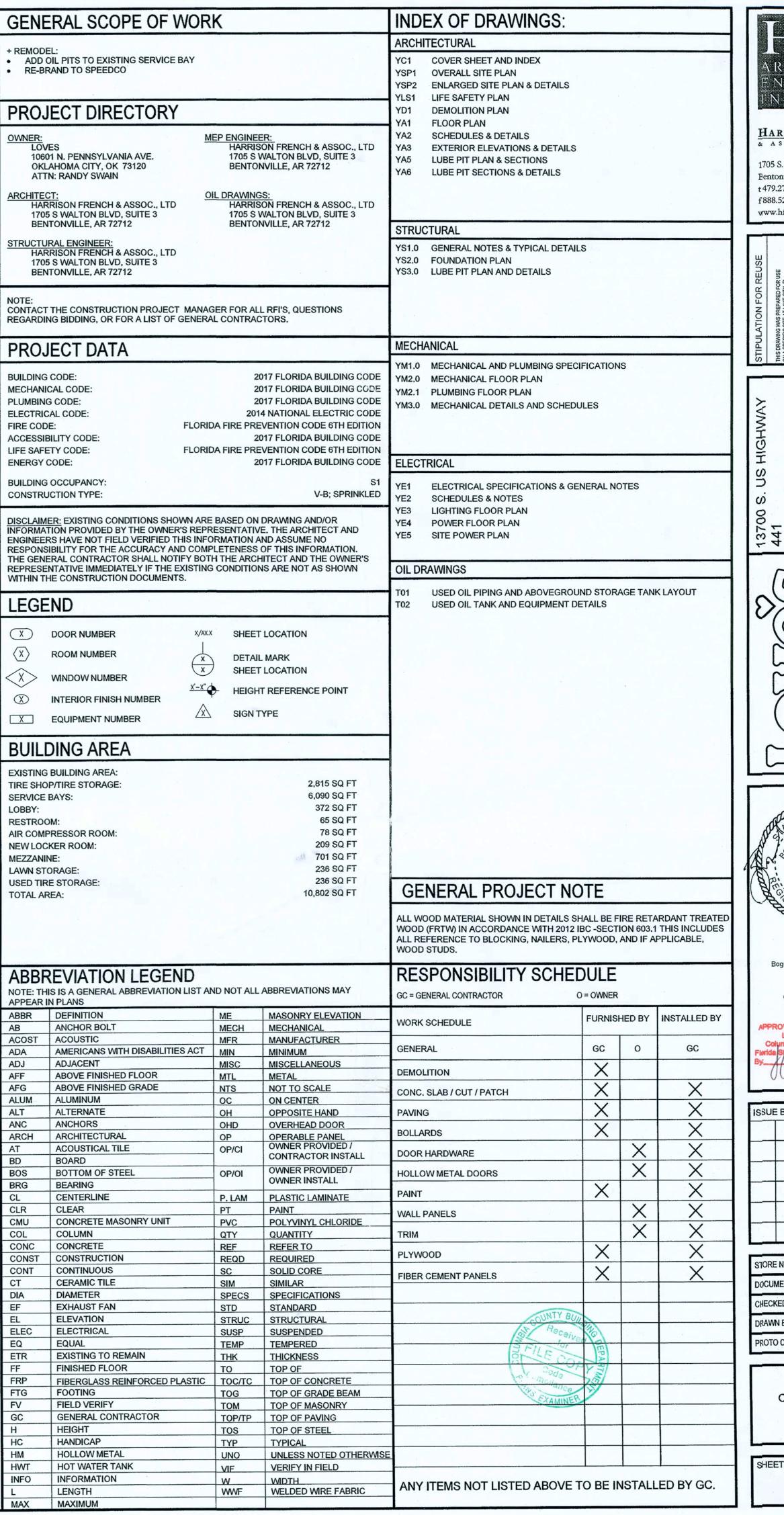


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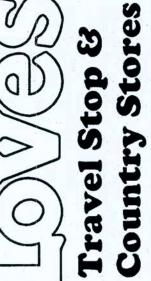
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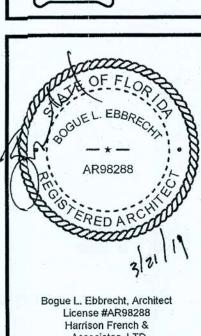
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PROVED (Subject to Revisions)
Life Safety Services
Columbia County Fire Rescue
da State Fire Inspector # 136416

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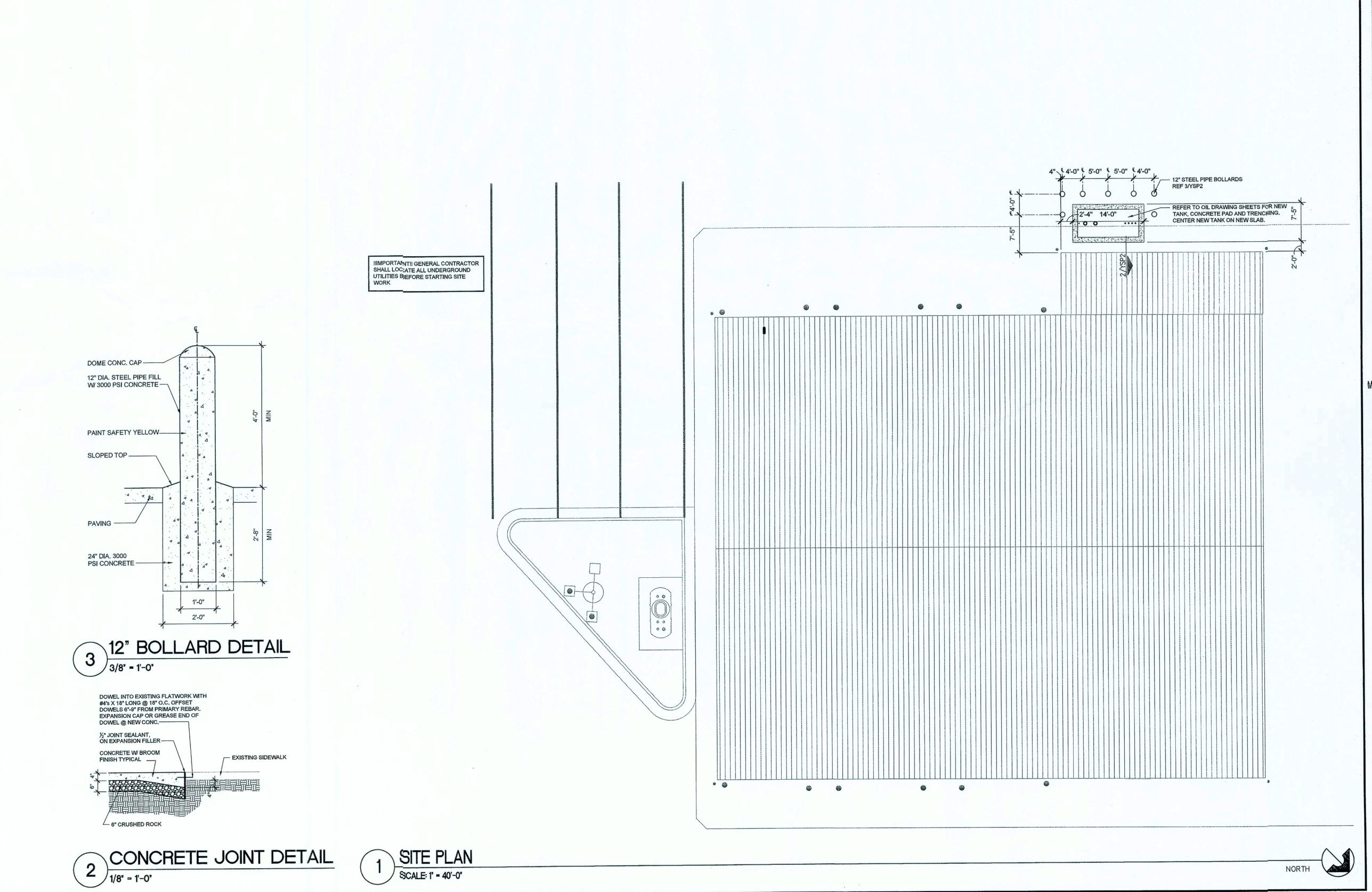
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COVER SHEET AND INDEX

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LAKE CITY, FL
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SPEEDCO RE-BRANDING

Travel Stop & Country Stores



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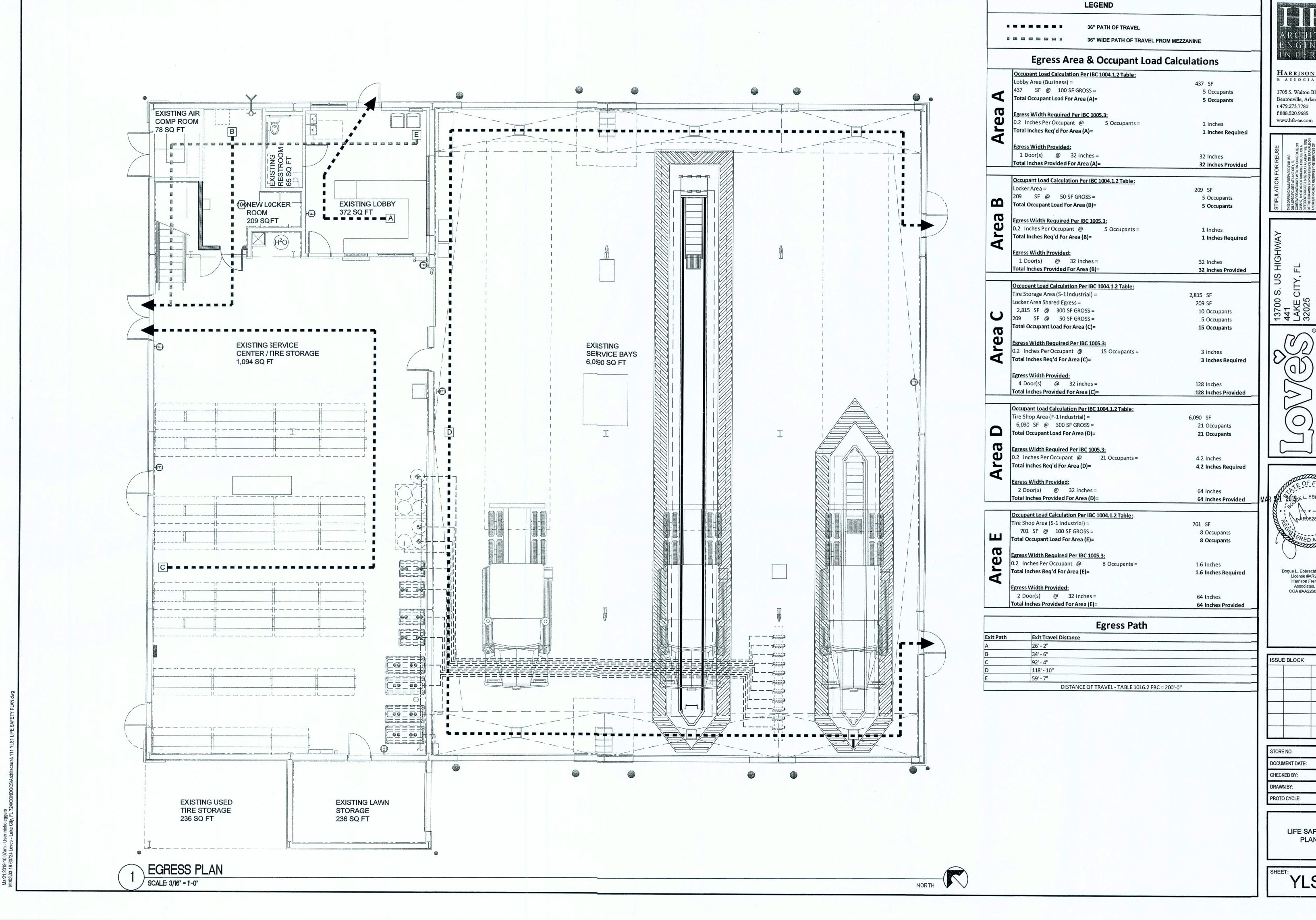
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ENLARGED SITE PLAN & DETAILS

YSP2

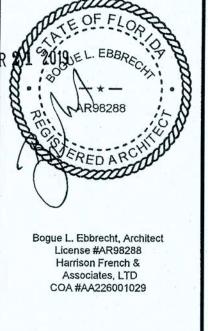


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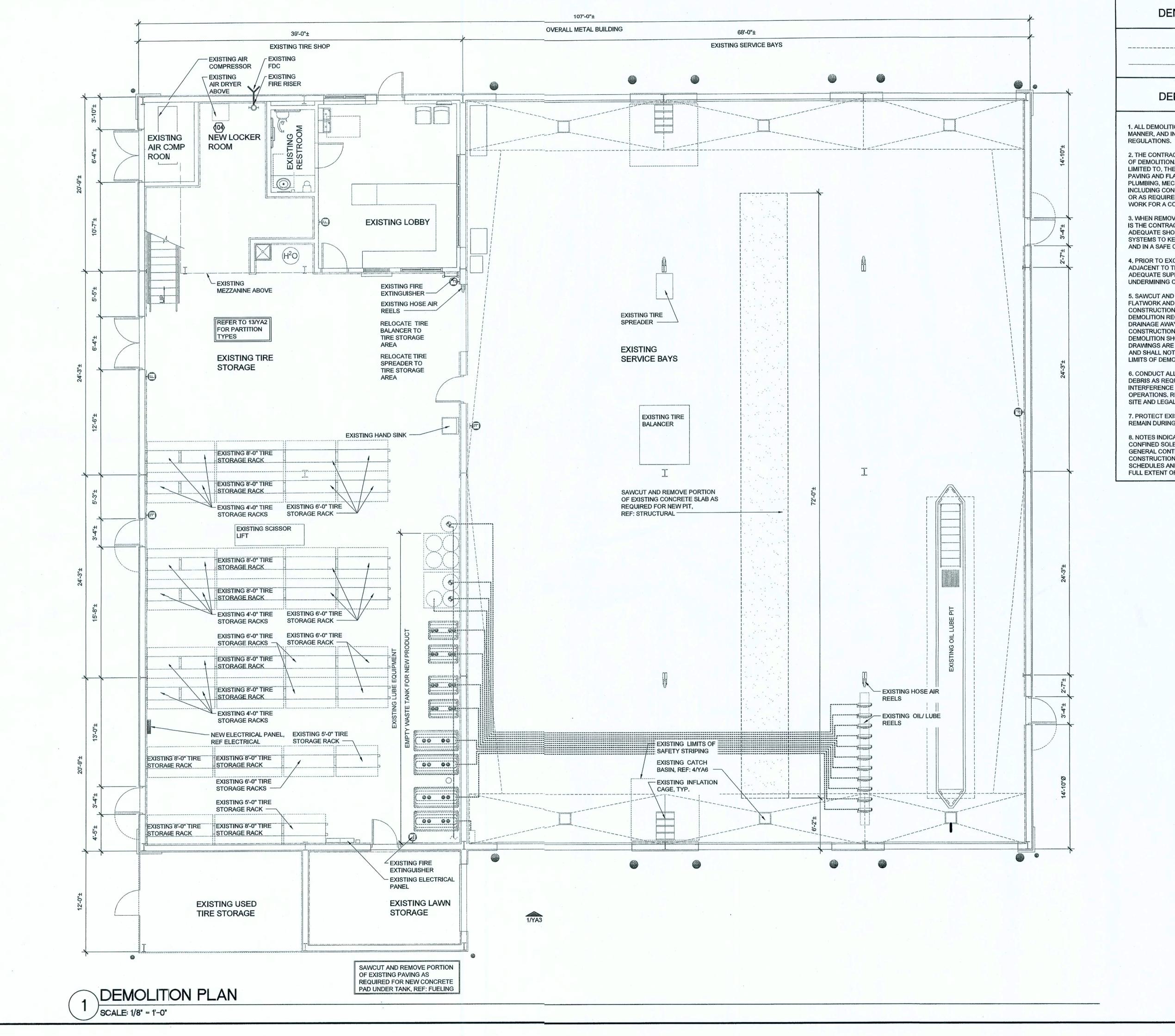


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LIFE SAFETY PLAN

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DEMOLITION LEGEND

----- DEMOLISH/REMOVE

EXISTING TO REMAIN

DEMOLITION NOTES

1. ALL DEMOLITION SHALL BE CARRIED OUT IN A SAFE MANNER, AND IN ACCORDANCE WITH OSHA

2. THE CONTRACTOR SHALL FIELD VERIFY THE EXTENT OF DEMOLITION. THE WORK INCLUDES, BUT IS NOT LIMITED TO, THE DEMOLITION AND REMOVAL OF PAVING AND FLATWORK, WALLS, PARTITIONS, DOORS, PLUMBING, MECHANICAL AND ELECTRICAL ITEMS INCLUDING CONDUITS AS SHOWN ON THE DRAWINGS OR AS REQUIRED FOR THE INSTALLATION OF THE NEW WORK FOR A COMPLETE JOB.

3. WHEN REMOVING EXISTING STRUCTURAL ITEMS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORING, BRACING AND SUPPORT SYSTEMS TO KEEP THE EXISTING STRUCTURE INTACT AND IN A SAFE CONDITION.

4. PRIOR TO EXCAVATION FOR FOUNDATIONS
ADJACENT TO THE EXISTING STRUCTURE, PROVIDE
ADEQUATE SUPPORT FOR THE SUB-BASE TO PREVENT
UNDERMINING OF THE EXISTING FOUNDATION.

5. SAWCUT AND REMOVE EXISTING EXTERIOR FLATWORK AND PAVING AS REQUIRED FOR NEW CONSTRUCTION. FIELD VERIFY EXTENTS OF DEMOLITION REQUIRED TO ENSURE POSITIVE DRAINAGE AWAY FROM THE BUILDING WHEN CONSTRUCTION IS COMPLETE. EXTENTS OF DEMOLITION SHOWN ON THE ARCHITECTURAL DRAWINGS ARE FOR GRAPHIC REPRESENTATION ONLY AND SHALL NOT BE ASSUMED TO DELINEATE ACTUAL LIMITS OF DEMOLITION REQUIRED.

6. CONDUCT ALL DEMOLITION AND REMOVAL OF DEBRIS AS REQUIRED TO INSURE MINIMUM INTERFERENCE WITH BUILDING/SITE FACILITIES AND OPERATIONS. REMOVE DEMOLISHED MATERIALS FROM SITE AND LEGALLY DISPOSE OF ALL DEBRIS.

PROTECT EXISTING PAVING AND STRUCTURES TO REMAIN DURING DEMOLITION AND CONSTRUCTION.

8. NOTES INDICATING DEMOLITION WORK ARE NOT CONFINED SOLELY TO THE DEMOLITION PLANS. THE GENERAL CONTRACTOR SHALL REVIEW ALL CONSTRUCTION DOCUMENTS, INCLUSIVE OF SCHEDULES AND SPECIFICATIONS, TO DETERMINE FULL EXTENT OF DEMOLITION WORK.

