CODES, REGULATIONS, STANDARDS, PERMITS, AND INSPECTION

1. The General Contractor is responsible for ensuring built compliance with all codes, regulations, and standards such as may be in force. The codes include, but may not be limited to:

2015 International Building Code
2015 International Energy Conservation Code
2015 International Mechanical Code
2014 National Electrical Code
2015 International Fire Code
2015 Uniform Plumbing Code
Texas Accessibility Standard 2012

2. Should the General Contractor become aware of a condition indicated in the contract documents that would result in a violation of any code or regulation listed above, the General Contractor shall contact the Architect immediately for resolution.

3. The General Contractor shall be responsible for obtaining any permit not provided beforehand by the Owner.

4. The General Contractor and/or his/her subcontractor shall be responsible for coordinating all required inspections.

5. To the extent required by the City of Lakeway or other applicable AHJ, the General Contractor shall commission a third party inspector.

6. Neither the Architect nor the Owner shall be considered to act in the role of an Inspector. While the Owner and the Architect shall endeavor to alert the General Contractor to any perceived or observed defect in the construction, failure to do so shall not in any way relieve the General Contractor from his/her obligation to ensure that the built work is safe, of good quality, and compliant with all relevant codes and regulations.

7. The General Contractor is responsible for ensuring that all work, whether performed by subcontractors or by the General Contractor him/herself, is of good workmanship and quality.

GENERAL NOTES

1. These documents comprise a portion of a contract between the Owner and the General Contractor. No contract is implied or stated between the Owner and any other party, not between the Architect and any party.

2. The General Contractor may not modify the plans, elevations, site plan, or any drawings in these contract documents without obtaining Architect consultation and Owner approval beforehand.

3. Should the Owner request a change to the contract documents, the General Contractor is responsible for ensuring that the change does not result in a built condition that does not comply with codes and/or regulations. Consultation with the Architect and/or an inspector is highly recommended.

4. The Owner shall not be held liable nor be made to pay for the remediation of work judged substandard and/or rejected by the Architect, Owner and/or any inspector (municipal or third-party). The Owner alone reserves the right to accept work judged substandard by either the Architect or the Owner. Should the Owner elect to accept substandard work, the Owner reserves the right to request monetary credit and/or a reduction in the contract sum.

5. The Owner and/or the Architect shall be permitted to access the project site, in part and as a whole, at any reasonable time without prior notice. If the project site, in whole or in part, is locked or is otherwise secured, the Architect shall coordinate with the General Contractor to gain access.

6. The General Contractor is solely responsible for obtaining and maintaining all such bonding, sureties and insurances as may be required to shield the Owner from claims pertaining to the General Contractor's and/or Subcontractor's execution of the Work and their respective conduct onsite.

7. The General Contractor is solely responsible for ensuring that working conditions onsite are safe and comply with all relevant rules, laws, codes, and standards. Likewise, the General Contractor is solely responsible for ensuring that all personnel onsite conduct themselves in a safe and prudent manner at all times, whether or not the General Contractor is present.

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PLUM	BING

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P1.1	PLUMBING F

PROJECT DESCRIPTION

OFFICE OCCUPANCY, GROUP B 2,027 SF Tenant Finish-out

Calculated Occupant Load = 30 Total Occupants Please refer to Sheet A0.1 for Code Plan and additional information

GUMBEAUX, LLC CHERRY PEAK OFFICE PARK, BUILDING 4B **Tenant Finish-Out** 3503 Wild Cherry Road Austin, TX 78738

COVER SHEET

& ENVELOPE COMCheck ITY GUIDELINES I AND REFLECTED CEILING PLAN EVATIONS

AND SCHEDULES

LS

NOTES SCHEDULES & ONE-LINE AN & LIGHTING PLAN

NOTES & SCHEDULES PLAN P2.1 PLUMBING DETAILS & RISERS

MECHANICAL, ELECTRICAL, PLUMBING ENGINEER X5 ENGINEERING P.O. BOX 91743 AUSTIN, TX 78709 512.815.2959

<u>OWNER</u> SUSAN HUVAL AUSTIN, TEXAS

ARCHITECT ASCENSION ARCHITECTURE, PLLC P.O. BOX 340781 LAKEWAY, TX 78734 512.657.8946

> Contact: Brandi McDaniel, AIA brandi@ascensionarch.com

Contact: Michael Sestak, P.E. msestak@x5eng.com

CHERRY PEAK OFFICE PARK, BUILDING 4B 3503 WILD CHERRY ROAD, AUSTIN, TEXAS 78738 LLC GUMBEAUX,

ARCHITECTU

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7/28/2020

PROJECT NO. DRAWN BY: **REVISIONS:**

DATE

20.03.0 7/28/2020

COVER SHEET CVR

CHERRY PEAK OFFICE PAR GUMBEAUX BUSINESS OF

Address: 3503 Wild Cherry R Proposed Use: General Office

General Project Description Gross Leasable Area: 2,027

Chapter 1 – Administration / Accessibility Standards: Texa Applicable Codes:

This report references specific

Chapter 3 – Use and Occup Classification: (Section 303)

303.2 Business Group B occu transactions, including storage Professional services

...

<u>Chapter 5 – General Buildin</u> Existing Building = T

Chapter 6 – Types of Const Table 601 Fire-Resis Structural F

Bearing walls Interior Nonb Floor Constr Roof Constru

Chapter 8 – Interior Finishes Section 803.1.1 Inter Class A: Fla Class B: Flar Class C: Fla

> Per Table 803.11 for Class A: exit passage Class B: corridors Class C: rooms and e

Chapter 10 Means of Egress General Means of Egress: Minimum Ceiling Hei Protruding o

> Floor Area Allowance Business

Assembly without Total Occupants yielded in

See plan for calculations.

Egress Width per Occupant: Total egress

> Total egres Fro

Number of Exits: Two exits or exit acce distance exceeds the travel distance is 100 1 exit requir 1 exit provid

Exit travel distance shall not 1017.2)

Travel distance shall be measured from the most remote point within a story along the natural and unobstructed path of horizontal and vertical egress travel to the entrance to an exit.

Minimum Corridor Width: 44 inches (Section 1024.2)

Corridors: Fire Resistance Rating per Table 1020.1 Exception 4. A fire resistance is not required for corridors in an occupancy in Group B that is a space requiring only a single means of egress complying with Section 1006.2.

Total calculated occupant load = 30 30 total occupants yields 15 male, 15 female

PER Section 422.2 Separate Facilities, Exception 3: In Business occupancies...with a total occupant load of 50 or less including customers and employees, one toilet facility, designed for use by no more than one person at a time, shall be permitted for use by both sexes.

Water closets Unisex:

Lavatories Unisex:

Drinking Fountains

1 per 150 30 yields

Service Sink

1 required 1 provided

END OF REPORT

ARK BUILDING 4B	
Road. Austin. TX 78738	
ce	
<u>n:</u> 7 SF	
A / Applicable Codes xas Accessibility Standard 2015 International E 2015 International E 2015 International N 2015 International F 2014 National Elect 2015 Uniform Plum	d 2012 Building Code Energy Conservation Code Aechanical Code Fire Code rical Code bing Code
fic building code reference	es from the International Building Code and the Uniform Plumbing Code
pancy Classification Business, Group B	
supancy includes among o ge of records and account	others, the use of a building or a portion thereof, for office, professional or service-type ts. Business occupancies shall include, but not be limited to, the following:
es (architects, attorneys, c	lentists, physicians, engineers, etc.)
<u>ng Heights and Areas</u> Type VB Nonsprinklered	
truction stance Rating Requireme frame 0 f lls 0 f bearing Walls 0 f truction 0 f ruction 0 f	nts for Building Elements (Hrs) for Type VB nr nr nr nr
es rior wall and ceiling finish ame Spread index 0-25; s ame Spread index 26-75; ame Spread index 76-200	materials shall be classified in accordance with ASTM E84 or UL 723. moke-developed index 0-450 smoke-developed index 0-450); smoke-developed index 0-450
r Group B Occupancy, No geways	onsprinklered:
enclosed areas	
<u>ss</u>	
eight allowed: 7'-6" objects are permitted to e	xtend below minimum ceiling height provided a minimum headroom of 80" is provided.
e per Occupant (Table 10	004.1.2):
100 gross fixed seats, Unconcentr	ated (tables and chairs) for Conference Room 15 gross
current plan : 30 OCCU	IPANTS
0.2 inch per occupant (1 ss width required based (30 occupants X 0.2	005.3.2) on occupant load = 6.0 inches 2 inches/occupant = 6.0 inches)
ss width proposed and p ont door: 1 door at 38 inch	provided = 38 nes each (clear width) = 38 inches
cess doorways from any s le values listed in Table 10 0 feet. ired ided	space shall be provided where the design occupant load or the common path of egress travel 006.2.1. Table 1006.2.1 indicates maximum occupant load for one exit is 49, and maximum
ot exceed 250 ft in building	gs equipped with Sprinkler System, 200 ft in buildings WITHOUT a Sprinkler System (Table

(The longest travel distance calculated in the proposed plan is 68'-3"+/-.)

Dead End Corridor Length: When more than one exit access is required, dead end corridor maximum is 20 feet (per 1020.4)

Plumbing fixtures required per 2015 Uniform Plumbing Code

1 required water closet, 2 provided

1 required lavatory, 2 provided

1 required

Per 415.2 Drinking Fountain Alternatives. Drinking fountains shall not be required for an occupant load of 30 or less.





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30 TOTAL OCCUPANTS





Figure 308.3.2 Obstructed high side reach





> 10"-24" MAX



vright hy Ascension Architecture PLL

ACCESSIBILITY

GUIDELINES

A0.2

NOTE: REFER TO ELECTRICAL PLANS & LIGHT FIXTURE SCHEDULE FOR FIXTURE SPECIFICATIONS, TYP.

