BUILDING CODE: FBC 'Florida Building Code'2007, LIFE SAFETY CODE: NFPA 101, 2007 Edition MECHANICAL CODE: FBC 'Florida Building Code - Mechanical', 2007 PLUMBING CODE: FBC 'Florida Building Code - Plumbing', 2007 ELECTRICAL CODE: NEC 'National Electric Code', 2005 GAS FUEL CODE: FBC 'Florida Building Code - Fuel Gas', 2007 ACCESSIBILITY: a. Federal ADA, Accessibility Guidelines for Buildings and Facilities (ADAAG) b. FBC 'Florida Building Code', 2007 Edition — Chapter 11, Florida Accessibility Code for Building Construction 1. Occupancy classification: FACTORY INDUSTRIAL F per FBC. FBC section - FACTORY INDUSTRIAL F 2. Physical properties of building: (FBC chapter 5) a. building area: 2,000 GSF, Ground Floor + 2000 GSF SECOND FLOOR = 4000 GSF Total b. grade elevation: 11'± NGVD, flN. fLR = 12'6" c. building height in feet above grade (top of highest roof): 30' d. building height in stories: 2 e. separation distance from exterior walls to property line: rear/north = 25', side/east = 1', front/south = 134'=10" side/west = 33' including 25' drainage and utility easment 3. Type of construction: (FBC chapter 5) a. construction type: FBC-Type II-B (sprinklered) b. max. height: 55' allowed / 30' actual c. max. number of stories: = 2 allowed / 1 + mezzanine actual d. max. floor area: 23,000 SF allowed / 4000 SF actual e. height increase allowance: N/A 4. Detailed constructions requirements: (FBC chapter 6, table 602) a. Fire protection of structural members in hours: - party and fire walls - N/A interior bearing walls — NC columns – NC - beams, girders, trusses and arches - NC floors, floor/ceiling assemblies – NC roof, roof/ceiling assemblies - NC exterior bearing walls 0 TO 3' = 13' TO 10' = 110' TO 20' = 020' TO 30' = 0over 30' = 0(NL)b. Fire Protection Requirements: (FBC chapter 7, table 704.2.4) exit access corridors - N/A c. Fire wall requirements: extension above roof - N/A d. Protection of exterior wall openings — 0 hours (FBC 705.1.1.2 exception 1) 5. Detailed occupancy requirements: (FBC chapter 10, table 1004.1.2) a. Number of occupants: Office #1 4000 (100 SF / occupant) = 40 Total occupant Load: 40 persons. b. Means of egress: max. travel distance (sprinklered facility) - 250' max. dead end corridor - 20' min. egress per person (in.) Level - .2  $\times$  24 occupants = 4.8" required, 72" provided (at each UNIT) min. corridor width - 44" min. clear exit door opening - 32" 6. Fire extinguishers: 1. locations (NFPA 10, table 3.2.1) — 60" max. height 2. type: group B - FE type 2-A 10-B-C (dry chemical) electrical - FE type 2-C (CO2) 7. Wind load: (FBC chapter 16, structural loads) 1. basic wind speed - 130 MPH (Sarasota County Ordin. 2001-091) 2. importance factor - 1.0 (FBC table 1606) 3. wind exposure category — see structural drawings 4. internal pressure co-efficient enclosed bldg - see structural drawings. 5. cladding wind pressure (per ASCE 7-98) - refer to structural drawings for additional information. 6. protection of openings — this project is located in the wind—borne debris region. All doors and windows within 60 feet of grade shall comply with impact requirements of SSTD12. ASTM E 1886 and ASTM E 1996, or Miami-Dade PA 201. PA 202 and PA 203 referenced therein as follows: a. Glazed openings located within 30 feet of grade shall meet the

requirements of the large missile test.

than 60 feet above grade shall meet the

b. Glazed openings located more than 30 feet above grade but less

provisions of the small missile test. (N/A).

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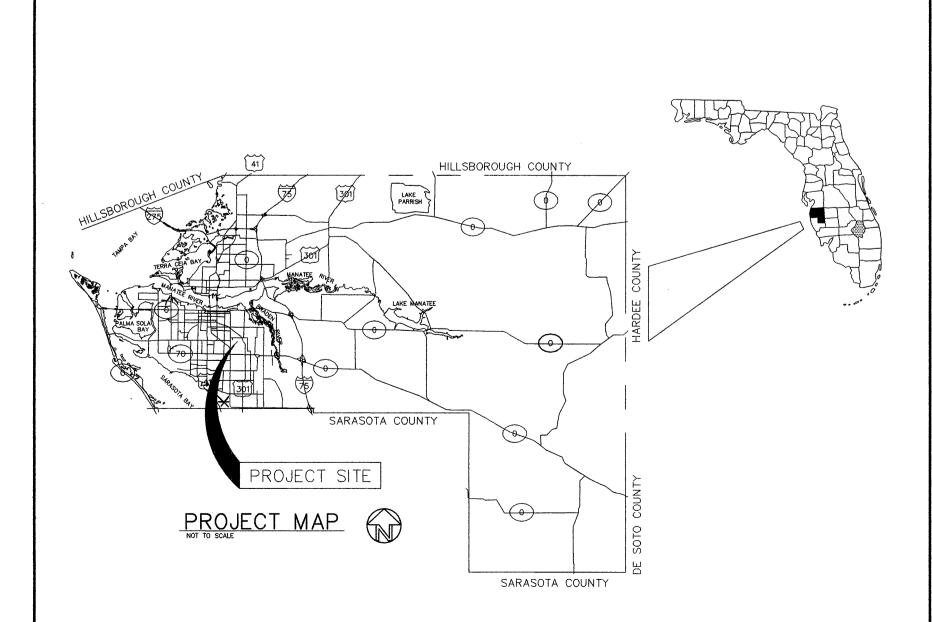
M4 MECHANICAL DETAILS

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A1.1 Cover Sheet

MANATEE COUNTY, FLORIDA MANATEE FLEET SERVICES 1100 26TH AVE. EAST BRADENTON, FLORIDA

# PHASE - II



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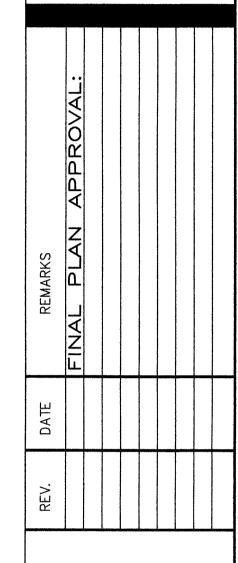
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BRADENTON \_\_\_ EAST, 26TH

Project Number

Yehuda Inbar AIA Inbar architect AIA

Al Meronek

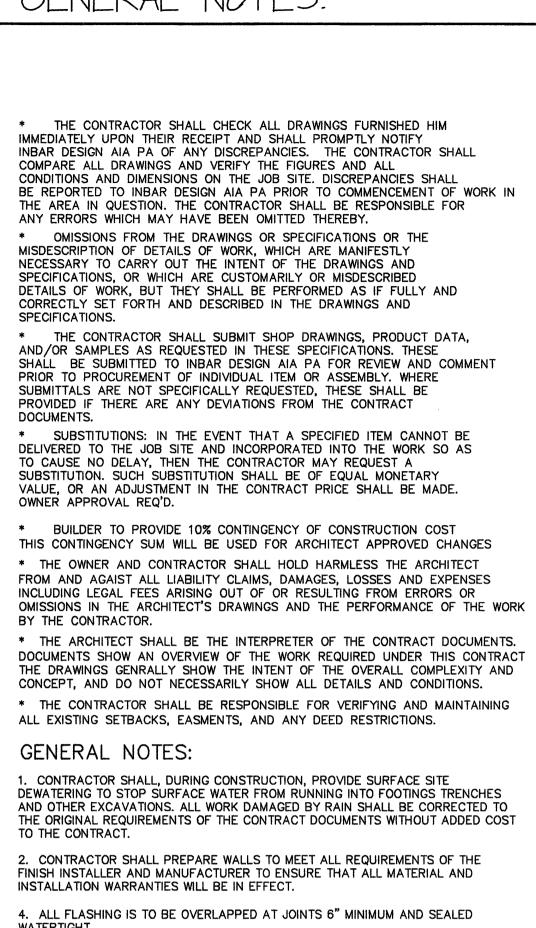
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Alan John Meronek AR 91853

Expires 2-28-2011

Drawing Number

A0.1



TO BEING COVERED BY NEW CONSTRUCTION.

5. ARCHITECT SHALL BE PRESENT TO OBSERVE ALL FLASHING INSTALLATION PRIOR

6. THE GENERAL CONTRACTOR, SUBCONTRACTORS, AND ALL EMPLOYEES ON THIS PROJECT SHALL AT NO TIME SCALE THE DRAWINGS TO DETERMINE DISTANCES NOT DIMENSIONED ON THE DRAWINGS. IF FURTHER DIMENSIONING IS REQUIRED IT SHALL BE REQUESTED IN WRITING BY THE GENERAL CONTRACTOR AND ANSWERED IN WRITING BY THE ARCHITECT. ALL DIMENSIONS ARE GIVEN TO THE FACE OF C.M.U., FACE OF METAL STUD, UNLESS OTHERWISE NOTED.

7. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, GRADES, PITCH, AND OTHER CONDITIONS BY TAKING MEASUREMENTS PRIOR TO ORDERING MATERIALS OR DOING WORK. DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT FOR ADDITIONAL INSTRUCTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THESE MEASUREMENTS. NO CONSIDERATION WILL BE GIVEN TO ANY CLAIM BASED ON DIFFERENCES BETWEEN THE DRAWINGS OR SPECIFICATIONS AND ACTUAL

8. CONTRACTORS ARE REMINDED THAT COORDINATING THE ROUTING OF THEIR WORK WITH OTHER TRADES IS ESSENTIAL. ANY EXPENSE FOR THE REMOVAL AND RELOCATION SHALL BE BORNE BY THE CONTRACTOR.

9. WHERE A DETAIL OR SECTION IS SHOWN FOR ONE CONDITION, IT SHALL APPLY TO ALL LIKE OR SIMILAR CONDITIONS OR LOCATIONS.

10. IN ROOMS WITH EXPOSED STRUCTURE CEILING, WALLS ARE TO EXTEND TO THE ROOF UNLESS OTHERWISE NOTED. 11. ALL WOOD MEMBERS IN CONTACT WITH CONCRETE, MASONRY, OR IN WET

LOCATIONS, INCLUDING FRAMING, BLOCKING, AND PLYWOOD SHALL BE PRESSURE 12. AT INTERIOR METAL STUD PARTITIONS NOT EXTENDING TO THE ROOF DECK,

13. ALL FURRINGS, EITHER FOR WALLS OR CEILINGS, TO CONCEAL HVAC, PLUMBING. OR ELECTRICAL WORK ARE NOT SHOWN. TO CONCEAL HVAC, PLUMBING, ELECTRICAL OR OTHER TRADES WORK, CONTRACTOR SHALL COORDINATE WITH RESPECTIVE TRADE AND PROVIDE FURRING AS REQUIRED USING TYPICAL FURRING DETAILS SHOWN FOR SIMILAR OR LIKE CONDITIONS.

BRACE TOP WITH STUD FRAMING TO STRUCTURE AS REQUIRED TO PROVIDE STABLE

14. ALL ROOF PENETRATIONS SHALL BE CUT AND FLASHED BY ROOFING CONTRACTOR. CONTRACTOR SHALL COORDINATE THIS WORK TO ENSURE PROPER FLASHING AND WEATHERTIGHTNESS.

16. AT GYPSUM WALLS PROVIDE WOOD BLOCKING AS REQUIRED TO SECURE DOOR STOPS AND OTHER ITEMS TO WALL.

17. A DETAIL FOR EVERY CONDITION IS NOT PROVIDED, THERE ARE ADEQUATE DETAILS FOR SIMILAR AND LIKE CONDITIONS THAT ARE TYPICAL IN NATURE AND SHALL BE USED AS GUIDES FOR DETERMINING HOW A SPECIFIC CONDITION SHOULD BE CONSTRUCTED THAT WILL PRODUCE RESULTS ACCEPTABLE TO THE ARCHITECT.

18. THE USE OF MATERIAL AND REFERENCE SYMBOLS FOR MATERIAL IDENTIFICATION AND FOR KEYING LOCATIONS WHERE SECTIONS AND DETAILS ARE DRAWN ARE PROVIDED AS A MATTER OF CONVENIENCE THE LACK OF USE OF A MATERIAL SYMBOL OR REFERENCE SYMBOL FOR ANY LOCATION SHALL NOT DELETE THE REQUIREMENT FOR CONSTRUCTION OF THAT CONDITION TO BE IN ACCORDANCE WITH THE DETAILS OR SECTIONS THAT APPLY TO OR ARE LIKE OR SIMILAR TO THAT CONDITION.

AND SECURE PARTITION.

1. ALL MATERIALS & EQUIPMENT TO BE U.L. APPROVED

2. ALL EXHAUST FANS TO VENT TO THE OUTSIDE

3. MEN'S & WOMEN'S REST ROOMS SHALL HAVE MAXIMUM WATER TEMPERATURE OF 110F. (INSTALL MIXING VALVE)

4. COMPLY WITH PAINT MANUFACTURE OF SURFACE PREPARATION SPECIFICATIONS @ EXISTING & NEW SURFACES.

5. PROVIDE HANDICAP ACCESSIBLE ROUTE W/ 1/2" MAX. STEP TO ENTRANCES TO ALL ACCESSIBLE SPACES ON SITE AND WITHIN THE BUILDING PER FBC 105.1

	& [ @ &	AND ANGLE CHANNEL AT CENTER LINE DIAMETER OR ROUND PERPENDICULAR	F	F.A. FD. FDC. FDCC. FDN. FE.	FIRE ALARM FLOOR DRAIN FIRE DEPARTMENT CONNECTION FIRE DEPARTMENT CONNECTION CABINET FOUNDATION FIRE EXTINGUISHER	0	0A. 0/A 0C. 0D. 0FF. 0PNG 0PP.	OVER ALL OUTSIDE AIR ON CENTER OUTSIDE DIAMETER OFFICE OPENING OPPOSITE
Α	H (E) A.B.S. ABV. ADV. ADD. AFF. ACHU.	POUND OR NUMBER EXISTING  ANCHOR BOLT ACRYLONITRILE BUTADIENE STYRENE ABOVE AIR CONDITIONING ACOUSTICAL AREA DRAIN ADDENDUM ABOVE FINISH FLOOR AGGREGATE AIR HANDLING UNIT		FEO. FH.A.S. FH.W.S. FHY. FIN. FLASH. FLEX. FLUOR. FMIR.	FIRE EXTINGUISHER CABINET FEMALE FIRE HOSE CABINET FLAT HEAD MACHINE SCREW FIRE HOSE RACK FLAT HEAD WOOD SCREW FIRE HYDRANT FINISH FLOW LINE FLASHING FLEXIBLE FLOOR FLUORESCENT FRAMED MIRROR	P	OPP.H. OZ.  PBD. PLO. PLAM. PLAS. PLYWD. PNL. PSF. P.SF. P.SH.	OPPOSITE HAND OUNCE  PARTICLE BOARD PRE-CAST CONCRETE PLASTIC LAMINATE PLASTER PLYWOOD PANEL(ING) POLISH POUNDS PER SQUARE FOOT PURSE SHELF
	ALLOW. ALT. ALUM. ANOD. APX. ARCH. ASPH. AUTO. AUX. AVG.	ALLOWANCE ALTERNATE ALUMINUM ANODIZED APPROXIMATE ARCHITECT(URAL) ASPHALT AUTOMATIC AUXILIARY AVERAGE		FMR.SH. F.O.C. F.O.F. F.O.S. F.S. FT. FTG. FURR. FUT.	FRAMED MIRROR AND SHELF FACE OF CONCRETE FACE OF FINISH FACE OF MASONRY FACE OF STUDS FULL SIZE FOOT (FEET) FOOTING FURRED FUTURE	Q	P.S.I. P.T.D. PTN. P.V.O. PVMT. Q.T. QTR.	POUNDS PER SQUARE INCH PRESSURE TREATED PAINTED PARTITION POLYVINYL CHLORIDE PAVEMENT QUARRY TILE QUARTER
B	BD. BLDG. BLK. BLKG. BM. BOT. BPL. BSMT. BUR.	BOARD BUILDING BLOCK BLOCKING BENCH MARK BOTTOM BEARING PLATE BASEMENT BUILT-UP ROOFING	6	F.W.C.  GA.  GALV.  G.B.  GL.  GYP.  H.	FABRIC WALL COVERING  GAUGE GALVANIZED GRAB BAR GALVANIZED IRON GLASS GRADE GYPSUM  HIGH	R	R. R./A R.D. REF. REINF. REINF. REIV. REV. RM.	RISER OR RADIUS RETURN AIR RADIUS ROOF DRAIN REFERENCE REFRIGERATOR REINFORCED REQUIRE(D) RESILIENT REVISE ROOM
C	CAB. C.B. CC.TV. CEM. CER. C.F.LASH. C.F.M. C.G.	CABINET CATCH BASIN CLOSED-CIRCUIT TELEVISION CEMENT CERAMIC COUNTER FLASHING CUBIC FEET PER MINUTE CORNER GUARD	1 1	H.B. H.DWD. H.DWE. H.M. H.DR.IZ. H.P. HR. HT.	HOSE BIB HALLOW CORE HARDWOOD HARDWARE HALLOW METAL HORIZONTAL HIGH POINT HOUR HEIGHT	S	R.O. R.W.L. S./A SAN. S.C. SCHED. SD.	ROUGH OPENING RAIN WATER LEADER  SOUTH SUPPLY AIR SANITARY SOLID CORE SCHEDULE SOAP DISPENSER
	CH. CJ. CJ. CLO. CLO. CLR. CMU. COMP.	COAT HOOK CAST IRON CONTROL JOINT CEILING CLOSET CLEAR CONCRETE MASONRY UNIT COLUMN COMPONENT	.	ID. IN. INCL. INSUL. INTM. INV. JAN.	INSIDE DIAMETER INCH INCLUDE INSULATION INTERIOR INTERMEDIATE INVERT		SECT. SH.R. SH.SH.R. SH.R. SH.SH.R. SH.R. SH.	SECTION SHELF SHOWER SHEET SIMILAR SANITARY NAPKIN DISPENSER SANITARY NAPKIN RECEPTACLE SANITARY NAPKIN-TAMPON DISPENSE SQUARE SERVICE SINK
	CONC. CONST. CONT. CPT. CR. CS. C.T. CU.FT. CU.YD. CX.	CONCRETE CONSTRUCTION CONTINUOUS CARPET CURTAIN ROD COUNTERSINK CERAMIC TILE CUBIC FEET (FOOT) CUBIC INCH CUBIC YARD CONNECTION	K L	JT. K.O. LAP. LAW. LAV. LKR. LLH.	JOINT  KITCHEN  KNOCK OUT  LABORATORY  LAMINATE  LAVATORY  POUND  LOCKER  LONG LEG HORIZONTAL		S.S. STL. STA. STD. STR. STR. SUR. SYM. SYS.	STAINLESS STEEL STEEL STATION STANDARD STORAGE STRUCTURE SURFACE SUSPENDED SYMMETRICAL SYSTEM
D	DBL. DEPT. DET. DF. DH. DIAG. DIA	DOUBLE DEPARTMENT DETAIL DRINKING FOUNTAIN DOUBLE HUNG DIAGONAL DIAMETER	M	LL.V. L.P. LT. LTL. LVL. LVR. MAT'L MAX.	LONG LEG VERTICAL LOW POINT LIGHT LINTEL LEVEL LOUVER MATERIAL MAXIMUM	T	T. T.B. T.O.C. T.D. T.D.R. TEL TEMP. TERR.	TREAD TOWEL BAR TOP OF CURB TOWEL DISPENSER TOWEL DISPENSER—RECEPTACLE TELEPHONE TEMPERED TERRAZZO
	DIM. DIV. DN. DR. DR. D.S. DWG. DWR.	DIMENSION DIVISION DOWN DOOR OPENING DOOR DOWNSPOUT DRAWING DRAWER		M.B. M.B.H. M.C.	MOP BASIN MOP-BROOM HOLDER MEDICINE CABINET MACHINE MECHANICAL MEDIUM MEMBRANE METAL MEZZANINE		T&O THER. THK. THRES. TOP. TRD. TOS. TOSTL. T.P.	TONGUE AND GROOVE THERMAL THICK(NESS) THRESHOLD TOP OF PAVEMENT TREATED TOP OF SLAB TOP OF STEEL TOILET TISSUE DISPENSER
	E. EA. E/A E.B. E.H.D. E.I.F.S.	EAST EACH EXHAUST AIR EXPANSION BOLT ELECTRICAL HAND DRYER EXTERIOR INSULATION & FINISH SYSTEM EXPANSION JOINT		MFR. M.H. MIN. MIR. MISO. MLDO. M.O.	MANUFACTURE MAN HOLE MINIMUM MIRROR MISCELLANEOUS MOULDING MASONRY OPENING	U	TV. T <i>O</i> .W. TYP. UR. U.N.O.	TELEVISION TOP OF WALL TYPICAL URINAL UNLESS NOTED OTHERWISE
	E.J. EL. ELEC. ELEV. EMER. ENGL. EQ. EQPT.	ELEVATION ELECTRIC ELEVATIOR EMERGENCY ENCLOSURE EQUAL	Ν	MTD. MTG. MULL. N. N.I.C.	MOISTURE RESISTANT MOUNTED MOUNTING MULLION NORTH NORTH NOT IN CONTRACT	$\bigvee$	V.C.T. VERT. VEST. V.IF. VNR. V.W.C.	VINYL COMPOSITION TILE VERTICAL VESTIBULE VERIFY IN FIELD VENEER VINYL WALL COVERING
	EQPT. E.W.C. EXH. EXP. EXPO. EXIST'G EXT.	EQUIPMENT ELECTRICAL WATER COOLER EXHAUST EXPANSION EXPOSED EXISTING EXTERIOR		NO. NOM. N.T.S.	NUMBER NOMINAL NOT TO SCALE	$\bigvee$	W. W./ W.A.U. W.O. WIN. W./O W.P.	WEST WITH WALL ASH URN WATER CLOSET WOOD WINDOW WITHOUT WATERPROOF

W.W.M. WELDED WIRE MESH

4 4 4	CONCRETE
	CONCRETE BLOCK (PLAN)
	CONCRETE BLOCK (SECTION)
	R= 19 ROOF SPRAY POLYURETHENE BIOBASED 501 1/4 OPEN CELL INSULATION
	ARCHITECTURAL GRADE FINISHED WOOD (SECTION OR PLAN)
	WOOD FRAMING LUMBER (SECTION)
	PLYWOOD (SECTION)
	RIGID BOARD TYPE INSULATION
	METAL (SECTION)
	EARTH
	GRAVEL/Fill
	REMOVE EXISTING FRAME WALL
	EXISTING FRAME WALL TO REMAIN
	NEW FRAME WALL
, , , , , , , , , , , , , , , , , , ,	EXISTING CMU WALL TO REMAIN (REPAIR)
	NEW CMU WALL
	SOLID LINE. ALL ITEMS, EXCEPT AS NOTED BELOW.
	DASHED LINE. ITEMS HIDDEN, ABOVE, OR TO BE REMOVED.
	CENTER LINE OF COLUMNS, OR OTHER OBJECT AS NOTED.  LEASE LINE OR PROPERTY LINE.
	BREAK LINE. MATERIAL TO CONTINUE.
+ 73.0°	EXISTING ELEVATION 73.0'
TW 85.0'	TOP OF WALL ELEVATION TW 85.0'
TC 85.0'	TOP OF CONCRETE TC 85.0'
TP 74.0'	TOP OF PAVEMENT TP 74.0'
◆ELEV. 102'-0"	LEVEL LINE OR ELEVATION LINE ELEV. 102'-0"
2	REVISION NUMBER DESCRIBED IN REVISION BLOCK
	CROSS OR WALL SECTION  DETAIL NUMBER
L	A-6 SHEET NUMBER
	WHERE DRAWN
<i>(</i> — –	DETAIL DETAIL NUMBER
I	A-7 SHEET NUMBER WHERE DRAWN
\	
	ELEVATION
	DETAIL NUMBER
	4 A-3 2
	3 SHEET NUMBER WHERE DRAWN
	DIMENSION INDICATING MASONRY OPENINGS
	DOOR SYMBOL - SEE DOOR SCHEDULE
OFFICE STF 4	ROOM NAME ROOM NUMBER
(L-5)	TOILET ACCESSORY — SEE SCHEDULE
B1	
0-5	HOLLOW METAL FRAMES — SEE DOOR SCHEDULES
	ALUM. CURTAIN WALL ASSEMBLIES — SEE WINDOW ELEV SCHEDULES

ALUMINUM WINDOWS -

---- KEYED TO GENERAL NOTE

SEE WINDOW ELEV SCHEDULE

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BRADENTON 26TH 00

Project Number

Yehuda Inbar AIA Inbar architect AIA

Checked by Al Meronek

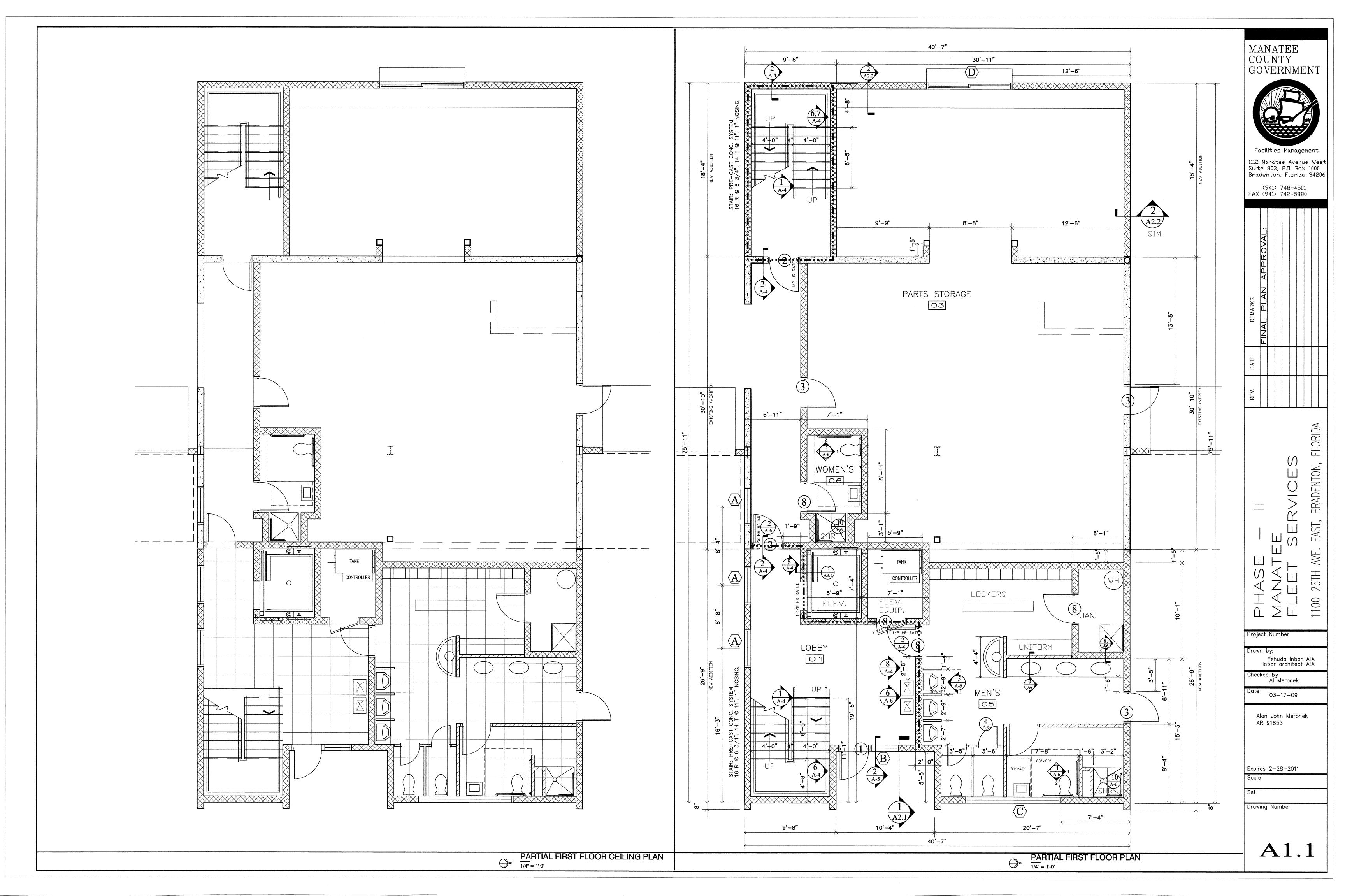
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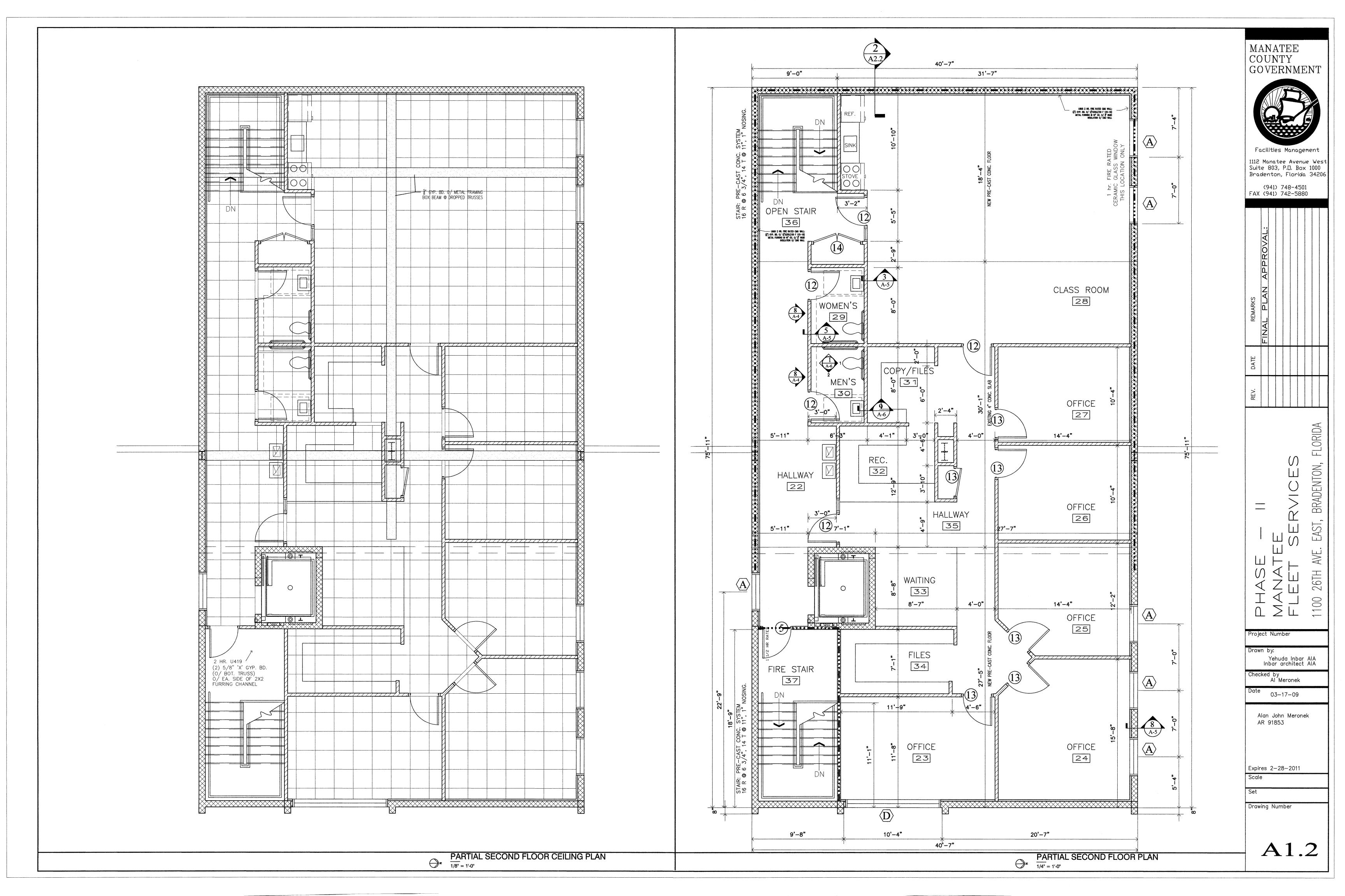
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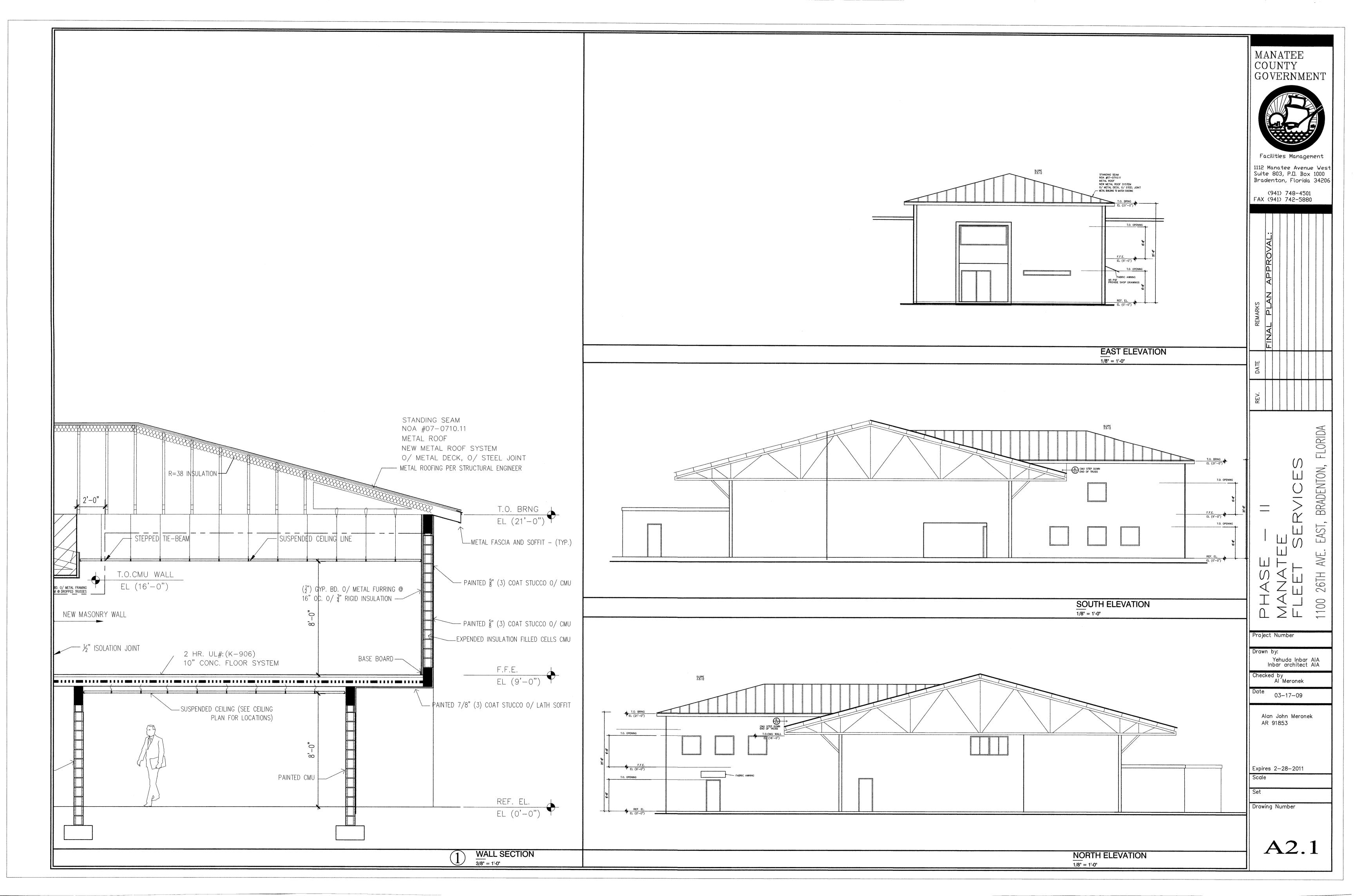
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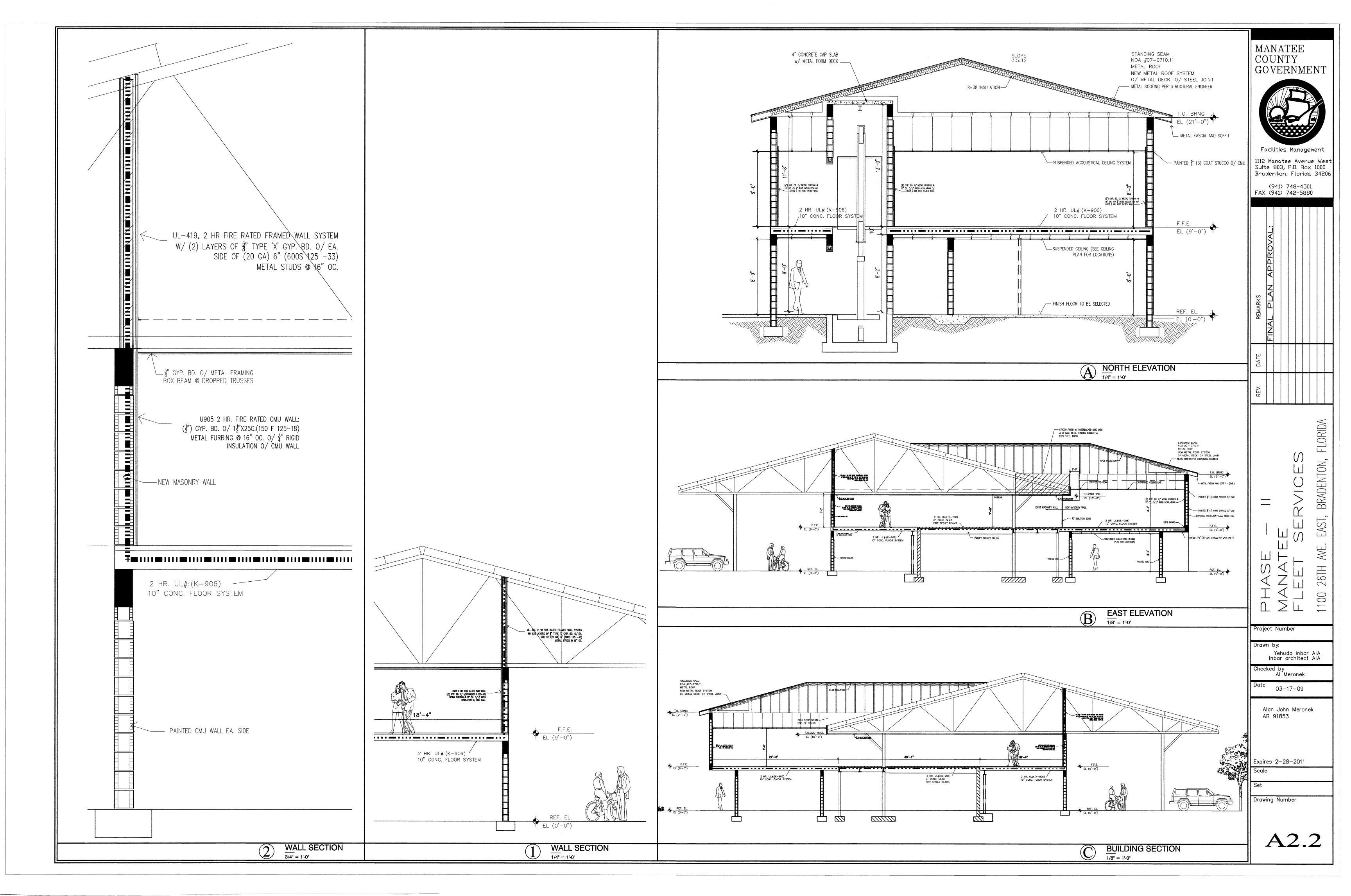
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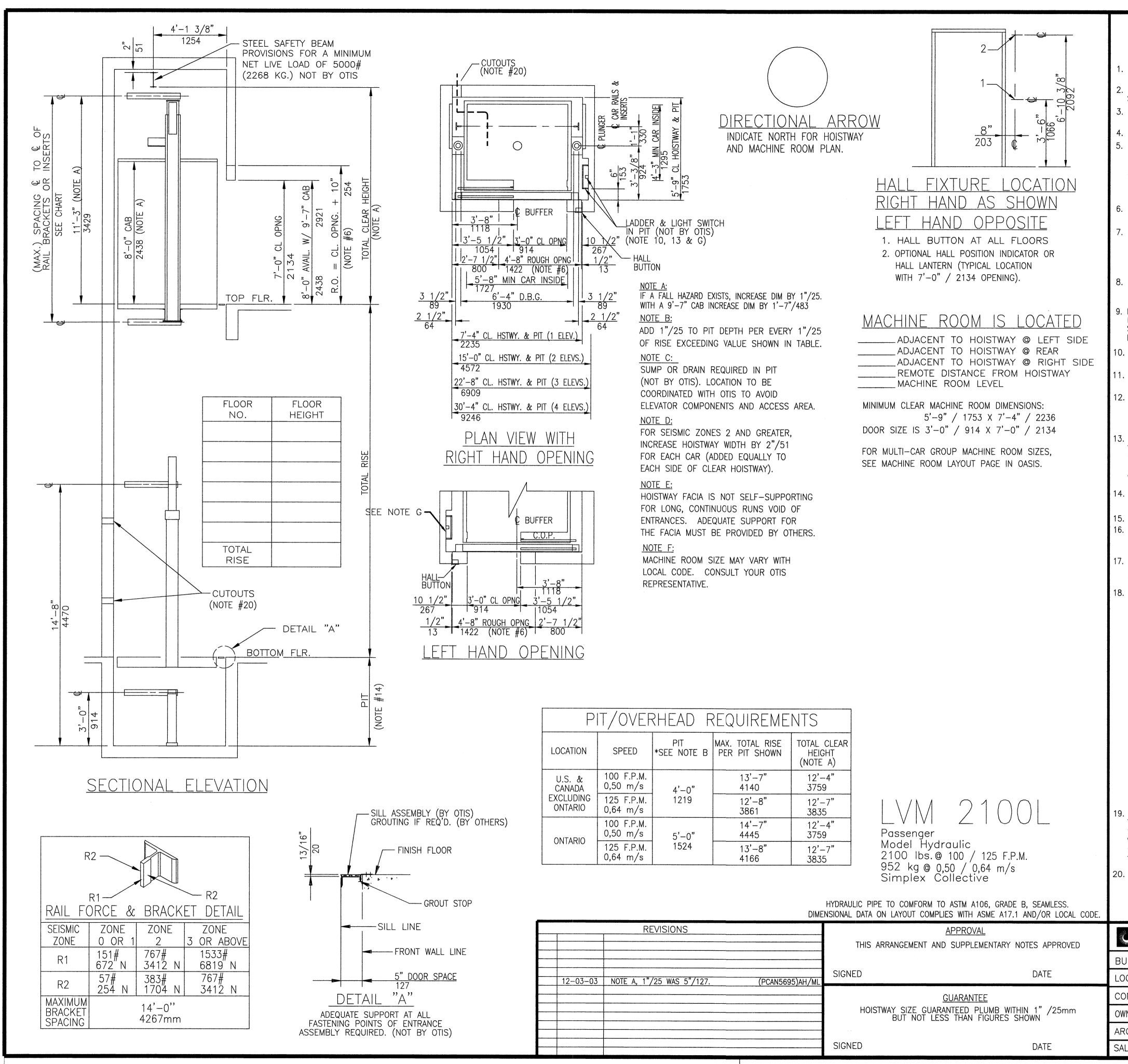
**ABBREVIATIONS** 











IMPORTANT NOTES

# GENERAL REQUIREMENTS BY OTHERS

PROPERLY FRAMED AND ENCLOSED LEGAL HOISTWAY INCLUDING VENTING AS

REQUIRED BY THE GOVERNING CODE AND SAFETY BEAM AS SHOWN. 2. ADEQUATE SUPPORT FOR GUIDE RAIL FASTENINGS NOT TO EXCEED THE VERTICAL SPACING SHOWN ON THE RAIL BRACKET CHART. SEPARATOR BEAMS WHERE REQUIRED.

PROVISIONS FOR GUARDING AND PROTECTING THE HOISTWAY DURING CONSTRUCTION TO BE ERECTED, MAINTAINED, AND REMOVED BY OTHERS.

. ALL CUTTING OR PATCHING TO ACCOMMODATE ELEVATOR INSTALLATION.

HOISTWAY WALLS ARE TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIRED FIRE RATING INCLUDING WHERE PENETRATED BY ELEVATOR FIXTURE BOXES, AND TO INCLUDE ADEQUATE FASTENINGS TO HOISTWAY ASSEMBLIES. A HORIZONTAL SUPPORT MUST BE PROVIDED 12" (305mm) ABOVE THE CLEAR OPENING AT EACH LANDING TO SUPPORT THE DOOR FRAME ASSEMBLY. THE ENTRANCE WALL AND THE FINISHED FLOOR MUST NOT BE CONSTRUCTED UNTIL THE FRAMES AND SILLS ARE SET.

3. FOR PRECAST OR POURED CONCRETE WALLS, PROVIDE THE ROUGH OPENNING FOR HOISTWAY AS SHOWN ON LAYOUT, AND ANY GROUTING AROUND ENTRANCE FRAMES IF REQ'D.

SUITABLE MACHINE ROOM WITH LEGAL ACCESS AND MINIMUM HEIGHT OF 7'6' (2286 mm) TO BE PROVIDED. MACHINE ROOM TEMPERATURE MAINTAINED BETWEEN 60° & 100' F (15.5' & 37.8' C). RELATIVE HUMIDITY NOT TO EXCEED 95% NON-CONDESING. FOR HEATING, VENTILATION, AND AIR CONDITIONING REQUIREMENTS OTHER THAN THOSE SHOWN ABOVE REFER TO OTIS CONFIRMATION OF POWER SUPPLY FORM

3. A SEPARATE BRANCH CIRCUIT FOR SUITABLE LIGHT FIXTURE(S) AND CONVENIENCE OUTLETS, WITH G.F.I., IN THE MACHINE ROOM WITH THE LIGHT SWITCH LOCATED ADJACENT TO THE LOCK JAMB SIDE OF THE MACHINE ROOM DOOR.

. FOR EACH ELEVATOR, A THREE PHASE ELECTRICAL FEEDER SYSTEM WITH A SEPARATE EQUIPMENT GROUNDING CONDUCTOR AND A SINGLE PHASE 120 VOLT LIGHTING SUPPLY. EACH WITH A FUSED DISCONNECT SWITCH OR CIRCUIT BR EAKER. LOCATED IN THE MACHINE ROOM AND WIRED TO EACH CONTROLLER.

10. IN THE PIT, A SEPARATE BRANCH CIRCUIT FOR CONVENIENCE G.F.C.I. OUTLET & LIGHT FIXTURE WITH LIGHT SWITCH ADJACENT TO THE PIT LADDER.

11. ALL ELECTRIC POWER FOR TOOLS, LIGHT, HOIST, ETC., DURING ERECTION AS WELL AS ELECTRIC CURRENT FOR STARTING AND ADJUSTING THE ELEVATOR.

12. DRY PIT REINFORCED TO SUSTAIN VERTICAL FORCES OF UP TO:

14,000/62 LBS/KN AT EACH BUFFER AND 3,169/14 LBS/KN AT THE CYLINDER HEAD. THE ACCUMULATION OF WATER MUST BE PREVENTED

13. A FIXED VERTICAL STEEL LADDER TO PIT EXTENDING 4'-0" (1219mm) ABOVE THE SILL OF THE BOTTOM ENTRANCE AS LOCATED IN THE PLAN VIEW. LADDER WIDTH AND PROJECTION FROM WALL PER LOCAL CODE. IF PIT DEPTH IS GREATER THAN 9'-10" (3000mm) [13'-9" (4191mm) WITH NO FLOOR BELOW BOTTOM LANDING], A PIT ACCESS DOOR IS REQUIRED.

14. PIT FLOOR BENEATH CYLINDERS AND BUFFER TO BE FLAT AND LEVEL WITHIN 1/8" (3mm) FULL WIDTH OF HOISTWAY.

15. ELEVATOR CAB FLOORING MUST NOT EXCEED A THICKNESS OF 5/16" (8mm). 16. ONE (1) DEDICATED OUTSIDE TELEPHONE LINE TO THE ELEVATOR MACHINE ROOM MUST BE FURNISHED. TELEPHONE CONNECTIONS TO EACH CONTROLLER. TELEPHONE INSTRUMENT BY OTHERS.

17. ALL 125 VOLT, 15 OR 20 AMP, SINGLE PHASE DUPLEX RECEPTACLES INSTALLED IN PITS, MACHINE ROOMS OR MACHINERY SPACES, SHALL BE OF THE GROUND—FAULT-CIRCUIT-INTERRUPTER TYPE.

