard, and rigid extension. Preset feature for hands free operation.

2.20 DISPENSER NOZZLE FOR CHASSIS GREASE

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Balcrank Products Model 3310-027 or comparable product by one of the following:

- 1. Heavy duty grease handle:
 - a. Graco Inc.
 - b. Liquidynamics.
 - c. Lubeq Corporation.
 - d. ~~Maenaught.~~

- B. Description: Heavy duty grease handle with 1/4" inlet, 18" long with P hose and Z-swivel handle.

2.21 LUBRICATION OILS

- A. Lubrication Oil: Grades to be determined by the owner.

2.22 SLEEVES

- A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.

2.23 ESCUTCHEONS

- A. General Requirements for Escutcheons: Manufactured wall and ceiling escutcheons and floor plates, with ID to fit around pipe or tube and with OD that completely covers opening.
- B. One-Piece, Deep-Pattern Escutcheons: Deep-drawn brass with polished chrome-plated finish.
- C. One-Piece, Stamped-Steel Escutcheons: With set screw and chrome-plated finish.

2.24 GROUT

- A. Description: ASTM C 1107, Grade B, nonshrink and nonmetallic, dry hydraulic-cement grout.

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6. Provide drainage and cleanup for wash-down procedures.
7. Antimicrobial Agents and Coatings: Apply EPA-registered antimicrobial agents if fungus is present. Apply antimicrobial agents according to manufacturer's written instructions after removal of surface deposits and debris.

3.9 START UP

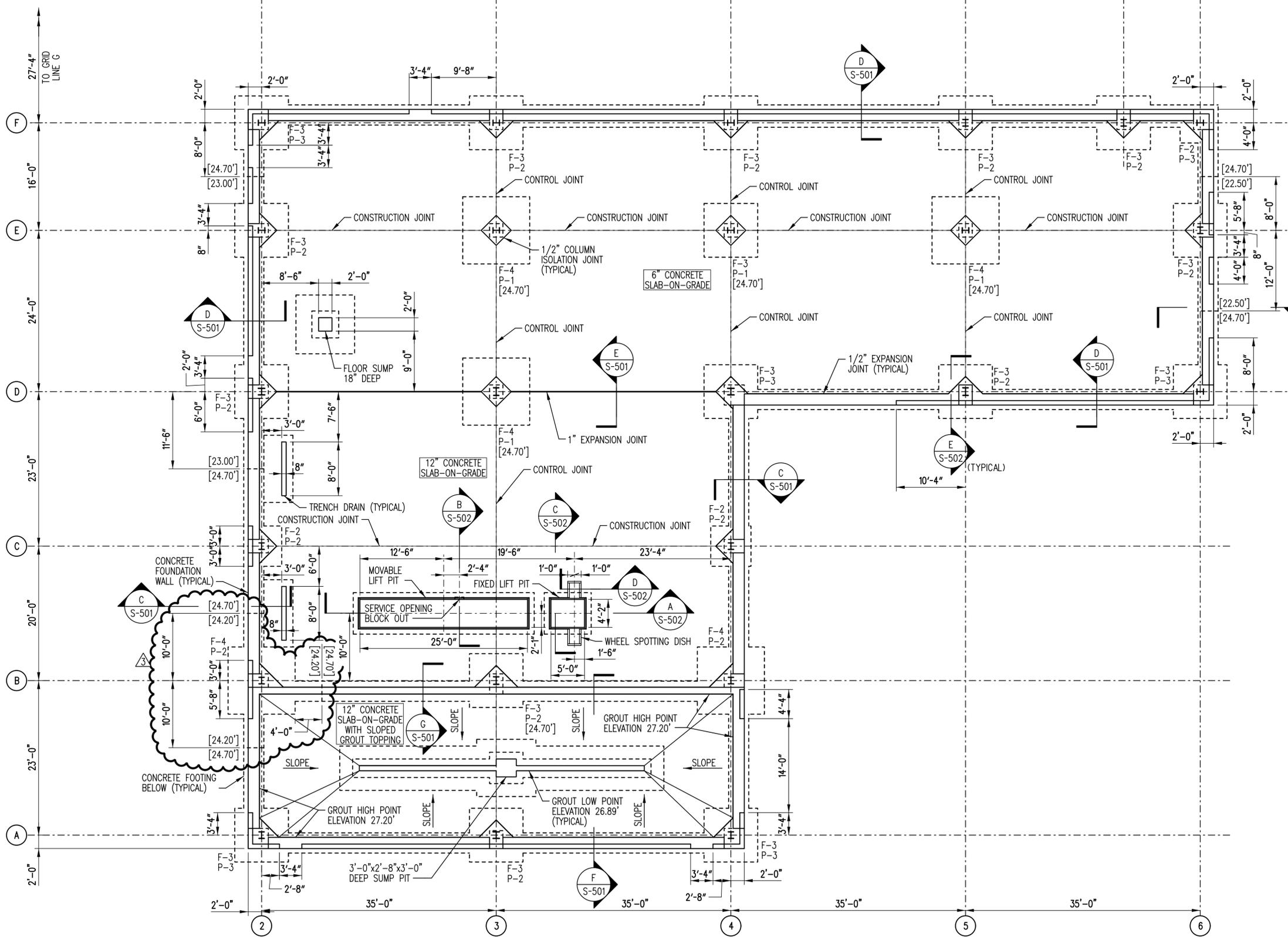
- A. Air Balance: Comply with requirements in Section 230593 "Testing, Adjusting, and Balancing for HVAC."