Convright hy Ascension Architecture PLI

3 INT ELEV - BREAK ROOM SIDE WALL 1/2" = 1'-0"

ASCENSION

ARCHITECTURE

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DO	DOOR SCHEDULE											
TAG	WIDTH	HEIGHT	ROOM	FIRE RATING	NOTES	HARDWARE						
01A	3'-6"	8'-0"	EXTERIOR		EXISTING BUILDING DOOR	KEYED LOCKSET						
03A	3'-0"	8'-0"	CONFERENCE		GLASS SLIDER IN INTERIOR GLASS SYSTEM	PASSAGE LEVER						
04A	3'-0"	8'-0"	OFFICE		SCWD (STAINED) W/VISION PANEL IN TIMELY PREFINISHED STL FRAME	OFFICE LOCKSET						
05A	3'-0"	8'-0"	OFFICE		SCWD (STAINED) W/VISION PANEL IN TIMELY PREFINISHED STL FRAME	OFFICE LOCKSET						
06A	4'-0"	8'-0"	CLOSET		SCWD (STAINED) TWO PANEL SLIDING DOOR	PASSAGE LEVER						
06B	4'-0"	8'-0"	CLOSET		SCWD (STAINED) TWO PANEL SLIDING DOOR	PASSAGE LEVER						
07A	3'-0"	8'-0"	CUSTODIAL		SCWD (STAINED) POCKET DOOR	PASSAGE LEVER						
09A	3'-0"	8'-0"	RESTROOM		SCWD (STAINED) IN TIMELY PREFINISHED STL FRAME	PRIVACY LOCKSET						
10A	3'-0"	8'-0"	RESTROOM		SCWD (STAINED) IN TIMELY PREFINISHED STL FRAME	PRIVACY LOCKSET						
13A	3'-0"	8'-0"	OFFICE		SCWD (STAINED) W/VISION PANEL IN TIMELY PREFINISHED STL FRAME	OFFICE LOCKSET						
14A	3'-0"	8'-0"	OFFICE		SCWD (STAINED) W/VISION PANEL IN TIMELY PREFINISHED STL FRAME	OFFICE LOCKSET						
15A	3'-0"	8'-0"	OFFICE		SCWD (STAINED) W/VISION PANEL IN TIMELY PREFINISHED STL FRAME	OFFICE LOCKSET						

DOORS & FRAMES

HARDWARE

POLISHED CHROME, MODEL #156MIL SQT SMT 26. PROVIDE LOCKSETS WHERE SCHEDULED.

NOTES: 1. SHEETROCK RETURNS AT WINDOWS, NO WOOD TRIM AT SILL OR APRON REQUIRED.

DOORS: SOLID CORE WOOD DOORS, 1 3/4" THICK, STAIN FINISH (STAIN COLOR TO BE SELECTED) FRAMES: TIMELY CLASSIC S-SERIES , TA-8, FOR ALL 4 7/8" WALLS, 20 GA., COLOR BROWNTONE, SC101

DOOR HARDWARE: PROVIDE AND INSTALL 1 1/2 PR BUTTS EACH DOOR WITH LEVER EQUAL TO KWIKSET MILAN LEVER, SIGNATURE SERIES, COLOR

FINISH	SCHEDULE
---------------	----------

TAG	ROOM	FLOOR	BASE	WALLS				CEILING	CLG HT	NOTES			
				NORTH	EAST	SOUTH	WEST						
1	FOYER	SC	WOOD	PT	PT	PT	PT	GYP-PT	12'-0"				
2	HALL	SC	WOOD	PT	PT	PT	PT	GYP-PT	12'-0"				
3	CONFERENCE	SC	WOOD	PT	PT	PT	PT	GYP-PT	12'-0"	GLASS ENTRANCE			
4	OFFICE	SC	WOOD	PT	PT	PT	PT	GYP-PT	12'-0"				
5	EXECUTIVE OFFICE	SC	WOOD	PT	PT	PT	PT	GYP-PT	12'-0"				
6	CLOSET	SC	WOOD	PT	PT	PT	PT	GYP-PT	12'-0"				
7	CUSTODIAL	TILE	TILE	PT	PT	PT	PT	GYP-PT	12'-0"	FRP AT MOP SINK WALLS			
8	BREAK ROOM	SC	WOOD	PT	PT	PT	PT	GYP-PT	12'-0"	TILE AT BACKSPLASH			
9	RESTROOM	SC	WOOD	TILE / PT	TILE / PT	TILE / PT	TILE / PT	GYP-PT	12'-0"	5'-0" TILE WAINSCOT WITH PT ABOVE			
10	RESTROOM	TILE	TILE	TILE / PT	TILE / PT	TILE / PT	TILE / PT	GYP-PT	12'-0"	5'-0" TILE WAINSCOT WITH PT ABOVE			
11	HALL	SC	WOOD	PT	PT	PT	PT	GYP-PT	12'-0"				
12	RECEPTION	SC	WOOD	PT	PT	PT	PT	GYP-PT	12'-0"				
13	OFFICE	SC	WOOD	PT	PT	PT	PT	GYP-PT	12'-0"				
14	OFFICE	SC	WOOD	PT	PT	PT	PT	GYP-PT	12'-0"				
15	EXECUTIVE OFFICE	SC	WOOD	PT	PT	PT	PT	GYP-PT	12'-0"				

FINISH SCHEDULE LEGEND

OORS:	
_E-FL	PORCELAIN FLOOR TILE, TO BE SELECTED
<u>ÁSE:</u>	
LE OOD	6" WOOD, PAINTED

<u>CEILINGS:</u> GYP-PT PAINTED GYPSUM BOARD CEILING

> PAINTED GYPSUM WALLBOARD, FIELD COLOR PAINTED GYPSUM WALLBOARD, RESTROOM WALL COLOR (ABOVE TILE WAINSCOT) WALL TILE (REFER TO INTERIOR ELEVATIONS FOR EXTENTS OF TILE AND TILE PATTERN, TYP.) WALL TILE 1 (RESTROOMS): WAINSCOT TO 5'-0" AFF MIN, TILE TO BE SELECTED WALL TILE 2 (BREAK ROOM): BACKSPLASH, TILE TO BE SELECTED

<u>WALLS:</u> PT-1 PT-2 TILE

MILLWORK: CUSTOM CASEWORK 18" DEEP LOWERS, 14" DEEP UPPERS (AT HALL 2), STAIN GRADE COUNTERTOPS: QUARTZ, SQUARE EDGE, EQUAL TO MSI, GRADE 1

FIXTURES AND EQUIPMENT SCHEDULE

REFRIGERATOR: BY TENANT DISHWASHER: BOSCH 800 SERIES 24" WIDE RECESSED HANDLE SPECIAL APPLICATION, MODEL #SGE68X55UC,

<u>DISHWASHER</u>: BOSCH 800 SERIES 24 WIDE RECESSED HANDLE SPECIAL APPLICATION, MODEL #SGE66A550C, 815mm H (32 inches) <u>FIRE EXTINGUISHER</u>: EQUAL TO LARSEN MULTI-PURPOSE DRY CHEMICAL, MP10, UL RATING: 2A-10B:C <u>FIRE EXTINGUISHER CABINET</u>: EQUAL TO LARSEN ARCHITECTURAL SERIES, AL-2409-R3, FULL PANEL, BLACK DIE CUT LETTERING, ALUMINUM TRIM AND DOOR MATERIAL, 2-1/2" ROLLED EDGE SEMI-RECESSED <u>WINDOW COVERINGS</u>: BY OWNER ATTIC ACCESS LADDER: LOUISVILLE LADDER, EVEREST SERIES, ALUMINUM ATTIC LADDER, AL228P, ROUGH

OPENING 22.5" x 63" ROOM IDENTIFICATION SIGNS: AT RESTROOMS, WITH UNIVERSAL SYMBOL OF ACCESSIBILITY & BRAILLE PER TAS REFER TO PLUMBING FIXTURE SCHEDULE, SHEET P0.1 FOR BALANCE OF FIXTURES AND EQUIPMENT

TOILET ACCESSORIES SCHEDULE

T-1 42" WALL MOUNTED GRAB BAR, EQUAL TO BOBRICK B-6806 SERIES T-2 36" WALL MOUNTED GRAB BAR, EQUAL TO BOBRICK B-6806 SERIES T-3 TOILET PAPER DISPENSER, EQUAL TO (2) 6-IN DIAMETER ROLLS T-4 MIRROR, 24" x 36", CLEAR GLASS MIRROR T-5 MOP HANGER, EQUAL TO MUSTEE #65.600 (REFER TO PLUMBING SCHEDULE)

ARCHITECTU

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GUMBEAUX

E PARK, BUILDING 4B D, AUSTIN, TEXAS 78738

CHERRY PEAK OFFICE F 3503 WILD CHERRY ROAD,

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7/28/2020

PROJECT NO. DATE DRAWN BY: **REVISIONS:**

SCHEDULES

A4

SINK AS SCHEDULED

FAUCET AS

SCHEDULED

QUARTZ COUNTERTOP

PROVIDE APRON AT SINK BASE TO MATCH CASEWORK FINISH HAEFELE 271.05.004 HOOK FASTENERS, TOP AND BOTTOM, BOTH SIDES OF PANEL STAIN FINISH ON 3/4" VENEER

PLYWOOD CORE REMOVEABLE PANEL WOOD BASE PAINTED

PARTITION END CAP, COLOR TO

MATCH WINDOW MULLION

- SOUND ATTENUATION BATTS

- 5/8" TYPE X GYP BOARD

— 5/8" TYPE X GYP BOARD

QUARTZ COUNTERTOP

STAIN FINISH ON 3/4"

DRAWER FRONT

STANDARDS WITH

BRACKETS

VENEER PLYWOOD CORE

RECESSED STEEL SHELF

CORRESPONDING STEEL

PROVIDE 1) ADJUSTABLE

SHELF PER CABINET

STAIN FINISH ON 3/4"

BASE CABINET DOOR

BASE AS SCHEDULED

NOTE: COORDINATE

REQUIRED BLOCKING IN

WALL WITH PARTITION TYPES

VENEER PLYWOOD CORE

6 METAL STUD FURRDOWN U = 1'-0"

E PARK, BUILDING 4B D, AUSTIN, TEXAS 78738 \mathbf{O} AUX CHERRY PEAK OFFICE F 3503 WILD CHERRY ROAD, GUMBE/

scensi

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INTERIM FOR

ARCHITECT REG. NO: 18329 7/28/2020 PROJECT NO. DATE DRAWN BY: **REVISIONS:**

DETAILS

A5

1 <u>PARTITION TYPES</u> 1" = 1'-0"

HVAC GENERAL PROVISIONS

IT IS THE INTENT OF THE CONTRACT DOCUMENTS TO PROVIDE AN INSTALLATION COMPLETE IN EVERY RESPECT. IN THE EVENT THAT ADDITIONAL DETAILS OF SPECIAL CONSTRUCTION MAY BE REQUIRED FOR WORK INDICATED OR SPECIFIED IN THIS SECTION OR WORK SPECIFIED IN OTHER SECTIONS, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE SAME AS WELL AS TO PROVIDE MATERIAL AND EQUIPMENT USUALLY FURNISHED WITH SUCH SYSTEMS OR REQUIRED TO COMPLETE THE INSTALLATION, WHETHER MENTIONED OR NOT.

FURNISH AND INSTALL ALL NECESSARY EQUIPMENT AND DEVICES NECESSARY TO PROVIDE A FUNCTIONING SYSTEM. ELEMENT OF THE WORK TO INCLUDE BUT NOT LIMITED TO MATERIALS, LABOR, TRANSPORTATION, SUPPLIES, EQUIPMENT, HOISTING RIGGING, STORAGE, UTILITIES AND ALL REQUIRED PERMITS, LICENSES AND INSPECTIONS.