18. SMOKE DETECTORS, LOCATED AS REQUIRED, WITH WIRING FROM THE SENSING DEVICES TO A CONTROLLER DESIGNATED BY OTIS. FOR EACH GROUP OF ELEVATORS, PROVIDE A NORMALLY CLOSED CONTACT REPRESENTING THE SMOKE DETECTOR AT THE DESIGNATED RETURN LANDING. FOR EACH GROUP OF ELEVATORS, PROVIDE A NORMALLY CLOSED CONTACT REPRESENTING ALL SMOKE DETECTORS LOCATED IN LOBBIES, HOISTWAYS, OR MACHINE ROOMS, BUT NOT THE SMOKE DETECTOR AT THE DESIGNATED RETURN LANDING (SEE ABOVE) OR THE SMOKE DETECTORS AS DESCRIBED IN A & B BELOW:

A) IF A SMOKE DETECTOR IS LOCATED IN THE HOISTWAY AT OR BELOW THE LOWER OF THE TWO RECALL LANDINGS, IT SHALL BE WIRED TO ACTIVATE THE SAME NORMALLY CLOSED CONTACT AS THE SMOKE DETECTOR LOCATED IN THE LOBBY AT THE LOWER

OF THE TWO RECALL LANDINGS. B) IF MACHINE ROOMS ARE LOCATED AT THE DESIGNATED RETURN LANDING, THE SMOKE DETECTOR LOCATED THEREIN SHALL BE WIRED TO ACTIVATE THE SAME NORMALLY CLOSED CONTACT AS THE SMOKE DETECTOR AT THE DESIGNATED LANDING. FOR A SINGLE UNIT, OR GROUP OF ELEVATORS HAVING ONE COMMON MACHINE ROOM AND ONE COMMON HOISTWAY, PROVIDE ONE ADDITIONAL NORMALLY CLOSED CONTACT REPRESENTING ALL MACHINE ROOM AND HOISTWAY SMOKE DETECTORS. IF THE GROUP CONTAINS MORE THAN ONE HOISTWAY, AND HOISTWAY SMOKE DETECTORS ARE INSTALLED, OR IF THE GROUP HAS MORE THAN ONE MACHINE ROOM, PROVIDE ONE ADDITIONAL NORMALLY CLOSED CONTACT FOR EACH ELEVATOR. THE CONTACT IS TO REPRESENT THE SMOKE DETECTOR IN THE MACHINE ROOM FOR THAT PARTICULAR ELEVATOR, AND ANY SMOKE DETECTORS IN THE HOISTWAY CONTAINING THAT PARTICULAR ELEVATOR.

19. IF SPRINKLERS ARE INSTALLED IN THE HOISTWAY, MACHINE ROOM, OR MACHINERY SPACES. THE LOCAL CODE MAY REQUIRE A MEANS TO AUTOMATICALLY DISCONNECT THE MAIN POWER SUPPLY OF THE AFFECTED ELEVATOR PRIOR TO THE APPLICATION OF WATER (CONFIRM WITH THE LOCAL CODE OFFICIAL). SMOKE DETECTORS SHALL NOT BE USED TO ACTIVATE SPRINKLERS IN HOISTWAYS, MACHINE ROOMS OR MACHINERY SPACES OR TO DISCONNECT THE MAIN LINE POWER SUPPLY.

20. TWO (2) 6" X 6" (152mm x 152mm) CUTOUTS ARE REQUIRED (NOT BY OTIS). THE ACTUAL LOCATION OF THE CUTOUTS FOR THE TO AND FROM OIL PIPE AND ELECTRICAL TROUGH WILL VARY DEPENDENT UPON MACHINE ROOM LOCATION AND CONFIGURATION.

DE.		
	UNITED TECHNOLOGIES OTIS ELEVATOR	
	BUILDING	
	LOCATION	SEISMIC ZONE
	CONT. WITH	
	OWNER	
	ARCHT.	
	SALES NO.	

DWG. NO. AAA28010BV

**MANATEE** COUNTY GOVERNMENT



Facilities Management

112 Manatee Avenue West Suite 803, P.D. Box 1000 Bradenton, Florida 34206

(941) 748-4501 FAX (941) 742-5880

REMARKS	FINAL PLAN APPROVAL:				
DATE					
REV.					
		-			

BRADENTON Project Number

FLORIDA

Yehuda Inbar AIA Inbar architect AIA Checked by Al Meronek

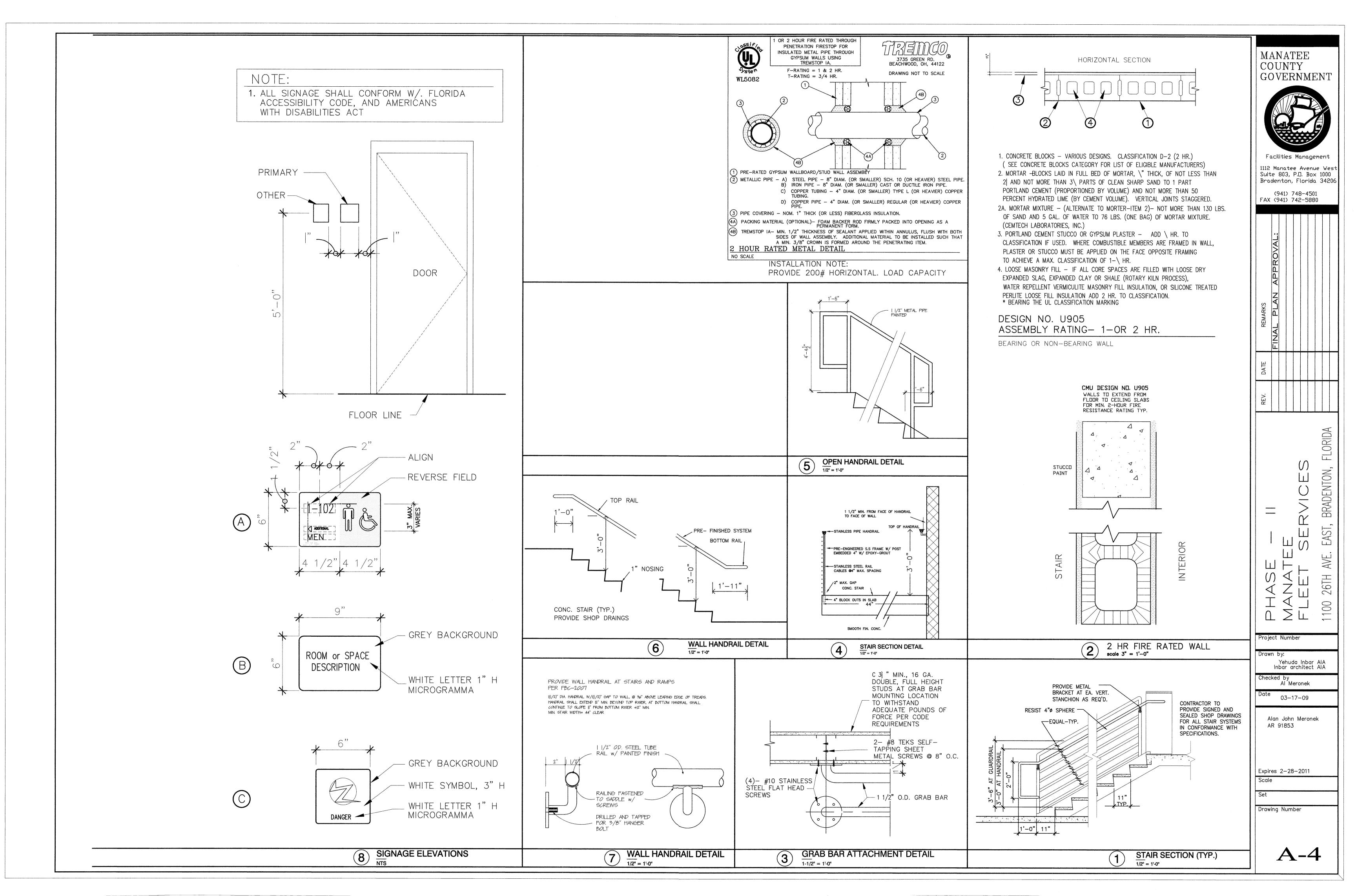
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Alan John Meronek AR 91853

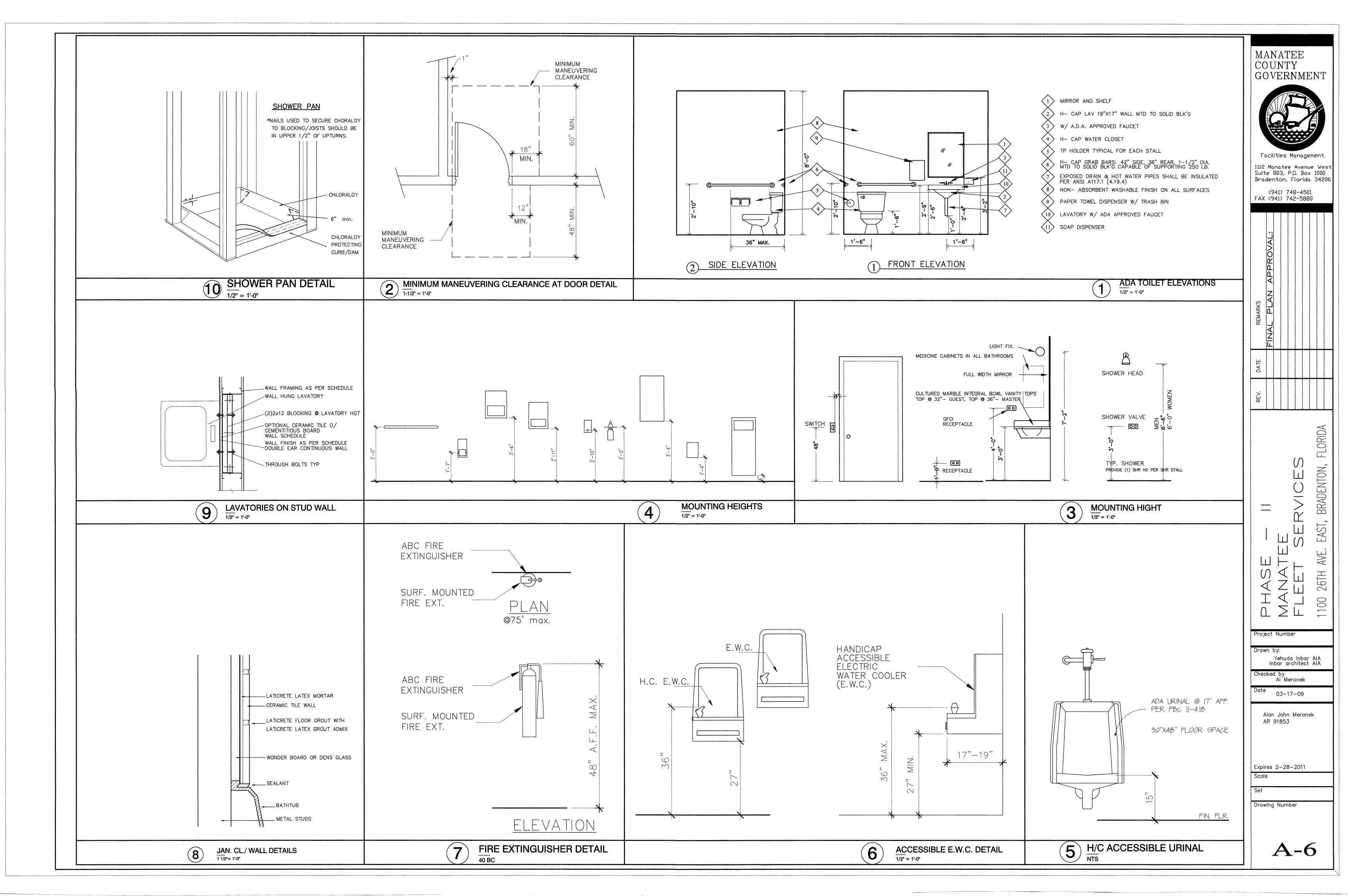
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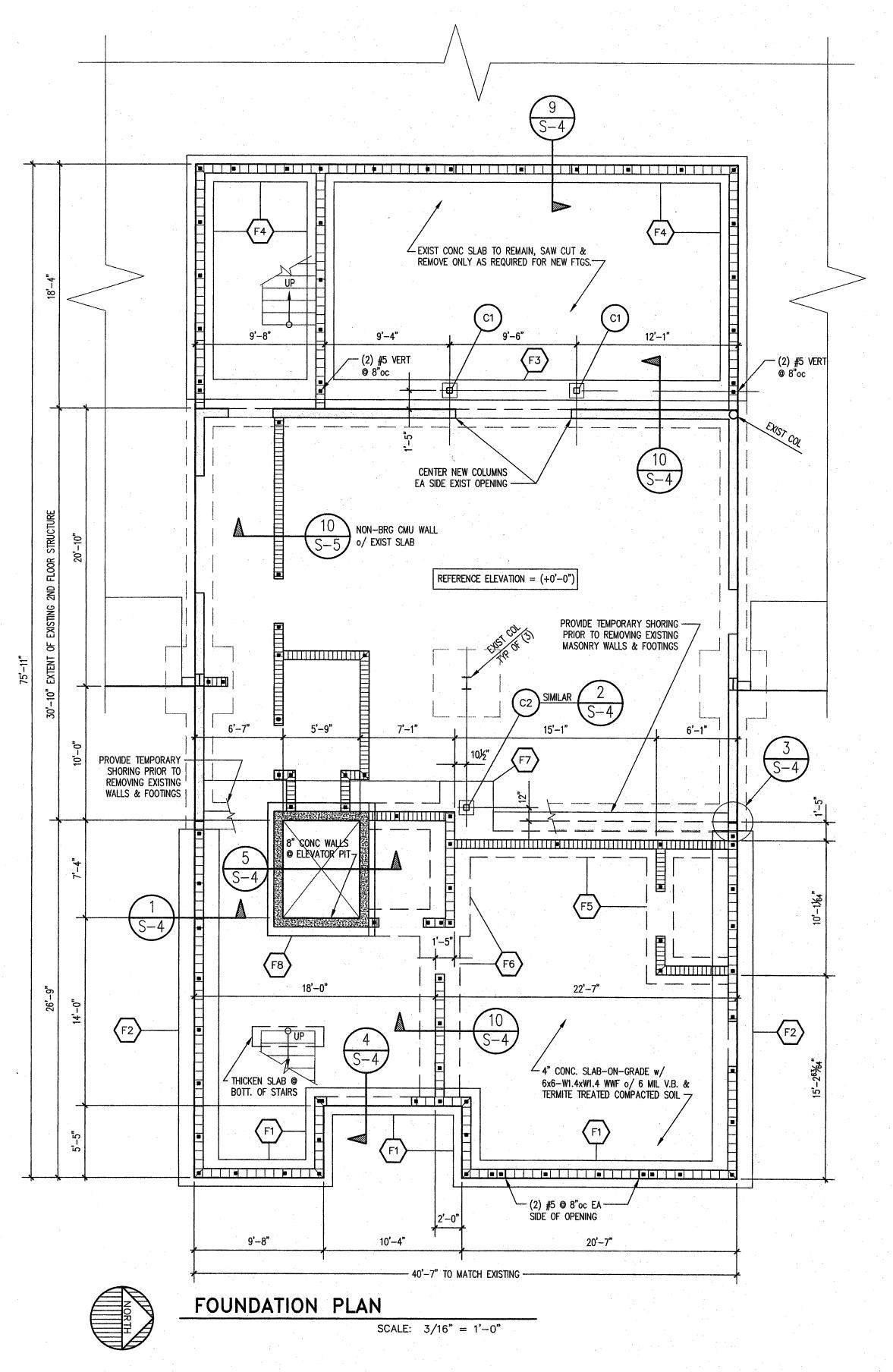
Drawing Number

A3.1



	WINDOW SCHEDULE 🔾	)					NA MATANA AMBANA AM	ROOM FINISH SCHEDULE	MANATER
HDW SET 1		INDOW SIZE FRAME COLOR OPTIONS TINT HD HGT	OAD/SF REMARKS	DOOR SCHED				FLOOR WALLS CEILIN	
Door Numbers: 1 Exterior/Lobby AL x AL	A FIX PGT IMPACT 4'-0" X 4'-0"  B FIX PGT IMPACT 3'-0"X 6'-0"	WHITE         GRAY         6'-8" AFF         4           WHITE         GRAY         6'-8" AFF         4			THICK DR. TYPE 1 3/4" SS. SF.		FINISH FRAME LOAD/SF REMARKS  FACTORY ALUM +40.0 –50.0 W/ ADA THRESHO		GOVERNMEN
Each opening to receive:  1 ea Cylinder 3900 Series US26D	C FIX PGT IMPACT 10'-0"X 1'-0"	WHITE GRAY 6'-8" AFF +	40.0 – 50.0	2 'A' 3'-0"x7'-0" 3 'B' 3'-0"x7'-0"	1 3/4" SS. SC. 1 3/4" SS SC		FACTORY         ALUM         +40.0 -50.0         W/ ADA THRESHO           PNT         METAL         +40.0 -50.0         W/ ADA THRESHO		и понт
1 ea Cylinder 3900 Series US26D 1 ea Core 3981 US26D Remainder of hardware by aluminum door supplier.	D FIX PGT IMPACT 10'-0"X 4'-0"	WHITE GRAY 6'-8" AFF	40.0 – 50.0						
HDW SET 2				5 'B' 3'-0"x7'-0"		1 1/2 HR. METAL	PNT METAL W/ PANIC HARDY		?-0" ?-0" ?-0"
Door Numbers: 2 Exterior/Stair 3'0" x 7'0" MD x MF 1 ½ Hr. U.L Each opening to receive:			9	8 'B' 3'-0"x7'-0"	1 3/4" SS SC	WOOD	PNT METAL	02         HALLWAY         F4         B2         W4         W4         W4         C1           03         PARTS STORAGE         F4         B2         W4         W4         W4	
3 ea Hinges BB1199 4.5" x 4.5" NRP US32D 1 ea Exit Device H1009 x DU US32D			i d	N N N N N N N N N N N N N N N N N N N				05 MEN'S F4 B2 W1 W4 W4 W4 C1	<u>'-0"</u> -0" Facilities Manageme
1 ea Cylinder 3902 x I.C. US26D 1 ea Core 3981 US26D	NOTE: EGRESS WINDOW OPE			14 'B' 5'-0"x7'-0"	1 3/4" SS SC	WOOD	PNT METAL		'-0"   1112 Manatee Avenue Suite 803, P.□. Box 1 Bradenton, Florida 3
1 ea Closer 5100 HDS ALM 1 ea Kickplate 194S US32D 1 set Gasket 891S MIL	TO BE AT 44" AFF ( MIN. SIZE: 24" HEIGH 5.7 sf MIN. OPENING	HT, 20" WIDTH						22 HALLWAY F4 B2 W1 W1 W1 C1 23 OFFICE F4 B2 W1 W1 W1 C1	(941) 748-4501
1 ea Threshold 8135NMIL 1 ea Drip Guard 810S MIL	3.7 SI MIN. OPENING	AREA						24     OFFICE     F4     B2     W1     W1     W1     C1       25     OFFICE     F4     B2     W1     W1     W1     C1       26     OFFICE     F4     B2     W1     W1     W1     C1	'-0" FAX (941) 742-5880
HDW SET 3								27 CLASS ROOM F4 B2 W1 W1 W1 C1	'-O"
Door Numbers: 4 Exterior/Parts 3'0" x 7'0" MD x MF Each opening to receive:		PROVIDE SELF CLOSER AT ALL EXIT DOORS AN NOTES:	D BATHROOM DOORS				M DR FRAME	30 WOMEN'S F4 B2 W1 W1 W1 W1 C1 31 COPY/FILES F4 B2 W1 W1 W1 W1 C1	<u>''-0"</u>
3 ea Hinges BB1199 4.5" x 4.5" NRP US32D 1 ea Storeroom Lock 93K 7D 15D S3 US26D		1. ALL INTERIOR DOORS SHALL BE PROVIDED A: $1-1/2$ PAIR OF $4-1/2$ " HIGH HINGES,						32 REC. F4 B2 W1 W1 W1 C1	·-o*
1 ea Closer 5100 ALM 1 ea Kickplate 1948 US32D	INTERIOR LIST:	B: 1— LOCKSET, LEVER STYLE, SIM TO CAL- C: 1— DOOR CLOSER, SIM TO DORMA 7600 D: 1— DOOR STOP SIM. TO HAGER 236W		LEVER LOCKSET.	FRONT DOOR (NIC)		CHAOS LOCATION TYPICAL ALL SIONS	34 FILES F4 B2 W1 W1 W1 C1	<u>''-0"</u>
1 ea Wall Stop 232W US32D 1 set Gasket 891S MIL	(20 g) 8" studs @ 16" OC = 32' high (20 g) 6" studs @ 16" OC = 26' high	E: 1- DOOR HOLD OPEN AT EACH NON- RA					GNAGE LOCATION TYPICAL ALL SIGNS	35 HALLWAY F4 B2 W1 W1 W1 C1 36 OPEN STAIR F4 B2 W1 W1 W1 W1 C1	
1 ea Threshold 8135NMIL 1 ea Drip Guard 810S MIL	(20 g) 4" studs @ 16" OC = 19' high	2. ALL EXTERIOR DOORS SHALL BE PROVIDED A: 1-1/2 PAIR OF 4-1/2" HIGH HINGES, B: 1- LOCKSET, LEVER STYLE, MEDIUM GRA						37 FIRE STAIR   F4   B2   W1   W1   W1   C1	
HDW SET 4	(20 g) DBL-2 1/2"WEBX 1 5/8" FLENGE studs  BRACING @ 48" VERT.= 18' high	C: 1- DOOR CLOSER, SIM TO SARGENT 123	SERIES			†			MARKS
Door Numbers: 5 Exterior/Parts, 6 Exterior/Parts 3'0" x 7'0" MD x MF Each opening to receive:	EXTERIOR LIST:	D: 1— COMPLETE WEATHER STRIP KIT AT DO WITH 1 1/2 PAIR OF OFFSET PIVOTS, SAM II CONCEALED ROD EXIT DEVICE, CO—9 PULLS II FOR OFFSET PIVOTS AND OVERHEAD CONCEA	CONS.  CONCEALED OVERHEAD CLOSER, PAN  N US 32 POLISHED STAINLESS STEEN  LED CLOSERS ROTTOM WEATHER SW	NELINE II CR-90 L, THRESHOLD		5: 77		NOTE: GC. TO COORDINATE CEILING HEIGHT W/ DUCT WORK	REI REI
3 ea Hinges BB1199 4.5" x 4.5" NRP US32D 1 ea Entrance Lock 93K 7AB 15D S3 US26D	40#/SF: (20 g) 4" studs @ 16" OC = 9' high 40#/SF: (18 g) 4" studs @ 16" OC = 10' high	E: 1- ADA ACCESSIBLE LOW RISE THRESHO	D WITH MATCHING DOOR BOTTOM.			40.		ROOM FINISHES LEGEND:	
1 ea Closer 5100 x HDS ALM 1 ea Kickplate 194S US32D 1 set Gasket 891S MIL	40#/SF: (18 g) 6" studs @ 16" OC = 14' high	COMPLETE WITH CUT SHEETS FOR THE ARCHI DOOR FRAMES AND HARDWARE ORDER. FINAL	TECT REVIEW BEFORE PROCEEDING W HARDWARE SCHEDULE SHALL BE AI	WITH DOORS,				FLOORS	<u> </u>
1 ea Threshold 8135NMIL 1 ea Drip Guard 810S MIL	40#/SF: (16 g) 8" studs @ 16" OC = 19' high	DOOR FRAMES AND HARDWARE SUPPLIER PRO  4. ALL HARDWARE AND THRESHOLDS SHALL	POSAL. COMPLY WITH THE 2004 FLORIDA AC		'A'		'B'	F1 PORCELAIN TILE O/ CRACK SUPRESSION MEMBRANE F2 CARPET (LOW VOC) F3 SEALED CONC.	DA
1 ea Lock Guard 340D US32D  HDW SET 5	11 STUDS SCHEDULE	5. 'PEMCO' THRESHOLD OR APPROVED EQUAL	S ACCEPTABLE			$(4) \frac{D}{1/2}$	OOR ELEVATIONS	F4 CONC.	
Door Numbers: 11 Hall/Stairs 3'0" x 7'0" WD x MF 1 ½ Hr. U.L.	NTS					1/2	." = 1'-0"	BASE B1. PORCELAIN TILE B2 VINYL	RE
Each opening to receive:								B3 4" WOOD	
3 ea Hinges BB1279 4.5" x 4.5" US26D 1 ea Exit Device 4500 Rim-F US32D 1 ea Trim 45BE x ARC US26D		•					11 11	WALLS W1 PAINTED 1/2" GYP. BD. W2 PAINTED 1/2" GREEN BD.	
1 ea Closer 5100 ALM 1 ea Kickplate 194S US32D			PVC STUCCO CONTROL .				1/2" GYP. BOARD	W3 STAINLESS STEEL AND GLASBOARD - P .09" WHITE W4 PAINTED CMU	
1 ea Wall Stop 232W US32D 1 set Gasket 721S CHARCOAL	5/8" STUCCO		W/PAPER BACK OR 15#	ER NON RUST METAL LATH FELT NAILED W/ 10d @ 4" OC.			ON EA. SIDE OF 3 5/8" METAL STUDS (20 GA.) © 16" OC.	CEILINGS	$  $
HDW SET 6		•	OVER OF SHEATING	WILLD WY TOU 9 + OO.				C1 2'X2' 'P' SUSPENDED ARMSTRONG CORTEGA TEGULAR C2 5/8" GYP. BD. C3 5/8" M.R. GYP. BD.	
Door Numbers: 8 Lobby/Elevator Equip., 10 Men/Janitor 3'0" x 7'0" WD x MF 1 ½ Hr. U.L. Each opening to receive:	WINDOW HEAD 2X6 RAISED TRIM ZB105 OPTION						HOLLOW METAL FRAME PAINTED	NOTES:	
3 ea Hinges BB1279 4.5" x 4.5" US26D 1 ea Storeroom Lock 3480 x ARC x I.C. US26D	CORNER BEAD CAULK	1X FURRING 2X6 PT BLOCK W/ (2) MIN.						INTERIOR WALLS TO BE ORANGE PEEL TEXTURE SATIN FINISH PAINT INTERIOR TRIM PAINT FINISH TO BE SEMIGLOSS	
1 ea Core 3981 US26D 1 ea Closer 5100 x HDS ALM		1/4" DIA. TOPCON 3" LONG @ 18" OC. MAX.						CARPET: 100% NYLON 28 OZ/ SQ. YD. ANTI— STATIC, NO VOC ALL FLOOR TILE WITH 8% ABRASIVE GRIT CERAMIC MOSAIC TILE AT MOP SINK FLOORS, WALLS & CEILING	
1 ea Kickplate 194S US32D 1 set Gasket 721S CHARCOAL	(2) HEAD	WOOD CASING CAULK	(6	STUCCO C	J. DETAIL		DOOR	PROVIDE SPARE TILE FOR OWNER USE ALL COUNTER/SINK TOPS TO BE SOLID PLASTIC. (COLOR BY OWNER) TOILET PARTITIONS TO BE SOLID PLASTIC FLUSH PANELS	— II — II S
HDW SET 7	2 HEAD 3 SIM.	VACEN		1" = 1'-0"		-	HEAD	MATERIAL ALLOWANCES MOURES IN THE	
Door Numbers: 9 Womens 3'0" x 7'0" WD x MF 1 ½ Hr. U.L. Each opening to receive:								MATERIAL ALLOWANCES INCLUDED IN BASE BID:	
3 ea Hinges BB1279 4.5" x 4.5" US26D 1 ea Privacy Lock 3440 x ARC US26D							1/2" GYP. BOARD ON EA. SIDE OF 3 5/8"		
1 ea Closer 5100 x HDS ALM 1 ea Kickplate 194S US32D 1 set Gasket 721S CHARCOAL	CAULK	WOOD WINDOW FRAME CAULK					METAL STUDS (20 GA.)  © 16" OC.		
HDW SET 8	5/8" STUCCO	WOOD SILL					HOLLOW METAL FRAME PAINTED		
Door Numbers: 7 Lobby/Mens 3'0" x 7'0" WD x MF 1 ½ Hr. U.L. Each opening to receive:		• PRECAST CONC. SILL							Project Number
3 ea Hinges BB1279 4.5" x 4.5" US26D			20000	R = 19 INSULATION MIN.					Drawn by:
1 ea Passage Set 3410 x ARC US26D 1 ea Closer 5100 x HDS ALM 1 ea Kickplate 194S US32D	DRIP -			(see room fin. shchedule)			DOOR		Yehuda Inbar Inbar architect
1 set Gasket 7218 CHARCOAL		EXISTING BLK. WALL		5/8" GYP. BD. CEILING			JAMB		Checked by Al Meronek
HDW SET 9	1 SILL	1 111							Date 03-17-09
Door Numbers: 14 Storeroom/Office 3'0" x 7'0" WD x MF Each opening to receive:		8 WINDOW SECTION $\frac{1}{1/2^n} = 1^{1}-0^n$	1/	2" GYP. BD. (NOT FROM CHINA)	WALLS	/	INTERIOR H.M. DOOR DETAI	ALUM. E.S.P. DOWNSPOUT (DS)	Alan John Merone
3 ea Hinges BB1279 4.5" x 4.5" US26D		1/2" = 1'-0"		2" GYP. BD. (NOT FROM CHINA) OVER 3 5/8" (20G) STUD @ 1 SOUND ATINUATION AT ALL	6" O.C. ROOMS		<del>3</del> <del>1/2"</del> = 1'-0"	ALUWI. E.S.F. DUWINSPUUT (DS)	AR 91853
1 ea Storeroom Lock 3480 x ARC x I.C. US26D 1 ea Core 3981 US26D 1 ea Overhead Stop #9 Series US32D									
3 ea Silencers 307D GREY		DOOR PANEL						ANCHOR STRAP @ 6'-0" O.C. MAX.	
HDW SET 10  Door Numbers: 12, 13 Restrooms 3'0" x 7'0" WD x MF							DOOR		Expires 2-28-2011 Scale
Each opening to receive:		DOOR SADDLE (		T. SOLE PLATE			ALUM THREASH	PRE-CAST SPLASH PAI	
3 ea Hinges BB1279 4.5" x 4.5" US26D 1 ea Privacy Lock 3440 x ARC US26D 1 ea Mop Plate 194S US32D	FP #104 3/4"X 5 1/2"	CARPET ON PAD		1X6 BASE BD. (PAINT)  FIN. FLR.   O'-0"			SET IN FULL SEALANT BED		Drawing Number
1 ea Wall Stop 236W US32D 3 ea Silencers 307D GREY	USE FLEX MOLDING AT ROUNDED WALLS	TILE CARPET ON PAD	CONC. SLAB	FIN. FLR. 0'-0"			COMPRESSABLE JOI	DINT / PAD	
		EPOXY MORTAR				4	CONCRETE WALK /	4 4 4	_
HARDWARE LIST	BASE BOARD (TYP.)	7 INTERIOR FLOOR TRANSITION	5) INTERIO	OR WALL SECTION	81	/	$\frac{\text{EXTERIOR DOOR SILL}}{\frac{1}{2^{\text{u}}} = 1^{\text{t}} - 0^{\text{u}}}$	1 SPLASH DETAIL	- $A-5$
NTS	5.10L DOMIND (111.)	\	$\frac{1}{1/2"} = 1' \cdot 0"$			. (	1/2" = 1'-0"	(1) SPLASH DETAIL	

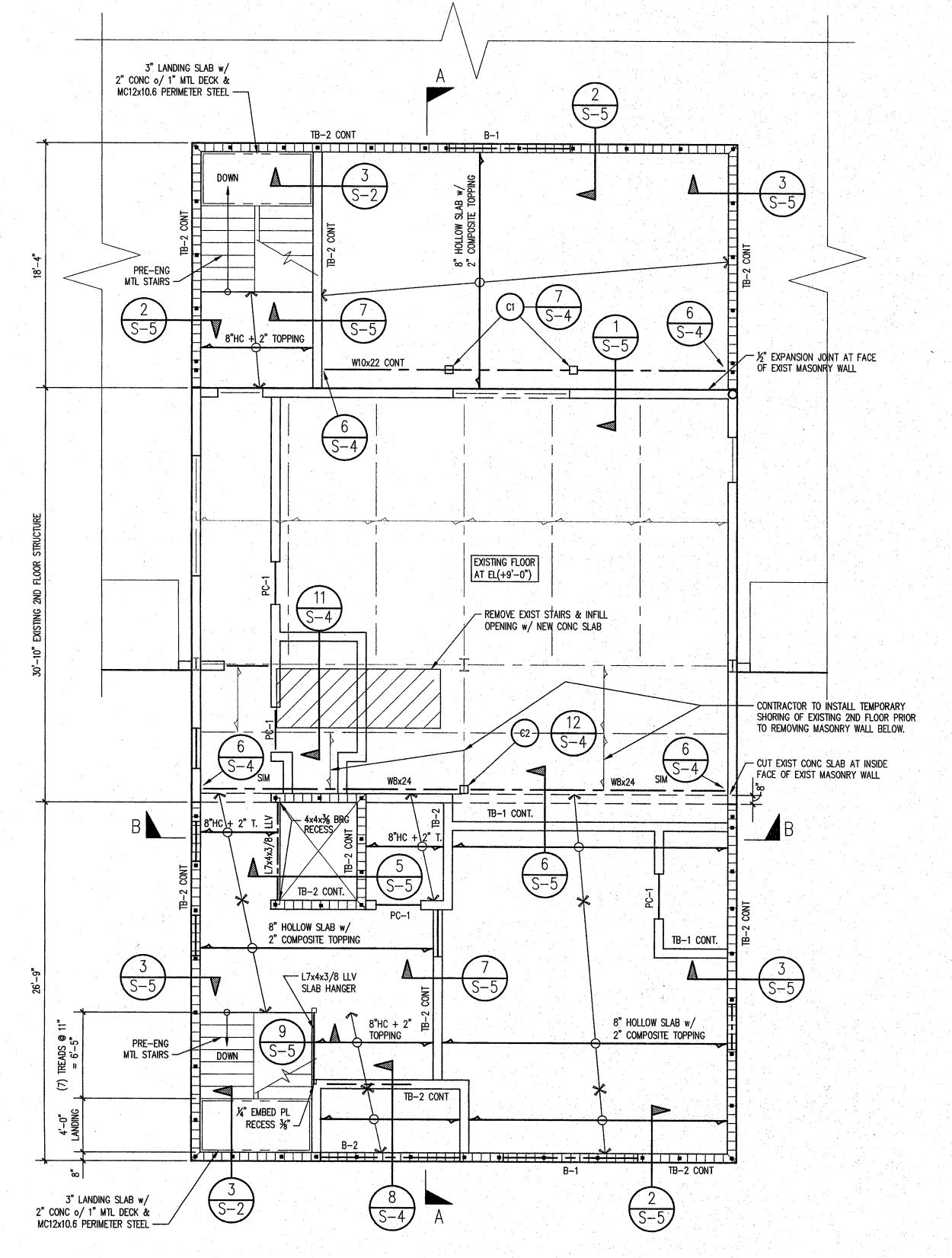




#### FOUNDATION PLAN NOTES:

- 1. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH EXISTING CONDITIONS & ARCHITECTURAL DRAWINGS BEFORE COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPENCIES FOR RESOLUTION PRIOR TO BEGINNING WORK.
- 2. ALL ELEVATIONS SHOWN ON THESE PLANS REFERENCE THE EXISTING GROUND FLOOR SLAB AT EL(+0'-0").
- 3. REFER TO STRUCTURAL NOTES ON SHEET S-6 FOR ADDITIONAL INFORMATION.
- 4. DIMENSIONS ARE TO FACE OF BLOCK OR TO COLUMN CENTERLINES. ALL COLUMNS AND WALLS SHALL BE CENTERED ON FOOTINGS UNLESS NOTED OTHERWISE...
- 5. PLAN MARKS SHOWN THUS  $F \times$  INDICATE FOOTINGS AS DESCRIBED IN FOOTING SCHEDULE ON SHEET S-2.
- 6. PLAN MARKS SHOWN THUS (Cx) INDICATE STEEL COLUMNS AS DESCRIBED IN COLUMN SCHEDULE ON SHEET S-2.
- 7. SAW CUT CONTROL JOINTS IN CONCRETE SLAB-ON-GRADE @ 15'oc EA. WAY.
- 8. INDICATES 8" CMU WALLS W/ #5 VERTICAL REINFORCING @ 4'-0"oc AND ALL CORNERS, INTERSECTIONS AND AS INDICATED BY FILLED-CELL SYMBOL ...
- O. INDICATES EXISTING 8" CMU WALL.
- 10. INDICATES 8" CMU INFILL WALLS w/ #5 VERTICAL REINFORCING @ 12'-0"oc AND AL CORNERS, INTERSECTIONS AND AS INDICATED BY FILLED-CELL SYMBOL ■.
- 11. INDICATES 8" FORMED & POURED CONCRETE WALL w/ TWO LAYERS OF #5 BARS

  © 12"oc EA WAY PLACED w/ 3/4" CLEAR COVER AT INSIDE FACE & 1 1/2" CLEAR
  COVER AT OUTSIDE FACE.





# 2ND FLOOR FRAMING PLAN

SCALE: 3/16" = 1'-0"

## 2ND FLOOR FRAMING PLAN NOTES:

- 1. TOP OF ALL CMU WALLS AT FIRST FLOOR ARE AT EL(+8'-2") UNLESS NOTED OTHERWISE. SEE BEAM
- SCHEDULE ON SHEET S-2 FOR TIE-BEAM SIZES & REINFORCING STEEL.
- 2. FINISHED FLOOR ELEVATION AT SECOND FLOOR TO MATCH EXISTING FLOOR @ EL(+9'-0"). CONTRACTOR TO FIELD VERIFY.
- 3. PLAN MARKS INDICATED THUS (Cx) INDICATES STEEL COLUMN BELOW. SEE COLUMN SCHEDULE ON SHEET S-2.
- 4. INDICATES 8" CMU WALL ABOVE w/ #5 VERTICAL REINFORCING @ 4'-0"oc AND ALL CORNERS, INTERSECTIONS AND AS INDICATED BY FILLED-CELL SYMBOL ...
- 5. INDICATES 8" CMU WALL BELOW. SEE FOUNDATION PLAN FOR REINFORCING REQUIREMENTS.
- 6. CONTRACTOR SHALL PROVIDE ENGINEERING DESIGN FOR TEMPORARY SHORING. SUBMIT SIGNED & SEALED SHIORING PLANS TO OWNER FOR REVIEW & APPROVAL PRIOR TO ANY DEMOLITION.
- 7. PRE-CAST HOLLOW CORE FLOOR SLABS SHALL HAVE 2 HOUR FIRE RATING.
- 8. SEE SHEET S-6 FOR STRUCTURAL NOTES & ADDITIONAL INFORMATION.

STRUCTURAL RENOVATION
FOR ANATEE COUNTY FLEET SERV

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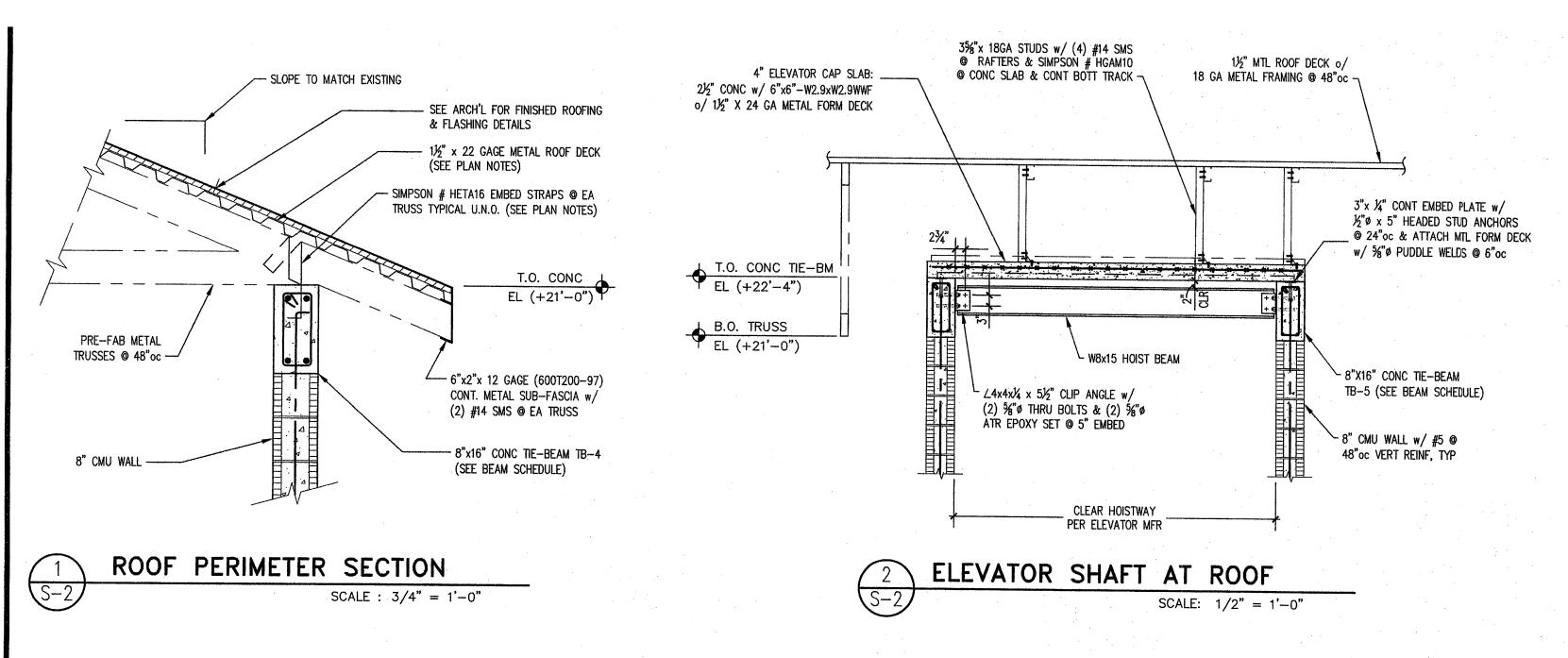
DATE <u>3/20/09</u>

JOB NO. <u>00-40941</u>

SCALE <u>AS SHOWN</u>

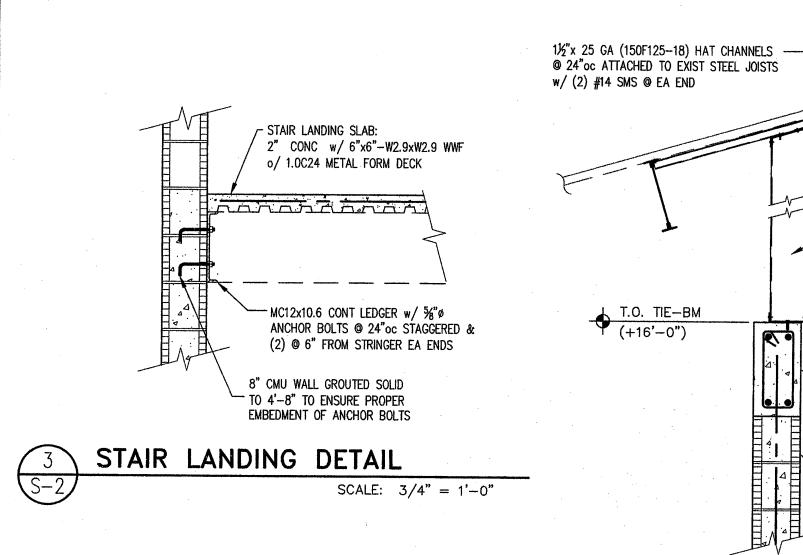
SHEET

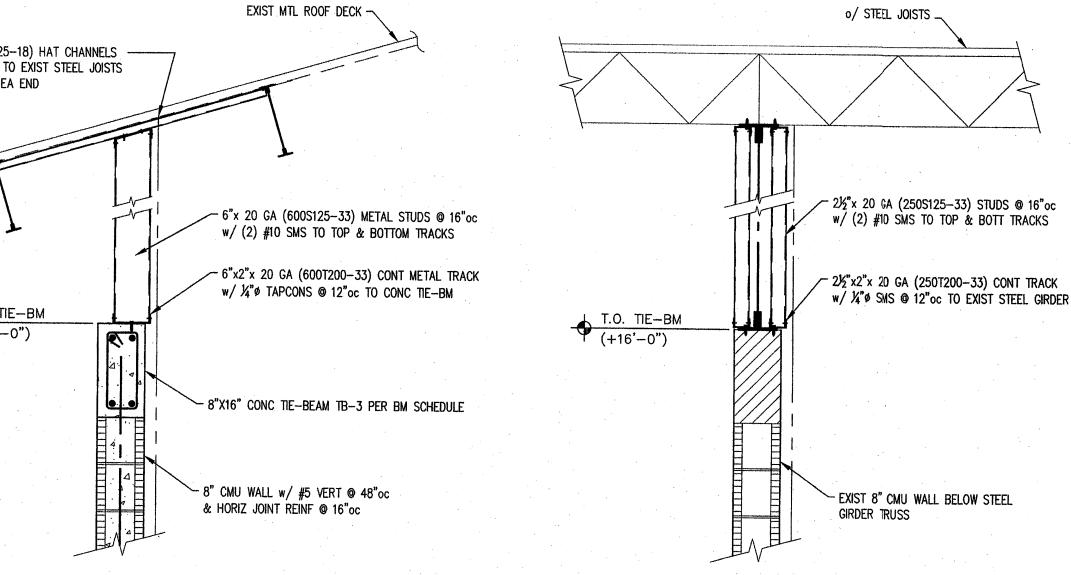
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LT-GA METAL CLOSURE WALL

SCALE: 3/4" = 1'-0"





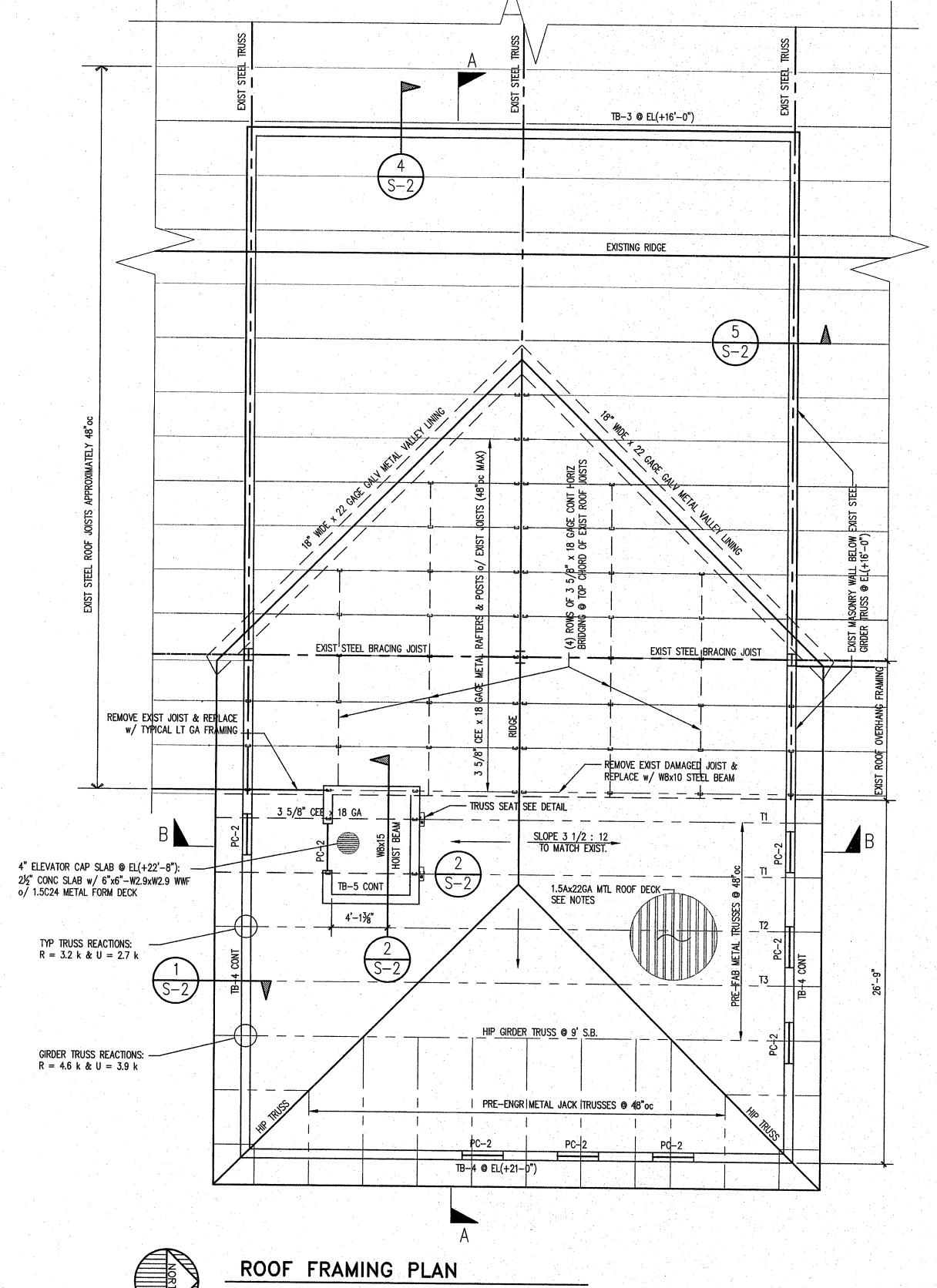
		FOOTING S	CHEDUI	Æ
MARK	SIZE (WxD)	REINFORCING	ELEVATION	REMARKS
F1	24"x12" CONT	(3) #5 CONT. BOTT.	(-1'-4")	8" CMU STEMWALL GROUTED SOLID BELOW FLOOR SLAB EL
F2	36"x12" CONT	(3) #5 CONT. BOTT.	(-1'-4")	8" CMU STEMWALL GROUTED SOLID BELOW FLOOR SLAB EL
F3	18"x20" CONT	(2) #7 CONT. TOP & BOTT w/ #3 TIES @ 8"oc	(+0'-0")	1/2" ISOLATION JOINT EA SIDE @ EXIST SLAB
F4	24"x12" CONT	(3) #5 CONT. BOTT.	(+0'-0")	1/2" ISOLATION JOINT EA SIDE @ EXIST SLAB
(F5)	16"x12" CONT	(2) #5 CONT. BOTT.	(+0'-0")	MONOLITHIC w/ FLOOR SLAB
F6	36"x12" CONT	(3) #5 CONT. BOTT.	(+0'-0")	MONOLITHIC w/ FLOOR SLAB
<b>(</b> F7 <b>)</b>	48" SQ. x12"	(4) #5 EA WAY BOTT.	(+0'-0")	1/2" I.J. @ EXISTING SLAB OR MONOLITHIC w/ NEW FLOOR SLAB
(F8)	8'-0"x10'-0"x12"	#5 @ 12"oc EA WAY TOP & BOTT.	(-4'-0")	PROVIDE 3"x1 1/2" KEYWAY w/ WATERSTOP @ 8" CONCRETE PIT WALL

		COLUMN	SCHEDUL	E
MARK	SIZE	BASE PLATE	CAP PLATE	REMARKS
<u>(1)</u>	HSS 4x4x1/4	10"x10"x1" PLATE w/ (4) 3/4"ø ANCHOR BOLTS	5"x9"x3/8" STEEL PLATE w/ (4) 5/8"ø THRU BOLTS	STRUCTURAL STEEL TUBING
<b>©</b> 2	HSS 4x4x1/4	10"x10"x1" PLATE w/ (4) 3/4"ø ANCHOR BOLTS	5"x5"x1/4" STEEL PLATE w/ FIELD WELDS TO EXIST BEAM	STRUCTURAL STEEL TUBING
NOTES:	1. BASE PLATES LOC	ATED 1" ABOVE TOP OF FOOTIN	IG TO ALLOW FOR NON-SHRINK GR	ROUT.

