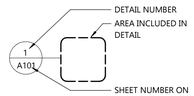
PROPOSED BUILD-OUT FOR:

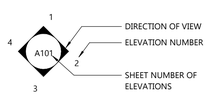
AspenDental

HARRIMAN, NEW YORK

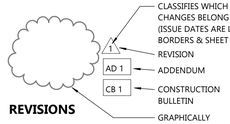
SYMBOLS LEGEND



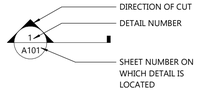
DETAIL CALLOUT REFERENCE



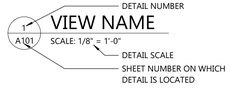
INTERIOR ELEVATION REFERENCE



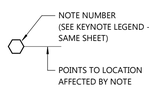
REVISIONS



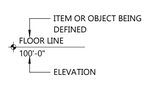
SECTION CUT REFERENCE



DETAIL IDENTIFICATION



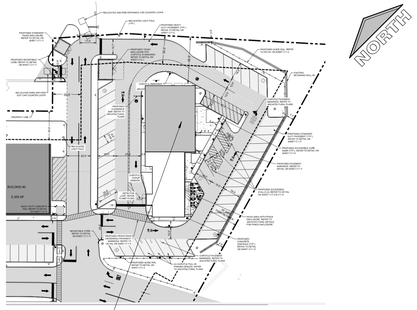
KEYED NOTE



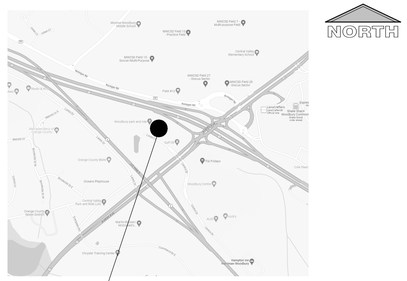
ELEVATION MARKER

SITE PLAN

NOT TO SCALE - FOR REFERENCE ONLY



LOCATION MAP



PROJECT CONTACTS

VILLAGE OF HARRIMAN

BUILDING DEPARTMENT
VILLAGE HALL
1 CHURCH STREET
HARRIMAN, NY 10926
P: (845) 782-6892

OWNER / CONST. MANAGER

ASPEN DENTAL MANAGEMENT
CONTACT: PATRICK ZIENO
281 SANDERS CREEK PARKWAY
EAST SYRACUSE, NEW YORK 13507
P: (315) 454-6000
F: (315) 454-6324

ARCHITECTURAL

EXCEL ENGINEERING INC.
CONTACT: JAY JOHNSON
100 CAMELOT DRIVE
FOND DU LAC, WI 54935
P: (920) 322-1690

PLUMBING

EXCEL ENGINEERING INC.
CONTACT: NICK STREETER
100 CAMELOT DRIVE
FOND DU LAC, WI 54935
P: (920) 322-1627

LANDLORD

THE MYLU TEAM
CONTACT: ZILU GRUNHUT
1149 ROUTE 17M
CHESTER, NY 10918
P: (845) 442-6958

MECHANICAL

EXCEL ENGINEERING INC.
CONTACT: MICHAEL ZAGAR
100 CAMELOT DRIVE
FOND DU LAC, WI 54935
P: (920) 322-1727

ELECTRICAL

EXCEL ENGINEERING INC.
CONTACT: TIM STOPPLEWORTH
100 CAMELOT DRIVE
FOND DU LAC, WI 54935
P: (920) 322-1748

PROJECT INFORMATION

PROJECT NAME
ASPEN DENTAL

PROJECT ADDRESS
6 LOCEY LANE
HARRIMAN, NY 10926

PROJECT USE
DENTAL OFFICE BUSINESS (B)

APPLICABLE CODES
2020 BUILDING CODE OF NYS (2018 IBC w/ AMEND.)
2020 MECHANICAL CODE (2018 IMC w/ AMEND.)
2020 FUEL GAS CODE (2018 IFGC w/ AMEND.)
2020 PLUMBING CODE (2018 IPC w/ AMEND.)
2020 ENERGY CONSERVATION CODE (2018 IECC w/ AMEND.)
2020 FIRE CODE (2018 IFC w/ AMEND.)
2017 NATIONAL ELECTRICAL CODE

USE & OCCUPANCY CLASSIFICATION

OCCUPANCY CLASSIFICATION
BUSINESS GROUP B

OCCUPANCY SEPARATION
MULTI-TENANT BUILDING
NO FIRE BARRIER SEPARATION REQUIRED

BUILDING SIZE
PROPOSED TENANT IMPROVEMENT 3,505 S.F.

BUILDING CONDITION
NEW CONSTRUCTION

TYPE OF CONSTRUCTION

TYPE OF CONSTRUCTION
TYPE II(B)

SEISMIC CATEGORY
CATEGORY B

INTERIOR FINISHES

WALLS & CEILINGS
INTERIOR WALL & CEILING FINISH CLASS - "B"

FIRE PROTECTION SYSTEMS

AUTOMATIC SPRINKLER SYSTEM
YES - SUBMITTED IN THESE DOCUMENTS AND WILL BE MODIFIED BY TENANT'S CONTRACTOR IF REQUIRED BY CODE

FIRE ALARM & DETECTION SYSTEM
YES - SUBMITTED IN THESE DOCUMENTS AND WILL BE MODIFIED BY TENANT'S CONTRACTOR IF REQUIRED BY CODE

EMERGENCY RESPONDER RADIO COVERAGE
PER SECTION 916.1, EMERGENCY RESPONSE RADIO COVERAGE SHALL BE PROVIDED IN ALL NEW BUILDINGS IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE (IFC) SECTION 510.

MEANS OF EGRESS

OCCUPANT LOADS

ROOM OR SPACE DESIGNATION	CLASSIFICATION OCCUPANCY FOR USE	FLOOR AREA (S.F.)	DENSITY SF/PERSON	OCCUPANT LOAD BY CALCULATION	OCCUPANT LOAD BY ACTUAL NO.	OCCUPANT LOAD BY COMBINATION	ROOM OR SPACE TOTAL	OCCUPANTS ACCOUNTED FOR IN OTHER SPACES
1ST FLOOR	BUSINESS	3,505	150 GROSS	23.37	-	-	24	-

EXIT DISTANCE
300' EXIT DISTANCE

EXIT WIDTH
REQUIRED: 4.8"
PROVIDED: 72"

COMMON PATH OF TRAVEL
100' TRAVEL DISTANCE

NO. OF EXITS
2 EXITS

ACCESSIBILITY

ACCESSIBLE ENTRANCES
1

ACCESSIBLE EXITS
2

PLUMBING FIXTURE COUNT

SANITARY FIXTURES

OCCUPANCY		WATER CLOSETS			LAVATORIES		DRINK FOUNTAINS		SERVICE SINK	
TYPE	CAPACITY	FACTORS	# M. FIX.	# F. FIX.	FACTORS	# FIX.	FACTORS	# FIX.	FACTORS	# FIX.
B - GROUP (BUSINESS)	24 PERSONS	1/25	0.48	0.48	1/40	0.60	1/100	0.24	1	1
PROVIDED FIXTURES			1 WC	1 WC		2		0*		1

* = TENANT TO PROVIDE BOTTLED WATER FILLER IN LIEU OF ELECTRIC WATER COOLER

SHEET INDEX

NUMBER	SHEET NAME / DESCRIPTION	REVIEW DATE	SHEET ISSUE DATE	LATEST SHEET REVISION NUMBER	LATEST SHEET REVISION DATE
GENERAL					
T1.0	TITLE SHEET	JULY 6, 2023	JULY 12, 2023		
T1.1	PROJECT INFORMATION & RESPONSIBILITY MATRIX	JULY 6, 2023	JULY 12, 2023		
T2.0	LANDLORD WORK LETTER	JULY 6, 2023	JULY 12, 2023		
T3.0	EGRESS AND ACCESSIBILITY PLAN	JULY 6, 2023	JULY 12, 2023		
ARCHITECTURAL					
A0.1	SPECIFICATIONS	JULY 6, 2023	JULY 12, 2023		
A0.2	SPECIFICATIONS	JULY 6, 2023	JULY 12, 2023		
A0.3	SPECIFICATIONS	JULY 6, 2023	JULY 12, 2023		
A1.1	FIRST FLOOR PLAN	JULY 6, 2023	JULY 12, 2023		
A5.0	ENLARGED PLANS, INTERIOR ELEVATIONS & DETAILS	JULY 6, 2023	JULY 12, 2023		
A5.1	INTERIOR DETAILS - CASEWORK	JULY 6, 2023	JULY 12, 2023		
A5.2	INTERIOR DETAILS - FRAMING & SLAB	JULY 6, 2023	JULY 12, 2023		
A5.3	INTERIOR DETAILS - X-RAY	JULY 6, 2023	JULY 12, 2023		
A5.4	INTERIOR DETAILS - EQUIPMENT	JULY 6, 2023	JULY 12, 2023		
A5.5	TREATMENT ROOM PERSPECTIVES	JULY 6, 2023	JULY 12, 2023		
A6.1	DOOR SCHEDULE & ELEVATIONS	JULY 6, 2023	JULY 12, 2023		
A6.2	ROOM FINISH SCHEDULE & PLAN	JULY 6, 2023	JULY 12, 2023		
A7.1	REFLECTED CEILING PLAN & DETAILS	JULY 6, 2023	JULY 12, 2023		
A7.2	SOFFIT FRAMING DETAILS	JULY 6, 2023	JULY 12, 2023		
PLUMBING					
P0.1	LEGEND AND SPECIFICATIONS	JULY 6, 2023	JULY 12, 2023		
P0.2	SPECIFICATIONS AND GENERAL SCHEDULES	JULY 6, 2023	JULY 12, 2023		
P1.U	UNDERGROUND PLAN	JULY 6, 2023	JULY 12, 2023		
P1.1	FIRST FLOOR PLAN	JULY 6, 2023	JULY 12, 2023		
P1.2	FLOOR PLAN - AIR AND VACUUM PIPING	JULY 6, 2023	JULY 12, 2023		
P2.0	ISOMETRICS AND SCHEDULES	JULY 6, 2023	JULY 12, 2023		
P3.0	DETAILS	JULY 6, 2023	JULY 12, 2023		
P3.1	DETAILS	JULY 6, 2023	JULY 12, 2023		
P4.0	SCHEDULES	JULY 6, 2023	JULY 12, 2023		
U1.1	UNDERGROUND UTILITY RISER PLAN AND DETAIL	JULY 6, 2023	JULY 12, 2023		
OTHER					
FP0.1	SPECIFICATIONS, SCHEDULES, AND DETAILS	JULY 6, 2023	JULY 12, 2023		
FP1.1	SPRINKLER PLAN	JULY 6, 2023	JULY 12, 2023		
HVAC					
H0.1	LEGEND AND SPECIFICATIONS	JULY 6, 2023	JULY 12, 2023		
H1.1	FIRST FLOOR PLAN	JULY 6, 2023	JULY 12, 2023		
H3.0	DETAILS	JULY 6, 2023	JULY 12, 2023		
H4.0	SCHEDULES	JULY 6, 2023	JULY 12, 2023		
ELECTRICAL					
E0.1	LEGEND, GENERAL SCHEDULES & ONELINE	JULY 6, 2023	JULY 12, 2023		
E0.2	SPECIFICATIONS	JULY 6, 2023	JULY 12, 2023		
E0.3	SPECIFICATIONS	JULY 6, 2023	JULY 12, 2023		
E1.1L	FLOOR PLAN - LIGHTING	JULY 6, 2023	JULY 12, 2023		
E1.1LV	FLOOR PLAN - LOW VOLTAGE	JULY 6, 2023	JULY 12, 2023		
E1.1P	FLOOR PLAN - POWER	JULY 6, 2023	JULY 12, 2023		
E2.0	DETAILS	JULY 6, 2023	JULY 12, 2023		
E3.0	DETAILS	JULY 6, 2023	JULY 12, 2023		

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES
SHEET ISSUE JULY 12, 2023

REVISIONS

JOB NUMBER
230264900

SHEET NUMBER
T1.0

TITLE SHEET

NATIONAL ACCOUNT INFORMATION

GENERAL CONTRACTOR TO COORDINATE WITH ALL NATIONAL ACCOUNT CONTACTS FOR ALL MATERIALS AND LEAD TIMES
-SEE CONTRACT EXHIBITS FOR RELEASE FORMS
-SEE CONTRACT SCHEDULE FOR REQUIRED MATERIAL ORDER DATES

FLOORING

ADMI WILL DIRECT PURCHASE ALL FLOORING THROUGH A NATIONAL ACCOUNT (CARPET, WALK-OFF, LVT, COVE BASE, TRANSITIONS, GLUES) FOR THE JOB. TO RELEASE FLOORING PRODUCT, PLEASE E-MAIL YOUR COMPLETED FLOORING RELEASE FORM TO aspendental@sposatoflooring.com OR CONTACT CARPET WHOLESALE INC. AT (315) 422-1489

LIGHT FIXTURES

ADMI WILL PURCHASE ALL LIGHT FIXTURES THROUGH A NATIONAL ACCOUNT. (ALL FIXTURES AS NOTED ON THE LIGHTING FIXTURE SCHEDULE SHOWN ON SHEET E1.1L) TO RELEASE THE LIGHT FIXTURES FROM THE DISTRIBUTOR, PLEASE CONTACT MIKE TIMMONS AT (315) 579-1499 OR STACY UNDERWOOD AT (315) 424-3834 OR YOU CAN E-MAIL THEM AT aspen@cooper-electric.com

RTAC UNITS

GC WILL PURCHASE ALL RTAC'S THROUGH A NATIONAL ACCOUNT.

CARRIER NORTHEAST
1401 ERIE BLVD. E.
SYRACUSE, NY 13210
CONTACT: DAVE GERVASI
P: (315) 703-8223
EMAIL: david.gervasi@carrierenterprise.com

****PLEASE CONTACT CARRIER TECH SUPPORT WITH ALL QUESTIONS @ 1-800-973-3345 x5.****

ROLLER SHADE INFORMATION

GENERAL NOTES

CONTRACTOR TO PROVIDE MANUAL ROLLER SHADE FOR ALL EXTERIOR WINDOW OPENINGS AND IS RESPONSIBLE TO COORDINATE ALL ITEMS TO ENSURE DELIVERY AND INSTALL PRIOR TO OPENING

CONTRACTOR TO VERIFY INSTALLATION REQUIREMENTS WITH SUPPLER / INSTALLER TO ENSURE PROPER BLOCKING IS PROVIDED

CONTRACTOR TO VERIFY THE FOLLOWING PRIOR TO ORDER
- -QUANTITY OF WINDOWS
- - FINAL WINDOW OPENING (WIDTH AND HEIGHT)

NO NATIONAL VENDERS FOR ROLLER SHADE. GC RESPONSIBLE TO COORDINATE WITH LOCAL VENDOR

NO HEAD COVER REQUIRED AT TOP OF ROLLER SHADE

APPROXIMATE WINDOW HEIGHTS ARE LISTED ON THE FLOOR PLAN ON **SHEET ---** . GC TO FIELD VERIFY ALL HEIGHTS BEFORE PLACING ORDER.

STANDARD

MFR: SHEERWEAVE BY PHIFER
STYLE: 4400 3%
COLOR: ECO / ALABASTER

OR

MFR: SHADES BY MATISS
STYLE: 3000 NET SUNSHADOW SOLAR SCREEN 3%
COLOR: WHITE / BEIGE

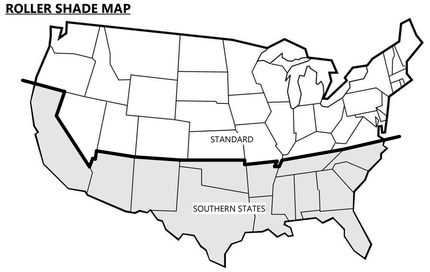
SOUTHERN STATES

MFR: VEROSOL
STYLE: SILVERSCREEN 4% SEMI TRANSPARENT METALLISED SCREENS
COLOR: BEIGE

OR

CHROMA BEIGE 2.20

ROLLER SHADE MAP



RESPONSIBILITY MATRIX

ITEM	LANDLORD	ASPEN	COMMENTS
SITE ACCESSIBILITY TO ENTRANCE	X		MUST COMPLY WITH ADA
PARKING LOT	X		
SITE LIGHTING	X		
FLOOR SLAB	X	X	LANDLORD TO GIVE TENANT (3) WEEKS' NOTICE PRIOR TO POUR. SEE WORK LETTER
FLOOR SLAB CUTS		X	
PERIMETER WALLS	X	X	SEE WORK LETTER
DEMISING WALLS	X	X	SEE WORK LETTER
TOILET ROOMS		X	
INTERIOR ROOM WALLS		X	
PERIMETER WALL PATCHING		X	
REAR DOOR	X		
TOILET ROOM DOORS/FRAMES/HARDWARE		X	
INTERIOR DOORS/FRAMES/HARDWARE		X	
STOREFRONT	X		
CASEWORK		X	**NOTE (2) - SEE BELOW**
INTERIOR FURNISHINGS AND EQUIPMENTS		X	**NOTE (1) - SEE BELOW**
DENTAL EQUIPMENT		X	**NOTE (2) - SEE BELOW**
PAINTING		X	
FLOORING		X	**NOTE (1) - SEE BELOW**
SUSPENDED CEILING		X	
ROLLER SHADES		X	**NOTE (3) - SEE BELOW**
WALL HUNG MIRROR		X	**NOTE (3) - SEE BELOW**
TOILET PAPER DISPENSER		X	**NOTE (3) - SEE BELOW**
GRAB BARS		X	**NOTE (3) - SEE BELOW**
TOILET ROOM SIGNAGE		X	**NOTE (1) - SEE BELOW**
SOAP DISPENSER		X	**NOTE (1) - SEE BELOW**
ELECTRIC HAND DRYER		X	**NOTE (3) - SEE BELOW**
WALL HUNG LAVATORY		X	
WATER CLOSET		X	
BOTTLE FILLING STATION		X	
TOILET ROOM FLOOR DRAINS TRAP PRIMERS		X	
30 GALLON WATER HEATER		X	
MECHANICAL ROOM SLOP SINK		X	
VACUUM/AIR SYSTEM		X	BY PC
WATER SERVICE	X		
WATER METER	X		
BACKFLOW PREVENTER		X	
ELECTRIC METER		X	
400 AMP ELECTRICAL SERVICE	X	X	SEE WORK LETTER
EXIT SIGNS		X	**NOTE (1) - SEE BELOW**
EMERGENCY LIGHTS		X	**NOTE (1) - SEE BELOW**
TOILET ROOM GFI		X	
DUPLEX OUTLETS AT PERIMETER WALLS		X	SPACED PER CODE. PER DWG'S
PANEL TO EXTERIOR SIGNAGE		X	WITH TIME CLOCK & PHOTO CELL
INTERIOR ELECTRICAL		X	
CAN LIGHTING		X	**NOTE (1) - SEE BELOW**
INTERIOR 2x2 LIGHTING		X	**NOTE (1) - SEE BELOW**
CONDUIT FOR DATA	X		MAIN DMARK TO TENANT SPACE
CONDUIT FOR TELEPHONE	X		MAIN DMARK TO TENANT SPACE
TELEPHONE/EQUIPMENT		X	
GAS PIPING TO LAB		X	
GAS PIPING RTU'S		X	
HVAC UNITS		X	SEE WORK LETTER & H4.0 ROOFTOP UNITS ARE PRE-ORDERED BY ASPEN DENTAL MANAGEMENT, INC. (ADMI) QUOTES AND SELECTIONS ARE SENT BY ADMI TO THE G.C. FOR DISTRIBUTION TO THE H.C.
HVAC DUCTWORK		X	
TOILET EXHAUST		X	
LAB/MECHANICAL EXHAUST		X	
FIRE SPRINKLER	X	X	WILL BE SUBMITTED IN THESE DOCUMENTS AND MODIFIED BY TENANT'S CONTRACTOR IF REQUIRED BY CODE
FIRE ALARM	X	X	WILL BE SUBMITTED IN THESE DOCUMENTS AND MODIFIED BY TENANT'S CONTRACTOR IF REQUIRED BY CODE

CONTRACTOR TO REFER TO **T2.0** LANDLORD WORK LETTER FOR ADDITIONAL INFORMATION
1.) SUPPLIED BY ASPEN DENTAL MANAGEMENT INC. AND INSTALLED BY ASPEN DENTAL MANAGEMENT GENERAL CONTRATOR.

2.) SUPPLIED AND INSTALLED BY OTHERS

3.) SUPPLIED AND INSTALLED BY ASPEN DENTAL MANAGEMENT GENERAL CONTRACTOR

GENERAL NOTES, NEW WORK:

1. ALL CONTRACTORS HIRED BY LANDLORD AND TENANT OR TENANTS CONTRACTORS TO BE LICENSED CONTRACTORS AND PROVIDE W/ PROOF OF INSURANCE (CERTIFICATES)
2. GEN. CONTR. VERIFY W/ LANDLORD & TENANT THAT ALL ELEC. STUBS/ CONDUIT AND ALL PLUMBING BELOW GRADE IS INSTALLED PRIOR TO CONCRETE SLAB BEING POURED.
3. GEN. CONTR. TO VERIFY ALL REQUIRED BLOCKING W/ OWNER FOR OWNERS EQUIP. (IE: EQUIP. TOILET ACCESSORIES, ETC).
4. ALL CONST. TO CONFORM W/ LOCAL STATE BUILDING CODES AND ORDINANCES.
5. ALL CONST. TO CONFORM W/ ADA STANDARD FOR ACCESSIBILITY.
6. ALL DOOR OFFSETS (HINGE SIDE) TO BE A MIN. OF 4" TYP.
7. ANY ROOM WITH SERVICE SINKS TO BE PROVIDED WITH EXHAUST VENTILATION PER STATE CODE. VERIFY WITH HVAC DESIGN DRAWINGS.
8. ALL MECH. EQUIP. TO BE DIRECT VENT SEALED COMBUSTION OR ELECTRIC. WATER HEATER EXACT LOCATION TO BE DETERMINED BY PLUMBING DESIGNER. SEE DRAWINGS FOR INFO.
9. F.E. = WALL MOUNTED FIRE EXTINGUISHER, MOUNT AT 4'-0" A.F.F. MAX. TO TOP OF EXTINGUISHER. FIRE EXTINGUISHER TO BE 10# ABC EXTINGUISHER TYPICAL FOR WALL MOUNTED.
10. ALL SUB CONTRACTORS TO MARK ALL PRIVATE UTILITIES (IE: DATA, SITE LIGHTING, IRRIGATION, ETC) EACH TIME DIGGERS HOTLINE IS CALLED.
11. GENERAL CONTRACTOR TO NOTIFY ARCHITECT, ENGINEER, TENANT AND LANDLORD OF ANY CHANGE OR DEVIATION FROM PLAN WITH IN 24 HOURS OF VERIFICATION TO ALLOW AMPLE RESPONSE TIME IF REVISIONS ARE REQUIRED.
12. ALL CONTRACTORS TO REVIEW PROPER PROJECT CLOSE-OUT NOTES ON THE COVER SHEET (CS). GENERAL CONTRACTOR RESPONSIBLE TO COORDINATE W/ ALL SUB CONTRACTORS. ALL INFORMATION SHALL BE PROVIDED AND REVIEWED BY ARCHITECT AND LANDLORD PRIOR TO FINAL DRAW/ PAY REQUEST APPROVAL.
13. GENERAL CONTRACTOR RESPONSIBLE TO CONDUCT WEEKLY TO BI-WEEKLY JOB SITE MEETINGS WITH ALL SUB CONTRACTORS ON SITE INCLUDING BOTH LANDLORDS AND TENANTS CONTRACTORS IF DIFFERENT. GENERAL CONTRACTOR TO ALSO TAKE WEEKLY JOBSITE MEETING MINUTES AND PROGRESS PHOTOS TO BE DISPERSED TO TENANT.
14. GENERAL CONTRACTOR TO DISPERSE ALL PLANS, ADDENDUMS AND CONSTRUCTION BULLETINS TO ALL BIDDERS AND SUB CONTRACTORS. GENERAL CONTRACTOR RESPONSIBLE TO MAINTAIN A PLAN HOLDERS LIST/ LOG. GENERAL CONTRACTOR TO HAND OUT FULL SETS OF PLANS TO EACH CONTRACTOR NO PARTIAL PRINTING WILL BE ACCEPTED.

GENERAL RESPONSIBILITY NOTES:

1. ALL CONTRACTOR RESPONSIBLE TO REVIEW ALL NOTES THIS SHEET. THESE ARE STANDARD MATERIALS AND METHODS FOR CONSTRUCTION. THERE WILL BE NO EXTRAS EXCEPTED BY ANY CONTRACTOR FOR ANY INFO NOT REVIEWED OR MISSED FROM THIS SHEET OF GENERAL NOTES.
2. NO SUBSTITUTIONS OF MATERIALS OR GENERAL PRACTICES AS CALLED OUT WITHIN THIS DRAWING SET WITHOUT THE WRITTEN APPROVAL FROM THE OWNER-LANDLORD, TENANT, ARCHITECT, OR STRUCTURAL ENGINEER.
3. IMPORTANT CONTRACTOR NOTES: ALL CONTRACTORS TO SUBMIT DESIGN BUILD (FIRE PROTECTION) FOR OWNER/ARCHITECT REVIEW PRIOR TO STARTING OF WORK. (FIRE PROTECTION DRAWINGS SUBMITTED ONLY WHERE APPLICABLE)
4. ALL CONTRACTORS INCLUDING ELECTRICAL, DATA, TELEPHONE, SOUND AND OR SECURITY TO COORDINATE W/ HVAC CONTRACTOR AND DESIGNER TO VERIFY IF PLENUM AIR RETURNS ARE USED IN THE BUILDING. IF PLENUMS ARE USED, ALL CONTRACTORS MUST USE PLENUM RATED WIRE. NO ADDITIONAL COSTS WILL BE PASSED ONTO THE BUILDING OWNER FOR LACK OF CONTRACTOR COORDINATION. HVAC DESIGNER AND CONTRACTOR ARE RESPONSIBLE TO COORDINATE W/ GENERAL CONTR./ DRYWALL CONTRACTOR IF PLENUM AIR RETURNS ARE USED IN THE BUILDING. DRYWALL CONTRACTOR MUST RETURN ALL GYP. IN THE AREA OF THE PLENUM TO THE BOTTOM SIDE OF THE STRUCTURE. NO COMBUSTIBLE MATERIAL ALLOWED IN THE PLENUM AREA PER CODE.
5. WHERE APPLICABLE BUILDINGS WITH FIRE SUPPRESSION SYSTEMS FIRE PROTECTION CONTRACTOR WHEN BLEEDING SYSTEM MUST USE A HOSE TO CATCH BASIN OR LAWN AREA. ABSOLUTELY NO DISCHARGE TO GRADE PAVING. IF DONE TO GRADE PAVING FIRE PROTECTION CONTR. RESPONSIBLE FOR CLEANING OF ALL RUST AND OR STAINS TO RETURN THE PAVING TO ORIGINAL CONDITION.
6. GENERAL CONTRACTOR RESPONSIBLE FOR FINAL GENERAL CLEANING PRIOR TO TURN OVER TO LANDLORD AND OR TENANT. GENERAL CONTRACTOR TO CONTACT LANDLORD AND/OR TENANT FOR FINAL INSPECTION.
7. GENERAL CONTRACTOR IS TO HAVE WINDOWS AND WILSON PARTITIONS CLEANED INSIDE AND OUT BY PROFESSIONAL WINDOW CLEANER. PROPER CLEANING TO BE USED W/ NO RAZOR BLADES USE TO PREVENT GLASS SCRATCHING OR ETCHING.
8. ALL CONTRACTOR TO PROTECT ALL FINISH MATERIALS (IE: ROOFING, PAVING, CARPET, MASONRY, ETC.) WHEN APPLYING PAINT EIFS OR ANY MATERIAL. GENERAL CONTRACTOR RESPONSIBLE FOR ALL SUBS AND SUB CONTRACTORS ARE RESPONSIBLE FOR ALL CLEANUP COSTS TO REPAIR MATERIAL TO ORIGINAL CONDITION.
9. GENERAL CONTRACTOR RESPONSIBLE FOR CONTACTING LANDLORD, TENANT AND ARCHITECT FOR FINAL WALK THRU, PUNCH LIST AND COMPLIANCE STATEMENT PRIOR TO TENANT OCCUPANCY AND FINAL TURN OVER.

ELECTRICAL NOTES:

1. COORDINATE PANEL/SUB PANEL LOCATION W/ LANDLORD/TENANT IF LOCATED WITHIN TENANT SPACE.
2. COORDINATE ALL POWER, PHONE AND DATA REQUIREMENTS W/ TENANT.
3. COORDINATE PHONE SERVICE INSTALL REQUIREMENTS W/ TENANT. VERIFY PANEL LOCATION W/ TENANT AND TENANT DRAWINGS TYP.
4. ALL WIRING TO BE INSTALLED IN CONDUIT, TYPICAL.
5. IN PATIENT ROOMS/AREAS ALL ELECTRICAL REQUIRES REDUNDANT GROUNDING.
6. AT RATED ROOMS CONTRACTOR TO PROVIDE FIRE CAULKING OR SLEEVE PIPING AS REQUIRED BY CODE TYPICAL.
7. PROVIDE ALL STATE & LOCAL PERMITS AND ANY OTHER TRADE RELATED FEES.
8. ELEC. CONTRACTOR TO PULL CONDUIT BELOW CONC. SLAB W/ PULL WIRE FOR TELEPHONE CO. USE. -COORDINATE SIZE OF CONDUIT W/ TELEPHONE PROVIDER.
9. GC TO PROVIDE MIN. 1/2" PLYWOOD PANEL. COORDINATE REQUIRED LOCATIONS W/ TENANT.
10. ELEC. CONTRACTOR RESPONSIBLE FOR COORDINATING TELEPHONE PANEL/EQUIPMENT LOCATIONS W/ TELEPHONE CO. SEE RESPONSIBILITY MATRIX FOR MORE INFORMATION.
11. SEE LANDLORD NOTES ON **SHEET T2.0** FOR ADDITIONAL INFORMATION

CONCRETE SLAB NOTES:

1. SAWCUT & REMOVE EXISTING CONC. SLAB AS REQUIRED FOR NEW WORK. CONTRACTOR TO REINF. AND PATCH TO MATCH EXISTING, TYPICAL. SEE DETAIL **3/A5.2**.
2. SLAB TO BE PLACED IN A TEMPERED SPACE AND SHALL NOT HAVE ADDITIONAL ADDITIVES IN THE MIXTURE TO AID CURING IN COLD TEMPERATURES OR TO INCREASE CURING TIME BEYOND ACCEPTABLE TIME FRAMES.
3. COORDINATE SLAB CURE TIMES WITH MOISTURE CONTENT REQUIREMENTS OF FLOOR FINISH, FLOOR MATERIALS AND ASSOCIATED ADHESIVES.
4. CONCRETE FLOOR TO BE PREPPED TO ACCEPT DIRECT APPLIED FLOOR FINISH AND FLOORING MATERIAL. COORDINATE W/ LANDLORD AND TENANT. FLOOR TO BE FREE OF DEFECTS AND HAVE A SMOOTH LEVEL FINISH. ASPEN DENTAL TO SUPPLY ALL FLOOR MATERIALS, CONTRACTOR TO INSTALL ALL FLOOR FINISH AND FLOORING MATERIALS.
5. ALL CONCRETE (SITE, FLOOR, ETC.) TO HAVE CYLINDER SLUMP TEST FOR OWNER, ARCHITECT AND ENGINEER REVIEW.
6. GENERAL CONTRACTOR/ CONCRETE CONTRACTOR TO CONTACT OWNER-LANDLORD, ARCHITECT OR ENGINEER ONE DAY PRIOR TO CONCRETE POUR TO REVIEW AGGREGATE BASE. BASED ON SITE LOCATION THIS MAY BE REVIEWED VIA SITE PHOTOS.
7. AT NEW SLAB POURS THAT CONNECT TO EXISTING SLABS. CONTRACTOR SHALL DRILL AND DRIVE #5ø SMOOTH ROD @ 24" OC MIN. RODS SHALL BE 12" LONG W/ 8" EMBED. TIE TO WIRE MESH REINFORCEMENT (TYP.). COAT ONE END OF ROD TO PREVENT BONDING W/ SLAB.
8. GENERAL CONTRACTOR TO PROTECT ALL CONCRETE SURFACES FROM OILS AND STAINS. THERE WILL BE NO WRITING ALLOWED ON EXPOSED SLABS.
9. COVER NEWLY PLACED SLAB W/ POLY TO CONTROL MOISTURE CONTENT AND FACILITATE EVEN CURING THROUGHOUT.
10. COORDINATE SLAB SAWCUT JOINTS W/ ORIGINAL BUILDING PLANS. IF PLANS DO NOT NOTE SAWCUT JOINTS, MATCH EXISTING CONCRETE SAWCUT JOINTS. IF NO EXISTING SAWCUT JOINTS, MAINTAIN 15' x 15' SAWCUT JOINT GRID (TYP.)

GENERAL HVAC NOTES:

1. ONE DIGITAL THERMOSTAT WITH RELATED LOW VOLTAGE WIRING PER HVAC UNIT/ZONE. SEE HVAC DRAWINGS.
2. AT NEW BUILDINGS, ALL GAS PIPING TO BE RAN UP EXTERIOR WALL FROM METER TO ROOF. PAINT TO MATCH WALL IF ALLOWED BY LOCAL JURISDICTION.
3. INSULATE ALL NECESSARY DUCTWORK AND PIPING PER CODE.
4. SUPPLY AND INSTALL ALL NECESSARY EXHAUST FANS, DUCTWORK, VOLUME DAMPERS, GRILLES, REGISTERS AND LINEAR DIFFUSERS PER CODE.
5. PROVIDE AIR BALANCING OF THE ENTIRE SPACE BY PROVIDING FULL TESTING AND BALANCING REPORT, FOR LANDLORD & TENANT REVIEW.
6. PROVIDE ALL STATE & LOCAL PERMITS AND ANY OTHER TRADE RELATED FEES.
7. AT RATED ROOMS, CONTRACTOR TO PROVIDE DUCT FIRE DAMPERS AS REQUIRED BY CODE TYPICAL. THIS WOULD ALSO APPLY TO ANY PIPE PENETRATIONS THAT WILL BE REQUIRED TO BE FIRE CAULKED OR SLEEVED TYPICAL.
8. SEE LANDLORD NOTES ON **SHEET T2.0** FOR ADDITIONAL INFORMATION

PLUMBING NOTES:

1. ALL PLUMBING FIXTURES TO MEET ADA GUIDELINES AND STATE/LOCAL CODES AND ORDINANCES.
2. ALL ROOF DRAIN LEADERS AND OVERFLOW PIPING TO BE WRAPPED IN PIPE INSULATION ALL AREAS NO EXCEPTIONS.
3. PROVIDE ALL STATE & LOCAL PERMITS AND ANY OTHER TRADE RELATED FEES.
4. ALL WATER PIPING WILL BE TYPE L COPPER AND WILL CONNECT TO EXISTING, SEE PLUMBING DRAWINGS FOR ADDITIONAL INFO.
5. ALL DRAIN PIPING WILL BE PVC PLASTIC AND WILL CONNECT TO EXISTING, SEE PLUMBING DRAWINGS FOR ADDITIONAL INFO.
6. AT RATED ROOMS CONTRACTOR TO PROVIDE FIRE CAULKING OR SLEEVE PIPING AS REQUIRED BY CODE TYPICAL.
7. SEE LANDLORD NOTES ON **SHEET T2.0** FOR ADDITIONAL INFORMATION
8. SINK FAUCET CONTROLS TO BE LOCATED ON THE LEFT, FAUCET TO BE LOCATED IN CENTER, AND SPRAYER TO BE LOCATED ON RIGHT. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.

SCOPE OF WORK

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL BUILDING CODES AND/OR REGULATIONS.
2. ALL WORK SHALL BE DONE IN A MANNER CONSISTENT WITH THE HIGHEST STANDARDS OF THE RESPECTIVE TRADES.
3. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS BEFORE BIDDING, IF BUILDING IS BUILT.
4. THE CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS BEFORE PROCEEDING WITH THE WORK. IN THE EVENT OF A DISCREPANCY, THE CONTRACTOR SHALL NOTIFY ASPEN DENTAL IMMEDIATELY.
5. THE CONTRACTOR SHALL ABIDE BY ALL REQUIREMENTS OF THE OWNER WITH RESPECT TO CONSTRUCTION SCHEDULING, COORDINATION, TEMPORARY CONSTRUCTION UTILITIES, ETC.
6. ALL MATERIALS, PRODUCTS AND UNITS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND INSTRUCTIONS. ADMI SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
7. INSTALLATION OF ALL MATERIALS AND/OR UNITS TO BE SELECTED BY, SUPPLIED BY, AND/OR INSTALLED BY THE OWNER SHALL BE SCHEDULED AND COORDINATED BY THE CONTRACTOR TO MAINTAIN THE CONSTRUCTION SCHEDULE. PRIOR TO THE COMMENCEMENT OF THE WORK, THE CONTRACTOR SHALL NOTIFY THE OWNER OF ALL QUANTITIES OF OWNER SUPPLIES MATERIALS AND/OR UNITS NOT SPECIFICALLY CALLED OUT IN THESE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL NOTIFY THE OWNER OF REQUIRED DELIVERY DATES OF OWNER SUPPLIED MATERIALS AND UNITS.
8. ALL FINISH PAINT SHALL BE APPLIED OVER A COMPATIBLE FACTORY OR FIELD APPLIED PRIMER.
9. THE CONTRACTOR SHALL PROTECT ALL EXISTING AND ADJACENT AREAS AT ALL TIMES DURING CONSTRUCTION. ANY AREA DAMAGES OR AFFECTED BY CONSTRUCTION SHALL BE PATCHED, REPAIRED, OR REPLACED AS REQUIRED TO MATCH EXISTING OR ADJACENT AREAS AT THE CONTRACTORS EXPENSE.
10. THE CONTRACTOR SHALL YIELD TO THE OWNER AND THEIR VISITORS AT ALL TIMES.
11. THE CONTRACTOR SHALL NOT DISRUPT THE BUILDING OR OPERATIONS WITHOUT PRIOR SCHEDULING AND APPROVAL FROM THE OWNER/LANDLORD.
12. THE ARCHITECT ASSUMES NO RESPONSIBILITY FOR ANY DEVIATION FROM THE FINAL CONSTRUCTION DOCUMENTS, NO MATTER WHAT THE CAUSE, UNLESS A WRITTEN DIRECTIVE IS GIVEN BY THE ARCHITECT.
13. IF CONFLICT OCCURS ON THESE CONSTRUCTION DOCUMENTS AND/OR THE SPECIFICATIONS, THE CONTRACTOR SHALL BID THE HIGHER QUALITY AND/OR QUANTITY. THE CONTRACTOR SHALL ALSO CONTACT ADMI FOR CLARIFICATION BEFORE SUBMITTING HIS BID.
14. ALL WORK THAT IS EITHER IMPLIED OR REASONABLY INFERRED BY THE CONTRACT DOCUMENTS, DRAWINGS AND SPECIFICATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
15. ALL WORK PERFORMED SHALL INCLUDE ALL APPURTENANCES AND APPARATUS NORMALLY DEEMED TO BE PART OF A COMPLETE PACKAGE WITHIN THE DEFINITIONS OF NORMAL INDUSTRY STANDARDS.
16. ALL DIMENSIONS ARE CLEAR (FINISH TO FINISH). ALL FINAL DIMENSIONS AND LAYOUT SHALL BE VERIFIED WITH AND APPROVED BY THE OWNER AS REQUIRED BEFORE PROCEEDING WITH THE WORK.
17. ALL PERMITS, INSPECTIONS AND APPROVALS SHALL BE SECURED BY THE CONTRACTOR.
18. ALL PROJECTIONS THROUGH THE ROOF SHALL BE FLASHED AND COUNTER-FLASHED AS REQUIRED. ROOF WORK SHALL BE PERFORMED BY LANDLORDS ROOFING CONTRACTOR AT TENANT'S COST.
19. THE CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS BLOCKING AND BRACING AS REQUIRED. ALL WOOD BLOCKING/BRACING IN CONSTRUCTION TYPES I & II TO BE FIRE TREATED AS REQ'D BY CODE. WOOD BLOCKING/BRACING IN CONSTRUCTION TYPES III THRU V TO BE FIRE TREATED ONLY IF IN RATED ASSEMBLIES.
20. THE ARCHITECT ASSUMES NO RESPONSIBILITY FOR CONSTRUCTION MEANS, METHODS, MATERIALS, TECHNIQUES, PROCEDURES, SEQUENCES OR SCHEDULING IN CONNECTIONS WITH THE WORK.
21. IN THE EVENT OF NOTE DIRECTION OR MATERIAL SPECIFICATION CONFLICT IN THESE DOCUMENTS, CONTACT ASPEN DENTAL.
22. THE CONTRACTOR SHALL REMOVE ALL RUBBISH AND WASTE MATERIAL ON A DAILY BASIS AND KEEP THE JOB SITE AND ALL EGRESS EXIT PATHWAYS BROOM CLEAN AT ALL TIMES. ALL WASTE MATERIAL SHALL BE DISPOSED OF PROPERLY.
23. INFORMATION CONCERNING EXISTING BUILDING CONDITIONS WAS OBTAINED FROM VARIOUS CONSTRUCTION DOCUMENTS AND FROM FIELD OBSERVATIONS. EVERY EFFORT HAS BEEN MADE TO ACCURATELY DEPICT EXISTING CONDITIONS. HOWEVER, ALL WORK MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION, AND ANY CONFLICT BETWEEN THESE DOCUMENTS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED IMMEDIATELY TO ASPEN DENTAL FOR VERIFICATION AND/OR CORRECTION. THE ARCHITECT ASSUMES NO RESPONSIBILITY FOR ANY WORK WHICH DEVIATES FROM THE FINAL CONSTRUCTION DOCUMENTS, NO MATTER WHAT THE CAUSE, UNLESS A WRITTEN DIRECTIVE IS ISSUED BY THE ARCHITECT PRIOR TO CONSTRUCTION OR INSTALLATION OF THE WORK.

