

Finish Schedule

confirm all finish selections and extents with Tenant . provided and installed by General Contractor unless noted otherwise Base

- vin 4" high vinyl [cove at carpet . straight at rubber / vinyl / ceramic] 'Johnsonite' #45 Black
- Rooms 100 . 101 . 102 . 103 . 104 . 105 . 106 . 109
- Floors vct vinyl composition tile [by tenant] 'Armstrong Imperial Texture Standard Excelon' . 12x12 52523 Animal Crackers
- Rooms 109 **cpt.a** carpet tile [by tenant] 'Interface' . Sew Straight . Style #1462002500 . Quarter
- Turn 102405 French Knot Rooms 101 . 102 . 103 . 104 cpt.b carpet tile [by tenant]
- Walls **pnt.a** eggshell latex paint [open clinic area] 'Benjamin Moore' EcoSpec interior latex eggshell enamel 2160-60 Kansas Grain. prime newly installed gypsum board. two coats paint at all gyp board [full coverage
- reauired] Rooms 100 . 101 . 104 . 105 . 106 . 109
- pnt.b eggshell latex paint [interior rooms] 'Benjamin Moore' EcoSpec interior latex eggshell enamel [provide waterborne epoxy at restroom] 2160-50 Oklahoma Wheat . prime newly installed gypsum board . two coats paint at all gyp board [full coverage required]
- Rooms 102 . 103 **pnt.c** eggshell latex paint [accent wall] 'Benjamin Moore' EcoSpec interior latex eggshell enamel 1 2158-30 Delightful Golden . prime newly installed gypsum board. two coats paint at all gyp board [full coverage required . no primer or paint behind deco metal]
- Rooms 100 . 106 [see accent wall location on plan] **pnt.d** eggshell latex paint [accent wall] 'Benjamin Moore' EcoSpec interior latex eggshell enamel 2066-20 Evening Blue . prime newly installed gypsum board. two coats paint at all gyp board [full coverage required
- Room 101 [see accent wall location on plan]
- pnt.e enamel paint [doors . frames] Interior latex semi-gloss enamel . two coats paint at all doors and frames . color to match adjacent wall . split varied frame colors at door stop Decorative Metal [accent wall]
- 'Formica' M4511 Decometal Aluminum Crush . install over primer [not paint] . fully adhere with 'Hybond' HY-80 . install per manufacturers recommendations Rooms 104 [see wall location on plan] . 105 [backsplash]

sat suspended acoustical tile . white [existing] 'USG' 562 Fissured square edge ceiling tile with 15/16" grid Rooms 100 . 101 . 102 . 103 . 104 . 105 . 106 . 107 . 108 .

Casework

- cntr countertops 'Wilsonart' 4862k-07 Sandy Topaz . matte finish
- Rooms 101 . 102 . 103 . 105 . 109 **cab.b** base cabinets . reception desk face
- Wilsonart' 4623-60 Graphite Nebula . matte finish Rooms 101 . 102 . 103 . 105 . 109
- crk cork 'Claridge Products' 1100 Tan Cork . contact 870.743.2200 Rooms 101 . 103

Restrooms are to be equipped with and constructed to the following tolerances: (dimensions noted to top of units aff and centerline of units horizontally unless noted otherwise) [00.00] indicates ADADG Section reference unless noted otherwise Wheelchair Turning Space 60 inch diameter turning space [304.3.1] Water Closet Clear Floor Space 60 x 56 inch clear floor space [604.3.1] Lavatory Clear Floor Space 30 x 48 inch clear floor space [606.2] Signage Provide ADA compliant placard at 60" aff to horizontal centerline of sign . mount on door Double Toilet Paper Holder Mount 32" from rear wall and 24" aff [604.7] Paper Towel Dispenser Stainless steel C-fold towel dispenser [302.2.1] Mirro Mount centered over lavatory and 40" aff to bottom [603.3] **Grab Bars** Bobrick or equal Rear: 1 1/4" dia x 36" [604.5.2] Model B-6806.99x36 Mount with centerline at 34" aff 6" from side wall Side: 1 1/4" dia x 42" [604.5.1] Model B-6806.99x42 Mount with centerline at 34" aff 12" from rear wall Vertical: 1 1/4" dia x 18" . Model B-6806.99x18 Mount vertical at 40" from rear wall with bottom at 40" aff Sink Piping All exposed under sink piping to be insulated

Toilet Accessories . Standards

Wall . Partition Schedule

- Exterior Wall Assembly existing Metal stud framed exterior wall with exterior split face cmu patch and repair walls as required following removal of adjacent partitions and equipment as applies . prepare for scheduled finishes Interior Wall existing
- 6" metal studs at 16" oc with 5/8" type x gypsum board each side full height . full mud.tape.finish . prepare for scheduled finishes Interior Partition
- 3-5/8" metal studs at 16" oc with 1/2" gypsum board each side to deck . brace to structure . full mud.tape.finish . wr gypsum board at wet locations Interior Partition
- 6" metal studs at 16" oc with 1/2" gypsum board each side to 6" above finish ceiling . brace to structure above . full mud.tape.finish . wr gypsum board at wet locations Interior Partition
- 3-5/8" metal studs at 16" oc with 1/2" gypsum board each side to bottom of existing ceiling . provide speed bead trim at interface . full mud.tape.finish . wr gypsum board at wet locations

Door Schedule

2

3

🔴 Door . Frame . Size

- Exterior Door 6-0 x 7-0 A1
- Medium stile full lite aluminum storefront system door
- Existing Exterior Door 4-0 x 7-0 B1 Hollow metal door and frame
- C1 New Interior Door 3-0 x 7-0
- Solid core flush panel stain grade red oak door in painted hollow metal frame . stain door 'Minwax' 241 Fruitwood New Interior Door 3-0 x 7-0
- C2 Solid core flush panel stain grade red oak door in painted hollow metal frame . stain door 'Minwax' 241 Fruitwood . provide 24x36 window kit
- **D1** Existing Interior Door 3-0 x 7-0 Solid core flush panel stain grade red oak door in painted hollow metal frame . stain door 'Minwax' 241 Fruitwood

- commercial [grade 2] ADA compliant lever type . nickel finish
- 1 Verify existing hardware is in good working order . wire for future electronic door strike and handicap door operator by Tenant . provide alternate price to install handicap door operator with remote button at reception desk
- Verify existing hardware is in good working order Privacy set . 1.5 pair bb butt hinges . wall stop . silencers
- 5 Passage set . occupancy indicator deadbolt . 1.5 pair bb butt hinges . wall stop . silencers . closer





- (6.01) reference notes



Interior Improvements for



JOE STEWART Missouri

125 Highland Park Avenue Excelsior Springs . MO 64024

ARCHITECT

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Drawings and/or Specifications are original proprietary work and property of the Architect intended for the specifically titled project. Use of items contained herein without consent of Architect for titled or other projects is prohibited. Drawings illustrate best information available to Architect. Field verification of actual elements, conditions, and

dimensions is required.



Project Number 21.112.32

ADA Compliance Certification

To best of my professional knowledge, the facility as indicated is in compliance with the Americans with Disabilities Act, including the current ADA Title III Design Guidelines.

Joseph Ray Stewart ssouri Architect A-2017032055

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1100	IU		10



Demolition Reference Notes

casework . fixtures

apply

01

Reference Notes

General

D.01 Remove existing metal stud . drywall finished walls,

D.02 Patch and repair as required all walls scheduled to

remain following removal of adjacent partitions .

behind/below new finished walls or floors as may

1.01 All furnishings and equipment provided by Tenant and

installed by GC except as specifically indicated

partitions, and related assemblies

D.03 Cap lines and other abandoned elements

mirror for entire length of ballet bar . top of upper mirror should be nominally 6'-7 1/2" aff Passage set . 1.5 pair bb butt hinges . wall stop . silencers **10.07** Occupant load sign . "TOTAL OCCUPANT LOAD . 25 OCCUPANTS"

Interior Improvement Package

Project Description Project scope includes limited demolition to existing framed partitions, new framed partitions, drywall, limited electrical systems, doors and hardware, and related elements.

Existing building construction is comprised of concrete floor slabs . steel building frame . exterior brick and plaster systems. interior metal stud partitions . membrane roofing

General Notes

- All construction and installations shall meet the 1 requirements of applicable Codes and Ordinances Contractor and subcontractors to field verify all dimensions and conditions prior to fabrications and
- installations All material shall be new and unused unless indicated otherwise; construction, installations, fit, and finishes shall exhibit first class workmanship
- Drawings indicate design intent only: operations, methods, and installations sole responsibility of General and Sub Contractors
- Unless noted or indicated otherwise dimensions are to face of finished wall and other vertical elements Subcontractors shall visit project site, acquaint
- themselves with and verify existing conditions prior to fabrication and/or installation of any work - notify Architect immediately of any discrepancies discovered Do not scale drawings - perform layouts from
- dimensions only notify Architect immediately of any discrepancies discovered Unless indicated otherwise, new wall construction not
- specifically dimensioned aligns with existing construction Each trade responsible for protecting existing work in place from damage and responsible for repairing to original condition any affected materials and/or installations
- Subcontractors shall coordinate their work with that of
- other trades Subcontractors shall remove daily from premises trash,
- waste, and debris generated from their work All work shall conform with latest published safety
- standards as established by OSHA and ANSI
- Procedure with work constitutes acceptance of existing conditions . substrates
- Premises shall be left fully cleaned and ready for Owner acceptance at completion of work
- All materials and assemblies to be installed in strict accordance with manufacturer requirements and industry standards unless specifically indicated otherwise