MARK	ELEVATION	SIZE (WxH)	REINFORCING	STIRRUPS	REMARKS
B-1	(+8'-2")	8"×16"	(2) #5 CONT. TOP & BOTT	#3 @ 6"OC	FORM & POUR CONC.
B-2	(+9'-0")	8"×10"	(2) #5 CONT. TOP & BOTT EXTEND TOP BARS 36" EA END	#3 @ 6"OC	FORM & POUR CONC.
TB-1	(+8'-2")	8"x8"	(1) #5 CONT.		FORM & POUR CONC @ ALL NON-LOAD BEARING INFILL WALLS
TB-2	(+8'-2")	8"×18"	(2) #5 CONT. TOP & BOTT	#3 @ 12°0C	FORM & POUR CONC.
TB-3	(+16'-0")	8"x16"	(2) #5 CONT. TOP & BOTT	#3 @ 12"OC	FORM & POUR CONC.
TB-4	(+21'-0")	8"x16"	(2) #5 CONT. TOP & BOTT	#3 @ 12"OC	FORM & POUR CONC.
TB-5	(+22'-4")	8"x16"	(2) #5 CONT. TOP & BOTT	#3 @ 12"0C	FORM & POUR CONC.
PC-1	(+7'-4")	8"x8"	(1) #5 BOTTOM		PRE-CAST LINTEL w/ 1 1/2" RECEST  © DOOR OPENINGS
PC-2	(+16'-4")	8"x8"	(1) #5 BOTTOM		PRE-CAST LINTEL GROUTED SOLID

CLOSURE WALL @ EXIST GIRDER

SCALE: 3/4" = 1'-0"





SCALE: 3/16" = 1'-0"

ROOF FRAMING PLAN NOTES:

- 1. SEE ARCHITECTURAL DRAWINGS FOR DIMESIONS AND ADDITIONAL INFORMATION.
- 2. ALL ELEVATIONS SHOWN THESE PLANS REFERENCE THE GROUND FLOOR SLAB AT EL(+0'-0").
- 3. SEE SHEET S-6 FOR STRUCTURAL NOTES & ADDITIONAL INFORMATION.
- 4. ROOF DECK SHALL BE 1.5" x 22 GAGE TYPE A (NARROW RIB) GALV. STEEL w/ #12 SCREWS @ EA SUPPORT IN 36/7 FASTENER & (2) #10 SCREWS @ EA SIDELAP.
- 5. ROOF TRUSSES SHALL BE PRE-MANUFACTURED OF LIGHT GAUGE METAL w/ 6"x18 GAGE MIN. TOP CHORDS. TRUSS DESIGN IS HEREBY DELEGATED TO A PROFESSIONAL ENGINEER TO COMPLY WITH THIS FRAMING PLAN AND THE DESIGN LOADS SPECIFIED IN STRUCTURAL NOTES ON S-6.
- 6. PLANS INDICATE TRUSS REACTIONS AS FOLLOWS: R=XXk @ GRAVITY LOADS GREATER THAN 5.0 KIPS. U=XXk @ WIND UPLIFTS GREATER THAN 1.0 KIPS.
- 7. PROVIDE TRUSS HOLDOWNS AS FOLLOWS: JACK TRUSSES & HIP JACKS - (1) SIMPSON #HETA16 EMBED STRAP w/ (9) #10 TEKS SCREWS TYPICAL TRUSSES T1, T2 & t3 - (2) SIMPSON #HETA16 EMBED STRAPS w/ (10) #10 TEKS SCREWS HIP GIRDER TRUSS - SIMPSON #HGT-2 SADDLE w/ (2) 3/4" EPOXY SET ATR @ 8" MIN EMBED
- 8. TOP OF CMU WALLS AT SECOND FLOOR ARE AT EL(+21'-0") UNLESS NOTED OTHERWISE. SEE BEAM SCHEDULE ON SHEET S-2 FOR TIE-BEAM SIZES & REINFORCING.
  - INDICATES 8" CMU WALL BELOW.

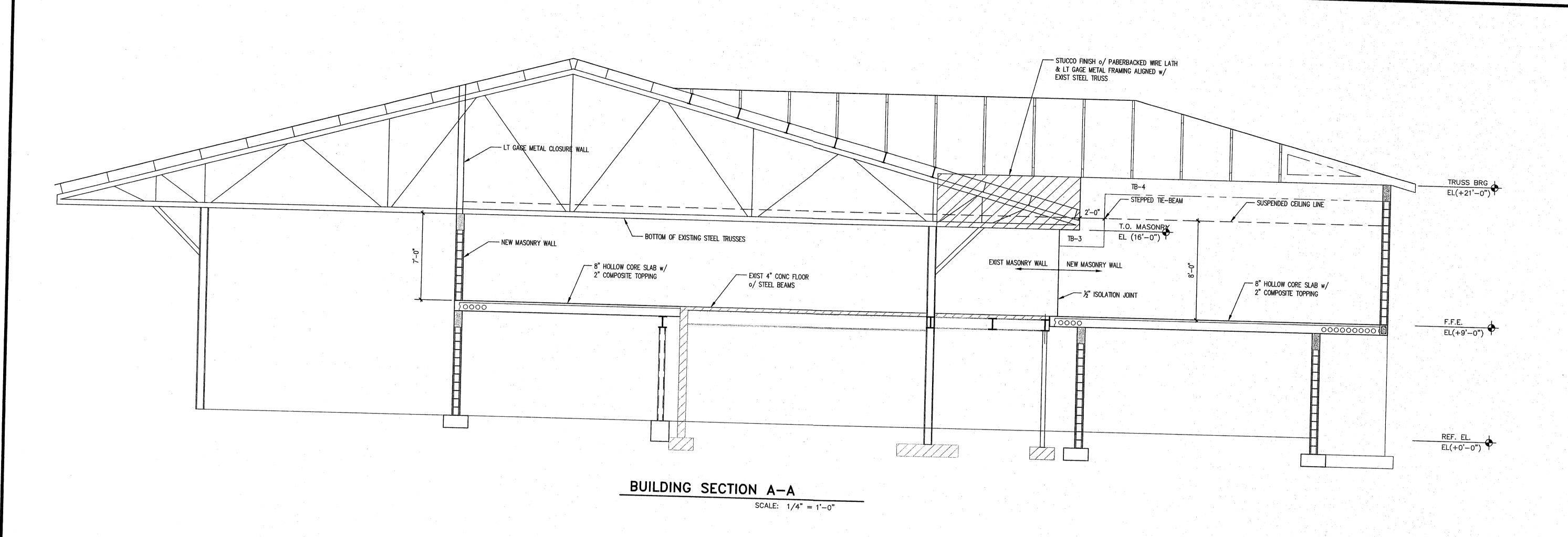
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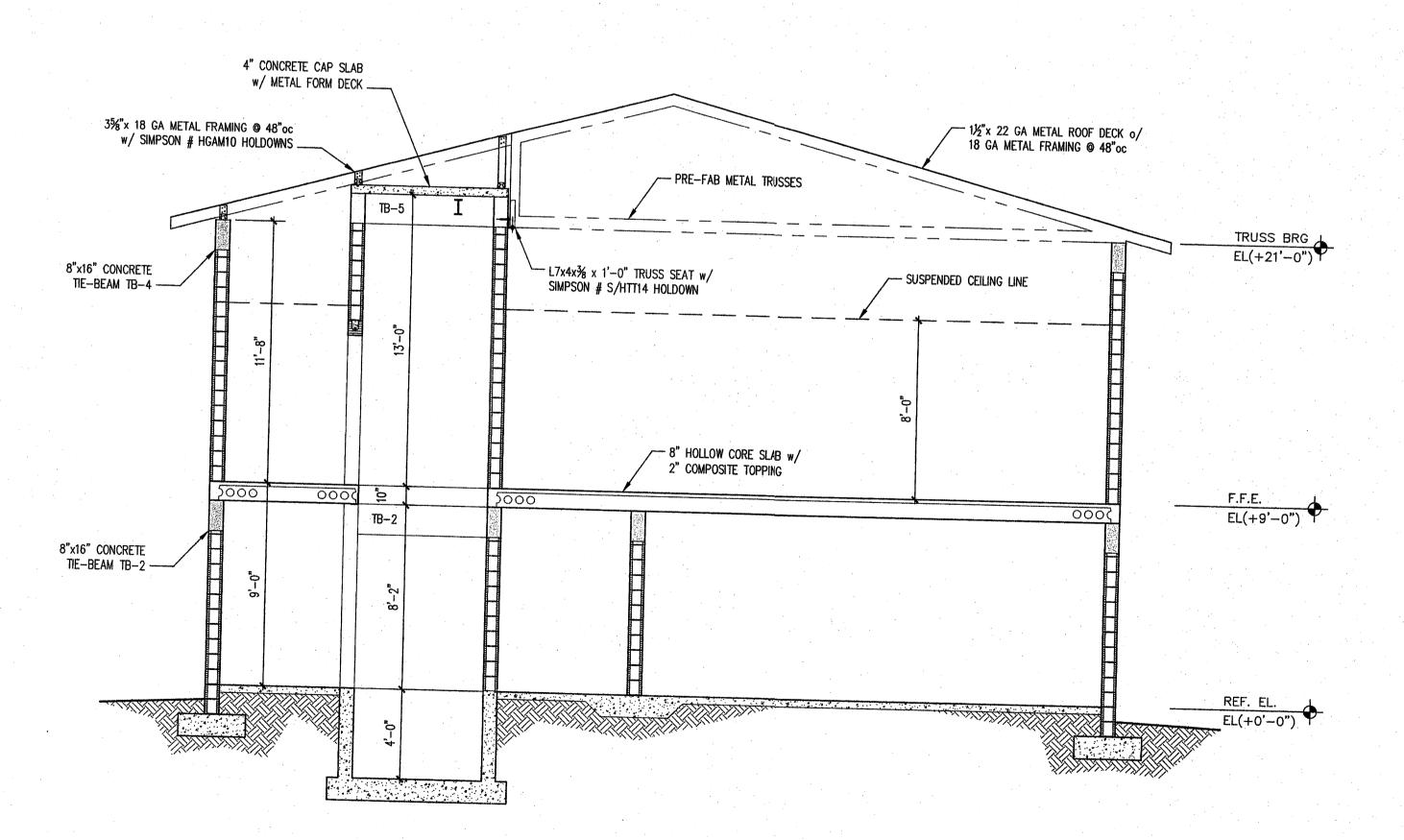
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DESIGNED\_\_\_\_BAT DATE 3/20/09 JOB NO. 00-40941 SCALE <u>AS SHOWN</u> SHEET





BUILDING SECTION B-B

SCALE: 1/4" = 1'-0"

PROFESSIONAL ENGINEER #4602.
SIGNATURE
4/21/2009

ENGINEERS | PLANNERS | SURVEYORS
BOOZTARS | PLANNERS | SURVEYORS

LANDSCAPE A

LANDSCAPE A

LG

LG

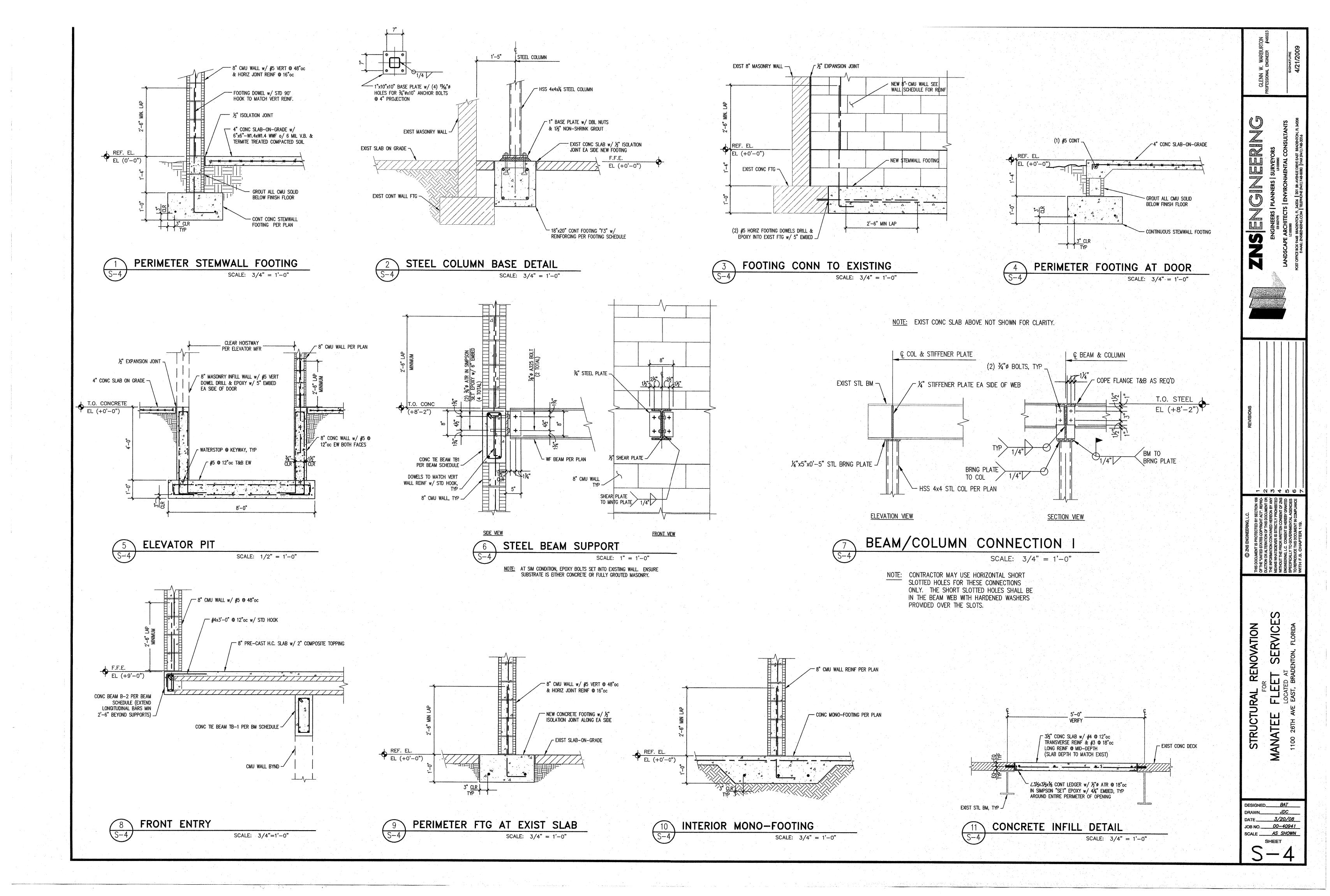
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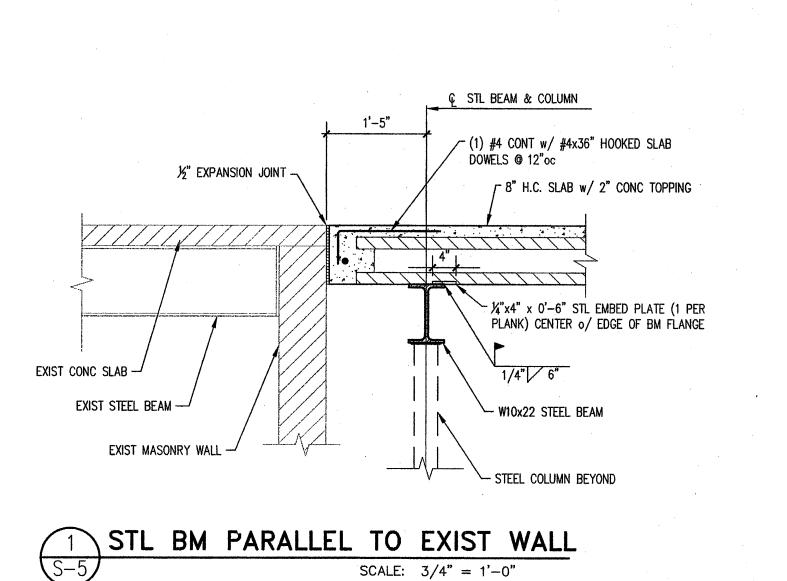
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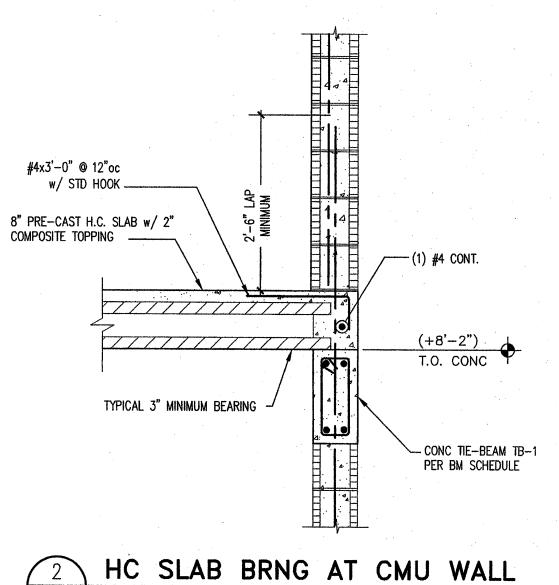
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STRUCTURAL RENOVATION
FOR FOR MANATEE COUNTY FLEET SERVICES
LOCATED AT LOCATED AT 1100 26TH AVE EAST, BRADENTON, FLORIDA

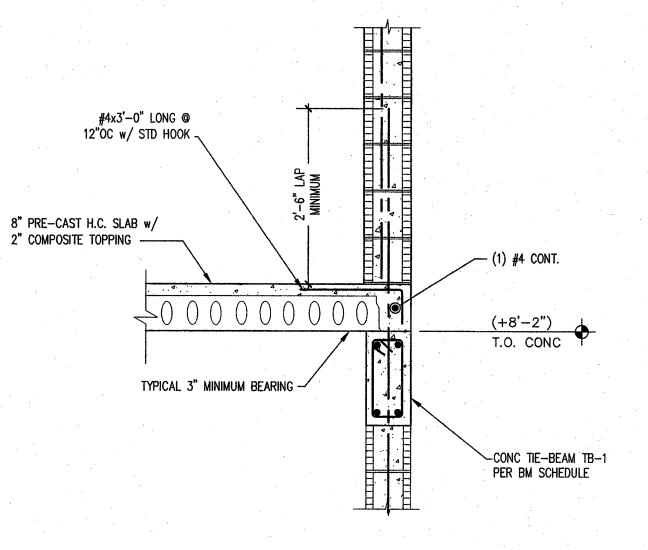
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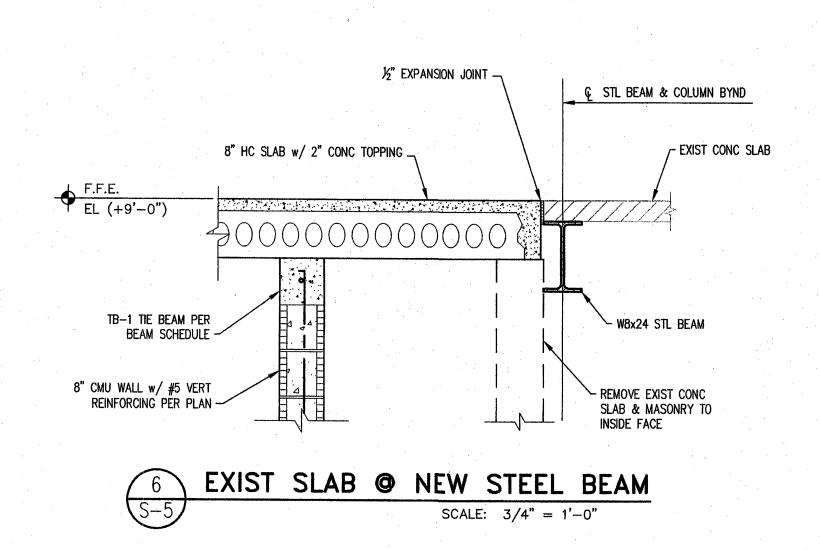


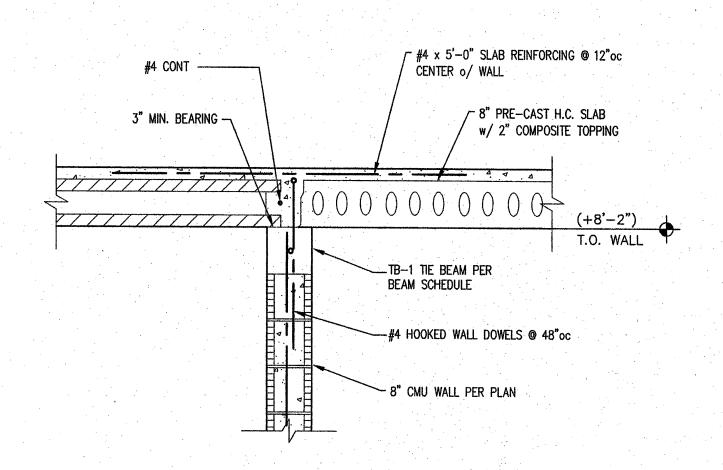


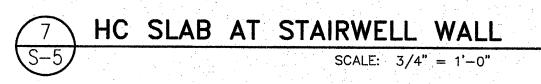
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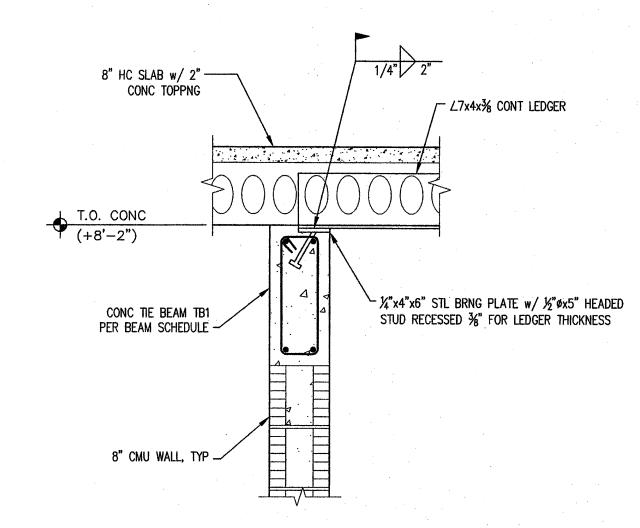


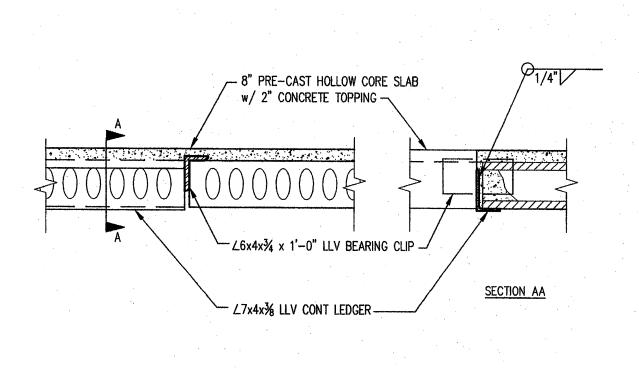


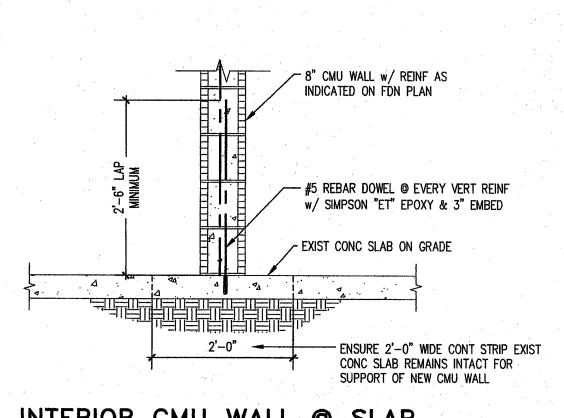


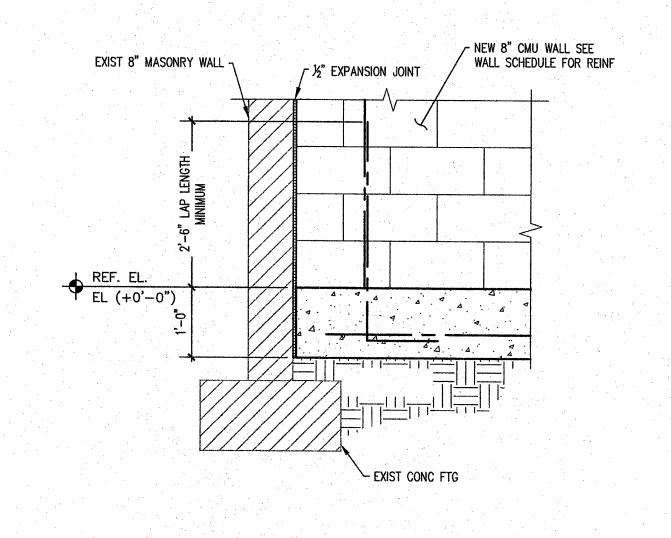




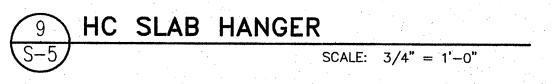


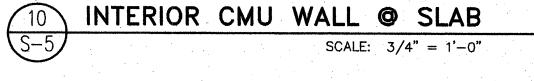


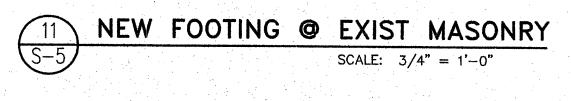












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DRAWN <u>JDC</u>
DATE <u>3/20/09</u>
JOB NO. <u>00-40941</u>
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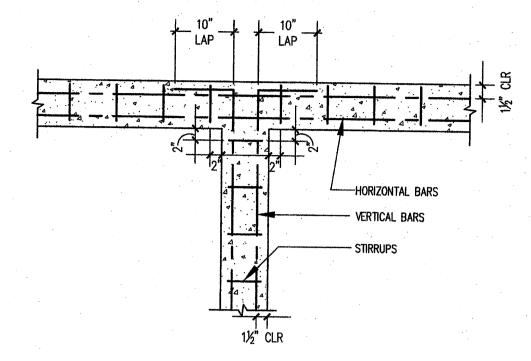
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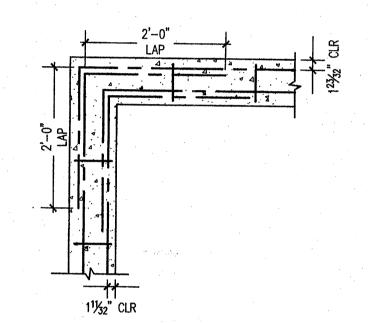
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# TYP. BEAM COL. INTERSECTION DETAIL



BEAM CORNER REINF. DETAIL

NTS

СОМ	PONENTS	S & CLA	DDING	DESIGN	PRESSU	RES			
	R00F WALLS								
Element Tributary Area (sq ft)	Zone 1	Zone 2/3	Overhang Zone 2	Overhang Zone 3	Zone 4	Zone 5			
10	+27.0/-37.3	+27.0/-68.2	-56.6	-95.0	+39.9/-42.5	+39.9/-50.2			
20	+25.5/-36.6	+25.5/63.1	-56.6	-86.0	+38.6/-41.2	+38.6/-47.6			
50	+23.4/-35.5	+23.4/-55.6	-56.6	-73.4	+36.8/-39.4	+36.8/-43.8			
100	+21.9/-34.8	+21.9/-50.2	-56.6	-64.4	+35.3/-37.8	+35.3/-41.2			

Zone 1: Represents the roof areas not designated as zone 2/3.

Zone 2: Represents the roof areas within 8 feet of the building exterior walls, not including the overhangs.

Zone 3: Represents the roof areas within 8 feet of 2 building exterior walls (i.e. building corners), not including the overhangs.

Zone 4: Represents the wall areas not designated as zone 5. Zone 5: Represents the wall areas within 8 feet of the building corners.

# STRUCTURAL NOTES

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.

ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.

THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO INSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIE-DOWNS.

DESIGN LOADS:

THE BUILDING STRUCTURE COMPLIES WITH THE 2007 FLORIDA BUILDING CODE & 2009 SUPPLEMENTS UTILIZING DESIGN LOADS AS FOLLOWS: ROOF:

LIVE LOAD - 20 psf TOP CHORD & 10 psf BOTTOM CHORD (NON-CONCURRENT) DEAD LOAD - 15 psf (3 psf AVAILABLE TO RESIST UPLIFT).

LIVE LOAD - 125 psf (LIGHT STORAGE)

DEAD LOAD - 105 psf (85 psf FOR HC SLABS & 20 psf FOR PARTITIONS) WIND: (PER ASCE 7-02 BASIC WIND SPEED = 130 MPH (3 SECOND GUST)

BUILDING CATEGORY II / IMPORTANCE FACTOR = 1.0 EXPOSURE "B"

ENCLOSED Gcpi = +0.18 / -0.18

SHOP DRAWING REVIEW:

SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC. IN ALL INSTANCES THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOP DRAWINGS UNLESS OTHERWISE SPECIFIED IN WRITING

ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO REVIEW BY THE ARCHITECT/ENGINEER. DRAWINGS SUBMITTED WITHOUT CONTRACTORS REVIEW WILL BE RETURNED

NEW FOUNDATIONS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 2,000 PSF ON COMPACTED FILL. BEFORE CONSTRUCTION COMMENCES, SOIL BEARING CAPACITY SHALL BE VERIFIED BY A SUBSURFACE INVESTIGATION, AS WELL AS FIELD AND LABORATORY TESTS PERFORMED BY A CERTIFIED TESTING LABORATORY, WHOSE REPORT SHALL INCLUDE ANALYSIS AND RECOMMENDATIONS FOR SITE PREPARATION IN ORDER TO BEAR THE FOUNDATION LOADS. ABOVE REPORT SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW BEFORE FOUNDATION CONSTRUCTION

FORMWORK AND SHORING:

NO STRUCTURAL CONCRETE SHALL BE STRIPPED UNTIL IT HAS REACHED AT LEAST TWO-THIRDS OF THE 28 DAY DESIGN STRENGTH. DESIGN, ERECTION AND REMOVAL OF ALL FORMWORK, SHORES AND RESHORES SHALL MEET REQUIREMENTS SET FORTH IN ACI STANDARDS 347 AND 301. DRAWINGS FOR SHORING AND RESHORING SHALL BE PREPARED BT A FLORIDA REGISTERED PROFESSIONAL ENGINEER.

SHALL BE PER AN APPROVED MIX DESIGN PROPORTIONED TO ACHIEVE A STRENGTH AT 28 DAYS AS LISTED

3000 psi FOR FOUNDATIONS AND SLABS ON GRADE. 4000 psi FOR ALL OTHER STRUCTURAL CONCRETE.

CONCRETE SHALL BE PLACED AND CURED ACCORDING TO ACI STANDARDS AND SPECIFICATIONS.

SUBMIT PROPOSED MIX DESIGN WITH RECENT FIELD TESTS AND STATISTICAL BACK-UP DATA AS PER CHAPTER 5 OF ACI 318-89 FOR REVIEW PRIOR TO USE. EACH MIX SHALL BE UNIQUELY IDENTIFIED BY MIX NUMBER OR OTHER POSITIVE IDENTIFICATION AND INCLUDE A WRITTEN DESCRIPTION INDICATING WHERE EACH PARTICULAR MIX IS TO BE PLACED WITHIN THE STRUCTURE. MIX SHALL MEET THE REQUIREMENTS OF ASTM C33 FOR COARSE AGGREGATE. CONCRETE SHALL COMPLY WITH ALL THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CALCIUM CHLORIDES SHALL NOT BE UTILIZED; OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER.

CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED. THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1-1/2) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN THAT STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE.

CONCRETE TESTING:

AN INDEPENDENT TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST IN PLACE CONCRETE:

ASTM C143 - "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE." MAXIMUM SLUMP SHALL BE 6 INCHES.

ASTM C39 - "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS." A SEPARATE TEST SHALL BE CONDUCTED FOR EACH CLASS, FOR EVERY 50 CUBIC YARDS (OR FRACTION THEREOF), PLACED PER DAY. REQUIRED CYLINDER(S) QUANTITIES AND TEST AGE AS Follows:

1 AT 7 DAYS 2 AT 28 DAYS

ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE DIRECTION OF THE ENGINEER, IF REQUIRED. IF 28 DAY STRENGTH IS ACHIEVED, THE ADDITIONAL CYLINDER(s) MAY BE DISCARDED.

MASONRY WALLS:

MASONRY UNITS SHALL MEET ASTM C-90 FOR HOLLOW LOAD BEARING TYPE MASONRY WITH UNIT STRENGTH OF 1900 psi ON THE NET AREA (f'm = 1500 psi). MORTAR SHALL BE TYPE "M" OR "S" AND MEET ASTM C-270. GROUT SHALL BE 2000 psi MINIMUM COMPRESSIVE STRENGTH AND MEET ASTM C-476.

UNLESS NOTED OTHERWISE, WALLS SHALL BE EIGHT INCH REINFORCED MASONRY WALL CONSTRUCTION WITH #5 VERTICAL REINFORCING BARS IN GROUT FILLED CELLS AT 48 INCHES O.C., CORNERS, ENDS OF WALLS, AND EACH SIDE OF ALL OPENINGS.

PROVIDE ACI STANDARD HOOKS FOR FOOTING DOWELS AND TERMINATION OF ALL VERTICAL REINFORCING. LAP SPLICES SHALL BE 48 BAR DIAMETERS. PROVIDE 9 GAGE GALVANIZED HORIZONTAL JOINT REINFORCING (DUR-O-WALL OR ENGINEER APPROVED SUBSTITUTION) AT ALTERNATE BLOCK COURSES.

HOLLOW-CORE SLABS: FLOORS SHALL BE PRESTRESSED CONCRETE HOLLOW-CORE SLABS DESIGNED IN ACCORDANCE WITH ACI 318 FOR THE FOLLOWING SUPERIMPOSED LOADS: DEAD LOAD - 25 psf LIVE LOAD - 125 psf

SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED FOR ALL WORK AND SUBMITTED FOR REVIEW. SHOP DRAWINGS SHALL BEAR THE SIGNATURE AND IMPRESSED SEAL OF A FLORIDA REGISTERED PROFESSIONAL ENGINEER.

BEAMS WITH THE PREFIX "TB" SHALL BE OF POURED AFTER THE BLOCK WALLS BELOW ARE IN PLACE. REINFORCING SHALL BE CONTINUOUS THROUGH TIE BEAMS WITH MINIMUM LAP SPLICES OF 48 BAR DIAMETERS AND BENT BARS AT CORNERS. USE METAL LATH, MORTAR, OR SPECIAL UNITS TO CONFINE CONCRETE TO AREA REQUIRED, IN ACCORDANCE WITH ACI 530.1, SECTION 4.3.3.3 (SOLID METAL OR FELT CAVITY CAPS ARE

SIMPSON STRONG-TIE "ET-22", OR ENGINEER APPROVED SUBSTITUTION, INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

PENETRATIONS:

DRAWINGS WITHOUT PREVIOUS APPROVAL OF THE ENGINEER.

SHALL CONFORM TO ASTM A992 AND THE "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF

STRUCTURAL TUBING SHALL CONFORM TO ASTM A-500, GRADE B, Fy = 46 ksi. STRUCTURAL PIPE SHALL

ALL BOLTED CONNECTIONS SHALL CONSIST OF MINIMUM 3/4 INCH DIAMETER ASTM A-325 HIGH STRENGTH BOLTS. BEAM CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR FOR THE REACTIONS SHOWN ON THE PLANS. IF NOT SHOWN, THE FABRICATOR SHALL DESIGN THE BEAM CONNECTIONS TO SUPPORT AN END REACTION OF W/2 KIPS FROM THE TABLES IN PART 2 "ALLOWABLE UNIFORM LOADS IN KIPS FOR BEAMS LATERALLY SUPPORTED" OF THE MANUAL OF STEEL CONSTRUCTION (9TH EDITION), BUT CONNECTIONS SHALL NOT HAVE LESS THAN 2 ROWS OF BOLTS. ANCHOR BOLTS SHALL CONFORM TO ASTM A-307 OR A-36 (THREADED ROD).

MACHINE AND LAG BOLTS:

SHALL BE A-307 HOT DIPPED GALVANIZED WITH GALVANIZED WASHERS.

STEEL STUDS, LINTELS, AND RUNNER TRACK MEMBERS SHALL BE OF TYPE SHOWN ON THE DRAWINGS AND SPECIFICATIONS CONFORMING TO ASTM A-446 GRADE C (MINIMUM YIELD POINT 40,000 psi) WITH HOT DIPPED GALVANIZED COATING CONFORMING TO ASTM A525 (CLASS G90). GALVANIZED STEEL RUNNER TRACK SHALL BE FORMED WITH MATERIAL MEETING REQUIREMENTS OF ASTM A-446 GRADE A (MINIMUM YIELD POINT 33,000

ASSEMBLY: ALL FRAMING MEMBERS SHALL BE CUT SQUARELY OR AT AN ANGLE AS REQUIRED TO FIT JOINED, JOINING OF STRUCTURAL MEMBERS SHALL BE MADE WITH SELF DRILLING SCREWS OR WELDING. WIRE TYING OF FRAMING MEMBERS IN STRUCTURAL APPLICATIONS SHALL NOT BE

INSTALLATION: STUDS SHALL SIT SQUARELY IN THE TOP AND BOTTOM RUNNER TRACK WITH FIRM ABUTMENT AGAINST TRACK WEBS. STUDS SHALL BE ALIGNED OR PLUMBED AND SECURELY FASTENED

SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL SHOW AND SPECIFY ALL CONNECTOR TYPES UTILIZED WITHIN TRUSSES, AS WELL AS CONNECTORS UTILIZED IN ALL OTHER CONNECTIONS AND ATTACHMENTS BETWEEN TRUSSES OR COMPONENTS SUPPLIED AS PART OF THE ENGINEERED TRUSS SYSTEM. AN ERECTION DRAWING SHALL BE INCLUDED, IDENTIFYING ALL TRUSS SYSTEM COMPONENTS, AS WELL AS ALL PERMANENT BRACING REQUIRED FOR TRUSS DESIGN. ENGINEERED SHOP DRAWINGS SHALL BEAR THE SIGNATURE AND IMPRESSED SEAL OF A FLORIDA REGISTERED PROFESSIONAL ENGINEER AS THE SPECIALTY

MASONRY OPENINGS LESS THAN 6 FEET SHALL BE SPANNED WITH 8"x8" PRECAST CONCRETE LINTELS WITH (1) #5 REINFORCING BAR. ALL PRECAST LINTELS SHALL BEAR A MINIMUM OF 8" AT EACH END. REINFORCING STEEL:

SHALL BE ASTM A615 GRADE 60 DEFORMED BARS, FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL BENDING DIAGRAM AND PLACING DETAILS OF ACI STANDARDS AND

SPECIFICATIONS. SECURE APPROVAL OF SHOP DRAWINGS PRIOR TO COMMENCING FABRICATION. TO CONFORM TO ASTM A-185, FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE

TYPICAL PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS. MINIMUM LAP SHALL BE ONE SPACE PLUS

SHALL BE AN EQUAL TWO PART STRUCTURAL EPOXY, SUCH AS RAMSET "EPCON", RAWL "POWER-FAST",

NO PENETRATIONS SHALL BE MADE IN ANY STRUCTURAL MEMBERS OTHER THAN THOSE LOCATED ON THESE

STRUCTURAL STEEL:

STRUCTURAL STEEL FOR BUILDINGS" BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC. ALL SHOP CONNECTIONS TO BE WELDED (UTILIZING E70XX ELECTRODES) AND FIELD CONNECTIONS TO BE BOLTED, UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS. STEEL TO RECEIVE ONE SHOP COAT AND ONE FIELD TOUCH UP COAT OF APPROVED PAINT, EXCEPT WHERE GALVANIZING IS INDICATED ON THE DRAWINGS.

CONFORM TO ASTM A-53 GRADE B, TYPE E OR S, Fy = 35 ksi.

LIGHT GAUGE METAL FRAMING:

psi) WITH HOT DIPPED GALVANIZED COATING CONFORMING ASTM A-525 (CLASS G-90).

SQUARELY AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD FIRMLY IN PLACE UNTIL PROPERLY PERMITTED. ATTACHMENT OF COLLATERAL MATERIALS TO STEEL MEMBERS SHALL BE MADE WITH SELF DRILLING SCREWS OR HARDENED SCREW SHANK NAILS. METAL LATH MAY ALSO BE CONNECTED TO STEEL BY STAPLES OR OTHER FASTENERS, IF APPROVED BY LOCAL BUILDING CODE.

TO THE FLANGES OF BOTH TOP AND BOTTOM RUNNER TRACK.

PRE-ENGINEERED TRUSSES:

ENGINEERED TRUSS SYSTEMS SHALL BE DESIGNED BY SUPPLIER'S SPECIALTY ENGINEER TO THE CONFIGURATION AND LOAD-CARRYING CAPACITY SHOWN ON DRAWINGS AND SPECIFICATIONS. ALTERNATE TRUSS LAYOUTS ARE ACCEPTABLE ONLY AS A CHANGE ORDER WHICH WILL INCLUDE ENGINEERING CHARGES FOR REDESIGN OF THE STRUCTURE BY THE ENGINEER OF RECORD.

ENGINEER.

RENOVATION SERVICE STRUCTURAL

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#### ELECTRICAL SPECIFICATIONS

- . THE WORK, APPARATUS AND MATERIALS WHICH SHALL BE FURNISHED UNDER THESE SPECIFICATIONS AND ACCOMPANYING DRAWINGS SHALL INCLUDE ALL ITEMS SPECIFIED HEREINAFTER AND SHOWN ON THE DRAWINGS. ALL OTHER MATERIALS NECESSARY FOR THE COMPLETE INSTALLATION SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR TO PROVIDE COMPLETE ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
- THE CONTRACTOR SHALL EXTEND THE SERVICE FROM THE POINT OF SERVICE ATTACHMENT FURNISHING ALL PROTECTIVE DEVICES, CONDUCTORS, SUPPORTS, RACEWAYS, ETC. TO PROVIDE COMPLETE INTERIOR ELECTRICAL SYSTEMS TO SERVE MOTOR LOADS, LIGHTING LOADS AND MISCELLANEOUS ELECTRICAL LOADS, AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREINAFTER. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND WIRING AT THE COMPLETION OF THE WORK AND MAKING ANY MINOR CONNECTION CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT. ALL WORKMANSHIP SHALL BE OF THE HIGHEST QUAU1Y AND NO SUBSTANDARD WORK WILL BE ACCEPTED.
- . VERIFY CONDITIONS AT THE FIELD PRIOR TO PRICING THE JOB. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL DETAILS OF THE WORK AND EXISTING CONDITIONS.
- ), CONTRACTOR SHALL REFER TO INTERIOR ARCHITECTURAL DRAWINGS FOR EXACT MOUNTING HEIGHTS AND/OR LOCATIONS OF ALL LIGHTING FIXTURE SWITCHES, OUTLETS AND WIRING DEVICES AND SHALL PERFORM ALL WORK NOTED ON PLANS, IN NOTES OR IN DETAILS RELATED TO ELECTRICAL

4. THE WORK UNDER THE REQUIREMENTS OF THESE SPECIFICATIONS SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE. THE INSTALLATION SHALL ALSO COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS OF LOCAL AND STATE LAWS AND ORDINANCES.

A. THE PLANS ARE GENERALLY DIAGRAMMATIC AND THE CONTRACTOR SHALL COORDINATE THE WORK WITH THE DIFFERENT TRADES SO THAT INTERFERENCES BETWEEN CONDUITS. PIPING, EQUIPMENT, ARCHITECTURAL AND STRUCTURAL WORK WILL BE AVOIDED. ALL NECESSARY OFFSETS IN RACEWAYS, FITTINGS, ETC. REQUIRED TO PROPERLY INSTALL THE WORK SHALL BE FURNISHED SO AS TO TAKE UP A MINIMUM SPACE, AND ALL MATERIALS REQUIRED TO ACCOMPLISH THIS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER. IN CASE INTERFERENCE DEVELOPS, THE OWNER'S AUTHORIZED REPRESENTATIVE WILL DECIDE WHICH EQUIPMENT. PIPING, ETC., MUST BE RELOCATED, REGARDLESS OF WHICH WAS INSTALLED FIRST.

- A. IN GENERAL, MATERIALS AND APPARATUS SHALL COMPLY WITH ALL APPLICABLE TESTS, RATINGS, SPECIFICATIONS, AND REQUIREMENTS OF THE IEEE AND NEMA AND SHALL BEAR THE APPROVED DEVICE LABEL OF THE UNDERWRITERS' LABORATORIES, INC.
- B. ANY MATERIAL OR PRODUCT SPECIFIED HEREIN OR ON THE DRAWINGS BY MANUFACTURER AND CATALOG NUMBER AFTER WHICH THE TERM "OR EQUAL" DOES NOT APPEAR SHALL BE INTERPRETED AS LIMITING SUCH ITEMS BY A PREDETERMINED SELECTION AS STATED. IN SUCH INSTANCES NO SUBSTITUTIONS WILL BE ALLOWED, ANY MANUFACTURER AND CATALOG NUMBER FOLLOWED BY THE TERM "OR EQUAL" SHALL BE INTERPRETED TO MEAN EQUAL IN QUALITY, VALUE, AND INTEGRAL PROPERTIES AND SIMILAR IN APPEARANCE, DESIGN, AND FUNCTIONS. THE CONTRACTOR MAY IN THESE INSTANCES AFTER OBTAINING WRITTEN APPROVAL OF THE OWNER, SUBSTITUTE MATERIALS OR PRODUCTS OTHER
- C. THE CONTRACTOR SHALL SUBMIT A LIST OF PRINCIPAL MATERIAL ITEMS, GIVING MANUFACTURER'S NAMES AND CATALOG NUMBERS. APPROVAL OF THE LIST SHALL BE OBTAINED FROM THE OWNER BEFORE ORDERS ARE PLACED.

A. CONTRACTOR SHALL GUARANTEE ALL WORK FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION, CONTRACTOR SHALL RECTIFY ANY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP AND PAY FOR ANY DAMAGE TO OTHER WORK RESULTING THEREFROM WITHIN SAID PERIOD. THE OWNER WILL GIVE NOTICE OF DEFECTS WITH REASONABLE PROMPTNESS.

#### IDENTIFICATION OF EQUIPMENT

- . IDENTIFICATION OF EQUIPMENT SHALL BE PROVIDED FOR ALL ELECTRICAL EQUIPMENT INSTALLED BY THE CONTRACTOR, ENGRAVED LAMINATED PLASTIC NAMEPLATES SHALL BE PROVIDED AND IDENTIFICATION SHALL CLEARLY DESCRIBE THE EQUIPMENT AND FUNCTION, COORDINATE NAMES ABBREVIATIONS AND OTHER DESIGNATIONS USED IN ELECTRICAL IDENTIFICATION WORK WITH CORRESPONDING DESIGNATIONS SHOWN, SPECIFIED OR SCHEDULED. PROVIDE NUMBERS, LETTERS AND WORDING AS INDICATED OR IF NOT OTHERWISE INDICATED, AS RECOMMENDED BY MANUFACTURER OR AS REQUIRED FOR PROPER IDENTIFICATION AND MAINTENANCE OF ELECTRICAL SYSTEMS AND EQUIPMENT.
- 3. INSTALL LABEL TAGS ON ALL WIRE AND CABLE IN JUNCTION BOXES, WIREWAYS AND WIRING GUTTERS OF PANELS. TAGS SHALL IDENTIFY WIRE OR CABLE CIRCUIT NUMBER AND/OR EQUIPMENT SERVED AS
- C. ALL JUNCTION BOXES TO BE DESIGNATED WITH PERMANENT MARKER INDICATING PANELBOARD AND CIRCUIT NUMBERS OF BRANCH CIRCUIT WIRING CONTAINED WITHIN.
- D. PANELBOARD DIRECTORIES SHALL BE UPDATED/TYPEWRITTEN WITH ACCURATE AND CURRENT INFORMATION BY THE CONTRACTOR AT THE END OF CONSTRUCTION, DIRECTORIES SHALL REFLECT EXISTING UNCHANGED AND NEW RECORD CONDITIONS AND INCLUDE CIRCUIT NUMBER, TENANT NAME, TYPE AND LOCATION OF LOAD.

#### RACEWAYS AND FITTINGS

- A. CONDUITS RUN EXPOSED ON EXTERIOR OF THE BUILDING OR BELOW GRADE SHALL BE RIGID STEEL CONDUIT. SCH 40 PVC CONDUIT IS ACCEPTABLE BELOW GRADE PROVIDED RIGID STEEL CONDUIT ELBOWS
- B. ALL CONDUIT SHALL BE PROPERLY ALIGNED. GROUPED AND SUPPORTED, EXPOSED CONDUIT SHALL BE INSTALLED AT RIGHT ANGLES TO OR PARALLEL TO THE PRINCIPAL STRUCTURAL MEMBERS. ALL CONDUIT SHALL BE SUPPORTED AT INTERVALS NOT EXCEEDING 8 FEET. PROVIDE SUPPORT A MINIMUM OF 18" FROM BENDS AND OUTLET BOXES AND ON INTERVALS NOT TO EXCEED 8'-O". CONDUIT IS NOT TO SPAN ANY SPACE UNSUPPORTED. ALL CONDUIT SHALL BE SUPPORTED FROM STRUCTURE AND NOT FROM CEILING SUPPORT SYSTEM.
- C. PROVIDE NYLON PULL CORD AND LEAVE IN PLACE IN EACH EMPTY CONDUIT.