3.10 DUCT SCHEDULE

- A. Fabricate ducts with galvanized sheet steel except as otherwise indicated and as follows:
 1. Shower exhaust ducts shall be ~~steel~~ aluminum from shower air device to point indicated on plan.
- B. Supply Ducts:
 1. Ducts Connected to Terminal Units:
 - a. Pressure Class: Positive 2-inch wg.
 - b. Minimum SMACNA Seal Class: C.
 - c. SMACNA Leakage Class for Rectangular: 24.
 - d. SMACNA Leakage Class for Round and Flat Oval: 12.
 2. Ducts Connected to Constant-Volume Air-Handling Units HV-1:
 - a. Pressure Class: Positive 3-inch wg.
 - b. Minimum SMACNA Seal Class: B.
 - c. SMACNA Leakage Class for Rectangular: 12.
 - d. SMACNA Leakage Class for Round and Flat Oval: 6.
 3. Ducts Connected to Variable-Air-Volume Air-Handling Units RTU-1:
 - a. Pressure Class: Positive 4-inch wg.
 - b. Minimum SMACNA Seal Class: A.
 - c. SMACNA Leakage Class for Rectangular: 6.
 - d. SMACNA Leakage Class for Round: 3.
- C. Return Ducts:
 1. Ducts Connected to Air-Handling Units RTU-1:
 - a. Pressure Class: Negative 2-inch wg.
 - b. Minimum SMACNA Seal Class: C.
 - c. SMACNA Leakage Class for Rectangular: 24.