ALL WORK TO COMPLY WITH THE APPLICABLE CODES IN EFFECT AT TIME OF BIDDING. WORK TO BE IN STRICT ACCORDANCE WITH THE 2015 INTERNATIONAL MECHANICAL CODE, 2014 NATIONAL ELECTRICAL CODE, 2015 INTERNATIONAL ENERGY EFFICIENCY CODE, STATE, NATIONAL AND LOCAL CODES AND STANDARDS. MODIFICATIONS TO THE CONTRACT DOCUMENTS REQUIRED BY THE AUTHORITY HAVING JURISDICTION SHALL BE DONE AT NO COST TO THE OWNER. WHERE THE CONTRACT DOCUMENTS ARE IN EXCESS OF CODE REQUIREMENTS, THE CONTRACT DOCUMENTS SHALL GOVERN. WHERE THE CODES ARE IN EXCESS OF CONTRACT DOCUMENTS, THE CODES SHALL GOVERN. OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS.

THE DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND GENERALLY INDICATE THE APPROXIMATE LOCATION OF DEVICES AND EQUIPMENT. DETAILS AND/OR DIMENSIONS MAY INDICATE EXACT LOCATION OF DEVICES AND EQUIPMENT. WHERE EXACT LOCATION OF DEVICES AND EQUIPMENT IS NOT INDICATED, LOCATION MUST BE DETERMINED IN THE FIELD IN COORDINATION WITH OTHER TRADES PERFORMING WORK ON THE PROJECT.

CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO FINAL MEASUREMENTS TO INSURE PROPER INSTALLATION OF ALL EQUIPMENT AND DEVICES. ALL ADJUSTMENTS SHALL BE RECORDED IN AS-BUILT DOCUMENTS. CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES PRIOR TO STARTING CONSTRUCTION. IF CONFLICTS ARISE DURING CONSTRUCTION IN RELATION TO OTHER TRADES THE CONTRACTOR IS TO PROVIDE ADDITIONAL MODIFICATIONS TO ROUTING AS REQUIRED TO RESOLVE CONFLICTS.

ALL WORK TO BE INSTALLED IN NEAT AND WELL ORGANIZED MANNER. ALL SERVICES TO BE RUN IN PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE LINES. ALL EQUIPMENT SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS FOR PROPER OPERATION AND MAINTENANCE.

ALL EQUIPMENT AND MATERIALS TO BE UL OR ETL LISTED FOR THE INTENDED USE. ALL EQUIPMENT AND MATERIALS SHALL BE NEW, UNLESS OTHERWISE INDICATED. ANY EQUIPMENT AND MATERIALS FOUND TO BE DEFECTIVE TO BE REPLACED AT NO COST TO THE OWNER. ALL EQUIPMENT, MATERIALS AND WORK SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE INCURRED DURING CONSTRUCTION, AND DEEMED UNACCEPTABLE TO THE OWNER AND ARCHITECT/ENGINEER, SHALL BE REPLACED AT NO ADDITIONAL COST. ALL OPEN ENDS OF WORK TO BE COVERED TO PROTECT FROM THE INFILTRATION OF DEBRIS. PROPERLY STORE ALL MATERIAL IN A LOCATION THAT IS PROTECTED AGAINST THE ELEMENTS, DAMAGE AND THEFT. DO NOT RUN EQUIPMENT UNTIL ALL INTERNAL BUILDING CLEANING IS COMPLETE TO REDUCE THE INFILTRATION OF DEBRIS. ALL EQUIPMENT SHALL HAVE FILTER MEDIA IN PLACE BEFORE START-UP.

GUARANTEE

GUARANTEE WORK FOR 1 YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE PROJECT. DURING THAT PERIOD MAKE GOOD ANY FAULTS OR IMPERFECTIONS THAT MAY ARISE DUE TO DEFECTS OR OMISSIONS IN MATERIALS OR WORKMANSHIP.

DUCTWORK - FIBROUS GLASS DUCT

DUCT TO BE DUCT BOARD WITH MINIMUM INSULATION VALUE OF: WITHIN UNCONDITIONED SPACE = R-6. ALL JOINTS TO BE PROPERLY SEALED AND BE AIR TIGHT. DUCT TO BE SUPPORTED PER MANUFACTURERS INSTRUCTIONS. DUCT TO BE BUILT TO MEET 2" SMACNA PRESSURE CLASSIFICATION.

DUCT WORK TO BE FABRICATED AND INSTALLED PER LATEST EDITION OF SMACNA. DUCTWORK TO PERFORM WITH NO NOISE, CHATTER, WHISTLING, OR VIBRATION. DUCTWORK MUST BE FREE FROM PULSATION UNDER ALL CONDITIONS OF OPERATION.

CONTRACTOR COORDINATION

ERECT ALL DUCTS IN THE GENERAL LOCATIONS SHOWN, BUT CONFORM TO ALL STRUCTURAL AND FINISH CONDITIONS OF THE BUILDING. BEFORE FABRICATING ANY DUCTWORK, CHECK THE PHYSICAL CONDITIONS AT THE JOB SITE AND MAKE ALL NECESSARY CHANGES IN CROSS SECTIONS, OFFSETS, AND SIMILAR ITEMS, WHETHER THEY ARE SPECIFICALLY INDICATED OR NOT.

STANDARD AND CODES

EXCEPT AS OTHERWISE INDICATED, DUCTWORK MATERIAL AND INSTALLATION SHALL COMPLY WITH SMACNA FIBROUS GLASS DUCT CONSTRUCTION STANDARDS.

SEALING OF SEAMS AND JOINTS

THE ENTIRE DUCT SYSTEM SHALL BE SEALED.

WALL PENETRATIONS.

WHERE DUCTS PASS THROUGH WALLS IN EXPOSED AREAS, INSTALL SUITABLE ESCUTCHEONS MADE OF SHEET METAL ANGLES AS CLOSERS. AT ALL LOCATIONS WHERE DUCTWORK PASSES THROUGH FLOORS, PROVIDE WATERTIGHT SLEEVES PROJECTING 3 INCHES ABOVE FINISHED FLOOR AND FLUSH WITH BOTTOM OF FLOOR SLAB. FABRICATE SLEEVES OF 1/8-INCH THICK STEEL, GALVANIZED AFTER FABRICATION. ANCHOR INTO ADJACENT FLOOR SLAB AS REQUIRED. SLEEVES ARE REQUIRED INSIDE AS WELL AS OUTSIDE CHASES. SUPPORT DUCTS WHERE PASSING THROUGH FLOORS WITH STEEL STRUCTURAL ANGLES OF ADEQUATE BEARING SURFACE, GALVANIZED AFTER FABRICATION AND RESTING ON TOP OF THE SLEEVE. ELBOWS.

ELBOWS

RECTANGULAR: WHERE SQUARE ELBOWS ARE SHOWN, OR ARE REQUIRED FOR GOOD AIR FLOW, PROVIDE AND INSTALL BARBER-COLMAN OR EQUAL DOUBLE-WALL AIR FOIL TURNING VANES. USE RADIUS ELBOWS WITH A CENTER LINE RADIUS OF NOT LESS THAN 1-1/2 TIMES THE DUCT WIDTH. RADIUS ELBOWS MAY BE PROVIDED IN LIEU OF VANES IN ELBOWS WHERE SPACE AND AIR FLOW REQUIREMENTS PERMIT.

LOW PRESSURE INSULATED FLEXIBLE DUCT.

FLEX DUCT SHALL BE ATCO UPC #031 OR EQUIVALENT WITH A MINIMUM INSULATION VALUE OF R-6. DO NOT EXCEED 6 FEET IN LENGTH WITH ANY FLEXIBLE DUCT. SUPPORT DUCT INDEPENDENTLY OF LIGHTS, CEILING AND PIPING.

FLEXIBLE CONNECTIONS

WHERE DUCTS CONNECT TO FANS MAKE FLEXIBLE AIRTIGHT CONNECTIONS USING "VENTGLAS" FABRIC. THE FABRIC MUST BE FIRE-RESISTANT, WATERPROOF AND MILDEW RESISTANT WITH A WEIGHT OF APPROXIMATELY 30 OUNCES PER SQUARE YARD. PROVIDE A MINIMUM OF 1/2-INCH SLACK IN THE CONNECTIONS, AND A MINIMUM OF 2-1/2-INCHES DISTANCE BETWEEN THE EDGES OF THE DUCTS. ALSO PROVIDE A MINIMUM OF 1-INCH SLACK FOR EACH INCH OF STATIC PRESSURE ON THE FAN SYSTEM. SECURELY FASTEN FABRIC TO APPARATUS AND TO ADJACENT DUCTWORK BY MEANS OF GALVANIZED FLATS OR DRAW BANDS.

ACCESS DOORS

INSTALL DUCTWORK ACCESS DOORS IN STRUCTURAL ANGLE FRAMES AND PROVIDE WITH SASH LOCKS AND HINGES ARRANGED FOR CONVENIENT ACCESS. CONSTRUCT DOORS WHICH OCCUR IN INSULATED DUCTS WITH AN INSULATION FILLER.

DUCT LEAKAGE

ALLOWABLE LEAKAGE: MAXIMUM ALLOWABLE LEAKAGE IS 5% OF TOTAL FLOW.

EXTERNAL DUCT INSULATION

FURNISH AND INSTALL EXTERNAL INSULATION ON LOW-VELOCITY SUPPLY AIR ROUND DUCTS. EXTERNAL INSULATION OF CONCEALED AND EXPOSED DUCTS IS INCLUDED IN THIS SECTION. INTERNAL ACOUSTIC DUCT LININGS ARE SPECIFIED UNDER DUCTWORK AND NOT INCLUDED IN THIS SECTION.

PRODUCTS

INSULATION: PROVIDE FLEXIBLE GLASS FIBER INSULATION WITH FACTORY-APPLIED, REINFORCED FOIL-KRAFT FACING. A MINIMUM THERMAL RESISTANCE OF 6.0 (SQ. FT. X DEGREES F X HRS. PER BTU) AT 75F IS REQUIRED, AFTER INSTALLATION (NOT IN BAG). PROVIDE MINIMUM 1-POUND DENSITY INSULATION, WHICH COMPLIES WITH SPECIFICATION H-B-100B.

COATING AND ADHESIVE

COATING: PROVIDE BENJAMIN FOSTER 30-35 VAPOR BARRIER COATING. ADHESIVE: PROVIDE BENJAMIN FOSTER 85-20 VAPOR BARRIER ADHESIVE

EXECUTION

DUCT, ROUND, OR RECTANGULAR

INSULATION SHALL BE WRAPPED TIGHTLY ON THE DUCTWORK WITH ALL CIRCUMFERENTIAL JOINTS BUTTED AND LONGITUDINAL JOINTS OVERLAPPED A MINIMUM OF 2 INCHES. IN ADDITION, SECURE INSULATION TO THE BOTTOM OF RECTANGULAR DUCTWORK OVER 24 INCHES WIDE BY THE USE OF MECHANICAL FASTENERS AT NO MORE THAN 18 INCHES ON CENTER.

EQUIPMENT CONDENSATE DRAIN PIPING

FURNISH AND INSTALL PIPING AND PIPING APPURTENANCES TO DRAIN HVAC EQUIPMENT REQUIRING DRAINS. PROVIDE SEAMLESS, HARD-DRAWN, TYPE L, COPPER WATER TUBE CONFORMING TO ASTM B 88, AND WROUGHT COPPER FITTINGS. INSULATE PIPING PER LOW TEMPERATURE PIPING INSULATION.