PROJECT NOTES

SUBMITTAL AND FEES

- SUBMITTALS ONLY NEEDED IF MATERIALS ARE DIFFERENT FROM WHAT IS SPECIFIED ON PLANS.

CONTRACTOR/ SUB-CONTRACTOR NOTE

- ALL TRADES SHALL CROSS REFERENCE ALL CONSTRUCTION DOCUMENTS FOR COORDINATION AND SCOPE OF WORK.

SHOP DRAWINGS

SHOP DRAWINGS NEEDED FOR SPRINKLER & FIRE ALARM WORK ONLY. (WHERE APPLICABLE)

CLOSE-OUT / O&M MANUALS

- CLOSE-OUT PER TERMS OF THE CONTRACT BETWEEN GENERAL CONTRACTOR &

AS-BUILT DRAWINGS

- AS-BUILT DRAWINGS PER TERMS OF THE CONTRACT BETWEEN GENERAL CONTRACTOR &

PROJECT FINAL PAYMENT

- FINAL PAYMENT PER TERMS OF THE CONTRACT BETWEEN GENERAL CONTRACTOR &

MEP AND FIRE PROTECTION NOTES

- INFORMATION SHOWN ON THESE DRAWINGS FOR (PLUMBING, HVAC, ELECTRICAL AND FIRE PROTECTION) IS FOR GENERAL DESIGN INTENT/BIDDING & INSTALLATION PURPOSES ONLY.
- ALL CONTRACTORS TO COMPLY W/ ALL LOCAL/STATE CODES & ORDINANCES.
- ALL CONTRACTORS ARE RESPONSIBLE FOR ALL FEES/ PERMITS ASSOCIATED WITH THESE TRADES FOR COMPLETION OF WORK OUTLINED.

PROJECT INFORMATION & RESPONSIBILITY MATRIX

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

JOB NUMBER
230264900

SHEET NUMBER
T1.1

LANDLORD WORK LETTER

Exhibit B
DESCRIPTION OF LANDLORD'S WORK
FREE STANDING BUILDING

Landlord agrees to construct for Tenant the Premises as set forth herein ("Landlord's Work"). Landlord's Work shall also include preparation by Landlord, at its sole cost and expense, plans and specifications, created by an architect approved by Tenant, structural, energy, mechanical, electrical, plumbing, accessibility, fire and life safety calculations (if required) civil (site) plans, landscape plans and improvements comprising the Premises. Landlord's Work shall be completed in accordance with the Plans approved by Tenant in writing. If not sooner provided, within thirty (30) days after execution of the Lease, Landlord shall deliver to Tenant one (1) full set of drawings reflecting the Landlord's Work that will be completed as necessary to prepare the Premises for Tenant's Work and as described below. The Plans and Landlord's Work shall be in accordance with the requirements of the Lease and this Exhibit B. Landlord's Work shall be done at Landlord's sole cost and expense. Landlord's Work shall be completed in accordance with all applicable governing codes, in a good and workmanlike manner, utilizing first quality new materials. If Landlord's Work is not in accordance with this Exhibit B and if Landlord fails to correct or complete the same (or commence and diligently pursue completion) within ten (10) days after written notice from Tenant of such noncompliance, Tenant shall have the option to complete Landlord's Work and offset the costs incurred against rent due Landlord with interest at the Default Rate of Interest.

I. LANDLORD'S WORK:

Landlord's Work shall include the following:

1. GENERAL SITE PREPARATION:

   a. The Premises shall be free of all Hazardous Substances (including, but not limited to, asbestos, underground storage tanks, etc.). Hazardous Substances shall be properly handled as required by governing codes and regulations. Any soil issues, with regard to contamination and stability, shall be addressed and corrected to levels acceptable to local and national governing agencies. Necessary tests are at Landlord's sole cost and expense.

   b. All ADA requirements and all other governing codes must be adhered to in all aspects of the site and building development.

   c. If new construction, Landlord to provide a copy of the survey of the parcel.

2. SITEWORK:

   Landlord shall install and provide:

   a. **Parking, Driveway and Delivery Areas:** Areas shall be hard-surfaced (10 year life) with concrete and/or asphalt designed and installed to handle usual and customary vehicular traffic per industry standards and governmental requirements and shall be clearly and uniformly striped per industry standards and governmental requirements. If parking lot is existing, Landlord shall repair and/or mill and resurface the entire parking lot area.

   b. **Sidewalks and Pedestrian Ways:** Walks shall be concrete or other hard-surfaced material designed and installed per industry standards and governmental requirements.

   c. **Landscaping:** Landscaping to be approved by Tenant and to be installed per industry standards and governmental requirements. Landscaping is to be designed to maintain maximum building visibility throughout the Lease Term. All grass areas shall be sod. Landlord shall warrant the landscaping for one growing season.

   d. **Demolition:** Necessary demolition to prepare the site for Landlord's Work and Tenant's Work.

   e. **Utilities:** Landlord to provide electrical, gas, sanitary and water service to the Premises and pay all connection and hookup/tapping/development fees associated. Utilities shall be in accordance with Tenant's plans and specifications and as follows:

      i. Water Service: Water service to be 1"- 1 ½" with a guaranteed consistent residual pressure of 60-75psi at a residual flow of 35 GPM downstream of any meter, sub-meter, RPZ or PRV. Water line shall be stubbed into tenants mechanical room with a shut off valve installed for tenant to distribute. If booster pump is required the Land lord shall provide an adequately sized "Goulds - Aquavar ABII variable speed constant pressure system" booster pump. Location of pressure booster pump shall be in designated location in tenant's mechanical room.

      ii. Natural Gas Service: Supply a gas line suitable to supply the required design loads of Tenant's HVAC equipment and interior laboratory. If gas is not available, Tenant shall install a 100# propane tank at the rear of the plaza/building for Tenant to pipe gas into the lab space.

      iii. Sewer Service: 4" minimum sewer line stubbed into the premises at an invert elevation no less than -30" below finished floor. Sanitary service to have a house trap outside of the premises prior entering Tenant's space. House trap to vent outside the space in green space or landscaped area.

      iv. Telephone/High Speed Service: Two inch (2") minimum conduit with pull string and other hardware as required by the telephone company from the nearest telephone service facility. Two inch (2") minimum conduit with pull string and other hardware as required by the local broadband company from the nearest point of service. Two inch (2") minimum conduit with pull string and other hardware as required by the local high speed/fiber company from the nearest point of service and terminating in the Tenants mechanical room.

      v. Electrical Service: As per Section 7.

      vi. A separate mail box installed by Landlord if required by United States Postal Service and per United States Postal Service specifications. Mailbox must be lockable.

   f. **Exterior Lighting:** The average maintained light level within fifty feet (50') of the Premises, measured from the storefront of the Premises, shall be (2-3) foot candles measured at the ground level. All site lighting to be LED fixtures.

   g. **Trash Enclosure:** A concrete pad, concrete apron, enclosure and other components required by applicable building codes, laws, rules, and regulations shall be installed. The final location of the enclosure shall be approved by Tenant. Enclosure shall be suitable for accommodating trash

dumpsters and recycling dumpsters as required by applicable building codes and ordinances. The enclosure shall be constructed of materials reasonably compatible with the exterior of the building.

   h. **Storm Water/Site Drainage:** Site drainage/catch basins throughout parking and planted areas shall be installed by Landlord per applicable building codes. Such drainage/catch basins shall be designed and installed to allow for free drainage and to eliminate standing water.

3. BUILDING SHELL: Building Shell shall include, but not be limited to:

   a. Structural components in accordance with the Plans and applicable building codes. Building height shall accommodate (i) a ten foot (10') window frame height, (ii) a minimum eight foot six inch (8'6") height Exterior Insulation Finish System (EIFS) sign band and applicable structural supports for Tenant's signs(s) & awnings(s), five-eight inch (5/8") plywood for sign band & 2" x 6" blocking for awnings (see attached building look) (Landlord to verify sign band height and length with Construction Manager prior to start of Landlord's Plans), (iii) with a minimum twelve foot (12') clear interior unobstructed space above the floor, and (iv) a minimum fifteen and one-half foot (15½') from bottom of roof deck height. All systems and components, including, but not limited to, lights, ducts, sprinkler system, telephone lines, conduit, plumbing, roof drains, and structural elements shall be installed above twelve feet (12').

   b. Complete roofing system, with a minimum ten (10) year transferable manufacturer warranty. Ventilation and insulation shall conform to applicable building codes. Rigid Insulation shall be installed on the exterior of the roof deck (R30 minimum value or per local code). The roof shall not pitch toward the entrance of the building. Roof material shall be 60 mil EPDM (Rubber) membrane roof or Ultraply TPO roof Membrane. Roof access shall be either an exterior roof ladder or an interior roof hatch with wall mounted ladder. Location to be approved by Tenant. LL to install walk Pads on the roof from the roof access point around all of Tenants RTU's.

   c. Exterior wall system shall include adequate backing for Tenant's signs & awnings. Landlord shall use Tenant's Latest set of Guide Plans to design the building with their own architect. Such guide plans have all specifications within. Any deviation from the guide plans will need to be approved by the Tenant. (A set of guide plans can be sent to you upon request) Final elevations are to be approved by Tenant.

   d. Exterior surfaces and trade dress to be finished and painted if needed by Landlord per approved elevations. Landlord shall provide building address numbers in accordance with applicable building codes.

   e. Perimeter walls shall be drywall ready or furred out with either 2" hat channel or 2 x 4 studs. All Perimeter walls shall be insulated with an R value of R19 or applicable to local building codes. Exterior walls shall have a functioning vapor barrier installed. (If applicable to climate) Tenant will install all drywall.

   f. Tenant separation walls shall be constructed with six inch (6") twenty gauge (20 ga) metal studs spaced @ 16" on center from floor to underside of roof deck. 6" insulation shall be installed for sound attenuation. No drywall on Tenant's side of wall shall be installed.

   g. All energy calculations, if required by governmental authorities, will be made in accordance with Tenant's plans and specifications.

4. FLOOR SLAB AND FINISH: A smooth and level concrete floor slab, free of leveling products, with not more than one-eighth inch (1/8") variation in ten feet (10'). Landlord is to give Tenant (3) three weeks' notice prior to pouring the floor slab so Tenant can install their underground plumbing and electrical. All floor coverings to be installed by Tenant. If the slab is existing, an ardex (concrete based) leveling product can be used to obtain the specification listed above.

5. STOREFRONT/DOORS/WINDOWS:

   a. **Storefront window frames:** Storefront to be provided by Landlord and shall include a minimum window frame height of ten feet (10') above finish floor and door locations in accordance with Tenant's plans. The storefront shall include all storefront structural components, with all columns and voids, completed and clad with storefront metal. The storefront window frames shall be Kawneer two inch by four and one-half inch (2"x 4½") IS451 center glazed system with a five (5) year manufacturer's warranty or equal. All Spandrel Glass to be installed per Tenant floor plan/final drawings. Spandrel Glass to be black in color.

   b. **Doors:** Narrow style 250 A.D.A. approved single acting, fully weather-stripped, surface applied, LCN 4041 or approved closers, one-half inch (½") maximum threshold, Type "B" push/pull hardware pairs 3070 with transom, and one-quarter inch (1/4") clear tempered door glass.

   c. **Glass:** Minimum one inch (1") clear insulated low-E, with written verification from Glass Company, dual sealed units.

   d. **Secondary exit/service door**: shall be minimum 3'-0" wide & open directly to the exterior or to a handicap accessible exit corridor and/or sidewalk per local building codes and ordinances. Secondary exit/service door shall have Hager 4500 series with 45NL ARC US26D. The rear service door shall have exterior "keyed" access. The location of the Secondary exit/service door shall be approved by Tenant.

6. PLUMBING: Landlord shall provide plumbing as follows:

   a. **Exterior:** Landlord shall provide a minimum of two (2) insulated, exterior hose bibs for free standing projects only.

   b. **Roof Drains:** Landlord shall provide roof drains and complete storm drainage system as required per applicable building code and in locations approved by Tenant. Roof drains are to run and drain to the back of the Premises. If roof drains run and drain to the entrance side of the Premises, such drains must be interior wall roof drains and must be connected to and run into an underground storm drain system or drywell. If Landlord installs interior roof drains, the drains shall be insulated and the location of the drains shall be subject to Tenant's prior written approval.

   c. **Fire Sprinkler System:** Landlord shall provide, when required by code, a fire sprinkler system in a basic 10 x 10 grid pattern to cover the open space. Tenant to make all modifications to the system to conform to Tenant's layout. If Tenant is required to use landlord's Fire sprinkler sub-contractor, the bid must be reasonable and within 5% of the lowest competitive bid for such work or Landlord shall increase the TIA in the amount equal to the difference or allow Tenant to use another qualified sub-contractor for such work.

7. ELECTRICAL:

   a. A 400 Amp 120/208V 3 phase service will be made available by Landlord for Tenants use Landlord shall provide and install service to a meter box & fused disconnect (including fuses) for the electrical service dedicated solely to Tenant in accordance with metering requirements of the utility company. Landlord shall install the meter box & fused disconnect (including fuses) in a location acceptable to the local utility company. Landlord shall be responsible for all installation related service fees. Tenant will pull the service into the building through a properly sized conduit installed by LL. The conduit will terminate within the Tenants mechanical room in the vicinity of the electrical panels.

   b. Landlord or utility company shall provide main switchgear, properly sized conduit, switchgear pad, bollards, main electrical service cable, contactors, disconnects, and conduit sweeps. Conduit and wire sizes are per National Electrical Code. All wire and bus shall be copper. Final location must be verified with Tenant prior to installation.

   c. **Fire Alarm System:** Landlord shall provide, when required by code, a fire alarm system which shall be installed to the open floor plan which includes the main fire panel. Tenant to make all modifications to the system to conform to Tenant's layout and tie back into the main panel supplied by the Landlord. If Tenant is required to use landlord's Fire alarm sub-contractor, the bid must be reasonable and within 5% of the lowest competitive bid for such work or Landlord shall increase the TIA in the amount equal to the difference or allow Tenant to use another qualified sub-contractor for such work.

8. HVAC:

   a. Landlord and Tenant to coordinate the installation of any new roof top units ("RTUs"). Landlord shall give Tenant (3) three weeks' notice prior to installation of the roof so Tenant can install their RTU curbs prior to the roofing being installed. Landlord shall provide all structural modifications to the roof structure to accommodate Tenants RTUs. Landlord to flash all curbs (including fan curbs), at no additional cost to tenant, only if tenant installs curbs prior to the original roof install.

9. MISCELLANEOUS PROVISIONS APPLICABLE TO LANDLORD'S WORK:

   a. Landlord to provide Tenant with a full set of construction documents for the work being performed. Drawings are to include, but not limited to Architectural, Structural, Mechanical, and Electrical, Plumbing & civil drawings.

   b. Landlord shall send weekly construction/ progress reports. Reports are to be sent once a week to the Tenant. The reports are to including pictures along with the weekly tasks that were completed.

   c. Landlord shall provide Tenant with a written construction schedule for Landlord's Work at least thirty (30) days before commencement of construction.

   d. All mechanical, electrical, plumbing and life safety systems shall be new and in good working order at the time Landlord delivers possession of the Premises.

   e. Landlord warrants all improvements, including, but not limited to mechanical, electrical and plumbing systems, for a period of at least one (1) year longer if required under the Lease, and assigns all assignable warranties to Tenant.

   f. All permits, including health, fees, licenses, architectural drawings, engineering, consulting services, testing services, or for the development of the Premises and/or Shopping Center, including, but not limited to, water connection or capacity fees, sewer connection or capacity fees, development/license taxes, school related fees, or offsite development requirements and the like necessary for the foregoing shall be provided by Landlord at its sole cost and expense.

   g. Landlord shall, at its sole cost and expense, secure from city or local governing body a substantial completion document or the local equivalent for Landlord's Work. The substantial completion document shall be provided to Tenant's on-site representative or as specified by Tenant under the Lease.

   h. Landlord shall remove trash and unused construction materials upon completion of Landlord's Work.

   i. Upon completion of Landlord's Work, Landlord will provide Tenant with the names and addresses of the general contractor and the other contractors, subcontractors, suppliers and vendors involved in Landlord's Work.

   j. Landlord agrees to hang banners provided by Tenant at the commencement of construction.

   k. The foregoing description of Landlord's Work does not supersede any local code requirements. Landlord is responsible for delivering a building that meets all local code requirements.

   l. Landlord shall provide access to the sign facade from the interior of the Premises for Tenant's sign installation, including, but not limited to, access to accommodate attachment of the signs to the building and electrical service. Landlord will also provide the roof penetration to allow access for power to Tenant's signage if access is not available through the interior of the Premises.

   m. COMPLETION SCHEDULE: Landlord shall cause the construction of Landlord's Work to be undertaken promptly and shall cause the construction of Landlord's Work to be diligently and continuously performed in a good and workmanlike manner.

   n. COMPLIANCE: Landlord shall construct Landlord's Work substantially in accordance with all applicable ordinances and statutes and in accordance with the requirements of all regulating authorities and any rating or inspection organization, bureau, association, or office having jurisdiction.

II. FORCE MAJEURE:

In the event Landlord or Tenant is prevented, delayed, or stopped from performing any act, undertaking, or obligation by reason of an "event of force majeure," including excessive adverse weather, strikes, lockouts, labor disputes, failure of power, acts of public enemies of this state or the United States of America, riots, insurrection, war, civil commotion, inability to obtain labor or materials, and/or any other cause (except financial) beyond the reasonable control of the party whose performance is so prevented, delayed, or stopped, then the time for that party's performance shall be extended one (1) day for each day's prevention, delay, or stoppage by reason of such event of force majeure.

III. DISCOVERY OF HAZARDOUS SUBSTANCES DURING CONSTRUCTION:

If conditions suggesting the presence of Hazardous Substances are discovered during construction of Tenant's Work, Tenant shall promptly notify Landlord. Landlord shall cause its environmental consultant to investigate the Premises and/or to perform tests to determine whether there are any Hazardous Substances (as defined in the Lease) which require remediation under applicable laws, rules and regulations. Remediation shall include those steps required to eliminate, remove or otherwise mitigate the presence of Hazardous Substances. If asbestos containing materials are discovered in the Premises, Landlord shall remove the same in accordance with applicable laws, rules and regulations. If remediation is required and the proposed remediation will (i) result in more than a ninety (90) calendar day delay in Tenant's Work or (ii) result in a reconfiguration of the Premises, the Common Area or the Shopping Center which, in the exercise of Tenant's reasonable business judgment, will materially affect Tenant's business operations, then, in either event, Tenant may terminate the Lease upon thirty (30) days' written notice to Landlord delivered within thirty (30) days after discovery of the occurrence of either (i) or (ii) above, as the case may be. After delivery of notice from Tenant to Landlord, the Lease shall terminate as provided in the notice unless the termination is due to (ii) above, in which event if Landlord is able to reconfigure the Premises, Common Area and/or Shopping Center, as the case may be, within such thirty (30) day period, such that the reconfiguration does not, in Tenant's reasonable business judgment, materially affect Tenant's business operations, the Lease shall not terminate. The Minimum Rent Commencement Date shall be extended one (1) day for each day of delay resulting from required remediation. In any event, Landlord shall be responsible for the reasonable increases in the construction costs of Tenant's Work, and related out-of-pocket costs and expenses, caused by such delay, remediation, reconfiguration and/or termination. All required remediation shall be diligently completed by Landlord at Landlord's sole cost and expense. The remedies provided herein are in addition to any other remedies available to the parties pursuant to the Lease.

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926
10979

PROFESSIONAL SEAL

SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

JOB NUMBER
230264900

SHEET NUMBER
T2.0

LANDLORD WORK LETTER

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GENERAL ACCESSIBILITY NOTES

THRESHOLDS

1. FLOOR(S) OR LANDING(S) ARE NOT MORE THAN 1/2" LOWER THAN THE TOP OF THE THRESHOLD OF THE DOORWAY.
2. PER 303.3 CHANGE IN LEVEL BETWEEN 1/4" AND 1/2" IS BEVELED AT A GRADIENT NOT TO EXCEED 1:2
3. DOORMATS ARE SECURELY ATTACHED (ANCHORED OR RECESSED) AND HAVE A LEVEL LOOP, LEVEL CUT/UNCUT PILE WITH PILE NOT EXCEEDING 1/2" IN HEIGHT.
4. EXPOSED EDGES OF DOORMAT(S) ARE FASTENED TO FLOOR SURFACES AND HAVE TRIM ALONG THE ENTIRE LENGTH OF THE EXPOSED EDGE.

DOORS

1. MINIMUM OF 3'-0" IN WIDTH, 6-8" IN HEIGHT
2. OPENS A MINIMUM OF 90 DEGREES
3. CLEAR WIDTH OF THE DOORWAY IS 32" MINIMUM.
4. DOUBLE DOORS / AUTOMATIC DOORS AT LEAST ONE DOOR MUST COMPLY WITH 1, 2 AND 3 ABOVE.
5. BOTTOM 10" OF DOOR HAS A SMOOTH, UNINTERRUPTED SURFACE THAT ALLOWS DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION.

   NOTE: WHERE NARROW FRAME DOORS ARE USED A 10" HIGH SMOOTH PANEL MUST BE INSTALLED ON THE PUSH SIDE BOTTOM OF THE DOOR WHICH WILL ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION.
6. EFFORT TO OPERATE DOORS IS WITHIN PRESSURES ALLOWED. INTERIOR DOORS 5 POUNDS MAXIMUM PRESSURE TO OPERATE. FIRE DOORS SEE APPROPRIATE ADMINISTRATIVE AUTHORITY.
7. TWO DOORS IN A SERIES PROVIDE A MINIMUM OF 48" CLEAR SPACE FROM ANY DOOR, IN ANY POSITION.

DOOR HARDWARE

1. EXIT DOORS ARE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
2. LATCHING AND LOCKING DOORS THAT ARE HAND OPERATED ARE OPERABLE WITH A SINGLE EFFORT (EX. LEVER TYPE, PANIC BARS OR PUSH-PULL TYPE).
3. OPENING HARDWARE IS NO HIGHER THAN 48 ABOVE FINISH FLOOR.
4. DOOR CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO AN OPEN POSITION OF 12 DEGREES SHALL BE 5 SECONDS MINIMUM.
5. HANDLES, PULL, LATCHES, LOCKS AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE. LEVER OPERATED MECHANISMS, PUSH-TYPE MECHANISMS, AND U-SHAPED HANDLES ARE ACCEPTABLE DESIGNS. WHEN SLIDING DOORS ARE FULLY OPEN, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES. HARDWARE REQUIRED FOR ACCESSIBLE DOOR PASSAGE SHALL BE MOUNTED NO HIGHER THAN 48 INCHES AFF.

CLEAR SPACE AT DOORS

GENERAL: REGARDLESS OF THE OCCUPANT LOAD, THERE SHALL BE A FLOOR OR LANDING ON EACH SIDE OF A DOOR.

1. FLOOR OR LANDING ON EACH SIDE OF THE DOOR IS LEVEL AND CLEAR.
2. LEVEL AREA IN THE DIRECTION OF THE DOOR SWING IS A MINIMUM OF 60" IN LENGTH.
3. LEVEL AREA OPPOSITE THE DIRECTION OF THE DOOR SWING IS A MINIMUM OF 42-48" IN LENGTH, DEPENDING UPON DIRECTION OF APPROACH AND EXISTENCE OF LATCH AND CLOSER.
4. SURFACE SLOPE OF THE LEVEL AREA DOES NOT EXCEED 1:50 GRADIENT (2%).
5. MINIMUM STRIKE SIDE CLEARANCE ON PULL SIDE OF DOOR IS PROVIDED AT LANDING PER LOCAL ACCESSIBILITY STANDARDS.
6. MINIMUM LATCH SIDE CLEARANCE ON PUSH SIDE OF DOOR IS PROVIDED AT LANDING PER LOCAL ACCESSIBILITY STANDARDS.

IDENTIFICATION SYMBOLS (FOR SANITARY FACILITIES)

1. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY IS INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. THE BORDER DIMENSIONS OF THISPICTOGRAM SHALL BE A MINIMUM OF 6" IN HEIGHT.

   NOTE: WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE, INCLUDING AT DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL, PREFERABLY.
2. VERBAL DESCRIPTION AS TO RESTROOM USAGE (I.E. MENS RESTROOM, ETC.) IS PLACED DIRECTLY BELOW THE SYMBOL OF ACCESSIBILITY.
3. THE CHARACTERS AND BACKGROUND OF THE SIGN IS EGGSHELL, MATTE OR OTHER NON-GLARE FINISH AND THE COLOR AND CONTRAST OF THE SIGN DISTINCTIVELY CONTRASTS WITH THE COLOR AND CONTRAST OF THE WALL.

   NOTE: THE REQUIRED COLOR OF THE SYMBOL OF ACCESSIBILITY CONSISTS OF A WHITE FIGURE ON A BLUE BACKGROUND. HOWEVER, THE APPROPRIATE ENFORCEMENT AGENCY MAY APPROVE SPECIAL SIGNS TO COMPLIMENT DÉCOR WHEN SUCH SIGNS PROVIDE ADEQUATE DIRECTION TO INDIVIDUALS WITH DISABILITIES.
4. SIGNS ARE CENTERED ON THE WALL 60" AFF AND 8" FROM EDGE OF SIGN TO EDGE OF DOOR FRAME.
5. LETTERS AND NUMERALS ARE RAISED 1/32" ARE SANSSERIF UPPERCASE CHARACTERS AND ARE ACCOMPANIED BY GRADE 2 BRAILLE. CHARACTERS ARE A MINIMUM 5/8" HIGH AND A MAXIMUM OF 2" HIGH.
6. MOUNTING LOCATION ALLOWS A PERSON TO APPROACH WITHIN 3" OF THE SIGNAGE WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE SWING OF A DOOR.
7. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR AREA 18" X 18" MINIMUM, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING THE CLOSED POSITION AND 45 DEGREE OPEN POSITION.

SANITATION FACILITIES

1. ACCESSIBLE UNITS SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.
2. EXCEPT AT DOORS, THE MINIMUM CLEAR WIDTH OF AN ACCESSIBLE ROUTE IN THIS FACILITY IS 36".
3. ENTRY DOOR HAS PUSH AND PULL FUNCTION (NO LATCHING DEVICE) WITH CLOSER.
4. SUFFICIENT SPACE FOR WHEELCHAIR MEASURING 30"x48" TO ENTER ROOM AND PERMIT THE DOOR TO CLOSE IS PROVIDED.
5. A CLEAR SPACE OF SUFFICIENT SIZE TO INSCRIBE A 60" DIAMETER CIRCLE IS PROVIDED WITHIN THE SANITARY FACILITY ROOM.
6. 60" SPACE IS CLEAR OF OBJECTS FROM THE FLOOR TO A HEIGHT OF 27".
7. CLEAR FLOOR SPACE FOR WATER CLOSETS SHALL COMPLY WITH LOCAL ACCESSIBILITY STANDARDS. CLEAR FLOOR SPACE MAY BE ARRANGED TO ALLOW EITHER A RIGHT HANDED OR A LEFT HANDED APPROACH.
8. 18" BETWEEN CENTER OF WATER CLOSET AND SIDE-WALL CORNER
9. TOILET SEATS SHALL NOT BE SPRUNG TO RETURN TO A LIFTED POSITION.
10. TOP OF TOILET SEAT IS 17"-19" FROM FLOOR SURFACE.
11. FLUSH VALVE IS ON WIDE SIDE OF TOILET AREA
12. 44" MAXIMUM FROM FLOOR TO FLUSH VALVE
13. 5 LB. MAXIMUM FORCE TO OPERATE FLUSH VALVE
14. WALLS WITHIN COMPARTMENT ARE SMOOTH, HARD AND NONABSORBENT TO 48 IN HEIGHT AND ARE NOT ADVERSELY AFFECTED BY MOISTURE.
15. FLOOR SURFACES OF TOILET ROOM ARE SMOOTH, HARD AND NON-ABSORBENT. BASE SHALL EXTEND UPWARD A MINIMUM OF 6" ONTO WALLS.
16. SIDE GRAB BAR IS A MINIMUM OF 42" LONG.
17. THE FORWARD END OF THE GRAB BAR IS LOCATED A MINIMUM OF 54" FROM THE BACK WALL.
18. SIDE GRAB BAR BEGINS A MAXIMUM OF 12" FROM THE REAR WALL.
19. REAR GRAB BAR IS A MINIMUM 36" LONG WITH THE ADDITIONAL LENGTH PROVIDED ON THE TRANSFER SIDE OF THE WATER CLOSET.
20. REAR GRAB BAR BEGINS A MAXIMUM OF 6" FROM THE CORNER OF THE WALL ON THE TOILET SIDE.
21. DIAMETER OF THE GRAB BAR(S) IS 1 1/4" - 1 1/2" OR SHAPE PROVIDES EQUIVALENT GRIPPING SURFACE.
22. CLEARANCE BETWEEN THE GRAB BAR(S) AND WALL IS 1 1/2" AND PARALLEL TO FLOOR (FOR TANK TYPE TOILETS, 36" MAY BE ALLOWED IF TANK OBSTRUCTS PLACEMENT OF BAR).
23. GRAB BARS ARE MOUNTED AT 33" MIN. - 36" MAX. TO TOP OF BAR.
24. BARS ARE SMOOTH WITH A MINIMUM RADIUS OF 1/8".
25. MINIMUM STRUCTURAL STRENGTH OF GRAB BAR(S) WILL SUPPORT A 250 LB. POINT LOAD.
26. GRAB BARS DO NOT ROTATE WITHIN THEIR FITTINGS.
27. SURFACE OF WALL ADJACENT TO GRAB BAR(S) IS FREE OF SHARP OR ABRASIVE ELEMENTS.
28. TOILET PAPER DISPENSERS SHALL BE 7" MINIMUM AND 9" MAXIMUM IN FRONT OF THE WATER CLOSET MEASURED TO THE CENTER LINE OF THE DISPENSER.
29. THE OUTLET OF THE DISPENSER SHALL BE 14" MINIMUM AND 19" MAXIMUM ABOVE THE FLOOR. THERE SHALL BE A CLEARANCE OF 1 1/2" MINIMUM BELOW THE GRAB BAR.
30. DISPENSERS SHALL NOT BE A TYPE THAT CONTROL DELIVERY OR DO NOT ALLOW CONTINUOUS PAPER FLOW.

LAVATORIES

1. MINIMUM 30"x48" CLEAR SPACE IS PROVIDED IN FRONT OF LAVATORY THAT ALLOWS FORWARD APPROACH.
2. REQUIRED CLEAR SPACE ADJOINS OR OVERLAPS AN ACCESSIBLE ROUTE AND EXTENDS A MAXIMUM OF 19" UNDERNEATH THE LAVATORY.
3. 34" MAXIMUM HEIGHT OF RIM OR COUNTER ABOVE FLOOR SURFACE
4. 29" MINIMUM CLEARANCE FROM BOTTOM OF APRON TO THE FLOOR
5. KNEE CLEARANCE UNDER FRONT LIP IS A MINIMUM OF 27" HIGH, 30" WIDE, AND EXTENDS A MINIMUM OF 8" IN DEPTH FROM THE FRONT OF THE LAVATORY
6. TOE CLEARANCE UNDER LAVATORY IS A MINIMUM OF 9" HIGH, 30" WIDE, AND EXTENDS A MINIMUM OF 17" IN DEPTH FROM THE FRONT OF THE LAVATORY.
7. DRAIN AND HOT WATER PIPING IS INSULATED OR CONFIGURED TO PREVENT CONTACT.
8. THERE ARE NO SHARP OR ABRASIVE ELEMENTS UNDER LAVATORY.
9. FAUCETS ARE LEVER TYPE, ELECTRONICALLY ACTIVATED OR APPROVED SELF CLOSING VALVES (MIN. 10 SECONDS OPEN FLOW).
10. FAUCETS ARE OPERABLE WITH ONE HAND AND DO NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST.
11. 5 LB. MAXIMUM FORCE REQUIRED TO ACTIVATE CONTROLS.

WATER CLOSETS

1. 30" WIDE x 48" DEEP MINIMUM CLEAR ACCESS IN FRONT OF FIXTURE (ONE FIXTURE ONLY REQUIRED).
2. ONE FULL UNOBSTRUCTED SIDE OF THE CLEAR FLOOR OR GROUND SPACE ADJOINS OR OVERLAPS AN ACCESSIBLE ROUTE OR ADJOINS ANOTHER WHEELCHAIR CLEAR FLOOR SPACE.
3. 44" MAXIMUM HEIGHT OF FLUSH VALVE ABOVE FLOOR
4. 5 LB. MAXIMUM PRESSURE TO OPERATE FLUSH VALVE
5. FLOOR SURFACES ARE SMOOTH, HARD AND NON-ABSORBENT EXTENDING UPWARD A MINIMUM OF 6" ONTO THE WALLS
6. WALLS WITHIN 24" OF FRONT AND SIDES OF URINAL ARE SMOOTH, HARD AND NON-ABSORBENT TO 48" IN HEIGHT AND ARE NOT ADVERSELY AFFECTED BY MOISTURE.

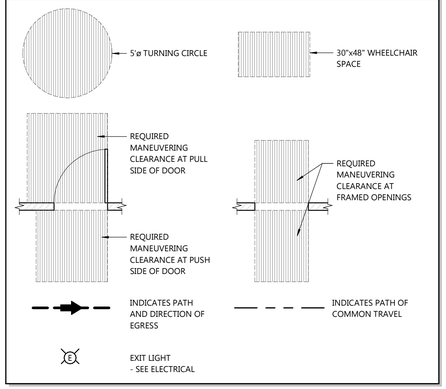
ACCESSORIES IN SANITARY FACILITIES

1. MINIMUM 30x48 CLEAR FLOOR OR GROUND SPACE IS PROVIDED TO ALLOW FORWARD OR PARALLEL APPROACH TO ACCESSORIES.
2. ONE FULL UNOBSTRUCTED SIDE OF THE CLEAR FLOOR OR GROUND SPACE ADJOINS OR OVERLAPS AN ACCESSIBLE ROUTE OR ADJOINS ANOTHER WHEELCHAIR CLEAR FLOOR SPACE
3. MIRROR(S) IS MOUNTED WITH THE BOTTOM OF THE REFLECTIVE SURFACE EDGE NO HIGHER THAN 40" AFF AND WITH THE TOP OF THE REFLECTIVE SURFACE EDGE NO LOWER THAN 74" AFF.
4. OPERABLE PARTS (INCLUDING COIN SLOTS) OF ALL FIXTURES OR ACCESSORIES ARE LOCATED A MAXIMUM OF 40" ABOVE FLOOR (I.E. SOAP DISPENSERS, TOWELS, TOILET SEAT COVERS, AUTO-DRYERS, SANITARY NAPKIN DISPENSERS, WASTE RECEPTACLES, ETC.).
5. CONTROLS AND OPERATING MECHANISMS ARE OPERABLE WITH ONE HAND AND DO NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST.
6. THE FORCE TO ACTIVATE CONTROLS IS 5 LB. MAXIMUM.