Project Code Data

- Building Code 2018 International Building Code
- Electrical Code
- 2017 National Electrical Code
- Mechanical Code 2018 International Mechanical Code
- Fire Protection
- 2018 International Fire Code Plumbing Code
- 2018 International Plumbing Code
- Accessibility Americans with Disabilities Act Accessibility Guidelines
- 2010 Accessible and Usable Buildings Use Group
- 'B' Business . Section 304
- Gross Tenant Area
- 2,153 gross square feet [calculated to exterior face of perimeter walls and centerline of
- demising walls]
- **Construction Type** II-B Section 605.2 . Table 601

Sheet Index

- Architectural A1 Floor Plan . Reflected Ceiling Plan
- A2 Schedules . Interior Elevations . Details
- Mechanical M1 HVAC Plan

M2 Plumbing Plan

- Electrical
- E1 Electrical Lighting Plan
- E2 Electrical Power Plan E3 Electrical Specifications





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6.12

6.09

6.08

10.04 6.08

6.12

6.09



3 Casework Elevation

note all elements existing to remain unless indicated otherwise

Reference Notes

- 01 General **1.01** All furnishings and equipment provided by Tenant and installed by GC except as specifically indicated
- **1.02** Patient tables . coordinate location and spacing with Tenant
- 1.03 Provide dedicated outlet for treadmill and future treadmill coordinate location with Tenant . refer MEP

06 Wood . Plastics

- 6.01 All millwork and cabinetry construction to 'AWI Custom Flush Overlay' standards . exterior finishes plastic laminate as selected . interior finishes white melamine 6.02 3/4" plywood or mdf substrate unless noted otherwise
- 6.03 Adjustable shelf
- 6.04 Toe space
- 6.05 5mm holes . 32 mm on center 6.06 Wire pull with brushed nickel finish
- 6.07 6" height drawer unit
- 6.08 Plastic laminate finish counter top with hardwood edge. typical 1 1/2" face height . 3/4" eased corner . provide 3" grommets where shown
- 6.09 [2] 2x6 blocking 6.10 2x blocking . provide all locations where permanent installations mount [fire retardant treated]
- **6.11** 1/4" back panel over 1x mounting cleats 6.12 3/4" x 1 1/2" rounded wood edge . plastic lamiante on all exposed surfaces . typ at all countertops in reception .
- treatment . staff 6.13 Provide angled supports at 5-0 oc max under wall mounted tops . color to match laminate tops . provide 3"
- grommets at each bracket as shown 6.14 Provide 1/2" fire retardant plywood backing 2-0 high by length of ballet bar . center at 42" aff . verify location and
- extents with Tenant 6.15 Provide 1/2" fire retardant plywood backing 2-0 wide by
- 8-0 high for theraband tree . verify location with Tenant 6.16 Provide 1/2" fire retardant plywood backing 2-0 wide by
- 4-0 high for pulley . verify location with Tenant 6.17 Provide 1/2" fire retardant plywood backing 2-0 wide by
 - 2-0 high for television . verify location with Tenant
- 6.18 Provide break metal wall cap to match storefront at wall mullion interface . paint satin black alkyd enamel . hold
- back 1/4" from mullion and caulk 6.19 2-0 x 3-0 . 3/4" plywood for IT Cabinet . above door 6.20 Provide 4" radius at all exposed countertop corners
- 08 Doors . Windows
- 8.01 New and existing doors . refer Door . Hardware Schedule 8.02 Provide 'Graber Solar Shades' Phifer Sheer Weave . 1% Opacity . Standard Clutch Drive . Charcoal Gray at existing storefront openings . coordinate locations with Tenant

10 Specialties

- **10.01** Commercial grade fire extinguisher on bracket . verify final location with Fire Inspector **10.02** Provide new 6" tall white vinyl self adhesive address numbering above storefront entrance
- **10.03** Provide coat hooks . coordinate type and location with Tenant
- **10.04** Provide cork on vertical surface from top of desk to bottom of transaction top . refer Finish Schedule **10.05** Provide cork on vertical surface from countertop to bottom of upper cabinets . refer Finish Schedule **10.06** Provide 3-0 high mirror for entire length of ballet bar mounted with bottom at 4" aff . directly above provide round red oak handrail mounted to 1x4 red oak backboard with brass handrail supports . stain with 'Minwax' 241 Fruitwood . directly above provide 3-0 high mirror for entire length of ballet bar . top of upper mirror should be nominally 6'-7 1/2" aff

Symbols

a	Metalux 24" x 48" 18 cell parabolic troffer with T-8 5000k lamps . refer MEP . tenant provided
b	Metalux 24" x 24" 18 cell parabolic troffer with T-8 5000k lamps . refer MEP . tenant provided
_C	Focal Point Luna Series FLU-24-B-2-120-SB-WH with T-8 5000k lamps . refer MEP . tenant provided
∫ em	emergency light with battery back up . refer MEP
∕₫xm	emergency . exit light with battery back up . refer ME
	suspended acoustical tile

- system . landlord provided
- exhaust fan . refer MEP

HVAC supply grille . refer MEP

HVAC return grille . refer MEP





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GENERAL NOTES:

- 1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW GENERAL NOTES, SPECIFICATIONS AND OTHER DISCIPLINE'S DRAWINGS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, TENANT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- 2. EXISTING CONDITIONS WERE TAKEN FROM AS BUILT DRAWINGS AND SITE VISITS AND MAY NOT REFLECT EXACT "AS-BUILT" CONDITIONS. COORDINATE DEMOLITION WORK AND NEW WORK WITH EXISTING CONDITIONS AND OTHER TRADES PRIOR TO CONSTRUCTION.
- 3. REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE PLUMBING SYSTEMS. VERIFY CHASE AND PENETRATION LOCATIONS SHOWN ON THE ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR PIPING MEET REQUIREMENTS.
- 4. INSTALL PIPING PARALLEL TO BUILDING LINES, UNLESS NOTED OTHERWISE.
- 5. COORDINATE LOCATION OF EQUIPMENT AND SUPPORTS WITH LOCATION OF ACCESS PANELS/DOORS TO ENABLE SERVICE OF EQUIPMENT. IF NO ACCESS PANEL IS SHOWN, PROVIDE ACCESS PANEL IN SIZE REQUIRED FOR MAINTENANCE OF EQUIPMENT. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
- 6. SEAL PENETRATIONS THROUGH BUILDING COMPONENTS IN ACCORDANCE WITH LOCAL CODES. FIREPROOF PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.

PLAN NOTES:

- (1) 4"Ø EXHAUST DUCT UP THROUGH ROOF ABOVE. TERMINATE WITH
- APPROVED FITTING EQUIPPED WITH INSECT SCREEN.
- (2) 1/2" CW DOWN TO WATER COOLER BACKBOX BELOW. PROVIDE BACKBOX APPROVED BY OWNER.
- (3) CONNECT NEW UNDERGROUND SAN TO EXISTING UNDERGROUND SAN MAIN. FIELD VERIFY EXACT LOCATION PRIOR TO INSTALLATION.
- 4 4"Ø DRYER VENT FROM DRYER CONNECTION, ROUTE UP THROUGH ROOF ABOVE. TERMINATE ABOVE ROOF PER THE DRYER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 5 1/2" CW & 1/2" HW DOWN TO WATER HEATER BELOW. MOUNT WATER HEATER ABOVE JANITORS SINK.
- (6) 1" CW, EXTEND TO EXISTING BUILDING SERVICE ENTRANCE AND CONNECT. FIELD VERIFY EXACT LOCATION.
- 7 INSTALL MIXING VALVE SCHEDULED IN PLUMBING FIXTURE SCHEDULE. INSTALL MIXING VALVE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS
- 8 1/4" CW DOWN TO TRAP PRIMER CONNECTION ON FLOOR DRAIN BELOW.





EXHAUST FAN SCHEDULE								
	UNIT INFORMATION							
UNIT	MFG	MODEL	TYPE	EXT	FLOW	HP	VOLT/	NOTES
CALLOUT		NO.		STATIC	(CFM)		PHASE	
				(IN WC)				
EF-1	PANASONIC	FV05-11	INLINE	0.3	75	1/20	120/1	

FIXTURE

LAVATORY (UNDER SLAB)

LUSH TANK WATER CLOSET

LOOR DRAIN

ANITOR SINK

WASHER BOX

SINK (UNDER SLAB)

AIR TERMINAL DEVICES SCHEDULE									
PLAN MARK	QUANTITY	MANUFACTURER	MODEL	SERVICE	MOUNT TYPE	BORDER SIZE	NECK SIZE	VOLUME DAMPER	
RG-1	1	TITUS	PAR	RETURN	LAY-IN	24"X24"	12"	NO	
RG-1	1	TITUS	PAR	RETURN	LAY-IN	12"X12"	12"	NO	
RG-1	3	TITUS	PAR	RETURN	LAY-IN	24"X24"	22"X22"	NO	
RG-1	2	TITUS	PAR	RETURN	LAY-IN	24"X24"	10"	NO	
SD-1	2	TITUS	OMNI	SUPPLY	LAY-IN	12"X12"	8"	YES	
SD-4	12	TITUS	OMNI	SUPPLY	LAY-IN	24"X24"	10"	YES	
SD-4	2	TITUS	OMNI	SUPPLY	LAY-IN	24"X24"	8"	YES	

ELECTRIC WATER HEATER SCHEDULE										
		UNIT INFORMATION								
UNIT	MFG	MODEL	CAP.	EWT	LWT	NUM	TOTAL	VOLT/	DWG	NOTES
CALLOUT		NO.	(GAL)	(°F)	(°F)	OF	INPUT	PH	NO.	
						ELEM.	(KW)			
WH-1	AO SMITH	ECT-30	30	40	120	2	4.5	208/1	RE:PLANS	