TEST AND BALANCE

CERTIFIED TEST AND BALANCE IS REQUIRED FOR PROJECT. CONTRACTOR SHALL MAKE ALL BALANCING ADJUSTMENTS REQUIRED TO MEET OWNER AND ARCHITECT/ENGINEER PREFERENCES. ADJUST SHEAVES, BELTS, DRIVES, DAMPERS, ETC., TO OBTAIN AIR QUANTITIES SHOWN. VERIFY PROPER OPERATION OF ALL SYSTEMS. VERIFY ALL VOLUME DAMPERS ARE INSTALLED. PERFORM TAB OPERATIONS AS REQUIRED BY THE NEBB TEST AND BALANCE PROCEDURES MANUAL AND RECORD TESTS RESULTS FOR THE OWNER'S REVIEW. TEST AND BALANCE TO BE COMPLETED BEFORE FINAL INSPECTION BY AUTHORITY HAVING JURISDICTION.

HVA	AC LEGEND		HVAC ABBR	REVIAT	IONS
<u> </u>	DUCT SIZE (WIDTH/HEIGHT) INDICATES	А	AMPERES	LDB	LEAVING DRY BULB
		ABV	ABOVE	LWB	LEAVING WET BULB
		AD	ACCESS DOOR	MAX	MAXIMUM
X	SUPPLY AIR DUCT SECTION	AD	AUXILIARY DRAIN	MIN	MINIMUM
e de la compañía de l	RETURN AIR DUCT SECTION	AFF	ABOVE FINISHED FLOOR	MTD	MOUNTED
\leq	EXHAUST AIR DUCT SECTION	AFG	ABOVE FINISHED GRADE	MTG HT	MOUNTING HEIGHT
\square	CEILING SUPPLY AIR DIFFUSER	BA VA	BALL VALVE	MVD	MOTORIZED VOLUME DAMPER
		BFF	BELOW FINISHED FLOOR	OA	OUTSIDE AIR
		BLW	BELOW	OBD	OPPOSED BLADE DAMPER
	CEILING EXHAUST AIR DEVICE	BTUH	BRITISH THERMAL UNITS / HOUR	NIC	NOT IN CONTRACT
	MOTORIZED ACTUATOR AND DAMPER	CFM	CUBIC FEET PER MINUTE	NTS	NOT TO SCALE
	VOLUME DAMPER	CO	CLEANOUT	PH	PHASE
(T)	THERMOSTAT	CONT	CONTINUATION	RA	RETURN AIR
		COORD	COORDINATE	RH	RELATIVE HUMIDITY
A1 200		D	CONDENSATE DRAIN LINE, EQUIP. DRAIN	RED	REDUCER
		DIA	DIAMETER	REQ'D	REQUIRED
		DN	DOWN	SA	SUPPLY AIR
		ETR	EXISTING TO REMAIN	SEER	SEASONAL ENERGY EFFICIENCY RATIO
		EA	EXHAUST AIR	SM	GALVANIZED SHEET METAL
		EDB	ENTERING DRY BULB TEMPERATURE	SP	STATIC PRESSURE, IN. H2O
		EFF	EFFICIENCY	SS	STAINLESS STEEL
		ELECT	ELECTRICAL	TEMP	TEMPERATURE
		EQUIP	EQUIPMENT	THK	THICK, THICKNESS
		ESP	EXTERNAL STATIC PRESSURE	TSTAT	THERMOSTAT
		EWB	ENTERING WET BULB TEMPERATURE	TYP	TYPICAL
		EX	EXISTING	UF	UNDER FLOOR
		F&I	FURNISH AND INSTALL	UG	UNDER GROUND
		FT	FEET	UON	UNLESS OTHERWISE NOTED
		GSH	GROSS SENSIBLE HEAT	V	VOLT
		GLH	GROSS LATENT HEAT	VD	VOLUME DAMPER
		GTH	GROSS TOTAL HEAT	W	WATT
		IN	INCHES	W	WIDE, WIDTH
		INSUL	INSULATION, INSULATE	W/	WITH
	-	L	LONG, LENGTH	WG	WATER GAGE
	Let a set				

NOTES

2. MANUF. TO INCLUDE 1 YEAR PARTS AND 5 YEAR COMPRESSOR WARRANTY

	FAN COIL UNIT SCHEDULE																				
			OA	EXTERNAL	FAN	VOLTS/	MOTOR		DX COIL (COOLING)				DX COIL (HP HEATING)			ELECTRIC HEAT					
MARK	CONFIGURATION	CFM	CFM	STATIC	DRIVE	PHASE	HP	EAT (F)	MIN. GTH	MIN. GSH	MIN. GLH	EAT (F)	LAT (F)	MIN. GTH	ĸw	MRTUH	VOLTS/	MCA	MOCP	MODEL	
				IN. WC				DB/WB	MBTUH	MBTUH	MBTUH	DB	DB	MBTUH	1.1.1	MBTOIT	PHASE	MON	MICOI		
FCU-1	HORIZONTAL	1200	75	0.5	DIRECT	240/1	1/2	80/67	29	24	5	70	96	33	9.6	32.8	240/1	53	60	TEM4A0C36	
FCU-2	HORIZONTAL	1400	75	0.5	DIRECT	240/1	1/2	80/67	39	31	8	70	96	39	9.6	32.8	240/1	55	60	TEM4A0C42	

MARK

A1

A2

A3

R1 R2

R3

R4

NOTES:

NOTES: 1 PROVIDE SINGLE POINT POWER CONNECTION AND CONDENSATE FLOAT SWITCH

FAN SCHEDULE

			GREENHECK		ESP	MAX FAN	MOTOR	ELECTRICAL	MAX SONES	NOTES			
MARK	JERVES		MODEL #	CFM	(IN. W.C.)	RPM	WATTS	VOLT/PHASE	MAX SONES	NOTES			
EF-1	RESTROOM	LIGHTS	SP-B110	75	0.3	950	80	115/1	2	1, 2			
EF-2	RESTROOM	LIGHTS	SP-B110	75	0.3	950	80	115/1	2	1, 2			
EF-3	CUSTODIAL	CONTINUOUS	SP-B110	75	0.3	950	80	115/1	2	1, 2			

NOTES:

1. PROVIDE WITH UNIT MOUNTED DISCONNECT AND SPEED CONTROLLER.

2. PROVIDE WITH CEILING GRILLE.

OUTSIDE AIR CALCULATIONS											
POOM	PEOPLE	AREA SQ FT	CFM/PERSON	CFM/ SQ FT	MinCFM	People CFM	Breathing Zone Outdoor Airflow	Zone Air Distribution	Zone Outdoor Airflow	Single Zone System	
ROOM	QTY (Pz)	(Az)	(Rp)	(Ra)	(Ra*Az)	(Rp*Pz)	(Vbz=Rp*Pz+Ra*Az)	Effectiveness (Ez)	(Voz=Vbz/Ez)	(Voz=Vbz/Ez)	CALC. CFM
OFFICE 5	1	192	5	0.06	12	5	17	1.0	17	17	17
RECEPTION	1	352	5	0.06	21	5	26	1.0	26	26	26
CONFERENCE	6	184	5	0.06	11	30	41	1.0	41	41	41
OFFICE 4	1	123	5	0.06	7	5	12	1.0	12	12	12
BREAKROOM	0	172	5	0.06	10	0	10	1.0	10	10	10
HALLWAY	0	138	5	0.06	8	0	8	1.0	8	8	8
OFFICE 15	1	212	5	0.06	13	5	18	1.0	18	18	18
OFFICE 14	1	123	5	0.06	7	5	12	1.0	12	12	12
OFFICE 13	1	128	5	0.06	8	5	13	1.0	13	13	13

NOTES:

1. CALCULATIONS PER ASHRAE 62.1.

	AIR COOLED HEAT PUMP SCHEDULE									
(DLING	HEA	TING		MINI	NUM	ELECT	RICAL		TRANE
	CONDENSER	MINIMUM	CONDENSER	DEED	EFFIC	IENCY				MODEL
	TEMP. (F)	CAPACITY	TEMP. (F)				VOLTS/PHASE	MCA	MOCP	
		MBH			SEER	HSPF				
	105	33	47	R410A	14	8.20	240/1	19	30	4TMR4036
	105	39	47	R410A	14	8.20	240/1	25	40	4TMR4042

1. PROVIDE WITH INTEGRAL REVERSING VALVE AND LOUVERED HAIL GUARDS.

3. PROVIDE LOCKING-TYPE TAMPER-RESISTANT CAPS ON ALL REFRIGERANT CIRCUIT ACCESS PORTS.

	AIR DEVICE SCHEDULE									
	FRAME	FILTER		SERVICE	FINISH			MODEL	MAX.	NOTES
NECK OIZE	SIZE	SIZE		OLINVICL			MANO ACTORER	MODEL	CFM	NOILO
6	6 X 4		SURFACE	SUPPLY	WHITE	STEEL	TITUS	250 - 2 WAY	100	1, 3
8	10 X 8		SURFACE	SUPPLY	WHITE	STEEL	TITUS	250 - 3 WAY	200	1, 3
10	12 X 12		SURFACE	SUPPLY	WHITE	STEEL	TITUS	250 - 3 WAY	300	1, 3
6	8 X 8		SURFACE	RETURN	WHITE	STEEL	TITUS	350RL	100	1, 2, 4
8	12 X 12		SURFACE	RETURN	WHITE	STEEL	TITUS	350RL	175	1, 2, 4
10	14 X 14		SURFACE	RETURN	WHITE	STEEL	TITUS	350RL	300	1, 2, 4
12	16 X 16		SURFACE	RETURN	WHITE	STEEL	TITUS	350RL	500	1, 2, 4

1. MATCH DEVICE TRIM TO CEILING OR WALL INSTALLED.

2. DUCT TO AIR DEVICE TO BE SAME SIZE AS SCHEDULED DUCT CONNECTION, UON.

3. PROVIDE AIR DEVICE WITH INTEGRAL DAMPER.

4. PROVIDE SQUARE TO ROUND TRANSITION.

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06/10/19

19.05.00

06/10/2019

PROJECT NO. DATE DRAWN BY:

REVISIONS:

HVAC NOTES & SCHEDULES

M0.

