KEY NOTES:

1. 10" DIA. TOILET EXHAUST UP THROUGH ROOF. PROVIDE WITH ROOF CURB AND CAP. VERIFY ROUTING AND ROOF PENETRATION LOCATION IF FIELD PRIOR TO BID.
2. EXTEND 20"X18" W/15Ø. RETURN DUCT RETURN DUCT AND STUBBED WITH BIRD SCREEN IN SPACE BETWEEN JOISTS. CAREFULLY COORDINATE WITH FIXTURES.
3. 12"X8" RETURN GRILLE ASSEMBLY AT 8'-6".
4. DEMOLISH EXISTING 10 TON HVAC UNIT AND PROVIDE NEW 10 TON HVAC UNIT, AS SCHEDULED (PROVIDE ADAPTOR CURB, AS REQUIRED & IF PERMITTED). PLUMBING CONTRACTOR SHALL EXTEND NEW CONDENSATE AND GAS PIPING AND RECONNECT TO EXISTING CONDENSATE AND GAS PIPING OF ADEQUATE CAPACITY. COORDINATE ALL WORK WITH LANDLORD & GENERAL CONTRACTOR. REWORK EXISTING ROOF PENETRATIONS AS REQUIRED. ALL ROOF WORK BY LANDLORDS APPROVED ROOFING CONTRACTOR.

NOTES:

COORDINATE ALL T-STAT OR MECHANICAL SENSOR REQUIREMENTS WITH EMS SYSTEM (SITE SAGE) (TYP.). FINAL LOCATIONS DETERMINED IN FIELD W/ 5B GM.

T.G.B. SHALL PROVIDE ALL GAS METER (AS REQUIRED) AND ALL PIPING AND ELECTRICAL POWER TO THE ROOFTOP UNITS AND PROVIDE CONTROL WIRING.

ALL DUCTWORK TO BE INSTALLED AT A MINIMUM OF 12'-6" A.F.F.

MECHANICAL CONTRACTOR TO PERFORM PREVENTATIVE MAINTENANCE ON EXISTING RTUS PRIOR TO TURNOVER AND SUBMIT TO FIVE BELOW WITH BALANCE REPORTS.

ALL SHOWN LIGHT AND DASHED IS EXISTING AND ALL SHOWN SOLID AND HEAVY IS NEW UNLESS NOTED OTHERWISE.

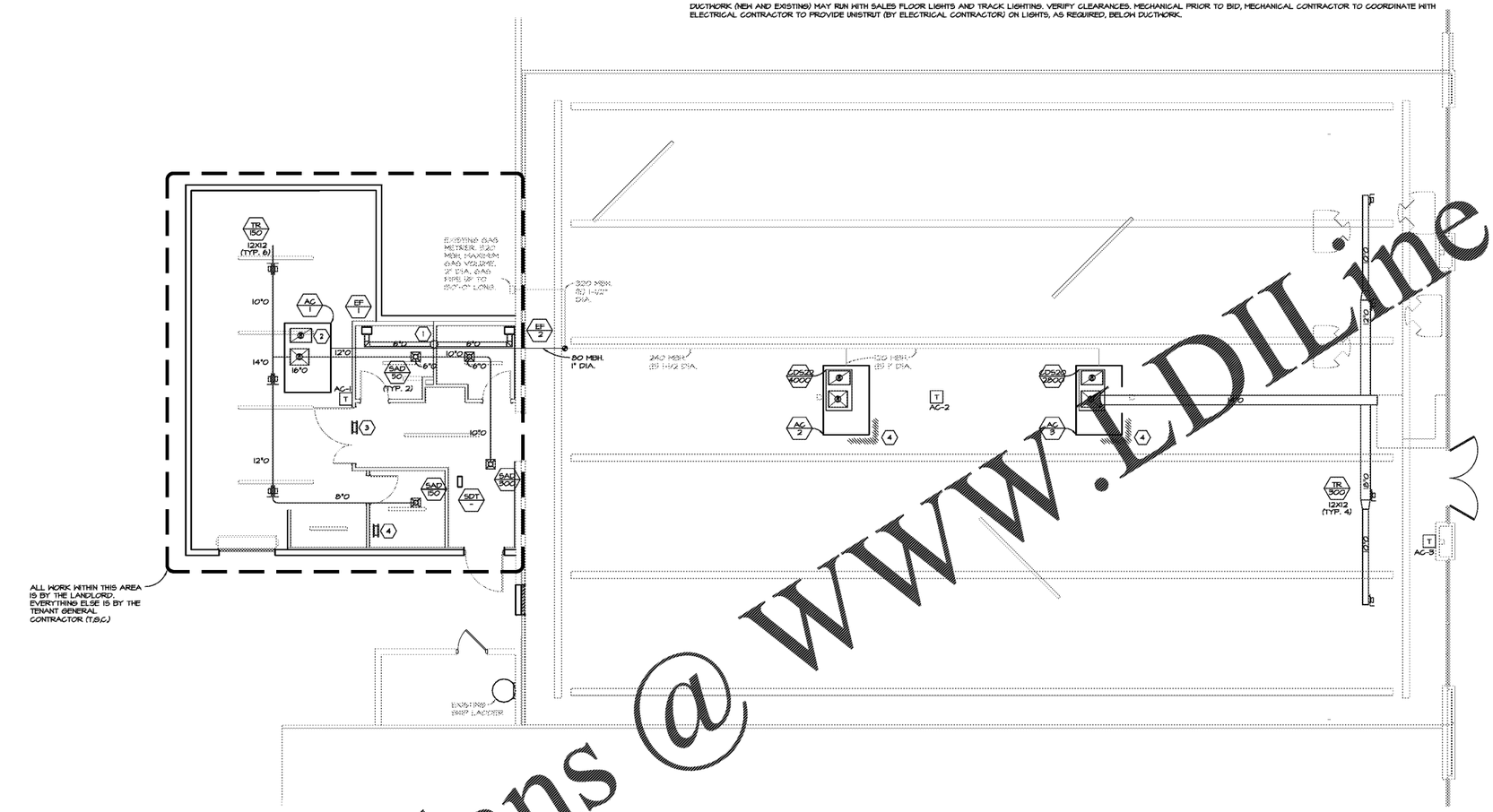
TEMP SENSORS ARE INSTALLED IN THE DISCHARGE AIR DUCT (AIR LEAVING THE ROOFTOP AND ENTERING THE ROOM) PROVIDED & INSTALLED BY F.B.