MATCH LINE - SEE S-101

MATCH LINE - SEE S-101



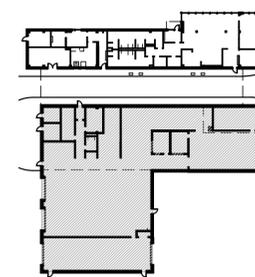
GENERAL SHEET NOTES

- FLOOR CONSTRUCTION TO BE 6" AND 12" THICK REINFORCED CONCRETE SLAB-ON-GRADE. THESE AREAS ARE DESIGNATED ON THE PLAN. TOP OF CONCRETE ELEVATION 27.37' (NORTH BUILDING) AND 27.20' (SOUTH BUILDING).
- EXX.XX' INDICATES THE BOTTOM OF FOOTING ELEVATION.
- REFER TO SHEET S-001 FOR GENERAL STRUCTURAL NOTES, CODES, AND LOADS.
- REFER TO SHEETS S-002 TO S-006 FOR ABBREVIATIONS AND STRUCTURAL TYPICAL DETAILS.
- REFER TO SHEETS S-501 TO S-502 FOR FOUNDATION DETAILS AND SECTIONS.
- REFER TO SHEETS S-601 TO S-603 FOR COLUMN SCHEDULES, BASE PLATE AND CONCRETE PEDESTAL DETAILS.
- COORDINATE ALL STRUCTURAL WORK WITH THE CIVIL, ELECTRICAL, AND PLUMBING DRAWINGS TO LOCATE ALL CONCRETE SLAB PENETRATIONS.
- CONTRACTOR TO VERIFY MINIMUM ALLOWABLE BEARING CAPACITY OF 2,000 PSF PRIOR TO INSTALLATION OF FOUNDATION AND FOOTINGS.
- COORDINATE ALL DETAILS OF MOVABLE LIFT PIT AND FIXED LIFT PIT WITH LIFT MANUFACTURER'S REQUIREMENTS/RECOMMENDATIONS. NOTIFY ENGINEER OF ANY DISCREPANCY BETWEEN LIFT MANUFACTURER'S REQUIREMENTS AND INFORMATION SHOWN ON THESE DRAWINGS PRIOR TO BEGINNING CONCRETE WORK.
- SLOPE GROUT TOPPING IN TRENCH DRAIN TO ACCOMMODATE POSITIVE FLOW TO DRAIN OR SUMP PIT. SEE PLUMBING DRAWINGS.

FOOTING SCHEDULE			
MARK	SIZE	REINFORCING	REMARKS
F-1	4'-0"x4'-0"x1'-0" THICK	8-#5 EACH WAY TOP & BOTTOM	-
F-2	6'-0"x6'-0"x1'-0" THICK	12-#5 EACH WAY TOP & BOTTOM	-
F-3	8'-0"x8'-0"x1'-0" THICK	16-#5 EACH WAY TOP & BOTTOM	-
F-4	10'-0"x10'-0"x1'-0" THICK	20-#5 EACH WAY TOP & BOTTOM	-

PIER/PEDESTAL SCHEDULE			
MARK	SIZE	REINFORCING	REMARKS
P-1	24"x24"	12-#6 VERT BARS WITH #4 TIES @6", 2 TIES WITHIN TOP 5" OF PEDESTAL	SEE PEDESTAL DETAIL ON S-603
P-2	24"x36"	16-#6 VERT BARS WITH #4 TIES @6", 2 TIES WITHIN TOP 5" OF PEDESTAL	SEE PEDESTAL DETAIL ON S-603
P-3	36"x36"	20-#6 VERT BARS WITH #4 TIES @6", 2 TIES WITHIN TOP 5" OF PEDESTAL	SEE PEDESTAL DETAIL ON S-603

NOTE: SOUTH BUILDING TOP OF PEDESTAL ELEVATION IS 26.53'.