- Energy Cod		
	le:	2015 IECC
Project Title	:	Gumbeaux
Location:		Lakeway, Texas
Project Type	e:	New Construction
Constructio 3503 Wil Building Austin, T	n Site: d Cherry Road 4B X 78738	Owner/Agent:
Addition	al Efficiency Pack	age(s)
Reduced in	terior lighting power. Re	equirements are implicitly enforced within interio
Mechani	cal Systems List	
Quantity	System Type & De	scription
	Proposed Efficiency Cooling Mode: Capaci Proposed Efficiency Fan System: None	 ity = 40 kBta/h, ity = 40 kBta/h, ity = 44 kBtu/h, it = 14.00 SEER, Required Efficiency: 14.00 SE
1	HVAC System 2 (Sing Split System Heat Pun Heating Mode: Capaci Proposed Efficiency Cooling Mode: Capaci Proposed Efficiency Fan System: None	le Zone): np ity = 27 kBtu/h, / = 8.20 HSPF, Required Efficiency = 8.20 HSPI ity = 39 kBtu/h, / = 14.00 SEER, Required Efficiency: 14.00 SE
Mechani <i>Complianc</i> specification designed t requireme	cal Compliance St e Statement: The pr ons, and other calcul to meet the 2015 IEC nts listed in the Inspe	tatement roposed mechanical design represented ir lations submitted with this permit applicat C requirements in COM <i>check</i> Version 4.1. ection Checklist.
Name - Tit	le	Signature

1. EXHAUST DUCT UP THROUGH ROOF. INSTALL ROOF CAP AT ROOF. ROOF CAP EQUIVALENT TO BROAN 634.

10Ø OUTSIDE AIR DUCT UP THROUGH ROOF. INSTALL ROOF CAP AT ROOF. ROOF CAP EQUIVALENT TO 634.

3. PROVIDE WIFI ENABLED THERMOSTAT.

4. PROVIDE 3/4" CONDENSATE PIPING FROM UNIT TO FIXTURE DRAIN. CONCEAL

PIPING WITHIN WALL. 5. PROVIDE CONCRETE PADS FOR CONDENSING UNITS.

Inc Engineering, ပိ 43 ____ <u>.</u>0 An Ц ____ MEP X5 CHERRY PEAK OFFICE PARK, BUILDING 4B 3503 WILD CHERRY ROAD, AUSTIN, TEXAS 78738 GUMBEAUX DOCUMENT RELEASED FOR INTERIM REVIEW UNDER THE AUTHORITY OF MICHAEL R. SESTAK, P.E. 92683 DOCUMENT INCOMPLETE. DO NOT USE FOR BIDDING, PERMIT, OR CONSTRUCTION. 06/10/19 19.05.00 PROJECT NO. 06/10/2019 DATE DRAWN BY: MRS **REVISIONS:** HVAC PLAN M1.1

- CLEVIS HANGER

INSULATED PIPE

GALVANIZED METAL SHIELD MIN. 6 IN. TYP.

ELECTRICAL GENERAL PROVISIONS & SPECIFICATIONS

FURNISH AND INSTALL ALL NECESSARY EQUIPMENT AND DEVICES NECESSARY TO PROVIDE A FUNCTIONING SYSTEM. ELEMENT OF THE WORK TO INCLUDE BUT NOT LIMITED TO MATERIALS, LABOR, TRANSPORTATION, SUPPLIES, EQUIPMENT, HOISTING RIGGING, STORAGE, UTILITIES AND ALL REQUIRED PERMITS, LICENSES AND INSPECTIONS. ALL WORK TO COMPLY WITH NATIONAL ELECTRICAL CODE, 2017 EDITION, 2015 INTERNATIONAL ENERGY CONSERVATION CODE AND ALL CODE AND ORDINANCE REQUIREMENTS OF AUTHORITY HAVING JURISDICTION. WHERE THE CONTRACT DOCUMENTS ARE IN EXCESS OF CODE REQUIREMENTS, THE CONTRACT DOCUMENTS SHALL GOVERN. WHERE THE CODES ARE IN EXCESS OF CONTRACT DOCUMENTS, THE CODES SHALL GOVERN.

THE DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND GENERALLY INDICATE THE APPROXIMATE LOCATION OF DEVICES AND EQUIPMENT. DETAILS AND/OR DIMENSIONS MAY INDICATE EXACT LOCATION OF DEVICES AND EQUIPMENT. WHERE EXACT LOCATION OF DEVICES AND EQUIPMENT IS NOT INDICATED, LOCATION MUST BE DETERMINED IN THE FIELD IN COORDINATION WITH OTHER TRADES PERFORMING WORK ON THE PROJECT. EXACT LOCATIONS OF LIGHTING FIXTURES ARE INDICATED ON THE ARCHITECTURAL REFLECTED CEILING PLANS AND BUILDING ELEVATIONS.

CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO FINAL MEASUREMENTS TO INSURE PROPER INSTALLATION OF ALL EQUIPMENT AND DEVICES. ALL ADJUSTMENTS SHALL BE RECORDED IN AS-BUILT DOCUMENTS. CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES PRIOR TO STARTING CONSTRUCTION. IF CONFLICTS ARISE DURING CONSTRUCTION IN RELATION TO OTHER TRADES THE CONTRACTOR IS TO PROVIDE ADDITIONAL MODIFICATIONS TO ROUTING AS REQUIRED TO RESOLVE CONFLICTS. CONTRACTOR SHALL REVIEW PLUMBING, HVAC AND ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND POWER REQUIREMENTS FOR ALL EQUIPMENT.

ALL WORK TO BE INSTALLED IN NEAT AND WELL-ORGANIZED MANNER. ALL SERVICES TO BE RUN IN PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE LINES. ALL DEVICES AND EQUIPMENT SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS FOR PROPER OPERATION AND MAINTENANCE.

ALL EQUIPMENT AND MATERIALS TO BE UL OR ETL LISTED FOR THE INTENDED USE. ALL EQUIPMENT AND MATERIALS SHALL BE NEW, UNLESS OTHERWISE INDICATED IN THE CONTRACT DOCUMENTS. ANY EQUIPMENT AND MATERIALS FOUND TO BE DEFECTIVE TO BE REPLACED AT NO COST THE OWNER.

ALL EQUIPMENT, MATERIALS AND WORK SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE INCURRED DURING CONSTRUCTION, AND DEEMED UNACCEPTABLE TO THE OWNER AND ARCHITECT/ENGINEER, SHALL BE REPLACED AT NO ADDITIONAL COST. ALL OPEN ENDS OF WORK TO BE COVERED TO PROTECT FROM THE INFILTRATION OF DEBRIS. PROPERLY STORE ALL MATERIAL IN A LOCATION THAT IS PROTECTED AGAINST THE ELEMENTS, DAMAGE AND THEFT.

SUBMITTALS

SUBMITTALS AND SHOP DRAWINGS REQUIRED FOR ALL PRODUCT DATA. SHOP DRAWINGS REQUIRED FOR ALL ELECTRICAL ROOMS. OPERATIONS AND MAINTENANCE MANUALS AND AS-BUILT DRAWINGS REQUIRED AS PART OF CLOSE OUT DOCUMENTS. REFER TO ARCHITECT FOR ADDITIONAL SUBMITTAL REQUIREMENTS.

WARRANTY

GUARANTEE WORK FOR 1 YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE PROJECT. DURING THAT PERIOD MAKE GOOD ANY FAULTS OR IMPERFECTIONS THAT MAY ARISE DUE TO DEFECTS OR OMISSIONS IN MATERIALS OR WORKMANSHIP.

IDENTIFICATION AND LABELING

EXISTING CIRCUITRY INFORMATION IS TAKEN FROM FIELD SURVEY AND EXISTING DRAWINGS. CONTRACTOR SHALL FIELD VERIFY CIRCUITRY AND INDICATE DISCREPANCIES ON THE AS-BUILT DRAWINGS.

ALL PANEL BOARDS, DISCONNECTS, TRANSFORMERS OR OTHER EQUIPMENT IN SEPARATE ENCLOSURE SHALL HAVE AN EXTERIOR ENGRAVED LAMINATE LABEL. LABELS SHALL HAVE 1/4 INCH LETTERS. LABELS SHALL INDICATE THE EQUIPMENT MARK AS INDICATED IN THE DOCUMENTS, THE AMPS AND VOLTAGE OF THE EQUIPMENT AND THE SOURCE.

EXAMPLE: "PANELBOARD LA, 200A - 208Y/120V, SERVED FROM TRANSFORMER TLA"

ALL JUNCTION BOXES LOCATED ABOVE CEILING OR EXPOSED TO BE MARKED WITH CIRCUIT INFORMATION AND COLOR CODED PER AUTHORITY HAVING JURISDICTION.

ALL RECEPTACLES SHALL BE LABELED WITH SELF ADHESIVE TAPE AND INDICATE THE PANEL DESIGNATION AND CIRCUIT NUMBER. UTILIZE CLEAR TAPE WITH BLACK LETTERS. UNLESS OTHERWISE NOTED. PROVIDE SAMPLE TO ARCHITECT FOR APPROVAL.

EXAMPLE: "LA-2"

GROUNDING

EQUIPMENT GROUND REQUIRED PER NEC ARTICLE 250. ALL GROUNDING AND BONDING CONDUCTORS TO BE SIZED PER NEC ARTICLE 250. ALL FEEDERS AND BRANCH CIRCUITS SHALL HAVE GROUNDING CONDUCTOR AND DEDICATED NEUTRAL.

RACEWAYS

MINIMUM CONDUIT SIZE SHALL BE 3/4 INCH. CONDUIT LOCATED IN INTERIOR LOCATIONS TO BE ELECTRICAL METALLIC TUBING (EMT) WITH COMPRESSION FITTINGS. MALLEABLE IRON (DIE CAST) FITTINGS ARE NOT ACCEPTABLE. CONDUIT LOCATED IN BELOW GRADE TO BE RIGID NON-METALLIC ENCASED IN CONCRETE.

LIGHT FIXTURE BRANCH CIRCUITS MAY BE FLEXIBLE METAL CONDUIT (FMC) WHERE FINAL CONNECTION IS MADE TO FIXTURE AND LENGTH IS MAXIMUM 60 INCHES.

SUPPORT EMT AT INTERVALS NOT TO EXCEED 10 FEET AND WITHIN 3 FEET FROM FITTINGS, BOXES, PANELS, ETC. CONDUIT SHALL BE SECURELY SUPPORTED FROM STRUCTURE. SUPPORTING WITH CEILING TEE CLIPS IS NOT ACCEPTABLE. CONDUIT SHALL NOT BE SUPPORTED FROM CEILING GRID. NO RUN OF CONDUIT SHALL HAVE MORE THAN 360 DEGREES OF BENDS AND BE LONGER THAN 100 FEET WITHOUT A PROPERLY SIZED JUNCTION BOX PER NEC.

EMT CONDUIT SHALL BE SIZED IN ACCORDANCE WITH NEC PERCENT FILL REQUIREMENTS AND AS INDICATED IN THE DOCUMENTS. GROUPING MULTIPLE 20 AMP BRANCH CIRCUITS IN A SINGLE CONDUIT IS ACCEPTABLE ONLY WHERE THE NUMBER OF CONDUCTORS INDICATED IN THE DOCUMENTS IS MAINTAINED. NO MORE THAN SIX CURRENT CARRYING #12 THHN OR #10 THHN CURRENT CARRYING CONDUCTORS ARE ALLOWED IN A SINGLE RACEWAY. MULTIWIRE BRANCH CIRCUITS SHALL BE PROVIDED WITH A DEDICATED NEUTRAL AND DEDICATED GROUND PER NEC 210.4(B). USE OF A SHARED NEUTRAL OR GROUND IS NOT ACCEPTABLE. CONTRACTOR SHALL APPLY THE PROPER NEC DE-RATING FACTORS BASED ON THE FULL RATING OF THE BRANCH CIRCUIT OVERCURRENT PROTECTION DEVICES.