ALLOCATE TIME AND MATERIALS REQUIRED TO VERIFY EXISTING CONDITIONS AND SCOPE (IE, T.G.B./TENANT PROVIDED), PRIOR TO BID, SUBMIT RFI IN WRITING TO THE ARCHITECT ANY DISCREPANCIES WHICH MAY AFFECT THE WORK AND THE ABILITY TO PROVIDE A COMPLETE MECHANICAL SYSTEM. FAILURE TO DO SO SHALL NOT RESULT IN ANY ADDITIONAL EXPENSE TO THE T.G.B. AND/OR TENANT.

DUCTWORK (NEW AND EXISTING) MAY RUN WITH SALES FLOOR LIGHTS AND TRACK LIGHTING. VERIFY CLEARANCES. MECHANICAL PRIOR TO BID, MECHANICAL CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR TO PROVIDE UNISTRUT (BY ELECTRICAL CONTRACTOR) ON LIGHTS, AS REQUIRED, BELOW DUCTWORK.

LEGEND

SD(1) / 24"x24"	REMOTE DUCT SMOKE DETECTOR TEST STATION WITH A&V ALARM AS REQUIRED BY CODE OR LOCAL AHJ. SIMPLEX # 4098-9842, 48" AFF.
	CONCENTRIC SUPPLY/RETURN DIFFUSER WITH PLENUM, 12'-6" A.F.F.
T	T.G.B. TO PROVIDE SITE TM46 TSTAT AT 72" AFF ORDERED THROUGH POWERHOUSE DYNAMICS, 617-340-6682 X234, SUPPORT@POWERHOUSEDYNAMICS.COM OR PERP.SITESAGE.NET/FIVEBELOW.
T	TEMPERATURE SENSOR
VD	VOLUME DAMPER
AHU-1	EQUIPMENT LABEL OR TONNAGE
24"x24" / 12" DIFF.	DIFFUSER NECK SIZE / DIFFUSER AIRFLOW PATTERN
X	X=DUCT WIDTH
Y	Y=DUCT HEIGHT
PE	PHOTOELECTRIC SMOKE DETECTOR
(E)/(R)	EXISTING/RELOCATED