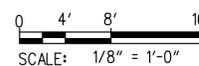


KEY PLAN
SCALE: NTS

1 FOUNDATION PLAN SOUTH BUILDING
S-101 SCALE: 1/8" = 1'-0"

ADDENDUMS / REVISIONS

3 LOWER FOOTING B-2 6-10-15

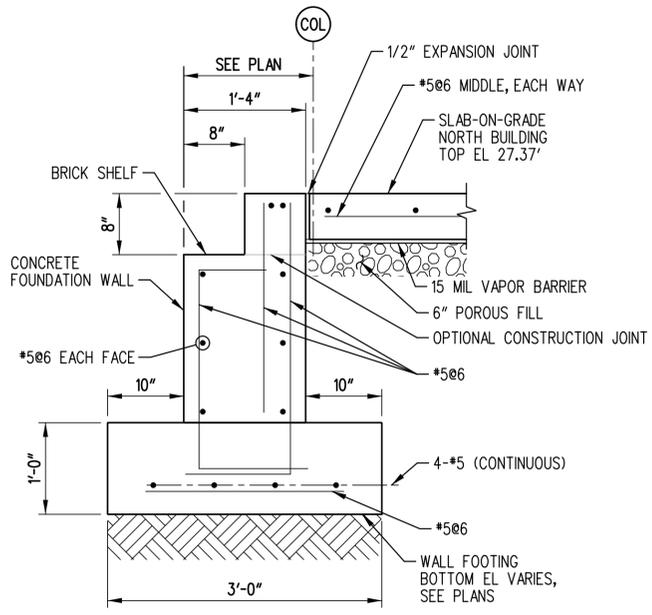


DELAWARE TRANSIT CORPORATION
LEWES PARK AND RIDE
AND MAINTENANCE FACILITY

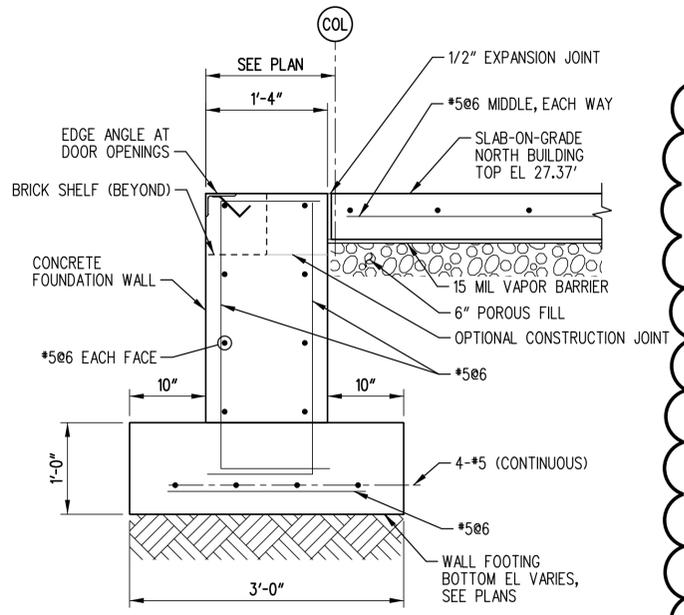
CONTRACT	BRIDGE NO.
T200612502	
COUNTY	DESIGNED BY: RJN/GAP
SUSSEX	CHECKED BY: RBG