USE A UL LISTED WIRE-PULLING COMPOUND APPROVED BY THE CONDUCTOR MANUFACTURER WHERE NECESSARY.

RACEWAYS SHALL BE INSTALLED PER NEC AND LOCAL REQUIREMENTS.

INSULATED CONDUCTORS

MINIMUM CONDUCTOR SIZE SHALL BE #12. CONDUCTOR SIZES #12 AND #10 TO BE SOLID COPPER WIRE WITH THHN/THWN INSULATION. CONDUCTOR SIZES #8 AND LARGER TO BE STRANDED COPPER WITH THHN/THWN INSULATION. COLOR CODE ALL WIRES PER AUTHORITY HAVING JURISDICTION.

ALL 120 VOLT, 20 AMP HOME RUNS LONGER THAN 100 FEET AND ALL 277 VOLT, 20 AMP HOME RUNS LONGER THAN 200 FEET SHALL BE MINIMUM #10 CONDUCTOR.

EACH BRANCH CIRCUIT SHALL HAVE A DEDICATED NEUTRAL AND A DEDICATED GROUND CONDUCTOR

ALL BOXES TO BE 4 INCH SQUARE GALVANIZED STEEL DEVICE BOXES EXCEPT FOR IN MASONRY WALLS. BOXES TO CONFORM TO NEC ARTICLE 370.

MASONRY BOXES MAY BE USED IN MASONRY WALLS.

WIRING DEVICES

ALL WIRING DEVICES SHALL BE MINIMUM NEMA 5-20R RATED UNLESS OTHERWISE NOTED. GFCI RECEPTACLES SHALL BE LISTED UL 943.

CEILING AND WALL MOUNTED OCCUPANCY SENSORS SHALL BE MULTI TECHNOLOGY. FURNISH AND INSTALL ALL REQUIRED LOW VOLTAGE WIRING, POWER PACKS AND RELAYS NECESSARY FOR A COMPLETE WORKING SYSTEM.

LIGHT SWITCHES TO BE DECORATOR STYLE.

VERIFY THE LOCATION, MOUNTING HEIGHT AND ORIENTATION OF DEVICES WITHIN MILLWORK WITH ARCHITECT BEFORE ROUGH-IN. VERIFY THE EXACT LOCATION OF ALL LIGHT SWITCHES WITH ARCHITECT BEFORE ROUGH-IN. ALL DEVICE COLORS SHALL BE SELECTED BY ARCHITECT. HORIZONTALLY INSTALLED RECEPTACLES SHALL HAVE THE GROUND PRONG TO THE LEFT.

VERIFY THAT DIMMER LOAD RATING EXCEEDS LOAD RATING BEFORE ENERGIZING, APPLY MANUFACTURER'S DE-RATING SCHEDULE IF DIMMERS ARE GANGED.

ENCLOSED SAFETY SWITCHES

ALL SAFETY SWITCHES SHALL BE GENERAL DUTY, QUICK-MAKE AND QUICK-BREAK.

PANELBOARDS

CONTRACTOR SHALL PROVIDE PANELBOARDS AS INDICATED IN PANEL SCHEDULES. PANELBOARDS TO BE LOCKABLE. PROVIDE ACCURATE TYPED PANEL CIRCUIT DIRECTORY IDENTIFYING EQUIPMENT OR DEVICES SERVED AND ROOM NAMES OR NUMBERS WHERE LOAD IS INSTALLED. INDICATE SPARES AND SPACES.

DATA AND COMMUNICATION SYSTEM

FURNISH AND INSTALL AN EMPTY BOX WITH 3/4 INCH EMT CONDUIT AND PULL STRING TO ABOVE ACCESSIBLE CEILING FOR ALL DATA, COMMUNICATION, SECURITY AND A/V DEVICES UNLESS NOTED OTHERWISE. ALL WIRING AND DEVICES SHALL BE PROVIDED AND INSTALLED BY OTHERS.

ABBREVIATIONS - ELECTRICAL							
А	AMPS	MC	METAL CLAD				
ABS	ABOVE BACKSPLASH	МСВ	MAIN CIRCUIT BREAKER				
AFF	ABOVE FINISHED FLOOR	MCC	MOTOR CONTROL CENTER				
ATS	AUTOMATIC TRANSFER SWITCH	MDP	MAIN DISTRIBUTION PANEL				
С	CONDUIT	МН	METAL HALIDE				
СВ	CIRCUIT BREAKER	MLO	MAIN LUG ONLY				
Ę	CENTERLINE	MSB	MAIN SWITCH BOARD				
СТ	CURRENT TRANSFORMER	NEC	NATIONAL ELECTRICAL CODE				
ISC SW	DISCONNECT SWITCH	NEMA	NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION				
EPO	EMERGENCY POWER OFF	NC	NORMALLY CLOSED				
EQUIP	EQUIPMENT	NCL	NON-COINCIDENTAL LOAD				
EX	EXISTING	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION				
FACP	FIRE ALARM CONTROL PANEL	NIC	NOT IN CONTRACT				
FAAP	FIRE ALARM ANNUNCIATOR PANEL	NL	NIGHT LIGHT				
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	NO	NORMALLY OPEN				
G	GROUND	NTS	NOT TO SCALE				
GRS	GALVANIZED RIGID STEEL	000	OCCUPANCY				
HID	HIGH INTENSITY DISCHARGE	PNL	PANELBOARD				
HP	HORSEPOWER	RCPT	RECEPTACLE				
HPS	HIGH PRESSURE SODIUM	ΤV	TELEVISION				
IG	ISOLATED GROUND	UON	UNLESS OTHERWISE NOTED				
KAIC	THOUSAND AMPERE INTERRUPTING CURRENT	V	VOLT				
KCMIL	THOUSAND CIRCULAR MIL	VA	VOLT AMP				
KW	KILOWATT	WP	WEATHER PROOF				
LRA	LOCK ROTOR AMPS	XFMR	TRANSFORMER				

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DEVICE SYMBOLS

DUPLEX RECEPTACLE, € AT 16 INCHES AFF UON
QUADRUPLEX RECEPTACLE, & AT 16 INCHES AFF UON
SIMPLEX RECEPTACLE, € AT 16 INCHES AFF UON
SPECIAL PURPOSE RECEPTACLE, € AT 16 INCHES AFF UON
DUPLEX GFCI RECEPTACLE, € AT 16 INCHES AFF UON
HALF SWITCHED DUPLEX RECEPTACLE, AT 16 INCHES AFF UON
SWITCHED DUPLEX RECEPTACLE, & AT 16 INCHES AFF UON
DUPLEX GFCI RECEPTACLE WITH WEATHER PROOF IN-USE COVER, AT 18 INCHES AFF UON
JUNCTION BOX
PUSH BUTTON SWITCH (NORMALLY OPEN), INSTALL JUNCTION BOX € AT 48 INCHES AFF UON
DATA OUTLET BOX & AT 16 INCHES AFF UON. INSTALL 3/4" CONDUIT TO ABOVE CEILING AND PROVIDE PULL STRING
SINGLE POLE SWITCH, € AT 48 INCHES AFF UON
SINGLE POLE SWITCH FOR FAN, € AT 48 INCHES AFF UON
DIMMER SWITCH, € AT 48 INCHES AFF UON
OCCUPANCY SENSOR SWITCH, € AT 48 INCHES AFF UON
CELLING MOUNTED COOLIDANOV CENCOD W/ NECESCADY DOWED DACKS

CEILING MOUNTED OCCUPANCY SENSOR. W/ NECESSARY POWER PACKS

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06/10/19

19.05.00

06/10/2019

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PROJECT NO. DATE DRAWN BY: **REVISIONS:**

ELECTRICAL NOTES

E0.

		Light Fixt	ure Schedule		
SYMBOL	TYPE	MODEL	MANUF.	LAMP	NOTES
A	RECESSED	RDL4-35K-WP	WESTGATE	12 W/725 L/3500 K	1
В	UNDERCOUNTER	UCLD-24IN-35K-90CRI-WH	LITHONIA	12.5W/740L/3500K	1
С	VANITY	FMVCCLS-24IN-30K35K40K-90CRI-KR	LITHONIA	18W/1800L	1
E	EMERGENCYLIGHT	ELM2 LED	LITHONIA	2-1.5W	1
F	ATTIC LIGHT	#9860-BL WITH LAMP GUARD	LEVITON	13 W/GU-24	1
Х	EXIT	EUS70R	SURE-LITES	1.3 W. LED EXIT SIGN	1

<u>NOTES:</u> 1. PROVIDE ALL HARDWARE AND ACCESSORIES FOR INSTALLATION IN CEILING OR WALL.

VOLTAGE: 120/240	
BUS AMPS: 225	
PHASE: 1	
WIRE 3	

VOLTAGE: 120/240 BUS AMPS: 225 PHASE: 1					MAIN CIRCUIT BREAKER: 200 MAN LUGS ONLY: NEMA ENCLOSURE: NEMA 1									
	VVIRE.	3							IVIO	UNTING.	SURFACE			
					LOAD				LOAD					
,		BREAK	ER	RCPT	LIGHT	OTHER		RCPT	LIGHT	OTHER	BREAK	ER		
CKT	DESCRIPTION	AMPS	POLES	(VA)	(VA)	(VA)		(VA)	(VA)	(VA)	AMPS	POLES	DESCRIPTION	CKT
	FCU-1	60	2			13200		900			20	1	OFFICE 14 RCPTS	2
3	"	-	-			-		900			20	1	OFFICE 13 RCPTS	4
5	HP-1	30	2			NCL		180			20 GFCI	1	REFR	6
	"	-	-			-		400			20	1	DISHWASHER	8
9	FCU-2	60	2			13200					20	1		10
11	11	-	-			-		900			20	1	RECEPTION RCPTS	12
13	HP-2	40	2			NCL		720			20	1	CONFERENCE RCPTS	14
15	"	-	-			-		720			20	1	CONFERENCE RCPTS	16
17	EWH-1	30	2			3900			24	80	20	1	RR EXHAUST FANS/LIGHTS	S 18
19	п	-	-			-			24	80	20	1	RR EXHAUST FANS/LIGHTS	S 20
21	EXTERIOR RCPTS	20	1	180					384		20	1	WEST LIGHTS	22
23	BEVERAGE FRIDGE	20	1	180					336		20	1	EAST LIGHTS	24
25	RESTROOM RCPTS	20	1	360					24		20	1	EXTERIOR LIGHTS	26
27	OFFICE 4 RCPTS	20	1	720				180			20	1	ATTIC RCPT	28
29	EXEC OFFICE 5 RCPTS	20	1	1080										30
31	EXEC OFFICE 15 RCPTS	20	1	1080										32
33	BREAKROOM RCPTS	20	1	180										34
35	BREAKROOM RCPTS	20	1	360										36
37	HALL 2 COUNTER RCPTS	20	1	360										38
39	HALL 2 COUNTER RCPTS	20	1	360										40
41	BEVERAGE FRIDGE	20	1	180										42
I					1					II			l	
l		CONNEC	TED	DEM]								
l		(VA)		(\	'A)									
1	RECEPTACLES	9,94)	9,9	940	1								
ļ	LIGHTS	792		99	90	1								
	OTHER	30,46	0	30,	460] [DE	MAND						
1	TOTAL	41,19	2	41,	390	1 [172	AMPS						

PANELBOARD L1

LOAD ANALYSIS							
LUADS:							
LIGHTING -		792 VA	Х	1.25	=	990 VA	
RECEPTACLES -		9940 VA					
<10,000 VA		9940 VA	Х	1.00	=	9940 VA	
>10,000 VA		0 VA	Х	0.50	=	0 VA	
OTHER -		30460 VA	Х	1.00	=	30460 VA	
TOTAL NEW CONNECTED LOAD	=	41192 VA					
NET CALCULATED DEMAND					=	41390 VA	
		@ 120)/24	0V 1 PH	1 =	172 A	
PROPOSED SERVICE IS 200A 120/2	240V 1 PH 3 V	VIRE.					