ARCHITECTS
ENGINEERS
INTERIORS

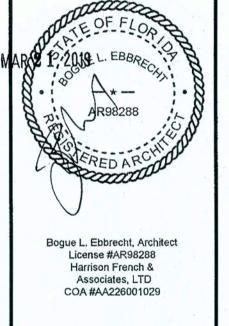
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Travel Stop & Country Store

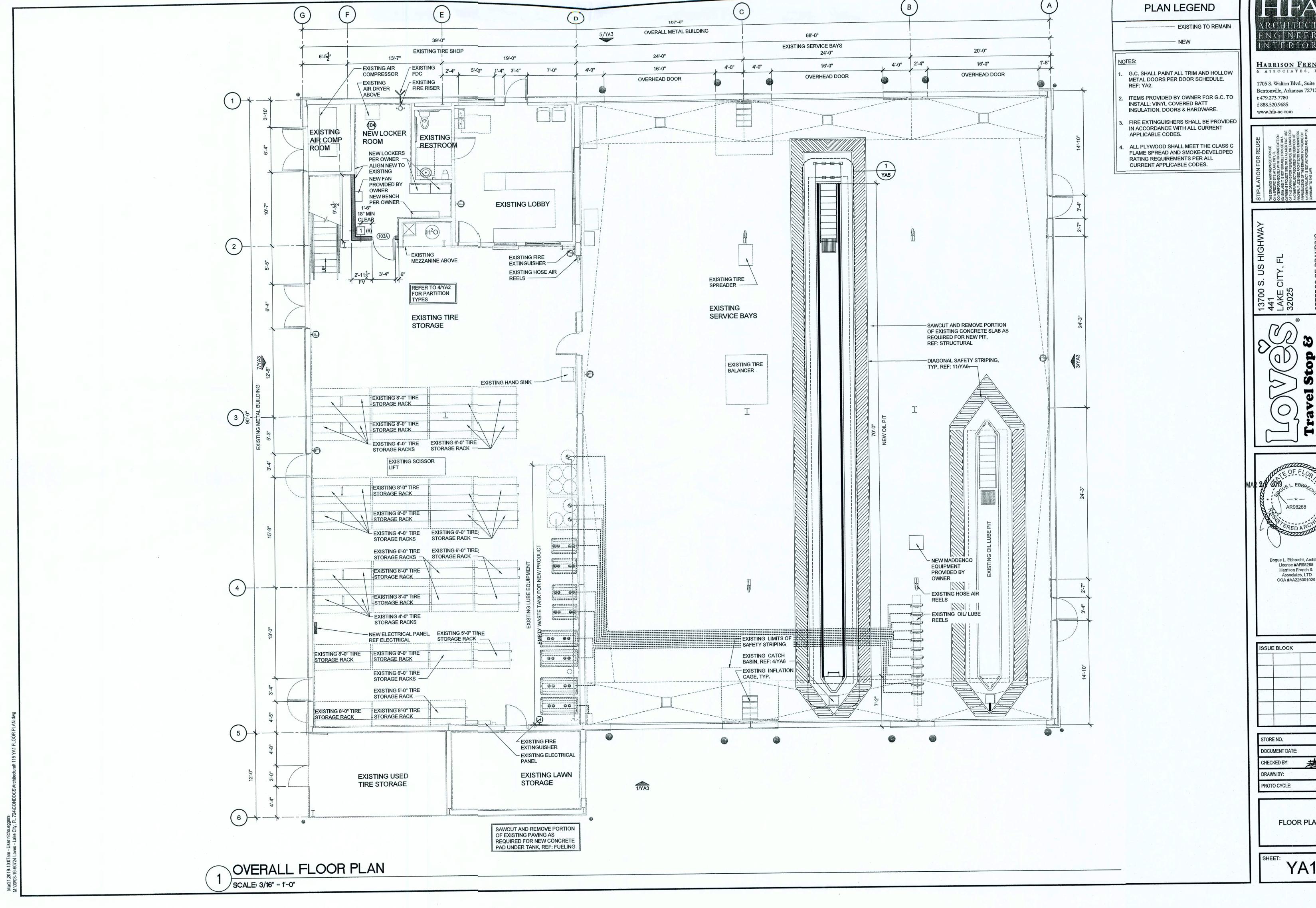


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DEMOLITION PLAN

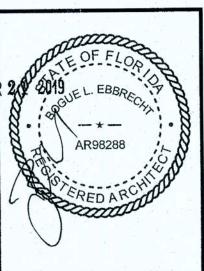
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FLOOR PLAN

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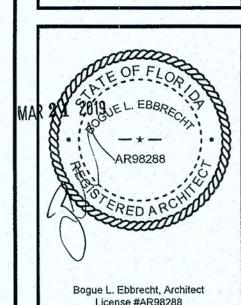
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3 JAMB DETAIL
SCALE: 3' = 1'-0'

INTERIORS

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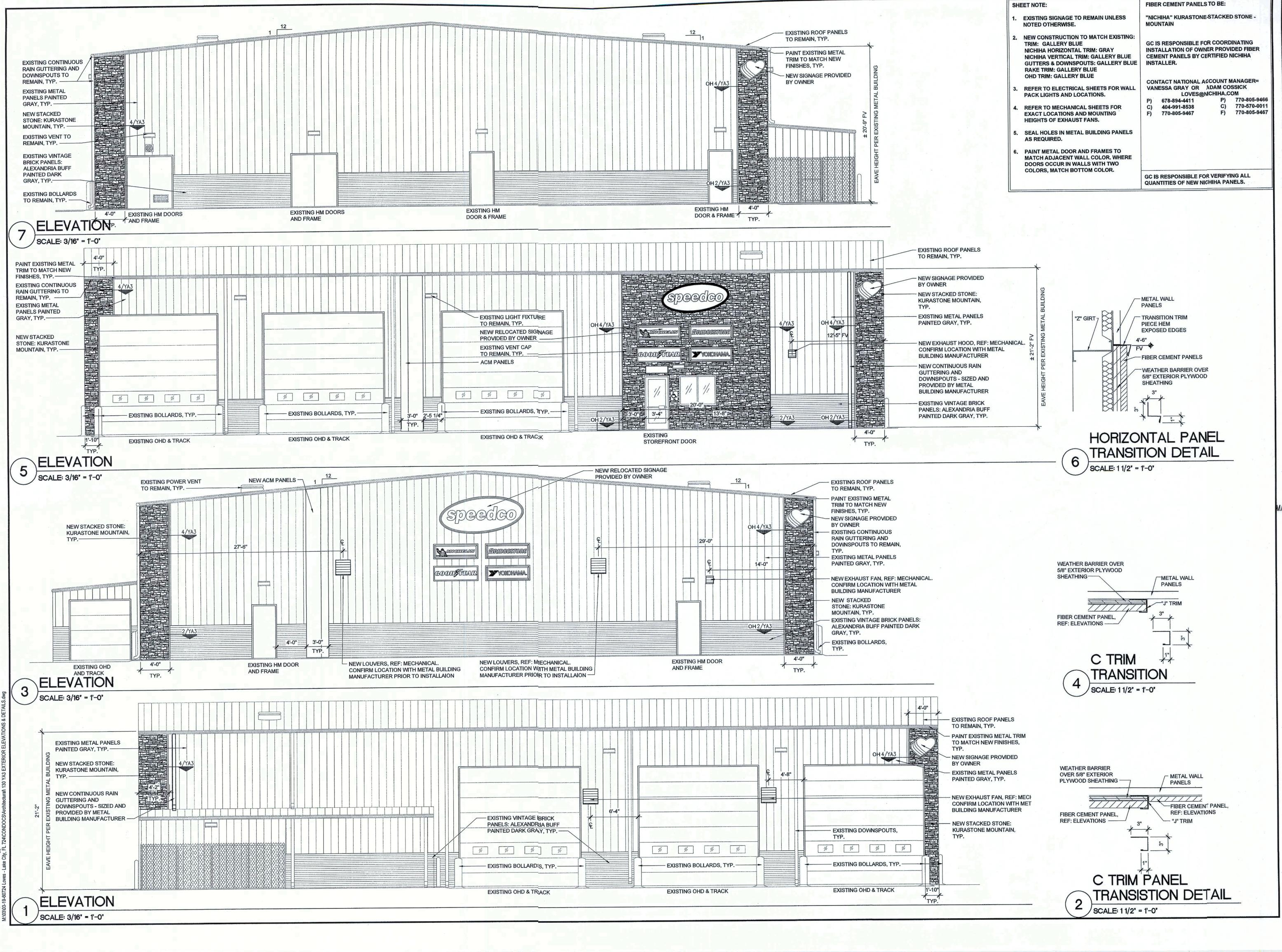
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SCHEDULES & DETAILS

SHEET: YA2

1 DOOR ELEVATIONS
SCALE: 1/4' = 1'-0'

2 HEAD DETAIL
SCALE: 3' = 1'-0'



NGINEER NTERIOR

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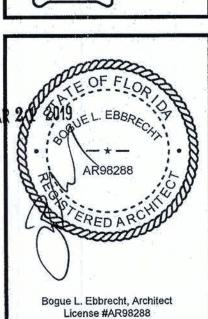
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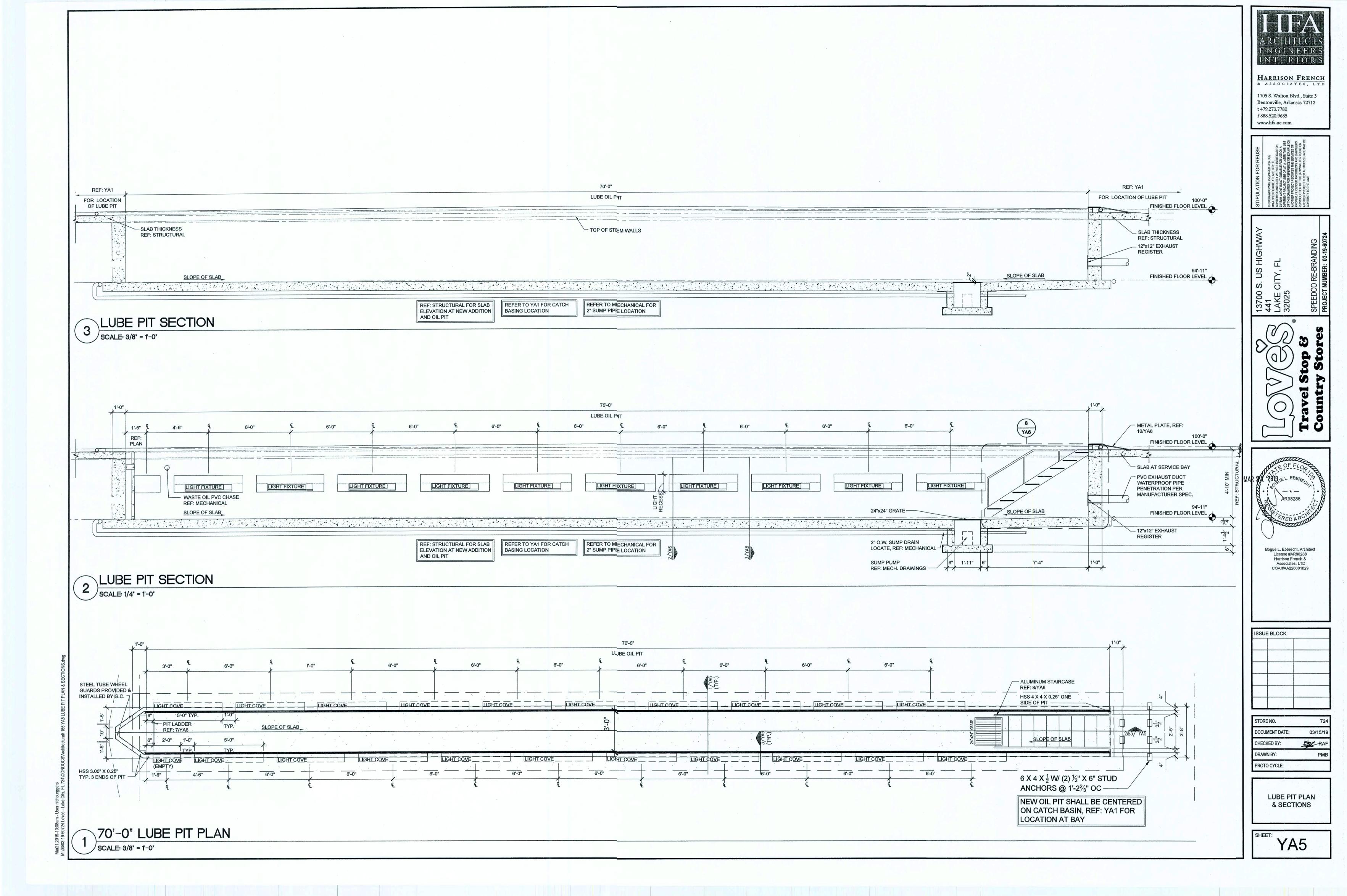
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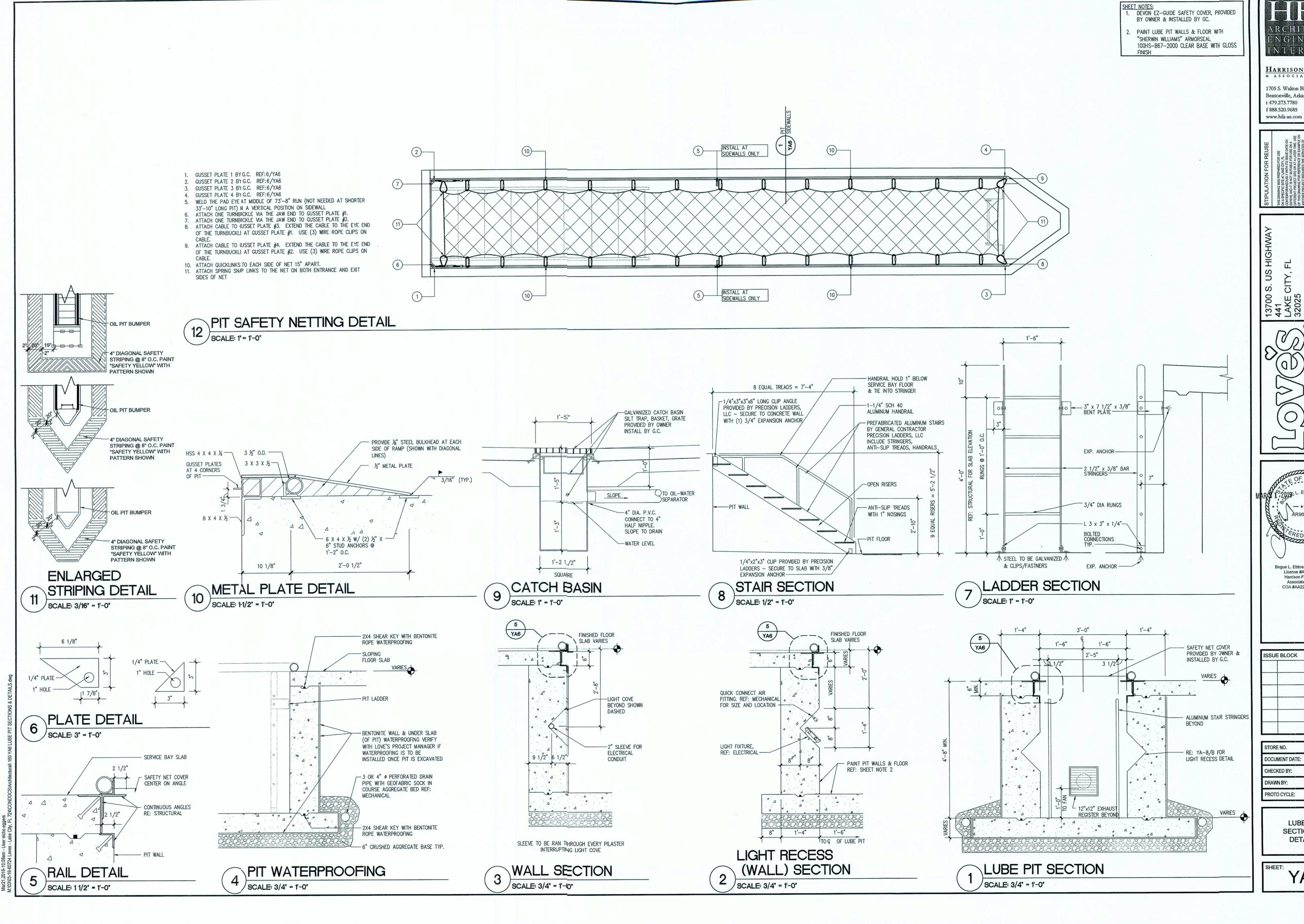
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> **EXTERIOR ELEVATIONS** & DETAILS

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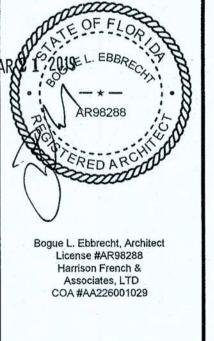




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> LUBE PIT **SECTIONS & DETAILS**

YA6

CONSTRUCTION SAFETY GENERAL NOTE

THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS, SINCE THESE ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.

CONCRETE GENERAL NOTES

1. All detailing, fabrication and placing of reinforcing steel shall conform to the ACI standard "Details and Detailing of Concrete Reinforcement" (ACI 315).

2. Concrete mix designs shall meet the following requirements:

Location	Minimum Compressive Strength (psi)	Maximum Aggregate Size	Maximum Water/Cement Ratio	Slump (in.)	Air Entrainment Percent (%)
Interior Slabs	4000	3/4"	.50	4 ±1	0
Exterior Slabs	3500	3/4"	.50	4 ±1	6 ±1
Perimeter Foundations		1"	.50	4 ±1	6 ±1

- 3. Reinforcing bars #4 and larger (except ties and stirrups) shall meet ASTM A615 with Supplementary Requirements (S1), Grade 60. Smaller bars shall be grade 40.
- 4. All reinforcing bar splices shall be 44 bar diameters.
- 5. All reinforcing bar hooks shall be ACI standard 90 degree hook, unless noted otherwise.
- 6. All bars are to be supported in forms and spaced with wire bar supports per ACI "Manual of Standard Practice for Detailing Concrete Structures" (latest edition). Bars shall be securely wired per latest edition of CRSI's "Recommended Practice for Placing Reinforcing Bars". Accessories for exposed concrete shall be plastic or have plastic-tipped feet.
- 7. The top of concrete pedestal shall be square, smooth & level to receive the metal building base plates.
- 8. Smooth dowels shall be steel conforming to ASTM A36.
- 9. All slots, sleeves and other embedded items such as strap-tie holdowns shall be set before concrete is placed. See Architectural, Electrical, Mechanical and vendor's drawings for sizes & locations.
- 10. Electrical conduit to be placed below slab shall be located by electrician prior to placement of slabreinforcements. Slab shall be thickened in these areas to accommodate a minimum of 3" top covering and 3" bottom clearance.
- 11. Fly ash shall not be used unless approved in writing by the Engineer. Fly ash, if approved, shall conform to ASTM C618 and shall not exceed 15% of the total cement volume.
- 12. All concrete is reinforced unless specifically called out as unreinforced. Reinforce all concrete not otherwise shown with same steel as in similar sections or areas.
- 13. No aluminum items shall be embedded in any concrete or placed in contact with concrete.
- 14. Concrete coverage of reinforcement shall have the following clear distances unless noted otherwise on the drawings:
- Cast against earth: 3" Formed concrete exposed to earth or weather: 2"
- · Slabs not exposed to earth or weather: 1"
- Beams & columns not exposed to weather: 1 1/2"
- 15. Embedded and all reinforcing bars marked continuous shall be embedded to develop the full tenson capacity of the bar. Laps shall be Class B tension lap unless specified otherwise on the drawings. Unless shown otherwise, splice top bars near midspan and splice bottom bars over supports.
- 16. Supply corner bars 4'-0" long (min. 2'-0" in each direction) in outside face of wall at corners of all valls and continuous footings, matching size and spacing of horizontal bars. Where there are no vertical bars in outside face of vall, supply three (3) #4 vertical support bars for corner bars.
- 17. Concrete placed during cold weather shall conform to the requirements of ACI 306R-10. Cold weather is defined as a period when, for more than 3 successive days, the mean daily temperature drops below 40°F.
- 18. Concrete placed during hot weather shall conform to the requirements of ACI 305R-10. Hot weather is defined as that combination of air temperature, relative humidity and wind speed that will cause a rate of evaporation of 0.2 lb/sq.ft./ir. or more as defined by Figure 2.1.5 of ACI 305R-10.
- 19. Do not add water to concrete during delivery, at Project Site, or during placement, unless approved by the Engineer of Record.
- 20. Reinforcing shall have the following lap splice and hook lengths:

Lap Sp	lice & Hook Le	ngths
Bar Size	Lap Splice	Hook
#4	2'-0"	8"
#5	2'-6"	10"
#6	3'-0"	1'-0"
#7	3'-6"	1'-2"
#8	4'-0"	1'-4"
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21. Maximum net allowable bearing pressure for footings = 3,000 psf. Bottom of footings shall bear or approved compacted structural fill in the Soils Report Project Number EQ165133 dated January 10, 2017 by Terracon Consultants Inc. Bottom of footings shall bear at or below minimum bearing depth. Minimum bearing depth is 18" telow lowest adjacent finished grade.

STRUCTURAL STEEL GENERAL NOTES

- 1. All detailing, fabrication and erection of structural steel shall conform to the requirements of the ABC Specification for the Design, Fabrication and Erection of Structural Steel for Buildings.
- 2. Hollow Structural Section (HSS) shall conform to ASTM A500, Grade B with a yield strength of 46ksi.
- 3. W-Shapes shall conform to ASTM A992 with a yield strength of 50 ksi. All other structural steel shall conform to the requirements of ASTM A36.
- 4. All anchor rods shall conform to ASTM F1554, Grade 36. Nuts for anchor rods shall conform to ASTM A563, Grade A, heavy hex and anchor rod washers shall conform to FS F-W-92.
- 5. All welding shall conform to the Specifications of the American Welding Society. Welding electroces shall be E-70 series. Welding shall be done by a certified welder.
- 6. All bolts shall be tightened to a snug-tight condition. A snug tight condition is defined as the tightness attained by a few impacts of an impact wrench or the full effort of a man using an ordinary spud wrench. All connected elements must be brought into snug contact.
- Bearing ends of all columns shall be square cut.
- 8. No openings shall be cut in structural members unless shown on the drawings.
- 9. Anchor rod holes in base plates shall be sized in accordance with AISC "Detailing for Steel Constuction".

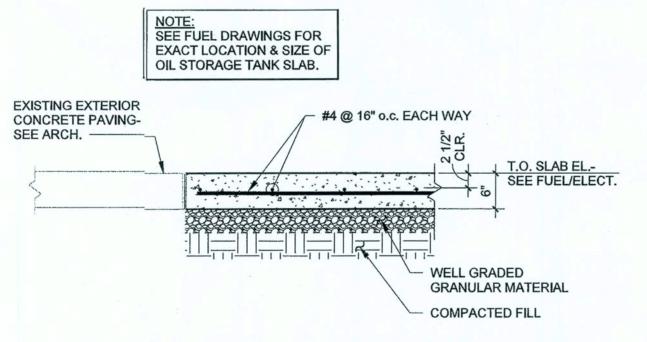
REQUIRED SPECIAL INSPECTIONS

(BY TESTING AGENCY)

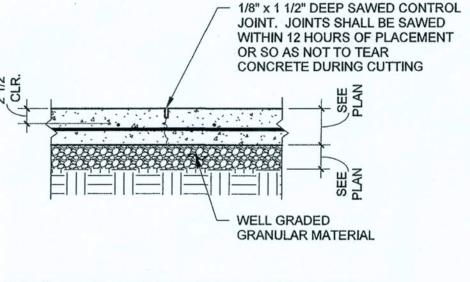
IN ADDITION TO THE REGULAR INSPECTIONS REQUIRED BY SECTION 110, THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH SECTION 1704, 1706 & 1707 OF THE 2017 FBC.

ITEM	SECTION
Concrete Construction	
- Reinforcing Steel Installation	Table 1705.3
- Cast-in Place Anchor Bolts	Table 1705.3
- Verify Design Mix	Table 1705.3
- Fresh Concrete Sampling	Table 1705.3
- Concrete Placement	Table 1705.3
- Concrete Curing Operations	Table 1705.3
- Evaluation of Concrete Strength	Table 1705.3

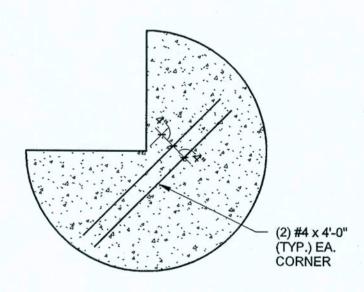
- REQUIRED SPECIAL INSPECTION NOTES:
- 1. General Contractor shall coordinate any additional special inspection requirements with Owner and applicable building authorities.
- 2. Special Inspections are the responsibility of the Owner. 3. The names of persons or firms who are to perform the Special Inspections shall be forwarded to the Building Official for approval.
- 4. The Special Inspector(s) shall complete and submit all forms required by the Local Jurisdiction.