# D. THIN WALL CONDUIT:

1. THIN WALL CONDUIT SHALL BE UNDERWRITERS' APPROVED GALVANIZED ELECTRICAL METALLIC TUBING. COUPLINGS AND CONNECTORS FOR CONDUIT SHALL BE STEEL HEX-NUT, ZINC OR CADMIUM PLATED

#### E. FLEXIBLE METALLIC CONDUIT:

- 1. FLEXIBLE METALLIC CONDUIT IN DRY LOCATIONS SHALL BE UNDERWRITERS' APPROVED, ZINC COATED, SINGLE STRIP TYPE, FITTINGS SHALL BE AS MANUFACTURED BY THOMAS AND BETTS "TITE-BITE". STRAIGHT OR ANGLE CONNECTORS OR APPROVED EQUAL.
- 2. FLEXIBLE CONDUIT IN DAMP OR WET LOCATIONS SHALL BE UNDERWRITERS' APPROVED FLEXIBLE, LIQUID-TIGHT METAL CONDUIT. FITTINGS SHALL BE AS MANUFACTURED BY APPLETON, CROUSE-HINDS OR THOMAS AND BETTS.

## . RIGID STEEL CONDUIT:

- 1, RIGID STEEL CONDUIT SHALL BE UNDERWRITERS' APPROVED HOT-DIP GALVANIZED. ZINC METALIZED. OR SHERADIZED. THE THREADED ENDS OF THE CONDUIT SHALL BE ZINC COATED AND SHALL BE THREADED TYPE, DOUBLE LOCK NUTS SHALL BE USED ON ALL CONDUIT TERMINATIONS EXCEPT
- 2, ALL CONDUIT SHALL BE MADE UP TIGHT AND NO RUNNING THREADS WILL BE PERMITTED. "ERICSON" COUPLINGS BEING USED WHERE NECESSARY. ALL CONDUIT RUNS BELOW GRADE OR UNDER FLOORS ON GRADE SHALL BE GIVEN A HEAVY COAT OF ASPHALTIC TYPE PAINT
- . ALL BOXES SHALL BE RIGIDLY MOUNTED AND SHALL BE EQUIPPED WITH SUITABLE SCREW FASTENED COVERS. OPEN KNOCK-OUTS OR HOLES IN BOXES SHALL BE PLUGGED WITH A SUITABLE BLANKING DEVICE,

B. OUTLET BOXES FOR EXPOSED WALL MOUNTING, AND OUTDOOR INSTALLATIONS SHALL BE CAST METAL TYPE "FS" OR "FD" BOXES WITH SUITABLE GALVANIZED SHEET COVERS, OR CAST METAL WEATHERPROOF OR VAPOR TIGHT COVERS WHEN NOTED ON THE DRAWINGS. WEATHERPROOF RECEPTACLE COVERS SHALL HAVE SPRING HINGE LIDS.

- A. UNLESS OTHERWISE INDICATED, ALL BRANCH CIRCUIT CONDUCTORS SHALL BE NO. 12 AWG. BRANCH CIRCUITS RUN OVER 75 FEET IN LENGTH. MEASURING ONE WAY FROM THE FIRST OUTLET OF THE CIRCUIT TO THE PANEL, SHALL BE NO. 10 AWG FOR THE ENTIRE CIRCUIT
- B. SPLICES, TAPS AND ATTACHMENT FITTINGS AND LUGS SHALL BE ELECTRICALLY AND MECHANICALLY SECURE AND SOLDERLESS FOR CONDUCTORS SIZES NO. 8 AWG AND LARGER, THERE SHALL BE PLENTY OF SLACK CABLE IN BOXES. OUTLETS AND CABINETS TO INSURE THAT THERE IS NO BINDING AT THE BUSHINGS, ALL LUGS SHALL BE OF THE CORRECT SIZES FOR THE CONDUCTORS JOINED AND IN NO CASE SHALL STRANDS BE CUT FROM A CONDUCTOR IN ORDER TO FIT THE CONDUCTOR INTO A LUG. TAPING OF JOINTS SHALL BE WITH VINYL PLASTIC ELECTRICAL TAPE TO SECURE INSULATION STRENGTH EQUAL TO THAT OF THE CONDUCTORS JOINED.
- C. ALL CONDUCTORS SHALL BE COPPER. CONDUCTOR INSULATION SHALL BE DUAL TYPE THHN/THWN 75 C. (167 F.) FOR DRY, DAMP & WET LOCATIONS. CONDUCTOR INSULATION WITH SINGLE TYPE MARKING THHN 90 C. (194 F.) MAY BE USED FOR DRY LOCATIONS ONLY. ALL CONDUCTORS SHALL BE COLOR CODED AS REQUIRED BY NEC AND FURTHER IDENTIFIED AND CODED AS SPECIFIED HEREINAFTER. COLOR CODING SHALL BE BY MEANS OF COLORED INSULATING MATERIAL, COLORED BRAID OR JACKET OVER THE INSULATION OR BY MEANS OF SUITABLE COLORED, PERMANENT, NON-AGING, INSULATING TAPE APPLIED TO CONDUCTORS AT EACH CABINET OR JUNCTION POINT, THE COLOR CODING SHALL BE ACCOMPLISHED AS THE CONDUCTORS ARE INSTALLED. THE FOLLOWING SYSTEMS OF COLOR CODING SHALL BE STRICTLY ADHERED TO:
  - 1) ISOLATED GROUND LEADS: GREEN AND YELLOW
  - 2) GROUND LEADS: GREEN 3) GROUNDED NEUTRAL LEADS: WHITE
  - 4) 120/208 VOLT, UNGROUNDED PHASE WIRES: BLACK, RED AND BLUE 5) 277/480 VOLT, UNGROUNDED PHASE WIRES: BROWN, ORANGE AND YELLOW.
- THE COLOR CODE ASSIGNED TO EACH PHASE WIRE SHALL BE CONSISTENTLY FOLLOWED THROUGHOUT.
- NOTE: WHERE EXISTING BASE BUILDING COLOR CODING DIFFERS FROM COLOR COOING ASSIGNED HERE--IN. CONTRACTOR SHALL USE EXISTING COLOR COOING AS REQUIRED TO MAINTAIN CONSISTENCY. ADVISE ENGINEER (IN WRITING) OF COLOR CODING TO BE USED.
- D. ALL WIRING IN CEILING SPACE OR IN AIR HANDLING PLENUMS NOT IN CONDUIT SHALL BE UL LISTED AS SUITABLE FOR PLENUM USE.
- E. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR AND MAKE ALL REQUIRED CONNECTIONS TO SERVE MECHANICAL EQUIPMENT FURNISHED.
- F. MODIFY EXISTING ELECTRICAL WORK ABOVE THE CEILING SPACE (CONDUIT, WIRING, EQUIPMENT, BOXES, ETC.) TO COORDINATE WITH NEW LIGHTS AND HVAC WORK.
- G. THE CONTRACTOR SHALL REMOVE ALL EXISTING WIRING AND EQUIPMENT MADE UNNECESSARY BY THE NEW INSTALLATION, ALL MATERIALS REMOVED AND NOT REUSED IN NEW TENANT RETROFIT, SHALL BE RETURNED TO BUILDING STOCK,
- H. REUSE EXISTING JUNCTION BOXES, CONDUITS AND WIRING TO FEED RECEPTACLES AND LIGHTING FIXTURES WHERE APPLICABLE, REMOVE AND DISPOSE OF ALL UNUSED CONDUIT AND WIRING BACK TO
- I. ALL CONDUITS AND WIRING PENETRATING RATED FLOORS AND WALLS SHALL BE SEALED TO MAINTAIN FIRE RATING AND INTEGRITY OF SEPARATION.
- A. THE INTERIOR ELECTRICAL SYSTEMS SHALL BE COMPLETELY AND EFFECTIVELY GROUNDED AS REQUIRED BY THE NEC AND AS SPECIFIED HEREINAFTER.
- B. ALL METALLIC RACEWAYS SHALL BE MECHANICALLY AND ELECTRICALLY SECURE AT ALL JOINTS AND AT ALL BOXES, CABINETS, FITTINGS, AND EQUIPMENT. METALLIC RACEWAYS SHALL BE CONNECTED TO A DIRECT GROUND AT THE POINT OF ELECTRICAL SERVICE ENTRANCE AND SHALL BE ELECTRICALLY CONTINUOUS THROUGHOUT THE ENTIRE SYSTEM.
- C. ALL GROUND CONDUCTORS SHALL BE INSULATED COPPER UNLESS OTHERWISE NOTED.
- D. ALL RACEWAYS WITH NO. 10 OR 12 AWG PHASE CONDUCTORS FOR RECEPTACLES LIGHTING FIXTURES AND SIMILAR CIRCUITS (NEW BRANCH CIRCUITS) SHALL BE PROVIDED WITH A PARITY SIZED GREEN EQUIPMENT GROUND CONDUCTOR, GROUND CONDUCTOR SHALL BE INSTALLED IN ENTIRE RACEWAY SYSTEM INCLUDING WALL SWITCHES AND FLEXIBLE CONDUIT TO LIGHT FIXTURES. EQUIPMENT GROUND CONDUCTOR SIZES FOR CIRCUITS WITH PHASE CONDUCTORS LARGER THAN NO. 12 AWG ARE INDICATED ON DRAWINGS, GROUND CONDUCTORS SHALL BE CONNECTED TO GROUND BUSS IN PANELBOARDS.
- E. TERMINATE FEEDER AND BRANCH CIRCUIT INSULATED EQUIPMENT GROUNDING CONDUCTORS WITH GROUNDING LUG, BUS, OR BUSHING. CONDUCTORS LOOPED UNDER SCREW OR BOLT HEADS WILL NOT BE
- F. INSTALL CLAMP-ON CONNECTORS ON CLEAN METAL CONTACT SURFACES TO ENSURE ELECTRICAL CONDUCTIVITY AND CIRCUIT INTEGRITY
- G. PROVIDE GROUNDING BUSHING AND A CONTINUOUS COPPER BONDING JUMPER FROM THE BUSHING TO THE EQUIPMENT GROUND BUS IN ALL FEEDERS. THE BONDING JUMPER SHALL BE THE SAME SIZE AS THE EQUIPMENT GROUND CONDUCTOR.

#### CIRCUIT PROTECTIVE DEVICES

#### A. GENERAL:

- 1. UNLESS OTHERWISE INDICATED, PROTECTIVE DEVICES SHALL BE MOUNTED WITH TOP OF CABINET OR ENCLOSURE 6'- 6" ABOVE FINISHED FLOOR, SHALL BE PROPERLY ALIGNED, AND SHALL BE ADEQUATELY SUPPORTED INDEPENDENTLY OF THE CONNECTING RACEWAYS, ALL STEEL SHAPES, ETC., NECESSARY FOR THE SUPPORT OF THE EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR, UNLESS OTHERWISE INDICATED, ALL BRANCH CIRCUIT PROTECTIVE DEVICES ENCLOSURES SHALL BE NEMA TYPE I, GENERAL PURPOSE TYPE. CIRCUIT PROTECTIVE DEVICES INSTALLED OUTDOORS OR EXPOSED TO THE WEATHER SHALL HAVE WEATHERPROOF ENCLOSURES, NEMA TYPE 3R OR TYPE 4.
- 2. INSTALL DISCONNECT SWITCHES FOR USE WITH MOTOR-DRIVEN APPLIANCES, AND MOTORS AND CONTROLLERS WITHIN SIGHT OF CONTROLLER POSITION UNLESS OTHERWISE INDICATED.
- 3. SUBMIT MANUFACTURER'S DATA (MINIMUM 5 COPIES) ON CIRCUIT AND MOTOR DISCONNECT SWITCHES AND/OR MOTOR STARTERS, SUBMIT SHOP DRAWINGS IN BOOKLET FORM WITH SEPARATE SHEET FOR EACH DEVICE, PROVIDE EQUIPMENT IDENTIFICATION AS DESIGNATED ON PLANS FOR EACH SHOP DRAWING

#### B. CIRCUIT BREAKERS:

1. CIRCUIT BREAKERS FOR MOUNTING IN EXISTING PANELBOARD SHALL BE MOLDED PLASTIC CASE, AIR CIRCUIT BREAKER TYPE, BREAKERS SHALL HAVE THERMAL MAGNETIC TRIP UNITS AND MULTI--POLE BREAKERS SHALL HAVE A COMMON TRIP BAR SO THAT THE TRIPPING OF ONE POLE WILL AUTOMATICALLY TRIP ALL POLES OF THE BREAKER, BREAKERS SHALL BE TRIP FREE AND TRIP INDICATING AND SHALL HAVE QUICK-MAKE, QUICK-BREAK CONTACTS.

#### C. SAFETY SWITCHES:

1. ALL SAFETY SWITCHES SHALL BE HEAVY DUTY TYPE. SWITCH MECHANISM SHALL BE QUICK-MAKE, QUICK-BREAK, COVER SHALL BE INTERLOCKED WITH MECHANISM TO PREVENT OPENING UNLESS SWITCH IS IN THE "OFF" POSITION. ALL ENCLOSURES SHALL BE PRIMED AND FINISHED TO RESIST RUSTING AND CORROSION. SWITCHES SHALL BE ITE, GENERAL ELECTRIC, SQUARE-D, OR CUTLER-HAMMER. (MATCH BUILDING STANDARD WHERE APPLICABLE)

#### D. FUSES:

1. ALL FUSES FOR SWITCHES SHALL BE DUAL ELEMENT, CARTRIDGE TYPE, FUSES SHALL BE BUSSMAN "FUSETRON" OR CHASE SHAWMUT "TRIONIC". THE CONTRACTOR SHALL FURNISH AND INSTALL PROPER SIZE FUSES WHERE REQUIRED FOR ALL FUSIBLE EQUIPMENT AND SHALL FURNISH TO THE OWNER A DUPLICATE CARTRIDGE FOR EACH FUSE INSTALLED.

#### E. MOTOR STARTERS:

- 1 COMBINATION MAGNETIC. FULL VOLTAGE STARTERS FOR 3  $\,$  MOTORS SHALL BE THREE POLE HORSEPOWER RATED. MAGNETICALLY OPERATED SWITCHES, WITH THREE THERMAL OVERLOAD UNITS AND FOUR EXTRA AUXILIARY CONTACTS, CONTROL VOLTAGE SHALL BE 1 20V, SUPPLIED FROM A CONTROL POWER TRANSFORMER. A THREE POLE HORSEPOWER RATED. NON-FUSIBLE DISCONNECT SWITCH SHALL ALSO BE INCLUDED IN THE ENCLOSURE. AN HOA SWITCH SHALL BE MOUNTED IN FRONT COVER. STARTERS SHALL BE SQUARE-D CLASS 8538.
- 2. MANUAL MOTOR STARTERS FOR 115V., 1 MOTORS (1) HORSEPOWER AND SMALLER, SHALL BE SINGLE POLE, HORSEPOWER RATED SWITCHES WITH THERMAL OVERLOAD UNITS AND HEATERS. STARTERS SHALL BE SQUARE-D CLASS 2510, WITH STAINLESS STEEL COVER PLATES.
- 3. MAGNETIC FULL VOLTAGE STARTERS FOR 3 MOTORS SHALL BE THREE POLE, HORSEPOWER RATED, MAGNETICALLY OPERATED WITH THREE THERMAL OVER LOAD UNITS AND FOUR EXTRA AUXILIARY CONTACTS, CONTROL VOLTAGE SHALL BE 120V. SUPPLIED FROM A CONTROL POWER TRANSFORMER, A HAND-OFF-AUTOMATIC, HOA SWITCH SHALL BE MOUNTED IN FRONT COVER. STARTERS SHALL BE SQUARE-D CLASS 8536.
- A. PANELBOARDS SHALL BE CONNECTED DISTRIBUTED PHASE WITH CIRCUIT NUMBERING AS INDICATED ON THE DRAWINGS, PANELBOARDS SHALL HAVE CIRCUIT DIRECTORY CARDS SHALL BE COMPLETED WITH A TYPEWRITER BY THE CONTRACTOR TO INDICATE NEW AND EXISTING AREAS AND/OR DEVICES SERVED
- B. CIRCUIT BREAKERS FOR MOUNTING IN NEW AND EXISTING PANELBOARDS OR DISTRIBUTION SECTION OF SWITCHBOARD SHALL BE MOLDED PLASTIC CASE, AIR CIRCUIT BREAKER TYPE. BREAKERS SHALL HAVE THERMAL-MAGNETIC TRIP UNITS AND MULTI-POLE BREAKERS, BREAKERS SHALL HAVE A COMMON TRIP BAR. SO THAT THE TRIPPING OF ONE POLE WILL AUTOMATICALLY TRIP ALL POLES OF THE BREAKER. BREAKERS SHALL BE TRIP FREE AND TRIP-INDICATING AND SHALL HAVE QUICK-MAKE,
- C. PANELBOARDS SHALL BE INSTALLED COMPLETE WITH CONNECTORS AND ASSOCIATED HARDWARE FOR ALL CIRCUIT BREAKERS AND SPACES LISTED IN THE PANELBOARD SCHEDULE.
- D. WHEN CONNECTING EQUIPMENT TO EXISTING PANELBOARDS, THE NEW AND EXISTING CIRCUIT BREAKERS SHALL BE IDENTIFIED. A NEW CIRCUIT DIRECTORY CARD SHALL BE PROVIDED.
- E. PANELBOARDS TO BE DEADFRONT TYPE, WITH COPPER BUS BARS, WITH BOLT-ON TYPE BRANCH CIRCUIT BREAKERS EQUAL TO SQUARE-D TYPE NOOD, NF, OR I-LINE AS APPLICABLE. ALL CIRCUIT BREAKERS SHALL BE CONCEALED BEHIND A HINGED, LOCKABLE DOOR INSTALLED ON THE FRONT
- F. ALL PANELBOARDS TO BE IDENTIFIED WITH ENGRAVED PLASTIC LAMINATE SIGNS, COORDINATE NAMES USED FOR IDENTIFICATION WITH CORRESPONDING DESIGNATIONS SHOWN, SPECIFIED OR SCHEDULED. FASTEN WITH SELF TAPPING STAINLESS STEEL SCREWS, OR CONTACT TYPE PERMANENT ADHESIVE WHERE SCREWS CAN NOT OR SHOULD NOT PENETRATE SUBSTRATE.
- G. SUBMIT MANUFACTURER'S DATA ON PANELBOARDS AND ENCLOSURES, SHOP DRAWINGS SHALL INDICATE ARRANGEMENT OF BUSSES, BRANCH CIRCUITS, ENCLOSURES, DIMENSIONS, ETC. (MINIMUM 5 COPIES) ACCEPTABLE MANUFACTURER'S: GE. SQUARE-D. SIEMENS AND CUTLER-HAMMER. (MATCH BUILDING STANDARD WHERE APPLICABLE.)
- H. INSTALL PANELBOARDS AND ENCLOSURES AS INDICATED, IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, APPLICABLE REQUIREMENTS OF NEC STANDARDS AND NECA'S "STANDARDS OF INSTALLATION", AND IN COMPLIANCE WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT PRODUCTS FULFILL REQUIREMENTS.

- A. ALL RECEPTACLES SHALL BE THE GROUNDING TYPE WITH GROUND CONNECTION MADE THROUGH AN EXTRA POLE WHICH SHALL BE PERMANENTLY CONNECTED TO GROUND CONDUCTOR.
- B. RECEPTACLES FOR 20 AMPERE, 120V SERVICE SHALL BE THREE-WIRE, TWO POLE RECEPTACLES RATED 20 AMPERES AT 120 VOLTS, ALL NEW RECEPTACLES SHALL BE THAT OF HUBBELL OR PRE-APPROVED EQUAL.
- C. WHERE EXISTING RECEPTACLES ARE SHOWN TO BE REMOVED FROM PARTITIONS BEING REMOVED, CONTRACTOR SHALL MAINTAIN SERVICE TO REMAINING OUTLETS.
- D. WALLPLATES: PROVIDE WALLPLATES FOR SINGLE AND COMBINATION WIRING DEVICES, OF TYPES, SIZES, AND WITH GANGING AND CUTOUTS AS INDICATED. SELECT PLATES WHICH MATE AND MATCH WIRING DEVICES TO WHICH ATTACHED. CONSTRUCT WITH METAL SCREWS FOR SECURING PLATES TO DEVICES; SCREW HEADS COLORED TO MATCH FINISH OF PLATES, WALLPLATES COLORED TO MATCH WIRING DEVICES.
- E. ELECTRICAL CONTRACTOR SHALL CONFIRM RECEPTACLE CONFIGURATION, VOLTAGE, PHASE AND AMPERAGE FOR ALL EQUIPMENT FURNISHED AND INSTALLED FOR THIS WORK. ADVISE ENGINEER IF

#### LIGHTING FIXTURES:

- A. THE CONTRACTOR SHALL FURNISH AND INSTALL COMPLETE IN ALL RESPECTS ALL NEW AND RELOCATED LIGHTING FIXTURES SHOWN ON THE PLANS.
- B. LIGHT FIXTURES SHALL BE SELECTED BY THE OWNER

GENERAL NOTES:

- C. BALLASTS FOR FLUORESCENT LAMPS SHALL BE HIGH FREQUENCY ELECTRONIC FOR USE WITH OTIC TYPE (265MA) LAMPS. THE TOTAL HARMONIC DISTORTION ( %THD) SHALL BE LESS THAN 20 %. THE POWER FACTOR SHALL BE .95 OR HIGHER.
- ELECTRONIC BALLASTS FOR FLUORESCENT LAMPS SHALL BE OSRAM SYLVANIA. QUICKTRONIC. ALL BALLASTS SHALL BE INDIVIDUALLY FUSED ON THE LINE SIDE OF THE BALLAST. ALL BALLASTS SHALL BE ENERGY SAVING, HIGH POWER FACTOR TYPE AND SHALL BEAR ETL/CBM AND UL LABELS.
- D. T-8 AND T-5 FLUORESCENT LAMPS SHALL BE 3500K RAPID START, COMPACT FLUORESCENT LAMPS SHALL BE 3500K. INCANDESCENT LAMPS SHALL BE 120V. GENERAL PURPOSE TYPE. UNLESS OTHERWISE NOTED ALL LAMPS SHALL BE TCLP COMPLIANT AND MANUFACTURED BY OSRAM SYLVANIA. U-SHAPED LAMPS SHALL HAVE 6" SPACING BETWEEN ENDS.
- E. ALL FIXTURES SHALL BE PROPERLY AND CAREFULLY SUPPORTED AND ALIGNED, AND THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY STEEL SHAPES, ETC., FOR SUPPORT OF FIXTURES AS REQUIRED AND DETAILED ON THE DRAWINGS. LIGHTING FIXTURES SHALL BE CLEAN AND NON-OPERATING LAMPS REPLACED WITH NEW LAMPS AT THE TIME OF FINAL INSPECTION.
- F. CONTRACTOR SHALL WEAR PROTECTIVE COTTON GLOVES WHEN HANDLING FIXTURES WITH LOW IRIDESCENT PARABOLIC LOUVERS, DO NOT HANDLE FIXTURES IN ANY WAY THAT WILL PUT FINGER PRINTS ON LOUVERS.
- 1. ALL WORK SHALL BE PERFORMED DURING TIME PERIODS ACCEPTABLE TO THE OWNER. SCHEDULE ALL WORK WITH THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING.
- 2. THE CONTRACTOR SHALL PERFORM ALL TEMPORARY WORK NECESSARY TO MAINTAIN CONTINUITY OF ELECTRICAL SERVICE WHEN CONNECTION IS MADE TO EXISTING SYSTEMS AND FACILITIES. EXISTING SERVICE SHALL NOT BE INTERRUPTED WITHOUT PRIOR CONSENT OF THE OWNER'S REPRESENTATIVE AND MAY BE INTERRUPTED ONLY AT AND FOR THE SPECIFIED TIME DESIGNATED BY OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL BE GUIDED BY THE OWNER'S REPRESENTATIVE AT ALL TIMES IN MATTERS AFFECTING THE EXISTING FACILITIES.
- 3. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL INSURE THAT ALL SYSTEMS OPERATE AS DESIGNED AND REQUIRED AND SHALL REVIEW THEIR OPERATION WITH THE OWNER, COMPLETE SET OF AS-BULT DRAWINGS SHALL BE COMPILED (BY THE CONTRACTOR) AND ISSUED (1 EACH) TO THE ARCHITECT AND BUILDING MAINTENANCE PERSONNEL UPON COMPLETION OF CONSTRUCTION AND

	ELECTRICAL SYMBOL LEGEN	1D
SYMBOL	DESCRIPTION	MOUNTING
	1 X 4 FLUORESCENT FIXTURE LETTER INDICATES TYPE	SEE FIXTURE SCHEDULE
	LINEAR INDIRECT FLUORESCENT FIXTURE LETTER INDICATES TYPE	SEE FIXTURE SCHEDULE
	2 X 4 FLUORESCENT FIXTURE LETTER INDICATES TYPE	SEE FIXTURE SCHEDULE
	SHADING DENOTES FIXTURE WITH EM BATTERY PACK. 'NL' DENOTES FIXTURE UNSWITCHED FOR NIGHT LIGHT	SEE FIXTURE SCHEDULE
H-®-H	FLUORESCENT STRIP FIXTURE LETTER INDICATES TYPE	SEE FIXTURE SCHEDULE
	FLUORESCENT WALL BRACKET FIXTURE LETTER INDICATES TYPE	SEE FIXTURE SCHEDULE
0	PL FLUORESCENT DOWNLIGHT LETTER INDICATES TYPE	SEE FIXTURE SCHEDULE
<b>I€</b> EX		SEE FIXTURE SCHEDULE
S S <sub>3</sub>	SINGLE POLE SWITCH (20A-120/277) '3' DENOTES 3-WAY 'D' DENOTES DIMMER	48" AFF OR AS
<b>.</b>	DUPLEX RECEPTACLE, 125V, 20A 'IG' DENOTES ISOLATED GROUND	18" AFF OR AS NOTED
<del></del>	DUPLEX RECEPTACLE, 125V, 20A	18" AFF OR AS NOTED
<b>©</b> =	DUPLEX RECEPTACLE, 125V, 20A	48" AFF OR AS NOTED
<b>#</b>	QUADRAPLEX RECEPTACLE, 125V, 20A	18" AFF OR AS
×	POWER/TELEPHONE POLE	SEE DETAIL OR AS NOTED
	OUTLET BOX OR J-BOX FOR POWER AND DATA SUPPLY TO FURNITURE SYSTEMS	18" AFF OR
<b>☑</b> ⊙	COMBINATION VOICE/DATA OUTLET	AS NOTED 18" AFF OR AS
	TELE OUTLET	NOTED 18" AFF OR AS
<u>`</u>	T.V. OUTLET	NOTED 18" AFF OR AS
	PANELBOARD 277/480V	NOTED SEE PANEL
	PANELBOARD 120/208V	SCHEDULE SEE PANEL
Ī		SCHEDULE SIZE AS NOTED
	DRY TYPE TRANSFORMER	SIZE AS NOTED
	RACEWAY CONCEALED IN WALL OR ABOVE CEILING RACEWAY CONCEALED UNDER FLOOR OR BELOW	SEE SPECIFICATIONS
	GRADE HOMERUN TO PANEL. LETTERS INDICATE PANEL,	SEE SPECIFICATIONS
× ×	NUMBERS INDICATE CIRCUIT. NOTE: HASH MARKS INDICATES THE NUMBER OF WIRES EXCLUDING THE REQUIRED EQUIPMENT GROUND.	SEE SPECIFICATIONS
\(\sqrt{5}\)\(	MOTOR, NUMERAL INDICATES HORSEPOWER	AS NOTED
\$	MOTOR RATED SWITCH WITH OVERLOAD RELAYS AS REQUIRED.	MOUNTED ADJACE TO EQUIPMENT
마	NON-FUSIBLE SAFETY SWITCH-SIZE AS NOTED	SEE SPECIFICATIONS
	FUSIBLE SAFETY SWITCH-SIZE AS NOTED	SEE SPECIFICATIONS
Q	FIRE ALARM DUCT DETECTOR ('RA'DENOTES RETURN AIR 'SA' DENOTES SUPPLY AIR)	MOUNTED IN HVAC DUCTWORK
R	FIRE ALARM OR AIR HANDLER SHUTDOWN RELAY	MOUNTED ADJACE TO EQUIPMENT
	FIRE ALARM VISUAL SIGNAL	80" AFF OR AS NOTED
•	FIRE ALARM MANUAL PULLSTATION	48" AFF OR AS NOTED
 ⊠⊲	FIRE ALARM AUDIBLE/VISUAL SIGNAL, ADA COMPATIBLE	80" AFF OR AS NOTED
<u> </u>	FIRE ALARM SMOKE DETECTOR	ON CEILING OR AS NOTED
FACP	FIRE ALARM PANEL ('FACP' DENOTES FIRE ALARM CONTROL PANEL, 'FAA' DENOTES ANNUNCIATOR)	60" AFF OR
FAA δ Θ	FIRE ALARM TAMPER AND FLOW SWITCH	AS NOTED
<u> </u>	FIRE ALARM HEAT DETECTOR	
	The state of the control of the cont	1

DEVICE UNLESS NOTED OTHERWISE. NOT ALL SYMBOLS APPEAR ON PLANS.

ABBREVIATIONS: ABOVE FINISHED FLOOR HP AIR HANDLING UNIT BELOW FINISHED GRADE CONDUIT EXHAUST FAN EQUIPMENT GROUND ENCL ENCLOSURE - ELECTRIC WATER COOLER ELECTRIC WATER HEATER FÇU FAN COIL UNIT FULL LOAD AMPERES SPEC

- GROUND FAULT INTERRUPTER TBD

— GROUND

- HORSEPOWER, HEAT PUMP - HEATING, BENTILATING, AIR CONDITIONING - JUNCTION BOX - LOCKED ROTOR AMPERES - MAIN CIRCUIT BREAKER

MLO - MAIN LUGS ONLY NEUTRAL NIGHT LIGHT - PULL BOX, PUSH-BUTTON PB - RECEPTACLE RECEP SUPPLY FAN

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UNO

SPECIFICATIONS

 TO BE DETERMINED - TELEPHONE TERMINAL BOARD UNLESS NOTED OTHERWISE WEATHERPROOF

Facilities Management 1112 Manatee Avenue West Sulte 803, P.D. Box 1000 Bradenton, Florida 34206 (941) 748-4501 FAX (941) 742-5880

MANATEE

GOVERNMENT

Project Number

Yehuda Inbar AlA Inbar architect AIA

Al Meronek

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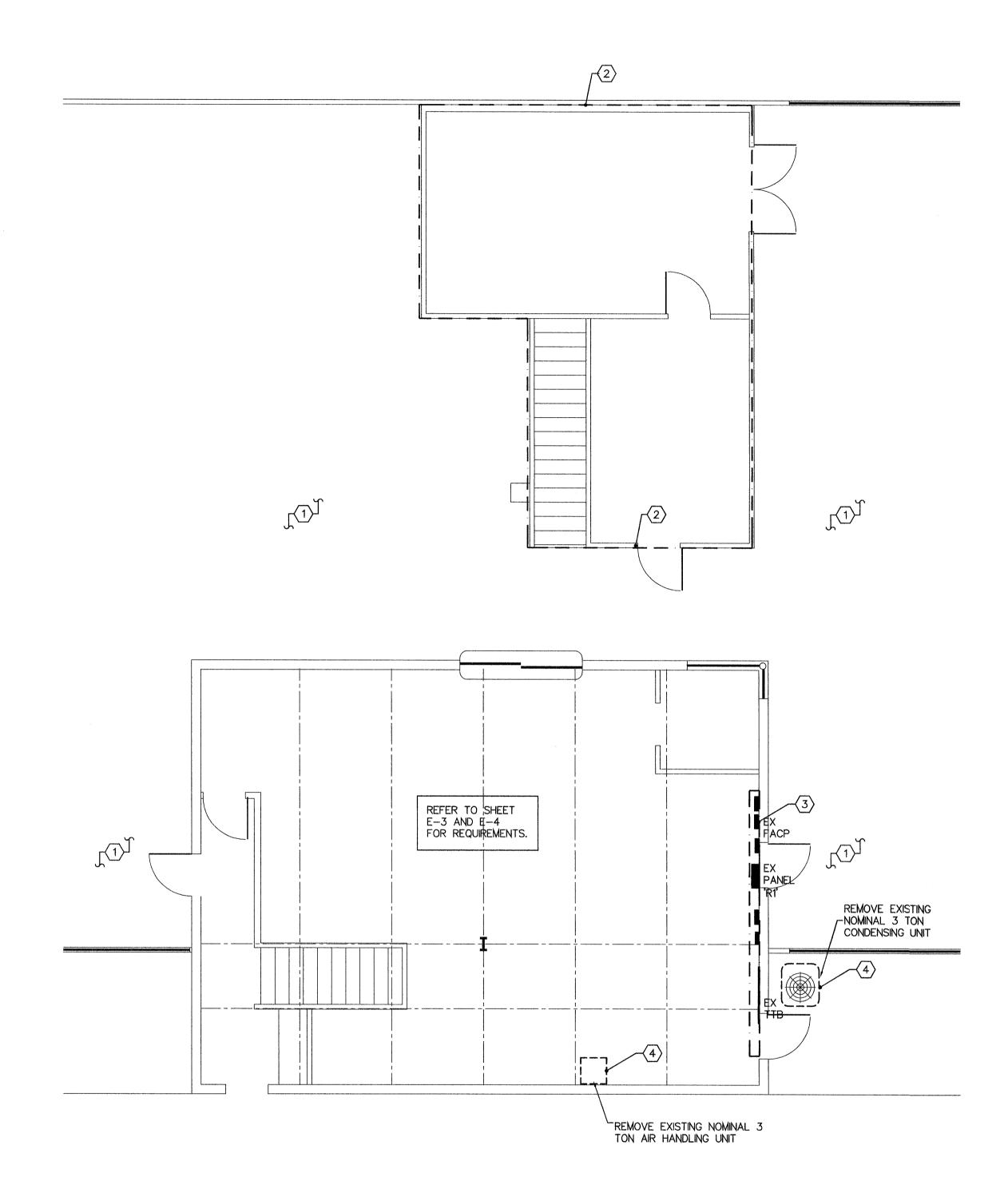
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## GENERAL NOTES:

- 1. ELECTRICAL CONTRACTOR TO COORDINATE ALL ELECTRICAL WORK WITH OWNER/ARCHITECT PRIOR TO ROUGH—IN.
- 2. ELECTRICAL CONTRACTOR TO VERIFY EXISTING CONDITIONS AND TO REPORT TO GENERAL CONTRACTOR, OWNER AND ENGINEER ANY DISCREPANCY FROM THAT SHOWN ON DRAWINGS.
- E DENOTES EXISTING
  R DENOTES RELOCATED

#### ELECTRICAL GENERAL NOTES:

- 1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE FLORIDA BUILDING CODE NATIONAL ELECTRIC CODE, NFPA AND ALL LOCAL ORDINANCES
- 2. BIDDERS ARE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND SATISFY THEMSELVES AS TO THE NATURE AND SCOPE OF WORK. THE SUBMISSION OF A BID WILL BE EVIDENCED THAT SUCH AN EXAMINATION HAS BEEN MADE. LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED, OR FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD AN EXAMINATION BEEN MADE, WILL NOT BE ALLOWED.
- 3. ALL EXISTING CIRCUITS TO REMAIN SHALL BE RECONNECTED WHETHER INDICATED OR NOT ON PROJECT DOCUMENTS.
- 4. NEW AND EXISTING CIRCUIT DESIGNATIONS MAY NOT REPRESENT ACTUAL FIELD CONDITIONS. THEY ARE INTENDED FOR REFERENCE ONLY.
- 5. WHERE EXISTING PARTITIONS OR WALLS ARE SHOWN TO BE REMOVED CONTRACTOR SHALL REMOVE DEVICES TO NEAREST SOURCE JUNCTION BOX AND SHALL MAINTAIN SERVICE TO REMAINING DOWNSTREAM ELECTRICAL OUTLETS. COORDINATE THE DEMOLITION OF THE EXISTING WALLS WITH ARCHITECTURAL DRAWINGS.
- 6. PROTECT EXISTING ELECTRICAL EQUIPMENT AND INSTALLATIONS NECESSARY TO REMAIN. IF DAMAGED OR DISTURBED IN THE COURSE OF THE WORK, REMOVE DAMAGED PORTIONS AND INSTALL NEW PRODUCTS OF EQUAL CAPACITY, QUALITY, AND FUNCTIONALITY.
- 7. REMOVE ELECTRICAL EQUIPMENT AND INSTALLATIONS, INDICATED TO BE DEMOLISHED, IN THEIR ENTIRETY. WHERE THE EXISTING EQUIPMENT INDICATED TO BE DEMOLISHED CONTAINS BRANCH CIRCUITRY SERVICING OUTLETS THAT ARE EXISTING TO REMAIN, RELOCATE THE BRANCH CIRCUIT TO AN ALTERNATE PANEL AND INDICATE THE CHANGE ON THE AS—BUILT DRAWINGS.
- 8. ABANDONED WORK: CUT OR REMOVE RACEWAY SLEEVES AND WIRING, INDICATED TO BE ABANDONED IN PLACE, BELOW THE SURFACE OF ADJACENT CONSTRUCTION. CAP RACEWAYS AND PATCH SURFACE TO MATCH EXISTING FINISH.
- 9. REMOVE FIRE ALARM NOTIFICATION DEVICES AND PULL STATIONS IN EXISTING WALLS TO BE DEMOLISHED AND TEMPORARILY RELOCATE TO NEAREST ADJACENT WALL. THE CONTRACTOR SHALL COORDINATE THE DEMOLITION WITH THE OWNER, GENERAL CONTRACTOR AND LOCAL AUTHORITY HAVING JURISDICTION TO ENSURE FALSE ALARMS ARE AVOIDED DURING DEMOLITION. THE FIRE ALARM IS TO REMAIN ACTIVE DURING DEMOLITION.
- 10. THE CONTRACTOR SHALL INCLUDE WITHIN THE BID ALL REQUIRED OFF HOUR, OVERTIME, AND NON-BUSINESS HOUR WORK AS REQUIRED TO PERFORM THE DEMOLITION WITHOUT DISRUPTING THE BUILDING TENANTS NORMAL BUSINESS OPERATIONS.
- 11. THE FIRE ALARM SYSTEM PANEL IS EXISTING TO REMAIN. ALL FIRE ALARM WORK SHALL REQUIRE THE USE OF OWNER APPROVED VENDOR. ALL WORK ASSOCIATED WITH THE FIRE ALARM SHALL BE COMPLETED UNDER A SEPARATE SET OF PERMIT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POINT TO POINT WIRING DIAGRAMS, BATTERY CALCULATIONS, RISER DIAGRAMS AND SIGNED AND SEALED SHOP DRAWINGS. THE FIRE ALARM SHALL BE RECERTIFIED UPON COMPLETION.
- 12. ALL WORK SHALL BE COORDINATE WITH OTHER TRADES FOR ITEMS IN THEIR SCOPE OF WORK WHICH WOULD REQUIRE ELECTRICAL WORK (DISCONNECTION/RECONNECTION ETC.) AND ARE NOT INDICATED ON THE ELECTRICAL PLANS.

#### DRAWING NOTES:

- EXISTING EQUIPMENT AND DEVICES IN THIS ROOM/AREA TO REMAIN UNLESS NOTED OTHERWISE.
- 2. EXISTING EQUIPMENT AND DEVICES IN THIS ROOM/AREA TO BE DEMOLISHED UNLESS NOTED OTHERWISE. COORDINATE WITH OWNER AND ARCHITECT PRIOR TO ROUGH—IN.
- 3. EXISTING EQUIPMENT EQUIPMENT TO REMAIN.
- 4. EXISTING HVAC EQUIPMENT AND ASSOCIATED DISCONNECT, WIRES AND CONDUITS TO BE DEMOLISHED BACK TO SOURCE PANEL. COORDINATE WITH MECHANICAL CONTRACTOR.

MANATEE COUNTY GOVERNMENT



Facilities Management

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(941) 748-4501 FAX (941) 742-5880

REMARKS					
DATE					
REV.					

MANATEE MANATEE FLEET SERVICES 1200 26TH AWE. EAST, BRADENTON, FLOF

Project Number

Drawn by: Yehuda Inbar AIA Inbar architect AIA

Checked by Al Meronek

Date 11-19-08

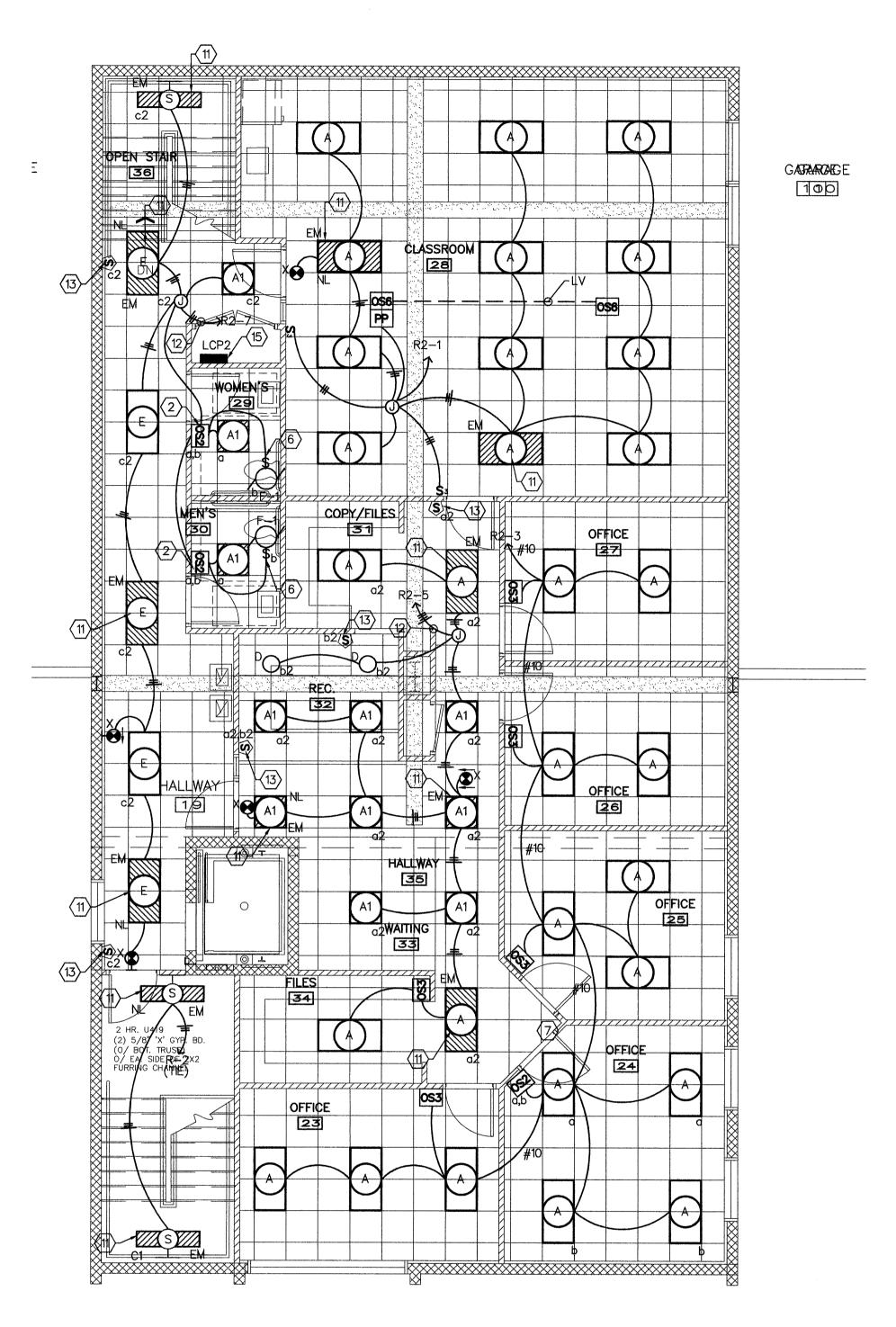
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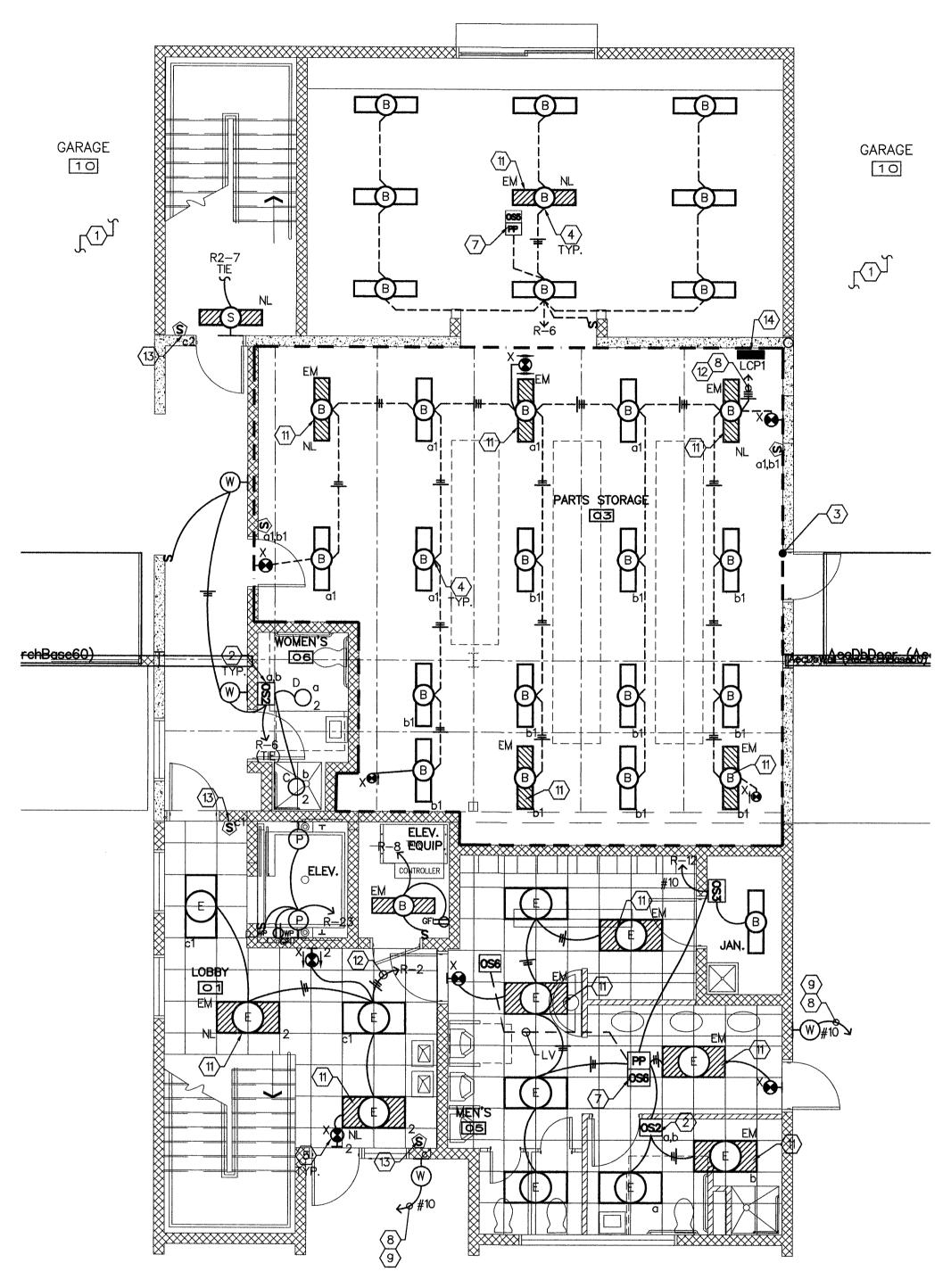
GRINER ENGINEERING, INC.
1628 First Avenue North
St. Petersburg, Florida 33713
Phone: (727)-822-2335
Fax: (727)-821-3361
Certificate of Authorization #3173





## **GENERAL NOTES:**

- 1. ELECTRICAL CONTRACTOR TO COORDINATE ALL ELECTRICAL WORK WITH OWNER/ARCHITECT.
- 2. COORDINATE EXACT LIGHT LAYOUTS, MOUNTING HEIGHT AND LOCATIONS WITH ARCHITECT/OWNER AND MECHANICAL EQUIPMENT.
- 3. ALL NEW ELECTRICAL EQUIPMENT AND DEVICES SHALL BE COMPATIBLE WITH EXISTING EQUIPMENT.
- 4. LAMPING AND/OR BALLASTS TO BE REPAIRED AND/OR REPLACED, AS NEEDED, IN EXISTING LIGHT FIXTURES THROUGHOUT SUITE. ELECTRICAL CONTRACTOR TO VERIFY THAT LAMPS IN ALL FIXTURES ARE WITH SAME TYPE AND COLOR TEMPERATURE.





SENS	OR LEGEND:	SENSOR NOTES:				
OS1	WALL MOUNTED DUAL TECH WALL SWITCH OCCUPANCY SENSOR OCCUPANCY # OSSMT-MDW BY LEVITON.	1.	PROVIDE SENSORS MANUFACTURED BY LEVITON.			
b	PROVIDE WITH MANUAL OVER RIDE SWITCH.	2.	PRVODIE A POWER PACK IF NEEDED. POWER PACK IS CONTROLLED BY LOW VOLTAGE SENSOR.			
0\$2	WALL MOUNTED DUAL TECH WALL SWITCH OCCUPANCY SENSOR OCCUPANCY # OSSMD-MDW WITH TWO RELAYS BY LEVITON. PROVIDE WITH MANUAL OVER RIDE SWITCH.	3.	ADDITIONAL SENSORS MAY BE REQUIRED TO PROVIDE COMPLETE COVERAGE DEPENDING ON PARTITION HEIGHT/PLACEMENT, FURNITURE			
083	WALL MOUNTED PIR OCCUPANCY SWITCH SENSOR # ODS10-ID BY LEVITON. PROVIDE WITH MANUAL OVER RIDE SWITCH.		PLACEMENT, EQUIPMENT HEIGHT/PLACEMENT AND SHELVING HEIGHT/PLACEMENT. CONSULT MFR REPRESENTATIVE PRIOR TO ROUGH—IN.			