1 ELECTRICAL ONE-LINE DIAGRAM

- AREA.
- 2. FIXTURE LOCATED IN ATTIC.
- 3. PROVIDE INTERMATIC MODEL ET90215CR TIME CLOCK OR EQUIVALENT FOR EXTERIOR LIGHTS. ROUTE EXTERIOR LIGHT CIRCUIT THROUGH TIMECLOCK.
- FOR MOUNTING HEIGHT.
- 5. INTERLOCK LIGHTS WITH EXHAUST FAN.
- 6. LOCATE ATTIC LIGHT SWITCH IN ATTIC NEAR ATTIC ACCESS LADDER.

4. INSTALL JUNCTION BOX TO SERVE SIGN. REFER TO ARCHITECTURAL PLANS

MICHAEL R. SES DOCUMENT IN DO NOT USE F PERMIT, OR CC	TAK, P.E. 92683 NCOMPLETE. OR BIDDING, INSTRUCTION.
	06/10/19
PROJECT NO.	19.05.0
DATE	06/10/201
DRAWN BY:	MR
REVISIONS:	
POWER & L PLA	lighting N
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4B 78738 OFFICE PARK, BUILDING Y ROAD, AUSTIN, TEXAS PEAK (HERR) CHERRY 3503 WILD C C

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Inc Engineering

PLUMBING GENERAL PROVISIONS

FURNISH AND INSTALL ALL NECESSARY EQUIPMENT AND DEVICES NECESSARY TO PROVIDE A FUNCTIONING SYSTEM. ELEMENT OF THE WORK TO INCLUDE BUT NOT LIMITED TO MATERIALS, LABOR, TRANSPORTATION, SUPPLIES, EQUIPMENT, HOISTING RIGGING, STORAGE, UTILITIES AND ALL REQUIRED PERMITS, LICENSES AND INSPECTIONS. ALL WORK TO COMPLY WITH 2017 NATIONAL ELECTRICAL CODE, 2015 UNIFORM PLUMBING CODE, 2015 INTERNATIONAL ENERGY CONSERVATION CODE, WCID 17 REQUIREMENTS AND ALL CODE ORDINANCE REQUIREMENTS OF AUTHORITY HAVING JURISDICTION. MODIFICATIONS TO THE CONTRACT DOCUMENTS REQUIRED BY THE AUTHORITY HAVING JURISDICTION SHALL BE DONE AT NO COST TO THE OWNER. WHERE THE CONTRACT DOCUMENTS ARE IN EXCESS OF CODE REQUIREMENTS, THE CONTRACT DOCUMENTS SHALL GOVERN. WHERE THE CODES ARE IN EXCESS OF CONTRACT DOCUMENTS. THE CODES SHALL GOVERN.

THE DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND GENERALLY INDICATE THE APPROXIMATE LOCATION OF DEVICES AND EQUIPMENT. DETAILS AND/OR DIMENSIONS MAY INDICATE EXACT LOCATION OF DEVICES AND EQUIPMENT. WHERE EXACT LOCATION OF DEVICES AND EQUIPMENT IS NOT INDICATED, LOCATION MUST BE DETERMINED IN THE FIELD IN COORDINATION WITH OTHER TRADES PERFORMING WORK ON THE PROJECT.

CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO FINAL MEASUREMENTS TO INSURE PROPER INSTALLATION OF ALL EQUIPMENT AND DEVICES. ALL ADJUSTMENTS SHALL BE RECORDED IN AS-BUILT DOCUMENTS. CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES PRIOR TO STARTING CONSTRUCTION. IF CONFLICTS ARISE DURING CONSTRUCTION IN RELATION TO OTHER TRADES THE CONTRACTOR IS TO PROVED ADDITIONAL MODIFICATIONS TO ROUTING AS REQUIRED TO RESOLVE CONFLICTS.

ALL WORK TO BE INSTALLED IN NEAT AND WELL ORGANIZED MANNER. ALL SERVICES TO BE RUN IN PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE LINES. ALL EQUIPMENT SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS FOR PROPER OPERATION AND MAINTENANCE.

ALL EQUIPMENT AND MATERIALS TO BE UL OR ETL LISTED FOR THE INTENDED USE. ALL EQUIPMENT AND MATERIALS SHALL BE NEW, UNLESS OTHERWISE INDICATED IN THE CONTRACT DOCUMENTS. ANY EQUIPMENT AND MATERIALS FOUND TO BE DEFECTIVE TO BE REPLACED AT NO COST THE OWNER.

ALL EQUIPMENT, MATERIALS AND WORK SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE INCURRED DURING CONSTRUCTION, AND DEEMED UNACCEPTABLE TO THE OWNER AND ARCHITECT/ENGINEER, SHALL BE REPLACED AT NO ADDITIONAL COST. ALL OPEN ENDS OF WORK TO BE COVERED TO PROTECT FROM THE INFILTRATION OF DEBRIS PROPERLY STORE ALL MATERIAL IN A LOCATION THAT IS PROTECTED AGAINST THE ELEMENTS, DAMAGE AND THEFT.

WHEN FLOOR AND SLAB IS SAW CUT TO INSTALL NEW PIPING OR TO GAIN ACCESS TO EXISTING PIPE. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR FOR PATCHING AND REPAIR OF FLOOR SLAB AND FINISH.

SUBMITTALS

SUBMITTALS AND SHOP DRAWINGS REQUIRED FOR ALL PRODUCT DATA. SHOP DRAWINGS REQUIRED FOR ALL ELECTRICAL ROOMS. OPERATIONS AND MAINTENANCE MANUALS AND AS-BUILT DRAWINGS REQUIRED AS PART OF CLOSE OUT DOCUMENTS. REFER TO ARCHITECT FOR ADDITIONAL SUBMITTAL REQUIREMENTS.

WARRANTY

GUARANTEE WORK FOR ONE YEAR FROM THE DATA FINAL ACCEPTANCE OF THE PROJECT. DURING THAT PERIOD MAKE GOOD ANY FAULTS OR IMPERFECTIONS THAT MAY ARISE DUE TO THE DEFECTS OR OMISSIONS IN MATERIAL OR WORKMANSHIP.

IDENTIFICATION AND LABELING

PLUMBING EQUIPMENT, SUCH AS PUMPS AND WATER HEATERS SHALL HAVE AN EXTERIOR ENGRAVED LAMINATE LABEL. LABEL SHALL HAVE 1/4 INCH LETTERS. LABEL SHALL INDICATE THE EQUIPMENT MARK AS INDICATED IN THE DOCUMENTS.

LABEL COLD WATER AND HOT WATER PIPING WITH ADHESIVE MARKERS IDENTIFYING THE PIPING SYSTEM. INSTALL MARKERS AT EVERY 25 FEET AND ON BOTH SIDES OF WALLS BEING PENETRATED BY PIPING.

PIPE INSULATION

FURNISH PRE-MOLDED GLASS FIBER PIPE INSULATION, WITH A PERMANENT K-FACTOR OF 0.23 BTU*IN./(H*SQ. FT.*°F) AT 75°F MEAN TEMPERATURE. FURNISH INSULATION WHICH IS 3 LB. PER CU. FT. DENSITY, WITH FACTORY-APPLIED, ALL-SERVICE REINFORCED VAPOR BARRIER JACKET, HAVING INTEGRAL LAMINATED ALUMINUM VAPOR BARRIER SEAL ALL CIRCUMFERENTIAL JOINTS WITH MINIMUM 3-INCH-WIDE BUTT STRIPS AND ADHESIVE COMPATIBLE WITH JACKET MATERIAL. COVER INSULATION WITH PVC JACKET IN LOCATIONS WHERE INSULATION COULD EASILY BE DAMAGED.

ALL 1/2" TO 1-1/4" HOT AND TEMPERED WATER PIPING <141°F TO BE INSULATED WITH 1" INSULATION.

ALL 1-1/4" TO 4" HOT AND TEMPERED WATER PIPING <141°F TO BE INSULATED WITH 1.5" INSULATION.

PIPES

DOMESTIC WATER PIPING TO BE PEX-A WATER PIPING. PEX-A PIPING SYSTEM TO BE DESIGNED BY MANUFACTURER AND INCLUDE ALL NECESSARY COMPONENTS FOR A FUNCTIONING SYSTEM.

WASTE AND VENT PIPING TO BE SCHEDULE 40 PVC JOINED WITH SOLVENT WELDS.

ALL PIPING INSTALLED BELOW FLOOR SHALL BE PROPERLY BEDDED IN WITH SAND PER 2015 UPC SECTION 314.4.

TESTING

FOR DOMESTIC WATER PIPING: TEST UNDER COLD WATER HYDROSTATIC PRESSURE OF 1¹/₂ TIMES OPERATING PRESSURE (150 PSIG MINIMUM) AND CAREFULLY CHECK FOR LEAKS. REPAIR ALL LEAKS AND RETEST SYSTEM UNTIL SYSTEM HOLDS FOR AT LEAST 24 HOURS AND PROVEN WATERTIGHT.

FOR SANITARY WASTE PIPING: TEST WITH NOT LESS THAN 10-FOOT HEAD OF WATER. MAINTAIN PRESSURE FOR 15 MINUTES.

STERILIZATION

STERILIZE THE MAIN WATER SYSTEM WITH SOLUTION CONTAINING NOT LESS THAN 50 PARTS PER MILLION AVAILABLE CHLORINE. ALLOW CHLORINATING SOLUTION TO REMAIN IN SYSTEM FOR PERIOD OF 8 HOURS. AFTER STERILIZATION, FLUSH THE SOLUTION FROM THE SYSTEM WITH CLEAN WATER UNTIL RESIDUAL CHLORINE CONTENT IS LESS THAN 0.2 PARTS PER MILLION.