1 FLOOR PLAN - HVAC





PLUMBING FIXTURE CONN. SCHEDULE							
URE	MARK	CW	HW	WASTE	VENT		
\В)	L-1	1/2"	1/2"	2"	1-1/2"		
	FD-1	1/4"		3"	2"		
OSET	WC-1	1/2"		3"	2"		
	JS-1	3/4"	3/4"	3"	2"		
	S-1	1/2"	1/2"	2"	2"		
	WB-1	1/2"	1/2"	2"	1-1/2"		



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PLUMBING FIXTURE SCHEDULE							
PLAN MARK	MANUFACTURER AND MODEL	FIXTURE DESCRIPTION	ACCESSORIES MANUFACTURER AND MODEL	ACCESSORIES DESCRIPTION	SIZE	NOTES	
FD-1	WATTS FD-12.SQ	PVC SHALLOW SUMP FLOOR DRAIN WITH SQUARE TOP WITH BRONZE STRAINER AND TRAP PRIMER CONNECTION.	-		-		
JS-1	MUSTEE 63M	FLOOR MOUNTED, PVC MOP SINK.	ACORN KFC	WALL MOUNTED SERVICE FAUCET WITH PAIL HOOD AND VACUUM BREAKER. SUPPLY SINK WITH 36" HOSE, MOP HANGER AND LINT BASKET STRAINER.	24" X 24"		
L-1	AMERICAN STANDARD LUCERNE 0356.041	VITREOUS CHINA, ADA COMPLIANT, D-SHAPED BOWL WALL HUNG LAVATORY.	1.) AMERICAN STANDARD COLONY 2175.205 2.) LAWLER TMM-1070	1.) SINGLE CONTROL CENTERSET FAUCET WITH METAL LEVER HANDLE. 2.) ASSE1070 COMPLIANT POINT OF USE THERMOSTATIC MIXING VALVE WITH BRONZE BODY, TAMPER RESISTANT COVER AND CHECK VALVES. SET OUTLET TEMPERATURE TO 95 DEG F.	-	PROVIDE CHROME PLATED BRASS TAILPIECE AND GRID DRAIN, CHROME PLATED BRASS P-TRAP, ANGLED STOP VALVES AND FLEXIBLE RISERS. INSULATE EXPOSED TAILPIECE, P-TRAP, AND WATER RISERS WITH ADA COMPLIANT INSULATION. MOUNT MIXING VALVE BELOW SINK AND PROVIDE A SINGLE TEMPERED WATER CONNECTION TO FAUCET.	
S-1	ELKAY LRAD	SINGLE BOWL, STAINLESS STEEL, ADA COMPLIANT COUNTER MOUNTED SINK. 3 FAUCET HOLES ON 4" CENTERS.	ELKAY LK800GN05T4	8" WIDESPREAD FAUCET WITH 4" WRIST BLADE HANDLES AND GRID DRAIN ASSEMBLY.	22" X 19-1/2"	PROVIDE CHROME PLATED BRASS TAILPIECE AND GRID DRAIN, CHROME PLATED BRASS P-TRAP, AND ANGLED STOP VALVES AND FLEXIBLE RISERS. INSULATE EXPOSED TAILPIECE, P-TRAP, AND WATER RISERS WITH ADA COMPLIANT INSULATION.	
WB-1	GUY GRAY #MWB	WASHING MACHINE CONNECTION BOX, RECESSED COLD ROLLED STEEL BOX WITH WHITE POWDER COAT FINISH, INTEGRAL SUPPLY VALVES AND PVC DRAIN.	-	-	-		
WC-1	AMERICAN STANDARD CADET 3 FLOWISE 2832.128	ADA COMPLIANT, FLOOR MOUNTED, FLUSH TANK, VITREOUS CHINA WATER CLOSET.	CHURCH 9500 C	SEAT: SOLID PLASTIC, OPEN FRONT, WHITE ELONGATED BOWL, INTEGRAL BUMPERS, EXTERNAL CHECK HINGES WITH STAINLESS STEEL POSTS.	-		





Tlt	Toilet Room	0	
Laundry	Storage Rm	0	
Tlt	Toilet Room	0	
Open Treatment	Health Club	10	
Open Treatment	Corridor	0	
Cardio	Health Club	10	

Az= Floor area

EXISTING RTU-1 Ventilation Calc

	Toilet Room	0	60	0	0	0	0.8	
	Storage Rm	0	150	0	0	0.12	0.8	1
	Toilet Room	0	65	0	0	0	0.8	
ent	Health Club	10	540	5	20	0.06	0.8	1
ent	Corridor	0	450	0	0	0.06	0.8	14
	Health Club	10	355	4	20	0.06	0.8	с,
	Corridor	0	335	0	0	0.06	0.8	2
Vot								
VENTILATION SCHEDULE								



CONNECT TO EXISTING WORK	
AC	—— G -
HVAC CONDENSATE DRAIN	回 FC
THERMOSTAT	++
SUPPLY DIFFUSER	
RETURN GRILLE/EXHAUST REGISTER	
RETURN AND EXHAUST AIR FLOW INDICATOR	$\left(\begin{array}{c} P \\ \# \end{array}\right)$
DUCT MOUNTED MANUAL BALANCING DAMPER	#

v	PLUMBIN
	DOMEST
	DOMEST
—— G ——	GAS (NA
FCO	FLOOR C
——— ́р WCO	WALL CL
——— + нв	HOSE BI
	FLOOR S
(P) #	PLUMBIN
C+	ELBOW I
+0	ELBOW
+O+	TEE UP

TEE DOWN

——SAN——	SOIL OR WASTE ABOVE GRADE OR FLOOR
— — SAN — —	SOIL OR WASTE BELOW GRADE OR FLOOR
v	PLUMBING VENT
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
—— G ——	GAS (NATURAL)
FCO	FLOOR CLEAN OUT
———	WALL CLEAN OUT
————— НВ	HOSE BIBB
	FLOOR SINK, FLOOR DRAIN, AREA DRAIN
(P) #	PLUMBING VENT RISER CALL-OUT
C+	ELBOW DOWN
+O	ELBOW UP

PLUMBING







HVAC CON
THERMOS
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	HVAC CON

NOTE REFERENCE

GENERAL	
MECHANICAL NOTE REFERENCE	
DEMOLITION NOTE REFERENCE	

Pz= Rp=	Zone Population People Outdoor Air Rate								
Ra=	Area Outdoor Air Rate								
ISTING RTU-1 Ventilat	ion Calculation	7.5	Ton						
Room Name	Occupancy Classification	Occupant Density	Az	Pz	Rp	Ra	Ez	Vbz	Voz
Waiting	Reception	30	100	3	5	0.06	0.8	21	26
Reception	Office Space	5	110	1	5	0.06	0.8	12	14
Treatment	Med Prc. Rm	20	115	2	15	0	0.8	35	43
Staff	Office Space	5	135	1	5	0.06	0.8	14	18
Tlt	Toilet Room	0	60	0	0	0	0.8	0	0
Laundry	Storage Rm	0	150	0	0	0.12	0.8	18	23
Tlt	Toilet Room	0	65	0	0	0	0.8	0	0
Open Treatment	Health Club	10	540	5	20	0.06	0.8	140	176
Open Treatment	Corridor	0	450	0	0	0.06	0.8	27	34
Cardio	Health Club	10	355	4	20	0.06	0.8	92	115
Cardio	Corridor	0	335	0	0	0.06	0.8	20	25
		Vot							47





MECHANICAL SYMBOLS

SUSPENDED WATER HEATER DETAIL



MECHANICAL SPECIFICATIONS 1. HANGERS AND SUPPORTS FOR PIPING AND

EQUIPMENT

DEFINITIONS

Terminology: As defined in MSS SP-90, "Guidelines on Terminology for Pipe Hangers and Supports." PERFORMANCE REQUIREMENTS

Design supports for multiple pipes capable of supporting combined weight of supported systems, system contents, and test water. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and

components. PRODUCTS

STEEL PIPE HANGERS AND SUPPORTS

Description: MSS SP-58, Types 1 through 58, factory-fabricated components. Refer to Part 3 "Hanger and Support Applications" Article for where to use specific hanger and support types.

TRAPEZE PIPE HANGERS Description: MSS SP-69, Type 59, shop- or field-fabricated pipe-support assembly made from structural-steel shapes with MSS SP-58 hanger rods, nuts, saddles, and U-bolts.

METAL FRAMING SYSTEMS

Description: MFMA-3, shop- or field-fabricated pipe-support assembly made of steel channels and other components. EXECUTION

HANGER AND SUPPORT APPLICATIONS

Specific hanger and support requirements are specified in Sections specifying piping systems and equipment. Comply with MSS SP-69 for pipe hanger selections and applications that are not specified in piping system Sections. Use hangers and supports with galvanized, metallic coatings for piping and equipment that will not have field-applied finish. Use nonmetallic coatings on attachments for electrolytic protection where attachments are in direct contact with copper tubing.

Horizontal-Piping Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types: Adjustable, Steel Clevis Hangers (MSS Type 1): For suspension of noninsulated or insulated stationary pipes, NPS 1/2 to

NPS 30 (DN 15 to DN 750). Adjustable, Steel Band Hangers (MSS Type 7): For suspension of noninsulated stationary pipes, NPS 1/2 to NPS 8 (DN 15 to DN 200). Complete Pipe Rolls (MSS Type 44): For support of pipes, NPS 2 to

NPS 42 (DN 50 to DN 1050), if longitudinal movement caused by expansion and contraction might occur but vertical adjustment is not necessary

Vertical-Piping Clamps: Unless otherwise indicated and except as specified in piping system Sections, install the following types: Hanger-Rod Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types: Steel Clevises (MSS Type 14): For 120 to 450 deg F (49 to 232 deg C) piping installations.