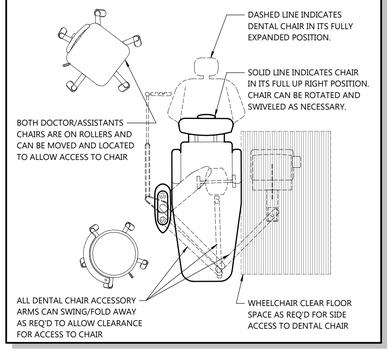
COAT HOOKS AND SHELVES

1. ACCESSIBLE COAT HOOKS PROVIDED WITHIN THE ROOM SHALL ACCOMMODATE A FORWARD REACH OR SIDE REACH COMPLYING w/ LOCAL ACCESSIBILITY STANDARDS.
2. WHERE SHELVES ARE PROVIDED, A PORTION OF SHELVING SHALL BE MOUNTED AT 40" MIN. AND 48" MAX. AFF

EGRESS / ACCESSIBILITY SYMBOLS LEGEND



DENTAL CHAIR DIAGRAM

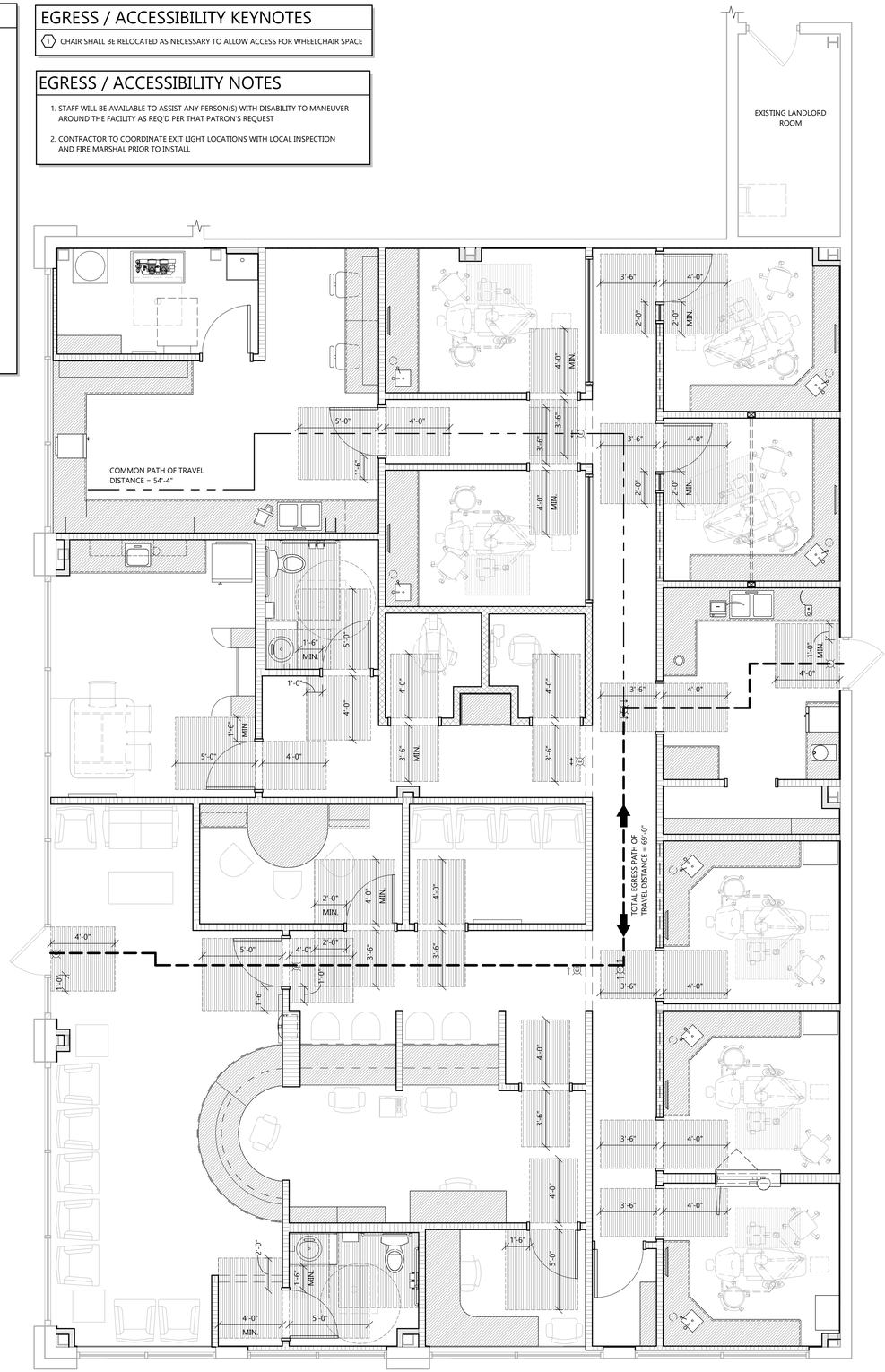


EGRESS / ACCESSIBILITY KEYNOTES

1. CHAIR SHALL BE RELOCATED AS NECESSARY TO ALLOW ACCESS FOR WHEELCHAIR SPACE

EGRESS / ACCESSIBILITY NOTES

1. STAFF WILL BE AVAILABLE TO ASSIST ANY PERSON(S) WITH DISABILITY TO MANEUVER AROUND THE FACILITY AS REQ'D PER THAT PATRON'S REQUEST
2. CONTRACTOR TO COORDINATE EXIT LIGHT LOCATIONS WITH LOCAL INSPECTION AND FIRE MARSHAL PRIOR TO INSTALL



NORTH

EGRESS/ACCESSIBILITY PLAN

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

0' 4' 8'

EGRESS AND ACCESSIBILITY PLAN

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES

SHEET ISSUE JULY 12, 2023

REVISIONS

JOB NUMBER
230264900

SHEET NUMBER
T3.0

ARCHITECTURAL SPECIFICATIONS (CONT)

DIVISION 00 PROCUREMENT AND CONTRACTING

00 72 00 GENERAL CONDITIONS

A. THE AIA GENERAL CONDITIONS A201 LATEST EDITION IS A PART OF THESE DOCUMENTS. COPIES ARE ON FILE AT THE OFFICE OF EXCEL ENGINEERING, INC.

00 73 16 INSURANCE REQUIREMENTS

A. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL SUBMIT TO THE OWNER CERTIFICATE OF INSURANCE FOR NOT LESS THAN THE FOLLOWING LIMITS:
   1. WORKER'S COMPENSATION AND EMPLOYERS LIABILITY:
      a. PER STATUTORY LIMITS
   2. COMMERCIAL GENERAL LIABILITY:
      a. GENERAL AGGREGATE: $2,000,000
      b. PRODUCTS AND COMPLETED OPERATIONS AGGREGATE: $2,000,000
      c. PERSONAL AND ADVERTISING INJURY: $1,000,000
      d. EACH OCCURRENCE: $1,000,000
      e. CONTRACTOR SHALL LIST EXCEL ENGINEERING, INC. AS ADDITIONAL INSURED.

DIVISION 01 GENERAL REQUIREMENTS

01 11 00 SUMMARY OF WORK

A. THE PLANS AND SPECIFICATIONS ARE INTENDED TO GIVE A DESCRIPTION OF THE WORK. NO DEVIATION FROM THE PLANS AND SPECIFICATIONS SHALL BE MADE WITHOUT THE WRITTEN CONSENT OF EXCEL ENGINEERING, INC. THE CONTRACTOR IS TO CLARIFY ANY DISCREPANCIES WITH EXCEL ENGINEERING, INC. PRIOR TO BIDDING. THE CONTRACTOR SHALL VISIT THE SITE TO VERIFY EXISTING CONDITIONS AND ACCESS TO THE WORK AREA.
B. REFERENCE TO "GENERAL CONTRACTOR" OR "GC" IN THE CONSTRUCTION DOCUMENTS IS INTENDED TO REPRESENT THE CONTRACTOR RESPONSIBLE FOR OVERALL CONSTRUCTION AND COORDINATION OF THE WORK. THE "GC" COULD BE A GENERAL CONTRACTOR, CONSTRUCTION MANAGER OR ANY OTHER CONTRACTOR RESPONSIBLE FOR THE OVERALL PROJECT. IT IS THE RESPONSIBILITY OF THE GC TO ASSIGN RESPONSIBILITY FOR ALL WORK.

01 25 13 PRODUCT SUBSTITUTION PROCEDURES

A. REFERENCE TO MATERIALS OR SYSTEMS HEREIN BY NAME, MAKE OR CATALOG NUMBER IS INTENDED TO ESTABLISH A QUALITY STANDARD, AND NOT TO LIMIT COMPETITION. THE WORDS "OR APPROVED EQUIVALENT" ARE IMPLIED FOLLOWING EACH BRAND NAME/MODEL NUMBER UNLESS STATED OTHERWISE. "OR APPROVED EQUIVALENT" MATERIALS SHALL BE APPROVED BY EXCEL ENGINEERING, INC. PRIOR TO BIDS BEING ACCEPTED AND ACCEPTANCE FOR USE. PROVIDE A LETTER FROM THE MANUFACTURER CERTIFYING THAT THE PRODUCT MEETS OR EXCEEDS THE SPECIFIED PRODUCT.

01 31 00 PROJECT MANAGEMENT AND COORDINATION

A. THE CONTRACTOR HAS THE SOLE RESPONSIBILITY FOR AND SHALL HAVE CONTROL OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND SAFETY PRECAUTIONS AND PROCEDURES USED TO CONSTRUCT THE WORK.
B. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL (INCLUDING TAXES) AND EQUIPMENT AS NECESSARY TO COMPLETE THE WORK. PERMITS SHALL BE OBTAINED AND PAID FOR BY THE RESPECTIVE CONTRACTOR, INCLUDING TEMPORARY OCCUPANCY PERMIT IF REQUIRED.
C. AUTOCAD FILES OF CONSTRUCTION DOCUMENTS MAY BE OBTAINED BY CONTACTING EXCEL ENGINEERING, INC. REVIT FILES WILL NOT BE MADE AVAILABLE. AUTOCAD FILE REQUESTS SHALL BE EMAILED TO EXCEL PROJECT MANAGER AND PROJECT ASSISTANT AND SHALL INCLUDE THE FOLLOWING INFORMATION:
   1. ASPEN DENTAL PROJECT NAME
   2. EXCEL ENGINEERING PROJECT NUMBER
   3. SHEET NUMBERS REQUESTED
D. AUTOCAD FILES REQUEST SHALL BE MADE TO:
   1. PROJECT MANAGER: (JAY JOHNSON ~~ jayj@excelengineer.com)
   2. PROJECT ASSISTANT: (archretail@excelengineer.com)
E. AUTOCAD FILES WILL BE SENT BY METHOD OF EXCEL ENGINEERING, INC. CHOOSING AS SOON AS POSSIBLE.
F. AUTOCAD FILES SHALL NOT BE USED FOR COMPONENT SUBMITTALS OR SHOP DRAWINGS. SUBMITTALS AND SHOP DRAWINGS USING EXCEL ENGINEERING, INC. CAD FILES WILL BE RETURNED REJECTED AND UN-REVIEWED.
G. ALL "REQUEST FOR INFORMATION" (RFI) SHALL BE MADE THROUGH THE GENERAL CONTRACTOR / CONSTRUCTION MANAGER FOR LOGGING AND TRACKING PURPOSES. RFI'S SHALL BE SUBMITTED TO THE ASPEN DENTAL CONSTRUCTION MANAGER. RFI'S SHALL BE SUBMITTED ON AN ARCHITECT APPROVED FORM, NUMBER SEQUENCE AND INCLUDE THE FOLLOWING INFORMATION:
   1. ASPEN DENTAL PROJECT NAME
   2. EXCEL ENGINEERING PROJECT NUMBER
   3. DIVISION OF CONSTRUCTION REFERENCED
   4. POTENTIAL SCHEDULE IMPACTS
   5. POTENTIAL COST IMPACTS OF ANY SUGGESTED ALTERNATES FROM THE CONSTRUCTION DOCUMENTS

01 32 00 SCHEDULING OF WORK

A. THE CONTRACTOR SHALL OBTAIN THE OWNER'S APPROVAL OF THE CONSTRUCTION SCHEDULE PRIOR TO PROCEEDING WITH THE WORK.

01 33 23 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

A. SUBMIT FOR APPROVAL ARCHITECTURAL, CIVIL, STRUCTURAL, HVAC, PLUMBING, FIRE PROTECTION AND ELECTRICAL SHOP DRAWINGS, PRODUCT DATA, TEST RESULTS AND SAMPLES INDICATED IN THE CONSTRUCTION ADMINISTRATION SUBMITTAL LIST (CASL). SEE DISCIPLINE SPECIFICATIONS FOR DISCIPLINE SPECIFIC CASL.
B. SHOP DRAWING SUBMITTALS SHALL BE MADE TO ASPEN DENTAL FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.
C. SUBMITTALS SHALL BE MADE BY ELECTRONIC SUBMISSION IN PORTABLE DOCUMENT FORMAT (PDF) UNLESS NOTED OTHERWISE. WHEN HARD COPY SUBMISSIONS ARE REQUIRED, COORDINATE WITH ASPEN DENTAL PRIOR TO SUBMISSION.
D. SUBMITTALS SHALL BE MADE TO ASPEN DENTAL.
E. SUBMITTAL SHALL BE MADE USING APPROVED SUBMITTAL FORM CONTAINING AT MINIMUM THE FOLLOWING INFORMATION:
   1. ASPEN DENTAL PROJECT NAME
   2. EXCEL ENGINEERING PROJECT NUMBER
   3. SUBMITTAL DIVISION OF CONSTRUCTION
   4. MATERIAL SUPPLIER / SUB CONTRACTOR
   5. SUBMITTAL DESCRIPTION (i.e. CONCRETE MIX DESIGN)
F. SUBMITTALS SHALL BE REVIEWED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMITTING FOR APPROVAL. CONTRACTOR SHALL COMPLETE ALL FIELD VERIFICATIONS PRIOR TO SUBMITTAL SUBMISSION.
G. SUBMITTALS MUST BE 100% COMPLETE AND IN ONE (1) PACKAGE FOR THE ITEM BEING SUBMITTED. NON-COMPLETE SUBMITTALS WILL BE RETURNED TO THE CONTRACTOR WITHOUT COMMENT AND STAMPED "REJECTED-RESUBMIT". CONTRACTORS WHO KNOWINGLY WANT TO SUBMIT NON-COMPLETE SUBMITTALS OR BREAK SINGLE SYSTEM SUBMITTALS INTO MULTIPLE SUBMITTALS WILL BE RESPONSIBLE TO ARRANGE WITH ASPEN DENTAL PRIOR TO SUBMITTING THE SUBMITTAL(S), AND TO COMPENSATE ASPEN DENTAL FOR THE EXTRA WORK INVOLVED.
H. SHOP DRAWINGS SHALL CLEARLY INDICATE SPECIFIC MODEL BEING PROVIDED WHERE CUT SHEETS SHOW MULTIPLE MODELS.
I. FAILURE TO SUBMIT SHOP DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING THE SPECIFIED EQUIPMENT AND MATERIALS.
J. PHYSICAL SAMPLES FOR FINISHES ARE TO BE SUBMITTED TO ASPEN DENTAL FOR APPROVAL PRIOR TO INSTALLATION.
K. BUILDING COMPONENTS REQUIRING SUBMISSION "FOR RECORD" TO THE AUTHORITY HAVING JURISDICTION REQUIRE SEALED AND SIGN HARD COPIES, PROVIDE THREE (3) HARD COPIES WITH WET SEAL AND ORIGINAL SIGNATURE.
L. TEST RESULTS SHALL BE SUBMITTED FOR REVIEW WITHIN 24 HOURS OF COMPLETION OF TEST.
M. CONTRACTOR SHALL ALLOW 10 WORKING DAYS IN SCHEDULE FOR A/E TO REVIEW SUBMITTALS. IF SUBMITTALS REQUIRE AN EXPEDITED REVIEW PROCESS, CONTACT ASPEN DENTAL PRIOR TO SUBMITTING THE SUBMITTAL(S) TO MAKE THE APPROPRIATE ARRANGEMENT.
N. SUBMITTALS REQUIRING RESUBMISSION SHALL HAVE CHANGES MADE TO A PREVIOUSLY REVIEWED SUBMITTAL DENOTED WITH REVISION CLOUDS AND TAGS IDENTIFYING CHANGES.
O. ARCHITECTURAL CONSTRUCTION ADMINISTRATION SUBMITTAL LIST:
   1. MANUFACTURED STONE (404)
   2. ROUGH CARPENTRY MATERIALS (604)
   3. INTERIOR FINISH CARPENTRY MATERIALS (604)
   4. FIBERGLASS REINFORCED PANELING (604)
   5. PENETRATION FIRE STOPPING (704)
   6. SEALANTS (704)
   7. HOLLOW METAL DOORS AND FRAMES (804)
   8. FLUSH WOOD DOORS (804)
   9. ALUMINUM FRAMED ENTRANCES AND STOREFRONTS (804)
   10. DOOR HARDWARE (804)
   11. GLAZING (804)
   12. DRYWALL STUDS (904)
   13. GYPSUM BOARD (904)
   14. TILING (904)
   15. RESILIENT BASE AND ACCESSORIES
   16. WALL COVERING (904)
   17. PAINTING SYSTEMS (904)
   18. SIGNAGE (1004)
   19. FIRE EXTINGUISHERS (1004)
   20. TOILET ACCESSORIES (1004)
   21. CABINET AND MILLWORK (1204)
P. STRUCTURAL AND ARCHITECTURAL PLANS SHOW DIMENSIONS AND ELEVATIONS TO SIGNIFICANT WORKING POINTS. SHOP DRAWING DETAILERS AND SUPPLIERS ARE RESPONSIBLE FOR THE DETERMINATION OF ALL DIMENSIONS, PITCHES, ELEVATIONS, ETC., BEYOND THOSE NOTED AS NECESSARY TO THOROUGHLY DETAIL / FABRICATE THEIR WORK. CONTACT ASPEN DENTAL WITH ANY DISCREPANCIES FOUND.
Q. IN NO CASE SHALL CHANGES BE MADE TO WORK SHOWN OR PROCEDURE SPECIFIED ON STRUCTURAL PLANS UNLESS FIRST APPROVED IN WRITING BY ASPEN DENTAL. REVIEW OF SHOP DRAWINGS BY ASPEN DENTAL DOES NOT CONSTITUTE ACCEPTANCE OF A DESIGN CHANGE. PROPOSED CHANGES BY CONTRACTOR MUST BE SUBMITTED IN RFI FORMAT AND MUST BE APPROVED IN THE SAME MANNER. CONTRACTOR REQUESTING CHANGE MAY BE BILLED ON A TIME AND EXPENSE BASIS BY ASPEN DENTAL FOR ALL REDESIGN WORK, FOR ALL NEW SKETCHES PREPARED, AND FOR ALL ADDITIONAL REVIEW TIME RELATED TO THE CHANGES.

01 40 00 QUALITY REQUIREMENTS

A. IN AS MUCH AS THE SPECIFICATIONS ARE BRIEF, THE CONTRACTOR SHALL PROVIDE WORKMANSHIP THAT IS NEAT, SECURE AND OF THE BEST QUALITY WITH THE BEST POSSIBLE APPEARANCE AND UTILITY MEETING ALL APPLICABLE STANDARDS. FAULTY WORK SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER. INDUSTRY STANDARDS SHALL BE USED AS THE GUIDE FOR QUALITY OF MATERIALS AND WORKMANSHIP.

01 41 00 REGULATORY REQUIREMENTS

A. ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES, ORDINANCES AND REGULATIONS, INCLUDING THE REQUIREMENTS OF THE AMERICAN WITH DISABILITIES ACT (A.D.A.) ARE MADE PART OF THESE SPECIFICATIONS AND SHALL BE COMPLIED WITH AS FAR AS THEY APPLY TO WORK UNDER THIS CONTRACT.

01 45 00 QUALITY CONTROL

A. NOTIFY ARCHITECT ONE WEEK IN ADVANCE TO SCHEDULE FINAL COMPLIANCE WALK-THRU. PRIOR TO THIS WALK THRU, PROVIDE THE ARCHITECT WITH THE FIRE PROTECTION SYSTEM TEST REPORT AND A COPY OF THE ELEVATOR INSPECTION REPORT AS APPLICABLE. ALL COMPONENT SUBMITTALS SHOULD BE FILED AND AVAILABLE FOR REVIEW AT THE WALK THRU. THE BUILDING SHALL BE COMPLETE AND ALL SYSTEMS OPERATIONAL AT THE TIME OF THE WALK THRU. IF THE ARCHITECT IS REQUIRED TO MAKE ADDITIONAL VISITS DUE TO NON-COMPLIANCE, THEY WILL BE CHARGED TO THE REQUESTING CONTRACTOR.

01 52 00 CONSTRUCTION FACILITIES

A. THE CONTRACTOR SHALL FURNISH TEMPORARY OFFICE, TOILET FACILITIES, WORKING TELEPHONE, ELECTRICITY, HEAT, WATER AND FIRE EXTINGUISHERS AS REQUIRED FOR COMPLETION OF THE WORK UNLESS THE OWNER HAS AGREED IN WRITING TO FURNISH OR WAIVE ANY OF THE ABOVE ITEMS.

01 53 00 TEMPORARY CONSTRUCTION

A. THE CONTRACTOR SHALL FURNISH TEMPORARY BRACING OF ALL BUILDING ELEMENTS DURING CONSTRUCTION. TEMPORARY BRACING SYSTEMS SHALL BE DESIGNED TO WITHSTAND CODE DESIGN LOADS. CONTRACTOR SHALL RETAIN SERVICES OF A PROFESSIONAL ENGINEER TO DESIGN AND SUPERVISE BRACING INSTALLATION IF THEY DO NOT HAVE THE EXPERTISE REQUIRED.

01 71 00 FIELD ENGINEERING

A. THE CONTRACTOR SHALL PROVIDE ALL LAYOUT AS REQUIRED, COMPETENT FULLTIME ON SITE SUPERVISION, AND BROOM CLEANING OF CONSTRUCTION SITE INCLUDING DUMPSTERS FOR REFUSE DISPOSAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY ON SITE AND PROTECTION OF SITE PER LOCAL, STATE AND FEDERAL REQUIREMENTS.

01 78 00 CLOSEOUT SUBMITTALS

A. THE CONTRACTOR SHALL FURNISH "AS-BUILT" DRAWINGS REFLECTING ALL CHANGES DURING CONSTRUCTION. PROVIDE TWO (2) COPIES OF OPERATING AND MAINTENANCE MANUALS TO OWNER FOR ALL FURNISHED EQUIPMENT.

01 78 36 WARRANTIES

A. THE CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER SUBSTANTIAL COMPLETION OF THE PROJECT. FURNISH MANUFACTURER'S WRITTEN WARRANTIES FOR SPECIFIED EQUIPMENT STATING EFFECTIVE WARRANTY DATE.

DIVISION 02 EXISTING CONDITIONS

02 41 19 SELECTIVE STRUCTURAL DEMOLITION

A. CONDUCT DEMOLITION AND DEBRIS REMOVAL OPERATIONS TO INSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.
B. IT IS UNKNOWN WHETHER HAZARDOUS MATERIALS WILL BE ENCOUNTERED, DO NOT DISTURB, IMMEDIATELY NOTIFY ARCHITECT AND OWNER.
C. DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS SHOWN ON THE DEMOLITION PLANS. USE METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS.
D. EXCEPT FOR ITEMS OR MATERIALS INDICATED TO BE REUSED, SALVAGED, REINSTALLED OR TO REMAIN OWNER'S PROPERTY, REMOVE DEMOLISHED MATERIALS FROM PROJECT SITE AND LEGALLY DISPOSE OF THEM IN AN EPA APPROVED LANDFILL.

DIVISION 03 CONCRETE

03 30 00 CAST-IN-PLACE CONCRETE

A. DESIGN AND CONSTRUCTION OF ALL CAST-IN-PLACE CONCRETE WORK SHALL CONFORM TO ACI 318 BUILDING CODE AND CRSI MANUAL OF STANDARD PRACTICE.
B. CONCRETE SLAB CONSTRUCTION TO BE PROVIDED PER MORE STRINGENT REQUIREMENTS OF GEOTECHNICAL REPORT OR CONSTRUCTION DOCUMENTS.
C. DESIGN MIXES SHALL BE IN ACCORDANCE WITH ASTM C94.
   1. GROUP A — FOOTINGS, GRADE BEAMS, AND TIE BEAMS.
      a. EXPOSURE CLASS: ACI 318 (F0)
      b. MINIMUM COMPRESSIVE STRENGTH: 3000 PSI AT 28 DAYS
      c. MAXIMUM WATER/CEMENT RATIO: NONE
      d. MAXIMUM AGGREGATE SIZE: 1 1/2"
      e. AIR CONTENT: N/A
   2. GROUP B — INTERIOR SLABS ON GRADE AND HOUSEKEEPING PADS (6" THICKNESS OR LESS).
      a. EXPOSURE CLASS: ACI 318 (F0)
      b. MINIMUM COMPRESSIVE STRENGTH: 3500 PSI AT 28 DAYS
      c. MAXIMUM WATER/CEMENT RATIO: NONE
      d. MAXIMUM AGGREGATE SIZE: 3/4"
      e. AIR CONTENT: N/A
   3. GROUP C — INTERIOR SLABS ON GRADE AND HOUSEKEEPING PADS (GREATER THAN 6" THICKNESS).
      a. EXPOSURE CLASS: ACI 318 (F0)
      b. MINIMUM COMPRESSIVE STRENGTH: 4000 PSI AT 28 DAYS
      c. MAXIMUM WATER/CEMENT RATIO: NONE
      d. MAXIMUM AGGREGATE SIZE: 1 1/2"
      e. AIR CONTENT: N/A
   4. GROUP D — INTERIOR WALLS, PIERS, COLUMNS, BEAMS, AND STRUCTURAL SLABS.
      a. EXPOSURE CLASS: ACI 318 (F0)
      b. MINIMUM COMPRESSIVE STRENGTH: 4000 PSI AT 28 DAYS
      c. MAXIMUM WATER/CEMENT RATIO: NONE
      d. MAXIMUM AGGREGATE SIZE: 3/4"
      e. AIR CONTENT: N/A
   5. GROUP E — INTERIOR CONCRETE FILLED METAL DECK AND PRECAST TOPPINGS.
      a. EXPOSURE CLASS: ACI 318 (F0)
      b. MINIMUM COMPRESSIVE STRENGTH: 4000 PSI AT 28 DAYS
      c. MAXIMUM WATER/CEMENT RATIO: NONE
      d. MAXIMUM AGGREGATE SIZE: 3/4"
      e. AIR CONTENT: N/A
   6. GROUP F — INTERIOR CONCRETE FILLED METAL PAN STAIRS AND LANDINGS.
      a. EXPOSURE CLASS: ACI 318 (F0)
      b. MINIMUM COMPRESSIVE STRENGTH: 4000 PSI AT 28 DAYS
      c. MAXIMUM WATER/CEMENT RATIO: NONE
      d. MAXIMUM AGGREGATE SIZE: 1/2"
      e. AIR CONTENT: N/A
   7. GROUP G — EXTERIOR WALLS, PIERS, COLUMNS, BEAMS, AND STRUCTURAL SLABS
      a. EXPOSURE CLASS: ACI 318 (F2)
      b. MINIMUM COMPRESSIVE STRENGTH: 4500 PSI AT 28 DAYS
      c. MAXIMUM WATER/CEMENT RATIO: 0.45
      d. MAXIMUM AGGREGATE SIZE: 3/4"
      e. AIR CONTENT: 6.0% (+/-1.5%) AT POINT OF DELIVERY
   8. GROUP H — ALL EXTERIOR CONCRETE EXPOSED TO FREEZING, THAWING, AND DEICING SALTS (I.E. EXPOSED WALLS, PIERS, ETC. THAT IS ABUTTED UP TO PAVED SURFACES WHERE DEICING SALTS MAY BE USED)
      a. EXPOSURE CLASS : ACI 318 (F3)
      b. MINIMUM COMPRESSIVE STRENGTH: 5000 PSI AT 28 DAYS
      c. MAXIMUM WATER/CEMENT RATIO: 0.40
      d. MAXIMUM AGGREGATE SIZE: 3/4"
      e. AIR CONTENT: 6.0% (+/-1.5%) AT POINT OF DELIVERY
   9. SLUMP LIMIT SHALL BE 4" (+/- 1").
   10. SLUMP LIMIT SHALL BE 8" (+/- 1") FOR CONCRETE WITH VERIFIED SLUMP OF 2" TO 4" BEFORE ADDING HIGH-RANGE WATER-REDUCING ADMIXTURE OR PLASTICIZING ADMIXTURE.
   11. ALL CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED WITH AIR CONTENT SPECIFIED IN DESIGN MIX GROUPS ABOVE. NO OTHER ADMIXTURES SHALL BE USED WITHOUT APPROVAL OF EXCEL ENGINEERING, INC. CALCIUM CHLORIDE SHALL NOT BE USED.
   12. CEMENTITIOUS MATERIALS: LIMIT PERCENTAGE, BY WEIGHT, OF CEMENTITIOUS MATERIALS OTHER THAN PORTLAND CEMENT IN CONCRETE WITH EXPOSURE CLASS (F3) AS FOLLOWS:
      a. FLY ASH OR OTHER POZZOLANS: 25 PERCENT BY MASS
      b. SLAG CEMENT: 50 PERCENT BY MASS
      c. TOTAL OF FLY ASH OR OTHER POZZOLANS, SLAG CEMENT: 50 PERCENT BY MASS, WITH FLYASH OR POZZOLANS NOT EXCEEDING 25 PERCENT BY MASS
      d. TOTAL OF FLY ASH OR OTHER POZZOLANS: 35 PERCENT BY MASS WITH FLY ASH OR POZZOLANS NOT EXCEEDING 25 PERCENT BY MASS
D. PLACE SLABS ON GRADE WITH CONSTRUCTION JOINT OR SAW JOINT AS INDICATED ON THE PLANS. SAW CUT TO BE DONE AS SOON AS POSSIBLE, BUT NO LATER THAN 24 HOURS AFTER CONCRETE IS PLACED. ALL INTERIOR SLABS TO HAVE A TROWEL FINISH AND ALL EXTERIOR SLABS TO HAVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE. MAINTAIN FLOOR LEVEL AT WALLS AND PITCH SURFACES UNIFORMLY TO DRAINS. ALL CONCRETE IS TO BE CURED FOR 7 DAYS. FLOORS TO BE STAINED, TO RECEIVE AN ASHFORD SEALER, OR TO RECEIVE ANOTHER FINISH THAT IS NOT COMPATIBLE WITH CURING COMPOUNDS ARE TO BE WET CURED OR CURED WITH AN ARMORLON TRANSGUARD 4000 WET CURE COVER PER MANUFACTURER'S SPECIFICATION. EXTERIOR SLABS SHALL BE SEPARATED FROM BUILDINGS WITH CONTINUOUS 1/2" FIBER EXPANSION JOINT AND/OR 1/4" FIBER EXPANSION JOINT AT DECORATIVE MASONRY UNITS. INTERIOR SLABS SHALL BE SEPARATED FROM FOUNDATION WALLS AND PIERS WITH FORM RELEASE AGENT, 15 LB. FELT OR AS DETAILED ON PLANS.
E. THE SLAB-ON-GRADE FLOOR FLATNESS/LEVELNESS SHALL MEET TO THE FOLLOWING CRITERIA:
   1. TOP OF FLOOR ELEVATION SHALL BE WITHIN 3/4" OF DESIGN ELEVATION IN ACCORDANCE TO ACI 117 TOLERANCES.
   2. THE SPECIFIED OVERALL VALUE FOR THE FLOOR FLATNESS/LEVELNESS PER ACI 117 AND ASTM E1155 IS AS FOLLOWS:
      a. NONCRITICAL MECHANICAL ROOMS, NONPUBLIC AREAS, AND PARKING - FF20 / FL15.
      b. CARPETED AREAS IN COMMERCIAL OFFICE, INDUSTRIAL BUILDING - FF25 / FL20.
      c. THIN-SET FLOORING, WAREHOUSE, POLISHED CONCRETE - FF35 / FL25.
      d. WAREHOUSE WITH AIR-PALLET USE, ICE RINKS - FF45 / FL35.
      e. CRITICAL AREAS AS INDICATED ON PLAN - >FF50 / >FL50.
   3. THE MINIMUM LOCAL VALUE FOR THE FLOOR FLATNESS/LEVELNESS SHALL NOT BE LESS THAN 67% OF THE SPECIFIED OVERALL VALUE.
   4. CONTRACTOR SHALL REPLACE AREAS THAT DO NOT MEET THESE CRITERIA.
F. THE SLAB-ON-GRADE FLOOR FLATNESS FOR SUPER FLAT FLOORS IN NARROW AISLE WAREHOUSES AND AREAS WITH DEFINED TRAFFIC FLOORS SHALL MEET THE FOLLOWING CRITERIA:
   1. THE SPECIFIED FLOOR FLATNESS SHALL BE F MIN. 100.
   2. SUPER FLAT FLOORS SHALL BE PLACED BY CONTINUOUS STRIP POURING. JOINT LOCATIONS SHALL BE PLACED AS INDICATED ON PLANS.
   3. SUPER FLAT FLOORS SHALL BE TESTED FOR COMPLIANCE USING A VEHICLE SIMULATION TESTING PROCEDURE. TESTING PROCEDURE AND AGENCY PERFORMING SIMULATION SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO START OF SLAB-ON-GRADE CONSTRUCTION.
   4. AREAS NOT MEETING THE SPECIFIED FLOOR FLATNESS SHALL BE REPAIRED BY GRINDING IF POSSIBLE. IF COMPLIANCE BY GRINDING IS NOT POSSIBLE CONTRACTOR SHALL REPLACE AREAS THAT DO NOT MEET CRITERIA.
G. BACKFILLING OF FOUNDATIONS:
   1. BACKFILLING OF OPPOSITE SIDES OF UNBRACED FOUNDATION WALLS SHALL MAINTAIN A MAXIMUM 2 FOOT DIFFERENTIAL IN ELEVATION PRIOR TO ACHIEVING FINAL SPECIFIED GRADE.
H. ALL REINFORCING BARS SHALL BE ASTM A615 GRADE 60. THICKNESS OF CONCRETE COVER OVER REINFORCEMENT SHALL BE NOT LESS THAN 3" WHERE CONCRETE IS DEPOSITED AGAINST THE GROUND WITHOUT THE USE OF FORMS AND NOT LESS THAN 1 1/2" FOR UP TO #6, 2" FOR #7 TO #10 IN ALL OTHER LOCATIONS. ALL REINFORCING SHALL BE LAPPED 48 DIAMETERS FOR UP TO #6 BARS, 62 DIAMETERS FOR #7 TO #9 BARS, 68 DIAMETERS FOR #10 BARS OR AS NOTED ON THE DRAWINGS AND EXTENDED AROUND CORNERS WITH CORNER BARS. PLACING AND DETAILING OF STEEL REINFORCING AND REINFORCING SUPPORTS SHALL BE IN ACCORDANCE WITH CRSI AND ACI MANUAL AND STANDARD PRACTICES. THE REINFORCEMENT SHALL NOT BE PAINTED AND MUST BE FREE OF GREASE/OIL, DIRT OR DEEP RUST WHEN PLACED IN THE WORK. ALL WELDED WIRE FABRIC SHALL MEET THE REQUIREMENTS OF ASTM A1064. WELDED WIRE FABRIC SHALL BE PLACED 2" FROM TOP OF SLAB, UNLESS INDICATED OTHERWISE.
I. CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO SAMPLE MATERIALS, PERFORM TESTS, AND SUBMIT TEST REPORTS DURING CONCRETE PLACEMENT. TESTS WILL BE PERFORMED ACCORDING TO ACI 301. CAST AND LABORATORY CURE ONE SET OF FOUR STANDARD CYLINDERS FOR EACH COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIX EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. PERFORM COMPRESSIVE-STRENGTH TESTS ACCORDING TO ASTM C 39. TEST TWO SPECIMENS AT 7 DAYS AND TWO SPECIMENS AT 28 DAYS. PERFORM SLUMP TESTING ACCORDING TO ASTM C 143. PROVIDE ONE TEST AT POINT OF PLACEMENT FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIX. PERFORM ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY APPEARS TO CHANGE.
J. VERIFY INTERIOR EQUIPMENT CONCRETE PAD SIZES WITH RESPECTIVE CONTRACTORS. PADS SHALL HAVE FIBERMESH 300 FIBERS AT A RATE OF 1.5 LBS/CU. YD. OR 6 X 6-W1.4 X W1.4 WELDED WIRE MESH WITH MINIMUM 1 INCH COVER. EQUIPMENT PADS SHALL BE 3.5 INCHES THICK (TOP OF PAD SHALL BE LEVEL IF POURED ON SLOPED FLOOR, THICKNESS SHALL BE AT HIGHEST FLOOR ELEVATION) WITH 1 INCH CHAMFER UNLESS SPECIFIED OTHERWISE AND SHALL BE PLACED AFTER PRECAST TOPPING HAS BEEN POURED.
K. PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES. IN HOT, DRY, AND WINDY WEATHER, APPLY AN EVAPORATION-CONTROL COMPOUND ACCORDING TO MANUFACTURER'S INSTRUCTIONS AFTER SCREEDING AND BULL FLOATING, BUT BEFORE POWER FLOATING AND TROWELING.
L. APPLY TROWEL FINISH TO MONOLITHIC SLAB SURFACES TO BE EXPOSED TO VIEW AND SLAB SURFACES TO BE COVERED WITH RESILIENT FLOORING, CARPET, PAINT, OR OTHER THIN FILM-FINISH COATING SYSTEM. APPLY NONSLIP BROOM FINISH TO EXTERIOR CONCRETE PLATFORMS, STEPS, AND RAMPS, AND ELSEWHERE AS INDICATED.
M. TEST RESULTS WILL BE REPORTED IN WRITING TO ARCHITECT, READY-MIX PRODUCER, AND CONTRACTOR WITHIN 24 HOURS AFTER TESTS. REPORTS OF COMPRESSIVE STRENGTH TESTS SHALL CONTAIN THE PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT, NAME OF CONCRETE TESTING SERVICE, CONCRETE TYPE AND CLASS, LOCATION OF CONCRETE BATCH IN STRUCTURE, DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIX PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH, AND TYPE OF BREAK FOR BOTH 7-DAY TESTS AND 28-DAY TESTS.

DIVISION 6 WOOD, PLASTICS AND COMPOSITES

06 10 00 ROUGH CARPENTRY

A. LUMBER SHALL BE GRADED AND STAMPED WITH MINIMUM STRUCTURAL DESIGN VALUES AS LISTED BELOW.
   1. #1/#2 DOUG FIR — 850 PSI FB, 95 PSI FV, 1,600 KSI E (BEAMS, LINTELS & HEADERS, UNLESS NOTED).
   2. #1/#2 S.P.F. — 875 PSI FB, 1,150 PSI FC, 1,400 KSI E (ALL STUDS & PLATES, UNLESS NOTED)
   3. LVL @ 1,800 KSI E OR MICRO-LAM @ ,1,900 KSI E — 2600 PSI FB, 285 PSI FV (OR AS NOTED ON THE PLANS).
   4. WOOD HEADER MATERIAL SHALL BE FREE OF ALL SPLITS, SHAKES AND CHECKS.
B. MISCELLANEOUS LUMBER: PROVIDE NO. 3 OR STANDARD GRADE LUMBER OF ANY SPECIES FOR SUPPORT OR ATTACHMENT OF OTHER CONSTRUCTION, INCLUDING ROOFTOP EQUIPMENT CURBS AND SUPPORT BASES, CANT STRIPS, BUCKS, NAILERS, BLOCKING, AND SIMILAR MEMBERS.
C. PROTECTION AGAINST DECAY WITH PRESERVATIVE-TREATED WOOD SHALL BE REQUIRED IN THE FOLLOWING AREAS:
   1. ALL WOOD SILL PLATES, FRAMING, AND FURRING STRIPS ATTACHED TO EXTERIOR BELOW GRADE MASONRY AND CONCRETE WALLS.
   2. ALL WOOD PLATES, BLOCKING, FRAMING AND FURRING STRIPS ATTACHED TO EXTERIOR, SINGLE-WYTHE MASONRY WALLS.
   3. ALL WOOD CAP FLASHING BLOCKING ATTACHED TO MASONRY OR CONCRETE PARAPETS.
   4. ALL WOOD SLEEPERS AND SILL PLATES ON CONCRETE SLABS IN DIRECT CONTACT WITH EARTH.
   5. EXCEPTION: WOOD SILL PLATES ON CONCRETE SLABS SEPARATED FROM DIRECT CONTACT TO THE EARTH WITH A 10 MIL POLYETHYLENE VAPOR RETARDANT WILL NOT REQUIRE PRESERVATIVE-TREATMENT.
   6. ALL WOOD IN CONTACT WITH GROUND OR EXPOSED TO THE WEATHER.
D. FINISHES FOR FASTENERS AND HARDWARE IN CONTACT WITH PRESERVATIVE-TREATED WOOD ARE BASED ON THE FOLLOWING ASSUMPTIONS:
   1. ALL INTERIOR TREATED WOOD SHALL USE AN ACQ-C, ACQ-D (CARBONATE), CBA-A, OR CA-B TREATMENT WITH RETENITON LEVELS LESS THAN OR EQUAL TO 0.40 PCF, 0.40 PCF, 0.41 PCF, AND 0.21 PCF RESPECTIVELY.
   2. ALL CONNECTION HARDWARE AND FASTENERS IN DIRECT CONTACT WITH INTERIOR TREATED WOOD

ARCHITECTURAL SPECIFICATIONS (CONT)

2. 25 PSI MIN. VERTICAL COMPRESSIVE STRENGTH MEASURED AT 10% STRAIN DEFORMATION OR AT YIELD, WHICHEVER OCCURS FIRST, EXCEPT WHERE PLANS/DETAILS INDICATE HIGHER VALUE. STYROFOAM HIGHLOAD INSULATION WHERE HIGHER VERTICAL COMPRESSIVE STRENGTHS ARE REQUIRED (MIN. VERTICAL COMPRESSIVE STRENGTH MEASURED AT 5% STRAIN DEFORMATION OR AT YIELD, WHICHEVER OCCURS FIRST).
3. THICKNESS AS INDICATED ON PLANS.