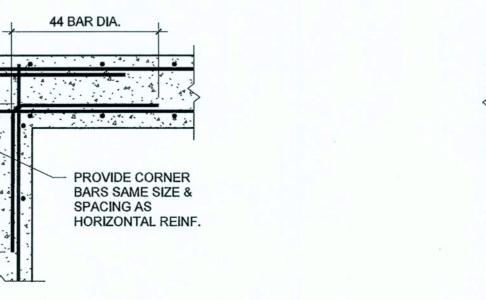
OIL STORAGE TANK SLAB SECTION



TYP. SLAB-ON-GRADE 5 CONTROL JOINT DETAIL

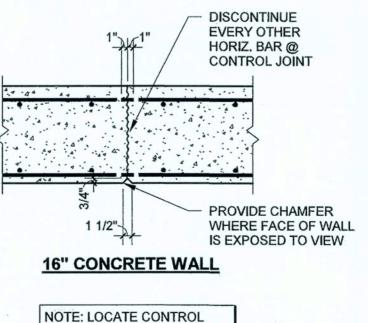


SECTION



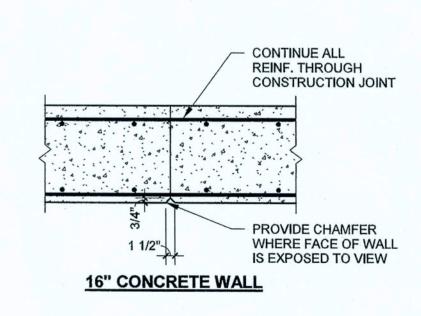
TYP. CONCRETE WALL **CORNER DETAIL**

12" CONCRETE WALL



JOINT AT 24'-0" o.c. MAXIMUM.

TYP. CONCRETE WALL **CONTROL JT. DETAIL**



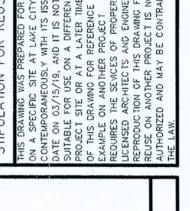
NOTE: CONSTRUCTION JOINT MAY BE SUBSTITUTED FOR CONTROL JOINT.

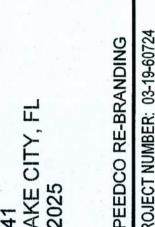
TYP. CONCRETE WALL **CONSTRUCTION JT. DETAIL** INTERIOR

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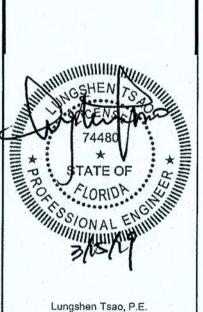




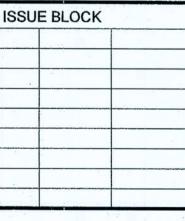


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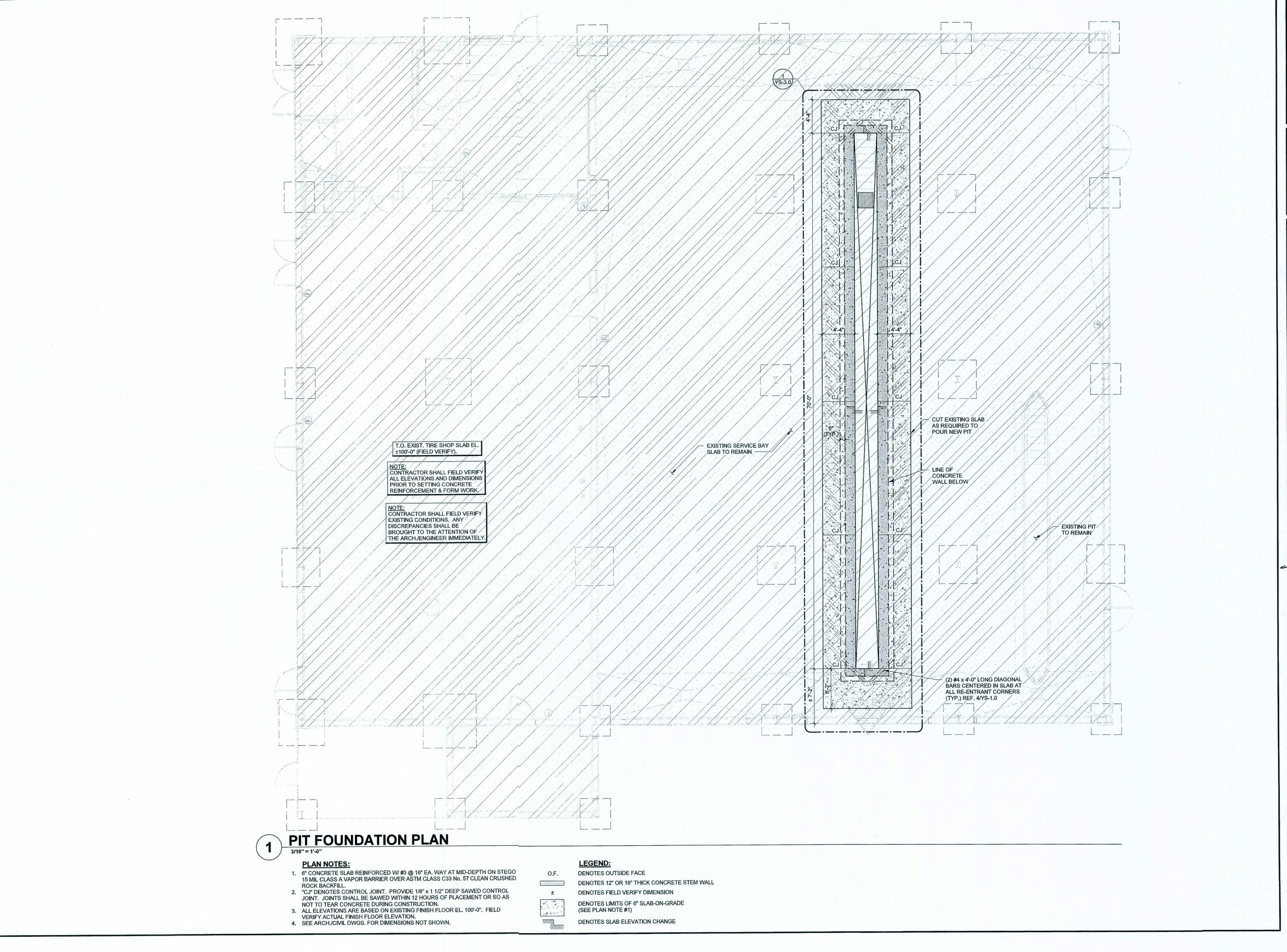


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GENERAL NOTES &

TYPICAL DETAILS

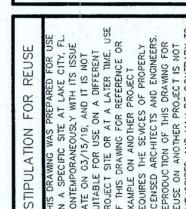
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ENGINEERS
INTERIORS

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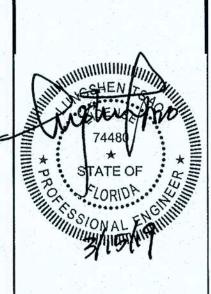
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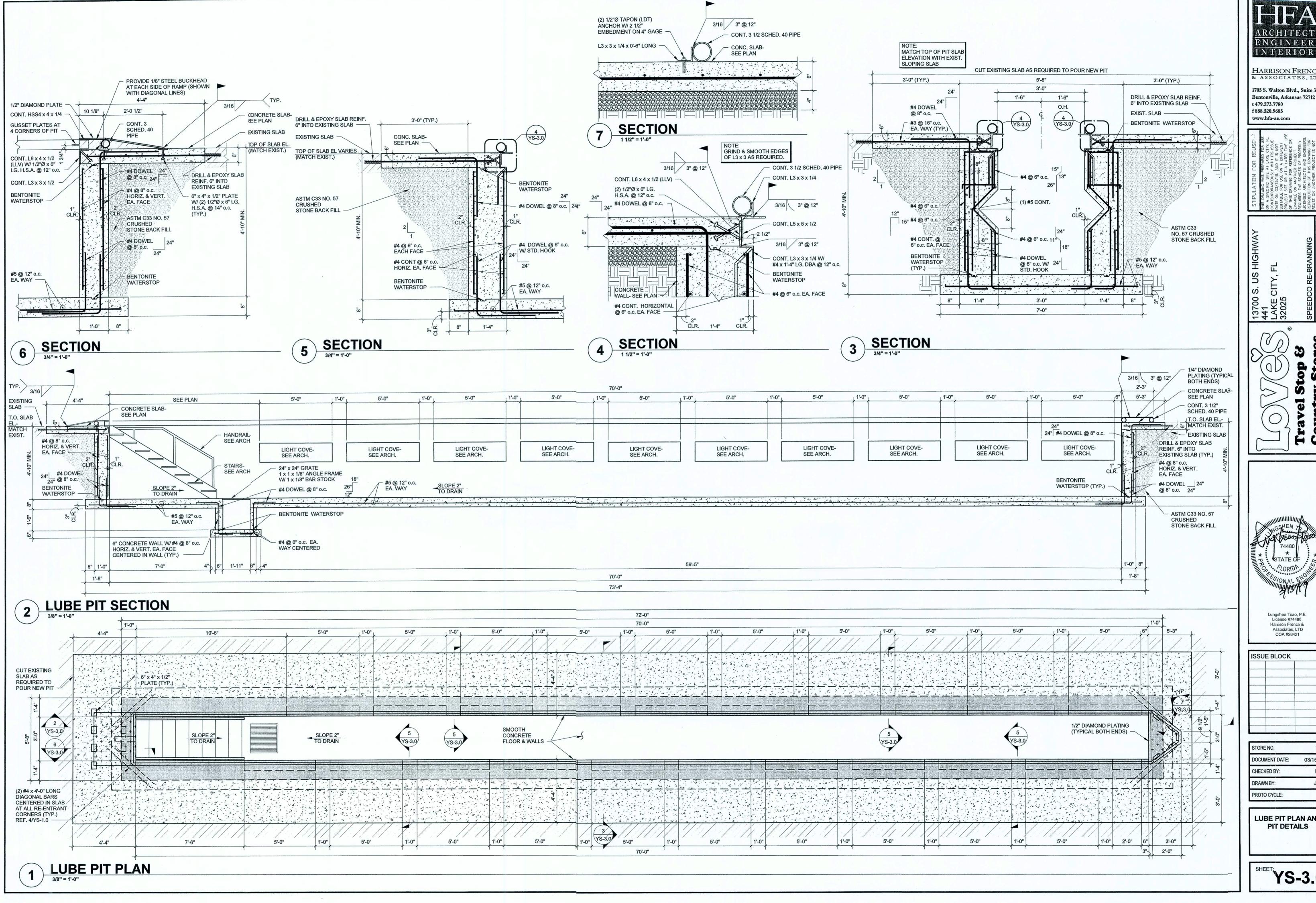
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FOUNDATION PLAN

YS-2.0



ENGINEERS INTERIORS

HARRISON FRENCH & ASSOCIATES, LTI

PIT DETAILS

YS-3.0

15A 1-1 GENERAL REQUIREMENTS

REQUIREMENTS UNDER DIVISION ONE AND THE GENERAL AND SUPPLEMENTARY CONDITIONS OF THESE SPECIFICATIONS SHALL BE A PART OF THIS SECTION. CONTRACTOR SHALL BECOME THOROUGHLY ACQUAINTED WITH ITS CONTENTS AS TO REQUIREMENTS THAT AFFECT THIS DIVISION OR SECTION. THE WORK REQUIRED UNDER THIS SECTION INCLUDES MATERIAL, EQUIPMENT, APPLIANCES, TRANSPORTATION, SERVICES, AND LABOR REQUIRED TO COMPLETE THE ENTIRE SYSTEM AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS.

THE SPECIFICATIONS AND DRAWINGS FOR THE PROJECT ARE COMPLEMENTARY, AND PORTIONS OF THE WORK DESCRIBED IN ONE, SHALL BE PROVIDED AS IF DESCRIBED IN BOTH. IN THE EVENT OF DISCREPANCIES, NOTIFY THE ENGINEER AND/OR OWNER AND REQUEST CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK INVOLVED.

15A 1-2 INSPECTION OF SITE

PRIOR TO SUBMITTING BID, VISIT THE SITE OF THE PROPOSED WORK AND BECOME FULLY INFORMED AS TO THE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. FAILURE TO DO SO WILL NOT BE CONSIDERED SUFFICIENT JUSTIFICATION TO REQUEST OR OBTAIN EXTRA COMPENSATION OVER AND ABOVE THE CONTRACT PRICE.

15A 1-3 MATERIAL AND WORKMANSHIP

PROVIDE NEW MATERIAL, EQUIPMENT, AND APPARATUS UNDER THIS CONTRACT UNLESS OTHERWISE STATED HEREIN, OF BEST QUALITY NORMALLY USED FOR THE PURPOSE IN GOOD COMMERCIAL PRACTICE, AND FREE FROM ANY DEFECTS. MODEL NUMBERS LISTED IN THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS ARE NOT NECESSARILY INTENDED TO DESIGNATE THE REQUIRED TRIM, WRITTEN DESCRIPTIONS OF THE TRIM GOVERN MODEL NUMBERS.

WORK PERFORMED UNDER THIS CONTRACT SHALL PROVIDE A NEAT AND "WORKMANLIKE" APPEARANCE WHEN COMPLETED, TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER. WORKMANSHIP SHALL BE THE FINEST POSSIBLE BY EXPERIENCED MECHANICS. INSTALLATIONS SHALL COMPLY WITH APPLICABLE CODES AND LAWS.

THE COMPLETE INSTALLATION SHALL FUNCTION AS DESIGNED AND INTENDED WITH RESPECT TO EFFICIENCY, CAPACITY, NOISE LEVEL, ETC. ABNORMAL NOISE CAUSED BY RATTLING EQUIPMENT, PIPING, DUCTS, AIR DEVICES, AND SQUEAKS IN ROTATING COMPONENTS WILL NOT BE ACCEPTABLE. IN GENERAL, MATERIALS AND EQUIPMENT SHALL BE OF COMMERCIAL SPECIFICATION GRADE IN QUALITY. LIGHT DUTY AND RESIDENTIAL TYPE EQUIPMENT WILL NOT BE ACCEPTED.

REMOVE FROM THE PREMISES WASTE MATERIAL PRESENT AS A RESULT OF WORK, INCLUDING CARTONS, CRATING. PAPER, STICKERS, AND/OR EXCAVATION MATERIAL NOT USED IN BACKFILLING, ETC. CLEAN EQUIPMENT INSTALLED UNDER THIS CONTRACT TO PRESENT A NEAT AND CLEAN INSTALLATION AT THE TERMINATION OF THE WORK.

REPAIR OR REPLACE PUBLIC AND PRIVATE PROPERTY DAMAGED AS A RESULT OF WORK PERFORMED UNDER THIS CONTRACT TO THE SATISFACTION OF AUTHORITIES AND REGULATIONS HAVING JURISDICTION.

15A 1-4 COORDINATION

COORDINATE WORK WITH THAT OF OTHER TRADES SO THAT THE VARIOUS COMPONENTS OF THE SYSTEMS WILL BE INSTALLED AT THE PROPER TIME, WILL FIT THE AVAILABLE SPACE, AND WILL ALLOW PROPER SERVICE ACCESS TO THOSE ITEMS REQUIRING MAINTENANCE. COMPONENTS WHICH ARE INSTALLED WITHOUT REGARD TO THE ABOVE SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE OWNER.

UNLESS OTHERWISE INDICATED, THE GENERAL CONTRACTOR WILL PROVIDE CHASES AND OPENINGS IN BUILDING CONSTRUCTION REQUIRED FOR INSTALLATION OF THE SYSTEMS SPECIFIED HEREIN. CONTRACTOR SHALL FURNISH THE GENERAL CONTRACTOR WITH INFORMATION WHERE CHASES AND OPENINGS ARE REQUIRED. KEEP INFORMED AS TO THE WORK OF OTHER TRADES ENGAGED IN THE CONSTRUCTION OF THE PROJECT, AND EXECUTE WORK IN A MANNER AS TO NOT INTERFERE WITH OR DELAY THE WORK OF OTHER TRADES.

FIGURED DIMENSIONS SHALL BE TAKEN IN PREFERENCE TO SCALE DIMENSIONS. CONTRACTOR SHALL TAKE HIS OWN MEASUREMENTS AT THE BUILDING, AS VARIATIONS MAY OCCUR. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ERRORS THAT COULD HAVE BEEN AVOIDED BY PROPER CHECKING AND INSPECTION.

PROVIDE MATERIALS WITH TRIM THAT WILL PROPERLY FIT THE TYPES OF CEILING, WALL, OR FLOOR FINISHES ACTUALLY INSTALLED. MODEL NUMBERS LISTED IN THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS ARE NOT INTENDED TO DESIGNATE THE REQUIRED TRIM.

15A 1-5 ORDINANCES AND CODES

WORK PERFORMED UNDER THIS CONTRACT SHALL, AT A MINIMUM, BE IN CONFORMANCE WITH APPLICABLE NATIONAL, STATE AND LOCAL CODES HAVING JURISDICTION. EQUIPMENT FURNISHED AND ASSOCIATED INSTALLATION WORK PERFORMED UNDER THIS CONTRACT SHALL BE IN STRICT COMPLIANCE WITH CURRENT APPLICABLE CODES ADOPTED BY THE LOCAL AHJ INCLUDING ANY AMENDMENTS AND STANDARDS AS SET FORTH BY THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), UNDERWRITERS LABORATORIES (UL), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME), AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS (ASHRAE), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), AMERICAN SOCIETY OF TESTING MATERIALS (ASTM) AND OTHER NATIONAL STANDARDS AND CODES WHERE APPLICABLE. WHERE THE CONTRACT DOCUMENTS EXCEED THE REQUIREMENTS OF THEIR REFERENCED CODES, STANDARDS, ETC., THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE.

PROCURE AND FAY FOR PERMITS AND LICENSES REQUIRED FOR THE ACCONPLISHMENT OF THE WORK HEREIN DESCRIBED. WHERE REQUIRED, OBTAIN, PAY FOR AND FURNISH CERTIFICATES OF INSPECTION TO OWNER. CONTRACTOR WILL BE HELD RESPONSIBLE FOR VIOLATIONS OF THE LAW.

15A 1-6 PROTECTION OF EQUIPMENT AND MATERIALS

STORE AND PRCTECT FROM DAMAGE EQUIPMENT AND MATERIALS DELVERED TO JOB SITE. COVER WITH WATERPROOF, "EAR-RESISTANT, HEAVY TARP OR POLYETHYLENEPLASTIC AS REQUIRED TO PROTECT FROM PLASTER, DIRT, PAINT, WATER, OR PHYSICAL DAMAGE. EQUIPMENT AND MATERIAL THAT HAS BEEN DAMAGED BY CONSTRUCTIONACTIVITIES WILL BE REJECTED, AND CONTRACTOR IS OBLIGATED TO FURNISH NEW EQUIPMENT AND MATERIAL OF A LIKE KIND.

KEEP PREMISES ROOM CLEAN FROM FOREIGN MATERIAL CREATED DURING WORK PERFORMED UNDER THIS CONTRACT. PIPNG, EQUIPMENT, ETC., SHALL HAVE A NEAT AND CLEAN APPEARANCE AT THE TERMINATION OF THE

PLUG OR CAP O'EN ENDS OF DUCTWORK AND PIPING SYSTEMS WHILE STORED OR INSTALLED DURING CONSTRUCTION WHEN NOT IN USE TO PREVENT THE ENTRANCE OF CEBRIS INTO THE SYSTEMS.

KEEP THE MANUFACTURER PROVIDED PROTECTIVE COVERINGS ONFLOOR DRAINS, FLOOR SINKS, AND TRENCH DRAINS DURINGCONSTRUCTION. REMOVE COVERINGS AT THE TERMINATION OF THE WORK AND POLISH EXPOSED SURFACES.

15A 1-7 OPERATON AND MAINTENANCE INSTRUCTIONS

COLLECT AND COMPILE A COMPLETE BROCHURE OF FIXTURES, MATERIALS, AND EQUIPMENT FURNISHED AND INSTALLED ON THIS PROJECT. INCLUDE OPERATIONAL AND MAINTENANCE INSTRUCTIONS, MANUFACTURER'S CATALOG SHEETS, WIRING DIAGRAMS, PARTS LISTS, APPROVED SHOP DRAWINGS, AND DESCRIPTIVE LITERATURE FURNISHED BY THE MANUFACTURER. INCLUDE AN INSIDE COVER SHEET THAT LISTS THEPROJECT NAME, DATE, OWNER, ARCHITECT, ENGINEER, GENERAL CONTRACTOR, SUBCONTRACTOR, AND AN INDEX OF CONTENTS.

SUBMIT COPIESOF LITERATURE BOUND IN APPROVED BINDERS TO THE ARCHITECT AND OWNER AT THE TERMINATION OF THE WORK. PAPER CLIPS, STAPLES, RUBBER BANDS AND MAILING ENVELOPES ARE NOT CONSIDERED APPROVED BINDERS. FINAL APPROVAL OF PLUMBING SYSTEMS WILL BE WITHHELD UNTIL THIS EQUIPMENT BROCHURE IS DEEMED COMPLETE BY THE ARCHITECT, ENGINEER, AND OWNER.