FOUNDATION PLAN -
SOUTH BUILDING

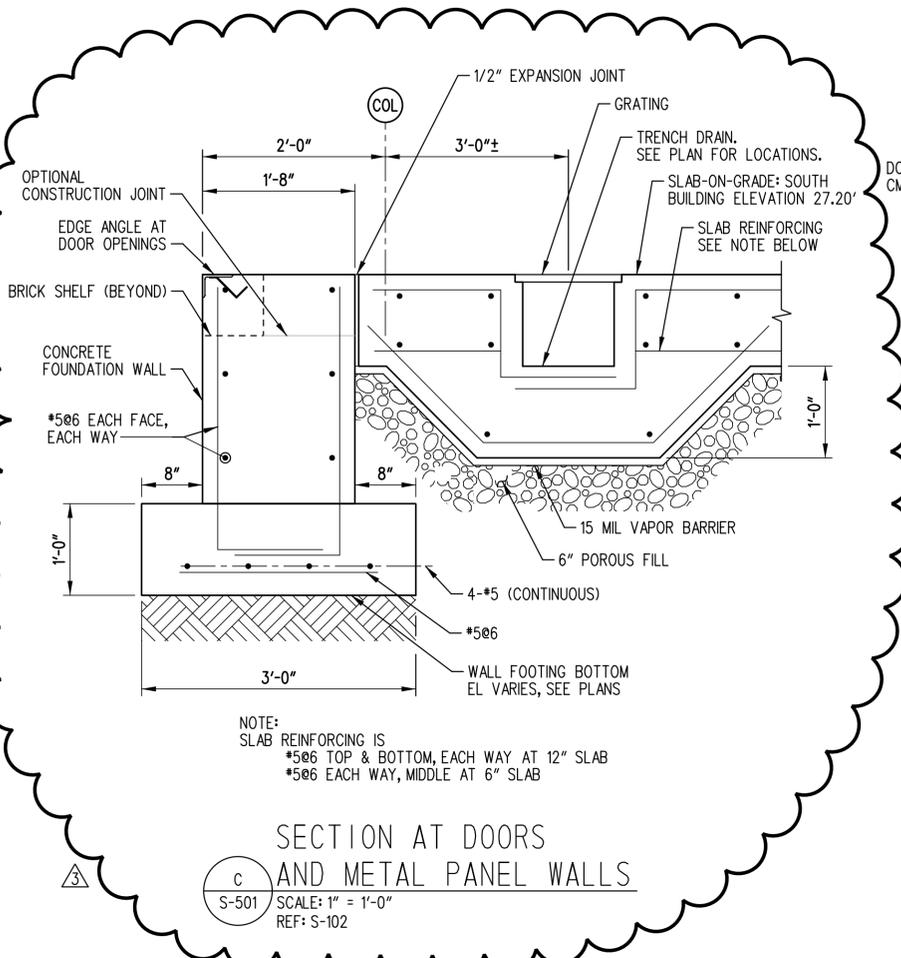
S-102
SHEET NO.
65
TOTAL SHTS.
185



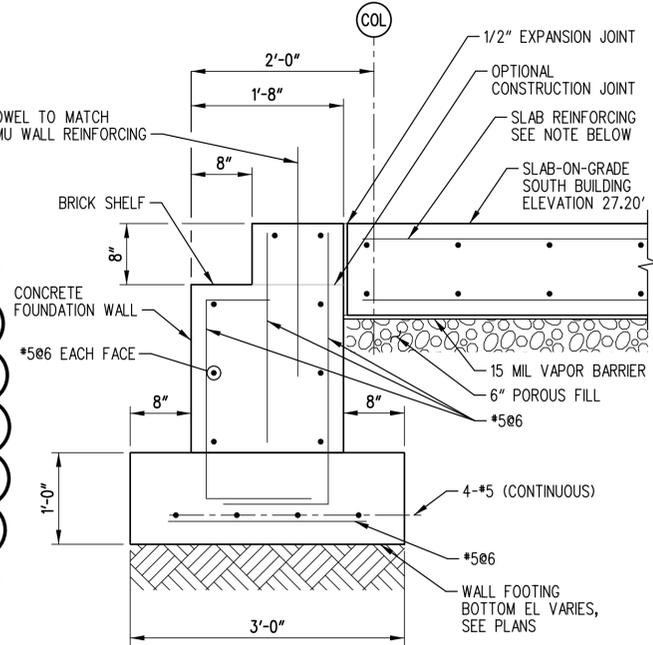
A
SECTION AT BRICK SHELF
S-501 SCALE: 1" = 1'-0"
REF: S-101



B
SECTION AT DOORS OR CURTAIN WALL
S-501 SCALE: 1" = 1'-0"
REF: S-101



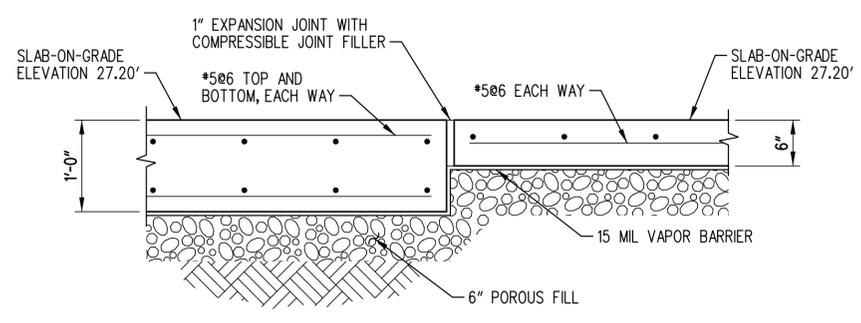
C
SECTION AT DOORS AND METAL PANEL WALLS
S-501 SCALE: 1" = 1'-0"
REF: S-102