K. SPRAY POLYURETHANE FOAM INSULATION
1. MANUFACTURER: BASF SPRAYTITE 81206 XF.
2. SPRAYTITE 81206 XF FOR AMBIENT TEMPERATURE RANGE OF 29 TO 65 DEG F. SPRAYTITE 81206 F FOR AMBIENT TEMPERATURE RANGE OF 60 TO 120 DEG F.
3. TWO COMPONENT CLOSED CELL SPRAY POLYURETHANE FOAM INSULATION TO MEET NFPA 285 AND ASTM E84 (CLASS 1) WITH FLAME SPREAD INDEX LESS THAN 25 AND SMOKE DEVELOPED LESS THAN 450. MINIMUM DENSITY OF 2.0 LB/ CU. FT.
4. THERMAL VALUE: "R" VALUE OF 6.7 PER INCH
5. "R" VALUE AS INDICATED ON THE PLAN.

L. THERMAL BARRIER / IGNITION BARRIER INTUMESCENT COATING
1. MANUFACTURER: NO-BURN PLUS THB
2. THICKNESS AS REQUIRED BY MANUFACTURER TO MEET CODE.
3. COLOR SELECTED BY OWNER (WHITE, GRAY, DARK CHARCOAL).

M. ROOF INSULATION
1. SEE ROOF PLAN.

N. RIGID CAVITY WALL INSULATION IN MASONRY CAVITY WALLS
1. MANUFACTURER: DOW STYROFOAM CAVITYMATE OR PLYMOUTH FOAM
2. EXTRUDED POLYSTYRENE INSULATION, 15 PSI COMPRESSIVE STRENGTH
3. THERMAL VALUE: "R" VALUE OF 5 PER INCH
4. THICKNESS AS SHOWN ON THE PLAN.

O. RIGID CAVITY WALL INSULATION IN WOOD STUD WALLS
1. MANUFACTURER: DUPONTOW STYROFOAM CAVITYMATE
2. EXTRUDED POLYSTYRENE INSULATION, 15 PSI COMPRESSIVE STRENGTH
3. THERMAL VALUE: "R" VALUE OF 5 PER INCH
4. THICKNESS AS SHOWN ON THE PLAN.

P. RIGID AIR AND MOISTURE BARRIER INSULATION
1. MANUFACTURER: DUPONT THERMAX XARMOR CI (CONTINUOUS INSULATION)
2. RIGID FOIL FACED POLYISOCYANURATE BOARD INSULATION, 25 PSI COMPRESSIVE STRENGTH, 4.0 MIL EMBOSSED ACRYLIC-COATED EXTERIOR FOIL FACER AND 1.25 MIL EMBOSSED ALUMINUM BACK INTERIOR FACER.
3. THERMAL VALUE: "R" VALUE OF 6.5 PER INCH.
4. THICKNESS AS INDICATED ON THE PLANS.
5. FASTEN RIGID INSULATION BOARDS TO SUBSTRATE WITH THRUFAST THERMAL-GRIP OR OTHER DUPONT APPROVED FASTENERS PER MANUFACTURER GUIDELINES.
6. SEAM TREATMENT:
   a. MANUFACTURER: DUPONT LIQUIDARMOR-CM, LIQUIDARMOR LT, LIQUIDARMOR QS AND LIQUIDARMOR RS. PROVIDE MANUFACTURER SPECIFIED THICKNESS AND WIDTH OF LIQUIDARMOR PRODUCT. MAKE LIQUIDARMOR PRODUCT AVAILABLE TO ALL TRADES MAKING PENETRATIONS IN THE EXTERIOR WALL.
   b. COORDINATE SEQUENCE OF FLASHING INSTALLATIONS WITH OTHER TRADES.
   c. COMPLETE WATER-RESISTIVE BARRIER BY SEALING ALL END AND EDGE JOINTS, THRU-WALL PENETRATIONS, WINDOW AND DOOR OPENINGS, PENETRATIONS AND TRANSITION FLASHINGS WITH MANUFACTURER'S FLASHING AND SEALANT PRODUCT.
7. PRE-INSTALLATION MEETING: PRIOR TO APPLICATION OF WALL SYSTEM, CONTRACTOR SHALL REVIEW AND DOCUMENT METHODS AND PROCEDURES RELATED TO INSTALLATION WITH APPLICATOR AND MANUFACTURER REPRESENTATIVE AT MEETING.
8. INSTALLATION REVIEW: PROVIDE INSTALLATION INSPECTION COMPLETED BY MANUFACTURER CERTIFIED REPRESENTATIVE. PROVIDE INSPECTION REPORT TO ARCHITECT. PROVIDE PHOTOS OF WALL BASE FLASHING, WINDOW OPENING PERIMETER AND EXAMPLE MECHANICAL PENETRATIONS THRU EXTERIOR WALL.
9. THERMAX WALL SYSEM GOLD WARRANTY: CONTRACTOR SHALL COORDINATE AND COMPLETE APPICABLE FORMS AND PROVIDE OWNER FINAL WARRANTY CERTIFICATE AS PART OF THE CLOSEOUT SUBMITTALS.

Q. SILL SEAL
1. MANUFACTURER: DUPONT STYROFOAM SILL SEAL FOAM GASKET.

R. FOLLOW MANUFACTURER'S INSTRUCTIONS ON PRODUCT STORAGE AND HANDLING.

S. INSTALL INSULATION IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS SHOWN ON PLANS.

07 84 13 PENETRATION FIRESTOPPING

A. PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
1. HILTI, INC.
2. JOHNS MANVILLE
3. 3M FIRE PROTECTION PRODUCTS
4. TREMCO, INC. - TREMCO FIRE PROTECTION SYSTEMS GROUP
5. USG CORPORATION
6. RECTORSEAL — METACAULK FIRESTOPPING PRODUCTS

B. PROVIDE PENETRATION FIRESTOPPING THAT IS PRODUCED AND INSTALLED TO RESIST SPREAD OF FIRE ACCORDING TO INDICATED REQUIREMENTS, RESIST PASSAGE OF SMOKE AND OTHER GASES AND MAINTAIN ORIGINAL FIRE-RESISTANCE RATING OF CONSTRUCTION PENETRATED. PENETRATION FIRESTOPPING SYSTEMS SHALL BE COMPATIBLE WITH ONE ANOTHER, WITH THE SUBSTRATES FORMING OPENINGS, AND WITH ANY PENETRATING ITEMS.

C. PENETRATIONS IN FIRE-RESISTANCE-RATED WALLS:
1. RATINGS DETERMINED PER ASTM E 814 OR UL 1479.
2. F-RATING NOT LESS THAN THE FIRE-RESISTANCE RATING OF CONSTRUCTIONS PENETRATED.

D. PENETRATIONS IN HORIZONTAL ASSEMBLIES:
1. RATINGS DETERMINED PER ASTM E 814 OR UL 1479.
2. F-RATING AT LEAST 1 HOUR, BUT NOT LESS THAN THE FIRE-RESISTANCE RATING OF CONSTRUCTIONS PENETRATED.
3. T-RATING AT LEAST 1 HOUR, BUT NOT LESS THAN THE FIRE-RESISTANCE RATING OF CONSTRUCTIONS PENETRATED EXCEPT FOR FLOOR PENETRATIONS WITHIN THE CAVITY OF A WALL.

E. PENETRATIONS IN SMOKE BARRIERS:
1. PROVIDE PENETRATION FIRESTOPPING WITH RATINGS DETERMINED PER UL 1479.
2. L-RATING NOT EXCEEDING 5.0 CFM/SF OF PENETRATION OPENING AT BOTH AMBIENT AND ELEVATED TEMPERATURES.

F. EXPOSED PENETRATION FIRESTOPPING: PROVIDE PRODUCTS WITH FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES OF LESS THAN 25 AND 450, RESPECTIVELY, AS DETERMINED PER ASTM E 84.

G. ACCESSORIES: PROVIDE COMPONENTS FOR EACH PENETRATION FIRESTOPPING SYSTEM THAT ARE NEEDED TO INSTALL FILL MATERIALS AND TO MAINTAIN REQUIRED RATINGS. USE ONLY THOSE COMPONENTS SPECIFIED BY PENETRATION FIRE STOPPING MANUFACTURER AND APPROVED BY QUALIFIED TESTING AND INSPECTING AGENCY FOR FIRESTOPPING INDICATED.

H. EXAMINE SUBSTRATES AND CONDITIONS FOR COMPLIANCE WITH REQUIREMENTS FOR OPENING CONFIGURATIONS, PENETRATING ITEMS, SUBSTRATES, AND OTHER CONDITIONS AFFECTING PERFORMANCE OF THE WORK.

I. SUBMIT FIRE STOPPING SUBMITTAL PACKAGE WITH DETAILS OF ALL PENETRATIONS AND FIRESTOPPING TO BE USED ON THE PROJECT TO AHJ 30 DAYS PRIOR TO INSTALLATION.

J. INSTALL PENETRATION FIRE STOPPING TO COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND PUBLISHED DRAWINGS FOR PRODUCTS AND INDICATED APPLICATIONS.

K. INSTALL FORMING MATERIALS AND OTHER ACCESSORIES OF TYPES REQUIRED TO SUPPORT FILL MATERIALS DURING THEIR APPLICATION AND IN THE POSITION NEEDED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS REQUIRED TO ACHIEVE FIRE RATINGS INDICATED.
1. AFTER INSTALLING FILL MATERIALS AND ALLOWING THEM TO FULLY CURE, REMOVE COMBUSTIBLE FORMING MATERIALS AND OTHER ACCESSORIES NOT INDICATED AS PERMANENT COMPONENTS OF FIRESTOPPING.

L. INSTALL FILL MATERIALS FOR FIRESTOPPING BY PROVEN TECHNIQUES TO PRODUCE THE FOLLOWING RESULTS:
1. FILL VOIDS AND CAVITIES FORMED BY OPENINGS, FORMING MATERIALS, ACCESSORIES, AND PENETRATING ITEMS AS REQUIRED TO ACHIEVE FIRE-RESISTANCE RATINGS INDICATED.
2. APPLY MATERIALS SO THEY CONTACT AND ADHERE TO SUBSTRATES FORMED BY OPENINGS AND PENETRATING ITEMS.
3. FINISH FILL MATERIALS THAT WILL REMAIN EXPOSED AFTER COMPLETING THE WORK TO PRODUCE SMOOTH, UNIFORM SURFACES THAT ARE FLUSH WITH ADJOINING FINISHES.

M. IDENTIFY PENETRATION FIRESTOPPING WITH PREPRINTED METAL OR PLASTIC LABELS. ATTACH LABELS PERMANENTLY TO SURFACES ADJACENT TO AND WITHIN 6 INCHES OF FIRESTOPPING EDGE SO LABELS WILL BE VISIBLE TO ANYONE SEEKING TO REMOVE PENETRATING ITEMS OR FIRESTOPPING. USE MECHANICAL FASTENERS OR SELF-ADHERING TYPE LABELS WITH ADHESIVES CAPABLE OF PERMANENTLY BONDING LABELS TO SURFACES ON WHICH LABELS ARE PLACED. INCLUDE THE FOLLOWING INFORMATION ON LABELS:
1. THE WORDS "WARNING - PENETRATION FIRESTOPPING - DO NOT DISTURB. NOTIFY BUILDING MANAGEMENT OF ANY DAMAGE"
2. CONTRACTOR'S NAME, ADDRESS, AND PHONE NUMBER
3. DESIGNATION OF APPLICABLE TESTING AND INSPECTING AGENCY
4. DATE OF INSTALLATION
5. MANUFACTURER'S NAME
6. INSTALLER'S NAME

N. PROVIDE OWNER WITH DETAILS OF ALL INSTALLATIONS AND PRODUCTS USED. AT PROJECT CLOSEOUT.

07 84 46 - FIRE-RESISTIVE JOINT SYSTEMS

A. WHERE REQUIRED, PROVIDE FIRE-RESISTIVE JOINT SYSTEMS THAT ARE PRODUCED AND INSTALLED TO RESIST SPREAD OF FIRE ACCORDING TO REQUIREMENTS INDICATED, RESIST PASSAGE OF SMOKE AND OTHER GASES, AND MAINTAIN ORIGINAL FIRE-RESISTANCE RATING OF ASSEMBLIES IN OR BETWEEN WHICH FIRE-RESISTIVE JOINT SYSTEMS ARE INSTALLED. FIRE-RESISTIVE JOINT SYSTEMS SHALL ACCOMMODATE BUILDING MOVEMENTS WITHOUT IMPAIRING THEIR ABILITY TO RESIST THE PASSAGE OF FIRE AND HOT GASES.

B. PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
1. HILTI, INC.
2. JOHNS MANVILLE
3. 3M FIRE PROTECTION PRODUCTS
4. THERMAFIBER, INC.
5. TREMCO, INC. – TREMCO FIRE PROTECTION SYSTEM GROUP
6. USG CORPORATION
7. RECTORSEAL — METACAULK FIRESTOPPING PRODUCTS

C. JOINTS IN OR BETWEEN FIRE-RESISTANCE-RATED CONSTRUCTION:
1. RATINGS DETERMINED PER ASTM E 1966 OR UL 2079.
2. FIRE-RESISTANCE RATING EQUAL TO OR EXCEEDING THE FIRE-RESISTANCE RATING OF CONSTRUCTION THEY WILL JOIN.

D. JOINTS AT EXTERIOR CURTAIN-WALL/FLOOR INTERSECTIONS:
1. RATING DETERMINED BY ASTM E 119 OR ASTM E 2307.
2. FIRE-RESISTANCE RATING EQUAL TO OR EXCEEDING THE FIRE-RESISTANCE RATING OF THE FLOOR ASSEMBLY.

E. JOINTS IN SMOKE BARRIERS:
1. RATINGS DETERMINED PER UL 2079.
2. L-RATING NOT EXCEEDING 5.0 CFM/FT OF JOINT AT BOTH AMBIENT AND ELEVATED TEMPERATURES.

F. EXPOSED FIRE-RESISTIVE JOINT SYSTEMS: PROVIDE PRODUCTS WITH FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES OF LESS THAN 25 AND 450, RESPECTIVELY, AS DETERMINED PER ASTM E 84.

G. ACCESSORIES: PROVIDE COMPONENTS OF FIRE-RESISTIVE JOINT SYSTEMS, INCLUDING PRIMERS AND FORMING MATERIALS, THAT ARE NEEDED TO INSTALL FILL MATERIALS AND TO MAINTAIN REQUIRED RATINGS. USE ONLY COMPONENTS SPECIFIED BY FIRE-RESISTIVE JOINT SYSTEM MANUFACTURER AND APPROVED BY THE QUALIFIED TESTING AGENCY FOR SYSTEMS INDICATED.

H. EXAMINE SUBSTRATES AND CONDITIONS FOR COMPLIANCE WITH REQUIREMENTS FOR JOINT CONFIGURATIONS, SUBSTRATES AND OTHER CONDITIONS AFFECTING PERFORMANCE OF THE WORK.

I. INSTALL FIRE-RESISTIVE JOINT SYSTEMS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND PUBLISHED DRAWINGS FOR PRODUCTS AND APPLICATIONS.

J. INSTALL FORMING MATERIALS AND OTHER ACCESSORIES OF TYPES REQUIRED TO SUPPORT FILL MATERIALS DURING THEIR APPLICATION AND IN POSITION NEEDED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS REQUIRED TO ACHIEVE INDICATED FIRE RATINGS.
1. AFTER INSTALLING FILL MATERIALS AND ALLOWING THEM TO FULLY CURE, REMOVE COMBUSTIBLE FORMING MATERIALS AND OTHER ACCESSORIES NOT INDICATED AS PERMANENT COMPONENTS OF FIRE-RESISTIVE JOINT SYSTEM.

K. INSTALL FILL MATERIALS FOR FIRE-RESISTIVE JOINT SYSTEMS BY PROVEN TECHNIQUES TO PRODUCE THE FOLLOWING RESULTS:
1. FILL VOIDS AND CAVITIES FORMED BY JOINTS AND FORMING MATERIALS AS REQUIRED TO ACHIEVE INDICATED FIRE RESISTANCE RATINGS.
2. APPLY FILL MATERIALS SO THEY CONTACT AND ADHERE TO SUBSTRATES FORMED BY JOINTS.
3. FINISH FILL MATERIALS THAT WILL REMAIN EXPOSED AFTER COMPLETING THE WORK TO PRODUCE SMOOTH, UNIFORM SURFACES THAT ARE FLUSH WITH ADJOINING FINISHES.

L. IDENTIFY FIRE-RESISTIVE JOINT SYSTEMS WITH PREPRINTED METAL OR PLASTIC LABELS. ATTACH LABELS PERMANENTLY TO SURFACES ADJACENT TO AND WITHIN 6 INCHES OF JOINT EDGE SO LABELS WILL BE VISIBLE TO ANYONE SEEKING TO REMOVE OR PENETRATE JOINT SYSTEM. USE MECHANICAL FASTENERS OR SELF-ADHERING TYPE LABELS WITH ADHESIVES CAPABLE OF PERMANENTLY BONDING LABELS TO SURFACES ON WHICH LABELS ARE PLACED. INCLUDE THE FOLLOWING INFORMATION ON LABELS:
1. THE WORDS "WARNING - FIRE-RESISTIVE JOINT SYSTEM - DO NOT DISTURB. NOTIFY BUILDING MANAGEMENT OF ANY DAMAGE"
2. CONTRACTOR'S NAME, ADDRESS AND PHONE NUMBER
3. DESIGNATION OF APPLICABLE TESTING AGENCY
4. DATE OF INSTALLATION
5. MANUFACTURER'S NAME
6. INSTALLER'S NAME

07 92 00 SEALANTS

A. GENERAL: IT IS THE INTENTION OF THIS SPECIFICATION THAT ALL JOINTS ARE TO RECEIVE SEALANT. SEALANT SHALL BE APPLIED IN ALL LOCATIONS INDICATED ACCORDING TO THE MANUFACTURER'S WRITTEN INSTRUCTIONS, INCLUDING BUT NOT LIMITED TO; JOINT WIDTH, SURFACE PREPARATION, PRIMERS, APPLICATION TEMPERATURE, AND MATERIAL STORAGE. SEALANT IS TO BE APPLIED AFTER FINISH OPERATIONS ARE COMPLETE. UNLESS OTHERWISE NOTED IN THE MANUFACTURER'S INSTRUCTIONS, APPROPRIATE SIZED BACKER RODS AND BOND BREAK IS REQUIRED AT ALL JOINTS.

B. EXTERIOR:
1. SEAL PERIMETER OF ALL WINDOWS, DOORS, LOUVERS, VENT OPENINGS, AND ANY LOCATION WHERE DIFFERENT MATERIALS MEET, WITH SEALANT TYPE ES-1.
2. SEAL JOINTS AT ROOF OPENINGS, EAVES, AND SOFFITS, FOR A WATERTIGHT CONNECTION WITH SEALANT TYPE ES-2.
3. SEAL THRESHOLDS TO SUBSTRATE WITH SEALANT TYPE ES-3.
4. SEAL ALL CMU CONTROL JOINTS, JOINTS IN PRE-CAST CONCRETE PANELS, AND JOINTS BETWEEN PRE-CAST COMPONENTS AND MASONRY OR OTHER PRE-CAST OR CAST — IN - PLACE CONCRETE, WITH SEALANT TYPE ES-1 OR ES-6.
5. SEAL ALL JOINTS IN TRAFFIC SURFACES SUCH AS CONCRETE PAVEMENT, SIDEWALKS, AND PADS WITH SEALANT TYPE ES-5. USE ES-6 AT SURFACES SLOPING IN EXCESS OF 1/2" PER FOOT.
6. SEAL BASE CHANNELS FOR INSULATED METAL PANELS TO FOUNDATION WITH SEALANT TYPE ES-3 OR TP-1.
7. SEAL INSULATED METAL PANELS TO BASE CHANNELS WITH SEALANT TYPE ES-4.
8. SEAL PANEL TO PANEL JOINTS IN INSULATED METAL PANELS WITH SEALANT TYPE ES-4.
9. SEAL FACE JOINTS IN INSULATED PANELS WHERE INDICATED WITH SEALANT TYPE ES-7.

C. INTERIOR:
1. SEAL ALL CMU CONTROL JOINTS, JOINTS IN PRE-CAST CONCRETE PANELS, AND JOINTS BETWEEN PRE-CAST COMPONENTS AND MASONRY OR OTHER PRE-CAST OR CAST-IN —PLACE CONCRETE, WITH SEALANT TYPE ES-6.
2. SEAL JOINTS IN EXPOSED CONCRETE SLABS IN WITH SEALANT TYPE ES-8.
3. SEAL JOINTS BETWEEN TOP OF CONCRETE CURBS AND INSULATED METAL PANELS WITH SEALANT TYPE ES-9.
4. SEAL JOINTS BETWEEN INSULATED METAL PANEL AND TRIM ELEMENTS WITH SEALANT TYPE ES-7.
5. SEAL JOINTS IN COOLER AND FREEZER FLOORS WITH SEALANT TYPE ES-10.
6. SEAL JOINTS AT ALL LOCATIONS INDICATED TO RECEIVE "STRANLOK" FINISH IN FOOD PROCESSING FACILITIES, FOOD PREPARATION, AND FOOD STORAGE AREAS WITH SEALANT TYPE ES-6.
7. SEAL COUNTERTOPS, BACKSPLASH, PERIMETERS OF PLUMBING FIXTURES WITH SEALANT TYPE ES-11.
8. SEAL UNDER BASE TRACK FOR DRYWALL PARTITIONS, INTERIOR DOOR AND WINDOW FRAMES, AND WALL ANGLE AT SUSPENDED CEILINGS WITH SEALANT TYPE AS-1.

D. SEALANT SCHEDULE: (SIMILAR PRODUCTS BY OTHER MANUFACTURERS MAY BE SUBMITTED FOR APPROVAL.)
1. ES-1: TREMCO "DYMONIC FC" ONE PART HIGH PERFORMANCE POLYURETHANE SEALANT.
2. ES-2: TREMCO "GUTTER SEAL" SYNTHETIC RUBBER AND RESIN SEALANT.
3. ES-3 TREMCO "BUTYL SEALANT" MULTI-COMPONENT SEALANT.
4. ES-4: SIKA "SIKALASTOMER — 511" NON-SKINNING BUTYL SEALANT.
5. ES-5 TREMCO "VULKEM 45 SSL" ONE PART, POURABLE SELF LEVELING, POLYURETHANE SEALANT.
6. ES-6: TREMCO "DYMONIC" ONE PART, HIGH PERFORMANCE, LOW MODULUS, POLYURETHANE SEALANT.
7. ES-7: TREMCO "SPECTREM 2" ONE PART, LOW MODULUS SILICONE SEALANT.
8. ES-8: TREMCO SA-FLEX "SL/85" TWO PART, SELF-LEVELING, POLYUREA SEALANT.
9. ES-9: TREMCO "DYMERIC 240FC" MULTI-COMPONENT CHEMICALLY CURING POLYURETHANE SEALANT.
10. ES-10: M&M "SPAL-PRO RSF" TWO COMPONENT POLYUREA JOINT FILLER.
11. ES-11: TREMCO "TERMSIL 200" OR GE "SILICONE II KITCHEN AND BATH" SINGLE COMPONENT SILICONE SEALANT.
12. AS-1: DAP "ALEX PLUS" PAINTABLE ACRYLIC LATEX - SILICONIZED SEALANT.
    TP-1: TREMCO "440 TAPE" BUTYL SEALANT TAPE.

DIVISION 08 OPENINGS

08 11 13 HOLLOW METAL DOORS AND FRAMES

A. HOLLOW METAL FRAMES: COMPLY WITH ANSI/SDI A250.11.
1. SET FRAMES ACCURATELY IN POSITION, PLUMBED, ALIGNED, AND BRACED SECURELY UNTIL PERMANENT ANCHORS ARE SET. AFTER WALL CONSTRUCTION IS COMPLETE, REMOVE TEMPORARY BRACES, LEAVING SURFACES SMOOTH AND UNDAMAGED.
2. AT FIRE-PROTECTION-RATED OPENINGS, INSTALL FRAMES ACCORDING TO NFPA 80.

B. HOLLOW METAL DOORS: FIT HOLLOW METAL DOORS ACCURATELY IN FRAMES, WITHIN CLEARANCES. SHIM AS NECESSARY TO ACHIEVE CLEARANCES INDICATED.
1. FIRE-RATED DOORS: INSTALL DOORS WITH CLEARANCES ACCORDING TO NFPA 80.
2. SMOKE-CONTROL DOORS: INSTALL DOORS ACCORDING TO NFPA 105.

C. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION. FURNISH AND INSTALL ALL DOORS AND FRAMES AS INDICATED ON THE PLANS.

08 14 16 FLUSH WOOD DOORS

A. INSTALL DOORS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND THE REFERENCED QUALITY STANDARD, AND AS INDICATED.
1. INSTALL FIRE-RATED DOORS IN CORRESPONDING FIRE-RATED FRAMES ACCORDING TO NFPA 80.

B. ALIGN IN FRAMES FOR UNIFORM CLEARANCE AT EACH EDGE.

C. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION. FURNISH AND INSTALL ALL DOORS AS INDICATED ON THE PLANS.

08 41 13 ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

A. INSTALLATION:
1. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
2. DO NOT INSTALL DAMAGED COMPONENTS.
3. FIT JOINTS TO PRODUCE HAIRLINE JOINTS FREE OF BURRS AND DISTORTION.
4. RIGIDLY SECURE NONMOVEMENT JOINTS.
5. INSTALL ANCHORS WITH SEPARATORS AND ISOLATORS TO PREVENT METAL CORROSION AND ELECTROLYTIC DETERIORATION.
6. SEAL JOINTS WATERTIGHT UNLESS OTHERWISE INDICATED.

B. INSTALL COMPONENTS TO DRAIN WATER PASSING JOINTS, CONDENSATION OCCURRING WITHIN FRAMING MEMBERS, AND MOISTURE MIGRATING WITHIN THE SYSTEM TO EXTERIOR.

C. INSTALL COMPONENTS PLUMB AND TRUE IN ALIGNMENT WITH ESTABLISHED LINES AND GRADES, AND WITHOUT WARP OR RACK.

D. ENTRANCE DOORS: INSTALL DOORS TO PRODUCE SMOOTH OPERATION AND TIGHT FIT AT CONTACT POINTS.

E. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION. FURNISH AND INSTALL ALL ENTRANCES AND STOREFRONTS AS INDICATED ON THE PLANS.

08 71 00 HARDWARE

A. REQUIREMENTS:
1. ALL LOCKSETS SHALL BE LEVER TYPE AS REQUIRED TO MEET REQUIREMENTS OF A.D.A.
2. ALL OTHER HARDWARE SHALL CONFORM TO THE REQUIREMENTS OF A.D.A.
3. ALL EXIT DOORS SHALL BE EQUIPPED WITH LEVER TYPE OR PANIC TYPE EXIT HARDWARE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A LATCH, KEY OR BOLT.
4. CONTRACTOR TO COORDINATE KEYING SCHEDULE WITH OWNER.

B. MOUNTING HEIGHTS: MOUNT DOOR HARDWARE UNITS AT HEIGHTS REQUIRED TO COMPLY WITH GOVERNING REGULATIONS.

C. INSTALL EACH DOOR HARDWARE ITEM TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

D. THRESHOLDS: SET THRESHOLDS FOR EXTERIOR AND ACOUSTICAL DOORS IN FULL BED OF SEALANT.

E. ADJUSTMENT: ADJUST AND CHECK EACH OPERATING ITEM OF DOOR HARDWARE AND EACH DOOR TO ENSURE PROPER OPERATION OR FUNCTION OF EVERY UNIT. REPLACE UNITS THAT CANNOT BE ADJUSTED TO OPERATE AS INTENDED. ADJUST DOOR CONTROL DEVICES TO COMPENSATE FOR FINAL OPERATION OF HEATING AND VENTILATING EQUIPMENT AND TO COMPLY WITH REFERENCED ACCESSIBILITY REQUIREMENTS.

F. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION. FURNISH AND INSTALL ALL HARDWARE AS INDICATED ON THE PLAN.

08 80 00 GLAZING

A. COMPLY WITH COMBINED WRITTEN INSTRUCTIONS OF MANUFACTURERS OF GLASS, SEALANTS, GASKETS, AND OTHER GLAZING MATERIALS, UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED, INCLUDING THOSE IN REFERENCED GLAZING PUBLICATIONS.

B. PROTECT GLASS EDGES FROM DAMAGE DURING HANDLING AND INSTALLATION. REMOVE DAMAGED GLASS FROM PROJECT SITE AND LEGALLY DISPOSE OF OFF PROJECT SITE. DAMAGED GLASS IS GLASS WITH EDGE DAMAGE OR OTHER IMPERFECTIONS THAT, WHEN INSTALLED, COULD WEAKEN GLASS AND IMPAIR PERFORMANCE AND APPEARANCE.

C. PROVIDE SAFETY GLASS IN ALL GLAZING AS LISTED BELOW UNLESS NOTED OTHERWISE:
1. WHERE REQUIRED BY FEDERAL, STATE AND LOCAL CODES.

D. SAFETY GLASS REQUIREMENTS:
1. SAFETY GLASS SHALL BE, BUT NOT LIMITED TO
   a. TEMPERED GLASS
   b. LAMINATED GLASS
   c. SAFETY PLASTIC
   d. SAFETY INSULATING UNITS WHICH MEET THE TEST REQUIREMENTS OF ANSI Z97.1, AND WHICH ARE CONSTRUCTED, TREATED, OR COMBINED WITH OTHER MATERIALS SO AS TO MINIMIZE THE LIKELIHOOD OF CUTTING AND PIERCING INJURIES RESULTING FROM HUMAN IMPACT WITH THE GLAZING MATERIAL.
2. ALL SAFETY GLAZING MATERIAL SHALL BE LABELED PER LOCAL, STATE, AND FEDERAL REQUIREMENTS.

E. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION. FURNISH AND INSTALL THE GLAZING AS INDICATED ON THE PLAN.

DIVISION 09 FINISHES

09 01 00 FINISHES

A. REQUIREMENTS:
1. PROVIDE AND INSTALL ALL FINISHES AS INDICATED ON PLANS.
2. INSTALL ALL MATERIALS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
3. "FINISH" INSTALLER INSPECT SUBSURFACE AND PREPARE AS PER MANUFACTURER'S SPECIFICATIONS PRIOR TO INSTALLATION OF PRODUCT.
4. ALL FINISHES TO MEET ALL CODE REQUIREMENTS AND REGULATIONS INCLUDING FLAME SPREAD AND SMOKE DEVELOPMENT.

B. EXTRA MATERIAL:
1. PROVIDE NEW, EXTRA MATERIAL OF EACH FINISH TYPE AND COLOR TO BE TURNED OVER TO OWNER AT JOB COMPLETION FOR THE FOLLOWING ITEMS:
   a. PAINT: PROVIDE 1 GALLON FOR FIELD COLORS AND 1 QUART FOR ACCENT COLORS APPLIED.
   b. RESILIENT TILE FLOORING: PROVIDE 1 BOX FOR EVERY 50 BOXES OR FRACTION THEREOF INSTALLED. FURNISH MINIMUM 10 LINEAR FEET FOR EACH 500 LINEAR FEET OR FRACTION THEREOF OF EACH TYPE OF RESILIENT ACCESSORY SUPPLIED.
   c. ACOUSTICAL CEILING TILE: PROVIDE FULL-SIZE UNITS EQUAL TO 2% OF QUANTITY INSTALLED, BUT NOT LESS THAN 1 BOX OF EACH TYPE OF CEILING TILE SUPPLIED.
   d. WOOD FLOORING: PROVIDE FULL-SIZE UNITS EQUAL TO 3% OF QUANTITY INSTALLED, BUT NOT LESS THAN 50 S.F.
   e. LAMINATE FLOORING: PROVIDE FULL-SIZE UNITS EQUAL TO 3% OF QUANTITY INSTALLED, BUT NOT LESS THAN 50 S.F.
   f. RESILIENT SHEET FLOORING: PROVIDE NOT LESS THAN 10 LINEAR FEET FOR EACH 500 LINEAR FEET OR FRACTION THEREOF INSTALLED.
   g. WALL COVERING MATERIAL: PROVIDE FULL-SIZE UNITS EQUAL TO 5 PERCENT INSTALLED.
   h. TILE CARPET: PROVIDE FULL-SIZE UNITS EQUAL TO 5 PERCENT OF THE AMOUNT INSTALLED, BUT NOT LESS THAN 10 SQ. YD.
   i. SHEET CARPET: PROVIDE FULL-WIDTH ROLLS EQUAL TO 5 PERCENT OF THE AMOUNT INSTALLED, BUT NOT LESS THAN 10 SQ. YD.
   j. CERAMIC, QUARRY AND PORCELAIN TILE: PROVIDE FULL-SIZE UNITS EQUAL TO 3% OF QUANTITY INSTALLED, BUT NOT LESS THAN 50 S.F.

09 22 16 DRYWALL STUDS (INTERIOR NON-BEARING)

A. REQUIREMENTS:
1. STUDS SHALL BE SECURED TO TOP AND BOTTOM TRACK WITH (1) #8ML SCREW IN EACH FLANGE (UNLESS A SLIP TRACK IS REQUIRED AT THE TOP OF THE WALL).
2. PROVIDE SLIP TRACK AT TOP OF FULL HEIGHT PARTITIONS.
3. STUDS SHALL BE INSTALLED PER "GYPSUM CONSTRUCTION HANDBOOK" AS PUBLISHED BY UNITED STATES GYPSUM COMPANY LATEST EDITION.
4. DRYWALL STUDS SHALL BE ACCORDING TO THE LIST BELOW OR AS INDICATED ON THE PLANS (THESE HEIGHTS ARE BASED ON THE STUDS HAVING (1) LAYER OF DRYWALL EACH FACE).
5. STUD SIZE — GAUGE — LIMITING HEIGHT WITH STUD SPACING
   a. 3 5/8" — 25 GA. — 13'-6" AT 16" O.C. — 11'-9" AT 24" O.C.
   b. 3 5/8" — 22 GA. — 15'-3" AT 16" O.C. — 13'-4" AT 24" O.C.
   c. 3 5/8" — 20 GA. — 15'-11" AT 16" O.C. — 13'-11" AT 24" O.C.
   d. 6" — 25 GA. — 20'-0" AT 16" O.C. — 17'-6" AT 24" O.C.
   e. 6" — 22 GA. — 22'-9" AT 16" O.C. — 19'-11" AT 24" O.C.
   f. 6" — 20 GA. — 23'-9" AT 16" O.C. — 20'-9" AT 24" O.C.

09 29 00 GYPSUM BOARD (GYP)

A. DRYWALL SHALL BE INSTALLED PER THE LATEST EDITIONS OF "RECOMMENDED SPECIFICATIONS FOR THE APPLICATION AND FINISHING OF GYPSUM BOARD" GA-216 AS PUBLISHED BY THE GYPSUM ASSOCIATION AND THE "GYPSUM CONSTRUCTION HANDBOOK" AS PUBLISHED BY UNITED STATES GYPSUM COMPANY.
1. PROVIDE CONTROL JOINTS PER THESE REQUIREMENTS.

B. COMPLY WITH ASTM C36 OR ASTM C 1396 AS APPLICABLE TO THE TYPE OF GYPSUM BOARD INDICATED.

C. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURES OFFERING PRODUCTS THAT MAY BE INCORPORATED INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
1. AMERICAN GYPSUM CO.
2. BPB AMERICAN INC.
3. G-P GYPSUM
4. LAFARGE NORTH AMERICA INC.
5. NATIONAL GYPSUM COMPANY
6. USG CORPORATION

D. AT ALL TOILET ROOMS, LOCKERS ROOMS, COOLER/FREEZER ROOMS, UNDER FRP PANELS OR OTHER DAMP/WET LOCATIONS PROVIDE:
1. GOLD BOND XP GYPSUM BOARD BY NATIONAL GYPSUM OR EQUAL.

E. UNDER CERAMIC AND PORCELAIN TILE IN TOILET ROOMS, LOCKER ROOMS OR OTHER DAMP/WET LOCATIONS PROVIDE:
1. FIBEROCK AQUA-TO

ARCHITECTURAL SPECIFICATIONS (CONT)

6. LEVEL 4 — JOINTS AND INTERIOR ANGLES HAVE TAPE EMBEDDED IN JOINT COMPOUND AND TWO SEPARATE COATS OF JOINT COMPOUND APPLIED OVER ALL FLAT JOINTS AND ONE SEPARATE COAT APPLIED OVER INTERIOR ANGLES; FASTENER HEADS AND ACCESSORIES ARE COVERED WITH THREE (3) SEPARATE COATS OF JOINT COMPOUND; NO TOOL MARKS OR RIDGES.
7. LEVEL 5 — IN ADDITION TO REQUIREMENTS OF LEVEL 4, A THIN SKIM COAT OF JOINT COMPOUND OR EQUAL SHALL BE APPLIED TO THE ENTIRE SURFACE: NO TOOL MARKS OR RIDGES ON THIS SURFACE.