15A 1-8 WARRANTIES

WARRANT EACH SYSTEM AND EACH ELEMENT THEREOF AGAINST ALL DEFECTS DUE TO FAULTY WORKMANSHIP, DESIGN OR MATERIAL FOR A PERIOD OF 12 MONTHS FROM DATE OF SUBSTANTIAL COMPLETION, UNLESS SPECIFIC ITEMS ARE NOTED TO CARRY A LONGER WARRANTY IN THE CONSTRUCTION DOCUMENTS OR MANUFACTURER'S STANDARD WAFRANTY EXCEEDS 12 MONTHS. REMEDY ALL DEFECTS, OCCURRING WITHIN THE WARRANTY PERIOD(S), AS STATED IN THE GENERAL CONDITIONS AND DIVISION 1.

WARRANTIES SHALL INCLUDE LABOR AND MATERIAL. MAKE REPAIRS OR REPLACEMENTS WITHOUT ANY ADDITIONAL COSTS TO THE OWNER.

PERFORM THE REMEDIAL WORK PROMPTLY, UPON WRITTEN NOTICE FROM THE ENGINEER OR OWNER.

AT THE TIME OF SUBSTANTIAL COMPLETION, DELIVER TO THE OWNER ALL WARRANTIES, IN WRITING AND PROPERLY EXECUTED, INCLUDING TERM LIMITS FOR WARRANTIES EXTENDING BEYOND THE ONE YEAR PERIOD, EACH AND STATING THE COMMENCEMENT DATE AND TERM.

15A 1-9 CUTTING AND PATCHING

PERFORM CUTTING OF WALLS, FLOORS, CEILINGS, ETC. AS REQUIRED TO INSTALL WORK UNDER THIS SECTION. DO NOT CUT OR DISTURS STRUCTURAL MEMBERS WITHOUT PRIOR POSSIBLE. GENERAL CONTRACTOR SHALL PATCH WALLS. FLOORS, ETC. AS REQUIRED BY WORK UNDER THIS SECTION. JOINING METHOD. PATCHING SHAIL MATCH THE ORIGINAL MATERIAL AND CONSTRUCTION. REPAIR AND REFINISH AREAS DISTURBED BY WORK TO THE CONDITION OF ADJOINING SURFACES IN A MANNER SATISFACTORY TO THE ARCHITECT.

15A 1-10 ROUGI-IN

COORDINATE WITHOUT DELAY ROUGHING-IN WITH GENERAL CONSTRUCTION. CONCEAL PIPING AND CONDUIT ROUGH-IN EXCEPT IN UNFNISHED AREAS AND WHERE OTHERWISE

15A 1-11 STRUCTURAL STEEL

STRUCTURAL STEEL USED FOR PIPE SUPPORTS, EQUIPMENT SUPPORTS, ETC., SHALL BE NEW, CLEAN, AND CONFORM TO ASTM DESIGNATION A-36.

SUPPORT PLUMBING AND MECHANICAL EQUIPMENT AND PIPING FROM THE BUILDING STRUCTURE. DO NOT SUPPORT PLUMBING EQUPMENT FROM CEILINGS, OTHER MECHANICAL OR ELECTRICAL COMPONENTS, AND OTHER NON-STRUCTUFAL ELEMENTS.

15A 1-12 ACCES DOORS

PROVIDE ACCESS DOORS IN CEILINGS AND WALLS WHERE INDICATED OR FEQUIRED FOR ACCESS TO CONCEALED VALVES AND EQUIPMENT INSTALLED UNDER THIS SECTION. PROVIDE CONCEALED HINGES, SCREWDRIVER-TYPE LOCK, ANCHOR STRAFS; MANUFACTURED BY MILCOR, ZURN, TITUS, FINISHED SPACES. RUN PIPES FREELY THROUGH FLOOR OR EQUAL, OBTAIN ARCHITECT'S APPROVAL OF TYPE, SIZE, AND WALL PENETRATIONS USING PIPE SLEEVES. DO NOT LOCATION, ANDCOLOR BEFORE ORDERING.

15A 1-13 PENETRATIONS

SEAL FLOOR, EXTERIOR WALL AND ROOF PENETRATIONS WATER AND WEATHER TIGHT WITH APPROPRIATE NON-SHRINK, NON-HARDENING COMMERCIAL CONSTRUCTION SEALANT. SEAL ROOF PENETRATIONS WITH 4 POUND PER SQUARE FOOT LEAD FLASHING. PROVIDE A SLEEVE, AND SEAL NON-FIRE-RATED FLOOR AND WALL PENETRATIONS WITH FIBERGLASS PACKING AND SILICONE CAULK (FOR ACOUSTICAL INSULATION).

COORDINATE FIRE RATING REQUIREMENTS AND LOCATIONS WITH THE ARCHITECT. SEAL PENETRATIONS OF FIRE-RATED ASSEMBLIES WITH 3M # CP-25 FIRE BARRIER CAULK (PROVIDE THICKNESS AND METHOD AS REQUIRED AND RECOMMENDED BY MANUFACTURER) TO MAINTAIN THE FIRE RESISTANCE RATING OF FIRE-RATED ASSEMBLIES.

SEAL EXTERIOR WALL PENETRATIONS BELOW GRADE WITH CAST IRON WALL PIPES AND MODULAR MECHANICAL SLEEVE SEALS, MANUFACTURED BY THUNDERLINE/LINK SEAL, CALPICO, INC AND METRAFLEX.

PROVIDE SLEEVES FOR HORIZONTAL PIPE PASSING THROUGH OR UNDER FOUNDATION. SLEEVES SHALL BE CAST IRON SOIL PIPE TWO NOMINAL PIPE SIZES LARGER THAN THE PIPE SERVED.

PROVIDE SLEEVES FOR VERTICAL PIPE PASSING THROUGH SLAB ON GRADE. SLEEVES SHALL BE SCHEDULE 40 PVC PIPE, TWO NOMINAL PIPE SIZES LARGER THAN THE PIPE SERVED. SEAL WATER-TIGHT WITH SILICONE CAULK.

15B: HEATING, VENTILATION, AND AIR CONDITIONING

15B 1-1 DUCTWORK

ALL DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS CORRESPONDING TO THE SYSTEM PRESSURE. DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR A TWO-INCH PRESSURE RATING AND SEAL CLASS B.

INSTALL VTR'S, EXHAUST FANS, AND FLUES A MINIMUM OF 5'-0" FROM PARAPET OR OUTSIDE WALL AND 10'-0" MINIMUM FROM EQUIPMENT WITH OUTSIDE AIR INTAKE.

15B 1-2 ELECTRICAL WIRING

LINE VOLTAGE WIRING SHALL BE FURNISHED BY ELECTRICAL CONTRACTOR. LINE VOLTAGE CONTROL AND INTERLOCK WIRING FOR MECHANICAL SYSTEMS SHALL ALSO BE FURNISHED BY ELECTRICAL CONTRACTOR. LOW VOLTAGE CONTROL WIRING SHALL BE BY THE DIVISION 15 CONTRACTOR. PROVIDE WIRING DIAGRAMS TO THE ELECTRICAL CONTRACTOR AS REQUIRED FOR PROPER EQUIPMENT HOOKUP. COORDINATE WITH THE ELECTRICAL CONTRACTOR THE ACTUAL WIRE SIZING AMPS FOR MECHANICAL EQUIPMENT (FROM THE EQUIPMENT NAMEPLATE) TO ENSURE PROPER INSTALLATION.

ALL TEMPERATURE SENSORS, FAN SWITCHES, AND SPEED CONTROLS SHALL BE INSTALLED 43" ABOVE THE FLOOR FOR ADA REQUIREMENTS.

15B 1-3 FINAL TESTING AND ADJUSTMENTS

AIR BALANCE SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCE CONTRACTOR. BALANCE EACH SUPPLY, RETURN, OUTSIDE AIR DEVICE WITHIN 5% OF REQUIREMENTS AND FURNISH A REPORT TO THE CONSTRUCTION MANAGER. THE ENTIRE HVAC SYSTEM MUST BE FULLY OPERABLE, BALANCED, AND APPROVED BY OWNER'S REPRESENTATIVE ON THE DAY TENANT OPENS FOR BUSINESS.

ADJUST THERMOSTATS AND CONTROL DEVICES TO OPERATE AS INTENDED. ADJUST BURNERS, PUMPS, FANS, ETC. FOR PROPER AND EFFICIENT OPERATION. CERTIFY TO ARCHITECT THAT ADJUSTMENTS HAVE BEEN MADE AND THAT SYSTEM IS OPERATING SATISFACTORILY. CALIBRATE SET AND ADJUST AUTOMATIC TEMPERATURE CONTROLS. WARRANTY INSTRUMENT BEING ADDRESSED TO THE OWNER CHECK PROPER SEQUENCING OF INTERLOCK SYSTEMS, AND OPERATION OF SAFETY CONTROLS.

15C: PLUMBING

15C 1-1 PIPING MATERIALS

MATERIALS SPECIFIED OR NOTED ON THE DRAWINGS ARE APPROVAL FROM THE ARCHITECT. CUT HOLES AS SMALL AS SUBJECT TO THE APPROVAL OF LOCAL CODE AUTHORITIES. VERIFY APPROVAL BEFORE INSTALLING ANY MATERIAL OR

> GAS PIPING: GAS PIPING SHALL BE BLACK STEEL, STANDARD WEIGHT, SCHEDULE 40 ASTM A53. PIPING 2" AND SMALLER SHALL BE WELDED OR THREADED WITH MALLEABLE IRON FITTINGS. PIPING 2 1/2" AND LARGER SHALL BE WELDED WITH BUTT-WELDED FITTING. FITTINGS SHALL CONFORM TO ASME B16.3, MALLEABLE IRON OR ASTM A 234, FORGED STEEL WELDED TYPE.

COMPRESSED AIR PIPING: COMPRESSED AIR PIPING SHALL BE BLACK STEEL, STANDARD WEIGHT, SCHEDULE 40 ASTM A53. PIPING 2" AND SMALLER SHALL BE WELDED OR THREADED WITH MALLEABLE IRON FITTINGS. PIPING 2 1/2" AND LARGER SHALL BE WELDED WITH BUTT-WELDED FITTING. FITTINGS SHALL CONFORM TO ASME B16.3, MALLEABLE IRON OR ASTM A 234, FORGED STEEL WELDED TYPE. EXTERIOR PIPING SHALL HAVE EPOXY PAINT.

15C 1-3 PIPING INSTALLATION

GENERAL: CLEAN PIPE THOROUGHLY PRIOR TO INSTALLATION. REAM ENDS OF PIPE TO REMOVE BURRS. CUT PIPE ACCURATELY TO MEASUREMENTS TAKEN ON THE JOB. INSTALL WITH ADEQUATE CLEARANCE FOR INSTALLATION OF COVERINGS WHERE REQUIRED. PIPE SHALL NOT BE SPRUNG OR BENT. NEATLY ALIGN PIPE, CONNECT IT SECURELY, AND SUPPORT IT FROM THE BUILDING STRUCTURE WITH HANGERS AS SPECIFIED BELOW. PROVIDE CHROME-PLATED ESCUTCHEONS ON PIPES PASSING THROUGH CEILINGS, FLOORS OR WALLS OF GROUT IN PLACE UNLESS REQUIRED FOR STRUCTURAL FIRE INTEGRITY. INSTALL PIPE CONCEALED IN FINISHED SPACES WHEREVER POSSIBLE. USE A DIELECTRIC UNION WHERE FERROUS AND COPPER PIPE CONNECT. DIELECTRIC UNION SHALL HAVE A ZINC STEEL BODY, A THREADED NYLON INSERT, AND INSULATING PRESSURE GASKET. NO FERROUS METAL-TO-COPPER CONNECTION MADE WITHOUT INSULATING UNIONS WILL BE ALLOWED.

HANGER & SUFPORTS: PIPE HANGERS SHALL BE AS DESCRIBED IN THE SPECIFICATIONS BY B-LINE OR EQUAL BY ANVIL, MICHIGAN, TRUSCON, OR UNISTRUT. CONNECT HANGERS TO THE STRUCTURE WITH SIDE BEAM CONNECTORS AND ALL THREAD HANGER RODS. PROVIDE ENGINEERED SUPPORT STRUTS BETWEEN JOISTS AND OTHER STRUC; TURAL MEMBERS AS REQUIRED TO PROVIDE A RIGID HANGING INSTALLATION. DO NOT HANG PIPES FROM OTHER PIPES, CONDUIT OR DUCTWORK, PROVIDE HANGER RODS AND SPACE HANGERS AT INTERVALS AS REQUIRED.

15C 1-4 EXTERIOR UTILITY CONNECTIONS

TERMINATE DOMESTIC WATER, STORM, AND SEWER LINES AT A POINT APPROXIMATELY FIVE FEET FROM THE BUILDING WALL, OR AS SHOWN ON THE DRAWINGS. MAKE CONNECTION TO THE VARIOUS SERVICES PROVIDED BY OTHERS AND COORDINATE CONNECTION REQUIREMENTS WITH CIVIL ENGINEER. VERIFY THAT INSTALLATION WILL TIE INTO THE VARIOUS SERVICED PROVIDED BY OTHERS AT THE INDICATED INV/ERT ELEVATION POINT PRIOR TO INSTALLATION. IF THE INSTALLATION WILL NOT TIE INTO THE INDICATED INV/ERT ELEVATION POINT WHILE MAINTAINING PROPER FALL, NOTIFY ARCHITECT AND CIVIL ENGINEER SO THAT AN ALTEIRNATIVE MAY BE DETERMINED.

PROVIDE SERVICE PIPING AND ACCESSORIES REQUIRED TO COMPLETE UTILITY CONNECTIONS THAT ARE NOT FURNISHED BY THE SERVING UTILITY.

15C 1-5 SYSTEIM TESTING AND ADJUSTING

UPON COMPLETION OF EACH PHASE OF THE INSTALLATION, TEST EACH SYSTEM IN CONFORMANCE WITH LOCAL CODE REQUIREMENTS AND AS NOTED BELOW. FURNISH LABOR AND EQUIPMEINT REQUIRED TO TEST PLUMBING WORK INSTALLED UNIDER THIS CONTRACT, AND ASSUME COSTS INVOLVED IN MAKING THE TESTS, AND REPAIRING AND/OR REPLACING DAMAGE RESULTING THEREFROM.

NOTIFY THE AFRICHITECT AND THE AUTHORITY HAVING JURISDICTION, THREE (3) WORKING DAYS PRIOR TO MAKING PLUMBING SYSTEM TESTS. LEAVE CONCEALED WORK UNCOVERED UJNTIL THE REQUIRED TESTS HAVE BEEN COMPLETED, BUT IF NECESSARY DUE TO CONSTRUCTION PROCEDURE, TESTS ON PORTIONS OF THE WORK MAY BE MADE, AND WHEN SATISFACTORY, THE WORK MAY BE CONCEALED. TEST PIPING BEFORE INSULATION IS INSTALLED, AND BEFORE BACKFILL. PIPES, JOINTS, FLANGES, VAL'VE STEMS, ETC., SHALL BE LEAK TIGHT. REPAIR OR RE:PLACE SYSTEM DEFECTS WITH NEW MATERIALS. C; AULKING OF DEFECTIVE JOINTS, CRACKS OR HOLES WILL NOT BE PERMITTED. REPEAT TESTS AFTER DEFECTS HAVIE BEEN ELIMINATED. MAKE TESTS IN THE PRESENCE OF: THE ADMINISTRATIVE AUTHORITY AND/OR THE OWNER'S AUTIHORIZED REPRESENTATIVE.

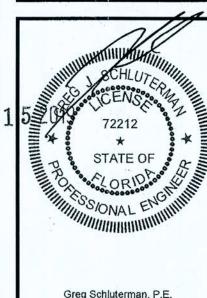


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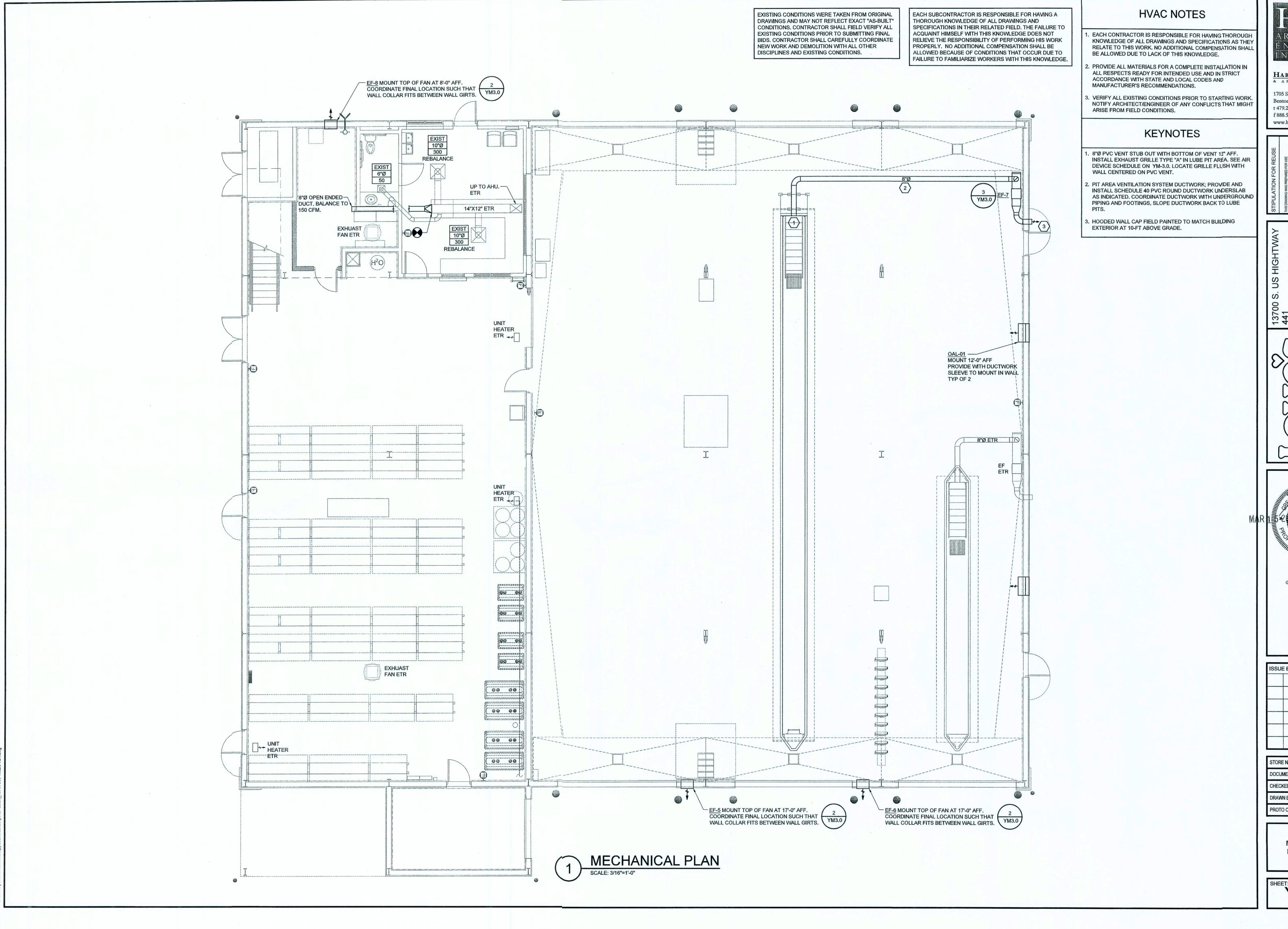
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MECHANICAL AND PLUMBING SPECIFICATIONS

EACH SUBCONTRACTOR IS RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF ALL DRAWINGS AND SPECIFICATIONS IN THEIR RELATED FIELD, THE FAILURE TO ACQUAINT HIMSELF WITH THIS KNOWLEDGE DOES NOT RELIEVE THE RESPONSIBILITY OF PERFORMING HIS WORK PROPERLY. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED BECAUSE OF CONDITIONS THAT OCCUR DUE TO FAILURE TO FAMILIARIZE WORKERS WITH THIS KNOWLEDGE



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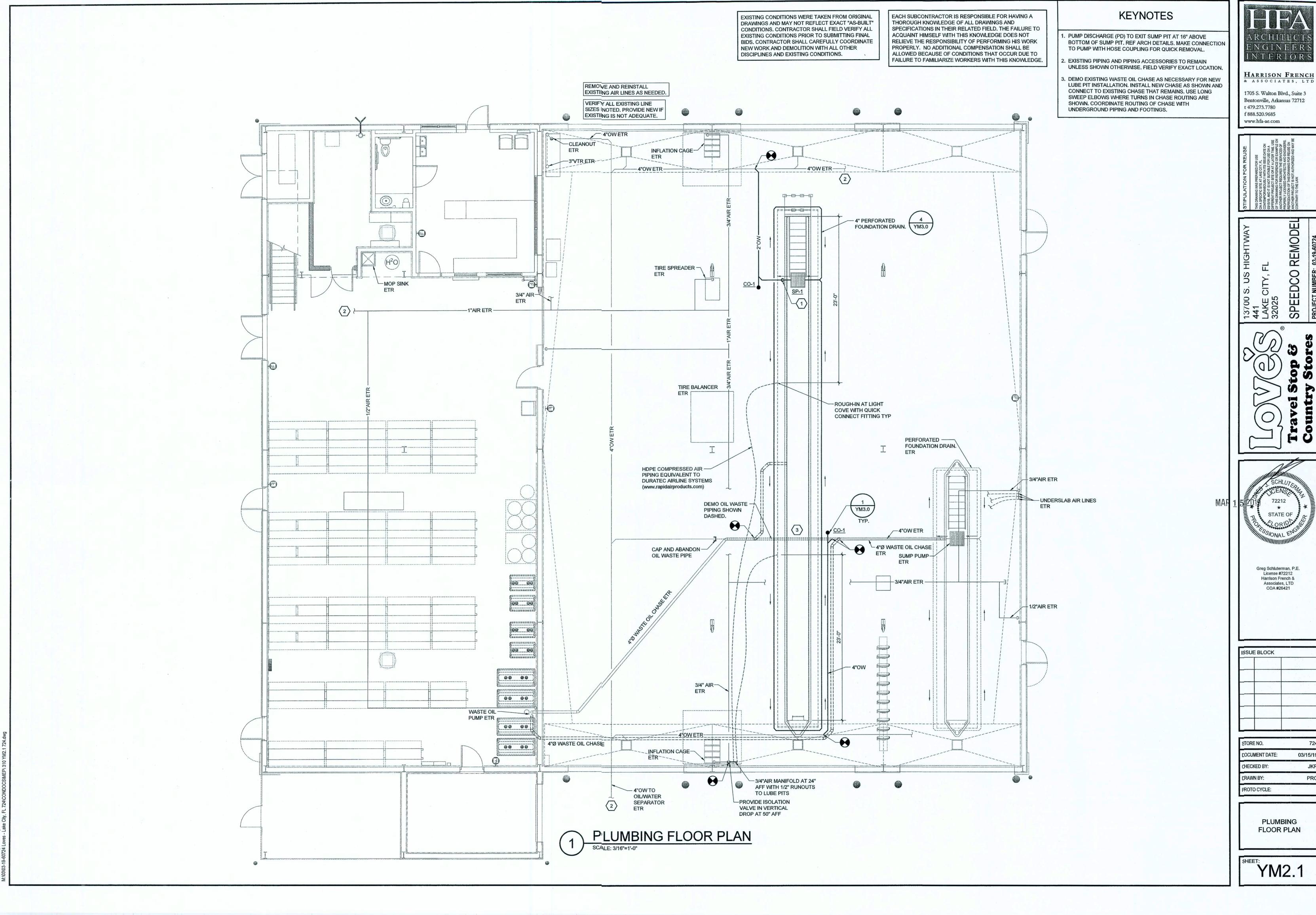
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MECHANICAL FLOOR PLAN

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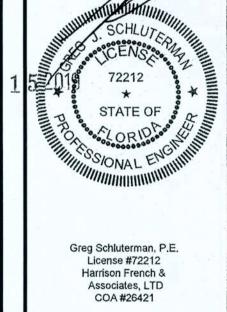


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PLUMBING FLOOR PLAN

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1. BORDER TYPES SHALL BE COMPATIBLE WITH ARCHITECTURAL CEILING TYPE FOR THE ROOM IN WHICH THE AIR DEVICE IS LOCATED.