1 MECHANICAL PLAN

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

ROOFTOP UNIT SCHEDULE

UNIT: TAG	LOCATION	TONS:	FAN: MIN. OSA	CFM	E.S.P. "H.G.	FILTER: TYPE	NO.	EFF.	ELECTRICAL: VOLTS-PH-Hz	MCA	MOCP	COOLING: MBH	GAS HEAT: INPUT MBH	GAS HEAT: OUTPUT MBH	OPER. WT.	MANUFACTURER MODEL NO.
AC-1	ROOF	4	110	1400	0.6"	2" DISP.	4	30%	208-3-60 / 480-3-60	17.3 / 7.1	30 / 15	95	80	65	1225	YORK ZJC048
AC-2	ROOF	10	160	4,000	1.0"	2" DISP.	4	30%	208-3-60 / 480-3-60	28.2 / 11.4	40 / 20	120	150	144	1520#	YORK ZJ120
AC-3	ROOF	10	160	4,000	1.0"	2" DISP.	4	30%	208-3-60 / 480-3-60	27.2 / 26.4	40 / 20	120	150	144	1520#	YORK ZJ120

REMARKS: EER = 12.2 REFRIGERANT = R410A

BASIS OF DESIGN: ROOFTOP UNITS WITH DOWNFLOW ECONOMIZER, POWER EXHAUST, LOW AMBIENT, SMOKE DETECTORS, PROGRAMMABLE T-STAT, ROOF CURB, SINGLE POINT BOTTOM CONNECTIONS, NON POWERED CONVENIENCE OUTLET.

NOTES:
1) UTILIZE T.G.B.'S ROOFING CONTRACTOR FOR ALL ROOF PENETRATIONS, REINFORCING CURB & ROOF OPENINGS, AS REQUIRED.
2) HIRE STRUCTURAL ENGINEER TO VERIFY STRUCTURAL INTEGRITY OF ROOF DECK. ADDITIONAL STRUCTURAL REQUIREMENTS ARE THE RESPONSIBILITY OF THIS CONTRACTOR.
3) RUN 1" CONDENSATE DRAIN LINE TO NEAREST ROOF DRAIN OR SPLASH BLOCK.
4) MOUNT ON PREFABRICATED ROOF CURB WITH VIBRATION ELIMINATORS WHERE REQUIRED (NOT INCLUDED IN OP. HEIGHT SHOWN). LOCATE PER T.G.B.'S SPECIFICATIONS.
5) PROVIDE AND INSTALL ADJUSTABLE PITCH HURRICANE RATED FULL UNIT CURB, 14 HIGH. CLEAR HEIGHT FROM TOP OF CURB AND FINISHED ROOF IS AT LEAST CODE MINIMUM OF 8". CONTRACTOR SHALL FIELD VERIFY REQUIRED CURB HEIGHT PRIOR TO PURCHASING. INTERIOR OF CURB SHALL BE INSULATED AS PER ROOF INSULATION SPECS. COORDINATE EXACT LOCATION OF CURB WITH GENERAL CONTRACTOR AND TRUSS CONDITIONS PRIOR TO INSTALLATION. SEE STRUCTURAL PLAN FOR CURB CONNECTION TO STEEL ROOF DECK.

YORK NATIONAL ACCOUNTS EQUIPMENT PACKAGE

FIVE BELOW HAS A NATIONAL HVAC AGREEMENT WITH YORK NATIONAL ACCOUNTS. THE HVAC EQUIPMENT SHALL BE PURCHASED BY FIVE BELOW, FIVE BELOW FRANCHISEE, T.G.B., OR BG OR MECHANICAL CONTRACTOR, DIRECTLY FROM YORK NATIONAL ACCOUNTS - NO EXCEPTIONS. THE HVAC MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND ACCEPTING THE EQUIPMENT, VERIFYING PROPER QUANTITIES, PROVIDING TEMPORARY STORAGE, LABOR, 1ST YEAR LABOR WARRANTY, FOR PRICE QUOTES, PROJECT SUBMITTALS, AND QUESTIONS REGARDING TECHNICAL SPECIFICATION, CONTACT YORK NATIONAL ACCOUNTS, JASON MCDANIELS @ TOLL FREE 800-481-4738, DIRECT LINE 405-419-6210, OR EMAIL TO: JASON.J.MCDANIELS@JCI.COM, FOR EXHAUST FANS, GRDS' AND UNIT HEATERS, CONTACT SHELDON HEFNER @ DIRECT LINE 405-419-8991, OR EMAIL TO: SHELDON.HEFNER@JCI.COM, FOR ALL OTHER INQUIRIES, PLEASE CONTACT CHRIS ZINK, NATIONAL ACCOUNT SALES MANAGER, AT 732-921-2104 OR EMAIL CHRIS.ZINK@JCI.COM

NOTE: AC-2 & 3 BASIS OF DESIGN IS CARRIER SINCE UNITS BEING REPLACED ARE CARRIER OF EQUAL WEIGHT AND CAPACITY. PROVIDE ALTERNATE FOR YORK UNITS.