Building Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types: Saddles and Shields: Unless otherwise indicated and except as specified in piping system Sections, install the following types: Steel Pipe-Covering Protection Saddles (MSS Type 39): To fill interior voids with insulation that matches adjoining insulation.

Protection Shields (MSS Type 40): Of length recommended in writing by manufacturer to prevent crushing insulation. Thermal-Hanger Shield Inserts: For supporting insulated pipe.

Comply with MSS SP-69 for trapeze pipe hanger selections and applications that are not specified in piping system Sections.

2. MECHANICAL INSULATION PRODUCTS

INSULATION MATERIALS

Comply with requirements in Part 3 schedule articles for where insulating materials shall be applied.

FiberGlass: Inorganic, incombustible, foamed or cellulated glass with annealed, rigid, hermetically sealed cells, with factory applied All Service Jacket (ASJ) painted in color selected by architect.

INSULATING CEMENTS Mineral-Fiber, Hydraulic-Setting Insulating and Finishing Cement: Comply with ASTM C 449/C 449M.

FACTORY-APPLIED JACKETS

Insulation system schedules indicate factory-applied jackets on various applications. When factory-applied jackets are indicated,

comply with the following: ASJ: White, kraft-paper, fiberglass-reinforced scrim with

aluminum-foil backing; complying with ASTM C 1136, Type I. EXECUTION

PREPARATION

Surface Preparation: Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application. Coordinate insulation installation with the trade installing heat tracing. Comply with requirements for heat tracing that apply to insulation. Mix insulating cements with clean potable water; if insulating cements are to be in contact with stainless-steel surfaces, use demineralized water. GENERAL INSTALLATION REQUIREMENTS

Install insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of equipment, ducts and fittings, and piping including fittings, valves, and PIPING INSTALLATION specialties. Install insulation materials, forms, vapor barriers or

retarders, jackets, and thicknesses required for each item of equipment, duct system, and pipe system as specified in insulation system schedules. Install accessories compatible with insulation materials and suitable for the service. Install accessories that do not corrode, soften, or otherwise attack insulation or jacket in either wet or back or side by side with common drain pipe. Straight tees, elbows, dry state. Install insulation with longitudinal seams at top and bottom of horizontal runs. Install multiple layers of insulation with longitudinal and end seams staggered. Do not weld brackets, clips, or other

attachment devices to piping, fittings, and specialties. Keep insulation materials dry during application and finishing. Install insulation with tight longitudinal seams and end joints. Bond seams and joints with adhesive recommended by insulation material manufacturer. Install insulation with least number of joints practical.

Where vapor barrier is indicated, seal joints, seams, and penetrations in insulation at hangers, supports, anchors, and other projections with vapor-barrier mastic. Install insulation continuously through hangers and around anchor attachments. For insulation application where vapor barriers are indicated, extend insulation on anchor legs from point of attachment to supported item to point of attachment to structure. Taper and seal ends at attachment to structure with vapor-barrier mastic. Install insert materials and install insulation to

tightly join the insert. Seal insulation to insulation inserts with adhesive or sealing compound recommended by insulation material manufacturer. Cover inserts with jacket material matching adjacent pipe insulation. Install shields over jacket, arranged to protect jacket from tear or puncture by hanger, support, and shield. Apply adhesives, mastics, and sealants at manufacturer's recommended coverage rate and wet and dry film thicknesses. Apply mastic on seams and joints

and at ends adjacent to duct and pipe flanges and fittings. Cut insulation in a manner to avoid compressing insulation more than 75 percent of its nominal thickness. Finish installation with systems at operating conditions. Repair joint separations and cracking due to thermal movement.

Repair damaged insulation facings by applying same facing material over damaged areas. Extend patches at least 4 inches (100 mm) beyond damaged areas. Adhere, staple, and seal patches similar to butt ioints. PENETRATIONS

Insulation Installation at Interior Wall and Partition Penetrations (That Are Not Fire Rated): Install insulation continuously through walls and partitions.

Insulation Installation at Fire-Rated Wall and Partition Penetrations: Install insulation continuously through penetrations of fire-rated walls

LUMBING RISER DIAGRAM

and partitions. Terminate insulation at fire damper sleeves for fire-rated wall and partition penetrations. Externally insulate damper sleeves to match adjacent insulation and overlap duct insulation at least 2 inches (50 mm).

Pipe: Install insulation continuously through floor penetrations. Seal penetrations through fire-rated assemblies. DUCT INSULATION SCHEDULE. GENERAL

Plenums and Ducts Requiring Insulation

Indoor, concealed supply and outdoor air. Indoor, exposed outdoor air. Indoor, concealed return located in nonconditioned space. Indoor, concealed,

INDOOR DUCT AND PLENUM INSULATION SCHEDULE Supply-Air, Return-Air and Make Up Air Duct Insulation: Fiberglass blanket, 1-1/2 inches (38 mm) thick and 1.5-lb/cu. ft. (24-kg/cu. M) nominal density.

PIPING INSULATION SCHEDULE, GENERAL

Acceptable preformed pipe and tubular insulation materials and thicknesses are identified for each piping system and pipe size range. If more than one material is listed for a piping system, selection from materials listed is Contractor's option

INDOOR PIPING INSULATION SCHEDULE Domestic Cold Water, Hot Water and Hot Water Recirc. Fiberglass: 3/4 inches thick.

DOMESTIC WATER PIPING

PRODUCTS PIPING MATERIALS

Comply with requirements in "Piping Schedule" Article for applications of pipe, tube, fitting materials, and joining methods for specific services, service locations, and pipe sizes.

COPPER TUBE AND FITTINGS

Hard Copper Tube: ASTM B 88, Type L (ASTM B 88M, Type B) PIPING JOINING MATERIALS

Solder Filler Metals: ASTM B 32, lead-free alloys. Include

water-flushable flux according to ASTM B 813. FLEXIBLE CONNECTORS

Stainless-Steel-Hose Flexible Connectors: Corrugated-stainless-steel tubing with stainless-steel wire-braid covering and ends welded to inner tubina.

EXECUTION

PIPING INSTALLATION Install copper tubing under building slab according to CDA's "Copper Tube Handbook."

Install piping concealed from view and protected from physical contact by building occupants unless otherwise indicated and except in equipment rooms and service areas. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or Install piping above accessible ceilings to allow sufficient space for ceiling panel removal, and coordinate with other services occupying that space. Install piping adjacent to equipment and specialties to allow service and maintenance.Install piping to permit valve servicing. Install piping free of sags and bends. Install fittings for changes in direction and branch connections. Install shut off valves

with unions in copper tubing at final connection to each piece of equipment, machine, and specialty.

JOINT CONSTRUCTION

Ream ends of pipes and tubes and remove burrs. Bevel plain ends o steel pipe. Remove scale, slag, dirt, and debris from inside and

outside of pipes, tubes, and fittings before assembly. Soldered Joints: Apply ASTM B 813, water-flushable flux to end of tube. Join copper tube and fittings according to ASTM B 828 or CDA's installation with direct-fired H&V units. "Copper Tube Handbook."

VALVE INSTALLATION

Install shutoff (ball) valve close to water main on each branch and riser serving plumbing fixtures or equipment, on each water supply to equipment, and on each water supply to plumbing fixtures that do not have supply stops.

Install drain valves for equipment at base of each water riser, at low points in horizontal piping, and where required to drain water piping. CONNECTIONS

Install piping adjacent to equipment and machines to allow service and maintenance. Connect domestic water piping to exterior water-service piping. Use transition fitting to join dissimilar piping materials. ESCUTCHEON INSTALLATION

Install escutcheons for penetrations of walls, ceilings, and floors. PIPING SCHEDULE Transition and special fittings with pressure ratings at least equal to

piping rating may be used in applications below unless otherwise indicated Aboveground domestic water piping, shall be Hard copper tube,

ASTM B 88, Type L 4. INTERIOR SANITARY WASTE AND VENT

PIPING

PRODUCTS PIPING MATERIALS

PVC Pipe: ASTM D 2665, solid-wall drain, waste, and vent.

EXECUTION

PIPING APPLICATIONS Aboveground, Interior, soil, waste, and vent piping shall be PVC Pipe with socket fittings and solvent welded joints. Underground, soil, waste, and vent shall be PVC Pipe with socket fittings and solvent welded joints.

Make changes in direction for soil and waste drainage and vent piping using appropriate branches, bends, and long-sweep bends. Sanitary tees and short-sweep 1/4 bends may be used on vertical stacks if change in direction of flow is from horizontal to vertical. Use long-turn, double Y-branch and 1/8-bend fittings if 2 fixtures are installed back to and crosses may be used on vent lines. Do not change direction of flow more than 90 degrees. Use proper size of standard increasers and reducers if pipes of different sizes are connected. Reducing size of drainage piping in direction of flow is prohibited. Lay buried building drainage piping beginning at low point of each system. Install true to grades and alignment indicated, with unbroken continuity of invert. Place hub ends of piping upstream. Install required gaskets according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements. Maintain swab in piping and pull past each joint as completed. Install soil and waste drainage and vent piping at the code required minimum slopes. Install PVC soil and waste drainage and vent piping according to ASTM D 2665. Do not enclose, cover, or put piping into operation until it is inspected and

approved by authorities having jurisdiction. JOINT CONSTRUCTION

PVC Nonpressure Piping Joints: Join piping according to ASTM D 2665.