2. SEE HVAC PLANS FOR LOCATION AND AIR QUANTITIES OF EACH AIR DEVICE.

3. ALL AIR DEVICES SHALL BE TESTED IN ACCORDANCE WITH ASHRAE STANDARD 7091.

4. NC VALUES ARE BASED UPON A 10 dB ROOM ATTENUATION. 5. OWNER PROVIDED AND CONTRACTOR INSTALLED. REFER TO SPECIFICATIONS

			FAN S	CHED	ULE				
MARK	AREA SERVED	MANU.	MODEL		FAN		ELE	C.	NOTES
Water	74 (11) (01) (11)			CFM	RPM	ESP	V/PH/HZ	HP	
EF5	MECHANIC'S BAY	DAYTON	10D968	4240	1750	0.125	120/1/60	3/4	A, C
EF6	MECHANIC'S BAY	DAYTON	10D968	4240	1750	0.125	120/1/60	3/4	A, C
EF7	LUBE PIT	PENNBARRY	SX085RCGP	400	1550	0.4	120/1/60	1/6	C, D, E, F
EF8	LOCKER ROOM	DAYTON	10D952	170	1775	0.25	120/1/60	1/30	A, C

GENERAL INFORMATION: 1. UNITS PROVIDED BY OWNER, INSTALLED BY CONTRACTOR.

A. FAN SHALL BE SWITCHED. REF ELEC.

B. PROVIDE MANUFACTURER INTEGRAL DISCONNECT, GRAVITY BACKDRAFT DAMPEF, AND BIRD SCREEN. C. PROVIDE MANUFACTURER INTEGRAL DISCONNECT, GRAVITY BACKDRAFT DAMPEF, BIRD SCREEN, AND WEATHER HOOD.

D. PROVIDE WITH PLUG TYPE DISCONNECT

E. WIRE TO RUN CONTINUOUS

F. PROVIDE WITH 12" X 12" BRICK VENT

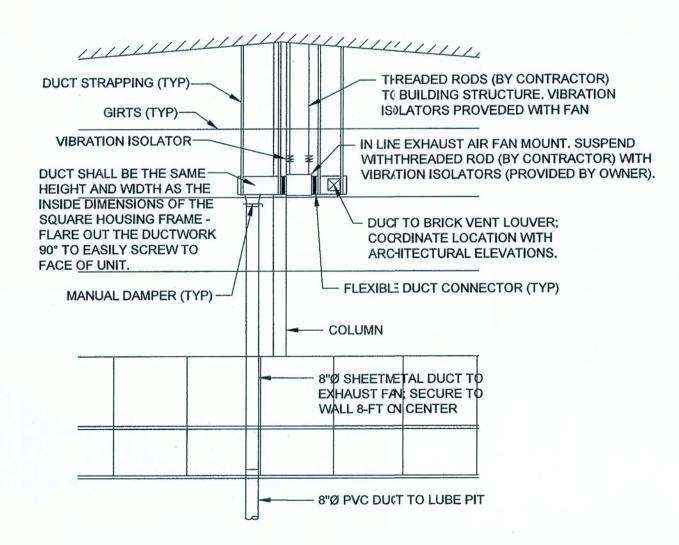
		PUMP S	CHEDUL	-E				
MARK	MANUFACTURER/		WORKING	GPM	DISCHARGE	MOTOR	ELEC	NOTES
	MODEL	TYPE	FLUID	C	PRESSURE (FT)	HP	VOLT/PH	
SP-1	ZOELLER MIGHTY MATE 53	SUBMERSIBLE SUMP PUMP	OILWATER	10	17	1/3	115/1	1

1. PROVIDE WITH DISCHARGE CHECK VALVE AND DECOUPLING UNION.

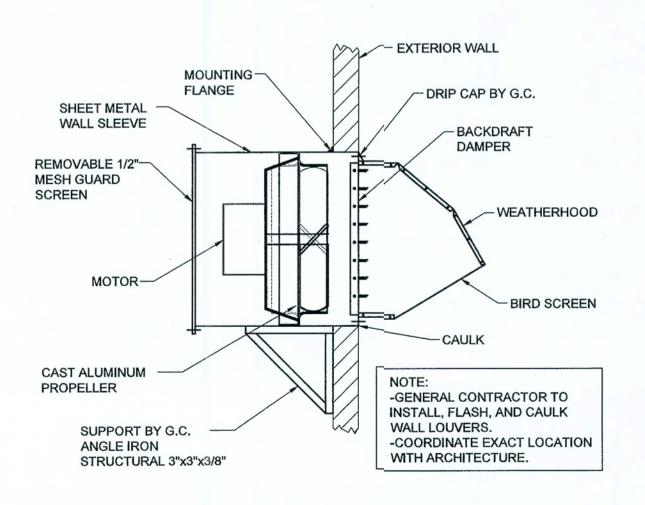
	LOUVER SCHEDULE									
				NECK		MAX. AIRFLOW	STATIC PRESSURE	FREE	AIR	
MARK M	MANUFACTURER	MODEL	LOCATION	SIZE (IN.)	TYPE	RATE (CFM)	DROP (IN H2O)	AREA (SQ. FT.)	VELOCITY	NOTES
OAL-1	NAILOR	1606CDAF	SERVICE BAY	30"X30"	DRAINABLE	1700	0.08	2.72	625	1-2

PROVIDE WITH ALUMINUM BIRD SCREEN.

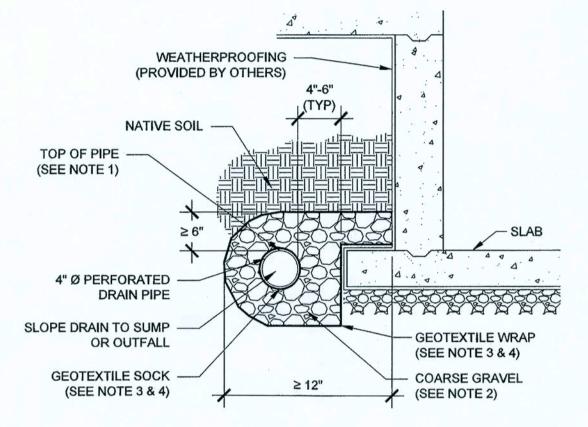
2. PROVIDE WITH KYNAR/HLAR (70% PVDF) FINISH; COLOR TO BE SELECTED BY ARCHTECT.



TIRE SHOP EXHAUST FAN SECTION



WALL EXHAUST FAN DETAIL



TOP OF PERFORATED PIPE MUST BE AT OR BELOW THE TOP OF FOOTING.

2. BACKFILL MUST BE SIZED AT LEAST ONE SIEVE SIZE (ROCK SIZE) LARGER THAN DIMENSIONS OF PERFORATIONS, OTHERWISE A GEOTEXTILE WRAP AROUND THE PIPE IS REQUIRED 3. FOR NATIVE SOIL WITH HIGH SAND CONTENT, A GEOTEXTILE BETWEEN THE BACKFILL AND NATIVE

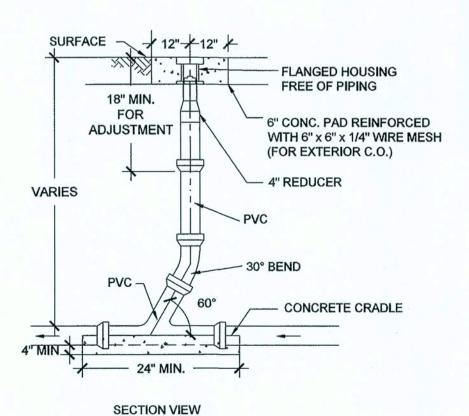
SOIL SHOULD BE USED. FOR NATIVE SOIL WHERE THE CLAY CONTENT EXCEEDS 50% OR THE SILT CONTENT EXCEEDS 40%, A GEOTEXTILE IS NOT REQUIRED AROUND THE PIPE. 4. FOR NATIVE SOIL WITH LESS THAN 50% PASSING THE NO. 200 SIEVE, THE APPARENT OPENING SIZE (AOS) OF THE FABRIC SHOULD BE AT LEAST A NO. 30 SIEVE. FOR NATIVE SOIL WITH MORE THAN 50%

FOUNDATION & SUBSURFACE

PASSING THE NO. 200 SIEVE, THE AOS OF THE FABRIC SHOULD BE AT LEAST A NO. 50 SIEVE.

DRAIN INSTALLATION

NTS



1. COVER SHALL HAVE A LOCKING LID MARKED "SEWER". 2. DESIGN BASIS IS JAY R. SMITH MODEL 4250; REFER TO **SPECIFICATIONS**

SANITARY SEWER CLEANOUT

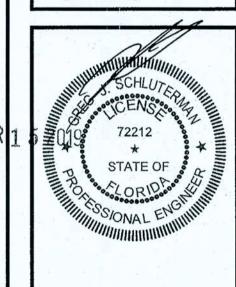
EACH SUBCONTRACTOR IS RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF ALL DRAWINGS AND SPECIFICATIONS IN THEIR RELATED FIELD. THE FAILURE TO ACQUAINT HIMSELF WITH THIS KNOWLEDGE DOES NOT RELIEVE THE RESPONSIBILITY OF PERFORMING HIS WORK PROPERLY. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED BECAUSE OF CONDITIONS THAT OCCUR DUE TO FAILURE TO FAMILIARIZE WORKERS WITH THIS KNOWLEDGE



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REMODEL



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MECHANICAL DETAILS AND SCHEDULES

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..WEATHER PROOF COVERPLATE ...WEATHER RESISTANT RECEPTACLE EXISTING TO REMAIN ...RELOCATED

WIRING METHODS

2.4 WIRING DEVICES

A. INSTALLATION

3.3 WIRING DEVICES

3.4 PROTECTION

NOT BE MOUNTED BACK-TO-BACK.

PART 1 - GENERAL 1.1 SUMMARY A. SECTION INCLUDES WIRE AND CABLE. OUTLET BOXES AND CONDUIT FITTINGS. WRING DEVICES. THE PUBLICATIONS LISTED BELOW FORM A PART OF THIS SPECIFICATION TO THE EXTENT REFERENCED. PUBLICATIONS ARE REFERENCED WITHIN THE TEXT BY THE BASIC DESIGNATION B. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA): NFPA 70 - NATIONAL ELECTRICAL CODE (NEC). C. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA): D. UNDERWRITERS LABORATORIES (UL): UL 1569 - METAL CLAD CABLES. PART 2 - PRODUCTS 2.1 WRE AND CABLE ELECTRICAL COMPONENTS AND DEVICES: LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100, BY A NATIONALLY RECOGNIZED TESTING AGENCY AND MARKED FOR USE. WIRE AND CABLE SHALL BEAR THE LABEL OF A NATIONALLY RECOGNIZED TESTING LABORATORY AND SHALL CONFORM TO STANDARDS ESTABLISHED FOR SUCH MATERIALS BY NATIONALLY RECOGNIZED AGENCIES. PROVIDE CODE GAUGE, SOFT ANNEALED COPPER WIRE, NOT LESS THAN 98 PERCENT CONDUCTIVITY AND OF 600 VOLT CLASS. D. CONDUCTORS: INSULATION TYPE SHALL BE ONE OF THE FOLLOWING. b. THWN. c. XHHW. d. XHHW-2 TYPE: a. #10 AND SMALLER - SOLID. b. #8 AND LARGER - STRANDED INTERLOCKED ARMOR METAL CLAD (MC) CABLE: CONTRACTOR'S OPTION AS ALLOWED BY AUTHORITIES HAVING JURISDICTION. MC CABLE SHALL HAVE THE FOLLOWING

MINIMUM SIZE CONDUCTOR, #12 AWG COPPER, INCLUDING GREEN INSULATED EQUIPMENT GROUND, SIZED IN ACCORDANCE WITH THE NEC.

WIRE SMALLER THAN #12 AWG NOT PERMITTED UNLESS OTHERWISE NOTED. #14 AWG, TYPE MTWOR TFF PERMITTED FOR SIGNAL AND PILOT CONTROL CIRCUITS UNLESS OTHERWISE

COLOR CODE #6 AWG AND SMALLER PHASE AND NEUTRAL CONDUCTORS BY CONTINUOUS OUTER COVERING. CONDUCTORS #4 AWG AND LARGER MAY BE COLOR CODED BY TAPE. TAPE SHALL HAVE MINIMUM OF TWO COMPLETE WRAPS AROUND CONDUCTOR AT 6 INCHES FROM TERMINATIONS, SPLICES, AND JUNCTION POINTS.

IDENTIFY CIRCUIT NUMBERS WITH SYNTHETIC CLOTH OR PLASTIC LABELS AT SPLICE AND JUNCTION POINTS

A. CONDUIT TYPES SHALL BE AS FOLLOWS AND SHALL BEAR THE LABEL OF A NATIONALLY

A. OUTLET BOXES AND CONDUIT FITTINGS SHALL BEAR THE LABEL OF A NATIONALLY RECOGNIZED TESTING LABORATORY AND BE RATED FOR ENVIRONMENTAL CONDITIONS WHERE INSTALLED.

2. EXTERIOR BOXES: PROVIDE MASONRY BOXES FOR OUTLETS INSTALLED FLUSH IN

EMT FITTINGS FOR DRY LOCATIONS: DIECAST OR STEEL SET SCREW TYPE.

EMT FITTINGS FOR WET OR DAMP LOCATIONS: STEEL COMPRESSION TYPE.

4. THREADLESS GRC OR IMC FITTINGS: NOT PERMITTED.

PVC FITTINGS: SOLVENT WELD TYPE FOR PVC CONDUIT.

GRC OR IMC CONNECTORS FOR DRY LOCATIONS.

B. BOXES: COMPLY WITH NEC IN REGARD TO MAXIMUM ALLOWABLE NUMBER OF CONDUCTORS

OUTLET BOXES: SUITABLE FOR SUPPORTING LIGHTING FIXTURES IF INTENDED FOR THAT PURPOSE.

3. GRC, IMC, OR EMT BOX CONNECTORS FOR WET OR DAMP LOCATIONS: WEATHER-TIGHT HUBS.

INTERIOR BOXES: HOT DIP GALVANIZED, 4 INCHES MINIMUM OCTAGON OR SQUARE, UNLESS
OTHERWISE NOTED. PROVIDE SINGLE OR MULTIPLE GANG OUTLET BOXES AS REQUIRED FOR
FLUSH INSTALLATION IN DRYWALL CONSTRUCTION. PROVIDE MASONRY BOXES FOR
OUTLETS INSTALLED FLUSH IN CONCRETE UNIT MASONRY. PROVIDE SINGLE
SURFACE_MOUNTED OUTLET BOXES FOR UTILITY TYPE BOXES.

1. ALUMINUM MC-LITE OR STANDARD MC.

OVERALL MOISTURE RESISTANT TAPE.

G. COLOR CODE

G.2. 208/120V

G.1.1. NEUTRAL: WHITE

G.2.3. GROUND: GREEN

4. GALVANIZED STEEL OR ALUMINUM INTERLOCKED CLADDING.

MANUFACTURED IN ACCORDANCE WITH UL 1569.

PHASE: A - BLACK, B - RED

G.2.2. PHASE: A - BLACK, B - RED, C - BLUE

G.1.4. ISOLATED GROUND - GREEN W/ YELLOW TRACER

ISOLATED GROUND - GREEN W/ YELLOW TRACER

1. GALVANIZED RIGID METAL CONDUIT (GRC): HOT DIP GALVANIZED.

INTERMEDIATE METAL CONDUIT (IMC): HOT DIP GALVANIZED.

3. ELECTRICAL METALLIC TUBING (EMT): HOT DIP GALVANIZED.

5. FLEXIBLE METAL CONDUIT: ZINC COATED STEEL OR ALUMINUM.

SCHEDULE 40 HEAVY WALL POLYVINYL CHLORIDE (PVC).

LIQUID TIGHT FLEXIBLE STEEL CONDUIT WITH PVC JACKET.

MC CABLE: STEEL OR ALUMINUM CLADDING.

2.3 OUTLET BOXES AND CONDUIT FITTINGS

CONCRETE UNIT MASONRY.

C. CONDUIT FITTINGS:

GROUND: GREEN

NEUTRAL: WHITE

BRANCH CIRCUIT SWITCHES: HEAVY DUTY, SPECIFICATION GRADE RATED 20A 120/277V AS A.1. SINGLE POLE - HUBBEL #HBL1221GY OR EQUAL. A.2. 3-WAY - HUBBEL #HBL1223GY OR EQUAL A.3. 4-WAY - HUBBEL #HBL1224GY OR EQUAL A.4. SINGLE POLE OCCUPANCY SENSOR - LEVITON #OSSMT-MD-G OR EQUAL. B. FRECEPTACLES: STRAIGHT BLADE NYLON GROUNDING, BACK OR SIDE WIRED, HEAVY DUTY, SPECIFICATION GRADE AS FOLLOWS: B.1|. DUPLEX RECEPTACLE, 20A 125V (5-20R) - HUBBELL #HBL5262GY OR EQUAL. B.2. DUPLEX RECEPTACLE, 20A 125V (5-20R) ISOLATED GROUND - HUBBELL #IG5262GY OR B.3). DUPLEX RECEPTACLE, 20A 125V (5-20R) GFCI - HUBBELL #GF15GYLA OR EQUAL. B.4. DUPLEX RECEPTACLE, 20A, 125V (5-20R) GFCI AND WEATHER RESISTANT -HUBBELL#GFTR15GY OR EQUAL. C.1_I. 302/304 STAINLESS STEEL COVER PLATES FOR FLUSH MOUNTED EQUIPMENT. C.2. GALVANIZED STEEL PLATES WHERE DEVICES ARE INSTALLED ON EXPOSED FITTINGS OR C.3. BLANK 302/304 STAINLESS STEEL COVER PLATES ON ALL BOXES WITHOUT DEVICE. C.4. WEATHER-PROOF, WHILE-IN USE COVER FOR ALL WEATHER RESISTANT, 20A, DUPLEX RECEPTACLES SHALL BE HUBBELL #WP26E OR EQUAL. D.1). UNLESS OTHERWISE NOTED, WIRING DEVICES SHALL BE GRAY. D.2. UNLESS OTHERWISE NOTED, COVER PLATES SHOULD BE SILVER. D.3. UNLESS OTHERWISE NOTED, ISOLATED GROUND RECEPTACLES AND COVER PLATES SHALL MATCH THE TYPE AND COLOR AS OTHER DEVICES INSTALLED IN THAT ROOM OR PART 3 - EXECUTION 3.1 IINSTALLATION - GENERAL A. INSTALL SPECIFIED MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS B. WHERE SWITCHES ARE GANGED, PROVIDE PERMANENTLY INSTALLED STEEL BARRIERS

BETWEEN SWITCHES OR PROVIDE SEPARATE BOXES AND SEPARATE COVERPLATES FOR EACH

CIRCUIT. INSTALL CONDUIT CONCEALED, EXCEPT IN UNFINISHED AREAS AND WHERE INDICATED ON DRAWNGS. 2). CLEAN PVC CONDUIT PER MANUFACTURER'S RECOMMENDATIONS BEFORE APPLICATION OF COORDINATE FLASHINGS WHERE CONDUIT PENETRATES ROOF MEMBRANE. 4. PAINT METALLIC CONDUIT UNDER CONCRETE SLAB OR WHERE INSTALLED IN CONTACT WITH EARTH. APPLY TWO 6 MIL COATS OF PVC OR ASPHALT PAINT CONTINUOUSLY ALONG ENTIRE LENGTH OF CONDUIT PRIOR TO INSTALLATION BELOW GRADE. DO NOT RUN CONDUIT IN

DRAWINGS, INCLUDING VOLTAGE, AMPERAGE, BUS BRACING, AND INTERRUPTING RATINGS. MAIN LUGS ONLY (MLO), MAIN CIRCUIT BREAKER (MCB), OR MAIN FUSIBLE SWITCH (MFS)
 PANELBOARD AND BRANCH DEVICES AS INDICATED ON SCHEDULE. BRANCH CIRCUIT PROTECTIVE DEVICES:
 PLUG ON OR BOLTED TYPE THERMAL MAGNETIC
 CENTER_TRIP CIRCUIT BREAKERS FOR ALTERNATING CURRENT, EACH WITH SINGLE HANDLE COMMON TRIP. TANDEM OR HALF_SIZED CIRCUIT BREAKERS OR LOAD CENTER TYPE CONSTRUCTION NOT PERMITTE IRCUIT BREAKER AMP INTERRUPTING CAPACITY IC) NO LESS THAN VALUES INDICATED ON DRAWNGS, CIRCUIT BREAKERS FEEDING EMERGENCY LIGHTS, NIGHT LIGHTS, TIME CLOCK INSTALL FLEXIBLE METAL CONDUIT OR LIQUID TIGHT FLEXIBLE METAL CONDUIT FOR FINAL CONNECTIONS TO AIR COMPRESSORS, HVAC EQUIPMENT, MOTORS AND OTHER VIBRATING MOTORS, ETC. WILL BE EQUIPPED WITH HANDLE, LOCKS WHERE INDICATED ON DRAWINGS, OR REQUIRED BY NFPA 70. 6. COORDINATE INSTALLATION OF CONDUIT IN MASONRY WORK. 3. CABINETS: ZINC COATED SHEET STEEL WITH KNOCK OUTS, LISTED AND LABELED BY A NATIONALLY RECOGNIZED TESTING LABORATORY. TRIMS AND DOORS TO HAVE 7: DO NOT INSTALL CONDUIT UNDER SLAB UNLESS INDICATED ON DRAWINGS. CONDUIT INSTALLED BELOW SLAB SHALL BE GALVANIZED RIGID METAL (GRC), INTERMEDIATE METAL CONDUIT (IMC), OR SCHEDULE 40 PVC. 8. ROUTE ABOVE GRADE CONDUIT PARALLEL OR PERPENDICULAR TO BUILDING LINES. 9. MAINTAIN MINIMUM OF 6 INCHES CLEARANCE AT FLUES AND HEAT SOURCES.