CEILING MOUNTED 1000 SQ FT LOW VOLTAGE OCCUPANCY

CEILING MOUNTED 2000 SQ FT LOW VOLTAGE OCCUPANCY

SENSOR #OSC20-MOW BY LEVITON, WITH POWER PACK (PP)

SENSOR #OSC10-MOW BY LEVITON, WITH POWER PACK (PP)

SENSOR MASKING KITS MAY BE REQUIRED TO LIMIT COVERAGE DEPENDING ON YOUR REQUIREMENTS. CONSULT MFR REPRESENTATIVE PRIOR TO ROUGH-IN,

MY	IMANUFACTURER	CATALOG NUMBER	LAMPS	MTG.	REMARKS
		o, the last terms and	<u> </u>	III. 10.	(ACMATICO)
`	LITHONIA	2RT5-28T5-120-GEB95	2-28W T5	LAY-IN	2'x 4' VOLUMETRIC FLUORESCENT LIGHT FIXTURE
	METALUX		3500 K		
	COLUMBIA		82 CRI		
	DAY-BRITE				
1	LITHONIA	2RT5-28T5-120-GEB115	2-14W T5	LAY-IN	2'x 2' VOLUMETRIC FLUORESCENT LIGHT FIXTURE
	METALUX		3500 K		Į
	COLUMBIA		82 CRI		
	DAY-BRITE				
3	TBD	TO MATCH EXISTING FIXTURE			4' SURFACE FLUORESCENT LIGHT FIXTURE
······	LITHONIA	LGF-1/32TRT-6RW-FOL-120	1-32 TRT	RECESSED	6" SHOWER COMPACT FLUORESCENT DOWNLIGHT
	METALUX	'	4100 K		UL LISTED FOR WET LOCATION
	COLUMBIA		82 CRI		
	DAY-BRITE				
)	LIGHT CONCEPTS	FMLR14-2-18DTT	2-18 DTT	SURFACE	14" SURFACE LOW PROFILE ROUND LIGHT
	METALUX		4100 K		FIXTURE IN RESTROOM
	COLUMBIA		82 CRI		
	DAY-BRITE				
	LITHONIA	2GT8-2-32-A12-120-GEB	2-32W T8	LAY-IN	2' X 4' 2 LAMP PRISMATIC FLUORESCENT
	METALUX		3500 K		LIGHTING FIXTURE
	COLUMBIA		85CRI		
	DAY-BRITE				
}	LITHONIA	AFV-42TRT-6AR-120	1-42W TRT	RECESSED	6" OPEN REFLECTOR DOWNLIGHT
	METALUX		3500 K		
	COLUMBIA		82 CRI		
	DAY-BRITE				
•	CANLET	68-02-IWF-01-100W-OG	(1) 100W	WALL	ELEVATOR PIT LIGHT WITH GUARD
	METALUX		A-19	MOUNTED	
	COLUMBIA				
<del></del>	DAY-BRITE				
•	LITHONIA	WC-2-32-120-GEB10IS	2-32W T8	WALL	4' COMMERCIAL WALL BRACKET
	METALUX		3500 K		
	COLUMBIA		85 CRI	1	
	DAY-BRITE				
V	LITHONIA	VR1BH-1-32TRT-120-LPI	1-32W TRT	WALL	WALL MOUNTED ROUGH SERVICE LIGHT FIXTURE
	METALUX		3500 K		UL LISTED FOR WET LOCATION
	COLUMBIA		82 CRI		
	DAY-BRITE				
	TBD	TO MATCH EXISTING EXIT SIGN			EXIT LIGHT

NOTES: FOR FIXTURE SCHEDULE

CONTRACTOR SHALL VERIFY ALL TYPES, TRIMS AND LIGHT FIXTURE COLORS WITH ARCHITECT/OWNER PRIOR TO BIDDING AND OR ORDERING.

#### ELECTRICAL NOTES:

- ELECTRICAL WORK IN THIS ROOM/AREA IS EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
- PROVIDE WALL MOUNTED OCCUPANCY SENSOR WITH INTEGRAL OVERRIDE SWITCH BY LEVITON OR EQUAL. REFER TO OCCUPANCY SENSORS SCHEDULE ON THIS SHEET AND DETAILS ON SHEET E-6. LOCATE AND CONNECT OCCUPANCY SENSOR PER M.F.R RECOMMENDATIONS.
- FIELD VERIFY AND COORDINATE FINAL LIGHT LOCATIONS IN THE ROOM WITH RACK LAYOUTS, ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
- RELOCATED OR NEW LIGHTING FIXTURE. NEW LIGHTING FIXTURE TO MATCH
- RELOCATED OR NEW EXIT SIGN. NEW EXIT SIGN TO MATCH EXISTING.
- PROVIDE FINAL CONNECTION TO EXHAUST FAN. INTERLOCK EXHAUST FAN WITH LIGHT SWITCH. COORDINATE WITH MECHANICAL CONTRACTOR.
- PROVIDE CEILING MOUNTED OCCUPANCY SENSOR BY LEVITON OR EQUAL. REFER TO OCCUPANCY SENSORS SCHEDULE ON THIS SHEET AND DETAILS ON SHEET E-6. LOCATE AND CONNECT OCCUPANCY SENSOR PER M.F.R RECOMMENDATIONS.
- TIE NEW LIGHTING FIXTURE TO EXISTING EXTERIOR LIGHTING BRANCH CIRCUIT. FIELD VERIFY EXACT BRANCH CIRCUIT.
- TIE INTO EXISTING LIGHTS CIRCUIT IN THIS AREA. CONTRACTOR SHALL VERIFY WITH AN AMP PROBE THIS EXISTING CIRCUIT CAN ACCOMMODATE THE REARRANGED OR NEW LIGHT FIXTURES AND BALANCE THE BRANCH CIRCUIT LOADS ACCORDINGLY.
- PROVIDE ALL NIGHT LIGHT, EMERGENCY AND EXIT POWER WITH UNSWITCHED CONDUCTOR AHEAD OF LIGHT SWITCH/OCCUPANCY SENSOR.
- PROVIDE LIGHTING FIXTURE DESIGNATE WIT 'EM' WITH GENERATOR TRANSFER DEVICE GTD BY BODINE. CONNECT PER MFR RECOMMENDATION AND INSTRUCTION.
- ROUTE HOMERUN VIA RELAY/S IN LIGHTING CONTROL PANEL (LCP1 FOR FIRST FLOOR; LCP2 FOR SECOND FLOOR). CONTROL FOR ON DURING BUSINESS HOURS. PROVIDE UNSWITCHED CONDUCTOR FOR ALL EMERGENCY AND EXIT
- PROVIDE DIGITAL LIGHTING SWITCHES AS MANUFACTURED BY LEVITON, REFER TO LIGHTING PLAN FOR DIGITAL SWITCH LOCATIONS AND DESIGNATIONS. LIGHT SWITCH TO PROVIDE ON-OFF CONTROL OF LIGHTS AND AFTER HOURS OVERRIDE. CONNECT LOW VOLTAGE SWITCHES TO LCP PER MFR RECOMMENDATIONS,
- PROVIDE MASTER LIGHTING CONTROL PANEL (LCP1) Z-MAX WITH 8 LIGHTING SWITCHING RELAYS, INTERNAL TIME CLOCK WITH ASTRONOMICAL CLOCK BY LEVITON. COORDINATE FINAL LOCATION WITH ARCHITECT AND OWNER.
- PROVIDE SLAVE LIGHTING CONTROL PANEL (LCP2) Z-MAX WITH 4 LIGHTING SWITCHING RELAYS BY LEVITON, COORDINATE FINAL LOCATION WITH ARCHITECT AND OWNER.

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BRADENTON EAST, 26TH 200

Project Number

Yehuda Inbar AIA Inbar architect AIA

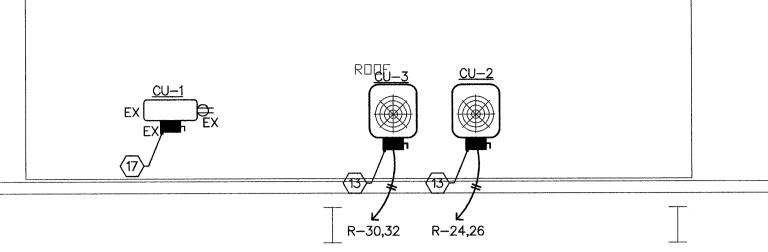
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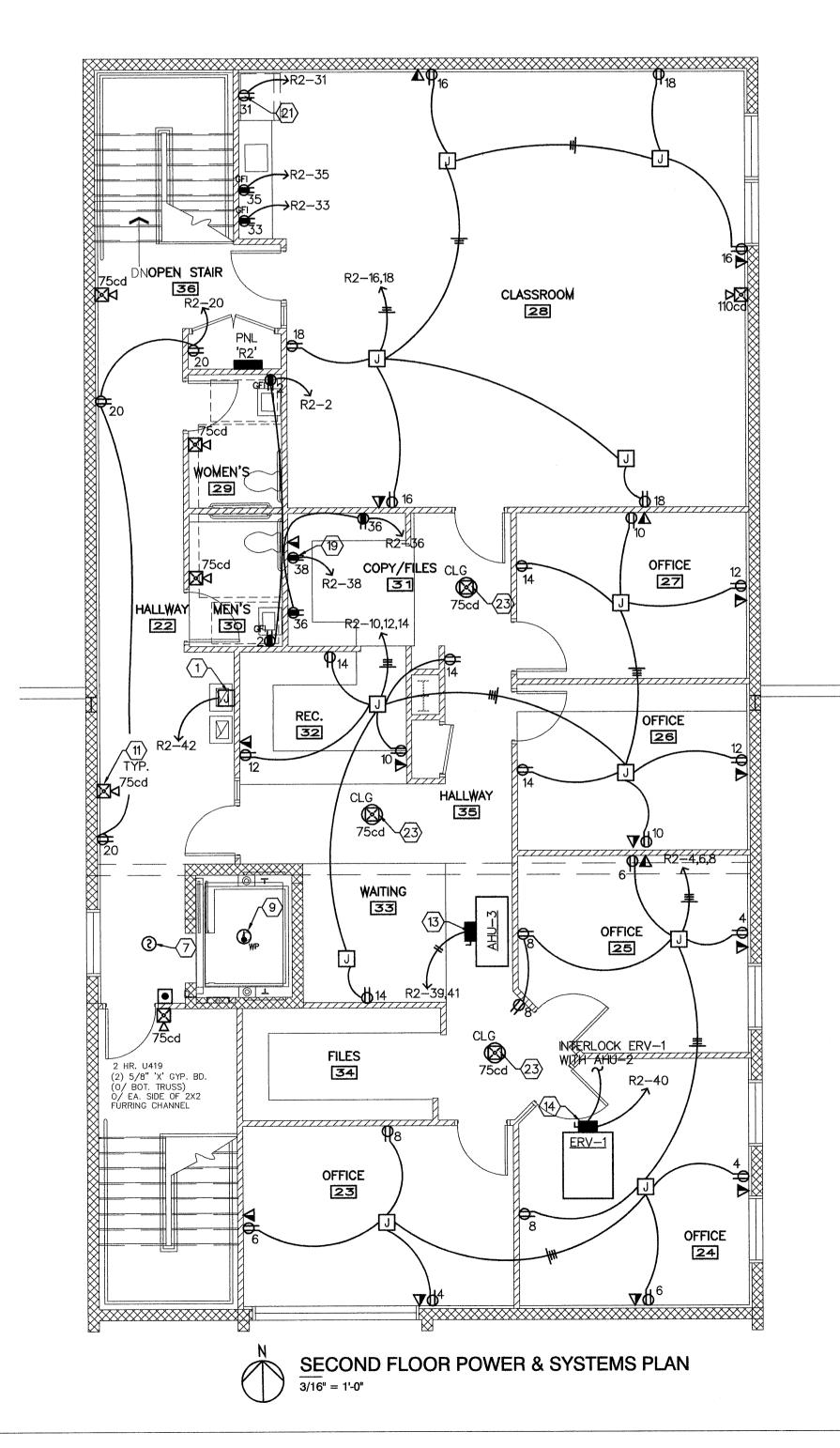
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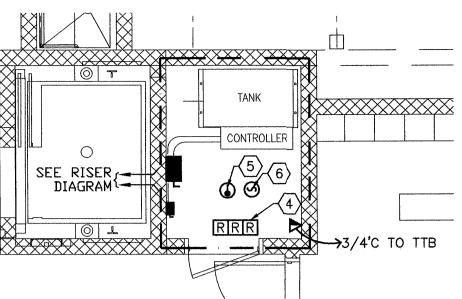
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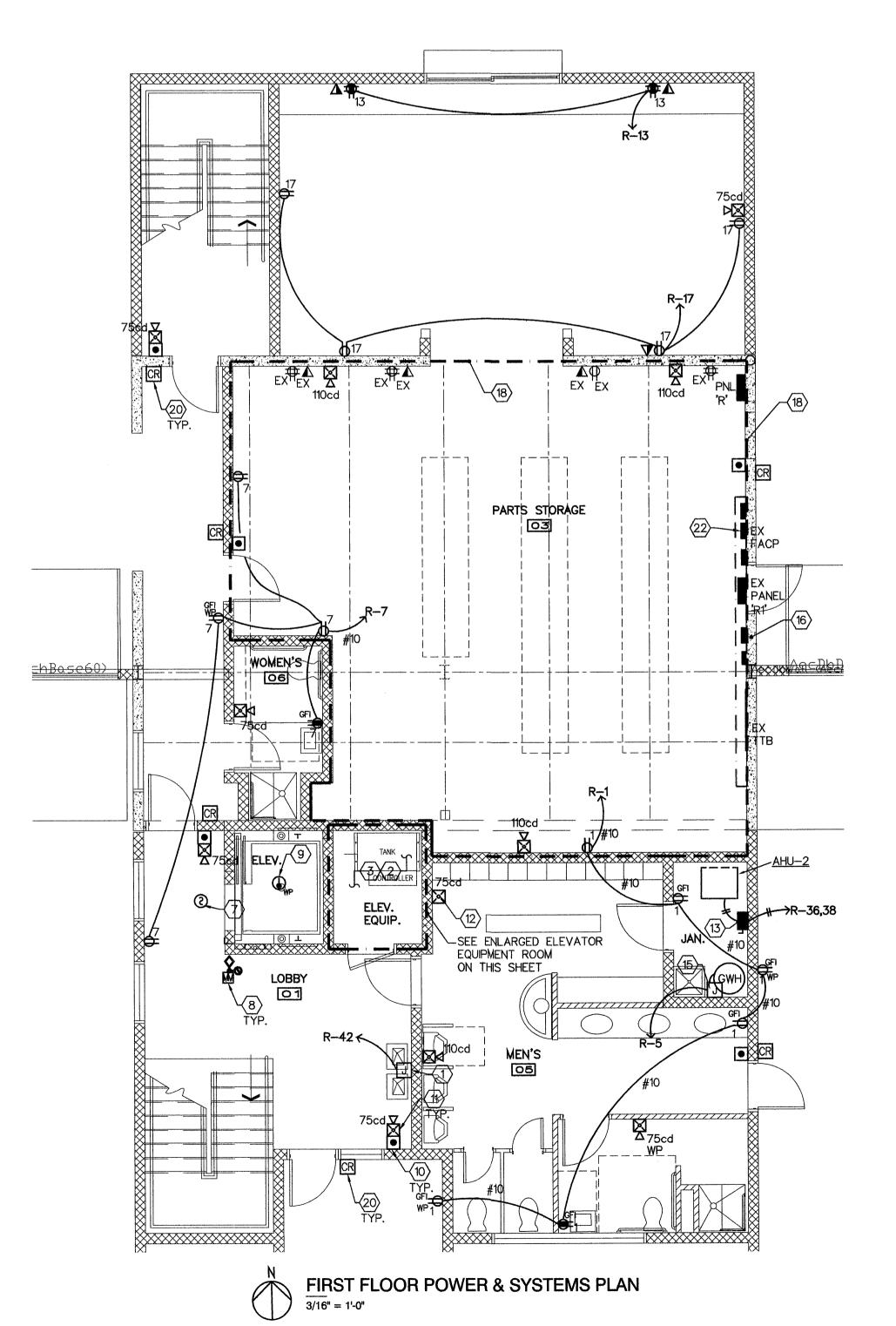


OPEN





**ENLARGED ELEVATOR EQUIPMENT ROOM** 1/4" = 1'-0"



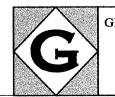
#### ELECTRICAL NOTES:

- PROVIDE FINAL CONNECTION TO ELECTRICAL WATER COOLER. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH PLUMBING CONTRACTOR. REFER TO PLUMBING SCHEDULE.
- COORDINATE LOCATIONS OF ALL EQUIPMENT IN ELEVATOR EQUIPMENT ROOM WITH ELEVATOR SHOP DRAWINGS PRIOR TO ROUGH-IN.
- ELECTRICAL CONTRACTOR SHALL REFERENCE ELEVATOR SPECIFICATIONS AND COORDINATE ALL REQUIREMENTS WITH ELEVATOR MANUFACTURER FOR ALL ELECTRICAL REQUIREMENTS PRIOR TO ROUGH-IN.
- PROVIDE FIRE ALARM RELAYS AS REQUIRED FOR ELEVATOR RECALL. COORDINATE WITH ELEVATOR CONTRACTOR. TIE TO EXISTING FIRE ALARM PANEL.
- PROVIDE HEAT DETECTOR LOCATED IN ELEVATOR EQUIPMENT ROOM FOR ELEVATOR SHUNT TRIP. TIE TO EXISTING FIRE ALARM PANEL.
- PROVIDE SMOKE DETECTOR LOCATED IN ELEVATOR EQUIPMENT ROOM FOR ELEVATOR RECALL.TIE TO EXISTING FIRE ALARM PANEL.
- PROVIDE SMOKE DETECTOR PROVIDED AT ELEVATOR LOBBY FOR ELEVATOR RECALL AND CAPTURE.
- TIE TO EXISTING FIRE ALARM PANEL. PROVIDE FINAL FIRE ALARM CONNECTION TO TAMPER SWITCH AND FLOW SWITCHES. COORDINATE EXACT LOCATIONS WITH FIRE SPRINKLER CONTRACTOR AND SHOP DRAWINGS. TYPICAL. TIE TO
- PROVIDE AND LOCATE WP HEAT DETECTOR IN PIT WITHIN 24" OF SPRINKLER HEAD. TIE TO EXISTING FIRE ALARM PANEL.
- RELOCATED OR NEW FIRE ALARM MANUAL FIRE ALARM PULL STATION WALL MOUNTED 48"AFF. NEW FIRE ALARM MANUAL STATION TO MATCH EXISTING, TIE TO EXISTING FIRE ALARM PANEL.
- RELOCATED OR NEW FIRE ALARM HORN/STROBE 80"AFF TO BOTTOM. NEW FIRE ALARM HORN/STROBE TO MATCH EXISTING. TIE TO EXISTING FIRE ALARM PANEL.
- 12. RELOCATED OR NEW FIRE ALARM STROBE 80"AFF TO BOTTOM. NEW FIRE ALARM STROBE TO MATCH EXISTING. TIE TO EXISTING FIRE ALARM PANEL.
- PROVIDE FINAL CONNECTION TO HVAC UNIT. REFER TO THE HVAC BRANCH CIRCUIT AND DISCONNECT SCHEDULE. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL CONTRACTOR AND DRAWINGS.
- PROVIDE FINAL CONNECTION TO ERV-1. INTERLOCK ERV-1 WITH AHU-2, ERV-1 SHALL RUN ONLY WHEN AHU-2 RUNS. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL CONTRACTOR AND DRAWINGS.
- PROVIDE FINAL CONNECTION TO GAS WATER HEATER. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH PLUMBING CONTRACTOR AND DRAWINGS.
- EXISTING FIRE ALARM, TELEPHONE AND SECURITY EQUIPMENT EQUIPMENT TO REMAIN. FIELD VERIFY EXACT LOCATION
- 17. EXISTING HVAC EQUIPMENT PROVIDED DURING PHASE 1 SHOWN ONLY FOR REFERENCE.
- EXISTING ELECTRICAL OUTLETS TO REMAIN. FIELD VERIFY AND COORDINATE FINAL OUTLET LOCATIONS IN THE ROOM WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN. IF REQUIRED RELOCATED EXISTING RECEPTACLES TO NEW LOCATIONS. ALL EXISTING WIRES AND CONDUITS IN THE EXISTING ROOM SHALL BE SUPPORTED PROPERLY PER NEC. COORDINATE WITH SECURITY, IT AND FIRE ALARM CONTRACTORS.
- PROVIDE RECEPTACLE FOR COPIER. VERIFY FINAL LOCATION WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
- PROVIDE JUNCTION BOX FOR CARD READER. EXTEND A 3/4" EMPTY CONDUIT FOR SECURITY WIRING FROM JUNCTION BOX. COORDINATE EXACT LOCATIONS AND REQUIREMENTS WITH SECURITY SYSTEM INSTALLER, ARCHITECT AND OWNER.
- PROVIDE RECEPTACLE FOR REFRIGERATOR. VERIFY FINAL LOCATION WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
- 22. EXISTING FIRE ALARM CONTROL PANEL. PROVIDE ADDITIONAL POWER SUPPLY IF REQUIRED.
- NEW FIRE ALARM HORN/STROBE CEILING MOUNTED. NEW FIRE ALARM HORN/STROBE TO MATCH EXISTING. TIE TO EXISTING FIRE ALARM PANEL.

# **GENERAL NOTES:**

- 1. ELECTRICAL CONTRACTOR TO COORDINATE ALL ELECTRICAL WORK WITH OWNER/ARCHITECT.
- 2. FIELD COORDINATE EXACT EQUIPMENT LAYOUTS, POWER REQUIREMENTS, MOUNTING HEIGHT AND LOCATIONS WITH ARCHITECT/OWNER.
- FIRE ALARM WORK SHALL BE DONE BY APPROVED BY OWNER FIRE ALARM CONTRACTOR. NEW FIRE ALARM DEVICE TO MATCH EXISTING. TIE ALL FIRE ALARM DEVICE TO EXISTING FIRE ALARM CONTROL PANEL.

HV	AC UNITS DISCONNECT AND FE	EDER SCHEDULE		
UNIT ID.	WIRE AND CONDUIT SIZES	DISCONNECT	MCA	Moci
AHU-2	2 # 6 AND 1 #10 E.G 1" C	60/2/50	47	50
AHU-3	2 # 6 AND 1 #10 E.G 1" C	60/2/50	47	50
CU-2	2 # 6 AND 1 #10 E.G 1" C	60/2/60/3R	34.5	60
CU-3	2 # 6 AND 1 #10 E.G 1" C	60/2/60/3R	34.5	60
ERV-1	2 # 10 AND 1 #10 E.G 3/4" C	30/2/25	19.3	25



RINER ENGINEERING, INC. Date 1628 First Avenue North St. Petersburg, Florida 33713 Phone: (727)-822-2335 Fax: (727)-821-3361 Certificate of Authorization #3173

MANATEE COUNTY GOVERNMENT



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REMARKS					
DATE					
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FLORIDA BRADENTON, EAST, 26TH 1200

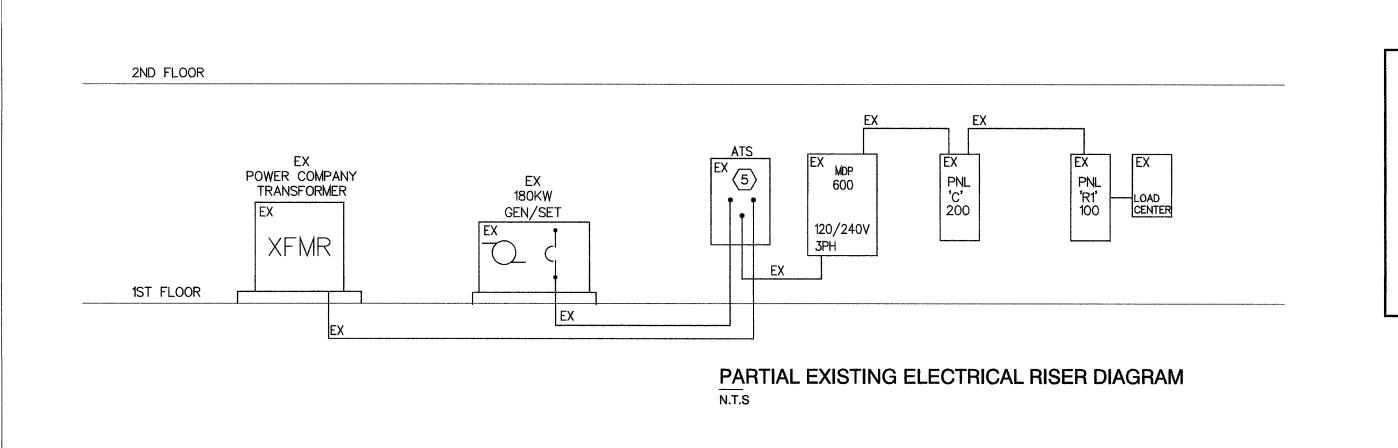
Project Number

Yehuda Inbar AIA Inbar architect AIA

Checked by Al Meronek

11-19-08

Drawing Number



EXISTING

EX 5

-ELECTRICAL

EQUIPMENT

MDP

600

120/240V

3PH,4W

EX |

## GENERAL NOTES:

- 1. ELECTRICAL CONTRACTOR TO VERIFY EXISTING CONDITIONS AND TO REPORT TO GENERAL CONTRACTOR, ARCHITECT, OWNER AND ENGINEER ANY DISCREPANCY FROM THAT SHOWN ON DRAWINGS.
- 2. ALL NEW ELECTRICAL SERVICE EQUIPMENT, TRANSFROMER, PANELS, BREAKERS, AND DEVICES SHALL BE COMPATIBLE WITH EXISTING EQUIPMENT.

100/3/NP

PROVIDE

ELEVATOR

NEW

CONNECTION TO\_

30/2/20

3#10 R-25 N 3/4°C

- 3. ALL FIRE ALARM WORK SHALL INCORPORATE THE USE OF APPROVED BY OWNER VENDOR.
- ELECTRICAL CONTRACTOR TO COORDINATE ALL ELECTRICAL WORK AND PHASES OF WORK WITH OWNER AND ARCHITECT.

## RISER NOTES:

- EXISTING MDP PANEL TO REMAIN. PROVIDE NEW 400 AMP, 3 PH CIRCUIT BREAKER FOR THIS PROJECT. NEW BREAKER TO MATCH EXISTING TYPE AND AIC. IDENTIFIED HIGH LEG IN PANEL 'MDP' AS REQUIRED PER NEC. FIELD VERIFY HIGH LEG. IF REQUIRED REARRANGE EXISTING OR DEMOLISH UNUSED CIRCUIT BREAKERS (TEMPORALLY OFFICE TRAILERS AND ETC.) TO PROVIDE REQUIRED SPACE FOR NEW BREAKER. ELECTRICAL CONTRACTOR SHALL COORDINATE ELECTRICAL PHASE 2 WORK WITH ARCHITECT AND OWNER PRIOR TO ROUGH—IN. NO EXCEPTION.
- 2. EXTEND 4 #500KCMIL AND 1 #3 EG IN 3-1/2" C.
- 3. PROVIDE NEW 3PH, 400 MLO, 120/240V PANEL 'R'. REFER TO PANEL SCHEDULE ON THIS SHEET.
- 4. EXTEND 3 #2/0 AND 1 #6 EG IN 2" C. (NO HIGH LEG IN FEEDER)
- 5. PROVIDE NEW 1PH, 120/240V PANEL 'R2'. (NO HIGH LEG IN PANEL). REFER TO PANEL SCHEDULE ON THIS SHEET.
- 6. EXISTING ELECTRICAL PANEL DIRECTORY IS NOT UPDATED. ELECTRICAL CONTRACTOR SHALL TRACE ALL EXISTING BRANCH CIRCUITS IN THE PANEL AND UPDATE THE EXISTING PANEL DIRECTORY ACCORDINGLY.
- 7. EXTEND 3 #1/0 AND 1 #6 EG IN 2" C. COORDINATE WITH ELEVATOR INSTALLER AND DRAWINGS PRIOR TO ROUGH—IN.

ANEL MDI XISTING		SURFACE MOUNTED 120/240 VOLT 3 PHASE ** 4 WIRE WITH GROUND														600A MCB NEMA 1	
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OTES	NO.	DESCRIPTION			VOLT	A		)	в						DESCRIPTION	NO.	NOTES
	1	OFFICE UPSTAIRS	100	3	240							240	3	200	ACTIVE	2	
	•																
		******															
	3	OFFICE TRAILERS	100	3	240							240	3	200	PANEL'X'	4	
	5	PANEL 'R3'	100	3	240							240	3	150	COMPRESSOR	6	
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·····	7	PANEL'A'	200	3	240							240	3	200	WHITE ROOM HYD PANEL		
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	9	PANEL 'B'	200	3	240							240	3	200	PANEL'Q'	10	<u> </u>
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5	11	PANEL 'R' (**), (***)	400	3	240	36198						240	3	600	MAIN OF THE PANEL	12	
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			YSTEM VO			120/240	<del></del>	SE	70	F	015				AL CONTACTOR SHALL UPDATE PA	NEL SCHEDU	LE
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	LOAD LIGHT		-			CONNE	0		<del></del>	DEMAN	0		4		ED CLEARLY HIGH LEG IN THE PANE	,	
		TACLES	-				0		1.25 220.13		0	VA VA	ł		ENEW 400AMP, 3 POLE CIRCUIT BRI		HE PROJECT
		ONDITIONING	-				0		0		0	VA VA	l		KER TO MATCH EXISTING TYPE AN D REARRANGE EXISTING OR DEMO		DDEARED
	HEAT						0		0		0	VA VA	1	-	LY OFFICE TRAILERS BREAKER #3.		
		NON-CONTINUOUS					83658		1		83658	VA	,		QUIRED SPACE FOR THE NEW BREA		,
~		INUOUS	-				00000		1.25		0	VA	1		TE WITH OWNER PRIOR TO ROUGH		
	KITCH		-				0		0.65		0	VA	COO	WINA.	TE WITH OWNER I RIOR TO ROOGIP	111,	
	111101		-						TOTAL		83658						
		<u> </u>				120/2403	/, 3 PHA	L	10111			AMPS					

LOAD SUMMARY NOTES:

ΕX

180KW

GEN/SET

2ND FLOOR

1ST FLOOR

EX

POWER COMPANY

TRANSFORMER

XFMR

PANEL <b>R</b>		SURFACE MOUNTED 120/240 VOLT 3 PHASE 4 WIRE WITH GROUND FIELD VERIFY HI LEG PHASE. IF REQUIRI	ED REA	RRANG	GE PAN	EL BREA	KER.									400A N NEMA 42,000	. 1
	CKT.			REAKI									REAKE			CKT.	
NOTES	NO.	DESCRIPTION	<del> </del>	POLE	VOLT				В	(	<u>C</u>	VOLT	POLE	TRIP	DESCRIPTION	NO.	NOTES
2	1	STORAGE/RESTROOM RECEPTACLES	20	1	120	1080	1095					120	1	20	LIGHTING LOBBY/RESTROOMS	2	1
	3	SPACE (HI LEG)	ļ	<u> </u>	<u> </u>							ļ			SPACE (HI LEG)	4	<u> </u>
5	5	GWH	20	1	120					1000	780	120	1	20	LIGHTING OFFICE	6	1
2	7	CORRIDOR/ STORAGE RECEPTACLES	20	1	120	540	250					120	1	20	LTS/RECEPT, ELEVATOR EQUIPMENT RM	8	2
	9	SPACE (HI LEG)							]						SPACE (HI LEG)	10	
2	11	LOBBY/RESTROOM RECEPTACLES	20	1	120					540	300	120	1	20	EXTERIOR LIGHTS	12	1
	13		20	1	120							120	1	20	SPARE	14	
	15	SPACE (HI LEG)		<u> </u>	<u> </u>			<u> </u>							SPACE (HI LEG)	16	
2	17	OFFICE RECEPTACLES	20	1	120					720	<u> </u>	120	1	20	SPARE	18	
	19		20	1	120							120	1	20	SPARE	20	
	21	SPACE (HI LEG)													SPACE (HI LEG)	22	
2	23	ELEVATOR PIT LTS/RECEPTACLES	20	1	120					380	3350	240	2	60	CU-2 (**)	24	3
1	25	ELEVATOR CAB (*)	20	1	120	1000	3350									26	3
	27	particular de la constantina della constantina d		1											SPACE (HI LEG)	28	
5	29	PANEL 'R2'	175	2	240					13008	3350	240	2	60	CU-3 (**)	30	3
5	31	Anguna				11658	3350									32	3
	33	SPACE (HI LEG)													SPACE (HI LEG)	34	
	35	SPARE	20	1	120						4468	240	2	50	AHU-2(**)	36	4
5	37	ELEVATOR (*)	100	3	240	9407	4468									38	4
5	39	(25 HP)						9407	T						SPACE (HI LEG)	40	
5	41	46-4								9407	750	120	1	20	EWC(***)	42	5
		CON	NECTE	D VA	<del></del>		36198	1	9407		38053		·		<u> </u>	L	
		SYS	TEM V	OLTS		120/240	V, 3 PHA	SE	*****************	· <del>1</del>		1					
		PH	ASEAN	ИPS		<del></del>	302		78	I	317	7					
NOTES	LOAD	TYPE				CONNE	CTED	NEC D	EMAND	DEMAN	ID LOAI	D	NOTE	$\alpha$			
	LIGHT		1				6435	<del> </del>	1.25		8043.75		1	• •	WITH SHUNT TRIP MECHANISM, INTERLO	ck wit	TH.
2	RECEP	TACLES	1				9630	1	220.13	1	9630	VA	ł		M SYSTEM, BREAKER TO TRIP PRIOR TO		
3	AIR C	ONDITIONING	1				13400	1	0	1	0	VA	i		ON OF ELEVATOR ROOM OR SHAFT SPRINK	CLER	
	HEATI		IS LAF	RGER			17872	1	1	1	17872		ì		REAKER SIZE WITH HVAC UNIT PLATE. COO		ATE
5	MISC.	NON-CONTINUOUS	1				36321	1	1	1	36321	VA	İ		HANICAL CONTRACTOR.	J240-22 18	
6	CONT	INUOUS	1				0		1.25	1	0	VA	i		EGFI CIRCUIT BREAKER.		
7	KITCH	EN	1			•	0	1	0.65	1	0	VA					
			1				<del></del>	1	TOTAL	1	71867						
····	· <del>!</del>	<u> </u>	1			120/240	V, 3 PHA	SE.	1		173	AMPS					
						<del></del>		**********		-	***************************************	**********	•				

PNL 'R' 400

100

PARTIAL NEW ELECTRICAL RISER DIAGRAM

R2		SURFACE MOUNTED 120/240 VOLT 1 PHASE 3 WIRE WITH GROUND												175A M NEMA 22,000	1
***************************************	CKT.			REAK		1	·		***************************************	····	REAKI	<del></del>		CKT.	
NOTES	NO.	DESCRIPTION	TRIP	POLE	VOLT	<del></del>	4		<u>c                                     </u>	VOLT	POLE	<del> </del>	DESCRIPTION	NO.	NOTE
1	1	OFFICE LIGHTING	20	1	120	820	360		<b>T</b>	120	1	20	RESTROOM RECEPTACLES	2	
1	3	OFFICE LIGHTING	20	1	120			780	540	120	1	20	OFFICE RECEPTACLES	4	2
1	5	OFFICE LIGHTING	20	1	120	740	540			120	1	20	OFFICE RECEPTACLES	6	2
1	7	CORRIDOR LIGHTING	20	11	120			920	720	120	1	20	OFFICE RECEPTACLES	8	2
	9	SPARE	20	1	120		540			120	1	20	OFFICE RECEPTACLES	10	2
	11	SPARE	20	1	120			4	540	120	1	20	OFFICE RECEPTACLES	12	2
	13	SPARE	20	1_1_	120		900			120	1	20	OFFICE RECEPTACLES	14	2
	15	SPARE	20	1	120				540	120	1	20	CLASS ROOM RECEPTACLES	16	2
	17	SPARE	20	1	120	<u> </u>	540			120	1_1_	20	CLASS ROOM RECEPTACLES	18	2
	19	SPARE	20	1	120	,			540	120	1	20	CORRIDOR/CLOSET RECEPTACLE	20	2
	21	SPARE	20	1	120					120	1	20	SPARE	22	
	23	SPARE	20	1	120				<u> </u>	120	1	20	SPARE	24	İ
<b></b>	25	SPARE	20	1	120					120	1	20	SPARE	26	İ
	27	SPARE	20	1	120					120	1	20	SPARE	28	
	29	SPARE	20	1	120	<u> </u>				120	1	20	SPARE	30	L
5	31	REFRIGERATOR	20	1	120			1200	<u> </u>	120	1	20	SPARE	32	L
5	33	COUNTER RECEPTACLE	20	1	120	500				120	1	20	SPARE	34	1
5	35	COUNTER RECEPTACLE	20	1	120			500	360	120	1	20	RECEPTACLES	36	2
	37	SPARE	20	1	120		1500			120	1	20	COPIER	38	5
4	39	AHU-3 (**)	50	2	240			4468	1900	120	1	25	ERV(**)	40	5
4	41	No. Walls Spring Spri				4468	750			120	1	20	EWC(*)	42	5
		CO	NNECTE	D VA			11658		13008				NOTE()	,,-	
		SY	STEM VO	OLTS		120/240	V, 1 PHA:	SE					*. PROVIDE GFI CIRCUIT BREAKER.		
		P	HASEAN	<b>MPS</b>			97		108				**. VERIFY BREAKER SIZE WITH HV	AC UNI	Γ PLA
NOTES	LOAD	ГҮРЕ				CONNE	CTED	NEC DE	EMAND	DEMA	NDLO	AD	COORDINATE WITH MECHANICA	L CONT	RACTO
1	LIGHT	NG					3260		1.25		4075	VA.			
2	RECEP	<b>FACLES</b>				1	6120		1	]	6120	VA			
3	AIR CC	ONDITIONING					0		0	1	0	VA			
4	HEATI	NG	IS LAF	RGER			8936		1	1	8936	VA			
5	MISC.	NON-CONTINUOUS				ļ	6350		1	1	6350	VA			
6	CONTI	NUOUS				ļ	0		1.25	1	0	VA			
7	FUTUF	RE LOAD				-	0		1	1	0	VA			
			7						TOTAL	1	25481	VA			
	······································					120/240	V, 1 PHA:	SE.	1	1	106	AMPS			
<u> </u>						1120/270	,,	<i>-</i>	<b>L</b>	<u>.l</u>	1 100		I		

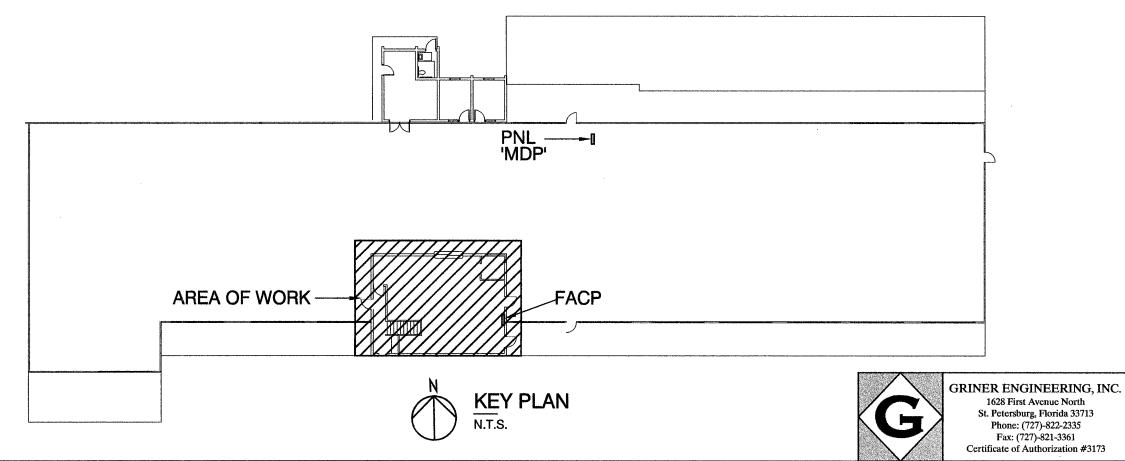
#### THE EXISTING BUILDING LOAD ON THE MAIN SWITCHBOARD IS 75 KW PEAK DEMAND OBTAINED FROM FLORIDA POWER & LIGHTING LOAD TO BE REMOVED: 1 LIGHTING 3.3 KVA 2 RECEPTACLE 5.2 KVA 3 HVAC 14.1 KVA TOTAL DELETED: 22.6 KVA NEW LOAD 6.5 KVA 2 RECEPTACLE 9.7 KVA 3 HVAC 17.8 KVA 8.1 KVA 5 ELEVATOR 28.2 KVA TOTAL NEW LOAD: 70.3 KVA LOAD 47.7 KVA

# ELECTRICAL LOAD CALCULATIONS NOTE:

N.T.S

**ELECTRICAL PANEL SCHEDULES** 

THE EXISTING ELECTRICAL SERVICE IS 120/240V, 3 PHASE WITH HIGH LEG. THE ENTIRE BUILDING IS ON 180 KW, 3PH GENERATOR. DUE TO SPECIFIC ELECTRICAL SYSTEM VOLTAGE, 120/240V, 3PH WITH HIGH LEG AND WITHOUT METERING READING FOR EACH CURRENT PHASE (A, B AND C) THE ELECTRICAL SERVICE AND THE GENERATOR CAN NOT BE DETERMINED THAT THEY HAVE SUFFICIENT CAPACITY. IF IT IS REQUIRED TO VERIFY THAT THE ELECTRICAL SERVICE OR/AND THE GENERATOR SERVICE HAVE ADEQUATE CAPACITY, THE METERING READING FOR EACH CURRENT PHASE (A, B AND C) IS REQUIRED PRIOR TO ROUGH—IN.



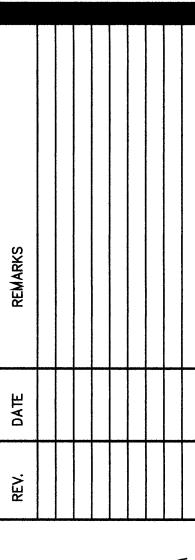
MANATEE COUNTY GOVERNMENT



Facilities Management

1112 Manatee Avenue West Suite 803, P.D. Box 1000 Bradenton, Florida 34206

(941) 748-4501 FAX (941) 742-5880



MANATEE
FLEET SERVICES
1200 26TH AVE. EAST, BRADENTON, FLORIDA

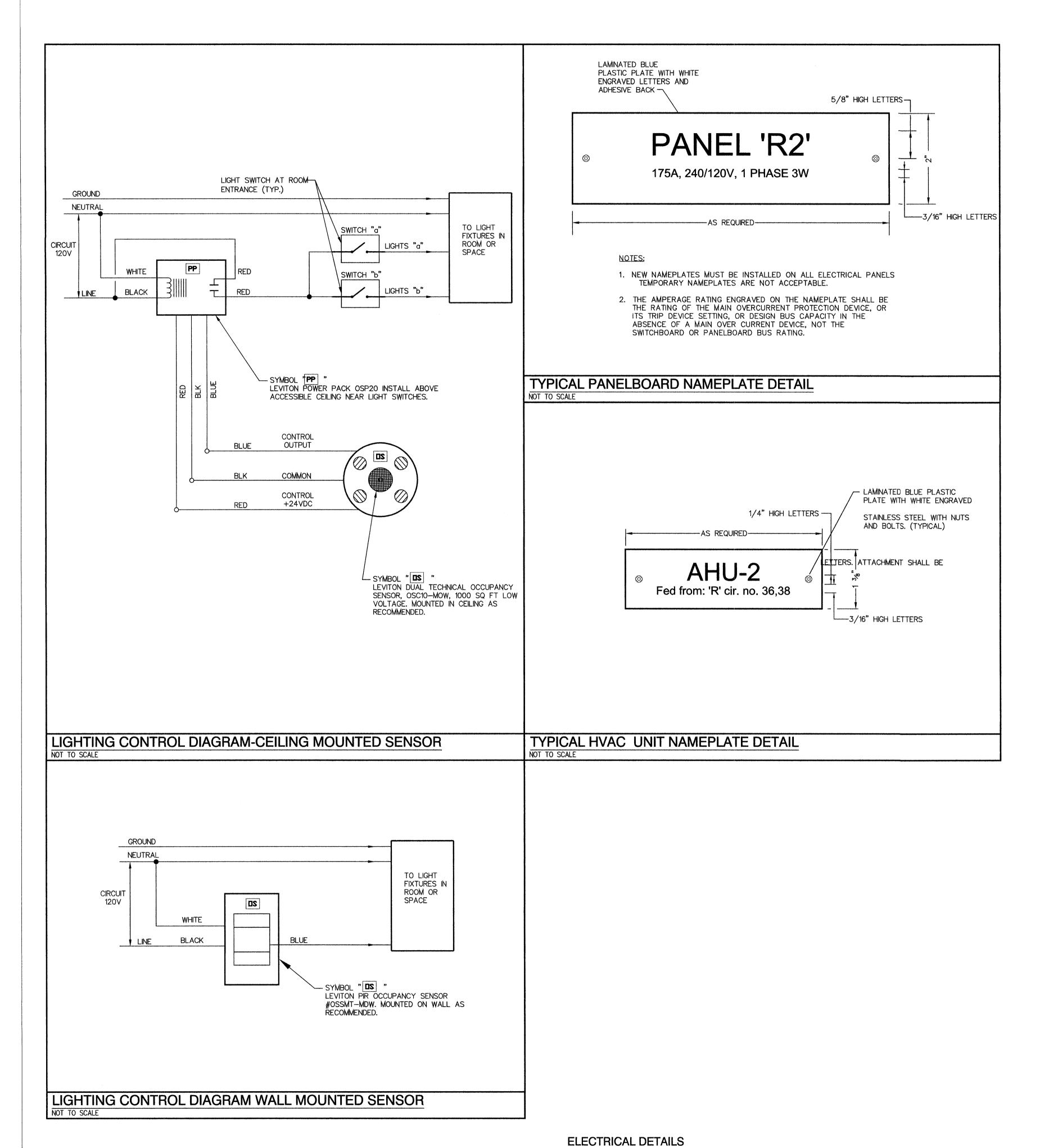
Project Number

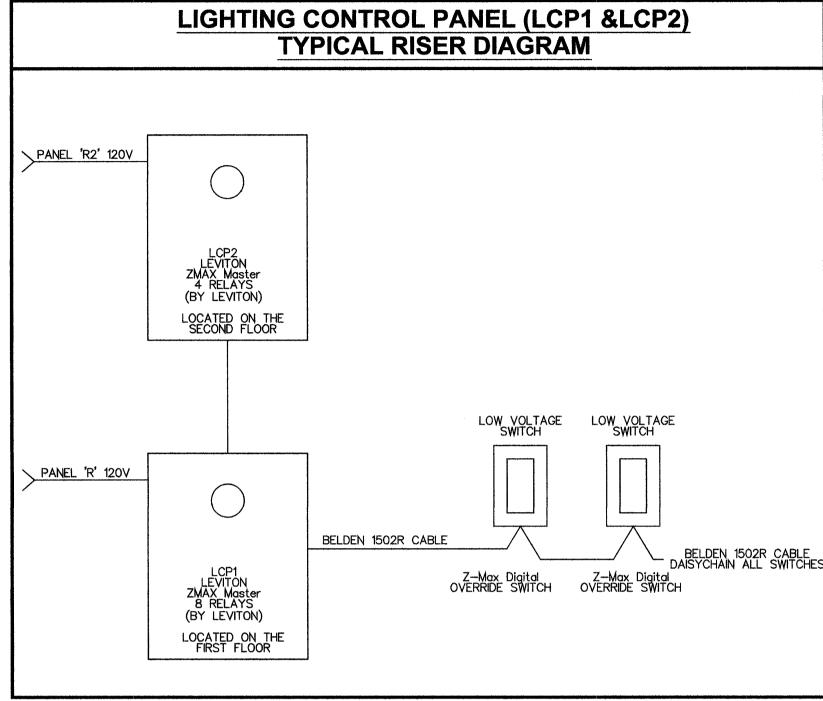
Drawn by:
Yehuda Inbar AIA
Inbar architect AIA
Checked by
Al Meronek

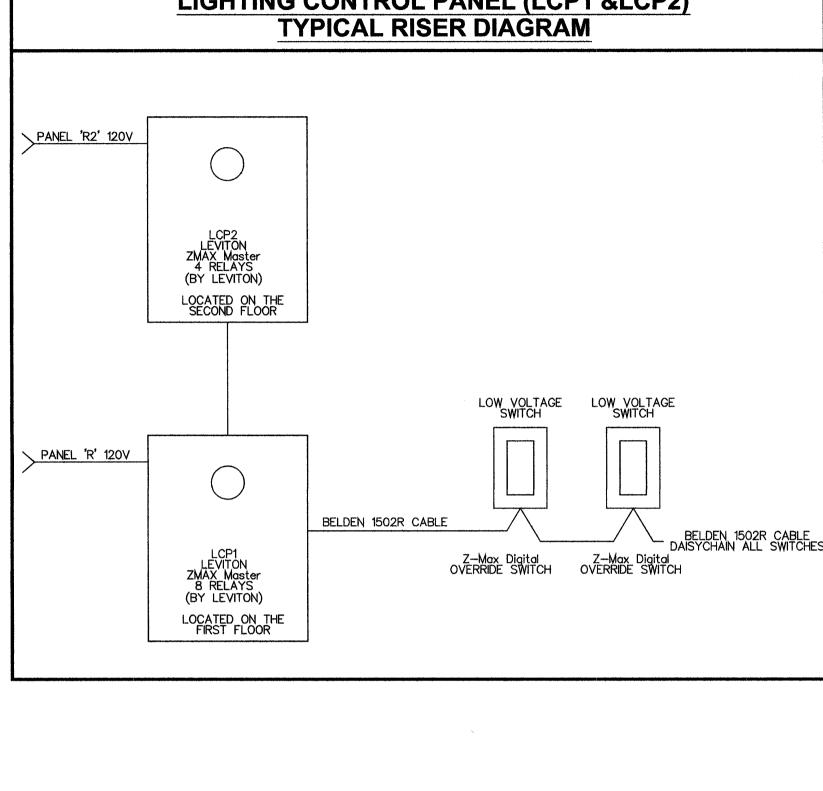
Date 11-19-08

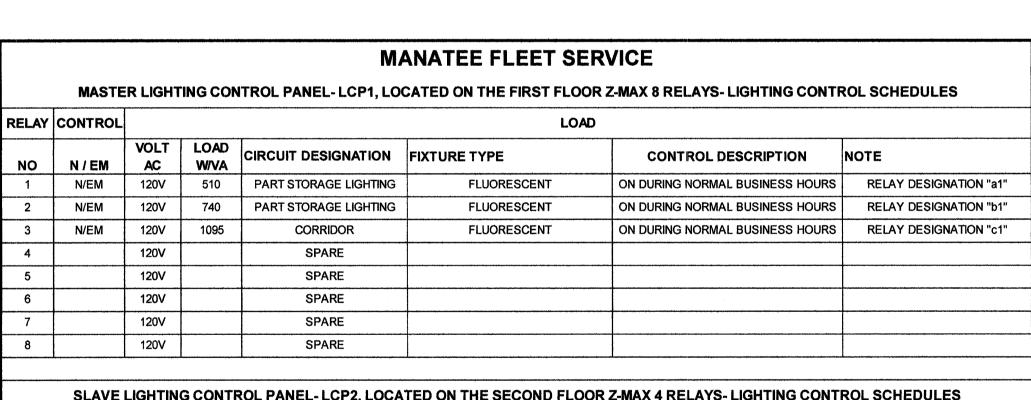
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Drawing Number









RELAY	CONTROL				LOAD		
NO	N/EM	VOLT AC	LOAD W/VA	CIRCUIT DESIGNATION	FIXTURE TYPE	CONTROL DESCRIPTION	NOTE
1	N/EM	120V	780	OFFICE LIGHTING	FLUORESCENT	ON DURING NORMAL BUSINESS HOURS	RELAY DESIGNATION "a2"
2	N/EM	120V	740	OFFICE LIGHTING	COMPACT FLUORESCENT	ON DURING NORMAL BUSINESS HOURS	RELAY DESIGNATION "b2"
3	N/EM	120V	920	CORRIDOR	FLUORESCENT	ON DURING NORMAL BUSINESS HOURS	RELAY DESIGNATION "c2"
4		120V		SPARE			

GENERAL NOTES:

1. EQUAL MANUFACTURER SHALL BE: ILC AND LIGHTING CONTROL DESIGN

- . ALL ALTERNATIVE SELECTIONS MUST BE SUBMITTED FOR PRIOR APPROVAL TO GRINER ENGINEERING FOURTEEN (14) DAYS PRIOR TO BID DATE. ANY SUBMISSIONS FOR APPROVAL MUST HAVE M.F.R. CUT SHEETS, WIRING DIAGRAM, AND CONTROL SCHEDULES AND LAYOUT FOR ENGINEER'S REVIEW OF EQUALITY OF MANUFACTURERS.
- . CONTRACTOR SHALL VERIFY ALL RELAY TYPE, FIXTURE LOAD AND DEVICE LAYOUT WITH ARCHITECT AND OWNER PRIOR TO BIDDING AND OR ORDERING. NO EXCEPTIONS. 4. COORDINATE FINAL OVERRIDE SWITCHES LOCATIONS WITH ARCHITECT AND OWNER.