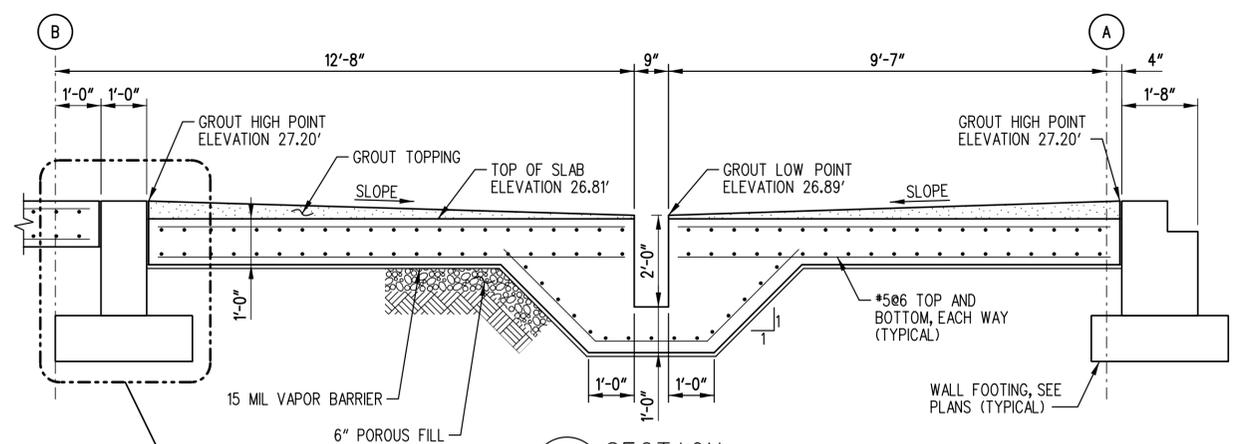
D
SECTION AT BRICK SHELF
S-501 SCALE: 1" = 1'-0"
REF: S-102

NOTE:
SLAB REINFORCING IS:
#5@6 TOP & BOTTOM, EACH WAY AT 12" SLAB
#5@6 EACH WAY, MIDDLE AT 6" SLAB

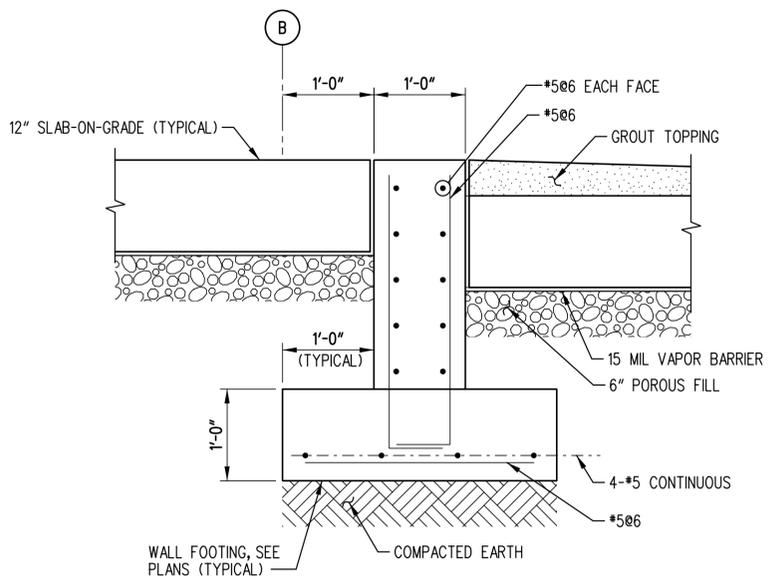
NOTE:
SLAB REINFORCING IS:
#5@6 TOP & BOTTOM, EACH WAY AT 12" SLAB
#5@6 EACH WAY, MIDDLE AT 6" SLAB