5. FACILITY NATURAL-GAS PIPING

PRODUCTS PIPES, TUBES, AND FITTINGS

Steel Pipe: ASTM A 53/A 53M, black steel, Schedule 40, Type E or S,

JOINING MATERIALS

Joint Compound and Tape: Suitable for natural gas. Welding Filler Metals: Comply with AWS D10.12/D10.12M for welding

materials appropriate for wall thickness and chemical analysis of steel pipe being welded.

MANUAL GAS SHUTOFF VALVES Bronze Plug Valves: MSS SP-78.

MOTORIZED GAS VALVES

Electrically Operated Valves: Comply with UL 429.

EXECUTION OUTDOOR PIPING INSTALLATION

Comply with NFPA 54 for installation and purging of natural-gas

INDOOR PIPING INSTALLATION Comply with NFPA 54 for installation and purging of natural-gas piping. Arrange for pipe spaces, chases, slots, sleeves, and openings

mechanical installations. Install piping in concealed locations unless otherwise indicated and except in equipment rooms and service areas. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal. Locate valves for easy access. Install natural-gas piping at uniform grade of 2 percent down toward drip and sediment traps. Install piping free of sags and bends. Install fittings for changes in direction and branch connections. Fire-Barrier Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with firestop materials. Verify final equipment locations for roughing-in. Drips and Sediment Traps: Install drips at points where condensate may collect, including service-meter outlets. Locate where accessible to permit cleaning and emptying. Do not install where condensate is subject to freezing. Extend relief vent connections for service regulators, line regulators, and verpressure protection devices to outdoors and terminate with weatherproof vent cap. Conceal pipe installations in walls, pipe spaces, utility spaces, above ceilings, below grade or floors, and in floor channels unless indicated to be exposed to view. CONNECTIONS Connect to utility's gas main according to utility's procedures and

in building structure during progress of construction, to allow for

requirements. Install natural-gas piping electrically continuous, and bonded to gas appliance equipment grounding conductor of the circuit powering the appliance according to NFPA 70. Install piping adjacent to appliances to allow service and maintenance of appliances. Connect piping to appliances using manual gas shutoff valves and unions. Install valve within 72 inches (1800 mm) of each gas-fired appliance and equipment. Install union between valve and appliances or equipment. Sediment Traps: Install tee fitting with capped nipple in bottom to form drip, as close as practical to inlet of each appliance. OUTDOOR & INDOOR PIPING SCHEDULE

Aboveground natural-gas piping shall be Steel pipe with wrought-steel fittings and welded joints.

ROOF TOP UNITS SUBMITTALS

Product Data: Include rated capacities, furnished specialties, and accessories. PACKAGED UNITS

Factory-assembled, prewired, self-contained unit consisting of cabinet. supply fan, controls, filters, DX cooling system and direct-fired gas furnace to be installed outside the building.

AIR FILTERS

Comply with NFPA 90A. DIRECT-FIRED GAS FURNACE

Description: Factory assembled, piped, and wired; and complying with ANSI Z83.4, "Direct Gas-Fired Make-Up Air Heaters"; ANSI Z83.18, "Direct Gas-Fired Industrial Air Heaters"; and NFPA 54, "National Fuel Gas Code." CONTROLS

Factory-wired, fuse-protected control transformer, connection for power supply and field-wired unit to remote control panel.

EXECUTION INSTALLATION

Install gas-fired units according to NFPA 54, "National Fuel Gas Code." Install roof curb on roof structure, according to ARI Guidelines. Install controls and equipment shipped by manufacturer for field

METAL DUCTS RECTANGULAR DUCTS AND FITTINGS

General Fabrication Requirements: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" based on indicated static-pressure class unless otherwise indicated.

ROUND DUCTS AND FITTINGS General Fabrication Requirements: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Chapter 3, "Round, Oval, and Flexible Duct," based on indicated static-pressure class unless otherwise indicated

General Material Requirements: Comply with SMACNA's "HVAC Duct Construction Standards Metal and Flexible" for acceptable materials, material thicknesses, and duct construction methods unless otherwis indicated. Sheet metal materials shall be free of pitting, seam marks, roller marks, stains, discolorations, and other imperfections. Galvanized Sheet Steel: Comply with ASTM A 653/A 653M.

EXECUTION DUCT INSTALLATION

Install duct systems as indicated unless deviations to layout are approved on Shop Drawings and Coordination Drawings. Install ducts according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" unless otherwise indicated. Install round ducts in maximum practical lengths. Install ducts with fewest possible joints. Install factory- or shop-fabricated fittings for changes in direction, size, and shape and for branch connections. Unless otherwise indicated, install ducts vertically and horizontally, and parallel and perpendicular to building lines. Install ducts close to walls, overhead construction, columns, and other structural and permanent enclosure elements of building. Install ducts with a clearance of 1 inch (25 mm), plus allowance for insulation thickness. Route ducts to avoid passing through transformer vaults and electrical equipment rooms and enclosures. Where ducts pass through non-fire-rated interior partitions and exterior walls and are exposed to view, cover the opening between the partition and duct or duct insulation with sheet metal flanges of same metal thickness as the duct. Overlap openings on four sides by at least 1-1/2 inches (38 mm).

Where ducts pass through fire-rated interior partitions and exterior walls, install fire dampers.

Excelsior Springs . MO 64024



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Drawings and/or Specifications

are original proprietary work and



	LIGHT FIXTURE SCHEDULE										
TAG	QUANTITY (CONFIRM WITH PLANS)	DESCRIPTION	VOLTAGE	MOUNTING	QTY	LA WATTAGE	MPING TYPE/COLOR TEMP	MANU/SERIES	VA		
A	23	2'-0"X4'-0" RECESSED LED ARCHITECTURAL LENSED TROFFER. STEEL HOUSING AND DOOR FRAME WITH WHITE POWDER COAT FINISH, ROUND, SMOOTH ACRYLIC LENS, 0-10V 10% DIMMING LED DRIVER.	120/277	RECESSED GRID		38	LED/4000K/4800 LUMEN	LITHONIA#2BLT4-48L-ADSM	38		
В	10	2'-0"X2'-0" RECESSED LED ARCHITECTURAL LENSED TROFFER. STEEL HOUSING AND DOOR FRAME WITH WHITE POWDER COAT FINISH, ROUND, SMOOTH ACRYLIC LENS, 0-10V 10% DIMMING LED DRIVER.	120/277	RECESSED GRID		38	LED/4000K/4800 LUMEN	LITHONIA#2BLT2-48L-ADSM	38		
E	4	SURFACE MOUNTED SELF-CONTAINED EMERGENCY LIGHTING FIXTURE FOR WALL INSTALLATION. NI-CAD BATTERY, UV-STABLE PLASTIC HOUSING WITH WHITE FINISH. TWO FULLY ADJUSTABLE MR16 LAMPS WITH CLEAR PROTECTIVE LAMP LENS. PUSH TO TEST SWITCH, LED INDICATOR LIGHTS FOR AC SUPPLY, BATTERY CHARGE STATUS. 90 MINUTES OF BATTERY OPERATION.	120/277	SURFACE	2	1	LED	DUAL-LITE#EV	5		
X	2	LED EXIT SIGN, SINGLE OR DOUBLE FACE AS INDICATED ON DRAWINGS, THERMOPLASTIC HOUSING, RED LETTERING, SEALED NI-CAD BATTERY, INTEGRAL LED EMERGENCY LAMPS, MINIMUM 90 MINUTE CAPACITY. DRAWINGS INDICATE ARROWS.	120/277	UNIVERSAL	3	6	LED	LITHONIA LHQM LED	5		

	OCCUPANCY SENSOR SCHEDULE										
TAG	QTY (CONFIRM WITH PLANS)	MANUFACTURER	MODEL	MOUNTING	TYPE	TIME DELAY SETTING	NOTES				
OS-1	4	LEVITON	MDS10-ID	WALL	PASSIVE INFRARED	15 MIN					
OS-2	1	LEVITON	OSC10-RMW	CEILING	DUAL TECHNOLOGY	15 MIN	FURNISH WITH POWER PACK(S) AND ISOLATED RELAY				

Project Information					
Energy Code:	2018 IECC				
Project Title: Project Type:	Alteration				
Construction Site:	Owner/Agent:	Designer/C	ontractor:		
Allowed Interior Lig	hting Power				
	Α	в	с		D
	Area Category	Floor Area (ft2)	Allowed Watts / ft2	Allov : (wed Watts B X C)
1-Waiting (Common Space	e Types:Lobby - General)	198	1.00		198
4-Break (Common Space	Types:Conference/Meeting/Multipurpose) Types:Office - Enclosed)	129 104	1.07		138 97
3-Treatment (Healthcare F	Facility:Exam/Treatment)	1689	1.68		2838
5-Restroom (Common Spa	ace Types:Restrooms)	120	0.85		102
		To	tal Allowed Wa	atts =	3372
Proposed Interior L	ighting Power	в	c		E
Fixture ID :	A : Description / Lamp / Wattage Per Lamp / Ballast	ь Lamps/ Fixture	# of Fixtures	Fixture Watt.	(C X D)
Waiting (Common Spa LED 2: B: 2X2 LED: LE	<u>ce Types:Lobby - General 198 sq.ft.)</u> D Panel 33W:	1	4	38	152
Break (Common Space LED 2: B: 2X2 LED: LE	<u>ə Types:Conference/Meeting/Multipurpose 129 sq.ft.)</u> D Panel 33W:	1	2	38	76
Office (Common Space LED 2: B: 2X2 LED: LE	e Types:Office - Enclosed 104 sq.ft.) D Panel 33W:	1	4	38	152
LED 1: A: 2X4 LED: LE	Facility:Exam/Treatment 1689 sq.tt.) D Panel 33W:	1	19	38	722
LED 1: A: 2X4 LED: LE	pace Types:Restrooms 120 sq.ft.) D Panel 33W:	1	2	38	76
			Total Propose	ed Watts =	1178
Interior Lighting PA	SSES				
Interior Lighting Co Compliance Statement building plans, specific systems have been des applicable mandatory r	mpliance Statement : The proposed interior lighting alteration project repr ations, and other calculations submitted with this perr signed to meet the 2018 IECC requirements in EMCh requirements listed in the Inspection Check State	resented in this doc nit application. The eck Version 4.1.2.0	ument is con proposed int and to comp	sistent wi :erior ligh [‡] ly with ar	ith the ting ነሃ
Cory Mitchell - designe	rSignature	$\overline{\mathbf{v}}$		2-26-21	



permit . bid **25 February 2021**

GENERAL NOTES:

- 1. AT LOCATIONS OF COMMUNICATIONS OUTLETS, UNLESS NOTED OTHERWISE, PROVIDE A 4"X4" BOX AT 18" AFF WITH (1) 3/4" CONDUIT WITH PULL STRING TO ABOVE THE CEILING.
- 2. ALL CIRCUITS IN PATIENT CARE AREAS SERVING RECEPTACLES SHALL MEET THE REQUIREMENTS OF NEC 517.13 FOR REDUNDANT GROUNDING. EITHER METAL RACEWAY WITH A GROUND WIRE OR HOSPITAL GRADE TYPE MC CABLING SHALL BE INSTALLED. HOSPITAL GRADE MC CABLING SHALL BE EQUIPPED WITH AN ALUMINUM INTERLOCKED ARMOR COVER MEETING THE GROUNDING RETURN PATH REQUIREMENTS OF NEC 250.118. STANDARD TYPE MC CABLING MAY BE USED FOR ALL OTHER CIRCUITS. PATIENT CARE AREAS INCLUDE THE TREATMENT ROOM AND OPEN TREATMENT AREA AS INDICATED ON THE PLANS.
- 3. TREATMENT AREAS ARE CONSIDERED "PATIENT CARE AREAS" BUT NOT "PATIENT BED AREAS" PER NEC 517. REDUNDANT GROUNDING PER THE GENERAL NOTE ABOVE ARE REQUIRED IN THESE AREAS HOWEVER "HOSPITAL GRADE" RECEPTACLES ARE NOT REQUIRED.
- 4. ALL DEVICES TO BE WHITE WITH WHITE NYLON FACEPLATES EXCEPT DEVICES AT THE OPEN TREATMENT TABLES, INSTALLED ON THE DECORATIVE METAL ACCENT WALL, SHALL HAVE STAINLESS STEEL PLATES.
- 5. MAINTAIN ELECTRICAL CONNECTION TO THE EXISTING ROOFTOP UNIT(S) AND ROOF RECEPTACLES.

Par	nel TP Sc	hedule													
VOLTAG	E: 120/208 V VIRE: 3 PH /4_W		BUS RAT	TING: 225 /	A ⁻ 225 A MLO		MOUNTING: SURFACE FED FROM: MIN AIC: 35000								
											00	OCPD			
CIRC	CIRCUIT DES	CRIPTION	AMP	POLE		<u></u>	PHASE L	LOAD VA		<u> </u>	POLE	AMP	CIRCUIT DESCRIPTION	CIRC	
1,3,5	RTU (EXISTING)		50	3	4264	0	4264	0	4264	0	3	3 0 SPACE			
7,9	WATER HEATER		30	2	2250	2700	2250	2700	0	0	2	30	WASHER DRYER	8,10	
11	EXTERIOR SIGN		20	1	0	0	0	0	250	5	1	20	DOOR OPENER	12	
13	LIGHTING		20	1	620	904	0	0	0	0	1	20	LIGHTING	14	
15	RECEPTION REC		20	1	0	0	720	720	0	0	1	20	RECEPTION/TREAT REC	16	
17	COPIER		20	1	0	0	0	0	180	1200	1	20	COFFEE STATION	18	
19	TREATMENT RECE	PT	20	1	540	1200	0	0	0	0	1	20	TREATMENT RECEPT	20	
21	TREATMENT RECE	PT	20	1	0	0	1200	540	0	0	1	20	OPEN TREAT RECEPTS	22	
23	OPEN TREAT RECE	EPTS	20	1	0	0	0	0	540	900	1	20	STAFF RM RECEPTS	24	
25	EXAM RECEPTS		20	1	660	480	0	0	0	0	1	20	REFRESHMENT RECEPT	26	
27	HYDRO/WATER CC	OOLER REC	20	1	0	0	1250	750	0	0	1	20	I.T. RACK REC	28	
29	BREAK COUNTER I	REC	20	1	0	0	0	0	500	300	1	20	REFRIGERATOR	30	
31	STOREFRONT/WT	G REC	20	1	900	0	0	0	0	0	1	0	SPACE	32	
33	SPACE		0	1	0	0	0	0	0	0	1	0	SPACE	34	
35	SPACE		0	1	0	0	0	0	0	0	1	0	SPACE	36	
37	SPACE		0	1	0	0	0	0	0	0	1	0	SPACE	38	
39	SPACE		0	1	0	0	0	0	0	0	1	0	SPACE	40	
41	SPACE		0	1	0	0	0	0	0	0	1	0	SPACE	42	
		TOTAL CON	NN. PHASE	LOAD	14	518	143	394	81	39	•				
LOA	D CATEGORY	CONN. LOAD (KVA)	DEM FAC	IAND TOR	DEMAN (K)	D LOAD /A)	NOTES:	GFI - GROUI LCK - HAND	ND FAULT CI LE PADLOCK	RCUIT BRE	AKER ENT				
Motor - No	n AC	0.1	1.	00	C).1		ST - SHUNT	TRIP						
Motor - No	n AC (Largest)	0.1	1.	25	C).1									
Other		9.9	1.	00	ç	.9									
Receptacle	es (0 - 10 KVA)	10.0	1.	00	1	0.0									
Receptacle	es (Over 10 KVA)	2.6	0.	50	1	.3									
Lighting		1.5	1.	25	1	.9									
Motor - Air	Conditioning	0.0	1.	00	C	.0									
Motor - Air (Largest)	Conditioning	12.8	1.	25	10	5.0									
TOTAL 37.1 39.4							PANEL IS EX	KISTING, PRO	OVIDE NEW	CIRCUIT B	REAKER	S FOR NEW CIRCUITS AS REQUIF	RED		

TOTAL DEMAND 109.3 AMPS

TOTAL PANEL SPARE 90.7 AMPS

PLAN NOTES:

- 1 MOUNT STROREFRONT RECEPTACLE ABOVE THE WINDOW OR FLUSH IN THE CEILING.
- 2 ALL CIRCUITS IN THIS PATIENT TREATMENT AREA ON THIS CIRCUIT SHALL MEET THE REQUIREMENTS OF NEC 517.13 FOR REDUNDANT GROUNDING. EITHER METAL RACEWAY WITH A GROUND WIRE OR HOSPITAL GRADE TYPE MC CABLING SHALL BE INSTALLED. HOSPITAL GRADE MC CABLING SHALL BE EQUIPPED WITH AN ALUMINUM INTERLOCKED ARMOR COVER MEETING THE GROUNDING RETURN PATH REQUIREMENTS OF NEC 250.118. "HOSPITAL GRADE" RECEPTACLES ARE NOT REQUIRED IN THESE AREAS PER THE GENERAL NOTE ABOVE.
- 3 PROVIDE POWER FOR EXTERIOR SIGNAGE AND PHOTOCELL FOR CONTROL, MAKE CONNECTION TO THE SIGN. COORDINATE EXACT LOCATION WITH SIGN INSTALLER.
- 4 MOUNT IN CASEWORK, COORDINATE LOCATION WITH ATHLETICO.
- 5 MOUNT ABOVE DOOR FOR FUTURE ELECTRIC DOOR STRIKE/ DOOR OPERATOR. EXTEND 1/2" EMPTY CONDUIT FROM BOX TO DOOR FRAME. PROVIDE ADD ALTERNATE FOR (1) 1/2" EMPTY CONDUIT TO THE RECEPTION DESK FOR REMOTE DOOR OPERATOR.
- 6 I.T. CABINET AT THIS LOCATION TO BE SUPPLIED BY THE TENANT, PROVIDE (1) 24" X 48" X 3/4" PLYWOOD FOR MOUNTING. MOUNT RECEPTACLE SHOWN NEXT TO CABINET. COORDINATE RECEPTACLE AND PLYWOOD LOCATION WITH TENANT. PROVIDE (1) #8 GROUND WIRE FROM TENANT PANELBOARD, TERMINATE ON THE CABINET.
- 7 EXISTING PANELBOARD, PROVIDE NEW CIRCUIT BREAKERS FOR NEW CIRCUITS.

ABOVE COUNTER AT 36" AFF TO BOTTOM OF OPENING. COMMUNICATIONS OUTLET TO BE BELOW COUNTER AT 18" AFF TO BOTTOM OF OPENING. (TYP FOR ROOM AT COUNTER LOCATIONS)



ELECTRICAL SPECIFICATIONS

1. COMMON WORK RESULTS FOR ELECTRICAL

COORDINATION

Coordinate arrangement, mounting, and support of electrical equipment: To allow maximum possible headroom unless specific mounting heights that reduce headroom are

indicated. To provide for ease of disconnecting the equipment with minimum interference to other installations.