Checked by Al Meronek 11-19-08 Drawing Number E-6 GRINER ENGINEERING, INC. 1628 First Avenue North St. Petersburg, Florida 33713 Phone: (727)-822-2335 Fax: (727)-821-3361 Certificate of Authorization #3173

MANATEE COUNTY

GOVERNMENT

Facilities Management

1112 Manatee Avenue West Sulte 803, P.D. Box 1000

Bradenton, Florida 34206

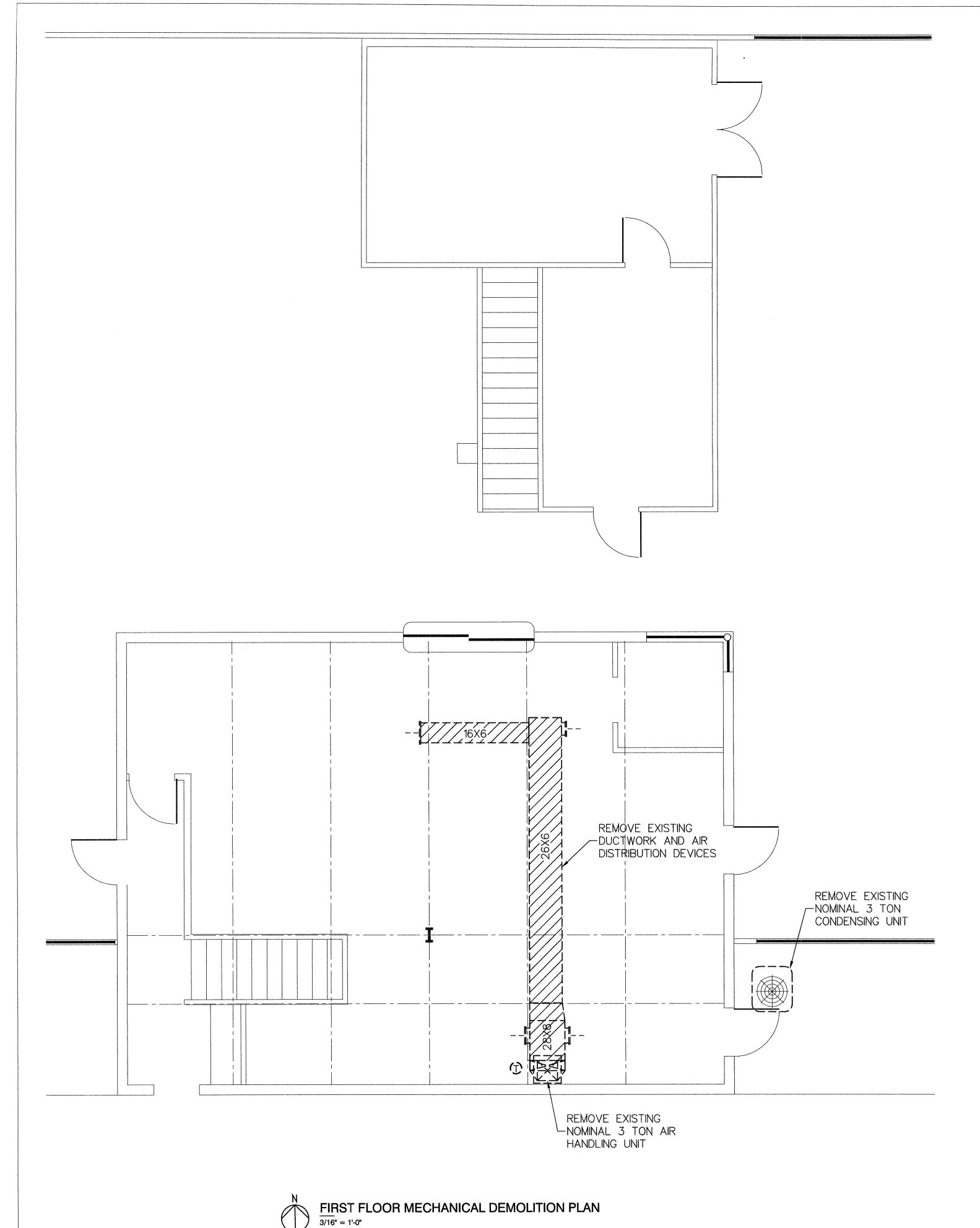
FLORIDA

EAST,

Project Number

Yehuda Inbar AIA Inbar architect AIA

(941) 748-4501 FAX (941) 742-5880



# HVAC GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE FLORIDA BUILDING CODE — MECHANICAL, NATIONAL ELECTRIC CODE, NFPA AND ALL LOCAL OPDINANCES

2. ALL WORK SHALL BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS.

3. REFER TO ARCHITECTURAL PLANS FOR EXACT CEILING GRID AND DIFFUSER LOCATIONS.

4. PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL HAVE STUDIED AND COMPARED THE CONTRACT DOCUMENTS WITH EXISTING/PROPOSED CONDITIONS AND NOT LATER THAN TEN (10) DAYS PRIOR TO THE BID OPENING SHALL REPORT TO THE ENGINEER ANY ERROR, INCONSISTENCY, OR OMISSION IN THE CONTRACT DOCUMENTS.

5. ALL METALLIC DUCTWORK SHALL BE SEALED WITH A NON-HARDENING, NON-MIGRATING MASTIC OR LIQUID ELASTIC SEALANT. PROVIDE HOT-DIPPED GALVANIZED STEEL FASTENERS, ANCHORS, RODS, STRAPS, TRIM AND ANGLES FOR SUPPORT OF DUCTWORK.

6. FABRICATE DUCT FITTINGS TO MATCH ADJOINING DUCTS AND TO COMPLY WITH DUCT REQUIREMENTS AS APPLICABLE TO FITTINGS, LIMIT ANGULAR TAPERS TO 30 DEGREES FOR CONTRACTING TAPERS AND 20 DEGREES FOR EXPANDING TAPERS.

7. PROVIDE FLEXIBLE CONNECTION FROM EACH DUCTWORK CONNECTION AIR MOVING EQUIPMENT.

8. ALL DUCTS SHOWN ARE INSIDE CLEAR DIMENSIONS.

9. PROVIDE ACCESS PANELS IN CEILINGS FOR ACCESS TO VOLUME DAMPERS, FIRE DAMPERS, DUCT MOUNTED SMOKE DETECTORS, AND WHERE REQUIRED FOR MAINTENANCE OF ALL FANS AND MECHANICAL EQUIPMENT. PANELS SHALL HAVE A FIRE RATING EQUAL TO THE PENETRATED ASSEMBLY. PROVIDE FIRE DAMPERS AT ALL DUCT PENETRATIONS OF FIREWALLS.

10. INSULATE OUTSIDE AIR, SUPPLY, AND RETURN DUCTWORK WITH INSULATION, WHICH HAS A MINIMUM R-VALUE OF 6. ALL DUCTWORK INSULATION, FITTINGS, COVERS AND FINISHES SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50 AND ALL BE IN COMPLIANCE WITH NFPA 90A.

11. LOCATE ALL THERMOSTATS 48" AFF UNLESS OTHERWISE NOTED. EXACT LOCATION OF ALL THERMOSTATS SHALL BE APPROVED BY THE ARCHITECT AND THE ENGINEER.

12. CONTRACTOR SHALL CLEAN ALL COILS AND REPLACE ALL FILTERS AND BELTS AT SUBSTANTIAL COMPLETION.

13. AIR CONDITIONING EQUIPMENT SHALL BE AS SPECIFIED. ARCHITECT AND ENGINEER WILL REVIEW ANY SUBSTITUTION FOR COMPATIBILITY.

14. DUCT SIZES AND EQUIPMENT OPENINGS THRU ROOFS, SLABS AND WALL PARTITIONS SHALL SUIT EQUIPMENT FURNISHED. SEE SHOP DRAWINGS FOR EQUIPMENT DIMENSIONS.

15. PROVIDE "P" TRAP AT AIR HANDLER UNITS.

16. SLEEVE AND SEAL ALL PIPING PASSING THROUGH WALLS, FLOORS AND ROOF UNLESS NOTED OTHERWISE.

17. ALL CUTTING, PATCHING AND REPAIR WORK SHALL BE THE RESPONSIBILITY OF THE TRADE INVOLVED.

18. A COPY OF THE FINAL TEST AND BALANCE REPORT, REVIEWED AND ACCEPTED BY THE ENGINEER OF RECORD SHALL BE MADE AVAILABLE AT THE FINAL CONSTRUCTION SURVEY. NO FINAL INSPECTION OF HVAC CONSTRUCTION BY THE ENGINEER OF RECORD WILL BE CONDUCTED PRIOR TO RECEIPT AND ACCEPTANCE OF A FINAL TEST AND BALANCE REPORT.

19. THE MAXIMUM ALLOWABLE LEAKAGE FOR THE DUCTWORK IS

20. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND SUBMITTALS FOR HVAC EQUIPMENT AND DUCTWORK SHOWN ON THE PLANS AND SPECIFICATIONS FOR THE ENGINEERS APPROVAL. THE ENGINEER MAY REQUIRE THE CONTRACTOR TO REDO ANY WORK, WHICH WAS NOT APPROVED, OR THE ENGINEER MAY REQUIRE A CREDIT TO THE OWNER. PROVIDE A SET OF AS BUILTS AFTER THE JOB IS COMPLETED. THIS SET SHALL BE CONTINUOUSLY UPDATED DURING CONSTRUCTION.

21. PROVIDE AIR TURNING VANES AT ALL 90—DEGREE ELBOWS. PROVIDE VOLUME DAMPERS AT EACH BRANCH TAKEOFF AS INDICATED IN THE SMACNA "HVAC DUCT CONSTRUCTION STANDARDS".

22. PROVIDE FILTER RACKS WHICH ARE ACCESSIBLE FOR MAINTENANCE AND SEALED AIR TIGHT.

23. CONTRACTOR SHALL INSTALL HVAC SYSTEMS AS REQUIRED BY THE MANUFACTURER AND ENGINEER TO INSURE QUIET OPERATION, NO UNDUE VIBRATION OR SOUND SHALL BE TRANSMITTED TO BUILDING STRUCTURE AND OCCUPIED AREAS. IF THE EQUIPMENT INSTALLED HAS A HIGHER SOUND PRESSURE LEVEL THAN THE EQUIPMENT SPECIFIED, THEN IT WILL BE THE CONTRACTORS AND THE MANUFACTURES RESPONSIBILITY TO ELIMINATE ANY ADDITIONAL NOISE TRANSMISSION.

# GENERAL SYMBOLS

śś" ∩C¯	UNDER CUT DOOR (INCHES GIVEN)
- <b>\_</b> -	EXHAUST/RETUEN AIRFLOW DIRECTION
	SUPPLY AIRFLOW DIRECTION
?	KEYED NOTE
ф	DIAMETER
<del> </del>	CONNECTION POINT
AD-1 100	- AIR DEVICE IDENTIFICATION
6X6 <del>-</del>	— AIRFLOW — AIR DEVICE NECK SIZE
<b>S</b>	TEMPERATURE SENSOR
$\bigcirc$	THERMOSTAT (MTD. 4'-0" AFF)

DUCTWORK LEGEND EXISTING DUCTWORK SIZE IN INCHES (PLAN DIM. FIRST) 18X12 3 NEW DUCTWORK SIZE IN INCHES (PLAN DIM. FIRST) > 18X12 < R.A. CEILING DIFFUSER (SUPPLY, RETURN, & EXHAUST) NESTED SQUARE/RECTANGULAR BRANCH TAKE OFF SPIN-IN FITTING WITH VOLUME DAMPER AND EXTRACTOR \$ T3 DUCT TRANSITION (RECTANGLE TO RECTANGLE) **EXE** DUCT TRANSITION (RECTANGLE TO ROUND) DUCT TEE WITH TURNING VANES DUCT ELBOW UP DUCT ELBOW DOWN 90 ELBOW WITH TURNING VANES 90 RADIUS ELBOW (R=1.5W) 45 BRANCH TAKE-OFF WITH VOLUME DAMPER DUCT ACCESS DOOR FIRE DAMPER (VERTICAL POSITION) FIRE DAMPER (HORIZONTAL POSITION) MOTORIZED VOLUME DAMPER IN DUCTWORK

MANUAL VOLUME DAMPER IN DUCTWORK

DUCT MOUNTED SMOKE DETECTOR

SIDEWALL RETURN GRILLE

SIDEWALL SUPPLY GRILLE

FLEXIBLE DUCT CONNECTOR

## PIPING AND VALVES LEGEND

REF REFRIGERANT PIPE

CONDENSATE DRAIN

LEBOW - 90 DEGREE

ELBOW - 45 DEGREE

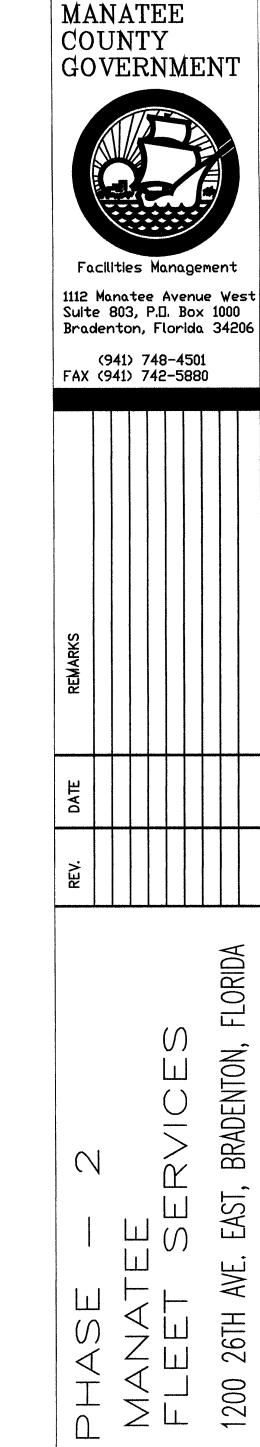
CEBOW - TURNED UP

CEELBOW - TURNED DOWN

CAP

UNION

**-**∿-



Project Number

Drawn by: Yehuda Inbar AIA Inbar architect AIA

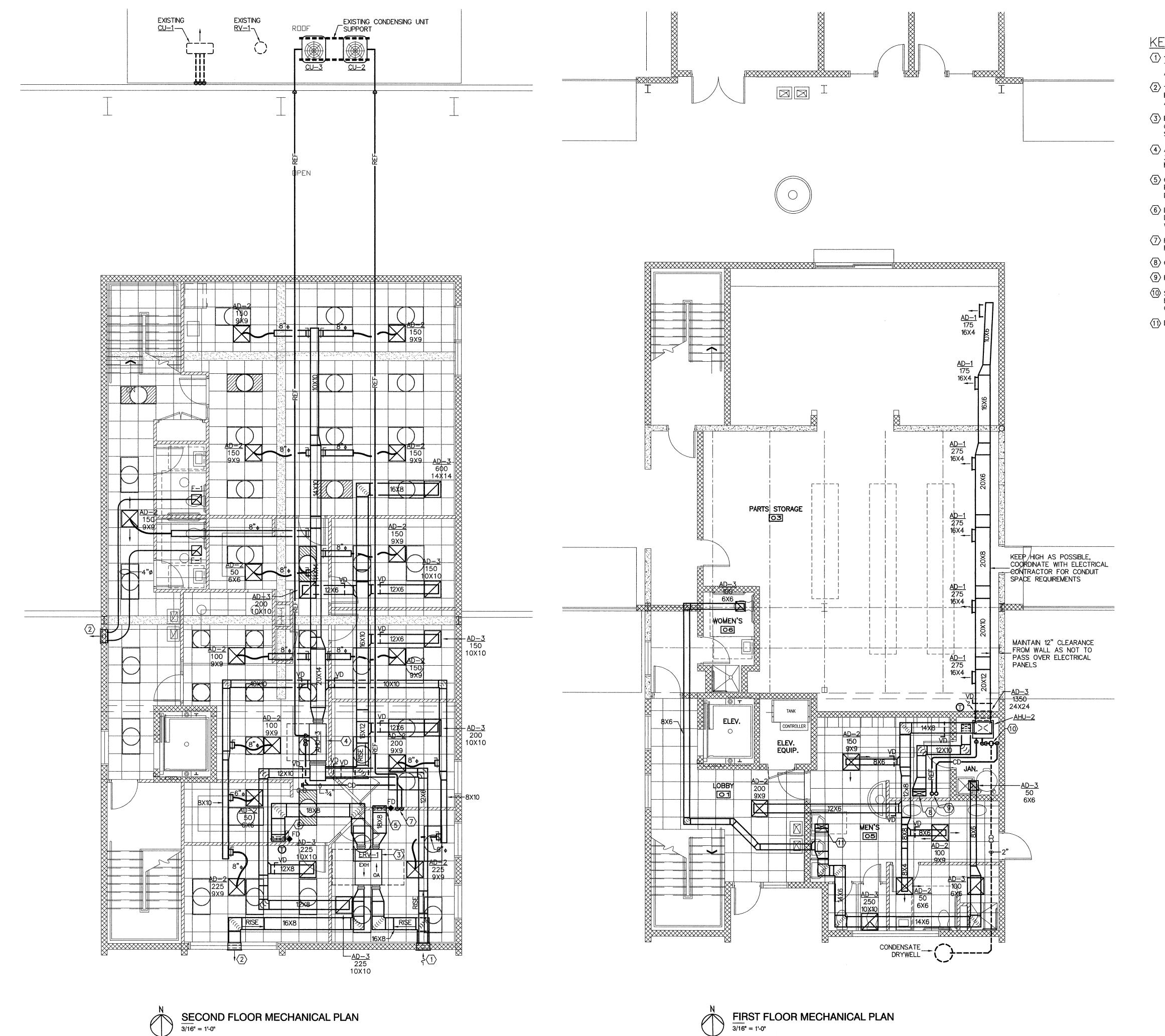
Checked by Al Meronek

11-19-08

Scale

Set
Drawing Number





# KEYED NOTES:

- 1) 16X16 O.A. INTAKE AIR LOUVER MOUNTED AT BOT. OF STRUCTURAL TIE BEAM, FLA. PRODUCT APPROVED, GREENHECK MODEL 635D OR APPROVED EQUAL.
- 2 16X16 EXHAUST AIR LOUVER MOUNTED AT BOT. OF STRUCTURAL TIE BEAM, FLA. PRODUCT APPROVED, GREENHECK MODEL 635D OR APPROVED EQUAL.
- (3) ENERGY RECOVERY VENTILATOR MOUNTED 12" ABOVE LAY-IN CEILING, MAINTAIN 30" MIN. CLEARANCE ON EACH SIDE OF UNIT FOR SERVICE AND MAINTENANCE CLEARANCE.
- 4 AIR HANDLING UNIT MOUNTED 12" ABOVE LAY—IN CEILING, MAINTAIN 30" MIN. CLEARANCE ON SERVICE SIDE OF UNIT FOR SERVICE AND MAINTENANCE CLEARANCE.
- 5 OUTSIDE SUPPLY DUCT DOWN IN CHASE WALL TO 1ST FLOOR.
  PROVIDE FIRE DAMPER AT FLOOR PENETRATION WITH DUCT ACCESS
  DOOR AND WALL ACCESS PANEL AT 12" A.F.F.
- 6 EXHAUST DUCT UP IN CHASE WALL FROM 1ST FLOOR. PROVIDE FIRE DAMPER AT FLOOR PENETRATION WITH DUCT ACCESS DOOR AND WALL ACCESS PANEL AT 12" A.F.F.
- 7 REFRIGERANT PIPING AND CONDENSATE DRAIN DOWN IN WALL TO 1ST FLOOR.
- (8) OUTSIDE AIR DUCT FROM 2ND FLOOR.
- (9) REFRIGERANT AND CONDENSATE PIPING FROM 2ND FLOOR.
- (10) SPILL 34" CD INTO 2" HUB DRAIN WITH FUNNEL AND INTEGRAL BACKFLOW PREVENTER. EXTEND BELOW FLOOR SLAB TO CONDENSATE DRYWELL.
- (1) EXHAUST DUCT UP TO 2ND FLOOR.

MANATEE COUNTY GOVERNMENT



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Suite 803, P.D. Box 1000

Bradenton, Florida 34206

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REV.	DATE	REMARKS

VANATEE FLEET SERVICES 200 26TH AVE. EAST, BRADENTON, FLORIDA

Project Number

awn by: Yehuda Inbar AIA Inbar architect AIA

Checked by Al Meronek

Date 11-19-08

Scale

Drawing Num

M-2

G

| Certificate of Authorization #3173 | GRINER ENGINEERING, INC. | Date | 11/19/2008 | Drawn | JWY | Designed | JWY | Designed | Jwy | Designed | Job no. | 08067 | Date | 11/19/2008 | Drawn | JWY | Designed | Jwy | Designed | Job no. | 08067 | Date | 11/19/2008 | Drawn | JWY | Designed | Jwy | Designed | Job no. | 08067 | Date | 11/19/2008 | Drawn | Jwy | Designed | Jwy | Designed | Job no. | 08067 | Date | 11/19/2008 | Drawn | Jwy | Designed | Jwy | Designed | Job no. | 08067 | Date | 11/19/2008 | Drawn | Jwy | Designed | Jwy | Designed | Job no. | 08067 | Date | 11/19/2008 | Drawn | Jwy | Designed | Jwy | Designed | Job no. | 08067 | Date | 11/19/2008 | Drawn | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed | Jwy | Designed

		<del></del>		
SPLIT SYSTEM AIR	HANDLIN	NG UNIT S	CHEDULE	
AIR HANDLER NO.		AHU-2	AHU-3	
AREA SERVED		1ST FLOOR	2ND FLOOR	
ARRANGEMENT		VERTICAL	HORIZONTAL	
NOMINAL TONNAGE	TONS	5	5	
AIRFLOW	CFM	1950	1950	
OUTSIDE AIR	CFM	600	250	
EXT. STATIC PRESSURE	IN. H <sub>2</sub> 0	0.50	0.50	
TOTAL CAPACITY	MBH	63.8	63.8	
SENSIBLE CAPACITY	MBH	48.9	48.9	
ENT. AIR TEMP.	DB/WB	76.0/63.9	76.0/63.9	
LVG. AIR TEMP.	DB/WB	52.0/52.0	52.0/52.0	
HEAT CAPACITY	KW/STEPS	8/1	8/1	
HEAT CAPACITY (HEAT PUMP)	MBH	N/A	N/A	
FAN MOTOR	HP	1	1	
FAN MOTOR	FLA	3.9	3.9	
VOLTAGE	V/PH/HZ	240/1/60	240/1/60	
MCA	AMPS	47.0	47.0	
MOCP	AMPS	50	50	
MANUFACTURER		LENNOX	LENNOX	
MODEL NO.		CBX32MV- 060-230	CBX32MV- 060-230	
NOTES		1,2,3,4	1,2,3,4	
NOTES:				

1. FURNISH WITH SINGLE POINT POWER CONNECTION. FURNISH WITH VARIABLE SPEED MOTOR.
 FURNISH WITH CHECK AND EXPANSION VALVE.

4. ELECTRIC HEAT KW INPUT PER SCHEDULED VOLTAGE.
5. HEAT PUMP

DESIGN CONDITIONS

SUMMER: OUTDOORS 92 DB, 79 WB INDOORS 75 DB, 50 %RH

OUTDOORS 39 DB INDOORS 70 DB

ONDENSING UNIT NO.		CU-2	CU-3	
AMBIENT TEMP.	DB DEG. F.	95	95	
COMPRESSORS	NO.	1	1	
STEPS OF CAPACITY	NO.	1	1	
CIRCUITS	NO.	1	1	
ELECTRIC	V/PH/HZ	240/1/60	240/1/60	
COMPRESSOR AMPACITY	RLA	26.2	26.2	
FAN MOTOR AMPACITY	FLA	1.7	1.7	
VCA .	AMPS	34.5	34.5	
VOCP	AMPS	60	60	
EFFICIENCY	SEER	13.5	13.5	
EFFICIENCY	HSPF	N/A	N/A	
REFRIGERANT	TYPE	R-410A	R-410A	
MANUFACTURER		LENNOX	LENNOX	
MODEL NO.		13ACX-060-230	13ACX-060-230	
NOTES		1	1	

ENERGY RECONERY UNIT	NO.	ERV-1	
SERVICE		AHU-1	
SUPPLY AIR			
FAN CFM	CFM	600	
E.S.P.	IN. H <sub>2</sub> 0	0.50	
MOTOR	BHP/HP	0.13/0.33	
FAN	RPM	1048	
EXHAUST AIR			
FAN CFM	CFM	500	
E.SP	IN. H <sub>2</sub> 0	0.5	
MOTOR	BHP/HP	0.08/0.33	
FAN	RPM	935	
SUMMER PERFORMANCE			
OUTDOOR AIR	DB/WB	92/79	
RETURN AIR	DB/WB	75.0/62.6	
SUPPLY AIR	DB/WB/GR	80.1/68.3/84	
WINTER PERFORMANCE			
OUTDOOR AIR	DB/WB/GR	39/32.7	
RETURN AIR	DB/WB	72.0/60.1	
SUPPLY AIR	DB/WB/GR	62.1/53.3/46	
UNIT VOLTAGE	V/PH/HZ	115/1/60	
ELEC. INPUT	MCA/MOCP	19.3/25	
MANUFACTURER		GREENHECK	
MODEL NO.		ERV-251S-20-A	
NOTES		1, 2	

NOTES:

1. PROVIDE WITH SINGLE POINT POWER CONNECTION.

3. PROVIDE SUPLLY AND RETURN AIR FILTERS (2"-30%).

MARK	TYPE	MATERIAL	FINISH	MANUF.	MODEL NO.	NOTES
AD-1	SUPPLY AIR REGISTER, WALL MOUNTED, DOUBLE DEFLECTION LOUVERED FACE	ALUM.	WHITE	PRICE	620D	1, 2, 3, 4, 5
AD-2	SUPPLY AIR DIFFUSER, 24X24 LAY—IN T—BAR MOUNTED, LOUVERED FACE	ALUM.	WHITE	PRICE	AMD	1, 2, 3, 4, 5
AD-3	RETURN AIR GRILLE, SURFACE MOUNTED, LOUVERED FACE	ALUM.	WHITE	PRICE	630D	1, 2, 3, 5

1. NOISE CRITERIA NOT TO EXCEED 25.
2. CONTRACTOR TO COORDINATE BORDER WITH CEILING SYSTEM
3. REFER TO FLOOR PLAN FOR CFM.
4. ALL AIR DEVICES ARE 4 WAY THROW, UNLESS NOTED OTHERWISE ON DRAWING.
5. ALL AIR DEVICES TO BE SUPPLIED WITH O.B.D.

FAN SCHEDULE										
UNIT NUMBER		F-1								
AREA SERVED		TOILETS								
FAN TYPE		CEILING								
SERVICE		EXHAUST								
AIR QUANTITY	CFM	50								
EXT. STATIC PRESS.	IN. H20	0.375								
FAN SPEED	RPM	675								
DRIVE		DIRECT								
SONES		3.0								
MOTOR		45 WATTS								
ELECTRICAL	V/ø/HZ	115/1/60								
MANUFACTURER		GREENHECK								
MODEL		SP-B70								
NOTES		1,2,3,4,5								
NOTES:  1,2,3,4,5  NOTES:  1. PROVIDE FAN WITH PLUG AND CORD MEANS OF DISCONNECT. 2. PROVIDE MOTOR WITH THERMAL OVERLOADS. 3. PROVIDE REMOVABLE WHITE POLYMER CEILING GRILLE. 4. PROVIDE TIME DELAY RELAY, ADJUST FOR 60 SECONDS RUN TIME. 5. INTERLOCK FAN WITH LIGHT SWITCH. 6. FURNISH WITH ROOF CURB.										

IAQ VENTILATION SCHEDULE  ASHRAE STANDARD 62.1—2007													
SPACE DESCRIPTION  AREA (SF)  PEOPLE (#)  PER SF  PER PERSON  CFM   DIVERSITY   CFM   REQUIRED   SPECIFIED   EXHAUST   FOR BLE   POS. PRE													
PARTS DEPARTMENT	1492	10	0.06	5	NO	139	500	0	500				
LOBBY	350	0	0.06	0	NO	21	100	0	100				
TOILETS	424	0	0	0	NO	0	0	500	-500				
IST FLOOR TOTALS					_	160	600	500	100				
OFFICE	2150	10	0.06	5	NO	179	200	0	200				
CORRIDOR	378	0	0.06	0	NO	23	50	0	50				
TOILETS	94	0	0	0	NO	0	0	100	-100				
2ND FLOOR TOTALS					-	202	250	100	150				

MANATEE COUNTY GOVERNMENT



Facilities Management 1112 Manatee Avenue West Suite 803, P.O. Box 1000 Bradenton, Florida 34206

(941) 748-4501 FAX (941) 742-5880

REMARKS					
DATE					
REV.					

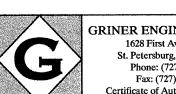
FLORIDA

Project Number

Yehuda Inbar AIA Inbar architect AIA

Checked by Al Meronek

Date 11-19-08



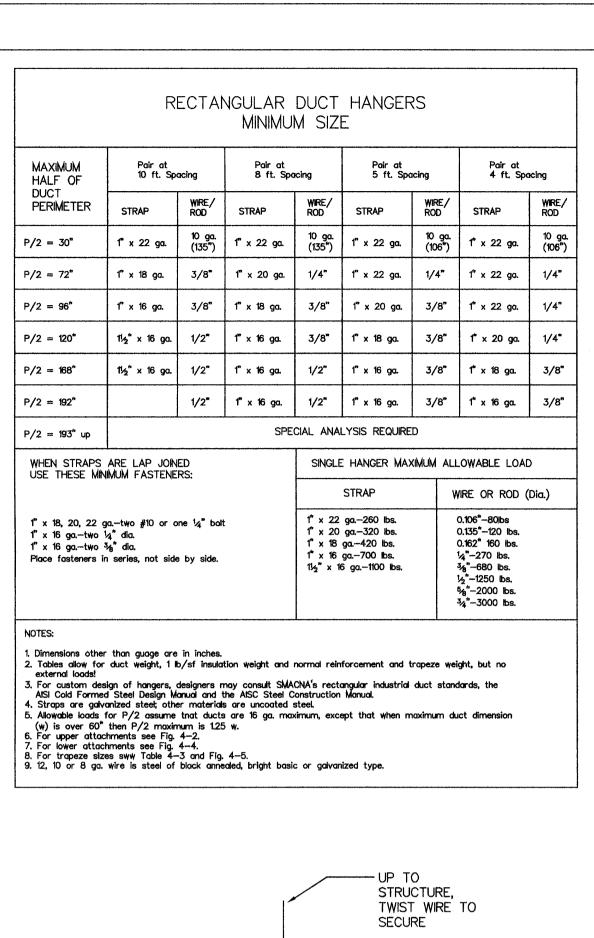
 GRINER ENGINEERING, INC.
 Date
 11/19/2008

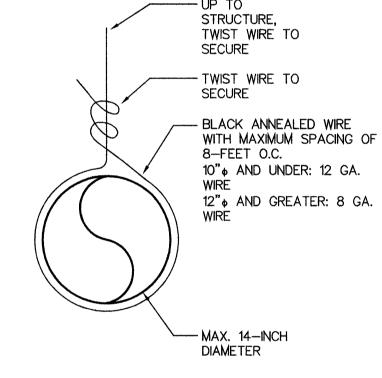
 1628 First Avenue North
 Drawn
 JWY

 St. Petersburg, Florida 33713
 Designed
 JWY

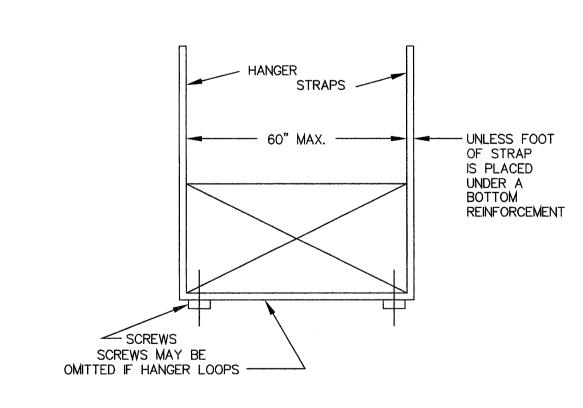
 Phone: (727)-822-2335
 Revised
 Revised

 Certificate of Authorization #3173
 Job no.
 08067



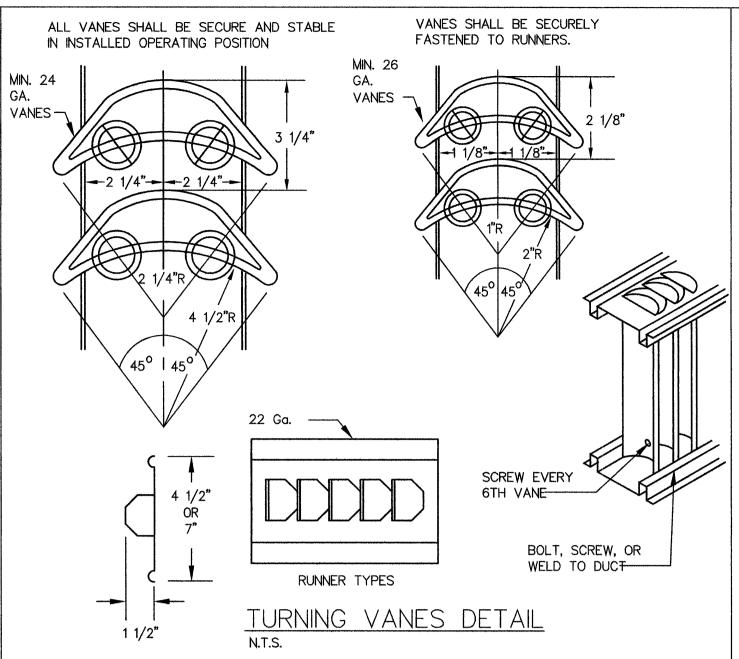


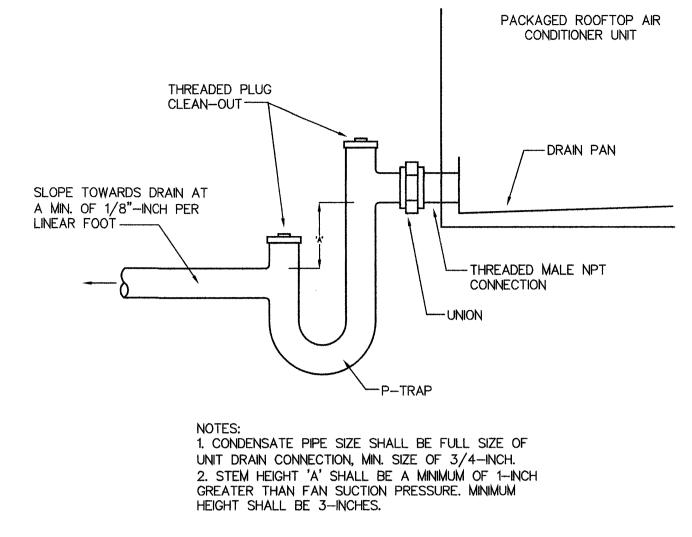
ROUND METAL DUCT



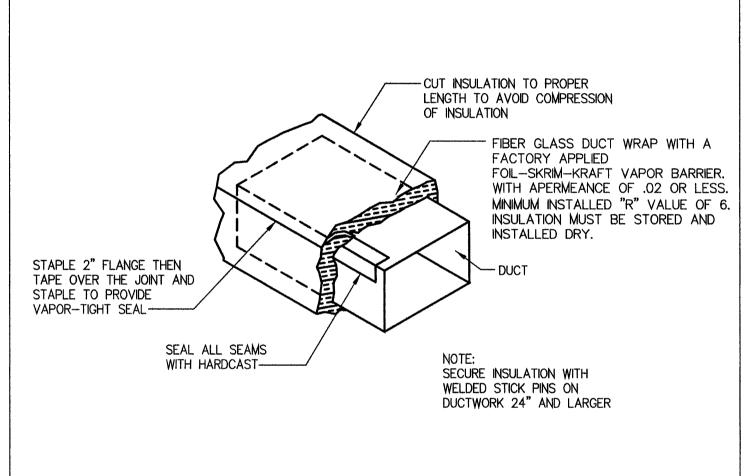
SINGLE RECTANGULAR METAL DUCT

**DUCTWORK SUPPORT DETAILS** 

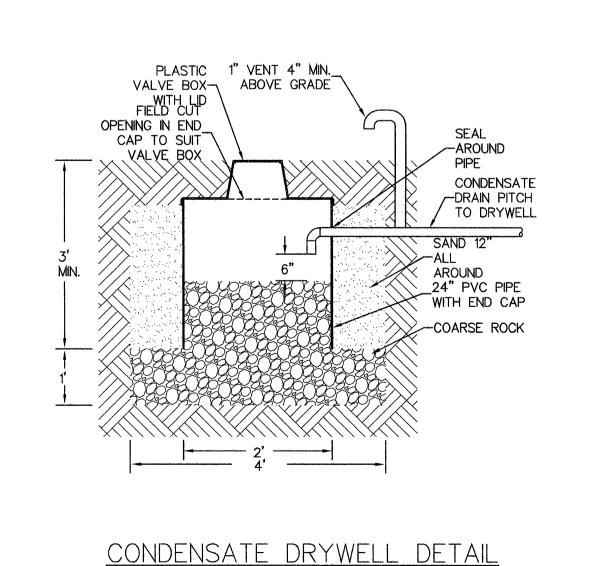


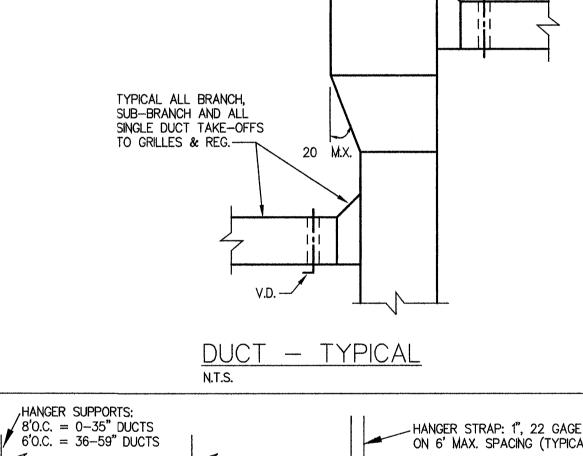


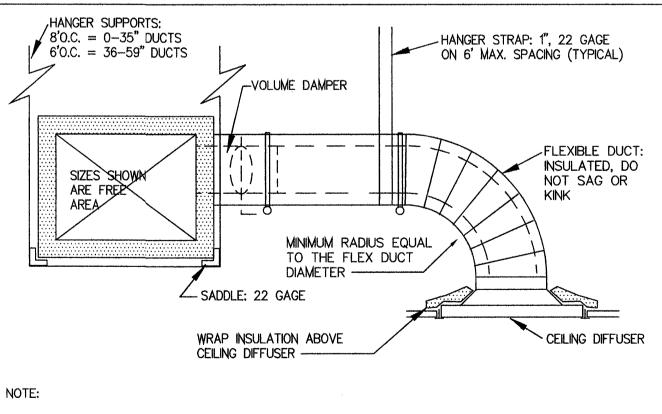
CONDENSATE DRAIN TRAP DETAIL



TYPICAL DUCT WRAPPING DETAIL





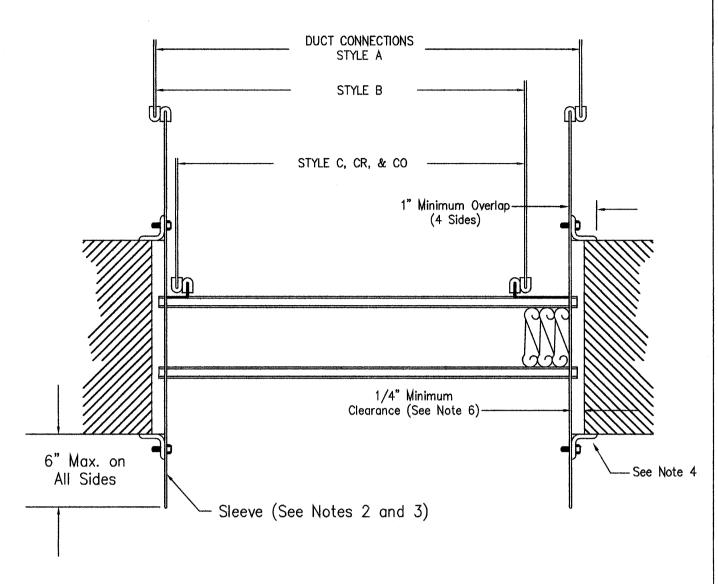


1. HANGER SUPPORTS SHALL BE AS NOTED ABOVE FOR DUCTS UP TO 24", AND WITH TRAPEZE HANGERS FOR DUCTS 25" AND ABOVE. 2. ROUND BRANCH DUCT CONNECTIONS SHALL BE WITH "FLEXMASTER" FLDE SPIN-IN FITTINGS, DAMPER AND

3. FLEXIBLE ROUND DUCT SHALL INCLUDE: HELIX COIL FLEXIBLE DUCTING, A 1-1/2" BLANKET INSULATION WITH MINIMUM 6.0 R VALUE, AND A ALUMINUM FOIL OUTER VAPOR BARRIER, AND BE UL-181 APPROVED, 25 OR LESS FLAME SPREAD AND 50 OR LESS SMOKE DEVELOPED. EQUAL TO "FLEXMASTER" TYPE 3M.

DUCT RUNOUT TO DIFFUSER DETAIL
N.T.S.

#### INSTALLATION INSTRUCTIONS - HORIZONTAL 11/2 HOUR U.L. CLASSIFIED GALVANIZED STEEL CURTAIN TYPE IBD FIRE DAMPERS SINGLE OR MULTIPLE SECTION



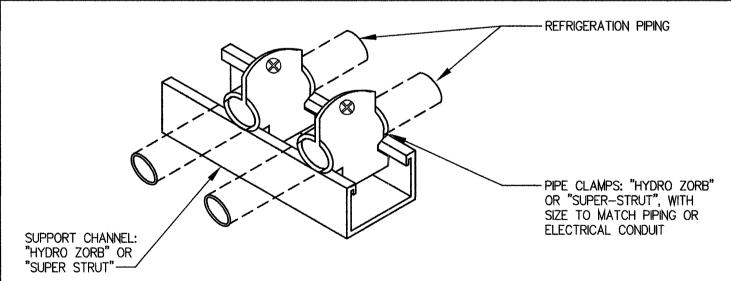
1. OPENING IN WALL SHALL BE A MINIMUM 1/8" PER FOOT LARGER THAN OVERALL SIZE OF DAMPER AND SLEEVE ASSEMBLY FOR GALVANIZED STEEL DAMPERS AND A MINIMUM 3/16" PER FOOT FOR STAINLESS STEEL DAMPERS. MAXIMUM OPENING NOT TO EXCEED 1/8" PER FOOT PLUS ONE INCH FOR GALVANIZED STEEL DAMPERS AND 3/16" PER FOOT FOR STAINLESS STEEL DAMAPERS. OPENING SHALL NOT BE LESS THAN 1/4" LARGER FOR ANY SIZE DAMPER AND ASSEMBLY.

2. SLEEVE GAGE SHALL BE AT LEAST EQUAL TO THE GAGE OF THE DUCT AS DEFINED BY THE APPROPRIATE SMACNA DUCT CONSTRUCTION STANDARD AND DESCRIBED IN NFPA 90A WHEN ONE OR MORE OF THE FOLLOWING DUCT-SLEEVE CONNECTIONS ARE USED (PLAIN "S" SLIP, HEMMED "S" SLIP, STANDING "S" SLIP, REINFORCED STANDING "S" SLIP, INSIDE SLIP JOINT, AND DOUBLE "S" SLIP).

3. IF ANY OTHER DUCT-SLEEVE CONNECTIONS ARE USED, SLEEVE SHALL BE MINIMUM OF 16 GAGE FOR DAMPERS UP TO 36"W X 24"H AND 14 GAGE IF DAMPER WIDTH EXCEEDS 36" OR HEIGHT EXCEEDS 24".

4. MOUNTING ANGLES SHALL BE A MINIMUM OF 1-1/2" X 1-1/2" X 14 GAGE AND BOLTED WITH 1/4" - 20 BOLT, 1/2" LONG WELDS, 3/16" RIVETS, OR NO. 10 SCREWS TO SLEEVE AT A MAXIMUM SPACING OF 6" FOR STAINLESS STEEL AND 8" FOR GALVANIZED WITH A MINIMUM OF TWO CONNECTIONS IN EACH SIDE, TOP, AND BOTTOM (SEE ILLUSTRATION). MOUNTING ANGLES FOR GALVANIZED DAMPERS 50"W X 60"H OR 60"W X 50"H AND LESS CAN BE A MINIMUM OF 1-1/2" X 1-1/2" X 16 GAGE. MAXIMUM FASTENER SPACING FOR 16 GAGE MOUNTING ANGLES IS 6" CENTER TO CENTER FOR HORIZONTAL INSTALLATION. MOUNTING ANGLES SHALL OVERLAP WALL A MINIMUM OF ONE INCH.

#### FIRE DAMPER INSTALLATION DETAIL N.T.S.



NOTES:

1. ALL REFRIGERANT PIPING SHALL BE HARD COPPER, TYPE "L" WITH LONG RADIUS ELBOWS. 2. STRAPS SHALL BE SINGLE PIECE, WROUGHT COPPER.

3. INSULATE SUCTION LINE WITH 3/4" ARMAFLEX INSULATION FULL LENGTH. DO NOT SPLIT DURING INSTALLATION. SEAL BUTT JOINTS WITH ARMAFLEX SEALANT, AND APPLY ARMAFLEX PRESERVATIVE ON ALL INSULATION ABOVE THE ROOF LINE. PROVIDE FIRE-RATED ARMAFLEX INSULATION IN ALL RETURN AIR PLENUMS.

4. ROUTING OFF ALL REFRIGERANT PIPING SHALL BE PLUMB, AND SHALL RUN TRUE WITH THE BUILDING LINES. HORIZONTAL RUNS OF SUCTION LINES OVER 25' SHALL BE PITCHED "ONE-HALF" BUBBLE TOWARD THE COMPRESSOR, OR OIL RETURN.