E
SECTION
S-501 SCALE: 1" = 1'-0"
REF: S-102



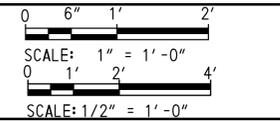
F
SECTION
S-501 SCALE: 1/2" = 1'-0"
REF: S-102



G
SECTION
S-501 SCALE: 1" = 1'-0"
REF: S-102

No. 90181-504 (S-501) CR-01-90181004s-501.dgn
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ADDENDUMS / REVISIONS	
3	REVISED DETAIL C 6-10-15



CONTRACT	BRIDGE NO.
T200612502	
COUNTY	DESIGNED BY: GAP
SUSSEX	CHECKED BY: RBG

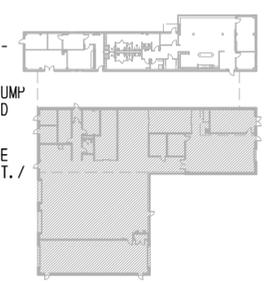
S-501
SHEET NO.
77
TOTAL SHTS.
185

DRAWING NOTES

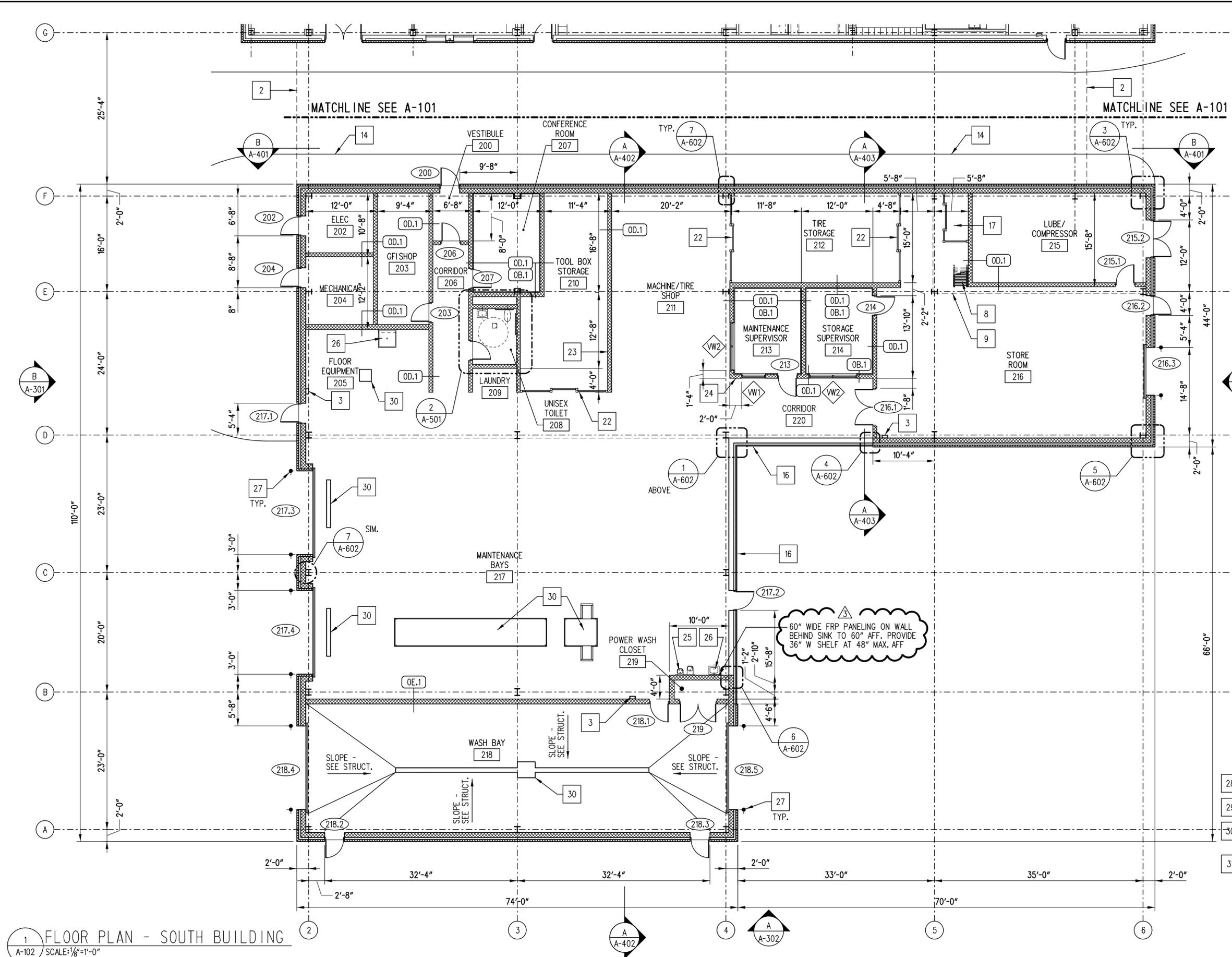
- SPECIFIC CONSTRUCTION NOTES LISTED ON PLAN SHEETS DO NOT NECESSARILY APPLY TO EVERY PLAN SHEET.
- NOT ALL DIMENSIONS, WALL TAGS, OR DOOR NUMBERS ARE PROVIDED ON FLOOR PLANS. SEE ENLARGED PLANS OF AREAS INDICATED ON PLAN FOR SUCH ITEMS.