To allow right of way for piping and conduit installed at required slope. So connecting raceways, cables, wireways, cable trays, and busways will be clear of obstructions and of the working and access space of other equipment. Coordinate location of access panels and doors for electrical items that are behind finished surfaces or otherwise concealed.

EXECUTION

- COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION
- Comply with NECA 1. SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS
- Electrical penetrations occur when raceways, cables, wireways, cable trays, or busways penetrate concrete slabs, concrete or masonry walls, or fire-rated floor and wall assemblies Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are
- used. Install sleeves during erection of slabs and walls. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
- Fire-Rated Assemblies: Install sleeves for penetrations of fire-rated floor and wall assemblies unless openings compatible with firestop system used are fabricated during construction of floor or wall. Cut sleeves to length for mounting flush with both surfaces of walls.
- Interior Penetrations of Non-Fire-Rated Walls and Floors: Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint. Fire-Rated-Assembly Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at
- raceway and cable penetrations. Install sleeves and seal raceway and cable penetration sleeves with firestop Roof-Penetration Sleeves: Seal penetration of individual raceways and cables with flexible boot-type flashing
- units applied in coordination with roofing work. Aboveground, Exterior-Wall Penetrations: Seal penetrations using steel pipe sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch (25-mm) annular clear space between pipe and sleeve for
- installing mechanical sleeve seals.
- FIRESTOPPING Apply firestopping to penetrations of fire-rated floor and wall assemblies for electrical installations to restore original fire-resistance rating of assembly.

2. GROUNDING AND BONDING

QUALITY ASSURANCE Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a

testing agency acceptable to authorities having jurisdiction, and marked for intended use. Comply with UL 467 for grounding and bonding materials and equipment.

PRODUCTS

CONDUCTORS

Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction. Bare Copper Conductors:

Solid Conductors: ASTM B 3. Stranded Conductors: ASTM B 8.

EXECUTION

APPLICATIONS

Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger, unless otherwise indicated. EQUIPMENT GROUNDING

Install insulated equipment grounding conductors with all feeders and branch circuits. INSTALLATION

3. HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

QUALITY ASSURANCE

Comply with NFPA 70.

PRODUCTS

SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS Raceway and Cable Supports: As described in NECA 1 and NECA 101.

Conduit and Cable Support Devices: Steel and malleable-iron hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for non-armored electrical conductors or cables in riser conduits. Plugs shall have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body shall be malleable iron.

EXECUTION

APPLICATION Comply with NECA 1 and NECA 101 for application of hangers and supports for electrical equipment and systems except if requirements in this Section are stricter.

Maximum Support Spacing and Minimum Hanger Rod Size for Raceway: Space supports for EMT, IMC, and RMC as required by NFPA 70. Minimum rod size shall be 1/4 inch (6 mm) in diameter. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits. Secure raceways and cables to these supports with two-bolt conduit clamps.

SUPPORT INSTALLATION

Comply with NECA 1 and NECA 101 for installation requirements except as specified in this Article. Raceway Support Methods: In addition to methods described in NECA 1, EMT, IMC, and RMC may be supported by openings through structure members, as permitted in NFPA 70.

Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code: To Wood: Fasten with lag screws or through bolts.

To New Concrete: Bolt to concrete inserts. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.

To Existing Concrete: Expansion anchor fasteners. Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete 4 inches (100 mm) thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than 4 inches (100 mm) thick. To Steel: Beam clamps (MSS Type 19, 21, 23, 25, or 27) complying with MSS SP-69.

To Light Steel: Sheet metal screws.

Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate.

4. CONDUCTORS AND CABLES

SUBMITTALS Product Data: For each type of product indicated.

QUALITY ASSURANCE

Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use. Comply with NFPA 70.

PRODUCTS

CONDUCTORS AND CABLES

Manufacturers: Subject to compliance with requirements, provide products by one of the following: Alcan Products Corporation; Alcan Cable Division. American Insulated Wire Corp.; a Leviton Company.

General Cable Corporation. Senator Wire & Cable Company.

Southwire Company.

Copper Conductors: Comply with NEMA WC 70. Conductor Insulation: Comply with NEMA WC 70 for Type THHN-THWN.

Multiconductor Cable: Comply with NEMA WC 70 for metal-clad cable, Type MC, hospital grade with aluminum interlocked armor cover meeting the grounding return path requirements of NEC 250.118 where

- indicated on plans, with ground wire. CONNECTORS AND SPLICES
- Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following: AFC Cable Systems, Inc.
- Hubbell Power Systems, Inc.
- O-Z/Gedney; EGS Electrical Group LLC. 3M: Electrical Products Division.

Tyco Electronics Corp. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

EXECUTION

CONDUCTOR MATERIAL APPLICATIONS

Branch Circuits: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger. CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THHN-THWN, single conductors in raceway.

Branch Circuits not Concealed in Concrete: Type THHN-THWN, single conductors in raceway or Metal-clad Cable, Type MC (hospital grade where indicated). INSTALLATION OF CONDUCTORS AND CABLES

Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow

surface contours where possible. Identify and color-code conductors and cables according to Section "Hangers and Sup Svstems."

5. RACEWAYS AND BOXES

QUALITY ASSURANCE Electrical Components, Devices, and Accessories: Listed and labeled as defined in NF

testing agency acceptable to authorities having jurisdiction, and marked for intended Comply with NFPA 70.

PRODUCTS

- METAL CONDUIT AND TUBING
- Manufacturers: Subject to compliance with requirements, provide products by one of the Allied Tube & Conduit; a Tyco International Ltd. Co.
- O-Z Gedney; a unit of General Signal. Wheatland Tube Company.
- Fittings for Conduit (Including all Types and Flexible and Liquidtight), EMT, and Cable: type and size raceway with which used, and for application and environment in which Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 886. Fittings for EMT: Steel or die-cast, set-screw or compression type for concealed
- die-cast, compression type for exposed locations. NONMETALLIC CONDUIT AND TUBING Manufacturers: Subject to compliance with requirements, provide products by one of the
- CANTEX Inc. CertainTeed Corp.; Pipe & Plastics Group.
- RACO; a Hubbell Company. Thomas & Betts Corporation.

BOXES, ENCLOSURES, AND CABINETS

- Manufacturers: Subject to compliance with requirements, provide products by one of the Hoffman Hubbell Incorporated; Killark Electric Manufacturing Co. Division.
- O-Z/Gedney; a unit of General Signal.
- RACO; a Hubbell Company. Thomas & Betts Corporation. Walker Systems, Inc.; Wiremold Company (The).

EXECUTION

RACEWAY APPLICATION

- Outdoors: Apply raceway products as specified below, unless otherwise indicated: Exposed and Concealed Conduit: Rigid steel conduit. Underground Conduit: RNC, Type EPC-40-PVC, direct buried. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneu or Motor-Driven Equipment): LFNC.
- Boxes and Enclosures, Aboveground: NEMA 250, Type 3R. Comply with the following indoor applications, unless otherwise indicated:

Exposed: EMT.

- Concealed in Ceilings and Interior Walls and Partitions: EMT, unless MC allowed Cables" section. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneu or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
- Damp or Wet Locations: Rigid steel conduit. Raceways for Optical Fiber or Communications Cable: EMT. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4, non
- locations.
- Minimum Raceway Size: 1/2-inch (16-mm) trade size. Do not install aluminum conduits in contact with concrete.
- INSTALLATION
- Comply with NECA 1 for installation requirements applicable to products specified in F requirements on Drawings or in this Article are stricter. Keep raceways at least 6 inches (150 mm) away from parallel runs of flues and steam or hot-water pipes.
- Install horizontal raceway runs above water and steam piping. Support raceways as specified in "Hangers and Supports for Electrical Systems." Arrange stub-ups so curved portions of bends are not visible above the finished slab. Install no more than the equivalent of three 90-degree bends in any conduit run except for communications
- conduits, for which fewer bends are allowed. Conceal conduit and EMT within finished walls, ceilings, and floors, unless otherwise indicated. Raceways Embedded in Slabs: Run conduit larger than 1-inch (27-mm) trade size, parallel or at right angles to main reinforcement.
- Where at right angles to reinforcement, place conduit close to slab support. Arrange raceways to cross building expansion joints at right angles with expansion fittings. Change from ENT to RNC, Type EPC-40-PVC, rigid steel conduit, or IMC before rising above the floor. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect
- conductors, including conductors smaller than No. 4 AWG. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb (90-kg) tensile strength. Leave at least 12 inches (300 mm) of slack at each end of pull wire. Raceways for Optical Fiber and Communications Cable: Install raceways, metallic and nonmetallic, rigid and
- flexible, with a maximum of two 90-degree bends or equivalent for each length of raceway unless Drawings show stricter requirements. Separate lengths with pull or junction boxes or terminations at distribution frames or cabinets where necessary to comply with these requirements.
- Flexible Conduit Connections: Use maximum of 72 inches (1830 mm) of flexible conduit for recessed and semirecessed lighting fixtures, equipment subject to vibration, noise transmission, or movement; and for transformers and motors.
- Use LFMC in damp or wet locations subject to severe physical damage. Use LFMC or LFNC in damp or wet locations not subject to severe physical damage.

Products: Subject to compliance with requirements, provide one of the following:

Receptacles for Owner-Furnished Equipment: Match plug configurations.