5. SUPPORT OF ALL PIPING AT COMPRESSORS, CONDENSERS, AND AIR HANDLING UNITS SHALL BE AS SHOWN ABOVE. SUPPORT OF PIPING IN BETWEEN THE UNITS SHALL BE WITH STRAP MATERIAL, USING ARMAFLEX INSULATION AS SADDLES. NO METAL TO METAL CONTACT. 6. BRAZE REFRIGERANT PIPING WITH FLOW OF DRY NITROGEN DURING BRAZING. 7. SOLDER SHALL BE 15% SILVER "SIL-FOS", OR EQUAL.

8. CHANGE FILTER-DRIER CORES AFTER 30 DAYS OF OPERATION.

REFRIGERANT PIPING DETAIL

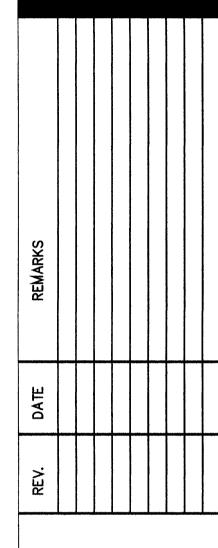
GRINER ENGINEERING, INC. 1628 First Avenue North St. Petersburg, Florida 33713 Phone: (727)-822-2335 Fax: (727)-821-3361 Certificate of Authorization #3173

MANATEE COUNTY GOVERNMENT



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FLORIDA BRADENTON EAST 26TH 200

Project Number

Drawn by: Yehuda Inbar AIA Inbar architect AIA

Checked by Al Meronek 11-19-08

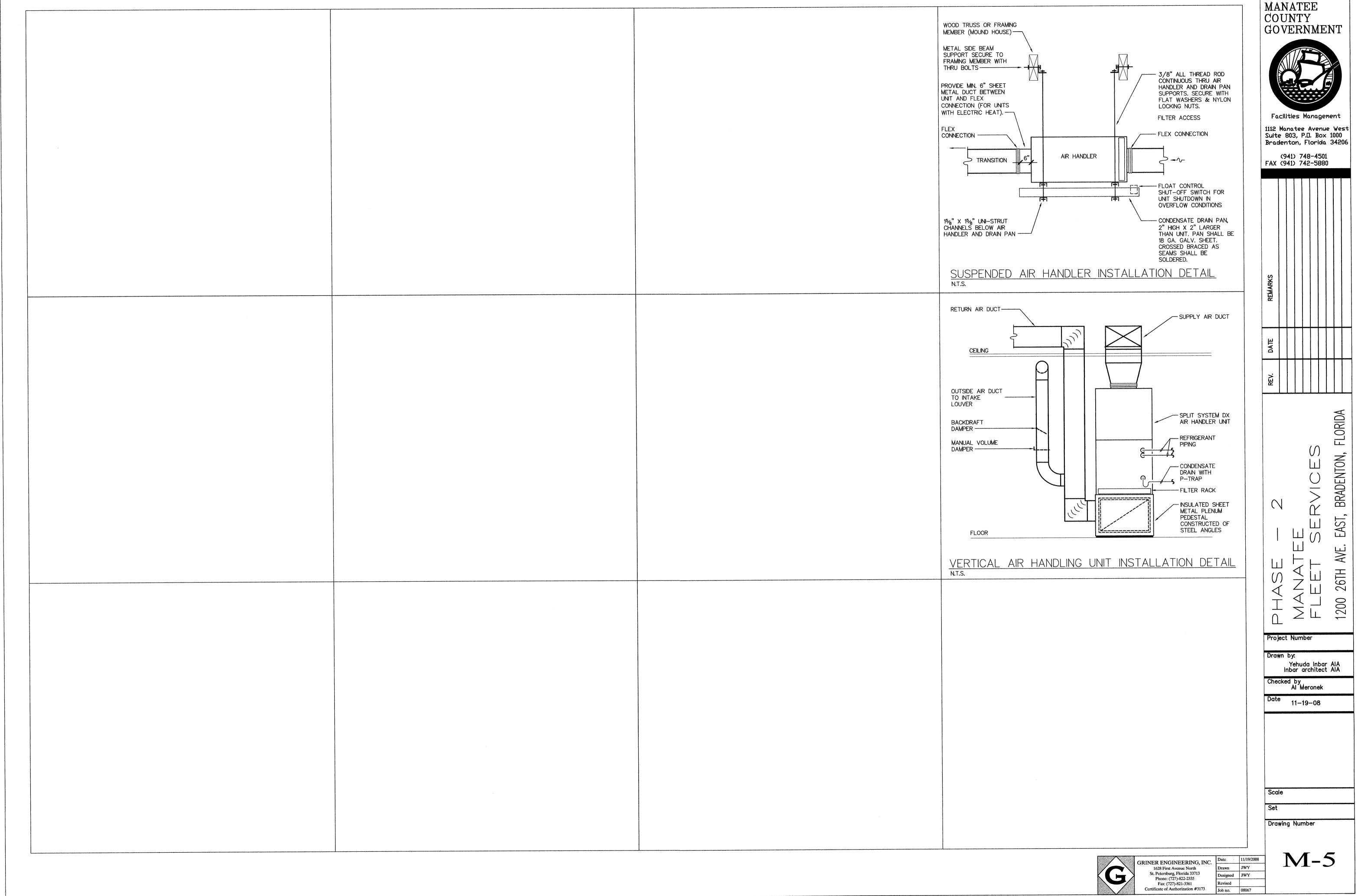
Scale

Drawing Number

Drawn JWY

Designed JWY





MANATEE

## MECHANICAL SPECIFICATION

SECTION 150

COMMON REQUIREMENTS FOR MECHANICAL WORK

1.0 GENERAL

1.01 SCOPE OF DIVISION: WORK SHALL INCLUDE ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY FOR A COMPLETE AND PROPERLY FUNCTIONING MECHANICAL INSTALLATION IN ACCORDANCE WITH REQUIREMENTS OF; THE FLORIDA BUILDING CODE 2004 — MECHANICAL AND NATIONAL FIRE PROTECTION ASSOCIATION (NFPA).

1.02 DRAWINGS: ARCHITECTURAL AND STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER MECHANICAL DRAWINGS WITH REFERENCE TO THE BUILDING CONSTRUCTION. MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT AND EXTENT OF WORK. EXACT LOCATIONS AND ARRANGEMENTS OF MATERIALS AND EQUIPMENT SHALL BE DETERMINED, WITH THE APPROVAL OF THE ENGINEER, AS WORK PROGRESSES TO CONFORM IN THE BEST POSSIBLE MANNER WITH THE SURROUNDINGS AND WITH THE ADJOINING WORK OF OTHER

1.03 COORDINATION OF WORK: COORDINATE ALL WORK, PRIOR TO INSTALLATION, WITH WORK OF OTHER TRADES AND WITH ARCHITECTURAL AND STRUCTURAL FEATURES TO PRECLUDE INTERFERENCE'S BETWEEN THE WORK OF DIFFERENT TRADES AND TO INSURE NECESSARY CLEARANCES AT CROSSOVERS AND EQUIPMENT.

1.04 SHOP DRAWINGS: SUBMIT TO ENGINEER FOR APPROVAL, BEFORE COMMENCING WORK, SHOP DRAWINGS FOR ALL MECHANICAL MATERIALS AND EQUIPMENT TO BE PROVIDED.

A. PRESENT DATA IN DETAIL EQUAL TO OR GREATER THAN THAT GIVEN IN ITEM SPECIFICATIONS AND INCLUDE ALL WEIGHTS, DEFLECTIONS, SPEEDS, VELOCITIES, PRESSURE DROPS, OPERATING TEMPERATURES, OPERATING CURVES, TEMPERATURE RANGES, SOUND RATINGS, DIMENSIONS, SIZES, MANUFACTURERS' NAMES, MODEL NUMBERS, TYPES OF MATERIAL USED, OPERATING PRESSURES, FULL LOAD AMPERAGES, STARTING AMPERAGES, FOULING FACTORS, CAPACITIES, SET POINTS, CHEMICAL COMPOSITIONS, CERTIFICATIONS AND ENDORSEMENTS, OPERATING VOLTAGES, THICKNESSES, GAUGES AND ALL OTHER RELATED.

#### 1.05 RECORD DRAWINGS:

A. MAINTAIN ONE EXTRA SET OF BLACK—LINE, WHITE PRINT DRAWINGS FOR USE AS RECORD DRAWINGS. RECORDS SHALL BE KEPT DAILY, USING COLORED PENCIL. AS THE WORK IS COMPLETED, RELEVANT INFORMATION SHALL BE TRANSFERRED TO A REPRODUCIBLE SET, AND COPIES MADE SHALL BE GIVEN TO THE ENGINEER.

1.06 FEES AND PERMIT:

A. THE CONTRACTOR SHALL OBTAIN ALL PERMITS, INSPECTIONS, AND APPROVALS AS REQUIRED BY ALL AUTHORITIES HAVING JURISDICTION

2.0 PRODUCTS

2.01 GENERAL:

A. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND WITHOUT BLEMISH OR

B. EQUIPMENT AND MATERIALS SHALL BE PRODUCTS WHICH WILL MEET WITH THE ACCEPTANCE OF THE AGENCY INSPECTING THE WORK. WHERE ACCEPTANCE IS CONTINGENT UPON HAVING THE PRODUCTS EXAMINED, TESTED, AND CERTIFIED BY UNDERWRITERS OR OTHER RECOGNIZED TESTING LABORATORY, THE PRODUCT SHALL BE SO EXAMINED, TESTED, AND CERTIFIED.

2.02 MOTORS: UNLESS SPECIFICALLY SPECIFIED OTHERWISE IN THE SECTION COVERING THE DRIVEN EQUIPMENT (OR THE EQUIPMENT DRIVES), MOTORS SHALL COMPLY WITH THE FOLLOWING:

A. SCHEDULED HORSEPOWER: THE HORSEPOWER SCHEDULED OR SPECIFIED ARE THOSE NOMINAL SIZES ESTIMATED TO BE REQUIRED BY THE EQUIPMENT WHEN OPERATING AT SPECIFIED DUTIES AND EFFICIENCIES. IF THE ACTUAL HORSEPOWER FOR THE EQUIPMENT FURNISHED DIFFERS FROM THAT SPECIFIED OR SHOWN ON THE DRAWINGS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT PROPER SIZE FEEDERS, BREAKERS, STARTERS, ETC. ARE PROVIDED AT NO CHANGE IN CONTRACT PRICE.

SECTION 15400

INSULATION: THERMAL

1.0 GENERAL

1.01 SCOPE: PROVIDE PLANT, LABOR, AND MATERIALS TO INSULATE EQUIPMENT, PIPING AND MISCELLANEOUS ITEMS IN THE PIPING AND DUCT SYSTEMS AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN.

1.02 NFPA 90A: ALL MATERIALS AND ADHESIVES USED IN OR ON DUCTWORK SHALL CONFORM TO THE REQUIREMENTS OF NFPA 90A AS TO FLAME SPREAD AND SMOKE DEVELOPED RATINGS.

2.0 PRODUCTS

2.01 DUCTWORK INSULATION MATERIALS:

A. INSULATION, FIBERGLASS BLANKET WRAP (TYPE DI-1): MANVILLE MICROLITE FIBERGLASS DUCT INSULATION WITH REINFORCED FOIL SCRIM KRAFT VAPOR BARRIER WITH A MINIMUM THERMAL RESISTANCE OF 6.0.

3.0 EXECUTION

3.01 DUCTWORK

A. GENERAL:

B. INTERIOR: ALL SUPPLY RETURN, AND OUTSIDE AIR DUCTWORK SHALL BE INSULATED EXTERNALLY WITH FIBERGLASS BLANKET WRAP. OVERLAP INTERNAL INSULATION A MINIMUM OF ONE FOOT BEYOND ANY SUCH INTERNAL INSULATION, AND VAPOR SEAL RAW END AS SPECIFIED HEREIN FOR JOINTS. ADHERE DUCT INSULATION USING ADHESIVE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHERE DUCT WIDTH EXCEEDS TWENTY—FOUR INCHES (24"), THE INSULATION SHALL BE ADDITIONALLY SECURED TO THE BOTTOM OF THE DUCT USING MECHANICAL FASTENERS SPACED ONE FOOT (1') ON CENTER. INSULATION SHALL BE APPLIED WITH EDGES TIGHTLY BUTTED, AND ALL JOINTS AND BREAKS IN THE VAPOR BARRIER SEALED USING GLASS FABRIC AND MASTIC APPLIED IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS.

SECTION 15717

SPLIT SYSTEM AIR CONDITIONER: DIRECT EXPANSION (DX), ELECTRIC HEAT

1.0 GENERAL

1.01 SCOPE: FURNISH AND INSTALL SPLIT SYSTEM UNITS OF THE TYPES, SIZES AND CAPACITIES INDICATED ON DRAWINGS.

1.02 MANUFACTURER: BASIS OF DESIGN IS SIMILAR TO THAT SHOWN ON DRAWINGS. ACCEPTABLE: LENNOX, YORK, CARRIER, TRANE OR APPROVED EQUAL.

2.0 PRODUCTS

A. PRODUCT DESCRIPTION: SPLIT SYSTEM CONSISTING OF AIR HANDLING UNIT AND CONDENSING UNIT INCLUDING CABINET, EVAPORATOR FAN, REFRIGERANT COOLING COIL, COMPRESSOR, REFRIGERATION CIRCUIT, CONDENSER, ELECTRIC HEATING COIL, AIR FILTERS, CONTROLS, AIR HANDLING UNIT ACCESSORIES, CONDENSING UNIT ACCESSORIES, AND REFRIGERATION SPECIALTIES.

2.1 AIR HANDLING UNIT

A. CABINET

1. PANELS: CONSTRUCTED OF GALVANIZED STEEL WITH BAKED ENAMEL FINISH AND ACCESS PANELS.

2. INSULATION: FACTORY APPLIED TO EACH SURFACE TO INSULATE ENTIRE CABINET WITH EDGES PROTECTED FROM EROSION.

B. EVAPORATOR FAN: FORWARD CURVED CENTRIFUGAL TYPE, RESILIENTLY MOUNTED MOTOR PERMANENTLY LUBRICATED WITH BUILT—IN THERMAL OVERLOAD PROTECTION. VARIABLE SPEED ELECTRONICALLY COMMUTATED MOTOR FOR SOFT START/STOP OPERATION.

C. EVAPORATOR COIL: CONSTRUCTED OF COPPER TUBES EXPANDED ONTO ALUMINUM FINS. FACTORY LEAK TESTED UNDER WATER. REMOVABLE, PVC CONSTRUCTION, DOUBLE—SLOPED DRAIN PAN WITH PIPING CONNECTIONS ON BOTH SIDES.

D. REFRIGERATION SYSTEM: SINGLE REFRIGERATION CIRCUIT CONTROLLED BY FACTORY INSTALLED THERMAL EXPANSION VALVE.

E. ELECTRIC HEATING COIL: HELICAL NICKEL—CHROME RESISTANCE WIRE COIL HEATING ELEMENTS WITH REFRACTORY CERAMIC SUPPORT BUSHINGS EASILY ACCESSIBLE WITH AUTOMATIC RESET THERMAL CUT—OUT, BUILT—IN CONTACTORS, GALVANIZED STEEL FRAME.

F. AIR FILTERS: 1 INCH 3/4THICK GLASS FIBER DISPOSABLE MEDIA IN METAL FRAMES, 25 TO 30 PERCENT EFFICIENCY BASED ON ASHRAE 52.1.

A. GENERAL: FACTORY ASSEMBLED AND TESTED AIR COOLED CONDENSING UNITS, CONSISTING OF CASING, COMPRESSORS, CONDENSERS, COILS, CONDENSER FANS

B. UNIT CASINGS: EXPOSED CASING SURFACES CONSTRUCTED OF GALVANIZED STEEL WITH MANUFACTURER'S STANDARD BAKED ENAMEL FINISH. DESIGNED FOR OUTDOOR INSTALLATION AND COMPLETE WITH WEATHER PROTECTION FOR COMPONENTS AND CONTROLS, AND COMPLETE WITH REMOVABLE PANELS FOR REQUIRED ACCESS TO COMPRESSORS, CONTROLS, CONDENSER FANS, MOTORS, AND DRIVES.

C. COMPRESSOR: SINGLE REFRIGERATION CIRCUIT WITH ROTARY OR SEMI-HERMETIC RECIPROCATING TYPE COMPRESSORS, RESILIENTLY MOUNTED, WITH POSITIVE LUBRICATION, AND INTERNAL MOTOR OVERLOAD PROTECTION.

D. REFRIGERANT: R410A. CFC'S ARE PROHIBITED.

AND MOTORS, AND UNIT CONTROLS.

E. COIL: CONSTRUCTED OF COPPER TUBING MECHANICALLY BONDED TO ALUMINUM FINS, FACTORY LEAK AND PRESSURE TESTED.

F. CONTROLS: FURNISH OPERATING AND SAFETY CONTROLS INCLUDING HIGH AND LOW PRESSURE CUTOUTS. CONTROL TRANSFORMER. FURNISH MAGNETIC CONTACTORS FOR COMPRESSOR AND CONDENSER FAN MOTORS.

G. CONDENSER FANS AND DRIVES: DIRECT DRIVE PROPELLER FANS STATICALLY AND DYNAMICALLY BALANCED. WIRED TO OPERATE WITH COMPRESSOR. PERMANENTLY LUBRICATED BALL BEARING TYPE MOTORS WITH BUILT—IN THERMAL OVERLOAD PROTECTION.

H. CONDENSING UNIT ACCESSORIES: FURNISH THE FOLLOWING ACCESSORIES:

1. TIME DELAY RELAY.

2. ANTI-SHORT CYCLE TIMER.

3. CONDENSER COIL GUARD: CONDENSER FAN OPENINGS FURNISHED WITH PVC COATED STEEL WIRE SAFETY GUARDS.

2.4 CONTROLS

A. THERMOSTAT: 7 DAY PROGRAMMABLE ELECTRONIC SPACE THERMOSTAT WITH SINGLE STAGE HEATING AND SINGLE STAGE COOLING WITH AUTOMATIC CHANGEOVER AND HEATING SETBACK AND COOLING SETUP CAPABILITY. FURNISH SYSTEM SELECTOR SWITCH OFF—HEAT—AUTO—COOL AND FAN CONTROL SWITCH, AUTO—ON.

3.0 EXECUTION

3.01 EQUIPMENT PLACEMENT: AIR HANDLING AND CONDENSING EQUIPMENT SHALL BE LOCATED ESSENTIALLY AS SHOWN ON DRAWINGS; HOWEVER, ACTUAL PLACEMENT OF THE UNIT SHALL BE VERIFIED USING FIELD MEASUREMENTS AND DATA RELATING TO THE UNITS APPROVED FOR ACTUAL INSTALLATION ON THIS PROJECT.

3.02 DUCT CONNECTIONS: SUPPLY AND RETURN DUCTS SHALL BE CONNECTED TO THEIR RESPECTIVE AIR HANDLER USING FLEXIBLE CONNECTORS.

3.03 PIPING: CONNECT ALL PIPING TO UNIT AS SHOWN BY FLOW DIAGRAM ON DRAWINGS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ARRANGE PIPING TO ALLOW EASY ACCESS TO ITEMS FOR ROUTINE MAINTENANCE AND TO ALLOW ADEQUATE CLEARANCES FROM RELATED EQUIPMENT IN THE SPACE.

SECTION 15800

AIR DISTRIBUTION EQUIPMENT

1.0 GENERAL

1.01 SCOPE: PROVIDE ALL AIR DISTRIBUTION DEVICES AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN FOR A COMPLETE AND OPERABLE SYSTEM.

1.02 RELATION TO OTHER WORK: COORDINATE WITH WORK OF THE CEILING, DRYWALL, AND PLASTERING TRADES AS REQUIRED TO INSURE AN ORDERLY PROGRESSION OF WORK AND A FIRST CLASS FINISHED SYSTEM WITH RESPECT TO PLACEMENT, ALIGNMENT, FINISH, GENERAL FIT, AND ABSENCE OF CONFLICT WITH LIGHTING SYSTEMS AND FIRE PROTECTION SYSTEMS.

1.03 DESIGN CONDITIONS:

A. ACOUSTICAL: NOISE PRODUCED AT EACH DIFFUSER, REGISTER, GRILLE, OR OTHER AIR DISTRIBUTION DEVICE SHALL NOT EXCEED A NOISE CRITERIA LEVEL OF 25 NC.

B. PRESSURE DROP ACROSS ANY AIR DISTRIBUTION DEVICE SHALL NOT EXCEED 0.10 IN W.G. STATIC.

1.04 MANUFACTURER: TITUS, PRICE, METAL AIRE, OR APPROVED EQUAL.

MANUFACTURERS STYLE AND SERIES NUMBERS INDICATED ARE EXAMPLES OF PRODUCTS TO BE PROVIDED.

1.05 APPEARANCE: EACH AIR DISTRIBUTION DEVICE WHICH HAS A PORTION THEREOF (FRAME, CORE, ETC.) EXPOSED TO VIEW IN THE FINISHED AREA SHALL HAVE A FACTORY APPLIED FINISH WHICH MATCHES AND IS COMPATIBLE WITH THE COLOR OF THE SURROUNDING SURFACE ON WHICH THE DEVICE IS INSTALLED. COLORS MUST BE APPROVED BY ARCHITECT PRIOR TO DEVICE FABRICATION.

2.0 PRODUCTS

2.01 CEILING MOUNTED CONDITIONED AIR SUPPLY DIFFUSERS, RETURN AIR AND EXHAUST AIR REGISTERS.

A. DESIGNATED ON DRAWINGS BY THE MANNER OF INDICATED SYSTEM FUNCTION FOR THE DEVICE.

B. SPONGE RUBBER GASKETS.

C. ALUMINUM OR STEEL, AS SPECIFIED.

D. COMPANION ADJUSTABLE VOLUME DAMPERS.

3.0 EXECUTION

A. INSTALL NEATLY WHERE INDICATED IN ACCORD WITH MANUFACTURER'S RECOMMENDATIONS AND IN ACCORD WITH SMACNA RECOMMENDATIONS AND AS OTHERWISE INDICATED.

B. PROPERLY TEST, BALANCE AND ADJUST TO PRODUCE QUIET, DRAFTLESS OPERATING TO BEST DEGREE POSSIBLE.

3.02 SQUARE AIR DEVICES: SURFACE MOUNTED DIFFUSERS SHALL BE SUPPORTED BY THE DUCT RUNOUTS OR DROPS WHERE SHEET METAL DUCTS ARE INDICATED AND BY SEPARATE HANGERS WHERE FLEX RUNOUTS ARE INDICATED. ALL RECTANGULAR CEILING DIFFUSERS SHALL BE INSTALLED WITH THEIR LINES PARALLEL AND PERPENDICULAR TO THE BUILDING LINE AND PROPERLY ALIGNED WITH CEILING.

SECTION 15830

ENERGY RECOVERY VENTILATOR

1.0 GENER

1.01 ENERGY RECOVERY VENTILATOR SHALL BE AS MANUFACTURED BY "GREENHECK" OR APPROVED EQUAL, PROVIDED ALL SPECIFICATIONS ARE MET. GREENHECK MODEL ERV EQUIPMENT IS USED AS THE BASIS OF DESIGN. UNITS SHALL BE LISTED PER ANSI/UL 1995, HEATING AND COOLING EQUIPMENT. ENERGY TRANSFER RATINGS OF THE ENERGY RECOVERY WHEEL SHALL BE ARI CERTIFIED. VENTILATORS SHALL BEAR THE AMCA CERTIFIED RATING SEALS FOR AIR PERFORMANCE. PERFORMANCE SHALL BE AS SCHEDULED ON PLANS. OUTDOOR AIR SHALL NOT MIX WITH EXHAUST AIR IN A COMMON PLENUM. UNIT CASING AND FRAMES

1.02 UNIT SHALL BE OF INTERNAL FRAME TYPE CONSTRUCTION OF GALVANIZED STEEL. FRAME AND PANELS SHALL BE G90 GALVANIZED STEEL. ALL METAL—TO—METAL SEAMS SHALL BE SEALED, REQUIRING NO CAULKING AT JOB

2.0 PRODUCTS

2.01 INSULATION

A. UNIT CASING TO BE INSULATED WITH 1 INCH FIBERGLASS WITH FOIL—SCRIM—KRAFT FACING, INSULATION SHALL MEET REQUIREMENTS OF NFPA 90A AND TESTED TO MEET UL 181 EROSION REQUIREMENTS. INSULATION SHALL BE SECURED TO UNIT WITH WATERPROOF ADHESIVE AND PERMANENT MECHANICAL FASTENERS,

2.02 ENERGY RECOVERY WHEEL

A. WHEEL SHALL BE OF THE ENTHALPY TYPE FOR BOTH SENSIBLE AND LATENT HEAT RECOVERY AND BE DESIGNED TO INSURE LAMINAR FLOW. ENERGY TRANSFER RATINGS MUST BE ARI CERTIFIED TO STANDARD 1060 AND BEAR THE ARI CERTIFICATION SYMBOL FOR ARI AIR—TO—AIR ENERGY RECOVERY VENTILATION EQUIPMENT CERTIFICATION PROGRAM BASED ON ARI 1060. RATINGS "IN ACCORDANCE WITH 1060" WITHOUT CERTIFICATION ARE NOT ACCEPTABLE. DESICCANT SHALL BE SILICA GEL FOR MAXIMUM LATENT ENERGY TRANSFER. WHEEL SHALL BE CONSTRUCTED OF LIGHTWEIGHT POLYMER MEDIA TO MINIMIZE SHAFT AND BEARING LOADS. POLYMER MEDIA SHALL BE MOUNTED IN A STAINLESS STEEL ROTOR FOR CORROSION RESISTANCE.

B. WHEEL DESIGN SHALL CONSIST OF REMOVABLE SEGMENTS (FOR WHEELS GREATER THAN 26 INCHES IN DIAMETER) FOR EASE OF SERVICE AND/OR CLEANING. SILICA GEL DESICCANT SHALL BE PERMANENTLY BONDED TO WHEEL MEDIA TO RETAIN LATENT HEAT RECOVERY AFTER CLEANING. WHEELS WITH SPRAYED ON DESICCANT COATINGS ARE NOT ACCEPTABLE. WHEELS WITH DESICCANT APPLIED AFTER WHEEL FORMATION ARE NOT ACCEPTABLE. ENERGY RECOVERY DEVICE SHALL TRANSFER MOISTURE ENTIRELY IN THE VAPOR PHASE.

C. ENERGY RECOVERY DRIVE BELT MATERIAL SHALL BE HIGH STRENGTH URETHANE AND SHALL BE FACTORY INSTALLED IN A PRE-STRETCHED STATE, ELIMINATING THE NEED FOR FIELD BELT TENSION ADJUSTMENT. LINK STYLE BELTS ARE NOT ACCEPTABLE.

2.03 ACCESS DOORS

A. ALL COMPONENTS SHALL BE EASILY ACCESSIBLE THROUGH REMOVABLE DOORS FOR EXHAUST, SUPPLY, FILTER, AND DAMPER COMPARTMENTS. ENERGY RECOVERY WHEELS SHALL BE MOUNTED IN A SLIDE—OUT TRACK FOR EASE OF INSPECTION, REMOVAL, AND CLEANING.

2.04 FAN SECTIONS

A. CENTRIFUGAL FANS TO BE DOUBLE WIDTH, DOUBLE INLET, SINGLE FAN FORWARD CURVED TYPE. ALL BLOWER WHEELS SHALL BE STATICALLY AND DYNAMICALLY BALANCED. GROUND AND POLISHED STEEL FAN SHAFTS SHALL BE MOUNTED IN PERMANENTLY LUBRICATED, SEALED BALL BEARING PILLOW BLOCKS. BEARINGS SHALL BE SELECTED FOR A MINIMUM (L10) LIFE IN EXCESS OF 100,000 HOURS AT MAXIMUM CATALOGED OPERATING SPEEDS. SEPARATE MOTORS FOR EXHAUST AND SUPPLY BLOWERS SHALL BE PROVIDED. ADJUSTABLE SHEAVES ON BELT—DRIVEN FANS WITH MOTORS LESS THAN 10 HP SHALL ALLOW INDEPENDENT BALANCING OF EXHAUST AND SUPPLY AIRFLOWS. OPTIONAL SPEED CONTROLLERS ON IRECT—DRIVE FANS SHALL ALLOW INDEPENDENT BALANCING OF EXHAUST AND SUPPLY AIRFLOWS. FAN AND MOTOR ASSEMBLIES ARE MOUNTED TO UNIT BASE WITH NEOPRENE ISOLATORS AS STANDARD. FANS SHALL BE LOCATED IN DRAW—THROUGH POSITION IN REFERENCE TO THE ENERGY RECOVERY WHEEL.

2.05 MOTORS AND DRIVES

A. MOTORS SHALL BE ENERGY EFFICIENT, COMPLYING WITH EPACT STANDARDS, FOR SINGLE SPEED ODP AND TE ENCLOSURES. MOTORS SHALL BE PERMANENTLY LUBRICATED, HEAVY—DUTY TYPE, MATCHED TO THE FAN LOAD AND FURNISHED AT THE SPECIFIED VOLTAGE, PHASE, AND ENCLOSURE. BELT—DRIVE MOTORS SHALL BE FACTORY MOUNTED TO AN ADJUSTABLE MOTOR PLATE HAVING TWO HEAVY—DUTY ADJUSTING BOLTS FOR ALIGNMENT AND BELT TENSION. DRIVES SHALL BE SIZED FOR A MINIMUM OF 150% OF DRIVEN HORSEPOWER. PULLEYS SHALL BE OF THE FULLY MACHINED CAST TYPE, KEYED AND SECURELY ATTACHED TO THE FAN WHEEL AND MOTOR SHAFTS; 10 HORSEPOWER AND LESS SHALL BE SUPPLIED WITH AN ADJUSTABLE DRIVE PULLEY. ENERGY WHEEL MOTORS AND DIRECT—DRIVE OTORS SHALL HAVE INTEGRAL OVERLOAD PROTECTION

OR FILTERS

A. SUPPLY AND EXHAUST AIR FILTERS SHALL BE 2—INCH THICK PLEATED FIBERGLASS, 30% EFFICIENT AND TESTED TO MEET UL CLASS 2. FILTER RACKS SHALL BE DIE—FORMED GALVANIZED STEEL.

2.07 ELECTRICAL

A. ALL INTERNAL ELECTRICAL COMPONENTS SHALL BE FACTORY WIRED FOR SINGLE POINT POWER CONNECTION. ALL ELECTRICAL COMPONENTS SHALL BE ULLISTED, APPROVED OR CLASSIFIED WHERE APPLICABLE AND WIRED IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE.

INTEGRAL DOOR INTERLOCKING DISCONNECT SWITCH AND TERMINAL STRIP SHALL BE SUPPLIED AS STANDARD COMPONENTS IN THE CONTROL CENTER. OPTIONAL FEATURES INCLUDE MOTOR CONTACTORS, 24 VAC CONTROL CIRCUIT, AND FUSING.

30 EXECUTION

A. THE ENERGY RECOVERY VENTILATOR SHALL BE WARRANTED TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE PURCHASE DATE. THE ENERGY RECOVERY WHEEL SHALL BE WARRANTED TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF FIVE YEARS FROM THE PURCHASE DATE. MOTORS SHALL BE WARRANTED BY THE MOTOR MANUFACTURER FOR A PERIOD OF ONE YEAR FROM THE PURCHASE DATE.

SECTION 15850 DUCTWORK

10 GENERAL

1.01 SCOPE: PROVIDE COMPLETE DUCT SYSTEMS AS INDICATED. SYSTEMS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING: OUTSIDE AIR, EXHAUST AIR, AND AIR CONDITIONING SUPPLY AND RETURN AIR DUCT SYSTEMS AS SHOWN ON DRAWINGS. DRAWING SCALES PROHIBIT THE INDICATION OF ALL OFFSETS, FITTINGS, AND LIKE ITEMS; HOWEVER, THESE ITEMS SHALL BE INSTALLED AS REQUIRED FOR THE ACTUAL PROJECT CONDITIONS AT NO CHANGE IN CONTRACT PRICE.

2.0 PRODUCTS

2.01 LOW PRESSURE SHEET METAL DUCTWORK: PRIME QUALITY FORTY—EIGHT INCH WIDE, TIGHT COAT GALVANIZED STEEL CONFORMING TO THE REQUIREMENTS OF ASTM 526. REINFORCING, CROSS BREAKING, SEAMS, JOINTS: BE IN ACCORDANCE WITH LATEST SMACNA CONSTRUCTION STANDARD FOR LOW PRESSURE SHEET METAL DUCT.

2.02 LOW PRESSURE ROUND DUCTWORK: DUCT SHALL BE MADE USING GALVANIZED STEEL AS PER ASTM A-527 G-90 WITH LONGITUDINAL SNAP-LOCK

2.03 FLEXIBLE DUCTWORK: TWO PLY VINYL FILM SUPPORTED BY HELICAL WOUND SPRING STEEL INNER CORE, FIBERGLASS INSULATION AND ALUMINIZED VAPOR BARRIER FILM. 6—INCH (WG) POSITIVE PRESSURE RATING, 1—INCH (WG) NEGATIVE PRESSURE RATING, 4000 FPM VELOCITY RATED, —10 TO 160 DEGREES F TEMPERATURE RANGE, R—6 THERMAL RESISTANCE RATING.T 3.0 EXECUTION

3.01 GENERAL:

A. CONSTRUCT ALL DUCTWORK AND ACCESSORIES IN ACCORDANCE WITH THE LATEST INDICATED EDITIONS OF APPLICABLE SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION CONSTRUCTION STANDARDS.

B. PRIOR TO DUCTWORK FABRICATION, VERIFY IF ALL DUCTWORK AS DIMENSIONED AND GENERALLY SHOWN WILL SATISFACTORILY FIT ALLOCATED SPACES. NOTIFY ARCHITECT IF ANY SPATIAL CONFLICTS EXIST, AND THEN OBTAIN ARCHITECT'S APPROVAL OF NECESSARY ROUTING. MAKE ANY SUCH NECESSARY REVISIONS WHICH ARE MINOR AT NO ADDITIONAL COST.

3.02 INSULATED DUCT: WHERE DUCTS WILL BE INSULATED, MAKE PROVISION FOR NEAT INSULATION FINISH AROUND DAMPER OPERATING QUADRANTS, SPLITTER ADJUSTMENT CLAMPS, ACCESS DOORS, AND SIMILAR OPERATING DEVICES. A METAL COLLAR EQUIVALENT IN DEPTH TO INSULATION THICKNESS AND OF SUITABLE SIZE TO WHICH INSULATION MAY BE FINISHED SHALL BE MOUNTED ON DUCT.

SECTION 15980

TEST AND BALANCE:

1.0 GENERAL

1.01 SCOPE: HVAC CONTRACTOR SHALL PROVIDE THE SERVICES OF AN INDEPENDENT TEST AND BALANCE AGENCY TO TEST, BALANCE AND CERTIFY THE PERFORMANCE OF THE COMPLETE HEATING AND AIR CONDITIONING SYSTEM.

BALANCING OF HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS.

A: ACCEPTABLE: TEST PHOENIX AGENCY, SOUTHERN INDEPENDENT TEST AND

APPROVED MEMBER OF AABC OR NEBB THAT SPECIALIZES IN TESTING AND

1.02 AGENCY QUALIFICATIONS: THE TEST AND BALANCE AGENCY SHALL BE AN

1.03 PERFORM ALL TESTING AND BALANCING, ADJUSTING AND DATA RECORDING NECESSARY TO ESTABLISH AND CONFIRM CAPACITY, QUALITY AND COMPLETED STATUS OF WORK.

2.0 PRODUCTS

2.01 INSTRUMENTS USED FOR TEST AND BALANCE SHALL HAVE BEEN CALIBRATED WITHIN A PERIOD OF SIX (6) MONTHS PRIOR TO THE TESTING AND BALANCING OF THIS PROJECT. LETTER OF CERTIFICATION LISTING INSTRUMENTATION USED AND LAST DATE OF CALIBRATION SHALL BE FURNISHED TO ARCHITECT WITH TEST REPORT.

3.0 EXECUTION

3.01 NATIONAL STANDARDS: TESTING AND BALANCING SHALL BE PERFORMED IN ACCORDANCE WITH A.A.B.C. NATIONAL STANDARDS.

3.02 LOGS: SHALL CLEARLY INDICATE THE FOLLOWING:

C. OUTSIDE, INSIDE, MIXED AND SUPPLY AIR CONDITIONS.

G. USE ASSOCIATED AIR BALANCE COUNCIL LOG AND DATA FORMS.

BALANCE OR OTHER AGENCY APPROVED BY ENGINEER.

A. ALL INLET AND OUTLET AREAS.

B. ALL APPLICABLE DUCT, PIPE AND COIL SIZES.

D. ALL FAN SPEEDS.

E. ALL MOTOR AMPERE RANGES.

F. DESCRIPTIONS OF EACH TEST METHOD USED.

MANATEE COUNTY GOVERNMENT



Facilities Management

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REV. DATE REMARKS

PHASE — 2

MANATEE

FLEET SERVICES

1200 26TH AVE. EAST, BRADENTON, FLORIDA

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11-19-08

Yehuda Inbar AIA Inbar architect AIA

Project Number

Drawn by:

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Drawing Number

9/2008 Y

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Date 11/19/20.
Drawn JWY
Designed JWY
Revised
Job no. 08067

# PLUMBING SPECIFICATION

PART 1: GENERAL

#### 1.01 GENERAL DOCUMENTS

- A. THE REQUIREMENTS OF THE GENERAL CONDITIONS & APPLICABLE SECTIONS SHALL APPLY TO ALL PLUMBING WORK. INSTALLATION SHALL BE IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2004 - PLUMBING WITH 2005 AMENDMENTS
- B. THE PLUMBING WORK SHALL INCLUDE FURNISHING ALL LABOR, EQUIPMENT, MATERIALS AND SERVICE NECESSARY FOR AND REASONABLY INCIDENTAL TO THE PROPER COMPLETION OF ALL PLUMBING WORK SHOWN ON THE DRAWINGS AND AS SPECIFIED. ALL MATERIAL SHALL BE NEW.
- C. ALL MATERIALS AND EQUIPMENT SHALL BE THE STANDARD CATALOGED PRODUCT OF A REPUTABLE MANUFACTURER REGULARLY MANUFACTURING THE PARTICULAR ITEM, FREE FROM DEFECTS AND IN NEW CONDITION.
- 1.02 SUBMITTALS A. MATERIALS OR PRODUCTS SPECIFIED HEREIN AND/OR INDICATED ON DRAWINGS BY TRADE NAME, MANUFACTURER'S NAME OR CATALOG NUMBERS SHALL BE INTERPRETED AS ESTABLISHING A STANDARD OF QUALITY AND DESIGN. SUBSTITUTIONS SHALL NOT BE ALLOWED UNLESS THEY ARE SUBMITTED FOR REVIEW AND APPROVED BY BID DATE.

#### 1.03 WORK BY OTHERS

- A. THE FOLLOWING SYSTEMS AND/OR EQUIPMENT ARE NOT A PART OF THIS SECTION. BUT SHALL BE PROPERLY CONNECTED WITH ALL PLUMBING SERVICES:
- ELECTRICAL POWER WIRING BY ELECTRICAL SUB-CONTRACTOR. - FIRE PROTECTION SYSTEM
- POOL AND SPA PLUMBING SYSTEM (P.C. TO PROVIDE WATER STUB-UP WITH BFP ONLY)
- 1.04 SHOP DRAWINGS FURNISH SIX (6) COPIES OF SHOP DRAWINGS OF EQUIPMENT OR FIXTURES FOR APPROVAL PRIOR TO PURCHASING. 1.05 RECORD DRAWINGS
- A. AFTER COMPLETION OF ALL WORK THE PLUMBING CONTRACTOR SHALL PROVIDE THE OWNER WITH AS BUILT RECORD DRAWINGS AS OUTLINED IN SPECIFICATIONS.

## PART 2: PRODUCTS

#### 2.01 PIPING

- A. SOIL, WASTE, VENT PIPING & STORM DRAINAGE PIPING: ABOVE FLOOR AND BELOW SLAB: INTERIOR ABOVE FIRST FLOOR SLAB SHALL BE PVC-DWV SCHEDULE 40 PIPE AND FITTING BELOW AND ABOVE SLAB EXCEPT ANY PIPING LOCATED WITHIN PLENUM SPACES OR FIRE RATED WALLS SHALL BE SERVICE WEIGHT CAST IRON, NO HUB, WITH STAINLESS STEEL CLAMPS AND SHIELDS WITH NEOPRENE SEALING SLEEVES.
- B. DOMESTIC WATER PIPING: INTERIOR COLD. HOT AND HOT WATER RECIRCULATING PIPING ABOVE SLAB: DOMESTIC WATER PIPING SHALL BE TYPE L COPPER TUBING WITH LEAD FREE SOLDER JOINTS OR APPROVED PVC PIPING & FITTING. PIPING BELOW SLAB UP TO FIVE FEET (5') BEYOND THE BUILDING WALLS SHALL OR TO THE POINT OF CONNECTION TO THE NEW SERVICES SHALL BE COPPER TUBING TYPE K. PIPE FITTING SHALL BE WROUGHT COPPER. NO JOINTS BELOW FLOOR. PVC PRESSURE TYPE PIPE & FITTINGS MAY BE USED ONLY IF APPROVED BY OWNER & LOCAL PLUMBING AUTHORITY.
- C. PIPE INSULATION (COPPER TUBING): HOT WATER SUPPLY COPPER TUBING SHALL BE INSULATED WITH 1" THICK FIBERGLASS OR EQUAL, IN COMPLIANCE WITH APPLICABLE ENERGY CODES. STORM WATER PIPING INCLUDING ROOF DRAIN SUMPS, ALL HORIZONTAL RAINWATER LEADERS, ROOF DRAIN SUMP BODY & ANY PIPING ABOVE SLAB RECEIVING COLD WATER DISCHARGE FROM A/C UNITS, ICE MACHINES, ETC. SHALL BE INSULATED WITH 1" THICK FIBERGLASS (OR EQUAL) INSULATION WITH VAPOR JACKET.

A. EQUAL TO NIBCO, CRANE OR WALWORTH. ALL BRONZE 150 PSI. BALL OR GATE VALVES WITH RISING STEMS.

#### 2.03 SPECIALTIES

A. PIPE PROTECTIVE COATING: FOR STEEL OR COPPER PIPE, PERMACEL OR SCOTCHWRAP VINYL TAPE APPLIED OVER PIPE TO A TOTAL MINIMUM THICKNESS OF 20 MILS. APPLY TO ALL WATER PIPE IN CONTACT WITH MASONRY OR CONCRETE.

B. PIPE HANGERS: HANGERS FOR BARE COPPER PIPE THROUGH 4 INCH (4") DIAMETER OR SMALLER SHALL BE ADJUSTABLE RING TYPE, PLASTIC COATED EQUAL TO MICHIGAN 102A, FOR STEEL PIPE MICHIGAN 100. ALL PIPE HANGERS IN AREA'S EXPOSED TO SALT ATMOSPHERE SHALL BE COOROSION RESISTANT. ALL WATER, SANITATION, STORM AND CONDENSATE STACKS SHALL HAVE A STACK CLAMP AT ALTERNATE FLOORS, HORIZONTAL & VERTICAL PIPE SUPPORT SHALL BE AS PER SCHEDULE BELOW:

PIPE SIZES (INCHES)	HORIZONTAL PIPE MAX. HANGERS DISTANCE (FEET)	VERTICAL PIPE MAX. HANGERS DISTANCE (FEET)
11/4" & SMALLER	6	10
11/2" & LARGER	10	10
(ALL)	12	10
(ALL)	4*	15
(ALL)	12	15
(ALL)	10	10**
(ALL)	4	10**
	PIPE SIZES (INCHES)  114" & SMALLER  112" & LARGER  (ALL)  (ALL)  (ALL)  (ALL)	SIZES (INCHES) DISTANCE (FEET)  114" & SMALLER 6  112" & LARGER 10  (ALL) 12  (ALL) 4*  (ALL) 12  (ALL) 10

NOTES:

\* MAXIMUM HORIZONTAL SPACING OF CAST IRON PIPE HANGERS SHALL BE INCREASED TO 10' (FEET) WHERE 10 FOOT LENGTHS OF PIPE ARE INSTALLED. \*\* MIDSTORY GUIDE FOR SIZES 2" AND SMALLER. \*\*\* NOT NECESSARILY ALL PIPE MATERIAL MAY BE USER FOR THIS PROJECT

## C. DRAINS AND CLEANOUTS: SEE SCHEDULE ON DRAWINGS.

D. DIELECTRIC UNIONS: EBCO OR CAPITOL AT ALL POINTS OF CONNECTION BETWEEN DISSIMILAR PIPE METALS.

E. FLASHING AND VENT STACKS: ALL VENTS EXTENDING THROUGH THE ROOF SHALL BE PROVIDED WITH FOUR POUND SHEET LEAD FLASHING EXTENDING UPWARD AROUND THE PIPE AND TURNED DOWN INSIDE THE PIPE OR AS OTHERWISE SHOWN ON THE DRAWINGS. THE ROOF FLASHING SHALL BE INSTALLED BY LICENSED & INSURED ROOFING CONTRACTOR. ALL FLASHING IN METAL ROOF SHALL BE BY THE ROOF MANUFACTURER. MINIMUM DISTANCE FROM ANY FRESH AIR INTAKE SHALL BE 10'-0".

F. AIR CHAMBERS: AT EACH FIXTURE GROUP PROVIDE "SA" AS SPECIFIED IN SPECIALTIES SCHEDULE AND ELSEWHERE AS REQUIRED, AND IN ALL CONNECTIONS TO EQUIPMENT WITH SOLENOID VALVE INSTALLED ON WATER SUPPLY LINE PROVIDE ACCESS FOR WATER HAMMER ARRESTORS. THE WATER HAMMER ARRESTORS SHALL BE SIZED AND INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

- G. ESCUTCHEONS AND SLEEVES: WHERE PIPES PIERCE EXPOSED PARTITIONS, FLOORS, WALLS OR CEILINGS, PROVIDE CHROME PLATED ESCUTCHEONS TO COVER THE RAW EDGE.
- H. SLEEVES SHALL BE PROVIDED AT RATED WALL ALL PIPE PENETRATIONS OF MASONRY, BAY WALL, CONCRETE WALLS AND FLOORS.

I. PROVIDE UL LISTED FIRE STOPPING PIPE PENETRATION ASSEMBLIES AT ALL PIPING THROUGH RATED WALLS AND ASSEMBLIES. SEE DETAILS ON THE DRAWING.

- 2.04 FIXTURES AND TRIM
- A. ALL EXPOSED METAL TO BE CHROME PLATED. PROVIDE STOPS AND UNIONS AT ALL SUPPLIES AND CAST BRASS 'P' TRAPS WITH CLEANOUT ON ALL WASTE.
- B. FIXTURES BY AMERICAN STANDARD, KOHLER, ELJER, STERLING OR APPROVED EQUAL.
- C. ALL TRAP PRIMER SHALL BE POLISHED CHROME FINISH. (TRAP PRIMERS ARE NOT REQUIRED IF PROSET DRAINS ARE TO BE USED AS PER DETAIL ON THE DRAWINGS).

#### 3.01, INSTALLATION

PART 3: EXECUTION

A. INSTALL PIPE ABOVE GROUND PLUMB AND SQUARE WITH BUILDING LINES, ADEQUATELY SUPPORTED WITHOUT SAGS OR HIGH POINTS. CONCEAL PIPING IN OCCUPIED AREAS AND MAINTAIN HEAD ROOM AND ACCESS SPACE IN UNFINISHED AREAS. SLEEVE PIPING THROUGH ALL WALLS, SLABS OR PARTITIONS WITH ESCUTCHEONS AT ALL FINISHED SURFACE. PROVIDE UNIONS AT ALL FINAL CONNECTIONS AND STOPS ON ALL SUPPLIES. ALL PIPE OPENINGS SHALL BE PLUGGED DURING INSTALLATION.

B. SANITARY DRAINAGE PIPING 3" & LARGER SHALL BE INSTALLED WITH A MINIMUM 1/8" PER FOOT SLOPE UNLESS NOTED OTHERWISE. ALL DRAINAGE PIPING 2-1/2" AND SMALLER SHALL BE NSTALLED WITH A MINIMUM OF 1/2" PITCH PER FOOT.

- C. ALL FIXTURES AND TRIM FOR HANDICAPPED SHALL BE INSTALLED IN COMPLIANCE WITH ADA CODE.
- D. INSTALL ALL PIPING TO ALLOW FOR EXPANSION.
- E. SEE RISER DIAGRAMS FOR ALL DRAINAGE & VENT PIPE SIZING FOR THE PLUMBING SYSTEMS. REFER TO PLUMBING FLOOR PLAN (WATER SYSTEM) & SCHEDULES FOR ALL WATER PIPING SYSTEM SIZING.
- F. ALL EXPOSED TO VIEW PIPING AND FITTINGS SHALL BE POLISHED CHROME FINISH.
- G. ALL WORK HANDICAPPED TOILETS SHALL COMPLY WITH ADA REQUIREMENTS. & FLORIDA BUILDING CODE 2004 - CHAPTER 11 FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION.
- H. FINAL CONNECTIONS TO DRAINAGE AND WATER SERVICE LINES TO EXISTING OR NEW AT 5'-0" FROM THE BUILDING WALLS SHALL BE BY THE PLUMBING CONTRACTOR.
- 3.02. DISINFECTING OF POTABLE WATER SYSTEM:
- A. THE SYSTEM SHALL BE FILLED WITH A SOLUTION CONTAINING 50 PARTS PER MILLION OF AVAILABLE CHLORINE AND ALLOWED TO STAND SIX HOURS BEFORE FLUSHING AND RETURNING TO SERVICE. DISINFECTION PROCEDURE AND RESULT SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL PLUMBING INSPECTOR.

#### 3.03. TESTS

A. ALL PLUMBING SYSTEMS SHALL BE TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE-PLUMBING (2004, WITH 2005 AMENDMENTS). ALL TESTS SHALL BE APPROVED BY THE LOCAL PLUMBING INSPECTOR AND SHALL BE OBSERVED BY A REPRESENTATIVE OF THE ARCHITECT.