09 51 13 ACOUSTICAL PANEL CEILINGS

A. PROVIDE MANUFACTURER'S STANDARD CEILING TILE AS SPECIFIED COMPLYING WITH ASTM 1264 CLASSIFICATIONS.
B. COMPLY WITH ASTM C636 (STANDARD PRACTICE FOR INSTALLATION OF METAL CEILING SUSPENSION SYSTEMS FOR ACOUSTICAL TILE AND LAY-IN PANELS), ASTM C635 (STANDARD SPECIFICATION FOR THE MANUFACTURE, PERFORMANCE AND TESTING OF METAL SUSPENSION SYSTEMS FOR ACOUSTICAL TILE AND LAY-IN PANEL CEILINGS) AND SEISMIC DESIGN REQUIREMENTS INDICATED, PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND CISCA'S "CEILING SYSTEMS HANDBOOK".
C. SUSPEND CEILING HANGERS FROM BUILDING'S STRUCTURAL MEMBERS, PLUMB AND FREE FROM CONTACT WITH INSULATION OR OTHER OBJECTS WITHIN CEILING PLENUM. SPLAY HANGERS ONLY WHERE REQUIRED AND, IF PERMITTED WITH FIRE-RESISTANCE-RATED CEILINGS, TO MISS OBSTRUCTIONS, OFFSET RESULTING HORIZONTAL FORCES BY BRACING, COUNTER SPLAYING, OR OTHER EQUALLY EFFECTIVE MEANS. WHERE WIDTH OF DUCTS AND OTHER CONSTRUCTION WITHIN CEILING PLENUM PRODUCES HANGER SPACING THAT INTERFERE WITH LOCATION OF HANGERS, USE TRAPEZES OR EQUIVALENT DEVICES. WHEN STEEL FRAMING DOES NOT PERMIT INSTALLATION OF HANGER WIRES AT SPACING REQUIRED, INSTALL CARRYING CHANNELS OR OTHER SUPPLEMENTAL SUPPORT FOR ATTACHMENT OF HANGER WIRES.
D. WIRE HANGERS TO BE ZINC-COATED CARBON STEEL WIRE COMPLYING WITH ASTM A641 STANDARDS, SIZED TO WITHSTAND 5X THE HANGER DESIGN LOAD BUT NOT LESS THAN 0.106" IN DIAMETER.
E. INSTALL EDGE MOLDINGS AND TRIM AT PERIMETER OF ACOUSTICAL CEILING AREA AND WHERE NECESSARY TO CONCEAL EDGES OF ACOUSTICAL PANELS. SCREW ATTACH MOLDINGS TO SUBSTRATE, LEVELING WITH CEILING SUSPENSION SYSTEM. MITER CORNERS ACCURATELY AND CONNECT SECURELY.
F. INSTALL SUSPENSION SYSTEM RUNNERS SO THEY ARE SQUARE AND SECURELY INTERLOCKED WITH ONE ANOTHER. REMOVE AND REPLACE DENTED, BENT, OR KINKED MEMBERS. SUSPENSION SYSTEM AS REQUIRED FOR THE SPECIFIED TILE-INTERMEDIATE DUTY CLASSIFICATION.
G. PROVIDE CORROSION RESISTANT GRID IN SHOWER AND EXTREME ENVIRONMENT AREAS.
H. INSTALL ACOUSTICAL PANELS WITH UNDAMAGED EDGES AND FIT ACCURATELY INTO SUSPENSION SYSTEM RUNNERS AND EDGE MOLDINGS. SCRIBE AND CUT PANELS AT BORDERS AND PENETRATIONS TO PROVIDE A NEAT, PRECISE FIT.
I. PROVIDE HOLD-DOWN CLIPS AT ENTRY VESTIBULE(S) AND FOR FIRST 12' OF CORRIDOR(S) IN FRONT OF EACH EXTERIOR DOOR.
J. PROVIDE APPROVED FIRE RATED GRID SYSTEM FOR FIRE RATED CEILINGS.
K. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION.

09 65 13 RESILIENT BASE AND ACCESSORIES

A. PROVIDE MANUFACTURES STANDARD VINYL BASE AS SPECIFIED THAT COMPLIES WITH ASTM F1861 TYPE TV.
B. PROVIDE MANUFACTURES STANDARD VINYL ACCESSORIES AS SPECIFIED THAT COMPLIES WITH ASTM F2169 TYPE TV.
C. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS FOR INSTALLING RESILIENT BASE AND ACCESSORIES.
D. PREPARE SUBSTRATES ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS TO ENSURE ADHESION OF BASE AND ACCESSORIES.
E. APPLY RESILIENT BASE TO WALLS, COLUMNS, PILASTERS, CASEWORK AND CABINETS IN TOE SPACES AND OTHER PERMANENT FIXTURES IN ROOMS AND AREAS WHERE BASE IS SPECIFIED.
F. INSTALL RESILIENT BASE IN LENGTHS AS LONG AS PRACTICAL WITHOUT GAPS AT SEAMS AND WITH TOPS OF ADJACENT PIECES ALIGNED.
G. TIGHTLY ADHERE RESILIENT BASE OR ACCESSORY TO SUBSTRATE THROUGHOUT LENGTH OF EACH PIECE, WITH BASE OR ACCESSORY IN CONTINUOUS CONTACT WITH HORIZONTAL AND VERTICAL SUBSTRATES.
H. DO NOT STRETCH RESILIENT BASE DURING INSTALLATION.
I. ON MASONRY SURFACES OR OTHER SIMILAR IRREGULAR'S SUBSTRATES, FILL VOIDS ALONG TOP EDGE OF RESILIENT BASE WITH MANUFACTURER'S RECOMMENDED ADHESIVE FILLER MATERIAL.
J. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION.

09 65 19 RESILIENT TILE FLOORING (RTF)

A. PROVIDE MANUFACTURES STANDARD VINYL COMPOSITE FLOOR TILE AS SPECIFIED COMPLYING WITH ASTM F1066 CLASSIFICATIONS.
B. PREPARE SUBSTRATES ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS TO ENSURE ADHESION OF FLOOR COVERINGS.
   1. MOISTURE TESTING: PERFORM TESTS RECOMMENDED BY MANUFACTURER. PROCEED WITH INSTALLATION ONLY AFTER SUBSTRATES PASS TESTING.
C. FILL CRACKS, HOLES, AND DEPRESSIONS IN SUBSTRATES WITH TROWELABLE LEVELING AND PATCHING COMPOUND AND REMOVE BUMPS AND RIDGES TO PRODUCE A UNIFORM AND SMOOTH SUBSTRATE.
D. DO NOT INSTALL FLOOR COVERINGS UNTIL THEY ARE SAME TEMPERATURE AS SPACE WHERE THEY ARE TO BE INSTALLED.
E. SWEEP AND VACUUM CLEAN SUBSTRATES TO BE COVERED BY FLOOR COVERINGS IMMEDIATELY BEFORE INSTALLATION.
F. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS FOR INSTALLING FLOOR TILE.
G. LAY OUT FLOOR TILES FROM CENTER MARKS ESTABLISHED WITH PRINCIPAL WALLS, DISCOUNTING MINOR OFFSETS, SO TILES AT OPPOSITE EDGES OF ROOM ARE OF EQUAL WIDTH. ADJUST AS NECESSARY TO AVOID USING CUT WIDTHS THAT EQUAL LESS THAN ONE-HALF TILE AT PERIMETER. MATCH TILES FOR COLOR/PATTERN AND LAY TILE WITH GRAIN DIRECTION ALTERNATING IN ADJACENT TILES.
H. SCRIBE, CUT, AND FIT FLOOR TILES TO BUTT NEATLY AND TIGHTLY TO VERTICAL SURFACES AND PERMANENT FIXTURES INCLUDING BUILT-IN FURNITURE, CABINETS, PIPES, OUTLETS, AND DOOR FRAMES.
I. EXTEND FLOOR TILES INTO TOE SPACES, DOOR REVEALS, CLOSETS, AND SIMILAR OPENINGS. EXTEND FLOOR TILES TO CENTER OF DOOR OPENINGS.
J. ADHERE FLOOR TILES TO FLOORING SUBSTRATES USING A FULL SPREAD OF ADHESIVE APPLIED TO SUBSTRATE TO PRODUCE A COMPLETED INSTALLATION WITHOUT OPEN CRACKS, VOIDS, RAISING AND PUCKERING AT JOINTS, TELEGRAPHING OF ADHESIVE SPREADER MARKS, AND OTHER SURFACE IMPERFECTIONS.
K. FLOORING CONTRACTOR SHALL STRIP AND FINISH ALL VCT FLOORING AS RECOMMENDED PER MANUFACTURERS SPECIFICATIONS PRIOR TO OCCUPANCY.
L. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS FOR CLEANING AND PROTECTION OF FLOOR TILE.
M. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION.

09 68 13 TILE CARPETING, WALK OFF CARPETING (CPT, WOC)

A. GENERAL: COMPLY WITH CRI 104, SECTION 14, "CARPET MODULES", AND WITH CARPET TILE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
B. PREPARE FLOOR SURGACES RECEIVING NEW FLOORING AS REQUIRED FOR A SMOOTH AND LEVEL SURFACE PRIOR TO INSTALLING NEW FLOORING.
C. INSTALLATION METHOD: AS RECOMMENDED IN WRITING BY CARPET TILE MANUFACTURER.
D. EXTEND CARPET TILE INTO TOE SPACES, DOOR REVEALS, CLOSETS, OPEN-BOTTOMED OBSTRUCTIONS, REMOVABLE FLANGES, ALCOVES, AND SIMILAR OPENINGS.
E. INSTALL PATTERN PARALLEL TO WALLS AND BORDERS.
F. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION.

09 72 00 VINYL WALL COVERING

A. CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BOND OF WALL COVERING, INCLUDING DIRT, OIL, GREASE, MOLD, MILDEW, AND INCOMPATIBLE PRIMERS.
B. PREPARE SUBSTRATES TO ACHIEVE A SMOOTH, DRY, CLEAN, STRUCTURALLY SOUND SURFACE FREE OF FLAKING, UNSOUND COATINGS, CRACKS, AND DEFECTS.
C. ACCLIMATIZE WALL-COVERING MATERIALS BY REMOVING THEM FROM PACKAGING IN THE INSTALLATION AREAS NOT LESS THAN 24 HOURS BEFORE INSTALLATION.
D. CUT WALL-COVERING STRIPS IN ROLL NUMBER SEQUENCE. CHANGE ROLL NUMBERS AT PARTITION BREAKS AND CORNERS.
E. INSTALL WALL COVERING WITH NO GAPS OR OVERLAPS, NO LIFTED OR CURLING EDGES, AND NO VISIBLE SHRINKAGE.
F. MATCH PATTERN AT 72" ABOVE FINISHED FLOOR.
G. EXTEND WALL COVERING A MIN. OF 6" BEHIND PERMANENT CASEWORK AND EQUIPMENT.
H. INSTALL SEAMS VERTICAL AND PLUMB AT LEAST 6 INCHES (150 MM) FROM OUTSIDE CORNERS AND 3 INCHES (75 MM) FROM INSIDE CORNERS UNLESS A CHANGE OF PATTERN OR COLOR EXISTS AT CORNER. NO HORIZONTAL SEAMS ARE PERMITTED.
I. FULLY BOND WALL COVERING TO SUBSTRATE. REMOVE AIR BUBBLES, WRINKLES, BLISTERS, AND OTHER DEFECTS.
J. REMOVE EXCESS ADHESIVE AT FINISHED SEAMS, PERIMETER EDGES, AND ADJACENT SURFACES.
K. ADHESIVE TO BE MILDEW RESISTANT, NON-STAINING AS RECOMMENDED BY THE WALL COVERING MANUFACTURER.
L. SEE PLAN FOR PRODUCT SPECIFICATION AND LOCATION.

09 91 00 PAINTING

A. REMOVE AND/OR PROTECT ALL HARDWARE, HARDWARE ACCESSORIES, MACHINED SURFACES, PLATES, LIGHTING FIXTURES, SPRINKLER HEADS AND SIMILAR ITEMS THAT ARE NOT TO BE PAINTED, BUT REQUIRE PROTECTION FROM THE PAINTING PROCESS. RE-INSTALL SAME AFTER COMPLETION OF PAINTING. MASK OFF ALL NAMEPLATES, EQUIPMENT IDENTIFICATION AND SIMILAR ITEMS. REMOVAL AND REINSTALL OF ITEMS IS TO BE DONE BY CONTRACTOR SKILLED IN SUCH WORK.
B. SEAL TOPS, BOTTOMS AND CUTOUTS OF UNPRIMED WOOD DOORS WITH A HEAVY COAT OF SEALER IMMEDIATELY UPON DELIVERY TO THE PROJECT.
C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER PREPARATION OF ALL SURFACES PRIOR TO THE PAINTING INSTALLATION.
D. GALVANIZED METAL: CLEAN PER SSPC-SP1 USING DETERGENT AND WATER OR A DEGREASING CLEANER TO REMOVE GREASES AND OILS. APPLY A TEST AREA, PRIMING AS REQUIRED. ALLOW THE COATING TO DRY AT LEAST ONE WEEK BEFORE TESTING. IF ADHESION IS POOR, BRUSH BLAST PER SSPC-SP7 IS NECESSARY TO REMOVE THESE TREATMENTS.
E. THE FINISH PRODUCT SHALL HAVE A CONSISTENT, SMOOTH APPEARANCE OF THE SPECIFIED LUSTER.
F. APPLY PAINT PER MANUFACTURER'S TEMPERATURE AND HUMIDITY REQUIREMENTS.
G. COMPLETED WORK SHALL BE FREE FROM DEFECTS AND FLAWS.
H. FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND SCAFFOLDING REQUIRED FOR COMPLETING SURFACE PREPARATION, PAINTING, FINISHING AND RELATED ITEMS.
I. EXCESS MATERIALS, CONTAINERS AND OTHER ITEMS NECESSARY FOR THE COMPLETION OF THE WORK MUST BE DISPOSED OF IN A MANNER THAT MEETS OR EXCEEDS THE STRICTEST LAWS GOVERNING THE PROJECT'S MUNICIPALITY AND/OR STATE. THE PAINTING CONTRACTOR IS RESPONSIBLE FOR COMPLETE ADHERENCE TO ALL DISPOSAL REGULATIONS.
J. PAINT ALL EXPOSED MISCELLANEOUS ITEMS, FINISHED OR UNFINISHED (INCLUDING H.V.A.C. RETURN AIR GRILLES, CONDUIT, ETC.) TO MATCH ADJOINING WALL SURFACES.
K. PAINT CEILING ACCESS PANELS TO MATCH ADJACENT CEILING FINISH.
L. ALL EXPOSED MISCELLANEOUS ITEM IN FOOD PROCESS ROOMS SHALL REMAIN UNPAINTED UNLESS NOTED OTHERWISE. PROTECT ALL SUCH SYSTEM DURING THE PAINTING PROCESSES WITHIN THE ROOMS.
M. CONTRACTOR TO VERIFY THAT PAINT IS COMPATIBLE WITH PRIMER OF SHOP PRIMED SURFACES. NOTIFY EXCEL ENGINEERING IF THERE ARE ANY COMPATIBILITY ISSUES.
N. THE CONTRACTOR SHALL KEEP EMPTY CONTAINERS ON THE PROJECT SITE UNTIL ALL PRODUCTS ARE VERIFIED AS TO COLOR AND/OR SHEEN. THE CONTRACTOR SHALL LEAVE WITH THE OWNER ALL OPENED PAINT CONTAINERS.
O. ALL PAINT COLORS, STAIN COLORS, AND VARNISH TO BE SELECTED BY ARCHITECT/OWNER FROM A FULL RANGE OF AVAILABLE COLORS UNLESS NOTED OTHERWISE.
   1. EXPOSED MECHANICAL PIPING SYSTEM SHALL BE PAINTED PER "FERROUS METAL (PRIMED, BRUSH/ROLLER)" SPEC AS FOLLOWS:
      a. GAS PIPING — YELLOW
      b. FIRE PROTECTION - RED
P. ALL EXPOSED EXTERIOR& INTERIOR METAL SURFACES SHALL BE PAINTED, U.N.O.
Q. EXTERIOR ITEMS:
   1. FERROUS METAL (PRIMED): STRUCTURAL STEEL, MISCELLANEOUS IRON, HANDRAILS, HOLLOW METAL DOORS AND FRAMES, ROOF STRUCTURE, EXPOSED ROOF PIPING, ETC.:
      a. ALKYD SHOP PRIMER ON METAL OR 1 COAT S-W KEM BOND HS UNIVERSAL METAL PRIMER B50 SERIES
      b. 2 COATS S-W PRO INDUSTRIAL ACRYLIC SEMI GLOSS, B66-650 @ 2.5-4.0 MILS DFT/COAT.
   2. GALVANIZED, ALUMINUM, ZINC-COATED AND NON FERROUS METALS:
      a. 1 COAT S-W PRO INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER, B66-310 SERIES, @ 2.0-4.0 MILS DFT.
      b. 2 COATS S-W PRO INDUSTRIAL ACRYLIC SEMI GLOSS, B66-650 @ 2.5-4.0 MILS DFT/COAT.
   3. CONCRETE:
      a. 1 COAT S-W LOXON CONCRETE MASONRY PRIMER A24W8300 @ 2.0-3.5 MILS DFT.
      b. 2 COAT S-W A-100 EXTERIOR LATEX SATIN A82 SERIES @ 1.5-2.0 MILS DFT/COAT.
R. INTERIOR ITEMS:
   1. GYPSUM DRYWALL FINISH: EG-SHEL
      a. 1 COAT S-W PROMAR 200 ZERO VOC INTERIOR LATEX PRIMER B28W2600 @ 1.2-1.5 MILS DFT.
      b. 2 COATS S-W PROMAR 200 ZERO VOC INTERIOR LATEX EG-SHEL B20-2600 @ 1.6-2.2 MILS DFT/COAT.
   2. GYPSUM DRYWALL FINISH: FLAT
      a. 1 COAT S-W PROMAR 200 ZERO VOC INTERIOR LATEX PRIMER B28W2600 @ 1.2-1.5 MILS DFT.
      b. 2 COATS S-W PROMAR 200 ZERO VOC INTERIOR LATEX FLAT B30W2600 @ 1.6-2.2 MILS DFT/COAT.
   3. GYPSUM DRYWALL FINISH: SEMI-GLOSS
      a. 1 COAT S-W PROMAR 200 ZERO VOC INTERIOR LATEX PRIMER B28W2600 @ 1.2-1.5 MILS DFT.
      b. 2 COATS S-W PROMAR 200 ZERO VOC INTERIOR LATEX SEMI-GLOSS B31W2600 @ 1.6-2.2 MILS DFT/COAT.
   4. GYPSUM DRYWALL FINISH: EPOXY SYSTEM SEMI-GLOSS
      a. 1 COAT S-W PROMAR 200 ZERO VOC INTERIOR LATEX PRIMER B28W2600 @ 1.2-1.5 MILS DFT.
      b. 2 COATS S-W PRO INDUSTRIAL WATER BASED CATALYZED EPOXY B73 SERIES @ 2.0-4.0 MILS DFT/COAT.
   5. NEW WOOD FINISH: STAINED
      a. 1 COAT S-W WOOD CLASSICS 250 INTERIOR OIL STAIN A49-800 SERIES.
      b. 1 COAT S-W WOOD CLASSICS WATERBORNE POLYURETHANE GLOSS VARNISH A68.
      c. 1 COAT S-W WOOD CLASSICS WATERBORNE POLYURETHANE SATIN VARNISH A68.
      d. 0.8-1.2 MILS DTF/COAT.
   6. NEW WOOD FINISH: PAINTED
      a. 1 COAT S-W PREMIUM WALL AND WOOD PRIMER B28W8111 @ 1.8-2.1 MILS DFT.
      b. 2 COATS S-W PRO INDUSTRIAL ACRYLIC SEMI GLOSS B-66-650 @ 2.5-4.0 MILS DFT/COAT.
   7. FERROUS METAL (PRIMED, BRUSH/ROLLER) — DOORS, FRAMES, HANDRAILS, MISC. METALS, ETC., FINISH: ACRYLIC
      a. 1 COAT S-W PRO INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER B66-310 @ 2.0-4.0 MILS DFT.
      b. 2 COATS S-W PRO INDUSTRIAL ACRYLIC SEMI GLOSS B-66-650 @ 2.5 — 4 MILS DFT/COAT.
   8. FERROUS METAL (PRIMER, SPRAYED) - ALL EXPOSED STRUCTURAL STEEL AND EXPOSED MECHANICAL/ELECTRICAL ITEMS, FINISH: ALKYD
      a. CONFIRM COMPATIBILITY WITH SHOP APPLIED PRIMERS.
      b. SPOT PRIME AS NEEDED: S-W KEM BOND HS UNIVERSAL METAL PRIMER B50 SERIES @ 2.0-5.0 MILS DFT.
      c. FINISH COAT S-W SUPER SAVE-LITE HI-TEC DRY FALL, EG-SHEL B48 SERIES @ 3.0-3.5 MILS DFT.
   9. FERROUS METAL (PRIMER, SPRAYED) - ALL EXPOSED STRUCTURAL STEEL AND EXPOSED MECHANICAL/ELECTRICAL ITEMS. NORMAL EXPOSURE, FINISH: ACRYLIC
      a. CONFIRM COMPATIBILITY WITH SHOP APPLIED PRIMERS.
      b. SPOT PRIME AS NEEDED: S-W PRO INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER @ 2.0-4.0 MILS DFT.
      c. FINISH COAT S-W PRO INDUSTRIAL WATERBORNE ACRYLIC DRY FALL, EG-SHEL, B 42W2 @ 3.0-4.5 MILS DFT.
         i. CONTRACTOR SHALL MAINTAIN A DAILY LOG OF TEMPERATURE (50F-110F) AND RELATIVE HUMIDITY.
         j. AMBIENT TEMPERATURE AND SUBSTRATE TEMPERATURE SHALL BE 50 DEGREES F TO 110 DEGREES F.
         k. RELATIVE HUMIDITY SHALL NOT EXCEED 75%.
   10. GALVANIZED: INTERIOR CEILING DECKING:
      a. SPRAYED:
         i. FINISH COAT S-W PRO INDUSTRIAL WATERBORNE ACRYLIC DRY FALL, EG-SHEL, B42W2 @ 3.0-4.5 MILS DFT.
   11. ALUMINUM, ZINC-COATED AND NON FERROUS METALS:
      a. 1 COAT S-W PRO INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER B66-310 @ 2.0 — 4.0 MILS DFT.
      b. 2 COATS S-W PRO INDUSTRIAL ACRYLIC SEMI GLOSS B66-650 @ 2.5-4.0 MILS DFT/COAT.
   12. CONCRETE MASONRY UNITS: ACRYLIC FINISH: SEMI-GLOSS
      a. 1 COAT S-W PREPRITE BLOCK FILLER B25W25- WHITE.
      b. 2 COATS S-W PROMAR 200 ZERO VOC INTERIOR LATEX SEMI-GLOSS B31W2600 @ 1.6 -2.2 MILS DFT/COAT.
   13. CONCRETE MASONRY UNITS EPOXY FINISH: SEMI-GLOSS
      a. 1 COAT S-W HEAVY DUTY BLOCK FILLER B42W46-WHITE.
      b. 2 COATS S-W PRO INDUSTRIAL WATER BASED CATALYZED EPOXY B73 SERIES @ 2.0-4.0 MILS DFT/COAT.
   14. PRECAST CONCRETE: EG-SHEL
      a. 1 COAT S-W LOXON CONCRETE MASONRY PRIMER A24W8300 @ 2.0-3.5 MILS DFT.
      b. 2 COAT S-W PROMAR 200 ZERO VOC INTERIOR LATEX EG-SHEL B20 SERIES @ 1.5-2.0 MILS DFT/COAT.
   15. FERROUS METAL (PRIMER, SPRAYED), ALL EXPOSED STRUCTURAL STEEL: EPOXY/URETHANE
      a. PREPARATION SSPC-SP-6 COMMERCIAL BLAST.
      b. 1 COAT DUPONT CORLAR 2.1 — LF63225P WHITE (4.0 — 6.0 DFT) MIX 1:1 WITH VF525 ACTIVATOR. (IF ROLLER APPLIED USE 5% RT001P ROLLING THINNER PER MIXED GALLON OF EPOXY).
      c. 1 COAT DUPONT IMRON 3.5 HG -33M24861 WHITES (2.0 MILS DFT) MIX 4:1 WITH VG-M6005 ACTIVATOR. (IF ROLLER APPLIED USE 1OZ OF RT002P ROLLING ADDITIVE PER MIXED GALLON OF IMRON).
S. PROVIDE A YELLOW STRIPED AREA, 3' DEEP BY THE WIDTH OF THE ELECTRICAL PANELS, ON THE CONCRETE FLOOR IN FRONT OF THE ELECTRICAL PANELS AND SWITCHGEAR. AT THE SWITCHGEAR, PAINT THE EXPOSED PORTION OF THE CONCRETE HOUSEKEEPING PAD YELLOW.

DIVISION 10 SPECIALTIES

10 14 00 SIGNAGE

A. REQUIREMENTS:
   1. CONTRACTOR TO FURNISH AND INSTALL SIGNAGE PER LOCAL, STATE, AND FEDERAL CODES AND PER ADDITIONAL DETAILS ON PLANS.
   2. COORDINATE STYLE AND COLOR WITH OWNER UNLESS SPECIFICALLY INDICATED ON PLANS.
   3. ALL SIGNAGE SHALL MEET THE REQUIREMENTS OF THE A.D.A. AND ANSI.
   4. WHERE PERMANENT IDENTIFICATION IS PROVIDED FOR ROOMS AND SPACES, SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. WHERE THERE IS NO WALL SPACE TO THE LATCH SIDE OF THE DOOR, INCLUDING AT DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL.
   5. MOUNTING HEIGHT SHALL BE 60" ABOVE FINISH FLOOR TO THE CENTERLINE OF THE SIGN UNLESS INDICATED OTHERWISE.
   6. PROVIDE HANDICAP PARKING SIGNS AS INDICATED ON PLANS AND AS REQUIRED BY LOCAL, STATE, AND FEDERAL CODES.

10 44 00 FIRE EXTINGUISHERS

A. REQUIREMENTS
   1. FURNISH AND INSTALL EXTINGUISHERS PER LOCAL, STATE, AND FEDERAL CODES, AND N.F.P.A. NO.10-1978.
   2. MOUNT FIRE EXTINGUISHER NOT HIGHER THAN 48" ABOVE FINISH FLOOR UNLESS LOCAL REGULATIONS REQUIRE DIFFERENT HEIGHT.
   3. ALL FIRE EXTINGUISHERS AND CABINETS TO MEET THE REQUIREMENTS OF THE A.D.A. AND ANSI A117.1.

DIVISION 21 FIRE SUPPRESSION

21 10 00 FIRE PROTECTION WORK

A. SEE FIRE PROTECTION PLANS FOR SPECIFICATIONS.

DIVISION 22 PLUMBING

22 05 00 PLUMBING WORK

A. SEE PLUMBING PLANS FOR SPECIFICATIONS

DIVISION 23 HEATING AND VENTILATING AND AIR CONDITIONING

23 05 00 HEATING AND VENTILATION WORK

A. SEE HVAC PLANS FOR SPECIFICATIONS.

DIVISION 26 ELECTRICAL

26 05 00 ELECTRICAL WORK

A. SEE ELECTRICAL PLANS FOR SPECIFICATIONS.

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COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

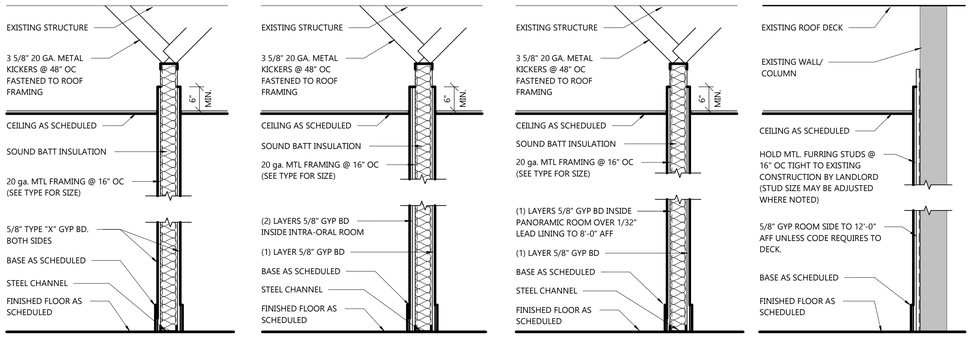
PROFESSIONAL SEAL

SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

JOB NUMBER
230264900

SHEET NUMBER
A0.3

PARTITION TYPES



NOTES:
1. WALL THICKNESSES SHOWN ON PLAN AS NOMINAL:
   - 5" = 4 7/8"
   - 5 1/2" = 5 1/2"
   - 6 1/2" = 6 5/8"
   - 7 1/4" = 7 1/4"
   - 8" = 7 7/8"
2. SOUND BATT INSULATION TO HAVE A FLAME SPREAD OF 25 OR LESS AND SMOKE DEVELOPMENT OF 450 OR LESS
3. ALL METAL STUD FRAMING SHALL BE 20 ga. UNLESS NOTED OTHERWISE
4. GYP. BD. WALL FINISH TO RETURN TO ALL DOOR & WINDOW FRAMES. PROVIDE FINISH J TRIM & SEALANT AT FRAME (TYP.).
5. HOLD ALL GYP BOARD 1/2" OFF CONCRETE SLAB
6. SEE PLAN FOR ALL WALL TYPES REQUIRING LEAD LINING

B.O. STRUCTURE HEIGHT:
VARIES - GC TO VERIFY

B.O. DECK HEIGHT:
HIGH SIDE APPROX. 16'-6" AFF
LOW SIDE APPROX. 15'-6" AFF

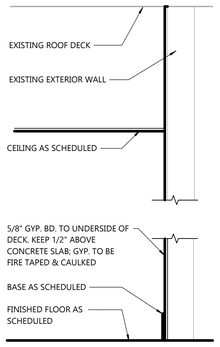
JOIST SPACING:
STEEL - APPROX. 4'-4" TO 5'-1" OC
GC TO VERIFY

NOTE:
INFORMATION BASED ON SHELL PLANS. GC TO VERIFY ALL CONDITIONS IN FIELD.

MILLWORK NOTES

ALL MILLWORK SHOWN HATCHED IS NOT IN CONTRACT & IS TO BE PART OF SEPARATE PACKAGE PROVIDED BY OWNERS MILLWORK VENDOR. GC SHALL BE RESPONSIBLE FOR COORDINATING DELIVERY OF MILLWORK AND PROVIDING AND INSTALLING ALL REQUIRED UTILITIES FOR A COMPLETE WORKING SYSTEM UNLESS NOTED OTHERWISE, TYP.

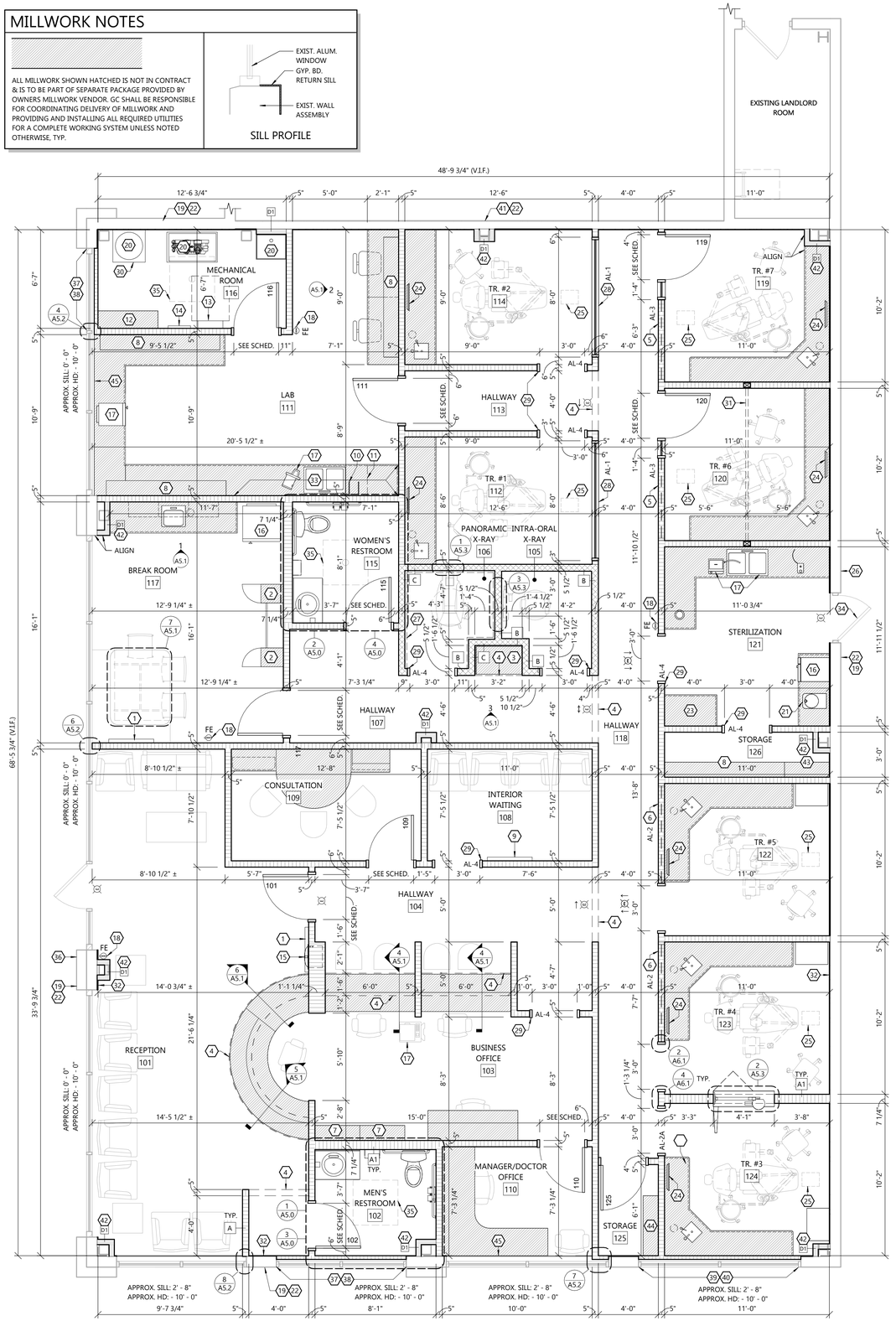
SILL PROFILE



1 / A1.1 GYP @ PERIMETER WALLS
SCALE: 3/4" = 1'-0"

FLOOR PLAN KEYNOTES

1. WALL MOUNTED LCD TV. GC TO PROVIDE APPROPRIATE BLK'G AT 72" AFF TV SHALL NOT PROTRUDE INTO SPACE MORE THEN 4" MAX. SEE DETAIL **10/A5.2**
2. LOCKERS
3. SHELVING BY MILLWORK VENDOR
4. SOFFIT ABOVE - REFER TO **SHEET A7.1**
5. ALUMINUM FRAMED TRANSOM LIGHT ABOVE. SEE AL-3 ON **SHEET A6.1** AND ADDITIONAL INFO
6. ALUMINUM FRAMED TRANSOM LIGHT ABOVE. SEE AL-2 ON **SHEET A6.1** AND ADDITIONAL INFO
7. FILING CABINETS
8. 8' SHELVES
9. WALL MOUNTED LCD TV GC TO PROVIDE APPROPRIATE BLK'G AT 60" AFF TV SHALL NOT PROTRUDE INTO SPACE MORE THAN 4" MAX. SEE DETAIL **10/A5.2**
10. ARTICULATOR RACK
11. PLASTER CART
12. PHONE CABINET
13. ELECTRICAL PANEL
14. PHONE BOARD
15. BOTTLE FILLING STATION - SEE DETAIL **10/A5.0**
16. REFRIGERATOR BY OTHERS
17. EQUIPMENT BY OTHERS
18. (4) FIRE EXTINGUISHER BY TENANT -SEE DETAIL **9/A5.0**
19. EXISTING EXTERIOR BUILDING SHELL WALL, TYP.
20. PLUMB. CONTRACTOR. TO COORDINATE. CLEARANCES REQ'D FOR ADMI SUPPLIED EQUIPMENT PRIOR TO INSTALLING WATER HEATER / MOP SINK
21. WATER DISTILLER
22. TENANT'S CONTRACTOR TO COORDINATE ALL EQUIPMENT BLOCKING & UTILITIES PRIOR TO INSTALLING 5/8" GYP. BD. - GYP. BD. TO BE TAPE AND SANDED TO ACCEPT TENANT'S WALL FINISHES
23. 40" AFF CPU STAND UP STATION
24. WALL MOUNTED LCD TV. GC TO PROVIDE APPROPRIATE BLK'G AT 50" AFF TV SHALL NOT PROTRUDE INTO SPACE MORE THEN 4" MAX. SEE DETAIL **10/A5.2**
25. APPROXIMATE LOCATION OF UTILITY CENTER. REFER TO ELEC. AND PLBG DRAWINGS - SEE DETAIL **1/A5.2**
26. TENANT'S GC TO PROVIDE AND INSTALL MASTER LOCK 5401D WALL-MOUNTED KEY STORAGE BOX ON EXTERIOR OF BUILDING AT 48" TO CENTER, PLACE AT RIGHT OF LEFT OF DOOR (PREFERRED LOCATION TO BE ON LATCH SIDE OF DOOR)
27. DASHED LINE INDICATES WALLS TO RECEIVE 1/32" LEAD LINING & (1) LAYER OF GYP. BD. SHIELDING SHALL EXTEND FROM FINISHED FLOOR TO 8'-0" AFF
28. SEE AL-1 ALUMINUM ELEVATION ON **SHEET A6.1** FOR ADDITIONAL INFO
29. SEE AL-4 ALUMINUM ELEVATION ON **SHEET A6.1** FOR ADDITIONAL INFO
30. PROVIDE HOLDRITE 50-SWHP-WM WALL MOUNTED EQUIPMENT PLATFORM. SEE DETAIL FOR BACKING. - SEE PLUMBING FOR MORE INFORMATION
31. CHAIR LIFT RAIL W/ POSTS AT EACH END -SEE **SHEET A5.4** FOR MORE INFORMATION
32. GYP. BOARD BY TENANT - GYP. TO EXTEND TO DECK AT PERIMETER WALLS. SEE DETAIL **1/A1.1**
33. INSTALL FRP (FIBER-REINFORCED PLASTIC) BEHIND THE SINK AND PLASTER AREA FROM FLOOR TO CEILING.
34. GC TO VERIFY REAR DOOR HARDWARE HAS ADAMS RITE 4590 LATCH PADDLE DEVICE & TO PROVIDE IF IT DOES NOT.
35. TAPER FLOOR BACK TO DRAIN (TYP.)
36. GC TO VERIFY IF A KNOX BOX IS EXISTING. IF NOT, LANDLORD IS TO PROVIDE AND COORDINATE LOCATION WITH FIRE MARSHAL.
37. INFILL WINDOW OPENING WITH STUD FRAMING, BATT INSULATION, & GYP. BD. TO FULL HEIGHT AS REQ'D TO MATCH ADJACENT WALLS
38. BLACK SPANDREL GLAZING (FULL HEIGHT) BY LANDLORD
39. BLACK SPANDREL GLAZING TO 7'-0" AFF BY LANDLORD
40. INFILL WINDOW OPENING WITH STUD FRAMING, BATT INSULATION, & GYP. BD. TO 7'-0" AFF AS REQ'D TO MATCH ADJACENT WALLS
41. EXISTING TENANT DEMISING WALL. CONTRACTOR TO VERIFY WALL RATING WITH SHELL DOCUMENTS AND PROVIDE CORRECT FIRE TREATED BLOCKING & FIRE CAULK AT ALL PENETRATIONS TO MAINTAIN RATING AS REQ'D. CONTRACTOR TO INSTALL 1 LAYER 5/8" GYP. BD. ON TENANT SIDE. GYP. BD. TO BE TAPED AND SANDED TO ACCEPT TENANT'S WALL FINISHES.
42. HOLD STUD FRAMING TIGHT TO COLUMN AS POSSIBLE
43. 3' SHELVES
44. 4' SHELVES
45. BACK PANEL BY MILLWORK SUPPLIER. PROVIDE DECORATIVE CAP TO RETURN TO GLAZING AT FULL HEIGHT WINDOW.
46. SEE AL-2A ALUMINUM ELEVATION ON **SHEET A6.1** FOR ADDITIONAL INFO



NORTH

FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"
0' 4' 8'

ARCHITECTURAL FIRST FLOOR PLAN

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

JOB NUMBER
230264900

SHEET NUMBER
A1.1

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7/11/2023 11:21:19 PM

TOILET ROOM ACCESSORY SPECS:

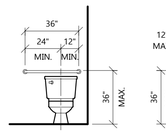
GENERAL NOTES:
- PROVIDED AND INSTALLED BY GC
- SEE TYP. TOILET ROOM ACCESSORY ELEVATIONS FOR MODEL NUMBERS, FINISH AND COLORS
- G.C. TO PROVIDE BLOCKING AS REQUIRED AT ALL ACCESSORY LOCATIONS
- G.C. TO VERIFY ROUGH OPENING REQUIREMENTS FOR ALL RECESSED MOUNTED EQUIPMENT

MANUFACTURER: AMERICAN SPECIALTIES, INC. (ASI)

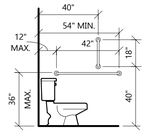
PRODUCTS: GRAB BARS, TISSUE DISPENSERS, TOWEL DISPENSERS, MIRRORS, SOAP DISPENSERS, ETC.