SUITABLE PRIMER COAT AND FINISH COAT OF MANUFACTURER'S STANDARD COLOR. TRIMS TO BE FITTED WITH HINGED DOORS HAVING OMBINED LOCK AND LATCH, LOCKS WILL BE EYED ALIKE AND FURNISHED WITH TWO KEYS FOR EACH PANELBOARD.

PANELBOARDS

LIGHTING/APPLIANCE PANELBOARDS.

NATIONAL ELECTRICAL CODE (NFPA-70), AND INTERIM AMENDMENTS IN EFFECT.

A. COMPLY WITH NATIONAL ELECTRICAL CODE.

A. ELECTRICAL SYSTEM VOLTAGES: THE FOLLOWING VOLTAGES SHALL APPLY UNLESS OTHERWISE NOTED.

RECEPTACLE AND SMALL POWER SYSTEMS: 208Y/120 VOLT, 3 PHASE, 4 WIRE WYE, 60 HZ,

PANELBOARDS MANUFACTURED BY ONE OF THE FOLLOWING, UNLESS OTHERWISE INDICATED ON

B. EQUIPMENT SHALL BEAR NAME AND TRADEMARK OF MANUFACTURER AS LISTED ABOVE.

A. PANELBOARDS: INSTALL AS SCHEDULED ON

C. SUBSTITUTIONS: NOT PERMITTED.

2.2 LIGHTING/APPLIANCE PANELBOARDS

B. COMPLY WITH LOCAL AND STATE, UTILITY REGULATIONS AND LAWS.

SOLID GROUNDED NEUTRAL.

AND METHODS, GROUNDING.

1. SECTION 16050 - BASIC ELECTRICAL MATERIALS

PART 1 - GENERAL

1.2 REFERENCES

A. SECTION INCLUDES:

1.3 QUALITY ASSURANCE

PART 2 - PRODUCTS

MANUFACTURERS

CUTLER HAMMEI

SIEMENS (ITE).

SQUARE D.

GENERAL ELECTRIC.

B. RELATED REQUIREMENTS:

1.1 SUMMARY

B. DIRECTORY HOLDER: CONTRACTOR SHALL PROVIDE LEGIBLE TYPEWRITTEN CIRCUIT DIRECTORY PROPERLY IDENTIFYING LOAD(S) ON EACH CIRCUIT MOUNTED UNDER CLEAR PLASTIC COVER. BRANCH CIRCUITS SHALL BE CONNECTED EXACTLY AS INDICATED ON PANEL SCHEDULE.

PART 3 - EXECUTION

3.1 EXAMINATION A. EXAMINE SURFACES AND ADJACENT AREAS II WHICH WORK UNDER THIS SECTION IS TO BE PERFORMED. REPORT IN WRITING TO OWNER'S CONSTRUCTION MANAGER PREVAILING CONDITIONS THAT MAY ADVERSELY AFFECT SATISFACTORY EXECUTION OF WORK. DO NO PROCEED WITH WORK UNTIL UNSATISFACTOR CONDITIONS HAVE BEEN CORRECTED. STARTING WORK CONSTITUTES ACCEPTANCE OF

THE EXISTING CONDITIONS AND THE CONTRACTOR SHALL THEN, AT HIS EXPENSE, BE RESPONSIBLE FOR CORRECTING ALL UNSATISFACTORY AND DEFECTIVE WORK ENCOUNTERED.

3.2 INSTALLATION A. INSTALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS INDICATED ON DRAWINGS.

SAFETY SWTICHES

THE PUBLICATIONS LISTED BELOW FORM A PART OF THIS SPECIFICATION TO THE EXTENT REFERENCED.

3. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

NEMA 250 - ENCLOSURES FOR ELECTRICAL EQUIPMENT

DEAD-FRONT CONSTRUCTION WITH HINGED ARC SUPPRESSOR AND SWITCH BLADES WHICH ARE FULLY

VISIBLE IN THE OFF POSITION AND WITH DOOR OPEN.

1. QUICK-MAKE AND QUICK-BREAK OPERATING HANDLE AND MECHANISM WITH A DUAL COVER INTERLOCK TO PREVENT UNAUTHORIZED OPENING OF THE SWITCH DOOR IN THE "ON" POSITION OR CLOSING THE SWITCH MECHANISM WHILE THE DOOR IS OPEN.

2. PROVIDE ELECTRICAL INTERLOCK SWITCH TO

DE-ENERGIZE CONTROL WIRING AS REQUIRED

3. LINE AND LOAD TERMINALS OF THE DEVICE RATED 100

4. PROVIDE OPERATING HANDLE WITH PROVISIONS FOR INSTALLATION OF A PADLOCK IN "OFF" OR "ON"

SWTCHES HORSEPOWER RATED FOR 600 VOLTS, 60 HZ, HEAVY-DUTY TYPE.

AMPERES OR LESS SHALL BE RATED FOR 75 DEGREES C

PUBLICATIONS ARE REFERENCED WITHIN THE TEXT BY THE

GENERAL NOTES

PROVIDE SEALS AT RACEWAY PENETRATIONS AS FOLLOWS:

A. FIRE RATED WALLS: SEAL WITH SEALANT HAVING A T-RATING TO MATCH OR EXCEED WALL RATING. B. EXTERIOR: REFER TO ARCHITECTURAL DOCUMENTS FOR

SEALING REQUIREMENTS AT ALL EXTERIOR MOUNTED DEVICES, FIXTURES, ENCLOSURES, AND RACEWAY PENETRATIONS. PROVIDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR

(SIZE PER NEC) IN PVC TYPE CONDUIT, POWER CIRCUITS, ISOLATED GROUND CIRCUITS, OR AS SHOWN ON PLANS. CONDUIT SHALL BE SIZED PER NEC BASED ON THWN 600 VOLT COPPER SINGLE CONDUCTORS, PLUS THE EQUIPMENT GROUNDING CONDUCTOR. WIRING DEVICES: DEVICE MOUNTING HEIGHTS ARE FROM

FINISHED FLOOR TO CENTER OF OUTLET BOX UNLESS NOTED OTHERWISE ON PLANS. COORDINATE THE STANDARD MOUNTING HEIGHTS WITH MASONRY: A. SWITCHES +46" B. RECEPTACLES +20 C. VOICE/DATA +20"

WIRING SHALL INCLUDE FINAL CONNECTION TO ALL EQUIPMENT IN CONFORMANCE WITH EQUIPMENT SUPPLIER

CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPLETE PANELBOARD IDENTIFICATION SCHEDULES.

BRANCH CIRCUIT CONDUCTORS SHALL BE MINIMUM #12 AWG UNLESS NOTED OTHERWISE IN SCHEDULES. WHERE 20A BRANCH CIRCUITS HAVE #8 AND LARGER WIRE SPECIFIED, #10 AWG WIRE SHALL BE USED FOR THE FINAL CONNECTION (15-FT MAXIMUM).

WHERE BRANCH CIRCUITS ARE GROUPED, SIZE CONDUIT AND DERATE CURRENT CARRYING CONDUCTORS PER NEC

PROVIDE HANDLE TIES ON ALL MULTIWIRE BRANCH CIRCUITS TO MEET NEC REQUIREMENTS. . CONDUITS EXTENDING BEYOND EXTERIOR WALL: STUB OUT

2'-0" BELOW GRADE TO 5'-0" BEYOND EXTERIOR WALLS

UNI ESS NOTED OTHERWISE, COORDINATE LOCATION AND PROVIDE CONNECTION TO SITE CONDUITS SUPPORTS FROM STRUCTURE: NO ATTACHMENT OF ANY TYPE SHALL BE MADE TO BRIDGING OR JOIST WEB MEMBERS. UTILIZE ONLY THE TOP AND BOTTOM CHORDS

FOR SUPPORTING THE ELECTRICAL SYSTEM INSTALLATIONS. . DO NOT INSTALL EQUIPMENT OR CONDUITS DIRECTLY UNDER SKYLIGHT WELLS UNLESS INDICATED OTHERWISE ON

JOIST SPACE, COORDINATE WITH SPRINKLER CONTRACTOR PRIOR TO INSTALLATION IN ORDER TO MAINTAIN REQUIRED CLEARANCES FROM SPRINKLERS. 3. COORDINATE OUTLET BOX LOCATIONS WITH METAL SIDING TO MINIMIZE CUTTING OF SIDING.

WHERE GROUPED CONDUITS ARE INSTALLED WITHIN THE

ALL MOUNTING HEIGHTS TO CENTERLINE OF ITEM UNLESS OTHERWISE NOTED. VERIFY ALL OUTLET LOCATIONS ON THE JOB PRIOR TO ROUGH-IN.

 LABEL THE FRONT OF EACH RECEPTACLE COVERPLATE WITH PANEL DESIGNATION AND CIRCUIT NUMBER USING CLEAR THERMAL TRANSFER (ELECTRIC DYMO) LABELS WITH 1/8" HIGH BLACK LETTERS (OR CONTRASTING COLOR IF PLATES ARE BLACK OR BROWN). LABELS SHALL BE SUITABLE FOR INDOOR/OUTDOOR USE. LABEL THE BACK OF EACH LIGHT SWITCH COVERPLATE WITH PANEL DESIGNATION AND CIRCUIT NUMBER USING A FINE BLACK PERMANENT MARKER.

ALL PIPING, CONDUIT, AND OUTLET BOXES (ELECTRIC, VOICE, DATA, ETC.) IN THE RATED WALLS OR CEILING SHALL BE CONSTRUCTED OF NON-COMBUSTABLE MATERIAL.

 OUTLET BOXES (ELECTRICAL, VOICE, DATA, ETC.) SHALL BE LIMITED TO TWO OUTLET BOXES PER STUD SPACE. OUTLET BOXES ON OPPOSITE SIDES OF THE RATED WALLS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES. CLEAR THERMAL TRANSFER (ELECTRONIC DYMO) LABELS

WITH 1/8" HIGH LETTERS. THE COLOR OF ISOLATED GROUND RECEPTACLES AND COVERPLATES SHALL MATCH THOSE OF OTHER DEVICES ON THE JOB.

20. FOR ISOLATED GROUND CIRCUITS, PROVIDE AN ISOLATED GROUND CONDUCTOR THROUGHOUT THE LENGTH OF THE CIRCUIT IN ADDITION TO THE PHASE, NEUTRAL, AND GROUND CONDUCTORS.

ALL ELECTRICAL SERVICE AND DISTRIBUTION FOUIPMENT PANELBOARDS DISCONNECT SWITCHES AND LIGHTING FIXTURES TO BE FURNISHED BY THE ACCOUNT VENDOR, GRAYBAR.

CONTACT: JOE STOLL 8170 LACKLAND ROAD ST. LOUIS, MO 63114 PHONE: 314-573-2080 FAX: 314-573-0003 EMAIL: LOVES@GRAYBAR.COM SYMBOL LEGEND

(SYMBOLS APPLY ONLY WHEN USED ON DRAWINGS)

SENSOR, MANUAL ON, AUTO OFF

SENSOR, MANUAL ON, AUTO OFF

DUAL-TECH WALL SWITCH OCC

CEILING OCC. SENSOR

RECEPTACLE, DUPLEX

MOUNTED HORIZONTALL

GROUND FLUSH FLOOR

ISOLATED GROUN

ISOLATED GROUND

L5-15R. UNO

L5-15R, UNO

POWER PACK

SENSOR, MANUAL ON, AUTO OFF

LOW TEMPERATURE, ULTRASONIC

RECEPTACLE, DUPLEX FLUSH FLOOR

RECEPTACLE, DUPLEX ISOLATED

RECEPTACLE, DOUBLE DUPLEX

RECEPTACLE, DOUBLE DUPLEX,

RECEPTACLE, SIMPLEX TWIST LOCK,

RECEPTACLE, SIMPLEX TWIST LOCK,

RECEPTACLE, DUPLEX TWIST LOCK,

RECEPTACLE, DUPLEX TWIST LOCK,

ISOLATED GROUND, L5-15R, UNO

RECEPTACLE, SPECIAL

RECEPTACLE, SIMPLEX

ALARM JUNCTION BOX,

FOR REMOTE TEST/RESET

NON-FUSED DISCONNECT

FUSED DISCONNECT

CIRCUIT, CONCEALED

CIRCUIT, EXPOSED

CONDUIT SLEEVE

BOX FOR OTHER

TELEPOWER POLE

SMOKE DETECTOR

ORN / STROBE

OOR HOLD OPEN

CONDENSER FANS

ELECTRIC DEFROST

HBA DIGITAL TIMER SWITCH - TD200

PUSH BUTTON

BUZZER

D'

DH

JUNCTION BOX

RECEPTACLE, PLUG-MOLD

(WALL MOUNTED/CEILING MOUNTED)

(WALL MOUNTED/CEILING MOUNTED)

(WALL MOUNTED/CEILING MOUNTED)

EQUIPMENT CONNECTION POINT

(PROVIDED WITH EQUIPMENT)

UNDERGROUND CONDUIT RUN

USH MOUNTED PANELBOARD

SURFACE MOUNTED PANELBOARD

ELEPHONE / DATA BOX

ELEPHONE, FLUSH FLOOR

ISOLATED GROUND, L5-15R, UNO

LTRASONIC CEILING OCC. SENSOF

WALL MOUNTED/CEILING MOUNTED) MERGENCY FIXTURE HARRISON FRENCE SWITCH, SINGLE POLE & ASSOCIATES, LT SWITCH, 3-WAY 1705 S. Walton Blvd., Suite 3 SWITCH, 4-WA Bentonville, Arkansas 72712 t 479.273.7780 SWITCH, KEYED f 888.520.9685 www.hfa-ae.com WITCH, DIMMER WITCH, VARIABLE SPEED SWITCH, MANUAL MOTOR

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> **ELECTRICAL** SPECIFICATIONS & GENERAL NOTES

SHEET:

MATERIALS AND METHODS

PART 2 - EXECUTION

INSTALLATION A. INSTALL SPECIFIED MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS INDICATED ON DRAWINGS.

B. CUTTING AND PATCHING: WHERE CUTTING IS REQUIRED THROUGH WALLS, FLOORS, OR CEILINGS, MAKE OPIENINGS NO LARGER THAN REQUIRED AND REPAIR AFFECTED SURFACES TO MATCH ADJACENT SURFACES. ELECTRICAL EQUIPMENT SUPPORTS: SUPPORT ELECTRICAL EQUIPMENT WITH HANGERS AND SUPPORTS SP'ECIFIED ABOVE OR IN ANOTHER APPROVED MANNER WHERE DETAILS ARE NOT INDICATED.

D. SLEEVES: INSTALL WHERE CONDUITS PASS THROUGH CONCRETE FLOORS. CAULK SLEEVES THROUGH OUT SIDE WALLS ABOVE GRADE WITH SEALANT.

TORQUE ALL CONDUCTOR CONNECTION TO MANUFACTURER'S RECOMMENDED VALUES. INSPECT PANELBOARDS FOR PHYSICAL DAMAGE, PROPER ALIGNMENT, ANCHORAGE, AND GROUNDING. CHECK PROPER INSTALLATION ANID TIGHTNESS OF CONNECTIONS FOR CIRCUIT BREAKERS, FUSIBLE SWITCHES, AND FUSES.

B. EQUIPMENT GROUNDING

1. MAKE CONDUITS ELECTRICALLY CONTINUOUS USING PROPER FITTINGS, CONNECTIONS, GROUNDING BUSHINGS. ETC. 2. WHERE GALVANIZED RIGID METAL CONDUIT (GRC) PENETRATES THE GRADE OUTDOORS OR PENETRATES THE SLAB, INSTALL INSULATING GROUNDING BUSHINGS.

METAL UNDERGROUND COLD WATER PIPE: CONNECT TO ELECTRICAL SYSTEM IF AVAILABLE AND PERMITTED BY LOCAL CODES. INSTALL JUMPERS AROUND WATER METERS, VALVES, OR OTHER DEVICES WHICH MIGHT CAUSE AN INTERRUPTION OF CONTINUITY DURING SERVICE.

E. GROUND RODS: IF GROUND RODS ARE REQUIRED, INSTALL TWO 5/8 INCH MINIMUM DIAMETER COPPERWELD) RODS DRIVEN VERTICALLY NOT LESS THAN 12 FEET APART AND EACH WITH 8 FEET OF LENGTH IN CONTACT WITH THE SOIL...

2.3 TESTING . UPON COMPLETION OF INSTALLATION, PERFORM CONTINUITY TESTS ON POWER AND EQUIPMENT BRANCH CIRCUIT CONDUCTORS. INSPECT WIRE AND CABLE FOR PHYSICAL DAMAGE. VERIFY PROPER PHASING

MEASURE GROUND RESISTANCE FROM SYSTEM NEUTRAL CONNECTION AT SERVICE ENTRANCE TO CONVENIENT GROUND POINT ON BUILDING WATER PIPE USING SUITABLE GROUND TESTING EQUIPMENT.

TEST RECEPTACLES WITH CIRCUIT TESTER TO ENSURE PROPER POLARITY, GROUNDING, AND CONTINUITY OF CIRCUITS.

PART 2 - PRODUCTS 2.1 SAFETY SWITCHES A. SWITCH INTERIOR

LOAD TEST GFCI RECEPTACLES.

10. INSTALL DOUBLE LOCKNUT AND BUSHINGS WHEN TERMINATING GRC OR IMC CONDUIT,

GALVANIZED RIGID METAL CONDUIT (GRC): PERMITTED FOR GENERAL EXPOSED OR CONCEALED WORK ABOVE OR BELOW GRADE.

INTERMEDIATE METAL CONDUIT (IMC): PERMITTED FOR GENERAL EXPOSED OR CONCEALED WORK ABOVE OR BELOW GRADE.

34. ELECTRICAL METALLIC TUBING (EMT): PERMITTED FOR GENERAL EXPOSED OR CONCEALED WORK ABOVE GRADE.

4I. POLYVINYL CHLORIDE RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE ON DRAWINGS: PERMITTED FOR BELOW_GRADE USE WHEN PERMITTED BY LOCAL GOVERNING

5i. FLEXIBLE METAL CONDUIT: PERMITTED IN LENGTHS OF 6 FEET OR LESS FOR CONNECTION TO EQUIPMENT IN DRY AREAS. NOT PERMITTED FOR GENERAL EXPOSED OR CONCEALED

6). LIQUID TIGHT FLEXIBLE METAL CONDUIT: PERMITTED EXPOSED IN LENGTHS OF 6 FEET OR LESS FOR VIBRATING EQUIPMENT IN DAMP LOCATIONS WHERE RIGID CONNECTIONS ARE

A. | REPLACE OUTLETS OR DEVICES IMPROPERLY LOCATED OR INSTALLED. SET OUTLETS AND | DEVICES PLUMB OR HORIZONTAL AND EXTEND TO, BUT NOT PROJECT ABOVE, FINISHED

INSTALL RECEPTACLES SO THAT THE GROUND PRONG IS IN THE DOWN POSITION.

A. | PROTECT INSTALLED PRODUCTS FROM DAMAGE UNTIL COMPLETION OF CONSTRUCTION OPERATIONS.

B. UNLESS OTHERWISE NOTED, RECEPTACLES, SWITCHES, AND OTHER WIRING DEVICES SHALL

WORK, FOR CONNECTION OF RECESSED LIGHT FIXTURES IN SUSPENDED CEILINGS AND

MC CABLE: PERMITTED ONLY WHERE CONCEALED INSIDE PARTITIONS AND ABOVE FINISHED CEILINGS. CABLE EXPOSED ON WALLS OR IN OPEN BAR JOIST AREAS WILL NOT BE PERMITTED. CUT CABLE WITH MANUFACTURER'S RECOMMENDED ARMOR STRIPPING TOOL.