#### 3.04. SYSTEM IDENTIFICATION

A. THE PLUMBING CONTRACTOR SHALL PROVIDE IDENTIFICATION TAGS FOR ALL PIPING AND VALVES IN THE BUILDING AS PER OWNER ACCEPTED STANDARDS. THE PIPE MARKS SHALL INCLUDE PIPING SYSTEM IDENTIFICATION AND DIRECTIONS OF FLOW.

#### 3.05 SPECIFICATIONS AND DRAWINGS

- A. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL COMPLETE SANITARY, STORM AND DOMESTIC WATER PIPING SYSTEMS: INCLUDING ALL ASSOCIATED DEVICES, EQUIPMENT, CONTROLS, AND CONNECTIONS TO NEW SERVICES, SUPPORTS, AND HARDWA FOR THE SATISFACTORY OPERATION OF THE SYSTEMS, WHETHER SPECIFICALLY SHOWN OR NOT ON THE DRAWINGS.
- B. THE PLANS SHOW THE LOCATION OF ALL FIXTURES AND EQUIPMENT AND ARE INTENDED TO DEPICT THE GENERAL INTENT OF THE WORK IN SCOPE, LAYOUT AND QUALITY OF WORKMANSHIP. THEY ARE NOT INTENDED TO SHOW IN MINUTE DETAIL EVERY AND ALL ACCESSORIES INTENDED FOR THE PURPOSE OF EXECUTION OF THE WORK, BUT IT SHALL BE UNDERSTOOD THAT SUCH DETAILS WILL BE PART OF THIS WORK.
- C. WHERE DRAWINGS AND SPECIFICATIONS CONFLICT, IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO BRING SUCH CONFLICT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
- D. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES.
- E. CONTRACTOR SHALL KEEP A RECORD OF THE LOCATIONS OF ALL CONCEALED WORK AND, UPON COMPLETION OF THE JOB, SHALL SUPPLY AS-BUILT DRAWINGS SHOWING IN COLORED PENCIL ON BLACK LINE PRINTS ANY DEVIATION FROM THE ORIGINAL DRAWINGS. THESE DRAWINGS SHALL INDICATE DIMENSIONS OF BURIED UTILITY LINES FROM BUILDING
- F. ALL DOCUMENTS, TEST REPORTS & AS-BUILTS DRAWINGS SHALL BE ATTACHED TO THE CLOSING DOCUMENT OF THE PROJECT.

#### 3.06 WARRANTY:

A. THE PLUMBING CONTRACTOR SHALL WARRANT HIS WORK TO BE FREE FROM DEFECTS IN MATERIALS AND AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE OF ALL WORK.

#### 3.07 COORDINATION

A. THE CONTRACTOR DOING THE SHEET METAL SHOP DRAWINGS AND THE PLUMBING, FIRE PROTECTION, AND HVAC FOREMAN AND GENERAL CONTRACTOR PROJECT MANAGER SHALL INSPECT & REVIEW THE CONDITIONS, AND SHALL COORDINATE THEIR WORK SO AS TO PROVIDE ADEQUATE SPACE ALLOWANCE ABOVE CEILING FOR ALL TRADES. ALL GRAVITY WASTE PIPING IN THE CEILING SPACE SHALL BE INSTALLED FIRST.

B. VERIFY LOCATIONS, SIZES, AND INVERT ELEVATIONS OF SANITARY DRAIN, AND DOMESTIC WATER PIPING CONNECTIONS WITH CIVIL ENGINEERING DRAWINGS PRIOR TO PROCEEDING WITH THE INSTALLATION OF ANY NEW WORK. SHOULD ANY DISCREPANCIES BE DISCOVERED CONTRACTOR SHALL OBTAIN DIRECTION FROM THE ENGINEER BEFORE PROCEEDING.

C. COORDINATE WITH ARCHITECTURAL DRAWINGS WALL AND PARTITION CONSTRUCTION AND THICKNESS WHERE PLUMBING PIPING, FIXTURES CARRIERS OR EQUIPMENT IS INDICATED. BEFORE PLUMBING PIPING ROUGH-IN.

D. COORDINATE EXACT LOCATION, ELEVATIONS AND SIZES OF ALL SLEEVES IN NEW STRUCTURE WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.

A. PLUMBING CONTRACTOR SHALL PROVIDE SCAFFOLDS WHERE REQUIRED FOR PLUMBING

#### 3.09 PERMITS

A. PLUMBING CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AT HIS EXPENSE.

# PLUMBING GENERAL NOTES

1. THE PLUMBING CONTRACTOR SHALL VERIFY THESE DRAWINGS WITH EXISTING FIELD CONDITIONS AND SHALL COORDINATE WITH CIVIL ENGINEER LOCATIONS AND ELEVATIONS OF PLUMBING SERVICE LINES BEFORE PROCEEDING WITH CONSTRUCTION. THE WATER & SEWER SERVICE LINES SHOWN ON THE DRAWINGS ARE FOR REFERENCE & BUILDING PERMIT ONLY. REFER TO CIVIL ENGINEERS DRAWINGS FOR DRAINAGE & WATER SERVICE LINES LAY-OUT & DETAILS.

2. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL COMPLETE SANITARY AND DOMESTIC WATER PIPING SYSTEMS; INCLUDING ALL ASSOCIATED DEVICES, EQUIPMENT. CONTROLS, AND CONNECTIONS TO BUILDING SERVICE LINES, SUPPORTS, AND HARDWARE REQUIRED FOR THE SATISFACTORY OPERATION OF THE SYSTEMS.

3. PLUMBING CONTRACTOR SHALL PROVIDE ROUTING AND OFFSETS NECESSARY TO AVOID CONFLICT WITH STRUCTURE, FINISHES, AND WORK OF OTHER TRADES.

4. WALL AND PARTITION CONSTRUCTION AND THICKNESS FOR PLUMBING PIPING OR EQUIPMENT IS INDICATED SHALL BE AS PER EQUIPMENT MANUFACTURERS SHOP DRAWINGS.

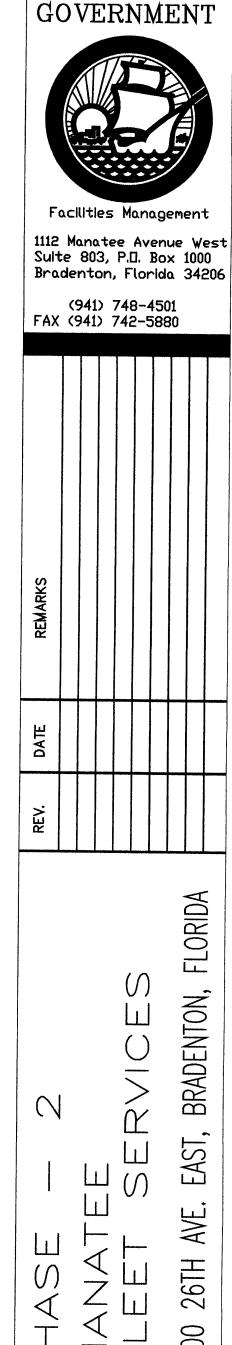
5. COORDINATE EXACT LOCATION, SIZE AND ELEVATIONS OF PIPE SLEEVES IN NEW STRUCTURE WITH STRUCTURAL ENGINEER.

6. BAND IRON, TIE WIRE, METAL STRAPPING OR WIRE STRAPPING SHALL NOT BE PERMITTED TO SUPPORT PIPING OR EQUIPMENT.

- 7. INSTALL PIPING TO ALLOW FOR EXPANSION.
- 8. ALL EXPOSED TO VIEW PIPING AND FITTING SHALL BE POLISHED CHROME FINISH.
- 9. ALL METALLIC HOT WATER PIPING TO BE INSULATED WITH 1" PIPE INSULATION AS PER FLORIDA ENERGY EFFICIENCY CODE.
- 10. PROVIDE LISTED FIRE STOPPING PIPE PENETRATION ASSEMBLIES AT ALL PIPING THROUGH FIRE RATED WALLS AND ASSEMBLIES.
- 11. THE CONTRACTOR DOING THE SHEET METAL SHOP DRAWINGS AND THE PLUMBING, FIRE PROTECTION, AND HVAC FOREMAN SHALL INSPECT & REVIEW THE CONDITIONS AND SHALL COORDINATE THEIR WORK SO AS TO PROVIDE ADEQUATE SPACE ALLOWANCE ABOVE CEILING FOR ALL TRADES. THE GRAVITY DRAINAGE PIPING SHALL BE INSTALLED FIRST.
- 12. ALL PLUMBING WORK SHALL COMPLY WITH FLORIDA BUILDING CODES BUILDING. -PLUMBING, -MECHANICAL, - FUEL GAS CODE 2004 EDITION WITH 2005 AMENDMENTS AND ALL OTHER CODES ADAPTED ON AUGUST 8,2005 BY STATE FIRE MARSHALL'S RULE 69A3.012 F.A.C.

0	YMBOL			DESCRIPTION						
	SS —	- NE	W SANITA	ARY SEWER PIPE						
		- SA	NITARY P	PIPE BY SITE CONTRACTOR						
		- NE	W VENT	PIPE						
	SS	- GR	EASE LIN	-						
		DR	AIN WITH V	YALL CLEANOUT UP TO FLOOR						
	-o <sup>FCO</sup>	- DR	DRAIN WITH FLOOR CLEANOUT UP TO FLOOR YARD CLEANOUT							
		- YA								
		CL	CLEANOUT PLUG							
		- NE	W DOMES	TIC COLD WATER PIPE						
		- NE	W DOMES	TIC HOT WATER PIPE						
		- NE	W DOMES	TIC HOT WATER RECIRCULATION						
	GW	- NE	W GRAY	WATER WASTE PIPE						
************	GWL		······································	WATER LEADER PIPE						
	CA		······································	) AIR PIPE						
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	FSH		FLOOR SINK WITH HALVE GRATE							
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			BALL VALVE							
	₩ RŸ		***************************************							
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AFF	ABOVE FINISHED FLO	OOR	W	WASTE LINE						
EX.	EXISTING	<del></del>	SS	SOIL STACK						
HD	HUB DRAIN		WS	WASTE STACK						
٧	VENT		VS	VENT STACK						
C.	ELECTRICAL CONTRA	CTOR	VTR	VENT THROUGH ROOF						
	FIRE PROTECTION CONTR	ACTOR	GR	GREASE WASTE LINE						
P.C.		00	CW	GRAY WATER LINE						
.P.C. 3.C.	GENERAL CONTRACT	UR	GW	ONT WATER LINE						

LEGEND - PLUMBING



MANATEE

COUNTY

BRADENTON AST 26TH 200

Project Number

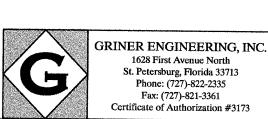
Yehuda Inbar AIA Inbar architect Al Al Meronek 11-19-08

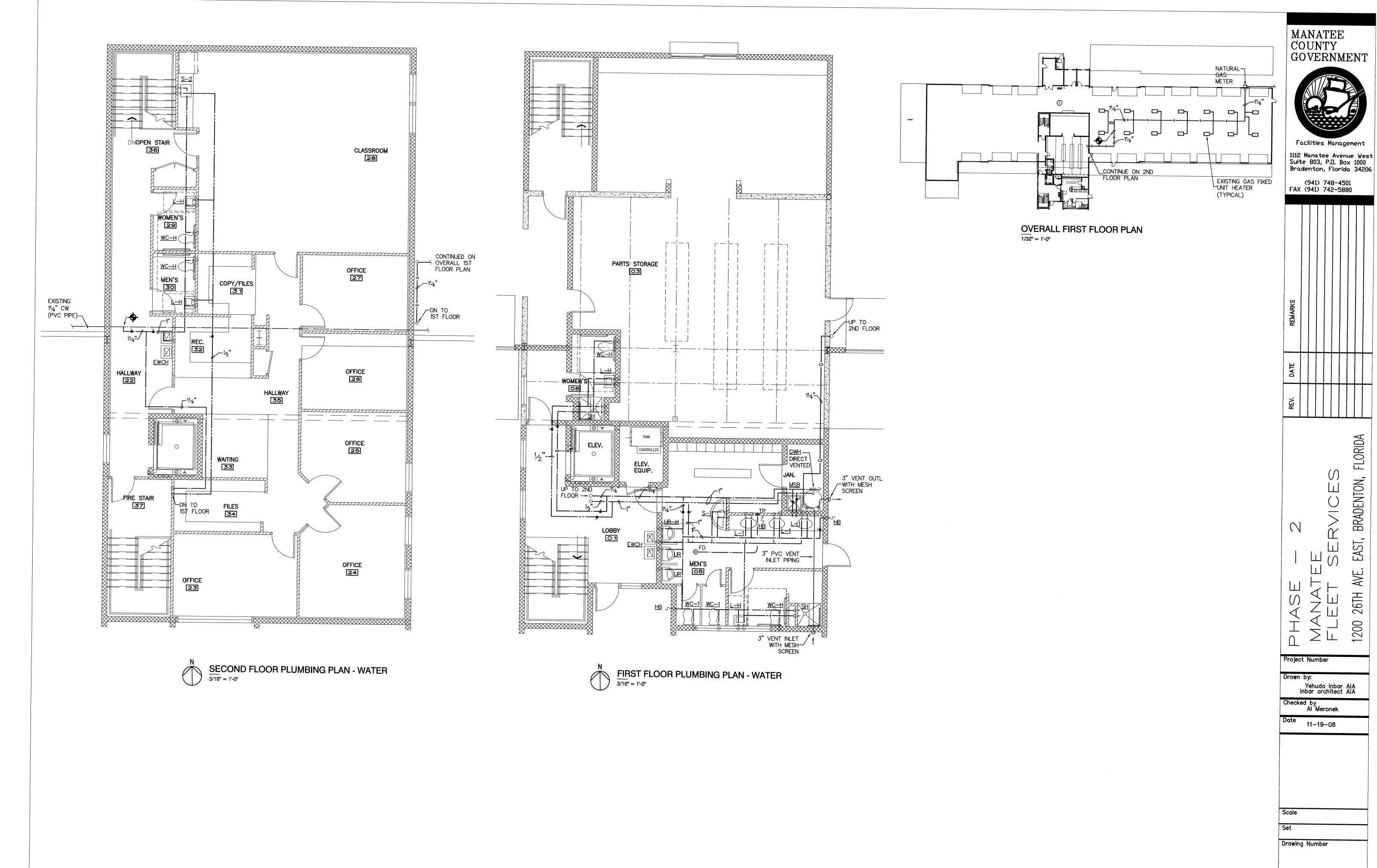
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Drawing Number

JWY

Designed JWY



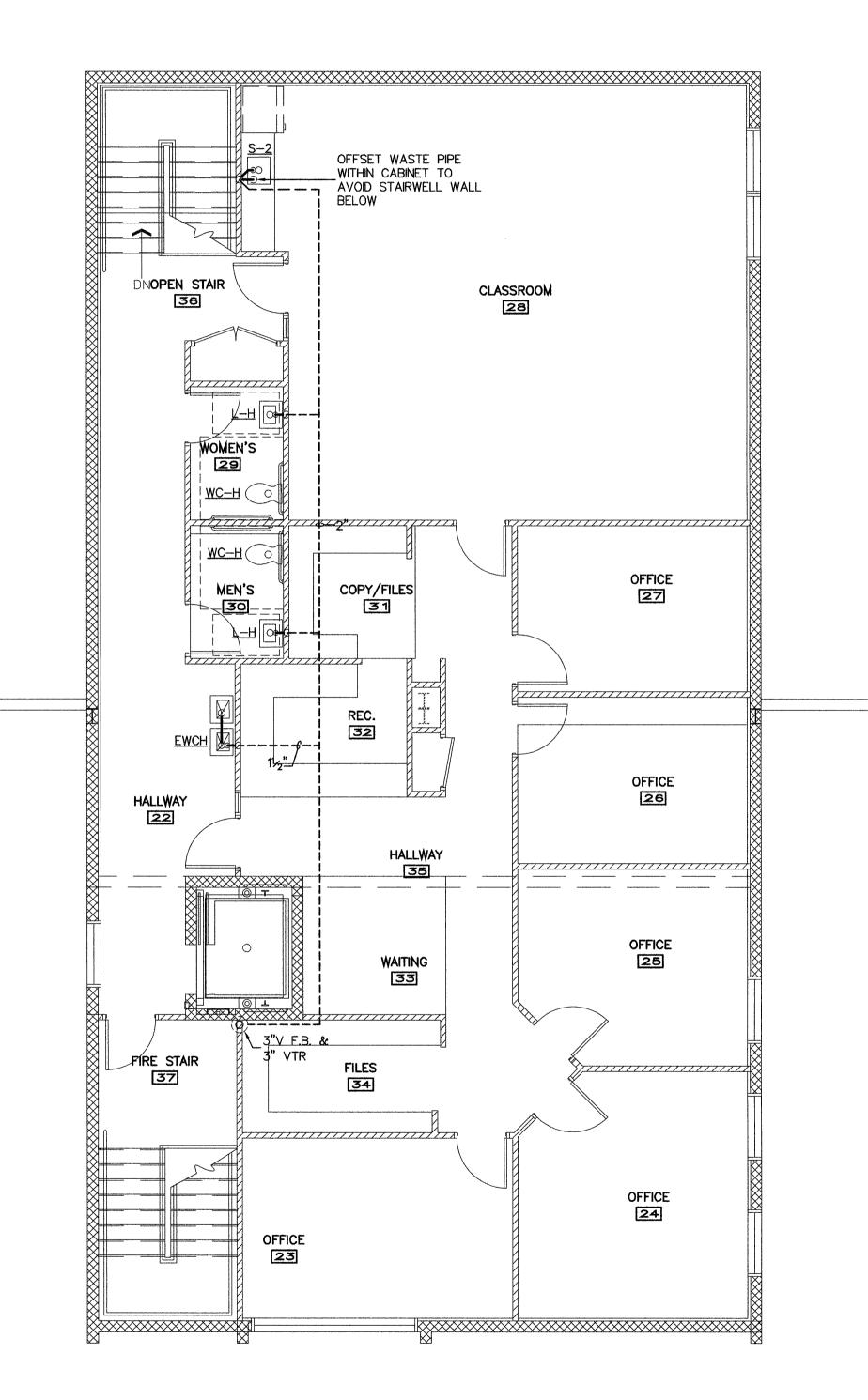


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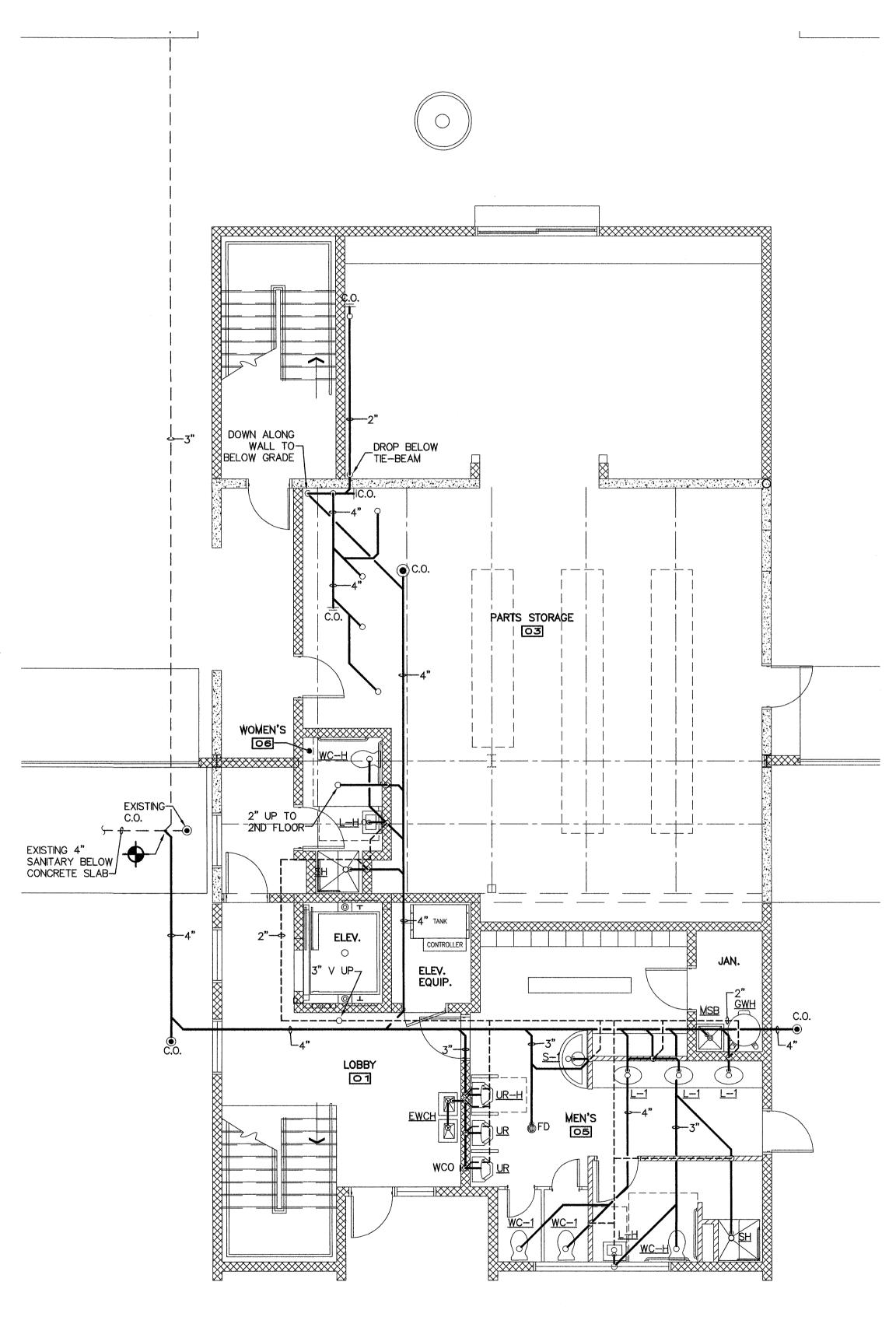
1628 First Avenue North
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Certificate of Authorization #3173

Date 11/19/2008
Drawn JWY
Designed JWY
Revised
Job no. 08067

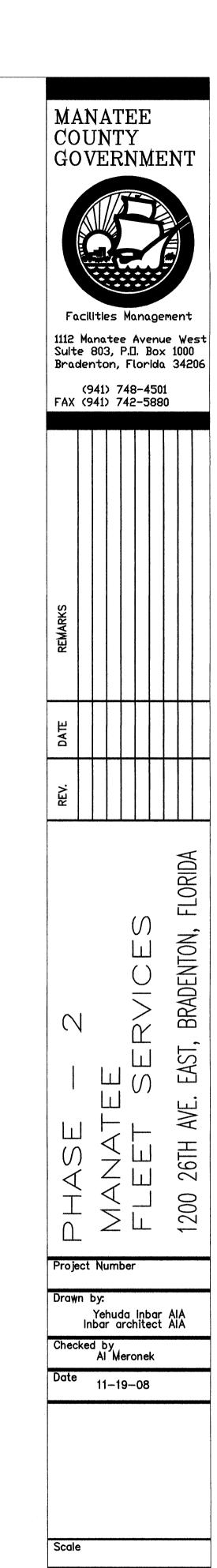
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FIRST FLOOR PLUMBING PLAN - WASTE & VENT  $\frac{N}{3/16"} = 1'-0"$ 



GRIN

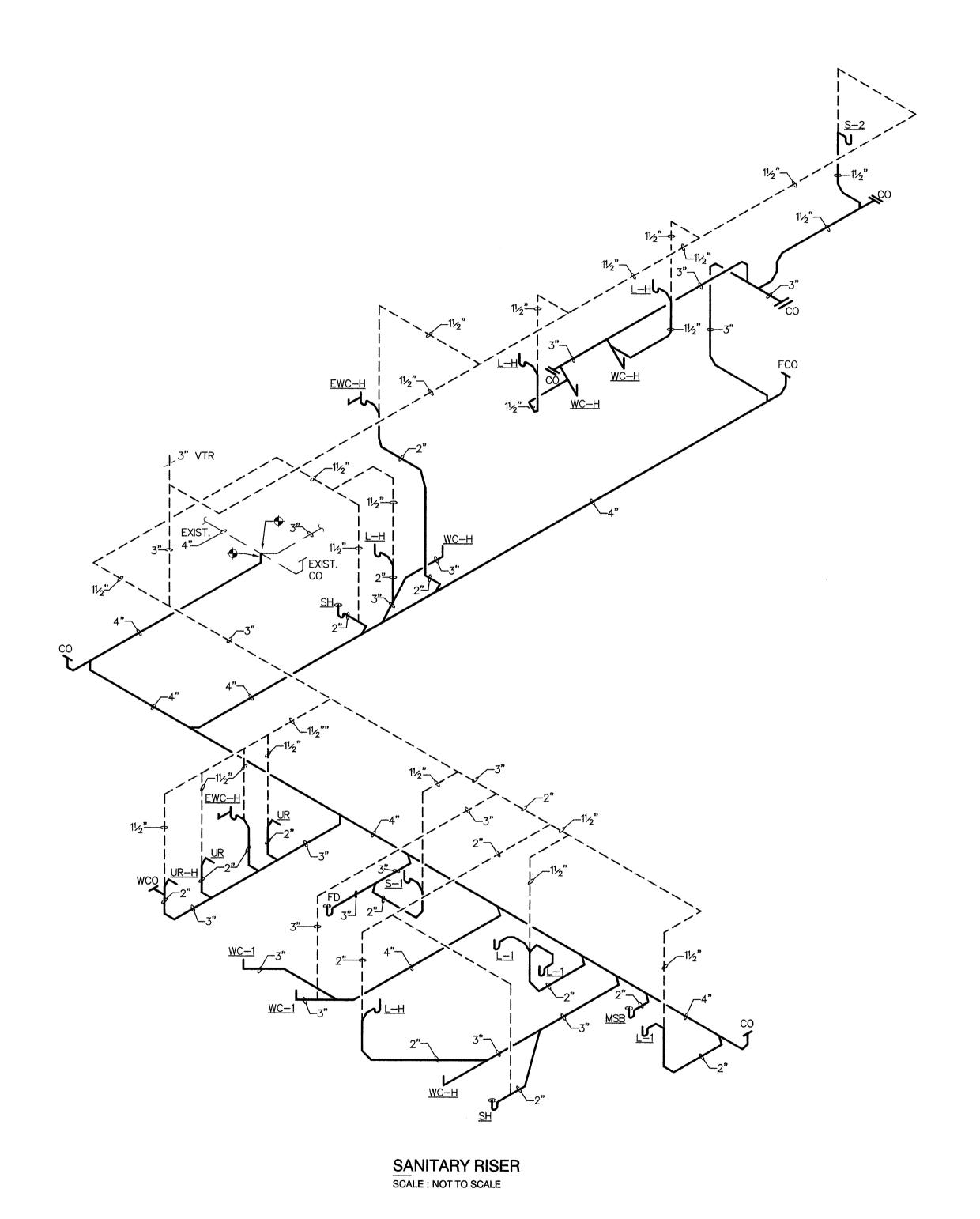
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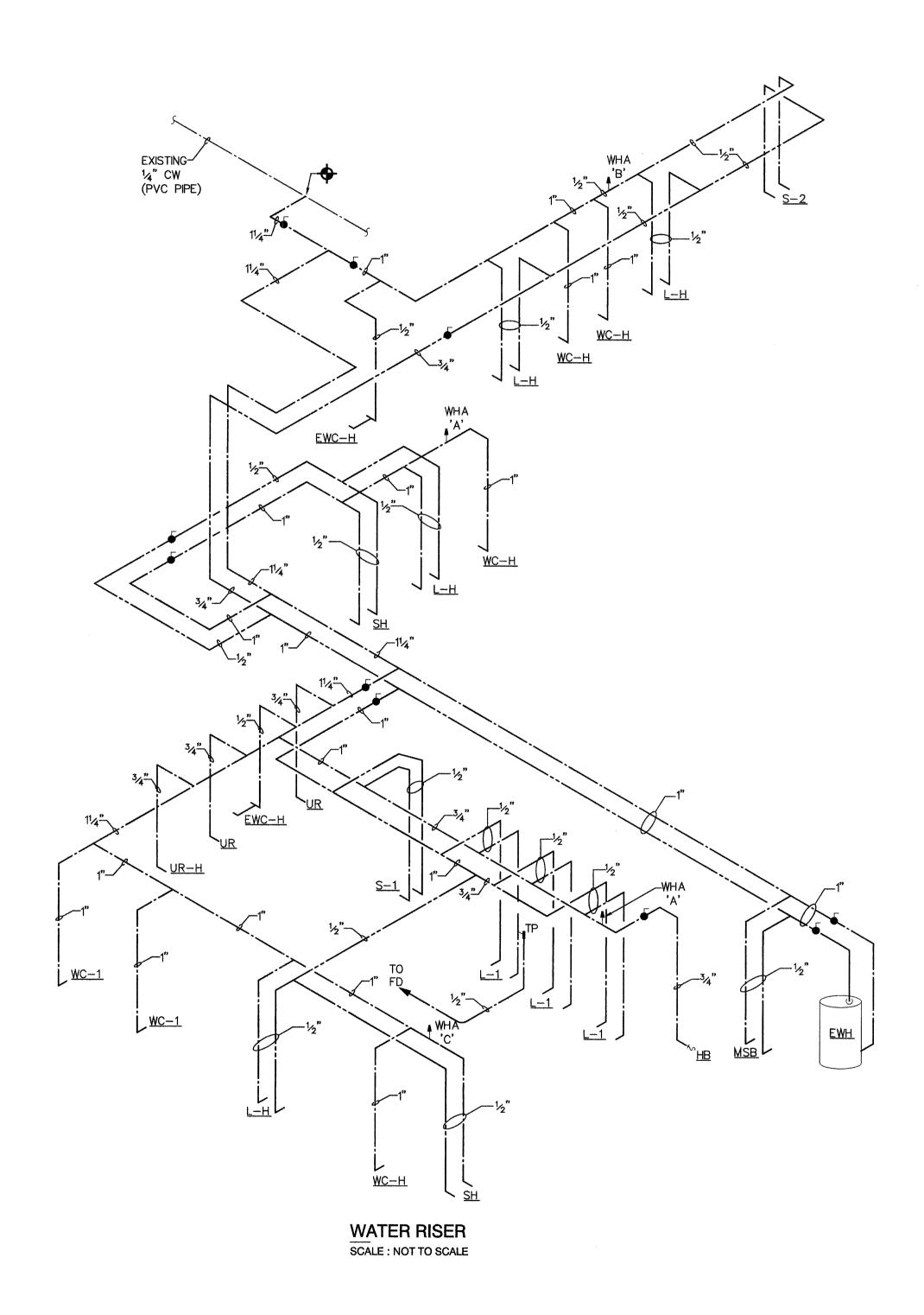
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Date
11/19/2008
Drawn
JWY
Designed
JWY
Revised
Job no.
08067

P-3

Drawing Number







1112 Manatee Avenue West Suite 803, P.D. Box 1000 Bradenton, Florida 34206

(941) 748-4501 FAX (941) 742-5880

BRADENTON, FLORIDA

Project Number

Drawn by: Yehuda Inbar AIA Inbar architect AIA

Checked by Al Meronek

Date 11-19-08

Drawing Number

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# PLUMBING SPEACIALTIES

MARK	DESCRIPTION/LOCATION	MANUF.	CAT. NUMBER	GENERAL NOTES	NOTES:
MCO	WALL CLEANOUT	ZURN	ZN-1446	ROUND ACCESS COVER	
SA	W. HAMMER ARRESTOR	ZURN	Z-1700 SHOKTROL	SIZE FOR 3/4" & 1" PIPE.	
YCO	YARD CLEANOUT	ZURN	Z-1474-Z	HEAVY DUTY, DURA COATED, SCORIATED COVER.	
FD-1	FLOOR DRAIN	ZURN	ZN-415-ZN-P-E	7" TYPE N STRAINER, MEMBRANE FLASHING CLAMP, POLISHED NICKEL BRONZE TOP WITH FUNNEL.	NOTE 1
HB	HOSE BIBB	WOODFORD	24P-1/2 & 24P-3/4	POLISHED CHROME FINISH W/VACUUM BREAKER	

NOTES:

1. FLOOR DRAINS SHALL BE PROVIDED WITH TRAP PRIMER CONNECTION WHERE REQUIRED.

2. APPROVED EQUAL MANUFACTURER JOSAM, ANCON & SMITH

# WATER HEATER SCHEDULE

	MAKE & MODEL	TYPE	STORAGE (GALLONS)	EFFICIENCY	RECOVERY GALLONS/HR	INPUT (BTUH)	FLUE	# OF		LECTRIC/ KW		PH	HZ	NOTES
			(GALLUND)		OALLONS/TIK	(BIOH)	(INCHES)	ELEMENTS	EACH	KW	•			
GWH-1	A.O. SMITH BTH—120	TANK TYPE GAS FIRED	60	94%	171 <b>@</b> 80°F	125,000	3" PVC			***	120	1	60	1,2,3,4, & 5

1. PROVIDE FACTORY INSTALLED HEAVY DUTY ELECTRICAL JUNCTION BOX, CONTROLS, WITH T-STATS SET ON 120° F.

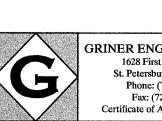
- 2. INSTALL GWH IN ACCORDANCE TO SPC, SMC CODES, NEC, AND APPLICABLE STANDARDS AND MANUFACTURERS RECOMMENDATIONS.
- 3. CONTACT MANUFACTURERS REPRESENTATIVE FOR HEATERS ELECTRICAL DATA BEFORE FINAL ORDER IS MADE.
- 4. INSTALL GWH IN ACCORDANCE WITH BUILDING CODE -- PLUMBING & MECHANICAL (WITH LATEST AMENDMENTS) CODES, ENERGY CODE, AND APPLICABLE STANDARDS AND MANUFACTURERS RECOMMENDATIONS.
- 5. PROVIDE BRASS DRAIN VALVE, & ALL REQUIRED OPTIONS TO COMPLETE THE INSTALLATION.

# PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	LOCATION (ROOMS #)	SOIL/ WASTE	VENT	COLD WATER	HOT WATER	OTHER CONN.	MANUFACTURER/ MODEL #	DESCRIPTION
								AMERICAN STANDARD FIXTURE: #0476.028	-VITREOUS CHINA, COUNTERTOP MOUNTED, 203/8"X173/8", 4" O.C. FAUCET HOLES, SELF-RIMMING, FRONT OVERFLOW, GRID STRAINER
<u>L-1</u>	LAVATORY COUNTERTOP MOUNTED	TOILET ROOMS	11/2"	11/2"	1/2"	1/2"	_	FAUCET: #2385.003	-ELECTRONIC FAUCET WITH PROXIMITY SENSOR, INTERGAL SOLENOID VALVE WITH STRAINER, 0.5 GPM, VANDAL RESISTANT FLOW CONTROL
								VALVE: #605XTMV	-THERMOSTAIC MIXING VALVE, NON-SCALD, FLEXIBLE SUPPLY HOSES
<u>LH</u>	LAVATORY, WALL HUNG, ADA	TOILET	11/2"	11/2"	1/2"	1/2"		AMERICAN STANDARD FIXTURE: #0355.012	-VITREOUS CHINA 201/2"X181/4", WALL MOUNTED, WITH CONCEALED ARMS & CARRIERS SUPPORTED FROM FLOOR (WITHSTANDING 250# OF LOAD APPLIED ON THE FRONT OF THE FIXTURE), 4" O.C. FAUCET HOLES, FRONT OVERFLOW, GRID STRAINER. INSTALL FIXTURE AT H/C HEIGHT.
	COMPLIANT	ROOMS	2			, ,		FAUCET: #2385.003	-ELECTRONIC FAUCET WITH PROXIMITY SENSOR, INTERGAL SOLENOID VALVE WITH STRAINER, 0.5 GPM, VANDAL RESISTANT FLOW CONTROL
								VALVE: #605XTMV	-THERMOSTAIC MIXING VALVE, NON-SCALD, FLEXIBLE SUPPLY HOSES
<u>UR</u>	URINAL, WALL HUNG, FLUSH VALVE	TOILET ROOMS	2"	11/2"	3/4"	_	_	AMERICAN STANDARD WASHBROOK FLO-WISE 6590.125	-VITREOUS CHINA, 0.125 GPF, 3/4 IN. NPT INLET, WALL FLANGE, LOW-CONSUMPTION (0.5 GPF), WITH INTEGRAL FLUSHING RIM, WASHOUT FLUSH ACTION, INTEGRAL STRAINER, 3/4" TOP INLET SPUD, REAR OUTLET SPUD WITH 2" TAILPIECE THREADED FOR FEMALE CONNECTION, INTEGRAL TRAP, FURNISH WITH CONCEALED WALL HANGER AND 2 IN. FEMALE FLANGED OUTLET CONNECTION.
								VALVE: SLOAN ROYAL #8186-0.5	-ELECTRONIC EXPOSED FLUSHOMETER, 0.5 GPF, 3/4" SCREWDRIVER ANGLE STOP VALVE, CHROME FINISH, BATTERY POWERED SENSOR
UR-H	URINAL, WALL HUNG, FLUSH VALVE, ADA COMPLIANT	TOILET ROOMS	2"	11/2"	3/4"		_	AMERICAN STANDARD WASHBROOK FLO-WISE 6590.125	-VITREOUS CHINA, 0.125 GPF, 3/4 IN. NPT INLET, WALL FLANGE, LOW-CONSUMPTION (0.5 GPF), WITH INTEGRAL FLUSHING RIM, WASHOUT FLUSH ACTION, INTEGRAL STRAINER, 3/4" TOP INLET SPUD, REAR OUTLET SPUD WITH 2" TAILPIECE THREADED FOR FEMALE CONNECTION, INTEGRAL TRAP, FURNISH WITH CONCEALED WALL HANGER AND 2 IN. FEMALE FLANGED OUTLET CONNECTION. INSTALL FIXTURE AT H/C HEIGHT
								VALVE: SLOAN ROYAL #186-0.5	-ELECTRONIC EXPOSED FLUSHOMETER, 0.5 GPF, 3/4" SCREWDRIVER ANGLE STOP VALVE, CHROME FINISH, BATTERY POWERED SENSOR
<u>WC1</u>	WATER CLOSET, FLOOR MOUNTED, FLUSH VALVE	TOILET ROOMS	3"	2"	1*	_	_	AMERICAN STANDARD MADERA FLO-WISE 3451.128 SEAT: OLSONITE #95C	-VITREOUS CHINA, WATER SAVER 1.28 GPF, TOP SPUD, ELONGATED SIPHON ACTION JET ACTION BOWL, 15" RIM HEIGHT, 10" ROUGH-IN -WHITE OPEN FRONT SEAT LESS COVER, CHECK HINGE STOPS
								VALVE: SLOAN #111–1.2	-ELECTRONIC EXPOSED FLUSHOMETER, 1.2 GPF, 1" SCREWDRIVER ANGLE CHECK STOP VALVE, CHROME FINISH, BATTERY POWERED SENSOR
WC-H	WATER CLOSET, FLOOR MOUNTED, FLUSH	TOILET	3"	2"	1,12	una		AMERICAN STANDARD MADERA FLO-WISE 3461.128	-VITREOUS CHINA, WATER SAVER 1.28 GPF, TOP SPUD, ELONGATED SIPHON ACTION JET ACTION BOWL, 161/2" RIM HEIGHT, 10" ROUGH-IN
	VALVE, ADA COMPLIANT	ROOMS			'			SEAT: OLSONITE #95C	-WHITE OPEN FRONT SEAT LESS COVER, CHECK HINGE STOPS
****								VALVE: SLOAN #1111.2	-ELECTRONIC EXPOSED FLUSHOMETER, 1.2 GPF, 1" SCREWDRIVER ANGLE CHECK STOP VALVE, CHROME FINISH, BATTERY POWERED SENSOR
<u>SH</u>	SHOWER, ADA COMPLIANT	TOILET	2"	11/2"	1/2"	1/2"	_	SHOWER VALVE: DELTA 1323	-SCALD-GARD PRESSURE BALANCING, SHOWER MIXING VALVE WITH WALL MOUNTED SHOWER HEAD. STUB-OUT HEAD AT 80", LEVER HANDLE
		ROOMS						SHOWER DRAIN: ZURN Z415-5B-P	-5" DIAMETER ROUND NICKEL-BRONZE TOP.
EWCH	ELECTRIC WATER COOLER, ADA COMPLIANT	PUBLIC AREA	11/2"	11/2"	1/2"	_		ELKAY MODEL #EZTL8C	-TWO-STATION, BARRIER-FREE COOLERS, WALL MOUNTED WHEELCHAIR ACCESS ONE PIECE STAINLESS STEEL BASIN WITH INTEGRAL DRAIN GRID, & BUBBLER, HEAVY-DUTY STEEL FRAME, LED-FREE WATERWAY, 8.0 GPH (@50°F W/90°F AMBIENT), 370 WATTS, 115V/1Ph/60Hz. PROVIDE WATER FILTER WATTS MODEL No. WIF, OR APPROVED EQUAL.
<u>S–1</u>	WASH FOUNTAIN, ADA COMPLIANT	TOILET ROOMS	2"	11/2"	1/2"	1/2"		BRADLEY: #TDB3104	-54" SEMI-CIRCULAR DEEP BOWL WASH FOUNTAIN, 34" RIM HEIGHT, POLYSESTER RESIN CONSTRUCTION, MOLDED FIBERGLASS PEDESTAL WITH ACCESS PANEL, INFRARED ACTIVATED BATTERY POWERED CONTROLS WITH THERMOSTATIC MIXING VALVE, THRU-WALL DRAIN AND SUPPLIES (COLOR BY ARCHITECT/OWNER)
<u>S-2</u>	SINGLE BOWL COUNTERTOP SINK	BREAK ROOM	11/2"	11/2"	1/2"	1/2"	_	ELKAY # LR-2522 AMERICAN STANDARD FAUCET #4205.000	- 25 IN X 22 IN SINK, COUNTERTOP, SINGLE BOWL, SELF RIM, #304 STAINLESS STEEL W/DROP LEDGE. THREE HOLE PUNCH. (SEE NOTES 1,2&3)
								WASTE FITTINGS: #LK-18	- SINGLE LEVER DECK MOUNTED FAUCET WITH SWIVEL SPOUT AND FLOW RESTRICTOR 0.5 GPM , LESS HAND SPRAY
en en en en en en en en en en en en en e								,,	CHROME PLATED, PERFORATED GRID STRAINER WITH 11/2" TAILPIECE.
Men	NOD SERVICE DAGA:	IANITOD						FIAT: #TSBCR 1000	-PRECAST TERRAZO, NEO-CORNER, 12" HIGH WITH 6" HIGH DROP
<u>MSB</u>	MOP SERVICE BASIN	JANITOR CLOSET	3"	11/2"	1/2"	1/2"	_	FAUCET: FIAT #830-AA	-CHROME PLATED FAUCET, VACUUM BREAKER, INTEGRAL STOPS AND WALL BRACE

1. SINK, LAVATORY & WATER COOLERS SUPPLY SHALL BE BRASS W/ BRASS ANGLE STOPS FOR ½" WATER SUPPLY LINES, W/ LOOSE KEY (W/CAP), AND WALL FLANGE. ALL COMPONENTS SHALL BE POLISHED CHROME FINISH. MANUFACTURER: E.B.C., INC. OR APPROVED EQUAL.

- 2. CAST BODY "P" TRAP 1½" x 1½" WITH HEAVY CAST J—BEND & FLAT CLEANOUT PLUG, SLIP NUTS AND WALL FLANGE. ALL COMPONENTS SHALL BE POLISHED CHROME FINISH. MANUFACTURER: E.B.C., INC. OR APPROVED EQUAL.
- 3. STRAINERS SHALL BE FURNISHED W/FIXTURES AS REQUIRED, FOR H/C LAVATORY PROVIDE OFFSET TAILPIECE.
- 4. PROVIDE TRUEBRO MODEL 103 (WHITE), ANTIMICROBAL HANDI LAV-GUARDS INSTALLATION KIT AT ADA COMPLIANT LAVATORIES FOR WATER SUPPLIES & WASTE LINE.
- 5. PROVIDE WATER SUPPLY & "P" TRAP & OPTIONAL WATER FILTERS FOR ELECTRIC WATER COOLERS AS PER MANUFACTURERS RECOMMENDATIONS.
- 6. CONNECT COLD & HOT WATER SUPPLY AT FAUCET TO COMMON COLD WATER SUPPLY.



GRINER ENGINEERING, INC.

1628 First Avenue North
St. Petersburg, Florida 33713

Date 11/19/2008
Drawn JWY St. Petersburg, Florida 33713 Phone: (727)-822-2335 

 St. Petersburg, Florida 33713
 Designed
 JWY

 Phone: (727)-822-2335
 Revised

 Fax: (727)-821-3361
 Revised

 Certificate of Authorization #3173
 Job no.
 08067

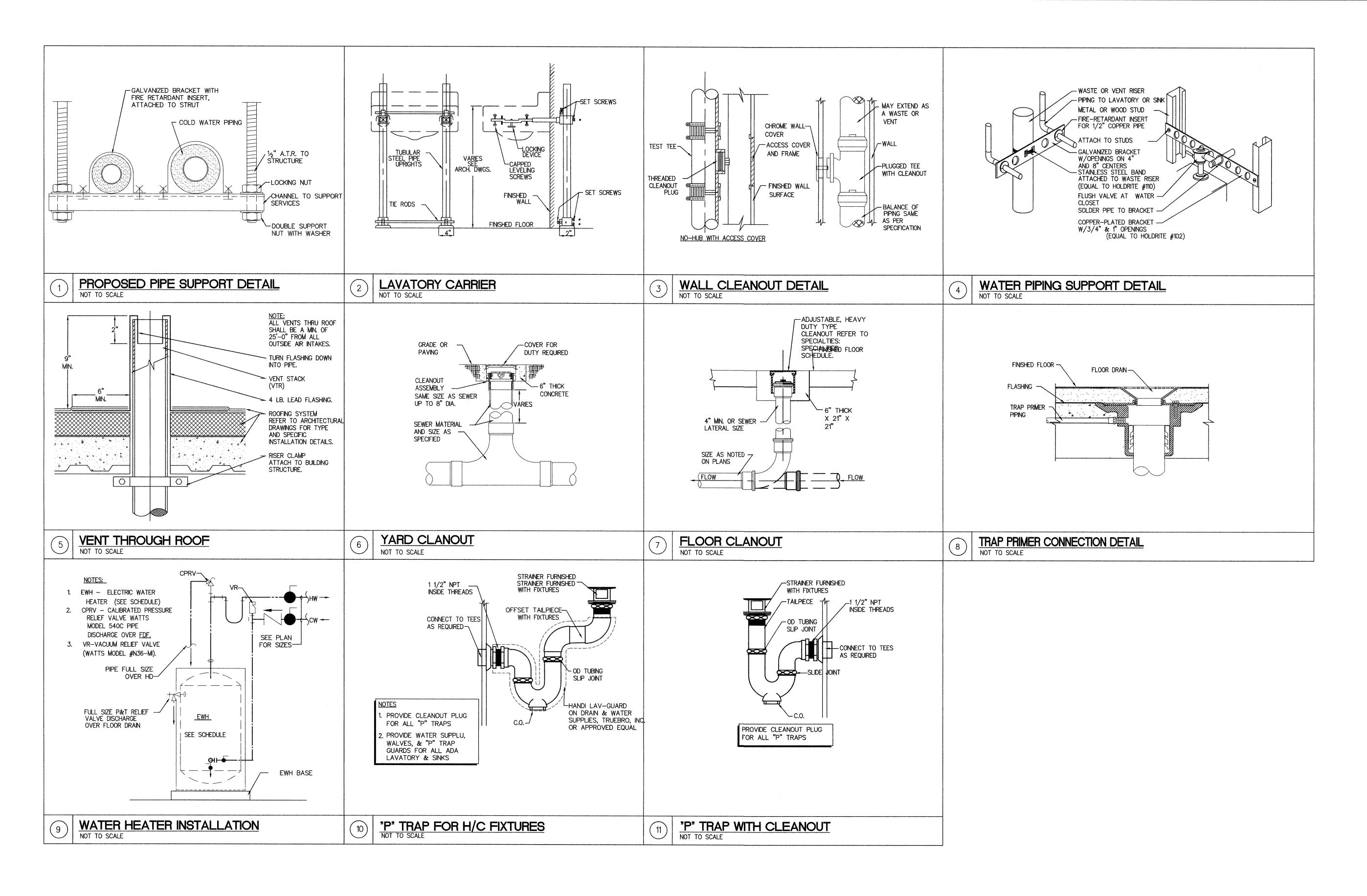
MANATEE COUNTY GOVERNMENT

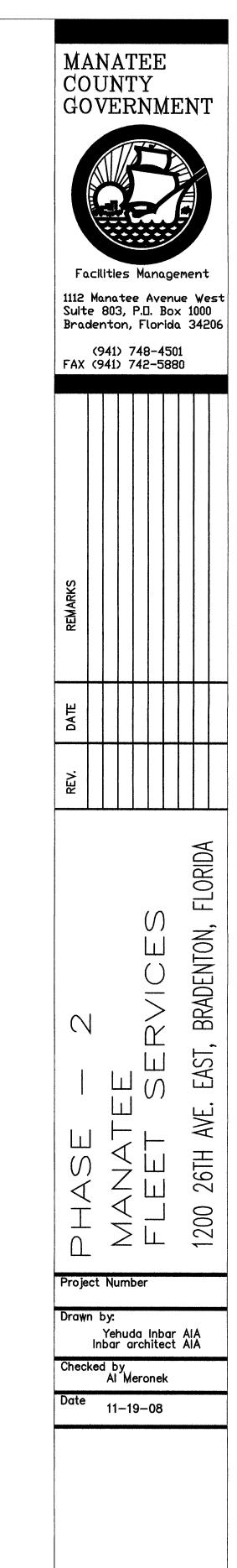


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GRINER ENGINEERING, INC.

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Certificate of Authorization #3173

Date 11/19/2008

Drawn JWY
Designed JWY
Revised
Job no. 08067

Date 11/19/2008
Drawn JWY
Designed JWY
Revised
Job no. 08067

Scale

Drawing Number