DIFFUSER, REGISTER AND GRILLE SCHEDULE

TYPE	DESCRIPTION
"SAD"	ALUMINUM CONSTRUCTION, SURFACE OR LAY-IN MOUNT, ROUND NECK CEILING DIFFUSER WITH REMOVABLE INNER CONE ASSEMBLY AND ADJUSTABLE VANES FOR CHANGING AIRFLOW DISCHARGE. PROVIDE WITH STANDARD WHITE FINISH AND MODEL RD-75 OPPOSED BLADE DAMPER AND MODEL "SB" SEGTORING BAFFLE FOR AIRFLOW OTHER THAN 4-WAY BLOW. TITUS MODEL #TMS-AA OR APPROVED EQUIVALENT.
"RET"	ALUMINUM CONSTRUCTION RETURN AIR GRILLE WITH BLADES ON 3/4" CENTER, PARALLEL TO THE LONG DIMENSION AND SET AT 35 DEGREES. PROVIDE WITH STANDARD WHITE FINISH, LAY-IN BORDER FOR INSTALLATION IN CEILING OR SURFACE MOUNT BORDER SUITABLE FOR INSTALLATION IN DRYWALL TYPE CEILING. TITUS MODEL #350-FL OR APPROVED EQUIVALENT.
"TR"	ALUMINUM CONSTRUCTION, SURFACE MOUNTED, LOUVERED FACE DOUBLE DEFLECTION REGISTER. PROVIDE WITH STANDARD WHITE FINISH AND OPPOSED BLADE DAMPER. TITUS MODEL #300-FS OR APPROVED EQUIVALENT.
"CDS"	ALUMINUM CONSTRUCTION, CONCENTRIC SUPPLY/RETURN DIFFUSER WITH PLENUM. PROVIDE WITH STANDARD FINISH. RUSKIN MODEL CDS SERIES.

EXHAUST FAN SCHEDULE

TAG	LOCATION	SERVICE	CFM	SP "H.G.	RPM	DRIVE	TYPE	WHEEL DIA.	WATTS	VOLTAGE PH. / Hz.	MANUFACTURER MODEL NO.	NOTES:
EF-1 / 12"	TOILET ROOM	EXHAUST	75	0.125"	-	DIRECT	BI	-	-	120/1/60	DAYTON 1LSH7	1,2,3

NOTES:
1) FAN SHALL BE MOUNTED IN CEILING WITH VIBRATION ISOLATORS.
2) FAN SHALL BE CONTROLLED BY THE TOILET ROOM LIGHT SWITCH.
3) FAN SHALL BE PROVIDED WITH LOW LEAKAGE BACKDRAFT DAMPER.

SPECIAL NOTES TO CONTRACTOR

FIELD VERIFY ELEVATIONS, SIZES, AND EXACT ROUTING OF NEW & EXISTING DUCTWORK SHOWN AND COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS. INSTALL ALL NEW AND REWORK ALL EXISTING DUCTWORK TO BE AT 12'-6" AFF MIN. NO EXCEPTIONS AND NO CHANGE ORDERS WILL BE ALLOWED FOR FAILURE TO DO SO PRIOR TO BID.

MECHANICAL VENTILATION CALCULATIONS IN ACCORDANCE WITH FLMC - 6th ADDITION (2017)

Room Name	Area (sf)	People Outdoor Air Rate, Rp (cfm/person)	Area Outdoor Air Rate, Ra (cfm/ft2)	Rp * # people + Ra * sf (cfm)	Corrected (cfm)	Occupant Density (#/1000ft2)	Exhaust Air cfm/fix	Exhaust Air # fix	Exhaust Air cfm	System
Sales East	3425	7.5	0.12	756	756	15	-	-	-	AC-3
Sales West	3425	7.5	0.12	756	756	15	-	-	-	AC-2
Corridor	160	-	0.06	11	11	-	-	-	-	AC-1
Office	85	5	0.06	9	11	5	-	-	-	AC-1
Restroom	-	-	-	-	-	-	75	1	75	AC-1
Restroom	-	-	-	-	-	-	75	1	75	AC-1
Stockroom	705	-	0.12	85	85	-	75	1	75	AC-1