Cord and Plug Sets: Match equipment requirements.

Cooper; 5351 (single), 5352 (duplex).

Leviton; 5891 (single), 5352 (duplex).

Duplex GFCI Convenience Receptacles, 125 V, 20 A:

Hubbell; HBL5351 (single), CR5352 (duplex).

Pass & Seymour; 5381 (single), 5352 (duplex).

Single and combination types to match corresponding wiring devices. Plate-Securing Screws: Metal with head color to match plate finish.

Material for Finished Spaces: Smooth, high-impact thermoplastic.

Wiring Devices Connected to Normal Power System: White.

Receptacles and communications outlets: 18" to center of device.

Color: Wiring device catalog numbers in Section Text do not designate device color.

STRAIGHT BLADE RECEPTACLES

Cooper; GF20.

Leviton Equal.

Pass & Seymour; 2084. Hubbell Equal

6. WIRING DEVICES QUALITY ASSURANCE

Comply with NFPA 70.

GFCI RECEPTACLES

SNAP SWITCHES

WALL PLATES

FINISHES

EXECUTION

INSTALLATION

Switches, 120/277 V, 20 A:

in "wet locations."

aluminum with lockable cover.

whichever is higher.

7. LIGHTING CONTROL DEVICES

QUALITY ASSURANCE

COORDINATION

partition assemblies

PRODUCTS

Switches: 46" to center of device.

OUTDOOR PHOTOELECTRIC SWITCHES

COORDINATION

PRODUCTS

UL 498.

poorts for Electrical	Basis-of-Design Product: Subject to compliance with requirements, provide a product by one of the following:
	Square D; Schneider Electric.
	Watt Stopper (The).
	Description: Solid state, with SPST dry contacts rated for 1800 VA to operate connected load, relay, or
	contactor colls; complying with UL 773.
NFPA 70, Article 100, by a	within that range
use.	Time Delay: 30-second minimum, to prevent false operation.
	Lightning Arrester: Air-gap type.
	Mounting: Twist lock complying with IEEE C136.10, with base.
	EXECUTION
the following:	
	Operational Test: Verify operation of each lighting control device, and adjust time delays.
e: NEMA FB 1; listed for i installed.	8.LIGHTING
	SUBMITTALS
d locations. Steel or	Product Data: For each type of lighting fixture, arranged in order of fixture designation. Include data on features, accessories, finishes, and the following:
di se fe ll'assetta a	Physical description of lighting fixture including dimensions.
the following:	Energy-efficiency data
	Photometric data, in IESNA format, based on laboratory tests of each lighting fixture type, outfitted with lamps, ballasts, and accessories identical to those indicated for the lighting fixture as applied in this Project
the following:	Operation and Maintenance Data: For lighting equipment and fixtures to include in emergency, operation, and maintenance manuals
the following.	QUALITY ASSURANCE
	Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use. Comply with NFPA 70.
	COORDINATION
	Coordinate layout and installation of lighting fixtures and suspension system with other construction that penetrates ceilings or is supported by them, including HVAC equipment, fire-suppression system, and partition assemblies.
	EXECUTION
	INSTALLATION
umatic, Electric Solenoid,	Support for Lighting Fixtures in or on Grid-Type Suspended Ceilings: Use grid as a support element. Install a minimum of four ceiling support system rods or wires for each fixture. Locate not more than 6 inches (150 mm) from lighting fixture corners.
	Support Clips: Fasten to lighting fixtures and to ceiling grid members at or near each fixture corner with clips that are UL listed for the application.
ed per "Conductors and	Fixtures of Sizes Less Than Celling Grid: Install as indicated on reflected celling plans or center in acoustical panel, and support fixtures independently with at least two 3/4-inch (20-mm) metal channels spapping and secured to celling tees.
umatic Electric Solenoid	Install at least one independent support rod or wire from structure to a tab on lighting fixture. Wire or rod
·	shall have breaking strength of the weight of fixture at a safety factor of 3.
nmatallia in dama ar wat	
nimetallic in damp or wet	
Part 2 except where	

Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a

testing agency acceptable to authorities having jurisdiction, and marked for intended use.

Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 configuration 5-20R, and

Products: Subject to compliance with requirements, provide one of the following:

Products: Subject to compliance with requirements, provide one of the following: Cooper; 2221 (single pole), 2222 (two pole), 2223 (three way), 2224 (four way).

Hubbell; CS1221 (single pole), CS1222 (two pole), CS1223 (three way), CS1224 (four way). Leviton; 1221-2 (single pole), 1222-2 (two pole), 1223-2 (three way), 1224-2 (four way).

Pass & Seymour; 20AC1 (single pole), 20AC2 (two pole), 20AC3 (three way), 20AC4 (four way).

Material for Damp Locations: Cast aluminum with spring-loaded lift cover, and listed and labeled for use

Wet-Location, Weatherproof Cover Plates: NEMA 250, complying with type 3R weather-resistant, die-cast

Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.

Mounting Heights. Mount devices at the following heights above finished floor unless noted otherwise. Above counter receptacles and communications outlets: 5" above the backsplash or counter top,

Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

Coordinate layout and installation of ceiling-mounted devices with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, smoke detectors, fire-suppression system, and

		Г
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		Drawings and/or Specifications are original proprietary work and
C	OMMUNICATIONS	property of the Architect intended for the specifically titled project.
<	TELEPHONE OUTLET	without consent of Architect for titled or other projects is
▼ 7	TELEPHONE/DATA OUTLET	best information available to Architect. Field verification of
$\blacksquare \forall \blacksquare \blacksquare$	ABOVE COUNTER DEVICE, MOUNT 5" ABOVE BACKSPLASH OR COUNTER TOP, WHICHEVER IS	actual elements, conditions, and dimensions is required.
\sim		
(TV)	PLYWOOD BOARD FOR EQUIPMENT MOUNTING	TE OF MISSO
D		
F	DISCONNECT SWITCH 30/3/NE INDICATES	
上h 30/3/NF	AMPERAGE, NUMBER OF POLES, AND FUSING. NF = NON FUSED. MATCH CIRCUIT VOLTAGE. 240 VOLT,	P - 2 07006928
	3 POLE, 30 AMP NON FUSED IF BLANK.	NAL 3-11-2
D	MOTOR	Project Number 21.112.32
	PANELBOARD	
	PHOTOCELL JUNCTION BOX	
Ŭ		
G		
1	ELECTRICAL NOTE REFERENCE	
	REVISION NOTE REFERENCE	Revisions
	CONNECT TO EXISTING WORK	
$\begin{pmatrix} x \\ xx \end{pmatrix}$	DETAIL REFERENCE - NO./SHEET NO.	
с	ONDUIT AND WIRE	
	CONDUIT HOMERUN TO PANEL NOTED WITH (2)#12 AND (1)#12 AWG GROUND UNLESS NOTED	
LF-1	OTHERWISE. SHORT TICK MARKS INDICATE CONDUCTORS, LONG MARKS INDICATE NEUTRAL	
÷	CONDUCTORS.	
	GROUND WIRE. #12 AWG UNLESS NOTED OTHERWISE.	
	CONDUIT CONCEALED IN WALL OR ABOVE CEILING WITH (2)#12 AND (1)#12 AWG GROUND UNLESS NOTED	
, — — 、	CONDUIT BELOW GRADE OR FLOOR WITH WITH	
	OTHERWISE.	
FIXTURE SCHED	JESIGNATIONS INDICATE TYPE, REFER TO LIGHT JLE	
	WALL/CEILING MOUNTED EMERGENCY LIGHTING UNIT	
	LIGHT FIXTURE	
\bigcirc	CEILING MOUNTED SURFACE/RECESSED LIGHT	
	INDICATES FACES, ARROWS AS INDICATED	
WI	RING DEVICES	for
NOTE: REFER TO	SPECIFICATIONS FOR MOUNTING HEIGHTS NOT LISTED.	
Ф Ф Щ	SIMPLEX, DUPLEX, AND QUAD RECEPTACLE. MOUNT AT 18" AFF TO CENTER OF DEVICE UNLESS NOTED	
⊕ ∯ ∰	OTHERWISE. ABOVE COUNTER RECEPTACLE, MOUNT 5" ABOVE	
<u>-</u> — ш	BACKSPLASH OR COUNTER TOP, WHICHEVER IS HIGHER.	
	RECEPTACLE DESIGNATIONS:	a's So
GII GEI GEI	GFI - GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE	
	U - DUPLEX RECEPTACLE WITH (2) USB CHARGING	inte
	PORTS, LEVITON T5832 OR EQUAL	
\$	WALL SWITCH, SINGLE POLE. MOUNT AT 46" AFF TO CENTER OF DEVICE UNLESS NOTED OTHERWISE	
\$ ³	WALL SWITCH DESIGNATIONS: 3 - THREE POLE SWITCH	
	4 - FOUR-WAY WALL SWITCH D - 0-10V WALLBOX DIMMER	
^{©S} MS-1	MOTION SENSOR, CEILING MOUNTED. DESIGNATION INDICATES TYPE - REFER TO OCCUPANCY SENSOR	
	SCHEDULE MOTION SENSOR, WALL MOUNTED. DESIGNATION	
	INDICATES TYPE - REFER TO OCCUPANCY SENSOR SCHEDULE. MOUNT AT 46" AFF TO CENTER OF	
	DEVICE NEMA RECEPTACLE, DESIGNATION INDICATES NEMA	
0-2UK	IYPE.	s h e e t
		同ら
ELECTRICA	AL SYMBOLS	<u>-</u>
NU SCALE		ELECTRICAL

SPECIFICATIONS permit . bid 25 February 2021