CONSTRUCTION NOTES

- 12" WIDE BY 15" DEEP DOUBLE TIER LOCKERS
- LINE OF ROOF ABOVE.
- FIRE EXTINGUISHER AND CABINET: SURFACE MTD. (FEC-S) ON CMU WALLS SEMI-RECESSED (FEC-SR) IN STUD WALLS LESS THAN 6" RECESSED (FEC-R) IN STUDS 6" OR GREATER
- 15" WIDE BY 18" DEEP DOUBLE TIER LOCKERS
- VENDING MACHINE (NIC)
- REFRIGERATOR
- SAFE (NIC)
- ALUMINUM SHIPS LADDER TO MEZZANINE - SEE SHEET A-504 FOR MEZZANINE
- EDGE OF MEZZANINE FLOOR ABOVE - SEE A-504 AND STRUCTURAL
- ROOF ACCESS LADDER AND HATCH ABOVE
- CLOTHES ROD WITH SHELF ABOVE
- METAL FILLER PANEL TO MATCH METAL LOCKER FINISH.
- 1-1/2" PLASTIC LAMINATE COUNTERTOP, PLAM-4.
- EDGE OF EXTERIOR SIDEWALK - SEE CIVIL
- CABINET UNIT HEATER / ACU - SEE MECHANICAL
- CORRUGATED METAL PANEL SIDING
- WIRE MESH GF1 STORAGE CAGE
- FARE PULL VAULT - OWNER FURNISHED AND CONTRACTOR INSTALLED
- THROUGH-WALL PARCEL DROP BOX
- 12" WIDE BY 15" DEEP SINGLE TIER METAL LOCKERS
- REAR LOADING POST OFFICE BOXES
- WIRE MESH PARTITIONS TO UNDERSIDE OF ROOF DECK AND 4070 SLIDING DOOR
- WALL MOUNTED COAT HOOKS - TOTAL (6)
- TIME CLOCK - OWNER FURNISHED AND CONTRACTOR INSTALLED
- ELECTRIC WATER COOLER - SEE PLUMBING
- UTILITY SINK - SEE PLUMBING
- CONCRETE FILLED STEEL PIPE BOLLARDS - SEE CIVIL DRAWINGS



KEY PLAN
SCALE: N.T.S.



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