FLORIDA ENERGY CODE - 6th EDITION (2017) POST CONSTRUCTION REQUIREMENTS

PER THE REQUIREMENTS OF THE FLORIDA BUILDING CODE/FLORIDA ENERGY CODE 5TH EDITION (2017), THE GENERAL CONTRACTOR SHALL OBTAIN & PROVIDE THE FOLLOWING MECHANICAL RELATED ITEMS LISTED BELOW. CONTRACTOR SHALL PROVIDE A COPY TO THE PROJECT OWNER AND WRITTEN CONFIRMATION TO THE PROFESSIONAL OF RECORD PROVING SAID INFORMATION HAS BEEN PROVIDED. 1. HVAC RECORD DRAWINGS OF THE ACTUAL INSTALLATION, SYSTEM CAPACITIES, CALIBRATION INFORMATION AND HVAC RECORD DRAWINGS OF THE ACTUAL INSTALLATION, SYSTEM CAPACITIES, CALIBRATION INFORMATION AND PERFORMANCE DATA FOR EACH EQUIPMENT PROVIDED TO THE OWNER WITHIN 90 DAYS OF SYSTEM ACCEPTANCE. 2. HVAC O&M DOCUMENTS FOR ALL MECHANICAL EQUIPMENT AND SYSTEM PROVIDED TO THE OWNER WITHIN 90 HVAC O&M DOCUMENTS FOR ALL MECHANICAL EQUIPMENT AND SYSTEM PROVIDED TO THE OWNER WITHIN 90 DAYS OF SYSTEM ACCEPTANCE BY THE MECHANICAL CONTRACTOR. 3. WRITTEN HVAC BALANCING AND OPERATIONS REPORT PROVIDED TO THE OWNER AND AUTHORITY HAVING WRITTEN HVAC BALANCING AND OPERATIONS REPORT PROVIDED TO THE OWNER AND AUTHORITY HAVING JURISDICTION WITHIN 90 DAYS OF SYSTEM ACCEPTANCE. REPORT SHALL BE PROVIDED BY A NEBB OR AABC CERTIFIED AIR BALANCE & TESTING AGENCY LICENSED IN FLORIDA.

STRUCTURAL SUPPORT OF ROOFTOP HVAC EQUIPMENT

THE T.G.B. GENERAL CONTRACTOR SHALL RETAIN AND PAY FOR A LICENSED PROFESSIONAL ENGINEER (POR) FOR ALL WORK PERTAINING TO FOR THE STRUCTURAL SUPPORT OF NEW AND/OR RELOCATED ROOFTOP HVAC EQUIPMENT SHOWN OR REFERENCED ON THE DOCUMENTS. THIS ENGINEER (POR) SHALL PERFORM ALL NECESSARY FIELD INVESTIGATIONS, ANALYSIS, AND DESIGN AS REQUIRED TO SAFELY SUPPORT ALL ROOF-MOUNTED EQUIPMENT RELATED TO THE WORK. THE POR SHALL DESIGN ALL SUPPLEMENTAL FRAMING AND SUPPORTS AND ALL REINFORCEMENT OF THE EXISTING STRUCTURE AS REQUIRED TO COMPLY WITH ALL CODES, REGULATIONS, AND GOOD ENGINEERING PRACTICE. THE POR SHALL SIGN AND SEAL ALL DRAWINGS, CALCULATIONS, AND ALL OTHER DOCUMENTS AS NECESSARY TO OBTAIN BUILDING PERMITS, APPROVALS FROM AUTHORITIES HAVING JURISDICTION, AND CERTIFICATES OF OCCUPANCY. COPIES OF ALL APPROVAL AND PERMIT DOCUMENTS SHALL BE PROVIDED TO THE T.G.B. PRIOR TO STARTING ANY ROOFTOP EQUIPMENT INSTALLATION.

2 MECHANICAL SCHEDULES

Order Plans @ WWW.LDILine.com

ENGINEER

MICHAEL J. ROLLINS — LICENSE NUMBER — 68796 — STATE OF FLORIDA — PROFESSIONAL ENGINEER

08.15.19 Date — 02.28.21 Expires

Professional Certification.
I certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Florida, license number 68796, expiration date February 28, 2021.

ARCHITECTURAL SEAL

DATE ISSUE

DATE	REVISION	NAME
09/19/19	PERMIT / OWNER	

PROJECT NAME / LOCATION

five BELOW

NORTH LAKELAND
919 LAKELAND PARK CENTER DRIVE
LAKELAND, FL 33809

PROJECT INFORMATION

DATE: SEPTEMBER 18, 2019
PROJECT NO. 190636
DELIVERY TYPE: AS-IS

DRAWN:
CHECKED:

SHEET TITLE / NUMBER

MECHANICAL PLAN

M1.0