TOILET ROOM NOTES:

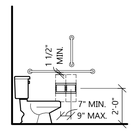
- 6 1/2" MAXIMUM SINK DEPTH
- INSULATE PIPES BELOW COUNTERTOPS (WATER AND WASTE LINES) W/ PVC MOLDED PROTECTION (BY PLUMBING CONTRACTOR)



1 1/2"ø GRAB BAR
MODEL NUMBER: ASI-3801
SATIN STAINLESS STEEL

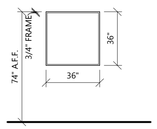


1 1/2"ø GRAB BARS
MODEL NUMBER: ASI-3801
SATIN STAINLESS STEEL



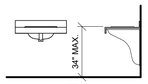
TOILET TISSUE DISPENSER
MODEL NUMBER: ASI-0264-1A
ALUMINUM W/ SATIN FINISH

WATER CLOSET
H.C. ACCESSIBLE

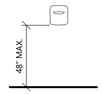


MIRROR
MODEL NUMBER: ASI-0600
SATIN STAINLESS STEEL

LIQUID SOAP DISPENSER
SUPPLIED BY ADMI
INSTALLED BE G.C.

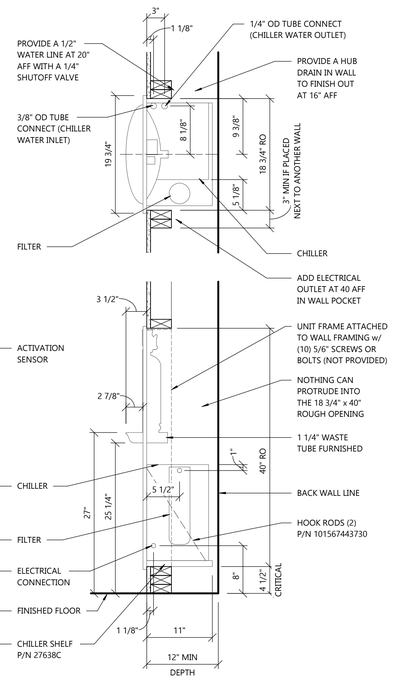


COUNTERTOP LAVATORY BASIN

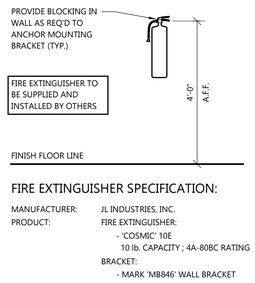


SURFACE MOUNTED HAND DRYER
EXCEL DRYER, INC.
XLERATOR
MODEL NUMBER: XL-BW
SURFACE-MOUNTED, AUTOMATIC, WHITE POLYMER (BMC) COVER
w/ 1.1 NOISE REDUCTION NOZZLE
SUPPLIED AND
INSTALLED BY G.C.

TOILET ROOM LEGEND



10 / A5.0 BOTTLE FILLING STATION DETAIL
SCALE: 1" = 1'-0"

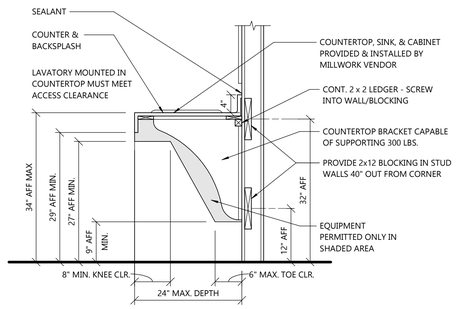


FIRE EXTINGUISHER SPECIFICATION:

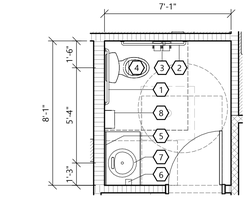
MANUFACTURER: JL INDUSTRIES, INC.
PRODUCT: FIRE EXTINGUISHER:
- 'COSMIC' 10E
10 lb. CAPACITY ; 4A-80BC RATING

BRACKET:
- MARK 'MB846' WALL BRACKET

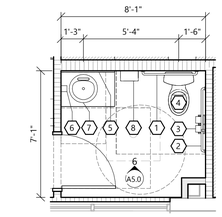
9 / A5.0 FIRE EXTINGUISHER DETAIL
SCALE: 1/2" = 1'-0"



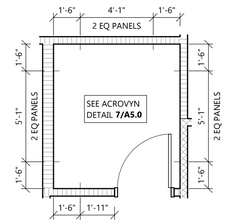
8 / A5.0 RESTROOM SINK SECTION
SCALE: 3/4" = 1'-0"



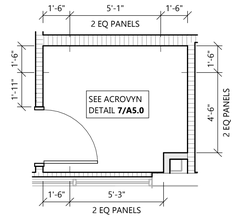
2 / A5.0 WOMEN'S RESTROOM PLAN
SCALE: 1/4" = 1'-0"



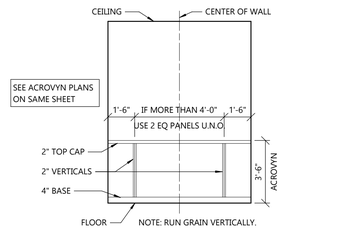
1 / A5.0 MEN'S RESTROOM PLAN
SCALE: 1/4" = 1'-0"



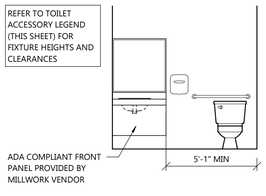
4 / A5.0 WOMEN'S ACROVYN PLAN
SCALE: 1/4" = 1'-0"



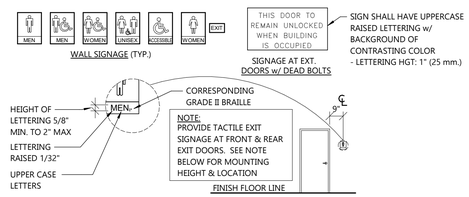
3 / A5.0 MEN'S ACROVYN PLAN
SCALE: 1/4" = 1'-0"



7 / A5.0 ACROVYN WALL PANEL DETAIL
SCALE: 1/4" = 1'-0"



6 / A5.0 RESTROOM ELEVATION
SCALE: 1/4" = 1'-0"



5 / A5.0 SIGNAGE DETAIL
NOT TO SCALE

ARCHITECTURAL ENLARGED PLANS, INTERIOR ELEVATIONS & DETAILS

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

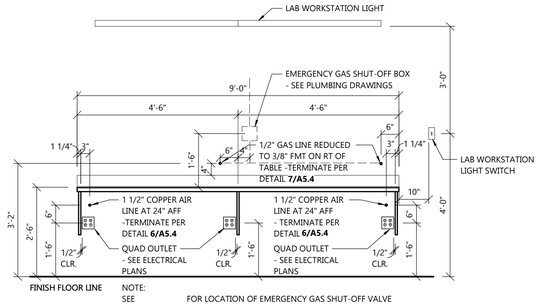
PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

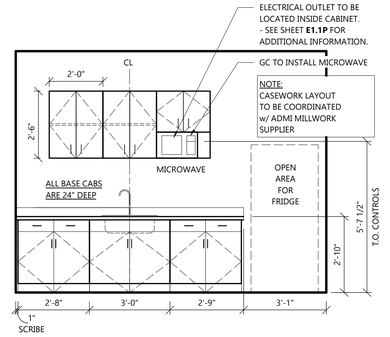
JOB NUMBER
230264900

SHEET NUMBER
A5.0



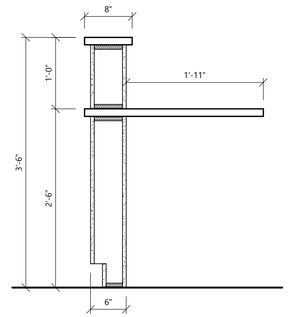
2 A5.1 ELEVATION - LAB WORKSTATION

SCALE: 1/2" = 1'-0"



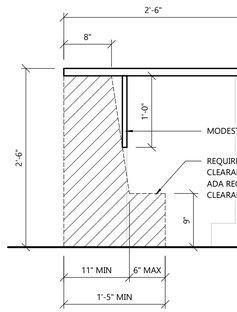
1 A5.1 ELEVATION - BREAK ROOM

SCALE: 3/8" = 1'-0"



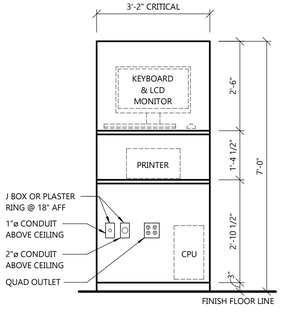
5 A5.1 RECEPTION STAND UP CHECK-IN

SCALE: 1" = 1'-0"



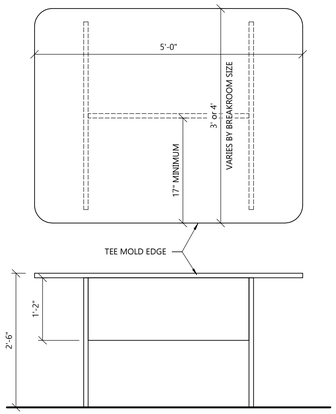
4 A5.1 BUSINESS OFFICE SIT DOWN CHECK-OUT

SCALE: 1" = 1'-0"



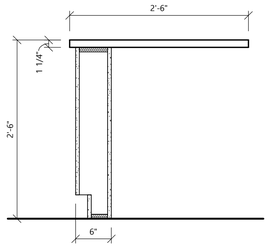
3 A5.1 ELEVATION - X-RAY ALCOVE

SCALE: 1/2" = 1'-0"



7 A5.1 BREAK ROOM TABLE

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



6 A5.1 RECEPTION ACCESS. CHECK-IN

SCALE: 1" = 1'-0"

ARCHITECTURAL INTERIOR DETAILS - CASEWORK

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

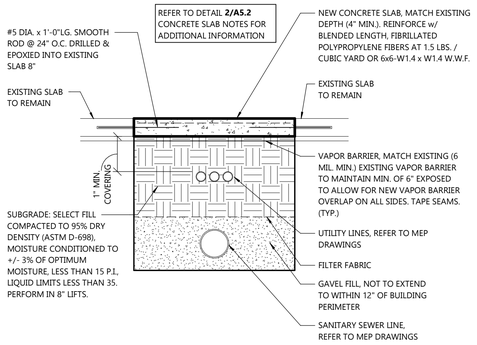
PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

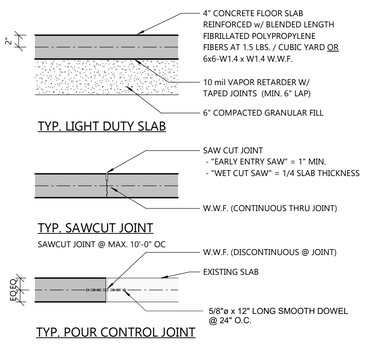
SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

JOB NUMBER
230264900

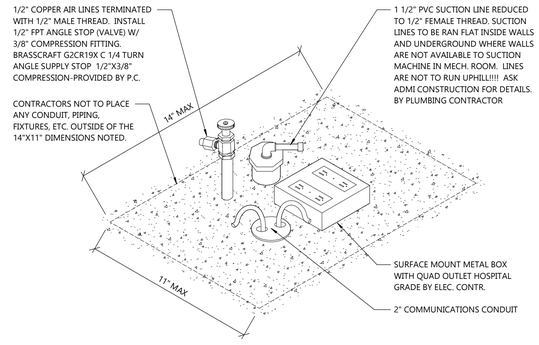
SHEET NUMBER
A5.1



3 A5.2 TRENCH DETAIL
SCALE: 3/4" = 1'-0"

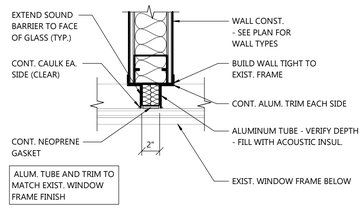


2 A5.2 SLAB DETAIL
SCALE: 1" = 1'-0"

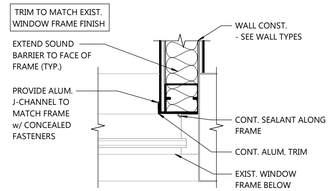


1 A5.2 UTILITY CENTER DETAIL
NOT TO SCALE

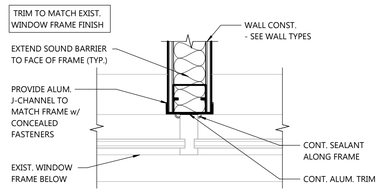
NOT ALL DETAILS MAY BE USED IN THIS PROJECT



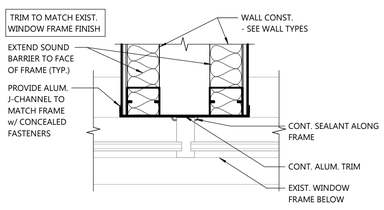
6 A5.2 WALL CLOSURE DETAIL
SCALE: 1 1/2" = 1'-0"



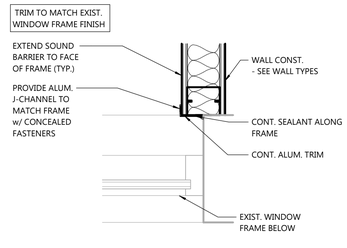
5 A5.2 WALL CLOSURE DETAIL
SCALE: 1 1/2" = 1'-0"



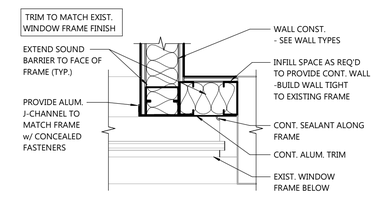
4 A5.2 WALL CLOSURE DETAIL
SCALE: 1 1/2" = 1'-0"



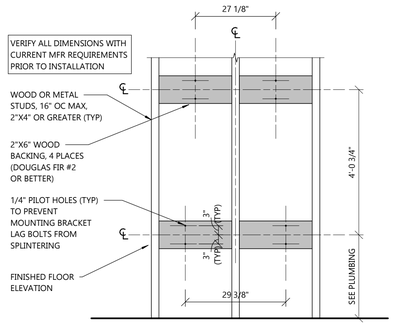
9 A5.2 WALL CLOSURE DETAIL
SCALE: 1 1/2" = 1'-0"



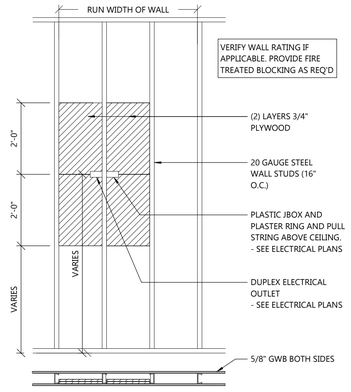
8 A5.2 WALL CLOSURE DETAIL
SCALE: 1 1/2" = 1'-0"



7 A5.2 WALL CLOSURE DETAIL
SCALE: 1 1/2" = 1'-0"



11 A5.2 WATER HEATER BLOCKING DETAIL
SCALE: 1/2" = 1'-0"



10 A5.2 FLAT SCREEN TV SUPPORT
SCALE: 1/2" = 1'-0"

ARCHITECTURAL INTERIOR DETAILS - FRAMING & SLAB

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

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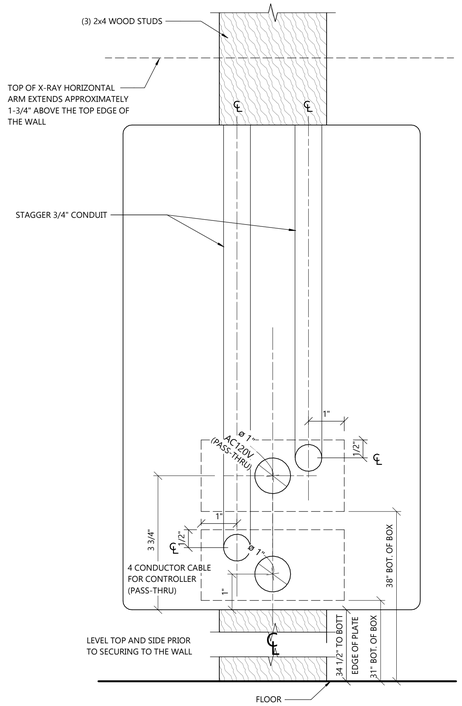
PROFESSIONAL SEAL

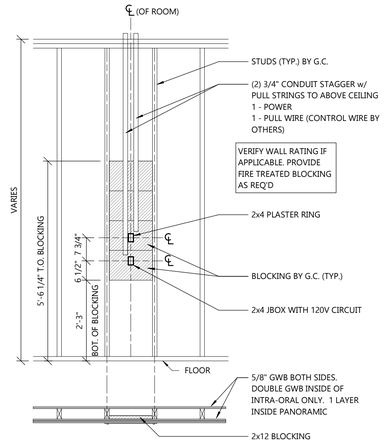
SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

JOB NUMBER
230264900

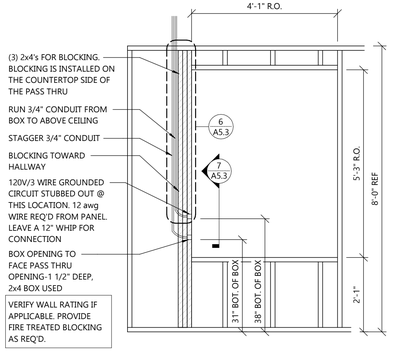
SHEET NUMBER
A5.2



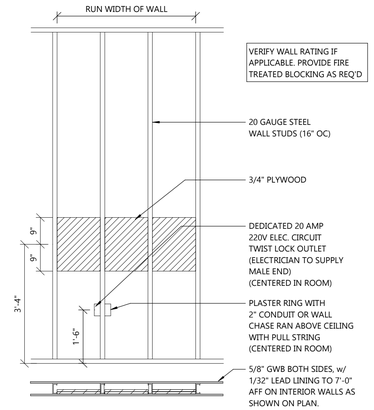
7 A5.3 PASS THRU X-RAY PLATE DETAIL
SCALE: 6" = 1'-0"



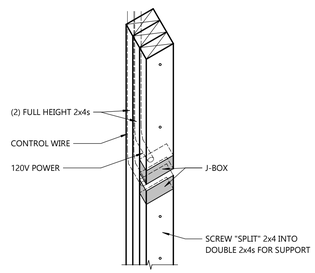
3 A5.3 CS 2200 X-RAY SUPPORT
SCALE: 1/2" = 1'-0"



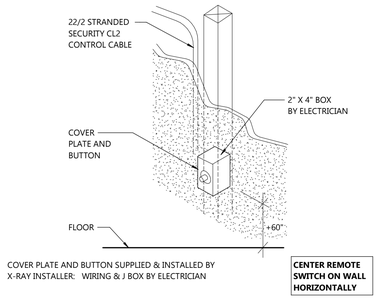
2 A5.3 PASS THRU X-RAY
SCALE: 1/2" = 1'-0"



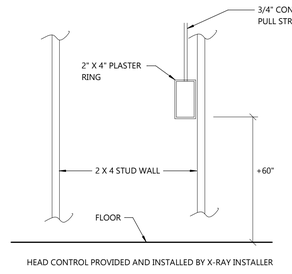
1 A5.3 PANORAMIC X-RAY SUPPORT
SCALE: 1/2" = 1'-0"



6 A5.3 PASS THRU X-RAY ISOMETRIC
SCALE: 1 1/2" = 1'-0"



5 A5.3 X-RAY REMOTE SWITCH
SCALE: 1/4" = 1'-0"



4 A5.3 X-RAY HEAD CONTROL
SCALE: 1/4" = 1'-0"

ARCHITECTURAL INTERIOR DETAILS - X-RAY

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

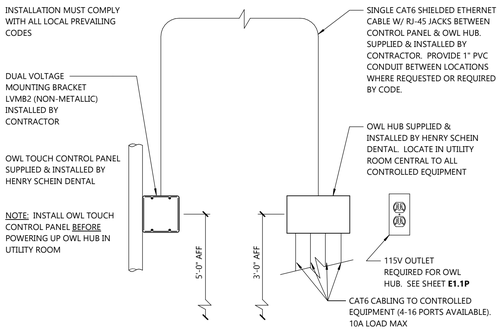
PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

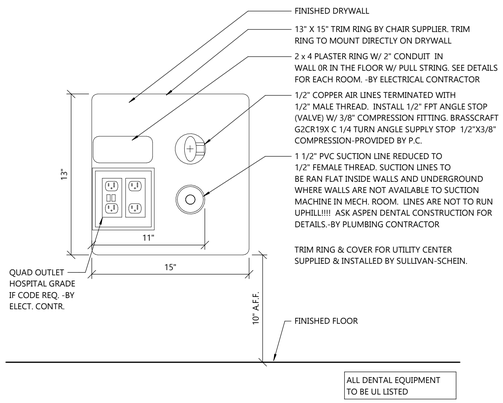
SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

JOB NUMBER
230264900

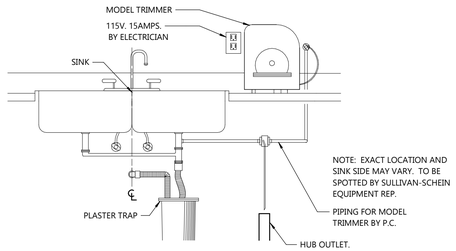
SHEET NUMBER
A5.3



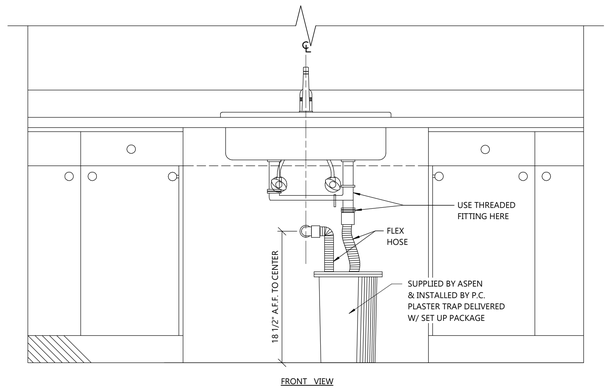
4 A5.4 RAMVAC "OWL TOUCH" CONT. PANEL
NOT TO SCALE



3 A5.4 WALL UTILITY CENTER
NOT TO SCALE



2 A5.4 MODEL TRIMMER
NOT TO SCALE



1 A5.4 PLASTER TRAP
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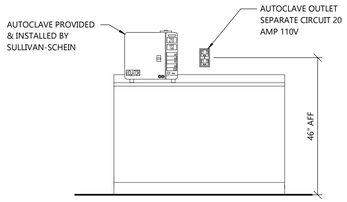
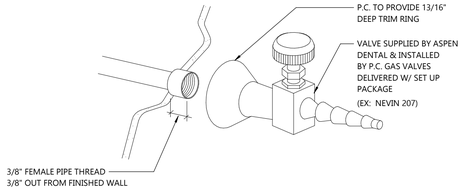
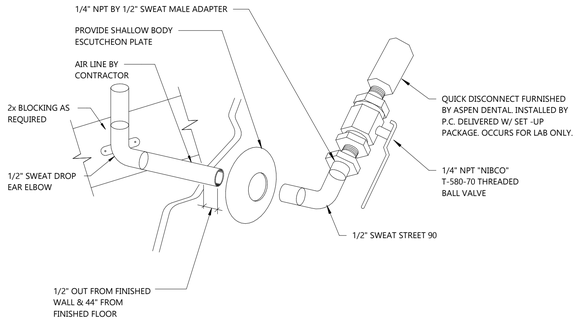


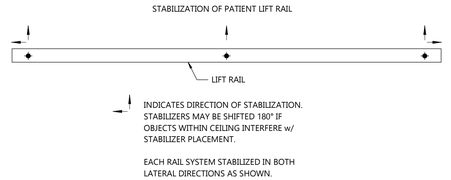
8 A5.4 AUTOCLAVE OUTLET
SCALE: 1/2" = 1'-0"



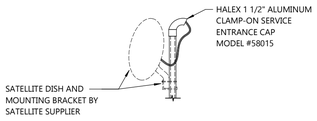
7 A5.4 LAB GAS VALVE
NOT TO SCALE



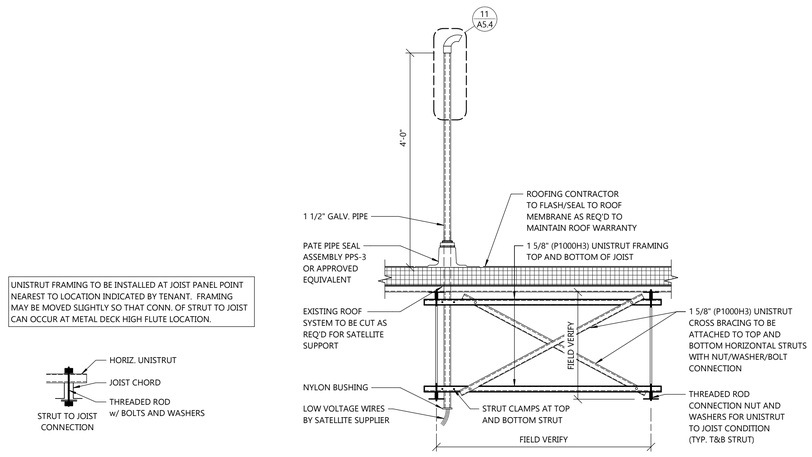
6 A5.4 AIR VALVE
NOT TO SCALE



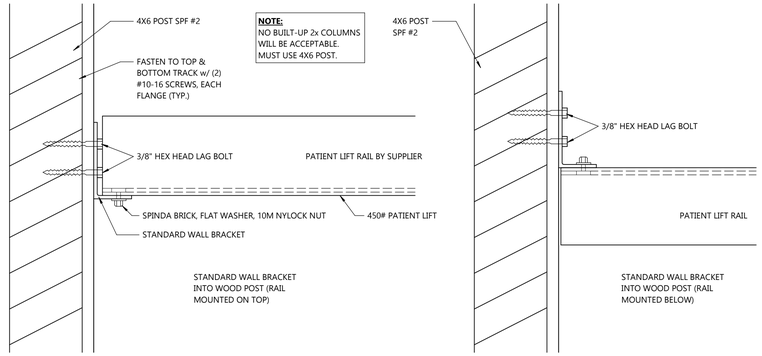
5 A5.4 LIFT RAIL STABILIZATION DETAIL
NOT TO SCALE



11 A5.4 SATELLITE CONNECTION TO PIPE
SCALE: 3/4" = 1'-0"



10 A5.4 SATELLITE SUPPORT DETAIL
SCALE: 3/4" = 1'-0"



* TENANT GC IS RESPONSIBLE FOR PROVIDING & INSTALLING 4x6 POST IN WALL ON EACH SIDE OF RAIL FOR WALL BRACKET ATTACHMENT.

9 A5.4 WALL MOUNT CHAIR LIFT DETAIL
SCALE: 3" = 1'-0"

ARCHITECTURAL INTERIOR DETAILS - EQUIPMENT

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100 Camelot Drive
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COLLABORATION

AspenDental

PROJECT INFORMATION

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PROFESSIONAL SEAL

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SHEET NUMBER
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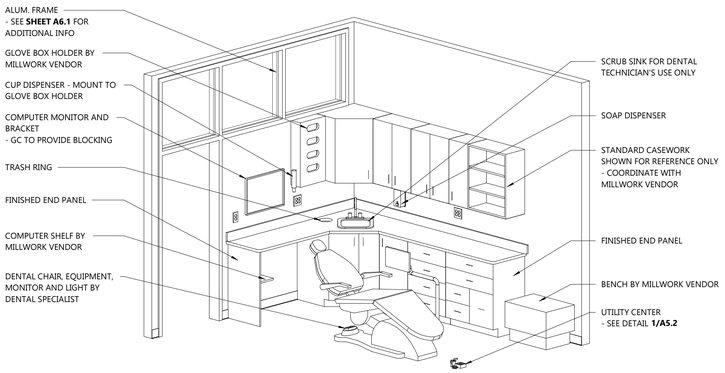
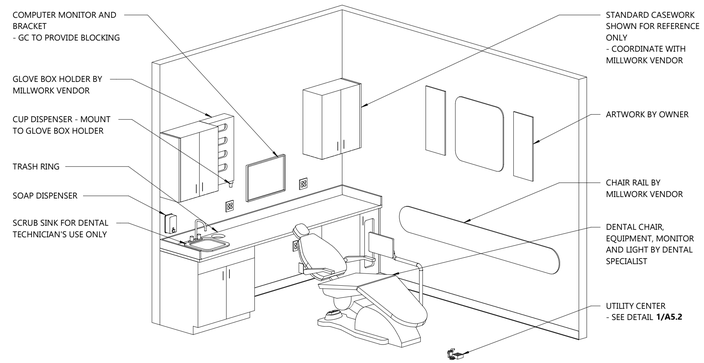
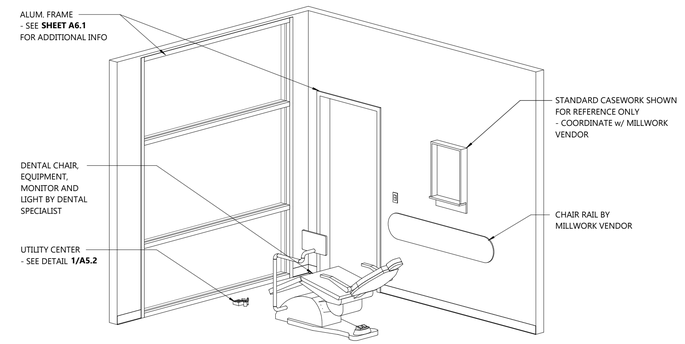


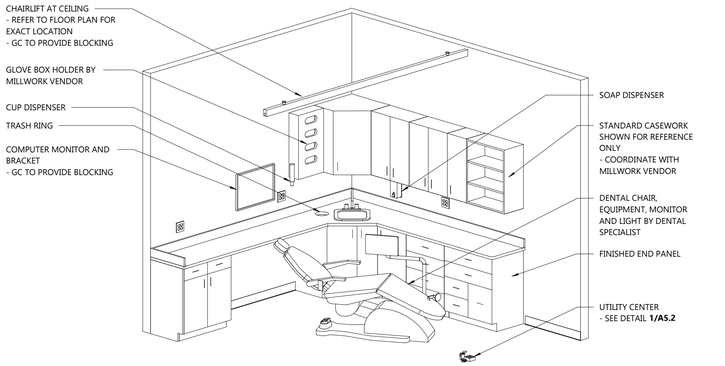
3 / A5.5 OPEN TR - SINK SIDE PERSPECTIVE
SCALE:



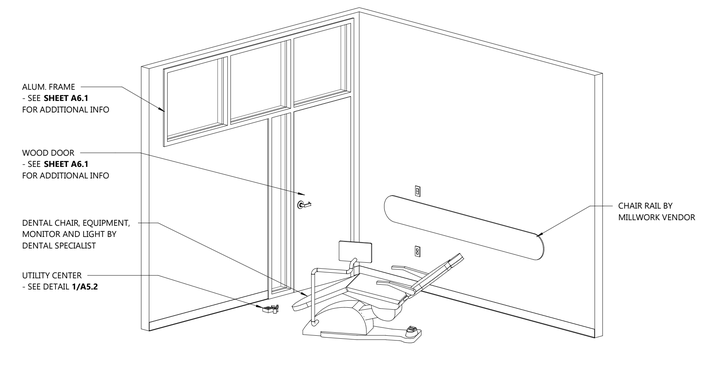
2 / A5.5 DENTURE TR - SINK SIDE PERSPECTIVE
SCALE:



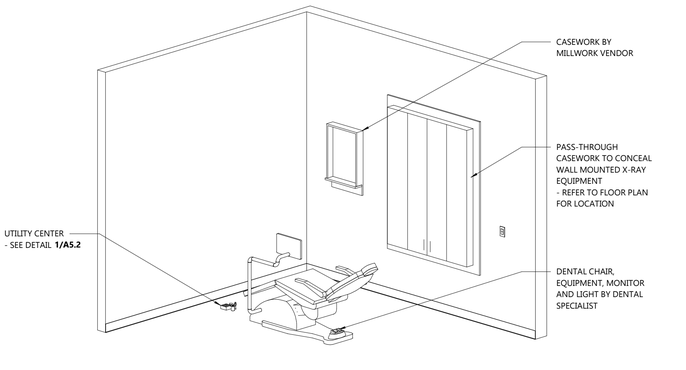
1 / A5.5 DENTURE TR - ENTRANCE SIDE PERSPECTIVE
SCALE:



6 / A5.5 TR WITH DOOR - SINK SIDE PERSPECTIVE
SCALE:



5 / A5.5 TR WITH DOOR - ENTRANCE SIDE PERSPECTIVE
SCALE:



4 / A5.5 DENTURE TR - SINK SIDE PERSPECTIVE
SCALE:

ARCHITECTURAL TREATMENT ROOM PERSPECTIVES

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100 Camelot Drive
Fond du Lac, WI 54935
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COLLABORATION

AspenDental

PROJECT INFORMATION

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6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

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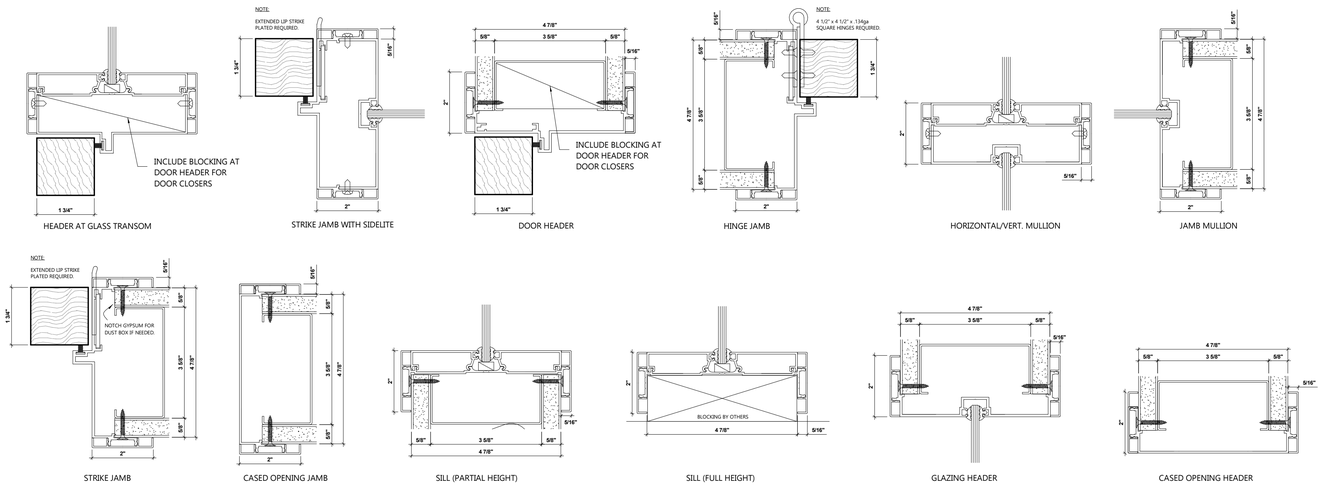
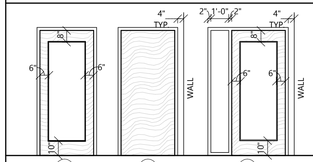
WILSON PARTITIONS FRAME DETAILS



DOOR SCHEDULE

DOOR NUMBER	DOOR SIZE WIDTH	HEIGHT	THICKNESS	DOOR TYPE	DOOR FINISH	FRAME TYPE	FRAME FINISH	HARDWARE TYPE	PASSAGE LOCKSET	PRIVACY LOCKSET	REMARKS
101	3'-0"	7'-0"	1 3/4"	A		A		1	●		
102	3'-0"	7'-0"	1 3/4"	B		A		2		●	UNDERCUT 1"
109	3'-0"	7'-0"	1 3/4"	A		A		3	●		
110	3'-0"	7'-0"	1 3/4"	B		A		3	●		
111	3'-0"	7'-0"	1 3/4"	A		A		3	●		
115	3'-0"	7'-0"	1 3/4"	B		A		2		●	UNDERCUT 1"
116	3'-0"	7'-0"	1 3/4"	B		A		1	●		
117	3'-0"	7'-0"	1 3/4"	B		A		3	●		
119	3'-0"	7'-0"	1 3/4"	C		A		3	●		
120	3'-0"	7'-0"	1 3/4"	C		A		3	●		
125	3'-0"	7'-0"	1 3/4"	B		A		3	●		UNDERCUT 1"

DOOR TYPES



NARROW STYLE RAIL BIRCH INTERIOR GLAZING: GL-2

FLUSH SOLID CORE BIRCH

NARROW STYLE RAIL BIRCH W/ SIDELIGHT: INTERIOR GLAZING: GL-2

NOTE: ALL WOOD DOORS WITH LITES - SEE DETAIL **7/A5.0** FLUSH MOULDING PROFILE

NOTE: ALL DIMS TYPICAL UNLESS NOTED

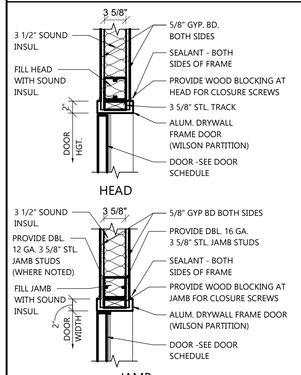
DOOR/FRAME TYPE SPECIFICATIONS

FRAMES: WILSON PARTITIONS ALUMINUM FRAME OR EQUAL (SEE DOOR SCHEDULE ABOVE FOR DOOR SIZES)
WILSON PARTITIONS ALUMINUM FRAME WITH 12" SIDELIGHT OR EQUAL (SEE DOOR SCHEDULE ABOVE FOR DOOR SIZES)
DOORS: MASONITE ARCHITECTURAL DOOR; (SEE DOOR SCHEDULE ABOVE FOR SIZES & **SHEET A6.2** FOR DOOR FINISHES)
- FULL LITE DOORS TO BE PER SCL SPECIFICATIONS

HARDWARE TYPES (NOT ALL TYPES MAY BE USED. REFER TO DOOR SCHEDULE ABOVE)

SET 1	SET 3
LEVER: HAGER 3500 SERIES WITHNELL **HINGES:** MCKINNEY, MP879 4 1/2" x 4 1/2",1 1/2 PAIR PER DOOR **CLOSER:** HAGER 5200 - ALM; **WALL STOP:** ROCKWOOD 406 - US26D	**LEVER:** HAGER 3500 SERIES WITHNELL **HINGES:** MCKINNEY, MP879 4 1/2" x 4 1/2", 1 1/2 PR. PER DOOR **WALL STOP:** ROCKWOOD 406 - US26D
SET 2	**SET 4**
LEVER: HAGER 3500 SERIES WITHNELL **HINGES:** MCKINNEY, MP879 4 1/2" x 4 1/2",1 1/2 PAIR PER DOOR **CLOSER:** HAGER 5200 - ALM; **WALL STOP:** ROCKWOOD 409 - US26D; **DEADBOLT:** SCHLAGE B-571 FINISH: 626 (SATIN CHROME) **GENDER SIGN** (SEE **SHEET A5.0**)	**SLIDING DOOR HARDWARE:** JOHNSON SLIDING BYPASS DOOR HARDWARE - 200SD **FLUSH PULL CUPS:** HAGAR 2630 US26D OR EQUAL

FRAME TYPES



FRAME TYPE A

GLAZING SCHEDULE

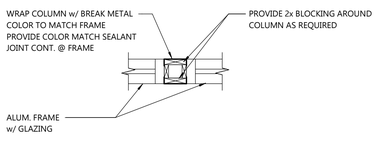
GLAZING SHALL MEET THE FOLLOWING STANDARDS AND GUIDELINES AS APPLICABLE FOR EACH TYPE:
-ASTM E 1300, ASTM C 1036, ASTM C 1048, ASTM E 774
-GANA GLAZING MANUAL
-SIGMA TM-3000 VERTICAL GLAZING GUIDELINES

GL-2: CLEAR FLOAT GLASS, TEMPERED

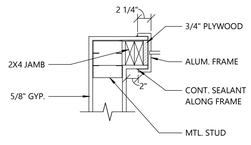
LITE: TYPE I, CLASS I, QUALITY Q3 FLOAT GLASS, KIND FT (FULLY TEMPERED), CONDITION A, 1/4" THICK

GENERAL DOOR / HARDWARE NOTES

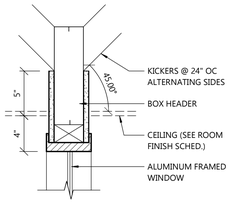
1. HARDWARE LOCK KEYING: HARDWARE SUPPLIER TO PROVIDE LOCK SCHEDULE, KEY DIAGRAM AND HAVE A REPRESENTATIVE GO OVER BUILDING KEYING DIRECT W/ OWNER-LANDLORD AND TENANT. KEYS TO BE HANDED DIRECT TO OWNER/TENANT.
2. ALL CYLINDERS TO BE SCHLAGE HEAVY DUTY 'D' SERIES FULL SIZE W/ INTERCHANGEABLE CORES. NO SUBSTITUTIONS.
3. FINAL CORES TO BE COORDINATED W/ OWNER-LANDLORD & TENANT.
4. ALL HOLLOW METAL DOORS/FRAMES SHALL BE WELDED - NO KNOCK DOWN FRAMES PERMITTED UNLESS SPECIFICALLY NOTED.
5. ALL HARDWARE TO BE AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANT
6. ALL TOILET ROOM DOORS TO HAVE A CLOSER AND PRIVACY LOCK
7. PROPER EXIT HARDWARE IS REQUIRED ON ALL EXIT AND EXIT ACCESS DOORS. DEAD BOLT HARDWARE SHALL COMPLY WITH REQUIREMENTS OF THE STATE/LOCAL BUILDING CODE.
8. ALL FINISHES TO BE BID AS 626 SATIN CHROME FINISH, UNLESS NOTED OTHERWISE.
9. ENTRY DOORS TO HAVE PASSAGE/ENTRY LOCKSET W/ CLOSER, COORDINATE W/ TENANT.
10. AT RATED ROOMS, HARDWARE SUPPLIER TO PROVIDE PROPER LOCKS, CLOSERS, ETC. TO MEET CODE.
11. HARDWARE SUPPLIER TO PROVIDE DOOR STOPS AT ALL DOORS. (IE WALL STOP, FLOOR STOP,) THESE STOPS TO BE PROVIDED IN THIS ORDER WITH WALL STOPS AS PREFERRED APPLICATION. SEE HARDWARE SCHEDULE FOR NOTES.
12. DOOR HARDWARE SHALL BE CAPABLE OF OPERATION WITH THE USE OF ONE (1) HAND AND SHALL NOT REQUIRE TIGHT PINCHING, TIGHT GRASPING OR TWISTING OF THE WRIST TO OPERATE. IF PROVIDED AT EXTERIOR PROVIDE READILY VISIBLE PERMANENT SIGNAGE ON OR ADJACENT TO DOOR STATING: 'THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED' - SEE **SHEET A5.0** FOR SIGN DETAILS. LEVER OR PADDLE DEADBOLTS RELEASES ARE ACCEPTABLE. DOOR THRESHOLD SHALL NOT EXCEED 1/2" IN HEIGHT, THRESHOLDS EXCEEDING 1/4" IN HEIGHT SHALL HAVE A 1:2 BEVEL. DOOR CLOSERS SHALL MEET OPENING FORCE AND SWEEP PERIOD REQUIREMENTS.
13. PROVIDE TACTILE EXIT SIGNAGE AT ALL EXIT DOORS -SEE **SHEET A5.0**
14. CONTRACTOR TO SUBMIT DETAILED HARDWARE SCHEDULE WITH COMPLETE CUT-SHEETS TO OWNER FOR FINAL APPROVAL.
15. EXTERIOR HARDWARE AS SELECTED BY OWNER TO BE HAGER 4500 SERIES WITH 4SNL. OUTSIDE TRIM IS US26D FINISH OR EQUAL. DEADBOLT LOCK IF REQUIRED SHALL BE OPERATED BY KEY OUTSIDE AND THUMBTURN INSIDE (EXT. DOOR LOCATIONS ONLY). REUSE EXISTING IF APPLICABLE.
16. ALL CLOSERS NOTED IN HARDWARE SETS ABOVE TO BE MOUNTED ON INTERIOR ROOM SIDE.