EXCEPT WHERE CONDUIT TERMINATES IN THREADED HUB.

1'1. INSTALL INSULATED THROAT BUSHINGS ON ALL PVC CONDUIT RUNS.

CONNECTION OF OTHER EQUIPMENT SUBJECT TO VIBRATION.

NOT SUITABLE UNLESS OTHERWISE INDICATED ON DRAWINGS.

PROVIDE MANUFACTURERS APPROVED CONNECTORS.

WHERE SWITCHES ARE INDICATED TO BE FUSED, FURNISH WITH PROVISIONS FOR FUSES. D. ENCLOSURES:

. RATINGS:

B. SWITCH MECHANISM:

PART 1- GENERAL

REFERENCES

A. SECTION INCLUDES:

SAFETY DISCONNECT SWITCHES.

BASIC DESIGNATION ONLY.

(1000 VOLTS MAXIMUM).

1.1 SUMMARY

 NEMA 1, CODE GAUGE SHEET STEEL WITH HINGED COVER, EXCEPT WHERE EXPOSED TO WEATHER. IF EXPOSED TO WEATHER, PROVIDE NEMA 3R ENCLOSURE.

ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. APPLICABLE CODES SHALL TAKE PRECEDENCE OVER DRAWING DETAILS.

ALLOWED BECAUSE OF CONDITIONS THAT OCCUR DUE TO FAILURE TO FAMILIARIZE WORKERS WITH THIS KNOWLEDGE

A. NAMEPLATES: PROVIDE LAMINATED PLASTIC NAMEPLATES WITH 3/4 INCH MINIMUM CONTRASTIN) COLOR ENGRAVED GROUNDING

CONDUIT AND EQUIPMENT SUPPORTS: HANGERS SHALL BE SERIES P3000 OR P3300 CHANNELS IY UNISTRUT DEPENDING ON LOAD AND SPAN INVOLVED. USE PIPE HANGERS BY MINERALLAC , OR CADDY CLIPS BY ERICO ONLY WHERE IMPRACTICAL TO ATTACH HANGERS AND SUPPORTS TO STRUCTURE OVERHEAD BY METHODS APPROVED AT JOBSITE. DO NOT USE FASTENERS WHICH PENETRATE THE ROOF DECK.

1.4 CONDUIT SLEEVES A. SLEEVES: GALVANIZED, BLACK STEEL OR SCHEDULE 40 PVC PIPE.

E. FASTENING AND ANCHORING: FASTEN CONDUIT STRAPS, DISCONNECT SWITCHES, PANELBOARDS, AND OTHER EQUIPMENT SECURED TO WALLS AND SLABS WITH CADMIUM PLATED SCREWS OR BOLTS AND LEAD CINCH ANCHORS OR EXPANSION BOLTS AND INSTALL IN HOLES DRILLED WITH PROPER SIZE MASONRY DRILL. PROPERLY SIZE ANCHORS IN AC; CORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR LOAD TO BE SUPPORTED.

A. GENERAL: GROUND ALL METALLIC CONDUITS, SUPPORTS, CABINETS, EQUIPMENT, SYSTEM NEUTRALS, METAL BUILDING STRUCTURES, AND OTHER ITEMS REQUIRED TO BE GROUNDED IN ACCORDANCE WITH THE NEC AND OTHER APPLICABLE CODES AND AS INDICATED ON DRAWINGS.

3. INSTALL AN INSULATED EQUIPMENT GROUND WIRE AS SHOWN ON DRAWINGS.

D. CONCRETE ENCASED ELECTRODES: WHERE INDICATED ON THE DRAWINGS, FURNISH AND INSTALL ELECTRODES, JUMPERS, AND APPROVED FITTINGS IN ACCORDANCE WITH GROUNDING ELECTRODE DETAIL.

PART 3 - EXECUTION

3.1 INSTALLATION A. INSTALL MOTOR AND CIRCUIT DISCONNECT IN

B. PROVIDE PROPERLY SIZED GROUNDING LUG AND TERMINATIONS FOR ALL SAFETY SWITCHES.

EACH SUBCONTRACTOR IS RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF ALL DRAWINGS AND SPECIFICATIONS IN THEIR RELATED FIELD. THE FAILURE TO ACQUAINT HIMSELF WITH THIS KNOWLEDGE DOES NOT RELIEVE THE RESPONSIBILITY OF PERFORMING HIS WORK PROPERLY. NO ADDITIONAL COMPENSATION SHALL BE

1.3 HANGERS AND SUPPORTS

1.5 GROUNDING AND BONDING A. INSULATED GROUNDING BUSHING: STEEL WITH FEED-THRU LUGS. B. INSULATED EQUIPMENT GROUND WIRE: COPPER.

PART 1 - GENERAL

A. SECTION INCLUDES:

1. ELECTRICAL IDENTIFICATION

2. HANGERS AND SUPPORTS

4. GROUNDING AND BONDING

1.2 ELECTRICAL IDENTIFICATION

CONDUIT SLEEVES

1.1 SUMMARY

PRODUCTS

			LIGHTING FIXTURE SCHEDUL	E				
YPF	MANUFACTURER	CATALOG#	DESCRIPTION	VOLTS	WATTS	MOUNTING	REMARKS	FURNISHED BY
	THE RESERVE OF THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER.	S 4 LED VHO CW UE	4' LED STRIP FIXTURE	120	57	SURFACE	MOUNT TO BOTTOM OF METAL FRAMING	OWNER
TAE		S 8 LED VHO CW UE EM	EMERGENCY 8' LED STRIP FIXTURE	120	114	SURFACE	MOUNT TO BOTTOM OF METAL FRAMING	OWNER
		MLL4/UNV1 TF / DP1050MTK	EXPLOSION PROOF FIXTURE / MOUNTING BRACKET	120	54.5	SURFACE	USE CEILING MOUNT BRACKET	OWNER
	01101011111	MLL4/UNV1 S903 TF EM / DP1050MTK	EMERGENCY EXPLOSION PROOF FIXTURE / MOUNTING BRACKET	120	54.5	SURFACE	USE CEILING MOUNT BRACKET	OWNER

L	P4					EXISTIN NELBO						V, 3PH, 4W
cen.	VIC. TIPE CHOP											42,000 AIC
	VES: TIRE SHOP											
OC.	ATION: TIRE STORAGE										SURFAC	CE MOUNT
ED	FROM: EXTERIOR DISCONNEC	T									GRO	OUND BAF
OVE	ROURRENT DEVICE: 600A										ISOLATIED GRO	DUND BAF
	LOAD SERVED	WIRE	BRKE	PL	PHASE A	PHASE B	PHASE C	PL	BRKR	WIRE	LOAD SERVED	ск
1	ar compressor (10)	_	90	3	5.54 4.46			3	100		PANEL LT (N,14)	2
3	-			-		5.54 4.31		-				4
5	-			-			5.54 4.53	-				6
7	tre balancer (10)	_	30	3	1.60 1.28		_	1	20	-	service center Itg (10)	8
9	-			-		1.60 0.55		1	20	-	exterior Itg (10)	10
11	-			-			1.60 0.69	1	20	-	interior lighting (10)	12
13	fiture welder (10)	_	50	2	4.20 0.23		1	1	20	-	mezzanine Itg (10)	14
15	-			-		4.20 0.00		1	20	-	SPARE (11)	16
17	dfice / recepts (10)	_ -	20	1			0.90 0.48	1	20	-	air dryer (10)	18
19	notorized fire door (10)		20	1	0.18 0.00		1	1	20	-	SPARE (11)	20
21	tre spreader (10)		20	1		1.00 0.18	070 000	1	20	_	mezzanine recept (10)	22
23	inflation cage (10)		20	1			0.72 0.00	1	20	_	SPARE (11)	24
25	ecepts (10)	<u> </u>	20	1	0.72 0.89		1	2	20	_	site lighting (10)	26
27	(eneral recepts (10)		20	1		0.36 0.89	0.00 0.70	-	20		it rook (10)	28
29	çeneral recepts (10)		20	1	0.50 0.40		0.90 0.72	1	20	_	i.t. rack (10) tsef-2 (10)	30
31	tuh-1 (10)	 -	30	2	2.50 0.49		1	1	20	-	spare (10)	32
33	-		20	-		2.50 0.00	0.36 1.08	1	20	_	general recepts (10)	36
35	t/ (10)		20	1	1.20 1.20		0.36 1.06	1	20	_	overhead door (10)	38
37 39	(verhead door (10)	+=	20	1	1.20 1.20	1.20 0.56	1	2	20	_	tsewh-1 (10)	40
41	(verhead door (10)	+-	20	1		1.20 0.00	1.20 0.56	-			_	42
43	(verhead door (10)	 -	20	1	1.20 0.00		1.20 0.00	1	20	_	space	44
45	(verhead door (10)		20	1		1.20 1.34	1	2	20	-	site lighting (10)	46
47	(verhead door (10)		20	1			1.20 1.34	-			_	48
49	exterior recepts (10)	_	20	1	1.08 2.50		-t-american	2	20	_	tsuh-3 (10)	50
51	future welder (10)	<u> </u>	50	2		5.54 2.50	1	-			-	52
53	-			-			5.54 1.83	2	20	-	tshp-1 (10)	54
55	interior lighting (10)	-	20	1	0.89 1.83	3.	_	-				56
57	interior lighting (10)	_	20	1		1.53 1.08		1	20	-	ig recept-computer (10)	58
59	notorized fire door (10)	_	20	1			0.18 0.20	1	20	_	fire alarm (10)	60
61	future welder (10)	_	50	2	5.54 1.33			3	20	_	tswh-1 (10)	62
63	-			-		5.54 1.33		-				64
65	future welder (10)	-	50	2			5.54 1.33	-				66
67	-			-	5.54 0.36		1	1	20		tsef-3 (10)	68
69	tuh-2 (10)	 -	30	2		2.50 0.10	250 000	1	20	-	recirc pump (10)	70
71	innerel resents (40)	-	20	-	0.36 0.54	T	2.50 0.00	1	20	_	water coolers (10)	72
73 75	(eneral recepts (10)	+-	20	1	0.36 0.54	0.44 0.86	1	1	20	_	tsef-4 (10)	74
75 77	oil pit lights (10)	-	20	1		0.44 0.00	0.86 1.18	1	20	_	tsef-5 (10)	78
77 79	pit sump pump recept (10) tsahu-1 (10)	+=	25	2	2.50 7.12		0.00 1.10	2	20	_	panel hwy1 (10)	80
81	Ballu-1 (10)		25	-	2.00 1.12	2.50 4.78	1	-			-	82
83	sef-6 (10)		20	1	T o	2.00 4.70	1.18 0.00	1	20	_	space	84
00	THE RESERVE THE PROPERTY OF TH	TAL CON		ED	55.3	54.1	42.2	K	_			
		TAL CON			460.6	451.1	351.3	-	//PS			
	10		AL LO		151.6	KVA	420.7	-	/IPS			
	PER NEC ARTICLE 2				159.9	KVA	443.9	-	/IPS			

L					DΔN	NEW NELBO <i>P</i>	RD				208Y/120V, 3F	
					iΛi	VLLDO	NI ND				100A	M.L.
SER	VES: TIRE SHOP										10,0	00 A
LOC	ATION: TIRE STORAGE											
FED	FROM: PANEL LP4										SURFACE M	IOUI
	RCURRENT DEVICE: 100A										GROUN	
OVE	RCORRENT DEVICE. 100A										GROON	יט כ
CK	LOAD SERVED	WRE	BRKF	PL	PHASE A	PHASE B	PHASE C	ГР	L BR	KR WIR	E LOAD SERVED	С
1	SPEEDCO SIGN (2,8,N)	12	20	1	1.20 1.66			1	2			
3	SPEEDCO SIGN (2,8,N)	12	20	1		1.20 1.66		1	2			
5	EXTERIOR SIGNS (2,8,N)	12	20	1			1.20 0.53	1	2	0 12		
7	HEART SIGNS (2,8,N)	12	20	1	0.40 1.20		4	1	2	0 12	OIL PIT SUMP PUMP (N)	
9	SPARE (N)	_	20	1		0.00 0.36		1	2	0 12		1
11	HEART SIGNS (2,8,N)	12	20	1			0.40 1.20	1	2	0 12	FUEL MONITORING PANEL (N)	1
13	SPARE (N)	-	20	1	0.00 0.00			1	2	0 -	SPARE (N)	1
15	LTG - OIL PIT (N)	12	20	1		1.09 0.00		1	2	0 -	SPARE (N)	1
17	EXTERIOR SIGNS (2,8,N)	12	20	1			1.20 0.00) 1	2	0 -	SPARE (N)	1
19	SPARE (N)	-	20	1	0.00 0.00			1	2	0 –	SPARE (N)	2
21	SPARE (N)	_	20	1		0.00 0.00		1	2	0 -	SPARE (N)	2
23	SPARE (N)	_	20	1			0.00 0.00) 1	2	0 –	SPARE (N)	2
25	SPACE				0.00 0.00						SPACE	2
27	SPACE					0.00 0.00					SPACE	2
29	SPACE						0.00 0.00				SPACE	3
31	SPACE				0.00 0.00						SPACE	3
33	SPACE					0.00 0.00		\perp			SPACE	3
35	SPACE		- '				0.00 0.00	1	_		SPACE	3
37	SPACE				0.00 0.00			L			SPACE	3
39	SPACE					0.00 0.00		_	_		SPACE	4
41	SPACE						0.00 0.00	_			SPACE	4
	TOTA	L CON	NECT	ED	4.46	4.31	4.53	_ K	VA			
TOTAL CONNECTED				ED	37.1	35.9	37.7	A	MPS	;		
			AL LO		13.3	KVA	36.9	A	MPS			
	PER NEC ARTICLE 220 FEEDER LOAD				19.1	KVA	53.1	A	MPS	;		

PANELBOARD NOTES ()

- (1) TERMINATE GROUND ON ISOLATED GROUND BUS.
- (2) INSTALL LOCKING DEVICE FURNISHED WITH PANELBOARD (LOCK-OFF FOR MAINTENANCE).
- INSTALL LOCKING DEVICE FURNISHED WITH PANELBOARD (LOCK-ON FOR CRITICAL LOAD).
- (4) GFI BREAKER FOR PERSONNEL PROTECTION (5 mA).
- (5) GFI BREAKER FOR EQUIPMENT PROTECTION (30 mA).

CONDUCTOR PROPORTIONALLY PER NEC.

- (6) CONDUCTOR SIZE HAS BEEN INCREASED FOR VOLTAGE DROP. SIZE EQUIPMENT GROUNDING
- (7) FACTORY WRED TO LOAD.
- (8) THRU CONTACTOR.
- (9) EXISTING CIRCUIT BREAKER TO REMAIN. VERIFY CONDITION OF CIRCUIT BREAKER TO ENSURE THAT IT IS OPERATIONAL AND MEETS ALL U.L. RATINGS.
- (10) EXISTING CIRCUIT TO REMAIN.

CIRCUIT AS "SPARE".

- (11) PROVIDE HANDLE LOCK OFF DEVICE TO LOCK "SPARE" CIRCUIT BREAKER IN THE "OFF" POSITION. IF CIRCUIT BREAKER IS IDENTIFIED AS "EXISTING", FIELD VERIFY CIRCUIT BREAKER INDICATED IS NOT CONNECTED TO ANY LOAD AND UPDATE PANELBOARD CIRCUIT DIRECTORY IDENTIFYING
- (12) TRACE EXISTING CIRCUIT, IDENTIFY LOAD AND PROVIDE COMPLETE TYPEWRITTEN PANELBOARD IDENTIFICATION SCHEDULE AND PLACE ON INTERIOR OF PANELBOARD DOOR. IF CIRCUIT IS A "SPARE" THEN REFER TO PANELBOARD NOTE (11).
- (13) PROVIDE LISTED HANDLE TIE AS INDICATED FOR MULTIWIRE BRANCH CIRCUIT.
- (14) REFER TO ONE-LINE DIAGRAM FOR WIRE SIZES.

ALL SWITCHBOARDS AND PANELBOARDS SHALL HAVE A COMMERCIALLY PRODUCED PERMANENT LABEL APPLIED TO WARN OF POTENTIAL ARC FLASH HAZARDS, IN ACCORDANCE WITH NEC 110.16 AND NFPA 70E. LABELING MAY BE COMPLETED BY EQUIPMENT MANUFACTURER, EQUIPMENT VENDOR/SUPPLIER, OR THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY THAT ALL SWITCHBOARDS AND PANELBOARDS ARE PROPERLY LABELED IN THE FIELD.

EXISTING CIRCUITRY IS BASED ON ORIGINAL BUILDING PLANS. IF EXISTING CIRCUITS TO REMAIN ARE NOT AS SHOWN ON THE PANELBOARD SCHEDULES, ARRANGE NEW CIRCUITS BASED UPON PRESENT LOCATION OF EXISTING CIRCUITS TO REMAIN SHOWN IN LOWERCASE.

EC SHALL MATCH TYPE AND AIC RATINGS OF EXISTING CIRCUIT BREAKERS AND MAINTAIN SERIES RATING OF BREAKERS.

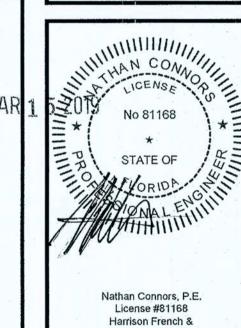
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RELIEVE THE RESPONSIBILITY OF PERFORMING HIS WORK PROPERLY. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED BECAUSE OF CONDITIONS THAT OCCUR DUE TO FAILURE TO FAMILIARIZE WORKERS WITH THIS

THOROUGH KNOWLEDGE OF ALL DRAWINGS AND SPECIFICATIONS IN THEIR RELATED FIELD. THE FAILURE TO ACQUAINT HIMSELF WITH THIS KNOWLEDGE DOES NOT

KNOWLEDGE.

ELECTRICAL SERVICE AND METERING ARE EXISTING TO REMAIN.



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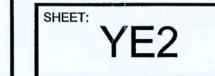
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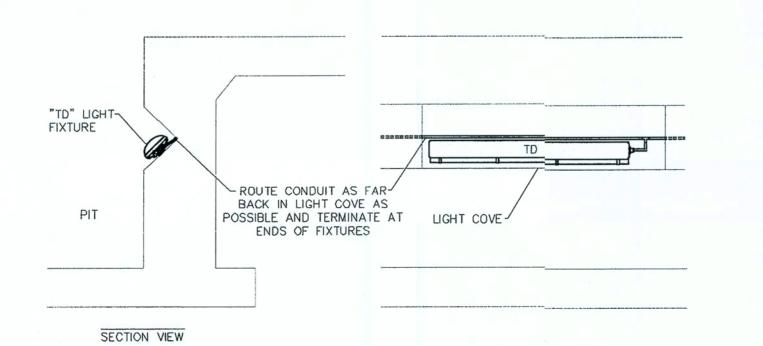
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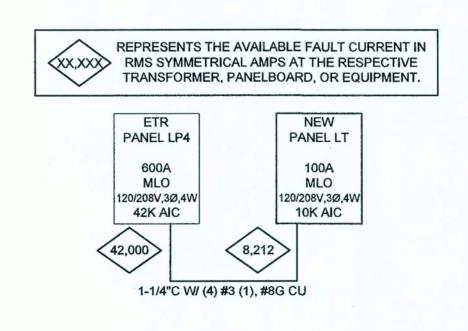
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SCHEDULES NOTES

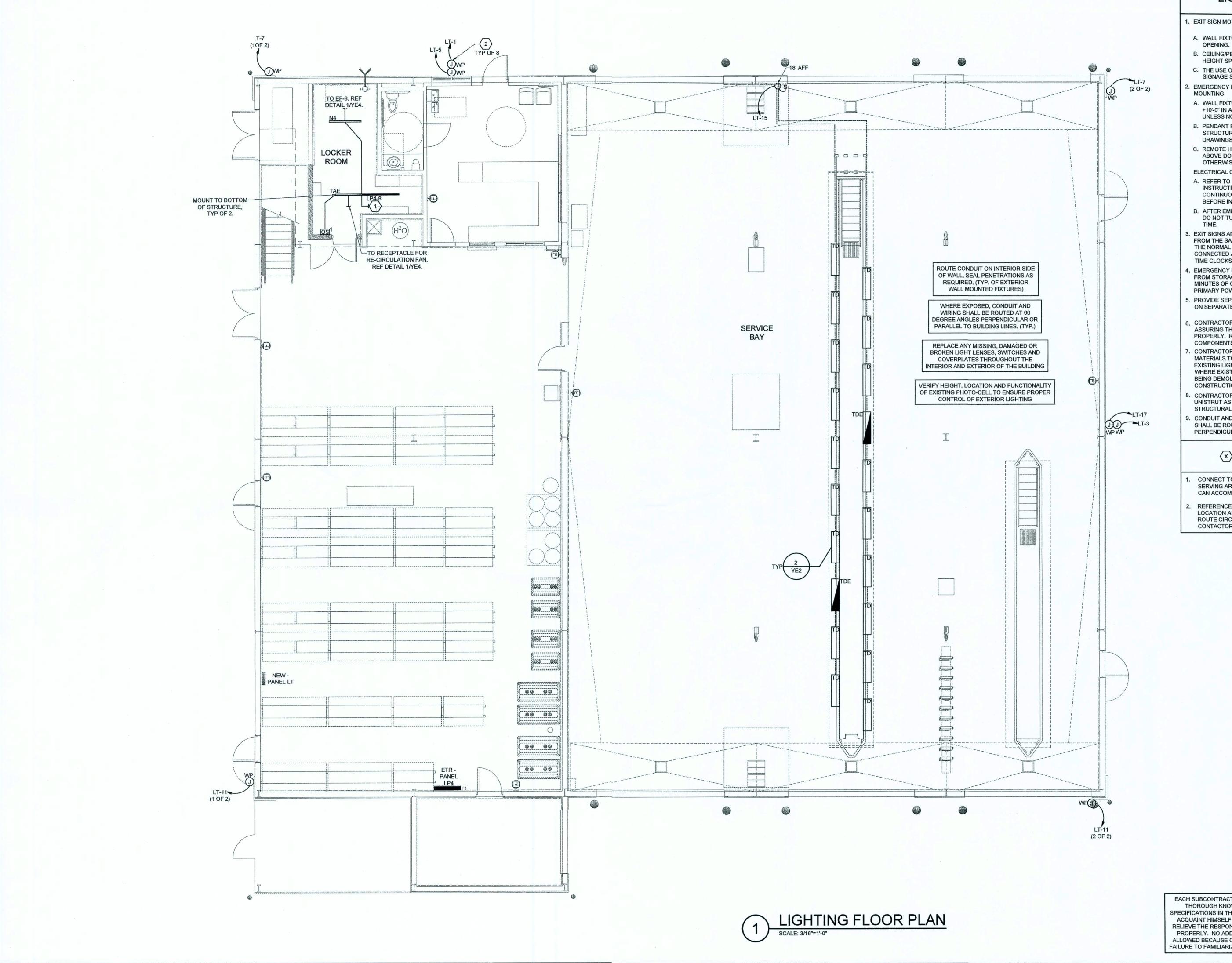








PARTIAL ONE-LINE DIAGRAM



LIGHTING NOTES

1. EXIT SIGN MOUNTING

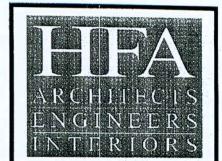
- A. WALL FIXTURE: CENTER 12" ABOVE DOOR
- B. CEILING/PENDANT FIXTURE: ON CEILING OR AT
- HEIGHT SPECIFIED ON DRAWINGS.
- C. THE USE OF TRITIUM BASED RADIOACTIVE EXIT SIGNAGE SHALL NOT BE ALLOWED.
- **EMERGENCY LIGHT INSTALLATION FIXTURE** MOUNTING
- A. WALL FIXTURE: 12" BELOW FINISHED CEILING OR +10'-0" IN AREAS OF EXPOSED STRUCTURE
- UNLESS NOTED OTHERWISE. B. PENDANT FIXTURE: BOTTOM CHORD OF
- STRUCTURE OR AT HEIGHT SPECIFIED ON DRAWINGS.
- C. REMOTE HEAD FIXTURE: HEADS CENTERED ABOVE DOOR OPENING +9'-0" UNLESS NOTED OTHERWISE.