WATER HEATER SCHEDULE											
MARK	STORAGE GALLONS	RECOVERY		ELECTRICAL				MANUFACTURER AND			
		GALS/HOUR	TEMP. RISE °F	KW	VOLTS	PHASE	SEIFOINT F	MODEL			
EWH-1	19	21	90	3.9	240	1	140	RHEEM PROE20 S2 RH			

NOTES:

1. MINIMUM EFFICIENCY OF 0.86 EF.

2. PROVIDE AMTROL THERM-X-TROL ST-5-C PRECHARGED EXPANSION TANK.

3. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR. 4. PROVIDE WITH 6 YEAR TANK AND PARTS WARRANTY.

PLUMBING FIXTURE SCHEDULE								
		BASIS OF DESIGN			CONNECTION			
MARK	DESCRIPTION	MANUF.	MODEL	CW	HW	W	V	NOTES
LAV-1	RECTANGULAR WALL MOUNTED, ONE HOLE, CERAMIC WHITE ADA SINK.							
	INCLUDES OVERFLOW AND 1.25" DRAIN.	NAMEEK MONA CERASTYLE	064400-U					
	TOUCHLESS SINGLE-HOLE MOUNT FAUCET, 0.5 GPM FLOW RATE,			1				
	POLISHED CHROME FINISH, AC POWERED. PROVIDE AC SINGLE SUPPLY	KOHLER	K-13468					
	1-1/4" POLISHED CHROME PLATED BRASS VANDAL PROOF GRID DRAIN							
	ASSEMBLY AND TAILPIECE							
	LAV-GUARD, BELOW LAVATORY, INSULATION KIT.	TRUBRO	MODEL NO. 102W]				
	FURNISH CONDENSATE TAILPIECE WHERE INDICATED ON DRAWINGS							
	FURNISH IN LINE HOT AND COLD WATER CHECK VALVES.	SYMMONS	4 10(B)	1/2	1/2	2	2	1, 3
WC-1	WATER CLOSET, PROVIDE RIGHT OR LEFT HAND FLUSH LEVER AS							
	REQUIRED, 1.28 GAL. FLUSH, VITREOUS CHINA, ELONGATED BOWL, COLOR:	KOHLER	KOHLER K-3575-0					
	OPEN FRONT SEAT TO MATCH TOILET COLOR.	KOHLER	KOHLER K-4666-C	1/2	-	4	2	1, 2
SK-1	UNDERMOUNT SINGLE COMPARTMENT SINK, 30-1/2" X 18-1/2" X 5-3/8"							
	DEEP, 18 GAUGE, 304 STAINLESS STEEL , UNDERSIDE FULLY COATED W/	ELKAY	ELUHAD281655PD					
	1-1/2 IN. ADJUSTABLE CAST BRASS P-TRAP WITH TUBING DRAIN TO WALL,							
	GROUND SWIVEL JOINT, CLEAN OUT PLUG AND CAST BRASS							
	ESCUTCHEON, ALL WITH POLISHED CHROME FINISH.	MCGUIRE	B8912.					
	LAV-GUARD INSULATION KIT W/ ALL NECESSARY ACCESSORIES.	TRUEBRO	102W	1/2	1/2	2	2	1, 3
	SINGLE HANDLE DECK MOUNTED FAUCET WITH PULLDOWN SPRAYER.	MOEN	S72308SRS	1/2	1/2	2	2	1
SK-2	SELF RIMMING, SINGLE COMPARTMENT, 15 IN. X 17-1/2 IN. X 6 IN. DEEP, 18							
	GAGE TYPE 304 STAINLESS STEEL SINK WITH 1 FAUCET HOLE AND FULLY							
	UNDERCOATED UNDERSIDE.	ELKAY	LRAD151760					
	1-1/2 IN. ADJUSTABLE CAST BRASS P-TRAP WITH TUBING DRAIN TO WALL,							
	GROUND SWIVEL JOINT, CLEAN OUT PLUG AND CAST BRASS							
	ESCUTCHEON, ALL WITH POLISHED CHROME FINISH.	MCGUIRE	B8912.					
	SINGLE HANDLE DECK MOUNTED FAUCET WITH PULLDOWN SPRAYER.	MOEN	S72308SRS	1/2	1/2	2	2	1
WB-1	ICE MAKER BOX WITH 1/4 TURN BRASS BALL VALVE. INSTALL AT & AT 18"	OATEY	38574	1/2	-	-	-	
MS-1	FLOOR MOUNTED SERVICE BASIN 24"X24"X10"; ONE PIECE DURASTONE							
	CONSTRUCTION, INTEGRALLY MOLDED CENTER DRAIN WITH SEAL.	MUSTEE	63M					
	FAUCET: HEAVY DUTY, CHROME PLATED BRASS DUAL HANDLE SINK							
	FAUCET WITH TOP REINFORCING BAR AND PAIL HOOK ON SPOUT. VACUUM							
	BREAKER INTEGRAL STOPS, CHROME PLATED HOT AND COLD HANDLES.							
	3/4" HOSE END SPOUT WITH PAIL HOOK, TOP REINFORCING BAR AND	MUSTEE	63.600A					
	HOSE & HOSE HOLDER: HEAVY DUTY 5/8" DIA. REINFORCED 31" RUBBER							
	HOSE WITH BRASS COUPLINGS ON ONE END. SPRING LOADED, MOLDED							
	RUBBER HOSE HOLDER MOUNTS ON STAINLESS STEEL WALL PLATE.	MUSTEE	65.700					
	MOP HANGER: THREE SPRING-LOADED RUBBER HOLDERS MOUNTED TO A							
	3" X 24" STAINLESS STEEL WALL PLATE.	MUSTEE	65.600					
	WALL GUARDS: PROTECTS WALL SURFACES FROM SPLASHING AND							
	DAMAGE FROM IMPACTS, 12" HEIGHT, 20 GAUGE #304 STAINLESS STEEL.	MUSTEE	67.2424	1/2	1/2	3	2	1
WH-1	FREEZLESS WITH VACUUM BREAKER ANTI SIPHON, VERIFY WALL	WOODFORD	19	3/4	-		-	

NOTES:

1. PROVIDE TRAPS, TAIL PIECES, RISERS, QUARTER TURN STOPS AND FIXTURE CARRIERS FOR COMPLETE INSTALLATION.

2. PROVIDE FLOOR FLANGE, QUARTER TURN STOPS AND RISER REQUIRED FOR COMPLETE INSTALLATION.

3. REFER TO ARCHITECT PLANS FOR MOUNTING HEIGHTS.

PLUMBING ABBREVIATIONS					
А	AMPERES	IN	INCHES		
ABV	ABOVE	INSUL	INSULATION, INSULATE		
AD	ACCESS DOOR	L	LONG, LENGTH		
AFF	ABOVE FINISHED FLOOR	MAX	MAXIMUM		
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM		
AV	ACID VENT	MTD	MOUNTED		
AW	ACID WASTE	MTG HT	MOUNTING HEIGHT		
BA VA	BALL VALVE	NIC	NOT IN CONTRACT		
BAS	BUILDING AUTOMATION SYSTEM	NTS	NOT TO SCALE		
BF VA	BUTTERFLY VALVE	PH	PHASE		
BFF	BELOW FINISHED FLOOR	RA	RETURN AIR		
BLW	BELOW	RD	ROOF DRAIN, ROOF DRAIN LEADER		
BTUH	BRITISH THERMAL UNITS / HOUR	RED	REDUCER		
CO	CLEANOUT	REQ'D	REQUIRED		
CONT	CONTINUATION	RPZ	REDUCED PRESSURE ZONE		
COORD	COORDINATE	SP	STATIC PRESSURE, IN. H2O		
CW	DOMESTIC COLD WATER	SS	SANITARY SEWER BELOW GRADE		
D	CONDENSATE DRAIN LINE, EQUIP. DRAIN	SS	STAINLESS STEEL		
DEG F	DEGREES FAHRENHEIT	SW	SOFT WATER		
DIA	DIAMETER	T&P	TEMPERATURE / PRESSURE RELIEF VALVE		
DN	DOWN	TEMP	TEMPERATURE		
DFCO	DOUBLE FLOOR CLEANOUT	ТНК	THICK, THICKNESS		
DYCO	DOUBLE YARD CLEANOUT	TSTAT	THERMOSTAT		
ETR	EXISTING TO REMAIN	TP	TRAP PRIMER		
EFF	EFFICIENCY	TW	TEMPERED WATER		
ELECT	ELECTRICAL	TYP	TYPICAL		
EOD	EMERGENCY OVERFLOW DRAIN	UF	UNDER FLOOR		
EQUIP	EQUIPMENT	UG	UNDER GROUND		
F&I	FURNISH AND INSTALL	UON	UNLESS OTHERWISE NOTED		
FCO	FLOOR CLEANOUT	V	SANITARY VENT		
FD	FLOOR DRAIN	V	VOLT		
FDC	FIRE DEPARTMENT CONNECTION	W	WATT		
FS	FLOOR SINK	W	WIDE, WIDTH		
FT	FEET	W	SANITARY SOIL/WASTE		
G	GAS	W/	WITH		
GA VA	GATE VALVE	WCO	WALL CLEANOUT		
GV	GREASE VENT	WG	WATER GAGE		
GW	GREASE WASTE	WHA	WATER HAMMER ARRESTOR		
HW	DOMESTIC HOT WATER				
HWR	DOMESTIC HOT WATER RETURN				

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PLUMBING LEGEND					
ф	BALL VALVE				
	BUTTERFLY VALVE				
Ň	CHECK VALVE				
\bowtie	GATE VALVE				
	GLOBE VALVE				
ιΦι	PLUG VALVE				
X	PRESSURE REGULATING VALVE				
函	SOLENOID VALVE				
K∕\$¢	STRAINER W/ BLOW DOWN VALVE				
述	TEMPERATURE/ PRESSURE RELIEF VALVE				
	VALVE IN VERTICAL				
ф С	WALL HYDRANT OR HOSE BIB				
	DOMESTIC COLD WATER				
	DOMESTIC HOT WATER				
	DOMESTIC HOT WATER RETURN				
	SANITARY SEWER				
	SANITARY VENT				
	DIRECTION OF FLOW				
	PIPE SIZE REDUCER				
I 	CLEANOUT				
C	P-TRAP				
	FLANGE CONNECTION				
	UNION				
— —Ə	ELBOW TURNING DOWN				
O	ELBOW TURNING UP				
-••	POINT OF CONNECTION TO EXISTING				

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PROJECT NO. DATE DRAWN BY:

REVISIONS:

PLUMBING NOTES & SCHEDULES

P0.1

KEYED NOTES

1. PROVIDE HW CONNECTION FOR DISHWASHER. MAKE FINAL CONNECTIONS TO DISHWASHER.

2. EWH-1 LOCATED IN ATTIC.

P2.1