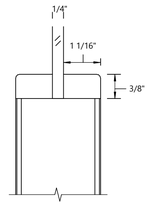
3 / A6.1 ALUM. FRAME @ COLUMN
SCALE: 3/4" = 1'-0"



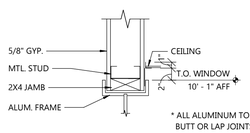
2 / A6.1 ALUM. JAMB DETAIL
SCALE: 1" = 1'-0"



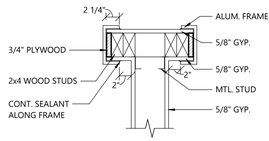
1 / A6.1 KICKER DETAIL
SCALE: 1 1/2" = 1'-0"



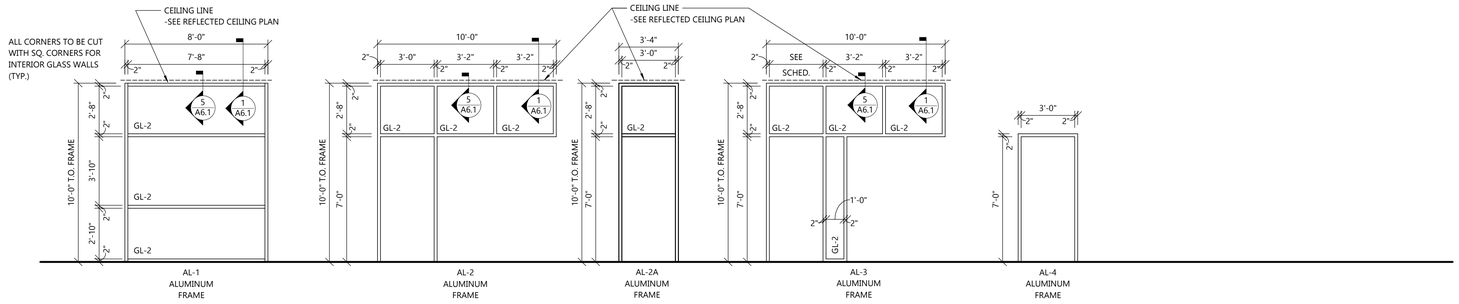
6 / A6.1 DOOR WOOD FLUSH MOULDING
NOT TO SCALE



5 / A6.1 ALUM. HEAD DETAIL
SCALE: 1" = 1'-0"



4 / A6.1 ALUM. JAMB DETAIL
SCALE: 1" = 1'-0"



ALUMINUM FRAME ELEVATIONS

ARCHITECTURAL DOOR SCHEDULE & ELEVATIONS

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COLLABORATION

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ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALLS	CEILING	CEILING HEIGHT	REMARKS
101	RECEPTION	LVT-1/WOC	B1		C1	10'-2"	1.
102	MEN'S RESTROOM	LVT-1	B2	ACROVYN/PT#3	C1	10'-2"	2.
103	BUSINESS OFFICE	CPT	B1		C1	10'-2"	1.
104	HALLWAY	LVT-1	B1	PT#4	C1	10'-2"	
105	INTRA-ORAL X-RAY	LVT-1	B1		C1	10'-2"	1.
106	PANORAMIC X-RAY	LVT-1	B1		C1	10'-2"	1.
107	HALLWAY	LVT-1	B1	PT#4	C1	10'-2"	
108	INTERIOR WAITING	CPT	B1	PT#3	C1	10'-2"	
109	CONSULTATION	CPT	B1		C1	10'-2"	1.
110	MANAGER/DOCTOR OFFICE	CPT	B1		C1	10'-2"	1.
111	LAB	LVT-1	B1	FRP#2/PT#5	C1	10'-2"	4.
112	TR. #1	LVT-1	B1		C1	10'-2"	1.
113	HALLWAY	LVT-1	B1	PT#4	C1	10'-2"	
114	TR. #2	LVT-1	B1		C1	10'-2"	1.
115	WOMEN'S RESTROOM	LVT-1	B2	ACROVYN/PT#3	C1	10'-2"	2.
116	MECHANICAL ROOM	CONC	B1	FRP#1/PT#5	C1	10'-2"	3.
117	BREAK ROOM	LVT-1	B1	PT#1	C1	10'-2"	
118	HALLWAY	LVT-1	B1		C1	10'-2"	1.
119	TR. #7	LVT-1	B1		C1	10'-2"	1.
120	TR. #6	LVT-1	B1		C1	10'-2"	1.
121	STERILIZATION	LVT-1	B1	PT#3	C1	10'-2"	
122	TR. #5	LVT-1	B1		C1	10'-2"	1.
123	TR. #4	LVT-1	B1		C1	10'-2"	1.
124	TR. #3	LVT-1	B1		C1	10'-2"	1.
125	STORAGE	LVT-1	B1	PT#1	C1	10'-2"	
126	STORAGE	LVT-1	B1	PT#1	C1	10'-2"	

ROOM FINISH REMARKS:

1. SEE FINISH PLAN FOR WALL FINISHES IN THIS ROOM
2. (ACROVYN) PROVIDE SARATOGA SERIES (SHADOW PAPYRUS #1610) ACROVYN WALL SYSTEM TO 42" AFF INCLUDE 4" BASE, 2 VERTICAL SEAMS/CORNERS & 2" TOP CAP. REMAINDER OF WALL TO BE PAINTED PT#3. GRAIN TO BE INSTALLED VERTICALLY
3. (FRP#1) PROVIDE FRP TO 42" AFF ON ALL WALLS & PAINT THE REMAINDER OF WALL ABOVE PT#5; FRP SPECIFICATION: CRANE COMPOSITES GLASBORD WHITE OR EQUAL
4. (FRP#2) PROVIDE FRP FROM FLOOR TO CEILING - SEE PLAN FOR LOCATION FRP SPECIFICATION: CRANE COMPOSITES GLASBORD WHITE OR EQUAL

GENERAL ROOM FINISH NOTES

1. INTERIOR WALL & CEILING FINISHES SHALL COMPLY W/IBC 803.9. 803.9 INTERIOR FINISH REQUIREMENTS BASED ON GROUP. INTERIOR WALL AND CEILING FINISH SHALL HAVE A FLAME SPREAD INDEX NOT GREATER THAN THAT SPECIFIED IN TABLE 803.9 FOR THE GROUP AND LOCATION DESIGNATED. INTERIOR WALL AND CEILING FINISH MATERIALS, OTHER THAN TEXTILES, TESTED IN ACCORDANCE WITH NFPA 286 AND MEETING THE ACCEPTANCE CRITERIA OF SECTION 803.1.2.1, SHALL BE PERMITTED TO BE USED WHERE A CLASS A CLASSIFICATION IN ACCORDANCE WITH ASTM E 84 IS REQUIRED.
2. EXIT ENCLOSURES & EXIT PASSAGEWAYS - CLASS B
3. INTERIOR FINISH MATERIALS CORRIDORS, ROOMS & ENCLOSED SPACES - CLASS C INTERIOR FINISH MATERIALS
4. ALL GYP. BOARD SURFACES SHALL BE LEVEL 4 GRADE FINISH AND GYP. BD. SURFACES SHALL BE TAPED, MUDDED AND PRIMED TO ACCEPT TENANT FINISHES. COORDINATE FINAL FINISH MATERIAL AND COLORS WITH FINISH PLAN. SPRAYED ON PAINT AND BACK ROLL FOR TEXTURE. WALL FINISH TO BE MAINTAINED OVER ENTIRE WALL SURFACE FROM THE FLOOR TO A MIN. OF 6" ABOVE FINISH CEILING HEIGHT. COORDINATE WITH SUPPLIED BASE TYPE/ HT.
5. ALL EXPOSED BLOCK WALLS SHALL BE PREPPED, BLOCK FILLER/ PRIMER APPLIED AND FINISHED WITH TWO (2) COATS PAINT.
6. PAINT EXPOSED STRUCTURE, MECHANICAL, AND ELECTRICAL EQUIPMENT TO MATCH COLOR OF THE ADJACENT WALLS (EXCEPT FACTORY FINISHED FIXTURES).
7. FLOOR FINISH MATERIALS SHALL BE COORDINATED WITH TENANT AND INSTALLED PER PLANS.
8. ALL MTL. STUD FRAMED SOFFITS TO HAVE DIAGONAL BRACING AS REQUIRED FOR STABILITY AND GYP. BD. ALL SIDES TO MIN. 6" ABOVE ADJACENT FINISH CLG. HEIGHT.
9. ALL CEILING GRIDS SHALL BE CENTERED IN EACH ROOM UNLESS OTHERWISE NOTED, SEE REFLECTED CEILING PLAN.
10. ALL ELECTRICAL AND MECHANICAL FIXTURES TO BE INSTALLED WITHIN CEILING SHALL BE CENTERED ON CEILING TILE UNLESS NOTED OTHERWISE, SEE MEP DRAWINGS.
11. ANY LOCATION GYP. BD. CONTACTING DISSIMILAR MATERIAL PROVIDE SEALANT JOINT PRIOR TO PAINT/ FINISH MATERIAL, TYP.
12. PROVIDE THE FOLLOWING AT WALL TO FRAME/ GLASS TERMINATION. ALIGN NEW WALL WITH CENTER OF EXIST. WINDOW MULL TYPICAL, STEP WALL AT WINDOW SILL/ HEAD. PROVIDE VINYL 'J' TRIM CLOSURE TO WINDOW FRAME TYPICAL, PROVIDE CONT. SEALANT JOINT. PROVIDE BREAK MTL. CLOSURE TO MATCH WINDOW FRAME AT FACE OF WALL EXPOSED TO FRONT OF STORE FRONT.
13. AT HOLLOW METAL OR ALUMINUM FRAMES (IE: WINDOW/ DOORS) PLACED IN GYP BD WALL ASSEMBLIES. RETURN GYP. BD. TO FRAME, PROVIDE PLASTIC 'J' CHANNEL AND SEALANT TYP. ENTIRE FRAME.
14. IF GYP. BD. IS STOPPED SHORT OF STRUCTURE ABOVE, INSULATION CONTRACTOR TO PROVIDE STRAPPING AT 24" O/C VERTICAL TO PREVENT INSULATION SLUMPING.
15. FLOORING CONTRACTOR TO PROVIDE COLOR MATCHED CAULK TO FLOOR TILE FINISH (IE: CERAMIC, LVT) AT ALL FLOOR DRAINS, CLEAN OUTS, AND DOOR FRAMES.

FLOORING

NOTES:
1. ADMI WILL DIRECT PURCHASE ALL FLOORING THROUGH A NATIONAL ACCOUNT. SEE **SHEET T1.1** FOR ADDITIONAL INFORMATION
2. SEE CONTRACT SCHEDULE FOR REQUIRED MATERIAL ORDER DATES
3. SEE ADMI'S CONSTRUCTION CLEAN SPEC. FOR FLOOR CARE OF RECEPTION + OFFICE (LVT) AREAS.

CPT CARPET TILE:
MOHAWK MACRO BLOOM II
SIZE: 12"x36"
COLOR: GT474-975 FELTED FRINGE STONE

WOC WALK OFF CARPET:
MANNINGTON CHARGE WALK-OFF TILE
SIZE: 18"x36"
COLOR: VECTOR 14362

LVT-1 VINYL TILE:
TARKETT LVT
SIZE: 18"x18"
COLOR: HEARTHSTONE PLST 7242

B1 BASE:
ROPPE
4"x1/8"x48" COVE BASE
#123 CHARCOAL

B2 BASE:
4" ACROVYN BASE

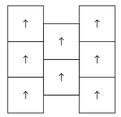
CONC SEALED CONCRETE
3 COATS
NOTE: LEAVE ALL EXTRA TILES IN MECHANICAL ROOM AT END OF JOB

TRANSITIONS THROUGHOUT:
ROPPE
COLOR: #123 CHARCOAL

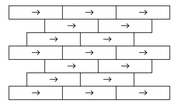
NOTE: BEFORE THE FLOORING INSTALLATION TAKES PLACE THE FOLLOWING MOISTURE LIMITS MUST BE ACHIEVED: LVT AREAS 98% RH OR 8 LBS. MVER; CARPET TILE AREAS 85% RH OR 8 LBS MVER. THESE TESTS SHOULD BE CONDUCTED IN STRICT ACCORDANCE WITH THE LATEST EDITION OS ASTM F-2010 & ASTM F-1869.

FLOORING PATTERNS

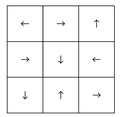
WOC PATTERN
ASHLAR



CPT-1 PATTERN
1/3 OFFSET



LVT-1 PATTERN
RANDOM



HOLLOW METAL DOOR & FRAME PAINT:

DOOR & WINDOW FRAME
SHERWIN WILLIAMS DTM ACRYLIC DEEP BASE • (2) COATS SEMI-GLOSS
1 GAL MIX

BAC COLORANT	OZ	32	64	128
B1-BLACK	-	56	1	1
N1-RAW UMBER	-	7	–	-
R2-MAROON	-	11	–	-
Y3-DEEP GOLD	-	52	1	1

CEILING

C1
MATERIAL: 24"x24" ACOUSTICAL PANEL CEILING
MANUF: ARMSTRONG
ITEM: DUNE #1774

* ALL CEILING HEIGHTS ARE AS STATED OR 2" ABOVE WINDOWS

*ALL CEILING HEIGHTS TO BE VERIFIED TO ALLOW REQ'D CLEARANCES FOR ALL M.E.P. FIXTURES, HOLD CEILINGS AS TIGHT AS POSSIBLE. CONTACT EXCEL ENGINEERING INC. IF ANY ISSUES OCCUR WITH CEILING HEIGHTS.
*ANY CEILING TILE ALTERNATES TO BE SUBMITTED TO **ADMI** FOR APPROVAL.
*CEILING GRID TO BE 15/16" PRELUDE XL, COLOR: WHITE, 7300 SERIES.
*GRID TO BE CENTERED IN ALL ROOMS.

WALL COVERINGS

SHERWIN WILLIAMS - SHERWIN WILLIAMS PRO-MAR 200 PAINT IN EGGSHELL FINISH.
-ALL WALLS TO HAVE (1) COAT PRIMER & (2) COATS PAINT (MIN.)
WALL COVERINGS BY EYKON, PREP WALLS AS REQ'D BY MANUF. INSTRUCTIONS

PT#1 -SW9147 FAV JEANS
PT#2 -SW6524 COMMODORE
PT#3 -SW9140 BLUSTERY SKY
PT#4 -SW6248 JUBILEE
PT#5 -SW7005 PURE WHITE

*UNDERSIDE OF ALL HEADERS & SOFFITS TO BE PT#5 U.N.O.

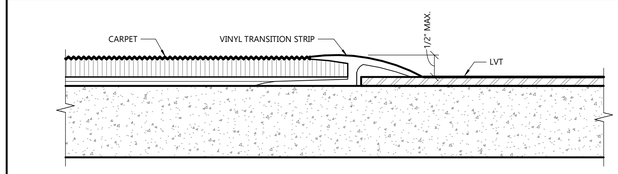
DOOR COLOR:

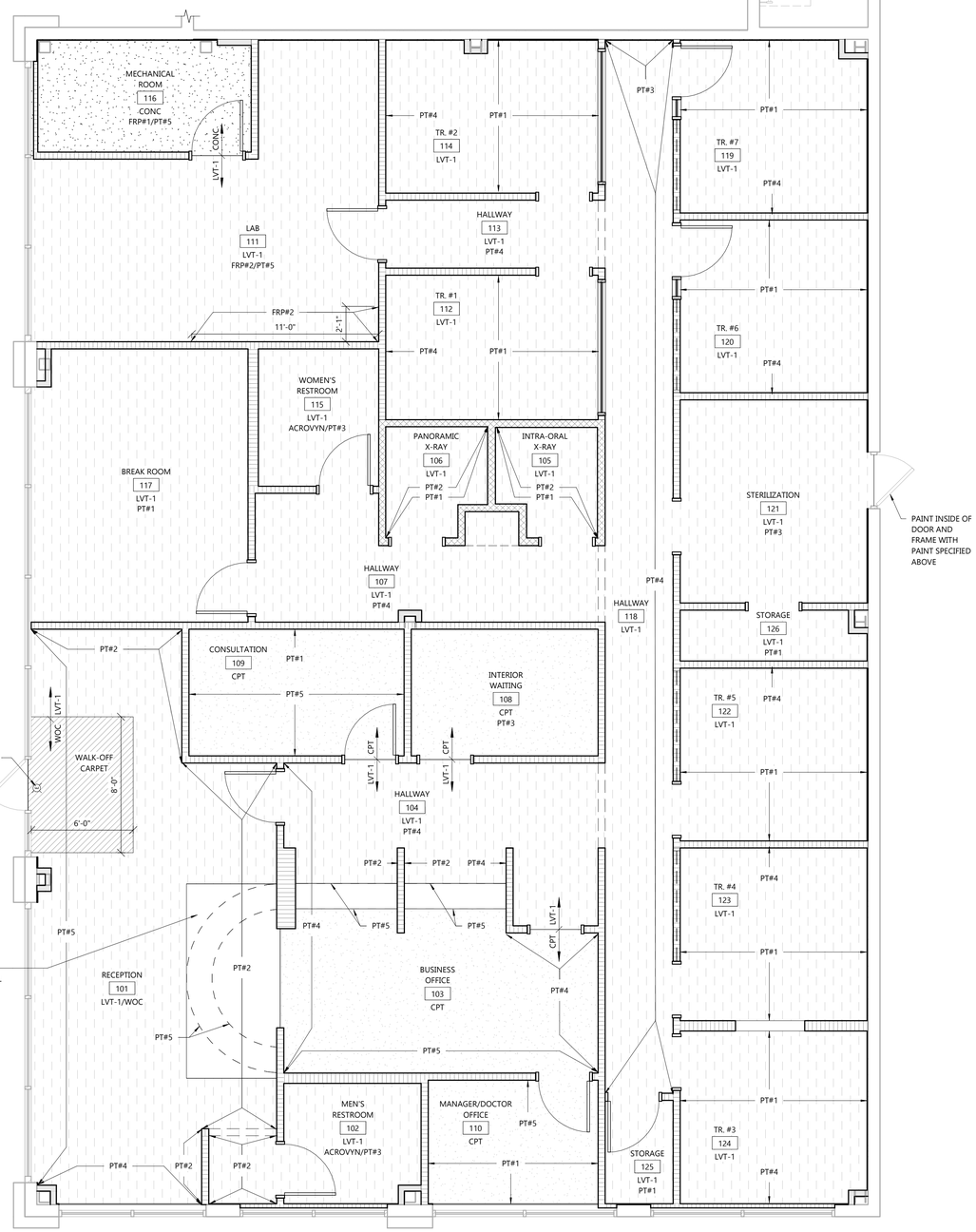
MASONITE DOOR COMPANY
TYPE: VENEER 5, ROTARY BIRCH SELECT WHITE
COLOR: CLEAR COAT
DOORS TO BE FACTORY PRE-FINISHED

ROLLER SHADES

MANUAL ROLLER SHADES PROVIDED BY G.C. FOR ALL EXTERIOR WINDOWS. SEE **SHEET T1.1** FOR MORE INFORMATION

FLOOR TRANSITION DETAIL





NORTH

FIRST FLOOR FINISH PLAN
SCALE: 1/4" = 1'-0"
0' 4' 8'

ARCHITECTURAL ROOM FINISH SCHEDULE & PLAN

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

JOB NUMBER
230264900

SHEET NUMBER
A6.2

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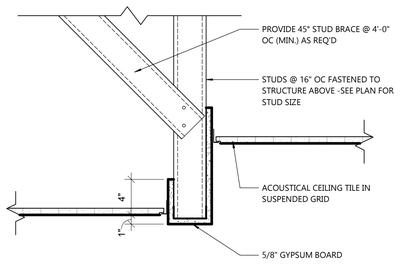
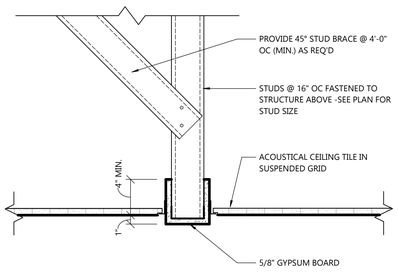
CEILING DETAILS



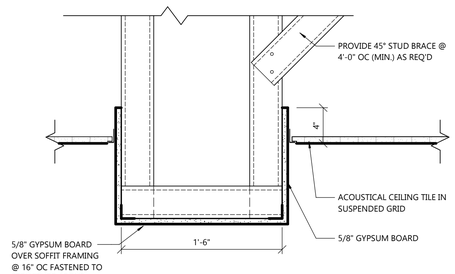
BULKHEAD DETAIL

NOT TO SCALE *NOT REFERENCED ON PLANS



BULKHEAD DETAIL

NOT TO SCALE *NOT REFERENCED ON PLANS



SOFFIT DETAIL

NOT TO SCALE -SEE SHEET A7.2

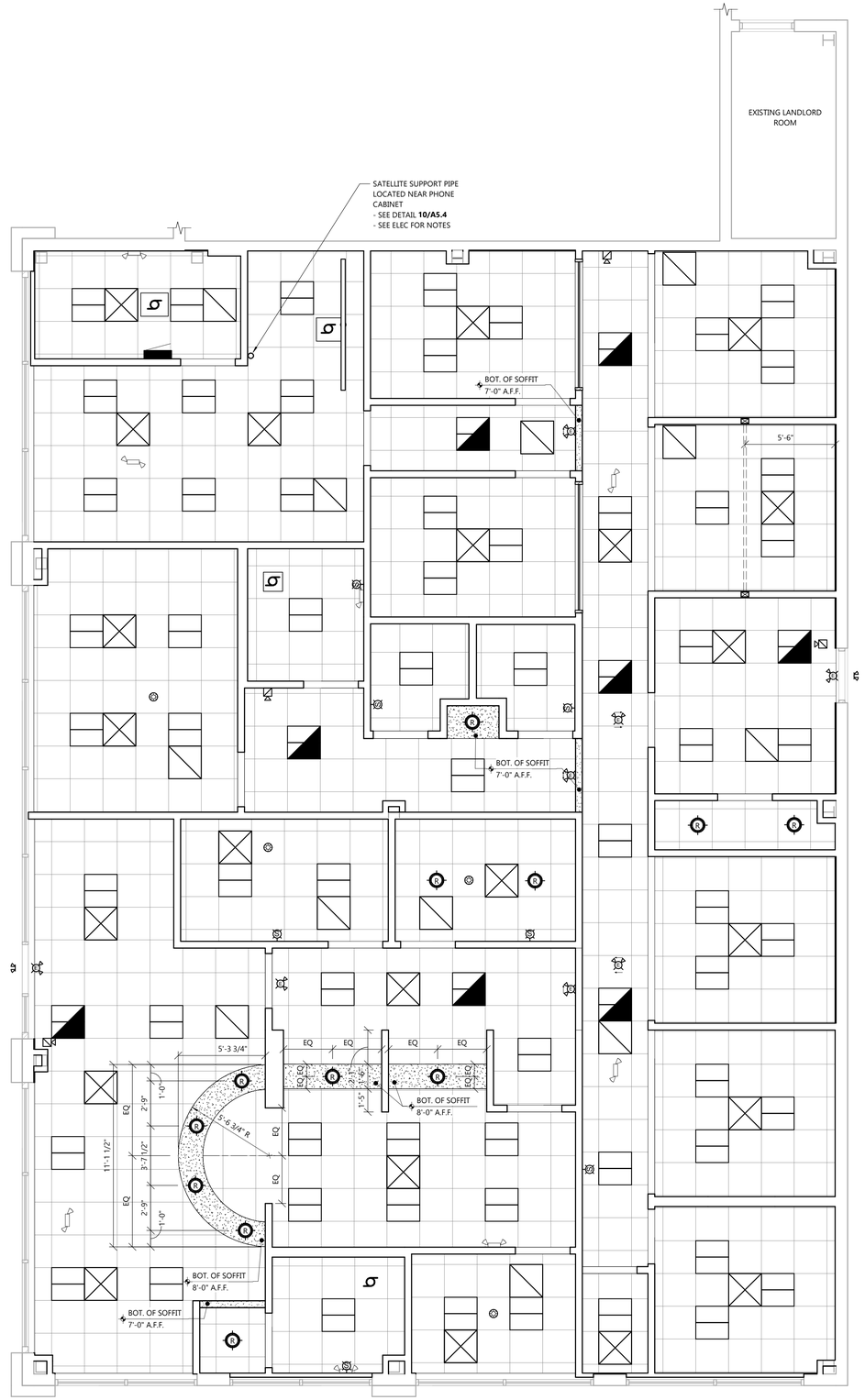
CEILING LEGEND

	SEE ROOM FINISH SCHEDULE ON **SHEET A6.2** FOR HEIGHTS. CENTER GRID IN ALL ROOMS.
	GYPSUM BOARD CEILING
	EXHAUST FAN
	SUPPLY AND RETURN GRILLES - SEE HVAC DRAWINGS
	2x2 LED LAY-IN TROFFER PROVIDED BY OWNER - SEE ELEC.
	6" LED DOWN LIGHT PROVIDED BY OWNER
	OCCUPANCY SENSOR - SEE ELEC.
E	EXIT LIGHT - PROVIDED BY OWNER
	BATTERY BACK-UP EGRESS LIGHTING -PROVIDED BY OWNER
E	EXIT LIGHT W/ BATTERY BACK-UP EGRESS LIGHTING - PROVIDED BY OWNER

LIGHTING NOTE:
GENERAL SWITCH LOCATIONS & WIRING TO BE DETERMINED BY LIGHTING CONTRACTOR PER LOCAL CODE AND TO BE APPROVED BY ADMI. ALL CEILING & LIGHT SUPPORT WIRES TO BE HUNG FROM TOP CHORD OF JOIST SYSTEM.

RECESSED FIXTURE NOTE:
GC TO PROVIDE "ENTING" AT ALL RECESSED CAN FIXTURES AS REQUIRED BY THE MANUFACTURES WRITTEN INSTRUCTIONS INSURING THAT NO INSULATION TOUCHES THE FIXTURES.

NOTE:
SEE ROOM FINISH SCHEDULE FOR CEILING FINISH & HEIGHT



NORTH

REFLECTED CEILING PLAN

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

0' 4' 8'

ARCHITECTURAL REFLECTED CEILING PLAN & DETAILS

EXCEL
Engineering and Architecture, P.C.

Always a Better Plan

100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:

ASPEN DENTAL

6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES

SHEET ISSUE JULY 12, 2023

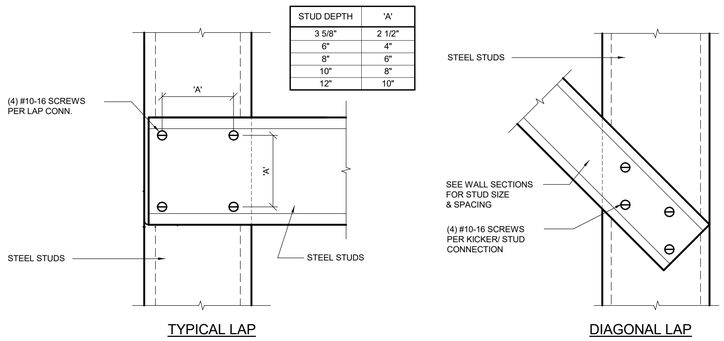
REVISIONS

JOB NUMBER

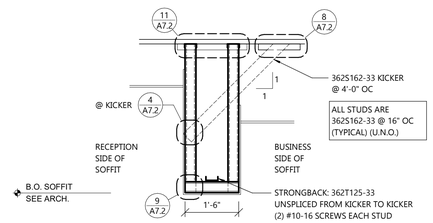
230264900

SHEET NUMBER

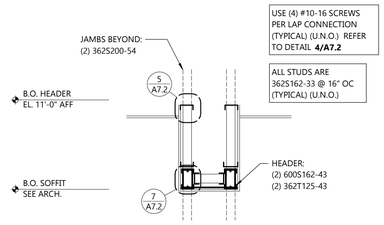
A7.1



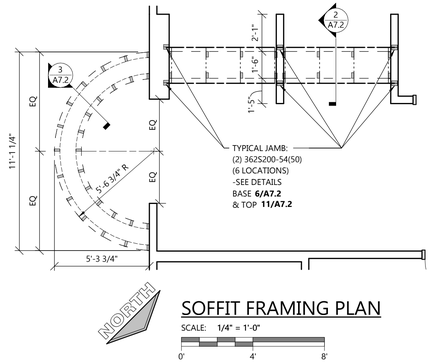
4 A7.2 LAP CONNECTIONS
SCALE: 3/4" = 1'-0"



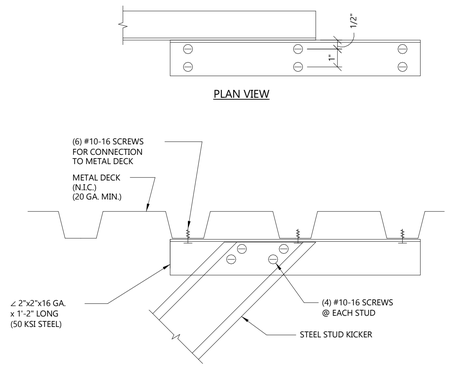
3 A7.2 CEILING SOFFIT SECTION
SCALE: 1/2" = 1'-0"



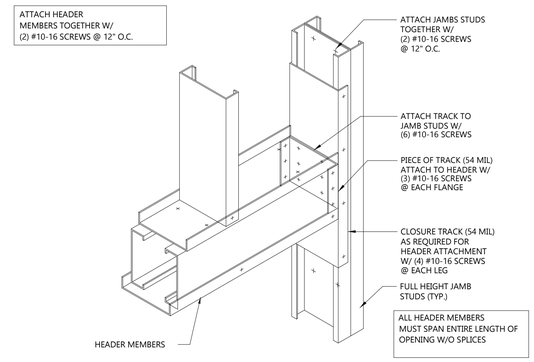
2 A7.2 CEILING SOFFIT SECTION
SCALE: 1/2" = 1'-0"



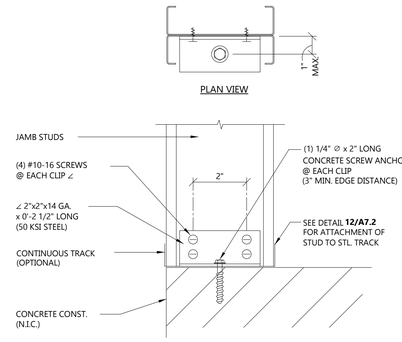
SOFFIT FRAMING PLAN
SCALE: 1/4" = 1'-0"
0' 4' 8'



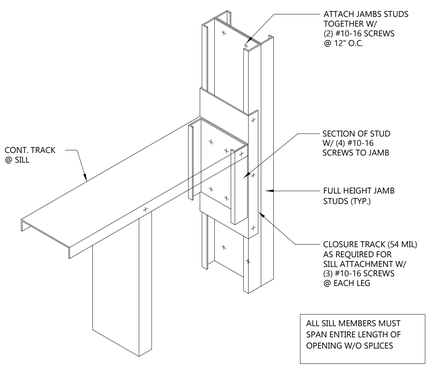
8 A7.2 KICKER / DECK CONNECTION
SCALE: 3" = 1'-0"



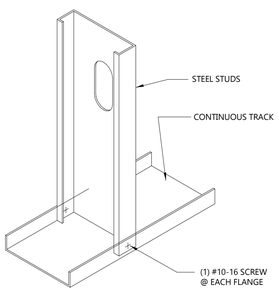
7 A7.2 HEADER - JAMB DETAIL
SCALE: 3" = 1'-0"



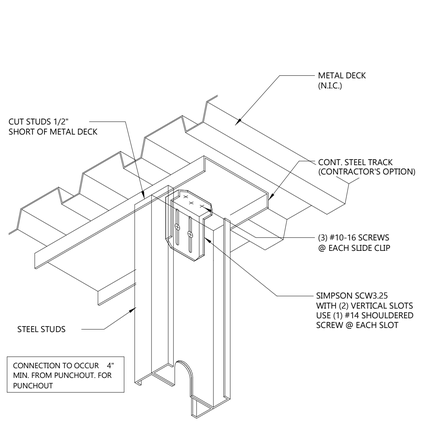
6 A7.2 BASE DETAIL @ CONCRETE
SCALE: 3" = 1'-0"



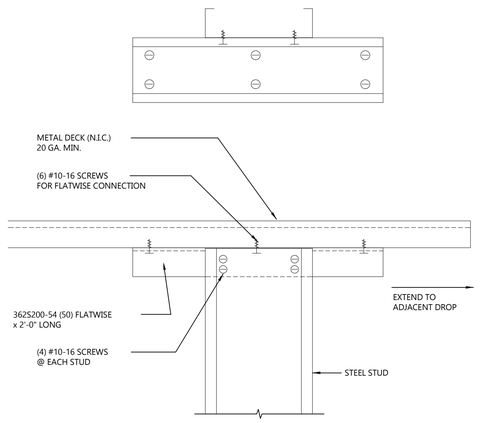
5 A7.2 SILL - JAMB DETAIL
SCALE: 3" = 1'-0"



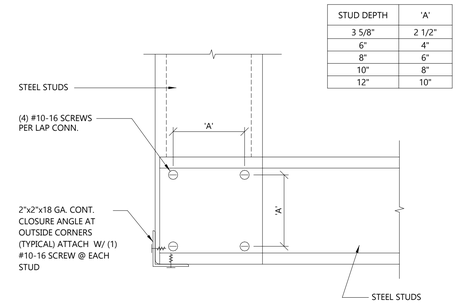
12 A7.2 STUD TO TRACK CONNECTION
SCALE: 3" = 1'-0"



11 A7.2 V.S.C. DETAIL
SCALE: 3" = 1'-0"



10 A7.2 TOP DETAIL @ METAL DECK
SCALE: 3" = 1'-0"



9 A7.2 LAP DETAIL
SCALE: 3" = 1'-0"

ARCHITECTURAL SOFFIT FRAMING DETAILS

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION
AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