ELECTRICAL CONNECTION

- A. REFER TO MANUFACTURER'S WRITTEN INSTRUCTIONS. ALLOW BATTERY TO CHARGE CONTINUOUSLY FOR A MINIMUM OF 168 HOURS BEFORE INITIAL TESTING.
- B. AFTER EMERGENCY LIGHT HAS BEEN POWERED, DO NOT TURN OFF FOR EXTENDED PERIODS OF
- 3. EXIT SIGNS AND EMERGENCY LIGHTS SHALL BE FED FROM THE SAME BRANCH CIRCUIT AS THAT SERVING THE NORMAL LIGHTING IN THAT AREA AND CONNECTED AHEAD OF ANY LOCAL SWITCHES OR TIME CLOCKS.
- . EMERGENCY EXIT ILLUMINATION SHALL BE SUPPLIED FROM STORAGE BATTERY THAT IS TO PROVIDE 90 MINUTES OF CONTINUED ILLUMINATION IN CASE OF PRIMARY POWER LOSS.
- 5. PROVIDE SEPARATE BOXES FOR GANGED SWITCHES ON SEPARATE BRANCH CIRCUITS.
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURING THAT ALL NEW LIGHT FIXTURES WORK PROPERLY. REPORT DEFECTIVE OR DAMAGED COMPONENTS TO OWNER.
- . CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS TO MAINTAIN BRANCH CIRCUITS TO EXISTING LIGHT FIXTURES THAT ARE TO REMAIN. WHERE EXISTING CIRCUITS ARE ROUTED IN AREAS BEING DEMOLISHED, RE-ROUTE IN NEW CONSTRUCTION AND RECONNECT.
- 8. CONTRACTOR SHALL FURNISH AND INSTALL UNISTRUT AS REQUIRED TO MOUNT FIXTURES TO STRUCTURAL MEMBERS.
- 9. CONDUIT AND WIRING IN AREAS WHERE EXPOSED SHALL BE ROUTED AT 90 DEGREE ANGLES PERPENDICULAR OR PARALLEL TO BUILDING LINES.

X KEYNOTES

- CONNECT TO EXISTING CIRCUIT CURRENTLY SERVING AREA LIGHTING. VERIFY EXISTING CIRCUIT CAN ACCOMMODATE NEW LOAD.
- REFERENCE ARCHITECTURAL ELEVATIONS FOR LOCATION AND MOUNTING HEIGHT FOR SIGNAGE. ROUTE CIRCUIT THROUGH EXISTING LIGHTING CONTACTOR.



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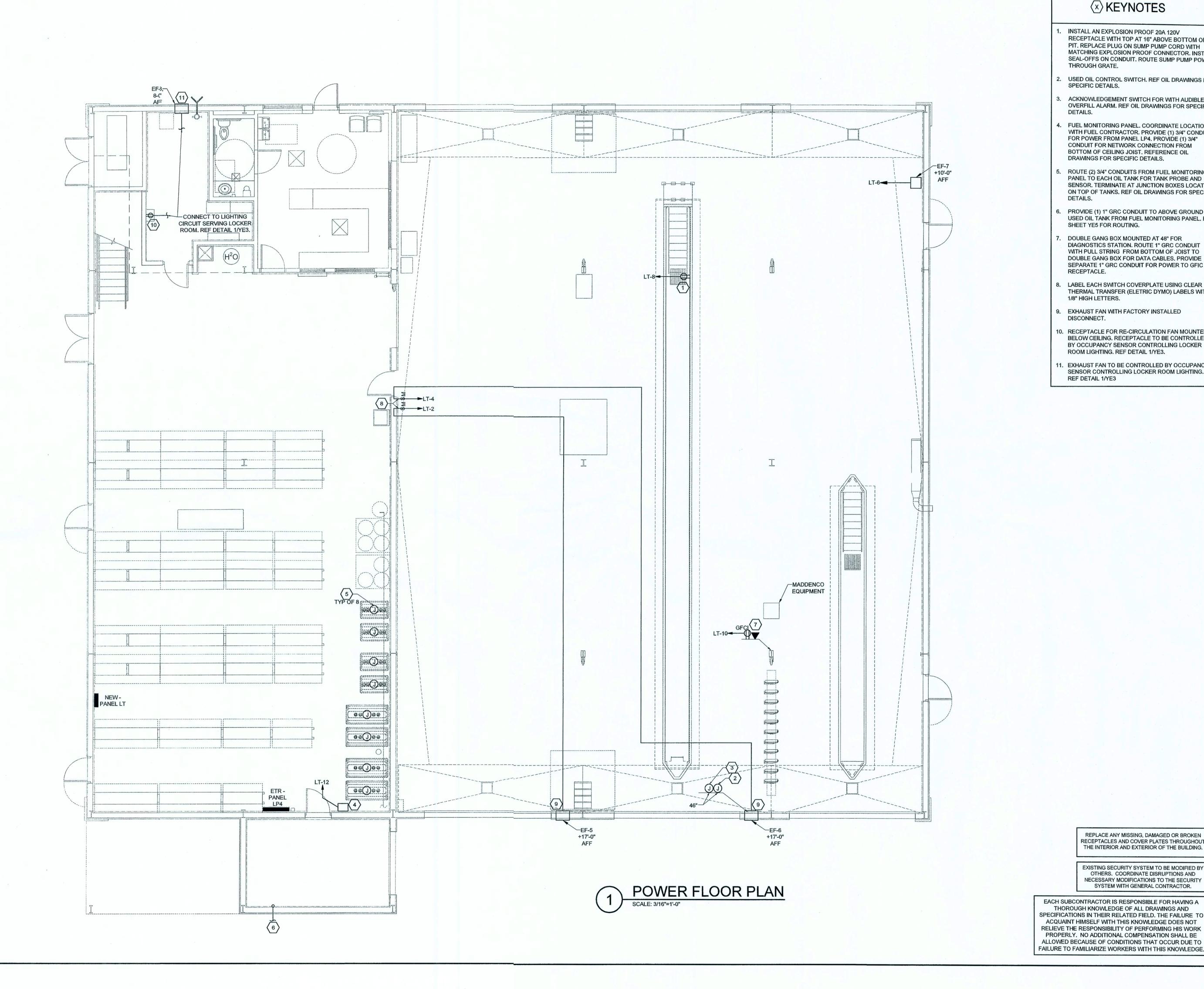
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> LIGHTING FLOOR PLAN

YE3

EACH SUBCONTRACTOR IS RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF ALL DRAWINGS AND SPECIFICATIONS IN THEIR RELATED FIELD. THE FAILURE TO PROPERLY. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED BECAUSE OF CONDITIONS THAT OCCUR DUE TO FAILURE TO FAMILIARIZE WORKERS WITH THIS KNOWLEDGE



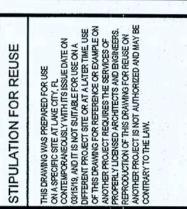


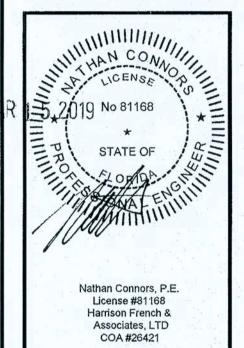
- INSTALL AN EXPLOSION PROOF 20A 120V RECEPTACLE WITH TOP AT 16" ABOVE BOTTOM OF PIT. REPLACE PLUG ON SUMP PUMP CORD WITH MATCHING EXPLOSION PROOF CONNECTOR. INSTALL SEAL-OFFS ON CONDUIT. ROUTE SUMP PUMP POWER THROUGH GRATE.
- USED OIL CONTROL SWITCH. REF OIL DRAWINGS FOR SPECIFIC DETAILS.
- ACKNOWLEDGEMENT SWITCH FOR WITH AUDIBLE OVERFILL ALARM. REF OIL DRAWINGS FOR SPECIFIC DETAILS.
- FUEL MONITORING PANEL. COORDINATE LOCATION WITH FUEL CONTRACTOR. PROVIDE (1) 3/4" CONDUIT FOR POWER FROM PANEL LP4. PROVIDE (1) 3/4" CONDUIT FOR NETWORK CONNECTION FROM BOTTOM OF CEILING JOIST. REFERENCE OIL DRAWINGS FOR SPECIFIC DETAILS.
- ROUTE (2) 3/4" CONDUITS FROM FUEL MONITORING PANEL TO EACH OIL TANK FOR TANK PROBE AND SENSOR. TERMINATE AT JUNCTION BOXES LOCATED ON TOP OF TANKS. REF OIL DRAWINGS FOR SPECIFIC DETAILS.
- PROVIDE (1) 1" GRC CONDUIT TO ABOVE GROUND USED OIL TANK FROM FUEL MONITORING PANEL. REF SHEET YES FOR ROUTING.
- DOUBLE GANG BOX MOUNTED AT 48" FOR DIAGNOSTICS STATION. ROUTE 1" GRC CONDUIT WITH PULL STRING FROM BOTTOM OF JOIST TO DOUBLE GANG BOX FOR DATA CABLES, PROVIDE SEPARATE 1" GRC CONDUIT FOR POWER TO GFIC RECEPTACLE.
- 8. LABEL EACH SWITCH COVERPLATE USING CLEAR THERMAL TRANSFER (ELETRIC DYMO) LABELS WITH 1/8" HIGH LETTERS.
- 9. EXHAUST FAN WITH FACTORY INSTALLED DISCONNECT.
- D. RECEPTACLE FOR RE-CIRCULATION FAN MOUNTED 9" BELOW CEILING. RECEPTACLE TO BE CONTROLLED BY OCCUPANCY SENSOR CONTROLLING LOCKER ROOM LIGHTING. REF DETAIL 1/YE3.
- 11. EXHAUST FAN TO BE CONTROLLED BY OCCUPANCY SENSOR CONTROLLING LOCKER ROOM LIGHTING. **REF DETAIL 1/YE3**



HARRISON FRENCH

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> **POWER FLOOR** PLAN

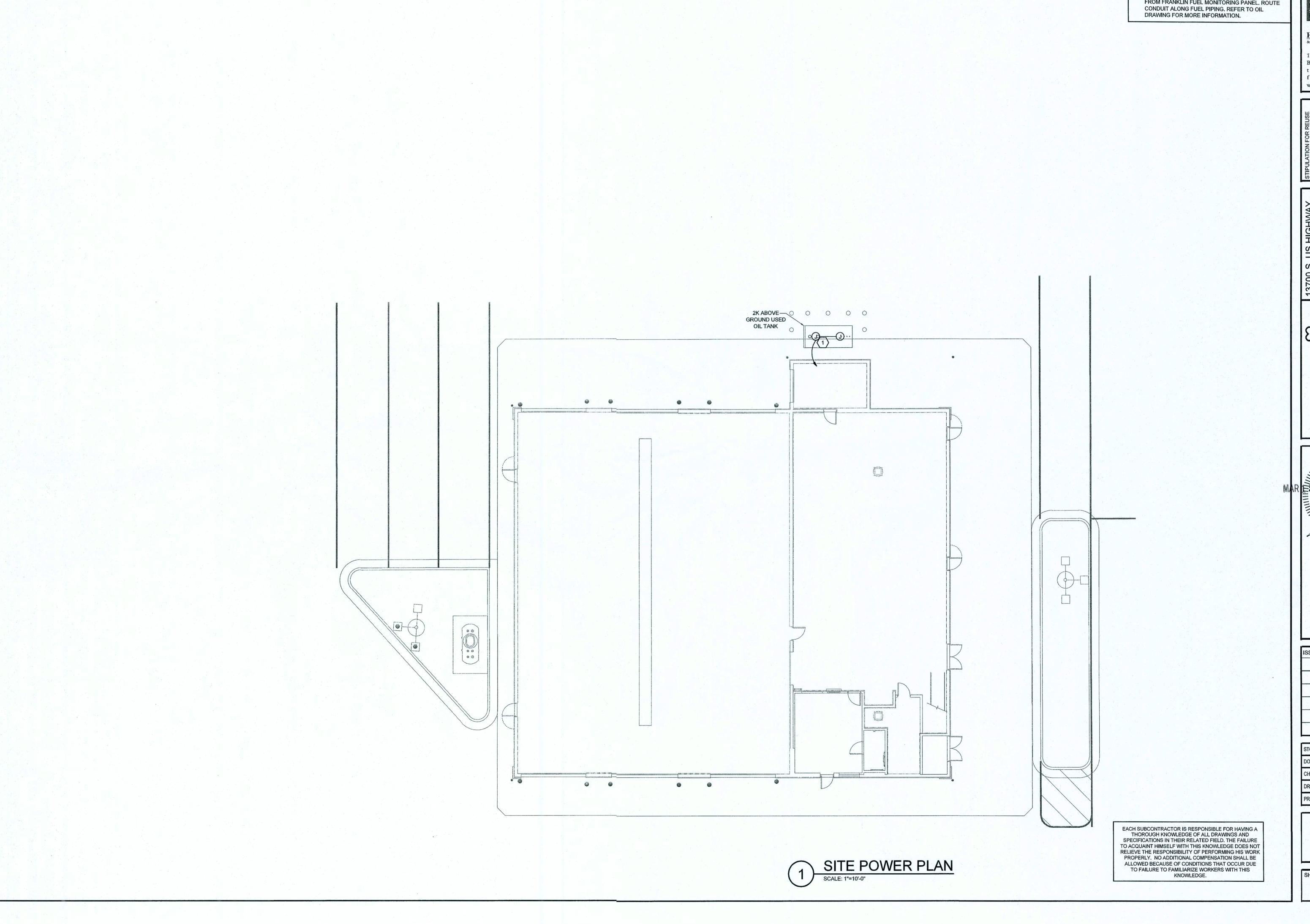
YE4

EXISTING SECURITY SYSTEM TO BE MODIFIED BY OTHERS. COORDINATE DISRUPTIONS AND NECESSARY MODIFICATIONS TO THE SECURITY

REPLACE ANY MISSING, DAMAGED OR BROKEN RECEPTACLES AND COVER PLATES THROUGHOUT

THE INTERIOR AND EXTERIOR OF THE BUILDING.

SYSTEM WITH GENERAL CONTRACTOR. EACH SUBCONTRACTOR IS RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF ALL DRAWINGS AND ACQUAINT HIMSELF WITH THIS KNOWLEDGE DOES NOT RELIEVE THE RESPONSIBILITY OF PERFORMING HIS WORK



KEYNOTES

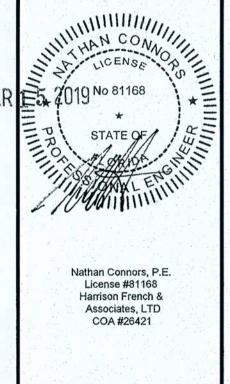
. INSTALL 1" GRC FOR TANK PROBE AND SENSOR FROM FRANKLIN FUEL MONITORING PANEL. ROUTE CONDUIT ALONG FUEL PIPING. REFER TO OIL DRAWING FOR MORE INFORMATION.



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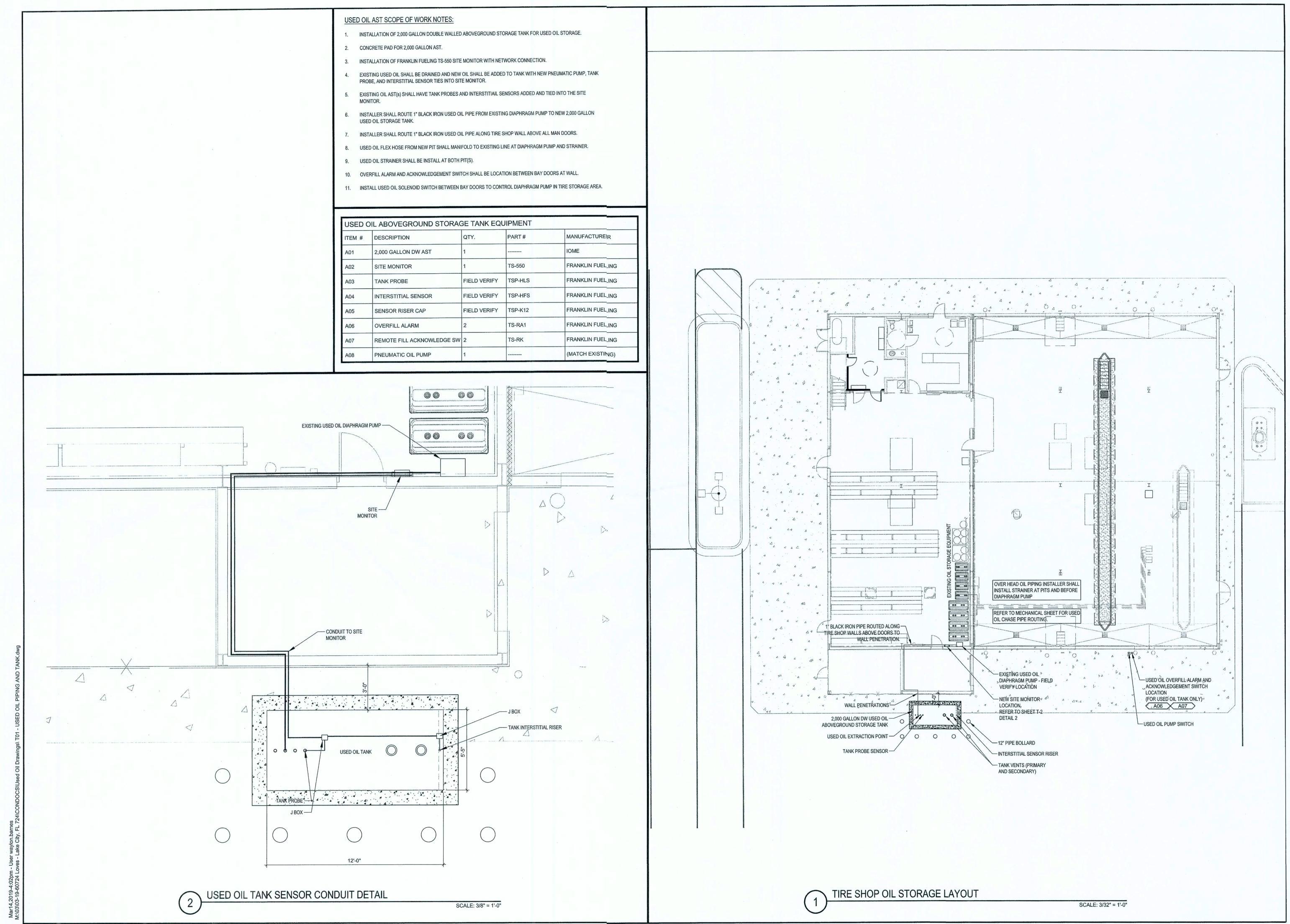




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SITE POWER

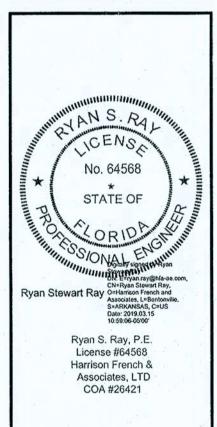




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USED OIL PIPING ABOVEGROUND STORAGE TANK LAYOUT