JOB NUMBER
230264900

SHEET NUMBER
A7.2

PLUMBING SPECIFICATIONS

DIVISION 22 PLUMBING

22 05 00 BASIC PLUMBING REQUIREMENTS

A. SEE DIVISION 00 PROCUREMENT AND CONTRACTING AND DIVISION 01 GENERAL REQUIREMENT FOR ADDITIONAL REQUIREMENTS.
B. PLUMBING CONTRACTOR SHALL VERIFY REQUIREMENTS FOR TEMPORARY WATER WITH GENERAL CONTRACTOR AND INCLUDE IN HIS SCOPE OF WORK WHEN DIRECTED BY G.C.. INSTALL IN ACCORDANCE WITH ALL CODE AND OSHA REQUIREMENTS FOR CONSTRUCTION PROJECTS.
C. SUBSTITUTIONS
   1. SEE DIVISION 01 23 00 PRODUCT SUBSTITUTION PROCEDURES FOR ADDITIONAL REQUIREMENTS.
   2. CONTRACTOR SHALL PROVIDE ALL SUPPORTING DATA AND ASSUME THE BURDEN OF PROOF THAT ANY SUBSTITUTE IS EQUIVALENT AS TO APPEARANCE, CONSTRUCTION, CAPACITY, AND PERFORMANCE. THE JUDGMENT OF EQUIVALENCY SHALL BE MADE BY THE ENGINEER AT THE TIME OF SHOP DRAWING REVIEW, NOT DURING BIDDING.
   3. WHERE SUBSTITUTE EQUIPMENT REQUIRES REDESIGN OF ANY PART OF THE PROJECT, THE COST OF REDESIGN AND ADDITIONAL COSTS OF THE WORK SHALL BE PAID BY THE CONTRACTOR. REDESIGN SHALL BE SUBJECT TO THE APPROVAL OF ALL AUTHORITIES HAVING JURISDICTION OVER THE WORK INCLUDING THE ARCHITECT/ ENGINEER.
   4. CONTRACTOR SHALL ASSUME ALL COORDINATION RESPONSIBILITIES FOR SUBSTITUTE EQUIPMENT INCLUDING COORDINATION ACROSS TRADES AND COORDINATION OF PREVIOUSLY REVIEWED AND APPROVED SHOP DRAWING SUBMITTALS, SHOULD THESE SHOP DRAWINGS BE AFFECTED BY THE SUBSTITUTED EQUIPMENT.
D. SHOP DRAWINGS, PRODUCT DATA, TEST RESULTS AND SAMPLE SUBMITTALS:
   1. SEE DIVISION 01 33 23 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES FOR ADDITIONAL REQUIREMENTS
   2. PLUMBING CONSTRUCTION ADMINISTRATION SUBMITTAL LIST:
      a. PIPING
      b. PIPE IDENTIFICATION
      c. FIXTURES
      d. INSULATION
      e. HANGERS
      f. DRAINS AND CLEANOUTS
      g. VALVES
      h. BACKFLOW PREVENTERS
      i. WATER HEATERS
      j. PUMPS
      k. SEWAGE EJECTORS
   3. PROJECT CLOSEOUT
      a. PROVIDE PLUMBING EQUIPMENT OPERATING AND MAINTENANCE MANUALS TO THE OWNER PER IECC C303.3 AND C408.2.5.1.
      b. PROVIDE RECORD DRAWINGS TO THE OWNER IN AUTOCAD FORMAT.
E. FINISHING AND PAINTING
   1. SEE DIVISION 09 91 00 FINISH AND PAINTING FOR ADDITIONAL REQUIREMENTS.
   2. PREPARE EXPOSED PIPE, FITTINGS, SUPPORTS, AND ACCESSORIES FOR FINISH PAINTING IN ROOMS THAT WILL HAVE CEILING AND STRUCTURE PAINTED.
   3. COORDINATE WORK WITH THE PAINTERS SO THAT ALL EQUIPMENT IS INSTALLED PRIOR TO PAINTING. P.C. SHALL PAINT ITEMS IF NOT IN PLACE PRIOR TO NORMAL ROUTINE PAINTING.
   4. IF FINISH BECOMES RUSTED, CORRODED, SCRATCHED, OR FLAKED DURING STORAGE OR INSTALLATION, REFINISH THE EQUIPMENT TO THE SATISFACTION OF THE OWNER.
   5. WHERE THE PLUMBING CONTRACTOR IS REQUIRED TO PAINT, THE PAINTING SHALL BE DONE IN ACCORDANCE WITH THE PAINTING PORTION OF THE ARCHITECTURAL SPECIFICATION.
F. DETAILS AND SCHEDULES ARE SHOWN TO AID THE CONTRACTOR AND ARE NOT MEANT TO BE INCLUSIVE OF ALL DEVICES. PROVIDE REQUIRED EQUIPMENT AND ACCESSORIES FOR A COMPLETE INSTALLATION.
G. INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND REQUIREMENTS. PROVIDE ADDITIONAL WORK AND MATERIALS AS REQUIRED.
H. PROVIDE ALL STATE AND LOCAL PERMITS AND ANY OTHER RELATED FEES.
I. REGULATORY REQUIREMENTS
   1. PROVIDE CERTIFICATE OF COMPLIANCE FROM AUTHORITY HAVING JURISDICTION INDICATING APPROVAL BACKFLOW PREVENTION DEVICES TESTING AND INSTALLATION.
   2. PERFORM WORK PER ALL LOCAL AND STATE CODES, ORDINANCES AND REGULATIONS HAVING JURISDICTION.
J. COORDINATE INSTALLATION OF PLUMBING WORK WITH THE OTHER CONTRACTORS TO AVOID CONFLICTS WITH OTHER WORK.
K. VERIFY CONNECTION REQUIREMENTS FOR EQUIPMENT FURNISHED BY OTHERS WITH FINAL SHOP DRAWINGS.
L. CUTTING AND PATCHING
   1. PROVIDE ALL CUTTING AND PATCHING NECESSARY FOR PLUMBING WORK INSTALLATION UNLESS THIS WORK IS IDENTIFIED TO BE THE WORK OF OTHER CONTRACTORS. PATCHING SHALL MATCH ADJACENT SURFACES. CORE DRILL OR SAW-CUT OPENINGS THROUGH EXISTING CONCRETE.
   2. P.C. SHALL PROVIDE SAWCUTTING, EXCAVATION, AND BACKFILL OF EXISTING FLOORS AS REQUIRED FOR INSTALLATION OF NEW UNDERGROUND PIPING. P.C. SHALL PROVIDE CONCRETE AND REINFORCING PER FLOOR SLAB SPECIFICATIONS IN REMOVED AREA OF THICKNESS TO MATCH EXISTING (FIELD VERIFY). PROVIDE DOWELS INTO EXISTING FLOOR SLAB. DOWEL DIAMETER SHALL BE MINIMUM ONE EIGHTH OF FLOOR SLAB THICKNESS. DOWEL LENGTH SHALL BE 12" FOR SLABS LESS THAN 6" THICK, 16" FOR SLABS 6-7" THICK, 18" FOR SLABS 8-9" THICK, AND 20" FOR SLABS GREATER THAN 9" THICK. DOWELS SHALL BE SPACED 12" O.C. AND PENETRATION IN EXISTING SLAB SHALL BE HALF THE LENGTH.
M. FIRE RATED INTERIOR WALL AND FLOOR PIPE PENETRATIONS
   1. SLEEVE REQUIRED FOR PENETRATION OF CONCRETE AND MASONRY WALLS AND FLOORS.
   2. SEAL OPENING AROUND PIPE WITH A UL APPROVED FIRE-STOP SYSTEM HAVING AN F-RATING NOT LESS THAN THE HOURLY RATING OF THE ASSEMBLY BEING PENETRATED.
   3. PROVIDE FIRE-RESISTIVE JOINT SYSTEM PRODUCTS BY THE SAME MANUFACTURER AS BEING USED ON THE REMAINDER OF THE PROJECT (COORDINATE WITH GC/CM).
   4. WHERE A SLEEVE IS REQUIRED, FURNISH AND INSTALL SLEEVES FOR NEW DRYWALL WALLS AND CONCRETE WALLS AND FLOORS. FURNISH SLEEVES TO THE MASON CONTRACTOR FOR INSTALLATION IN NEW MASONRY WALLS.
   5. PROVIDE UL ASSEMBLY PENETRATION NUMBER TO AHJ COMPLIANT WITH BUILDING UL ASSEMBLY 30 DAYS PRIOR TO INSTALLATION IF REQUIRED BY AHJ.
N. SEALANTS
   1. PLUMBING CONTRACTOR SHALL PROVIDE ALL SEALANTS WHERE JOINT IS HIDDEN AND WHERE JOINT IS EXPOSED IN MECHANICAL ROOM.
   2. SEALANT CONTRACTOR SHALL PROVIDE SEALANTS AT ALL EXPOSED LOCATIONS IN FINISHED ROOMS.
O. ESCUTCHEONS
   1. INSTALL ONE-PIECE (TWO PIECE FOR EXISTING PIPING) POLISHED CHROME PLATED STEEL ESCUTCHEONS AT PENETRATIONS EXPOSED IN FINISHED ROOMS (ROOMS WHICH DON'T HAVE UNFINISHED CONCRETE FLOORS).
   2. ESCUTCHEONS WITH SPRINGS FOR WALL AND CEILING LOCATIONS.
   3. ID TO CLOSELY FIT AROUND PIPE/INSULATION, OD THAT COMPLETELY COVERS THE OPENING.
   4. ESCUTCHEONS REQUIRED IN CABINETS AND CASEWORK.
P. PROJECT COMPLETION
   1. CLEAN FIXTURES AND EQUIPMENT AND LEAVE IN PROPER WORKING CONDITION AT THE TIME OF FINAL CLEAN-UP.
   2. REMOVE, CLEAN AND REPLACE AERATORS AFTER FLUSHING WATER PIPING.
   3. PROVIDE OPERATING INSTRUCTIONS FOR A TOTAL OF TWO (2) HOURS. MAINTAIN A RECORD OF OPERATING INSTRUCTION PERIODS AND OBTAIN OWNER SIGNOFF THAT INSTRUCTIONS HAVE BEEN COMPLETED.
Q. ACCESS
   1. FURNISH ACCESS PANELS OF ADEQUATE SIZE TO PERMIT SERVICE OF EQUIPMENT, VALVES, OR OTHER SPECIALTIES WHICH REQUIRE MAINTENANCE OR ADJUSTMENT WHICH ARE INSTALLED BEHIND WALLS OR ABOVE NON-LAYIN CEILING SURFACES.
   2. PANELS SHALL BE SUITABLE FOR INSTALLATION IN THE MATERIAL FORMING THE FINISHED SURFACE, WITH FLANGED FLUSH METAL FRAME, FLUSH HINGED STEEL DOOR, FLUSH SCREWDRIVER OPERATED LATCH.
   3. PANELS UL LISTED TO CONFORM TO THE FIRE RATING OF THE SURFACE INSTALLED IN.
   4. TURN ACCESS PANEL OVER TO CONTRACTOR SKILLED IN THE CONSTRUCTION OF THE SURFACES INVOLVED FOR INSTALLATION.
   5. ARCHITECT TO APPROVE ACCESS PANEL LOCATION PRIOR TO INSTALLATION OF EQUIPMENT REQUIRING ACCESS.
   6. COORDINATE WITH THE OTHER CONTRACTORS AND WHEREVER PRACTICAL, GROUP DEVICES IN SUCH A MANNER SO AS TO MINIMIZE PANELS.

22 05 19 METERS AND GAUGES

A. PRESSURE GAUGES AND THERMOMETERS
   1. MANUFACTURERS: TRERICE, U.S. GAUGE, ASHCROFT, MARSH, WEISS, WEKSLER.
   2. PRESSURE GAUGES
      a. GENERAL PURPOSE: TRERICE 600CB PBF CERTIFIED LEAD FREE CAST ALUMINUM CASE, PHOSPHOR BRONZE BOURDON TUBE; TRERICE 872-1PBF LEAD FREE BRASS PRESSURE SNUBBER.
         1). GAUGE COCK: APOLLO 77FLF-100 LEAD FREE FULL PORT THREADED BRASS VALVE, 150 PSI SWP, 400 DEG F MAXIMUM TEMPERATURE.
   3. STEM THERMOMETERS:
      a. GENERAL PURPOSE: TRERICE BX9, ASTM E1, ORGANIC SPIRIT LIQUID FILL, CAST ALUMINUM CASE WITH EPOXY FINISH, CAST ALUMINUM ADJUSTABLE JOINT WITH POSITIVE LOCKING DEVICE, 9" SCALE, 3/4" NPT BRASS STEM, WITH EXTENSIONS AS REQUIRED FOR INSULATION.
      b. PROVIDE THERMOWELL FOR ALL THERMOMETERS. BRASS IN COPPER TUBING. SIZE AND INSERTION LENGTH FOR APPLICATION. PROVIDE HEAT TRANSFER MEDIUM.
   4. SCALE RANGES AND MINIMUM INCREMENT AS FOLLOWS:
      a. COLD WATER: 0-100 PSIG/ 1 PSIG; 0-100 DEG F/ 1 DEG F
      b. HOT WATER: 0-100 PSIG/ 1 PSIG; 0-160 DEG F/ 2 DEG F.
   5. EXTEND NIPPLES TO ALLOW INSULATION CLEARANCE.
   6. INSTALL WHERE READ FROM NORMAL OPERATING LEVEL.
   7. CALIBRATE FOR ACCURACY.

22 05 29 PIPE AND EQUIPMENT HANGERS AND SUPPORTS

A. MANUFACTURERS: B-LINE, EMPIRE INDUSTRIES, GLOBAL PIPE HANGER PRODUCTS, GRINNEL, NATIONAL PIPE HANGER, UNI STRUT.
B. ANGLES, CHANNELS, AND BEAMS: ASTM A36 AND A572 AS REQUIRED.
C. HANGERS SHALL NOT BE ATTACHED TO JOIST BRIDGING.
D. ATTACHMENT TO METAL DECK: HANGERS MAY BE ANCHORED TO METAL FLOOR/ROOF DECK IF ALL THE FOLLOWING CONDITIONS ARE MET:
   1. MAXIMUM HANGER LOAD OF 50 LBS.
   2. ANCHORED TO BOTTOM OF DECK FLUTES, NOT UPPER FLUTE.
   3. ANCHOR LENGTH SHALL EXCEED DECK DEPTH.
E. PIPE HANGERS/SUPPORTS
   1. SEE DETAILS ON PLANS FOR ADDITIONAL PIPE HANGER SPECIFICATIONS.
   2. SEE SCHEDULE ON PLANS FOR HANGER SPACING.
   3. CONFORM TO ASME B31.9 AND MANUFACTURER'S STANDARDIZATION SOCIETY (MSS) SP-58-2009.
   4. MATERIALS
      a. V BOTTOM CLEVIS HANGER: MSS SP-58 TYPE 1, B-LINE FIGURE B3106 AND FIGURE B3106V PRE-GALVANIZED PLASTIC PIPE SUPPORT CHANNEL FOR PEX PIPING TO INCREASE HANGER SPACING.
   5. INSTALL HANGERS AND SUPPORTS SO PIPING LIVE AND DEAD LOADS AND STRESSES FROM MOVEMENT WILL NOT BE TRANSMITTED TO CONNECTED EQUIPMENT. ADJUST HANGERS TO DISTRIBUTE LOADS EQUALLY ON ATTACHMENTS AND TO PROVIDE INDICATED PIPE SLOPES.
F. STRUT SYSTEM
   1. COMPLY WITH THE LATEST REVISION OF MFMA STANDARDS PUBLICATION NUMBER MFMA-3, "METAL FRAMING STANDARDS PUBLICATION".
   2. INSTALL STRUT IN ACCORDANCE WITH MFMA-102 "GUIDELINES FOR THE USE OF METAL FRAMING"; IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S RECOMMENDATONS, AND WITH RECOGNIZED INDUSTRY PRACTICES.
   3. COLD FORMED LOW CARBON STEEL METAL FRAMING CHANNEL STRUT: B-LINE TYPE B CHANNEL.
   4. 1-5/8 INCHES WIDE IN VARYING HEIGHTS AND WELDED COMBINATIONS AS REQUIRED TO MEET LOAD CAPACITIES.
   5. MANUFACTURER'S STANDARD FINISH OR PLAIN FINISH.
G. PROVIDE SUPPORT FOR UTILITY METERS IN ACCORDANCE WITH REQUIREMENTS OF UTILITY COMPANIES.

22 05 53 MECHANICAL IDENTIFICATION

A. NAMEPLATES
   1. MANUFACTURERS: MARKING SERVICES, BRADY B-1, AND SETON SETONFLEX.
   2. 3/4" HIGH, 1/16" THICK PLASTIC WITH ENGRAVED WHITE LETTERS ON BLACK BACKGROUND COLOR, SCREW OR ADHESIVE MOUNTING.
   3. PROVIDE AT STARTERS.
B. VALVE TAGS
   1. MANUFACTURERS: MARKING SERVICES, W.H. BRADY, AND SETON NAME PLATE COMPANY.
   2. 1-1/2" DIAMETER 20 GAUGE BRASS TAG WITH STAMPED BLACK LETTERS. ATTACH WITH 5765 #6 SOLID BRASS BEAD CHAIN.
   3. PROVIDE TYPEWRITTEN LETTER SIZE CHART.
   4. COORDINATE VALVE TAG NOMENCLATURE/NUMBERING SEQUENCE/STARTING NUMBER WITH OWNER PRIOR TO ORDERING TAGS.
   5. ALL VALVES SHALL BE TAGGED EXCEPT DRAIN VALVES AND FIXTURE STOPS.
C. SIGNAGE
   1. MANUFACTURERS: W.H. BRADY, MY SAFETY SIGN AND SETON NAME PLATE COMPANY.
   2. PLASTIC SIGN: MIN 4" SIDE x 2" HIGH, 1/16" THICK LAMINATE PLASTIC WITH ENGRAVED LETTERS. TWO HOLES PUNCHED, WITH VALVE CHAIN. WHITE BACKGROUND W/ RED LETTERS.
   3. PROVIDE AT MAIN WATER SHUTOFF VALVE IN ASPEN DENTAL MECHANICAL ROOM.
D. PIPE IDENTIFICATION
   1. INDOOR SELF-ADHESIVE PIPE MARKERS
      a. MANUFACTURERS: MARKING SERVICES MS-900, BRADY B-736, SETON OPTI-CODE.
      b. FLEXIBLE PVC FILM WITH PRESSURE SENSITIVE ACRYLIC ADHESIVE BACKING WITH PRINTED MARKINGS.
      c. SECURE WITH 2" WIDE TAPE WITH ARROWS INDICATING FLOW.
   2. COLOR, OVERALL SIZE AND LETTER HEIGHT SHALL CONFORM TO ASME A13.1- 2007 "SCHEME FOR THE IDENTIFICATION OF PIPING SYSTEMS".
   3. IDENTIFY PIPE SERVICE, FLOW DIRECTION, AND PRESSURE.
   4. IDENTIFICATION SYSTEM SHALL MATCH CURRENT SYSTEM IN THE BUILDING. WHERE NONE EXISTS, PROVIDE PER SPECIFICATIONS.
   5. NOMENCLATURE TO MATCH NAME ON DRAWING LEGEND.
   6. LOCATIONS
      a. LOCATE TO FACE GREATEST POINT OF VISIBILITY. ALL ADJACENT LABELS TO BE INSTALLED NEATLY IN A ROW.
      b. LOCATE IDENTIFICATION NOT-TO-EXCEED 50 FEET FOR EXPOSED PIPING.
      c. LOCATE IDENTIFICATION NOT-TO-EXCEED 25 FEET FOR PIPING ABOVE CEILINGS.
      d. MINIMUM ONE LOCATION PER ROOM.
      e. INSTALL IDENTIFICATION AFTER PIPING AND INSULATION IS COMPLETE TO ENSURE MAXIMUM VISIBILITY OF THE IDENTIFICATION SYSTEM.
      f. BEHIND ACCESS PANELS AND ALL OTHER ACCESSIBLE POINTS OF SERVICE.
      g. NEAR LOCATIONS WHERE PIPES PENETRATE WALLS, FLOORS OR CEILINGS.
      h. NEAR EACH VALVE AND CONTROL DEVICE.
      i. AT EACH MAJOR PIECE OF EQUIPMENT.

22 07 00 INSULATION

A. GENERAL
   1. SEE INSULATION SCHEDULES ON PLANS FOR ADDITIONAL INFORMATION.
   2. INSULATION, INSULATION SYSTEMS AND JACKETS SHALL MEET UL-723/ASTM E84 REQUIREMENTS OF MAX. FIRE HAZARD CLASSIFICATION OF 25, AND MAX. FLAME SPREAD, FUEL CONTRIBUTED, AND SMOKE DEVELOPED OF 50 WHEN INSTALLED IN RETURN AIR PLENUMS.
   3. INSTALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND MICA PUBLICATION "COMMERCIAL AND INDUSTRIAL STANDARDS", 2011 SEVENTH EDITION.
   4. CONTINUE INSULATION WITHOUT INTERRUPTIONS THROUGH WALLS AND FLOOR PENETRATIONS AND HANGERS.
   5. REPAIR INSULATION ON EXISTING PIPING WHICH IS DAMAGED DUE TO CONNECTING OF NEW PIPING. MAINTAIN EXISTING VAPOR BARRIER INTEGRITY.
B. FIBERGLASS (F.G.) INSULATION
   1. RIGID PIPING:
      a. O.C. FIBERGLAS PIPE INSULATION, KNAUF EARTHWOOL PIPE INSULATION, JOHNS MANVILLE MICRO-LOK.
      b. SINGLE OR DOUBLE ADHESIVE SELF-SEALING LAP SYSTEM FOR LONGITUDINAL JOINT, PRESSURE SENSITIVE BUTT STRIP SEALS, ALL SERVICE JACKET VAPOR BARRIER COVERING.
      c. 3.5-5.5 LB./CU.FT., R=4.3 / NOMINAL INCH AT 75 DEG F.
      d. MAX 850 DEG F, JACKET MAX 150 DEG F, 0.02 PERM.
      e. COMPRESSIVE STRENGTH AT 10% DEFORMATION 125 LB./S.F.
      f. VALVES, FITTINGS, AND FLANGE COVERS:
         1). ZESTON 2000/300 SERIES, CEELCO 300 SERIES, PROTO LOSMOKE PVC JACKET
         2). HIGH IMPACT 30 MIL WHITE PVC WITH PRECUT FIBERGLASS INSERTS. MAX TEMP 150 DEG
C. ELASTOMERIC FOAM INSULATION
   1. SEAL BUTT JOINTS WITH ADHESIVE.
   2. PIPE
      a. MANUFACTURERS: AEROFLEX AEROCEL SSPT, K-FLEX INSUL-LOCK DS, ARMACELL AP/ARMAFLEX BLACK LAPSEAL.
      b. EPDM/PVC BASE ELASTOMERIC FOAM MATERIAL
      c. DUAL TAPE CLOSURE
      d. MAX. 'K' VALUE 0.245 AT 75 DEG F
      e. MAX. CONTINUOUS TEMPERATURE 220 DEG F
      f. MAX. 0.05 PERM PER ASTM E96
      g. MAX. FIRE/SMOKE DEVELOPED OF 25/50 PER ASTM E84 FOR UP TO 2" THICK.
      h. PROVIDE MANUFACTURER PREFORMED INSULATION OVER VALVES AND FITTINGS
      i. FIELD CUTTING AND GLUING LONGITUDINAL JOINT NOT PERMITTED.
D. PIPE INSULATION REQUIREMENTS
   1. INSULATE ENTIRE PIPING SYSTEM INCLUDING VALVES AND FITTINGS PER MICA INSULATION STANDARDS PLATES 10 THRU 18.
   2. SEAL ALL INSULATION ENDS.

22 10 00 EXCAVATION AND BACKFILL

A. P.C. SHALL EXCAVATE AND BACKFILL TRENCHES FOR PLUMBING WORK.
B. PROTECT TREES, PLANTS, LAWNS, AND OTHER FEATURES REMAINING AS PORTION OF FINAL LANDSCAPING.
C. PROTECT BENCHMARKS, EXISTING STRUCTURES, FENCES, SIDEWALKS, PAVING, AND CURBS FROM EXCAVATING EQUIPMENT AND VEHICULAR TRAFFIC.
D. MAINTAIN, PROTECT, AND TEMPORARILY SUPPORT ABOVE AND BELOW GRADE UTILITIES WHICH ARE TO REMAIN.
E. PROVIDE AND MAINTAIN ALL FENCING, BARRICADES, SIGNS, WARNING LIGHTS, AND/OR OTHER EQUIPMENT NECESSARY TO KEEP ALL EXCAVATION PITS AND TRENCHES AND THE ENTIRE SUBGRADE AREA SAFE UNDER ALL CIRCUMSTANCES AND AT ALL TIMES. NO EXCAVATION SHALL BE LEFT UNATTENDED WITHOUT ADEQUATE PROTECTION.
F. ELEVATIONS SHOWN ON THE PLANS ARE SUBJECT TO SUCH REVISIONS AS MAY BE NECESSARY TO FIT FIELD CONDITIONS.
G. EXCAVATING
   1. CUT TRENCHES SUFFICIENTLY WIDE TO ENABLE INSTALLATION AND ALLOW INSPECTION. REMOVE WATER OR MATERIALS THAT INTERFERE WITH WORK.
   2. DO NOT INTERFERE WITHIN 45 DEGREE BEARING SPLAY OF FOUNDATIONS.
   3. EXCAVATE MINIMUM 4" BELOW BOTTOM OF PIPE IF STONE GREATER THAN 1" OR BEDROCK IS ENCOUNTERED.
   4. REMOVE UNSTABLE AREAS OF SUBGRADE BELOW PIPE TO MINIMUM 24" BELOW PIPE OR TO STABLE MATERIAL. BACKFILL WITH PEA GRAVEL, LIMESTONE SCREENINGS, OR EQUIVALENT AND COMPACT TO DENSITY EQUAL TO REQUIREMENTS FOR SUBSEQUENT BACKFILL MATERIAL.
   5. STOCKPILE EXCAVATED MATERIAL IN AREA DESIGNATED ON SITE AND REMOVE EXCESS MATERIAL NOT BEING USED FROM SITE.
H. BEDDING AND BACKFILL:
   1. LINES PASSING UNDER FOUNDATIONS:
      a. INSTALL WITH MINIMUM OF 1-1/2 INCH CLEARANCE TO CONCRETE AND ENSURE THERE IS NO DISTURBANCE OF BEARING SOIL.
      b. BACKFILL WITH COMPACTED ENGINEER FILL PER GEOTECH REPORT.
   2. MECHANICALLY COMPACT BEDDING AND BACKFILL TO PREVENT SETTLEMENT. THE INITIAL COMPACTED LIFT TO NOT EXCEED 24" COMPACTED TO 95% DENSITY PER MODIFIED PROCTOR TEST (ASTM D-1557). SUBSEQUENT LIFTS UNDER PAVEMENTS, CURBS, WALKS AND STRUCTURES ARE NOT TO EXCEED 12" AND BE COMPACTED TO 95% DENSITY PER MODIFIED PROCTOR TEST. IN ALL OTHER AREAS WHERE CONSTRUCTION ABOVE THE EXCAVATION IS NOT ANTICIPATED WITHIN 2 YEARS, MECHANICALLY COMPACT BACKFILL IN LIFTS NOT EXCEEDING 24" TO 90% DENSITY PER MODIFIED PROCTOR TEST.
   3. MAINTAIN OPTIMUM MOISTURE CONTENT OF FILL MATERIALS TO ATTAIN REQUIRED COMPACTION DENSITY.
   4. DRAIN/VACUUM PIPING
      a. BEDDING: WHERE OVEREXCAVATED, BRING BACK TO BOTTOM OF PIPE ELEVATION WITH DRY SAND, GRAVEL, PEA GRAVEL, WASHED STONE OR CRUSHED STONE PASSING A 3/4" SIEVE.
      b. BACKFILL TO A DEPTH OF 12" OVER THE PIPE WITH SAND, CRUSHED STONE THAT PASSES A 1" SIEVE. PLACE IN WELL TAMPED MAXIMUM 6" LAYERS FOR LENGTH OF SEWER AND WIDTH OF TRENCH.
   5. COMPRESSED AIR PIPING (BELOW FLOOR)
      a. BEDDING: WHERE OVEREXCAVATED, BRING BACK TO BOTTOM OF PIPE ELEVATION WITH DRY SAND, PEA GRAVEL OR WASHED STONE PASSING A 3/4" SIEVE.
      b. BACKFILL TO A DEPTH OF 12" OVER THE PIPE WITH SAND, PEA GRAVEL, OR WASHED STONE THAT PASSES A 3/4" SIEVE. PLACE IN WELL TAMPED MAXIMUM 6" LAYERS FOR LENGTH OF WATER PIPE AND WIDTH OF TRENCH.
   6. BACKFILL ABOVE 12" ABOVE THE PIPE:
      a. UNDER EXISTING AND FUTURE UTILITIES, AND BUILDINGS: GRANULAR MATERIALS, PIT RUN SAND, GRAVEL, OR CRUSHED STONE, FREE FROM LARGE STONES, ORGANIC, AND FROZEN MATERIALS.
   7. DIRECT SURFACE WATER AWAY FROM STOCKPILE SITE TO PREVENT EROSION OR DETERIORATION OF MATERIALS. REMOVE STOCKPILE, LEAVE AREA IN A CLEAN AND NEAT CONDITION. GRADE SITE SURFACE TO PREVENT FREESTANDING SURFACE WATER.

22 11 00 WATER PIPING AND VALVES

A. PIPING
   1. SEE PIPE SCHEDULE ON PLANS FOR ADDITIONAL INFORMATION.
B. PIPING INSTALLATION
   1. DRAWINGS AND DIAGRAMS SHOW SIZE AND APPROXIMATE LOCATION OF PIPING. THE DRAWINGS SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION. PROVIDE ADDITIONAL OFFSETS TO COORDINATE WITH INSTALLATION REQUIREMENTS OF OTHER SYSTEMS.
   2. ROUTE ABOVE GROUND PIPING IN ORDERLY MANNER, PARALLEL TO BUILDING STRUCTURE. OFFSET PIPE CONNECTIONS AT EQUIPMENT TO ALLOW FOR SERVICE, SUCH AS REMOVAL OF THE EQUIPMENT.
   3. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
   4. INSTALL PIPING TO CONSERVE BUILDING SPACE AND NOT INTERFERE WITH USE OF SPACE AND OTHER WORK. GROUP PIPING WHENEVER PRACTICAL AT COMMON ELEVATIONS.
   5. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT WITH RESPECT TO THE BUILDING AND PLUMBING SYSTEM.
   6. PROVIDE CLEARANCE FOR INSTALLATION OF INSULATION AND ACCESS TO VALVES.
   7. DO NOT ROUTE PIPING ABOVE TRANSFORMERS, PANELBOARDS, MOTOR CONTROL CENTERS, SWITCHBOARDS OR OTHER ELECTRICAL DISTRIBUTION EQUIPMENT.
   8. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINTING DISSIMILAR METALS.
   9. USE ONLY NEW MATERIAL, FREE OF DEFECTS, RUST AND SCALE, AND MEETING THE LATEST REVISION OF THE ASTM SPECIFICATIONS.
   10. PREPARE EXPOSED UNFINISHED PIPE, FITTINGS, SUPPORTS, AND ACCESSORIES, READY FOR FINISH PAINTING.
   11. SLOPE PIPING AND ARRANGE SYSTEMS TO DRAIN AT LOW POINTS. USE TOP CONNECTIONS FOR TAKEOFFS TO EQUIPMENT ABOVE THE MAINS AND BOTTOM CONNECTIONS FOR TAKEOFFS TO EQUIPMENT BELOW THE MAINS.
   12. USE LONG RADIUS ELBOWS FOR ALL 90 DEGREE ELBOWS.
   13. INSTALL VALVE STEM BETWEEN THE VERTICAL (UPRIGHT) OR HORIZONTAL POSITION.
   14. DO NOT SUPPORT WEIGHT OF PIPING ON VALVE.
   15. PIPING INSTALLED IN EXTERIOR WALLS SHALL BE INSTALLED ON THE ROOM SIDE OF EXTERIOR WALL INSULATION AND ONLY WHEN APPROVED BY THE ENGINEER. WHEREVER POSSIBLE, AVOID ROUTING DOMESTIC WATER SUPPLY PIPING IN EXTERIOR WALLS.
C. PIPING TESTING
   1. EACH TEST MUST BE WITNESSED BY THE OWNER'S REPRESENTATIVE. IF LEAKS ARE FOUND, REPAIR THE AREA WITH NEW MATERIALS AND REPEAT THE TEST. DO NOT INSULATE PIPE UNTIL IT HAS BEEN SUCCESSFULLY TESTED.
   2. MEASURE AND RECORD TEST PRESSURE AT THE HIGH POINT IN THE SYSTEM.
   3. TEST WATER DISTRIBUTION SYSTEM WITH POTABLE WATER UNDER A WATER PRESSURE OF 100 PSIG OR THE WORKING PRESSURE OF THE SYSTEM (WHICHEVER IS GREATER) FOR A PERIOD OF (4) HOURS. IF LOCAL AUTHORITIES REQUIRE MORE STRINGENT TESTING, CONTRACTOR SHALL COMPLY WITH THOSE REQUIREMENTS.
   4. WHERE NEW PIPING IS AN EXTENSION OF THE EXISTING SYSTEM, TEST THE NEW PIPING PRIOR TO CONNECTION TO THE EXISTING SYSTEM.
D. WATER PIPING BALANCING
   1. VERIFY THAT SUFFICIENT WATER FLOW, PRESSURE AND TEMPERATURE ARE AVAILABLE AT EACH OUTLET AND EQUIPMENT CONNECTION.
   2. BALANCE CIRCULATING HOT WATER SYSTEM TO ENSURE PROPER CIRCULATION OF HOT WATER IN THE SYSTEM WITH HOT WATER AVAILABLE TO ALL FIXTURES AND CONNECTIONS.
E. FLUSH AND DISINFECT DOMESTIC WATER SUPPLY SYSTEM AS FOLLOWS:
   1. FILL PIPING WITH POTABLE WATER AND ALLOW TO STAND FOR 24 HOURS.
   2. FLUSH EACH OUTLET BEGINNING WITH OUTLET CLOSEST TO BUILDING CONTROL VALVE AND THEN EACH SUCCESSIVE OUTLET IN THE SYSTEM.
   3. FLUSH EACH OUTLET MINIMUM 1 MINUTE AND UNTIL WATER APPEARS CLEAR AT THE OUTLET.
   4. FILL SYSTEM WITH WATER/CHLORINE SOLUTION OF 50 PPM OF CHLORINE AND LET STAND FOR 24 HOURS, OR 200 PPM FOR 3 HOURS.
   5. FLUSH WITH POTABLE WATER.
   6. REPEAT DISINFECTION IF BACTERIOLOGICAL CONTAMINATION EXISTS.
   7. PERFORM WATER QUALITY TEST IF REQUIRED BY LOCAL AUTHORITIES.
   8. IF LOCAL AUTHORITIES REQUIRE MORE STRINGENT FLUSHING AND DISINFECTION, CONTRACTOR SHALL COMPLY WITH THOSE REQUIREMENTS.
F. VALVES
   1. MANUFACTURERS: NIBCO, APOLLO, KEYSTONE, CENTERLINE, DEZURIK, CRANE, MUELLER, POWELL, VIEGA, GRINNELL, SIOUX CHIEF. LISTING OF MODEL NUMBER DOES NOT PRECLUDE OTHER ACCEPTABLE MANUFACTURERS FROM PROVIDING EQUIVALENT VALVES.
   2. PROVIDE BRONZE VALVE FOR COPPER PIPE.
   3. SHUTOFF VALVES 1" AND SMALLER
      a. PEX BALL VALVE
         1). APOLLO 77X SERIES
         2). BRONZE THREE PIECE BODY, CHROME PLATED BRASS BALL, FULL PORT, TEFLON SEATS AND STUFFING BOX RING, LEVER HANDLE WITH VALVE EXTENSIONS FOR INSULATED PIPING, CRIMP JOINT ENDS, 200 PSI WOG, NSF 61 LISTED.
   4. SHUTOFF VALVES 2" AND SMALLER
      a. BRONZE BALL VALVE:
         1). SOLDERED: NIBCO S-685-66-LF.
         2). PRESS FITTING: VIEGA SERIES 2970.*ZL OR SERIES 2971.*ZL
         3). TWO PIECE, CHROME PLATED BRASS OR STAINLESS STEEL BALL, FULL PORT, REINFORCED PTFE SEATS AND STUFFING BOX RING, LEVER HANDLE WITH LOCKABLE HANDLE AND VALVE STEM EXTENSIONS FOR INSULATED PIPING, 250 PSI, NSF 61 ANNEX G LISTED.
   5. MANUAL BALANCE VALVES 2" AND SMALLER
      a. BELL & GOSSETT A-549LFP(C), CALEFFI, NIBCO, FLOWSET, ARMSTRONG, AND IMI HYDRONIC ENGINEERING): BRONZE BODY WITH CALIBRATED BRASS ORIFICE OR VENTURI, MEMORY STOP, SOLDERED ENDS AND PRESSURE TAPS. 125 PSIG RATING AT 240 DEG F, NSF 61 ANNEX G LISTED LEAD FREE.
      b. INSTALL 5 PIPE DIAMETERS DOWNSTREAM AND 2 PIPE DIAMETERS UPSTREAM OF A FITTING.
   6. DRAIN VALVES: SHUTOFF VALVE WITH THREADED CAP. PROVIDE FOR COMPLETE SYSTEM DRAINAGE, NSF 61 LISTED.
   7. SPRING LOADED CHECK VALVES
      a. 2" AND SMALLER:
         1). THREADED: NIBCO MODEL 480-Y-LF
         2). BRONZE BODY, TFE SEAT AND DISC, STAINL

PLUMBING SPECIFICATIONS (CONT.)

2. SENSUS MODELS 496
3. FOR REGULATORS INSTALLED INDOORS, PIPE THE RELIEF VALVE VENT FULL SIZE TO THE OUTSIDE OF THE BUILDING AT A NON-HAZARDOUS LOCATION. INCREASE VENT SIZE ONE PIPE SIZE IF VENT LENGTH EXCEEDS 10 FEET. TERMINATE WITH AN ELBOW DOWN WITH A SCREEN OVER THE OPENING. DO NOT COMBINE VENTS.
4. MAXITROL 325 SERIES WITH VENT LIMITER ARE PERMITTED FOR INDOOR APPLICATIONS WHERE SUPPLYING LESS THAN 300,000 BTUH.
5. FOR REGULATORS INSTALLED OUTDOORS, POSITION THE REGULATOR SO THE RELIEF VALVE VENT IS FACING DOWN OR INSTALL ELBOW FACING DOWN A MINIMUM 10 FEET FROM AN OUTSIDE AIR INTAKE AND 5 FEET FROM A GAS FLUE DISCHARGE.

22 13 00 DRAIN PIPING AND VALVES

A. PIPING INSTALLATION
1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. FIELD VERIFY EXISTING AND PROPOSED SEWER ELEVATIONS AND SIZES AND NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING OF ANY VARIATION OF THE ELEVATIONS BEFORE BEGINNING ANY SEWER AND BUILDING DRAIN WORK.
3. DRAWINGS AND DIAGRAMS SHOW SIZE AND APPROXIMATE LOCATION OF PIPING. THE DRAWINGS SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION. PROVIDE ADDITIONAL OFFSETS TO COORDINATE WITH INSTALLATION REQUIREMENTS OF OTHER SYSTEMS.
4. ROUTE ABOVE GROUND PIPING IN ORDERLY MANNER, PARALLEL TO BUILDING STRUCTURE. OFFSET PIPE CONNECTIONS AT EQUIPMENT TO ALLOW FOR SERVICE, SUCH AS REMOVAL OF THE EQUIPMENT.
5. INSTALL PIPING TO CONSERVE BUILDING SPACE AND NOT INTERFERE WITH USE OF SPACE AND OTHER WORK. GROUP PIPING WHENEVER PRACTICAL AT COMMON ELEVATIONS.
6. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT WITH RESPECT TO THE BUILDING AND PLUMBING SYSTEM.
7. PROVIDE CLEARANCE FOR INSTALLATION OF INSULATION AND ACCESS TO VALVES.
8. DO NOT ROUTE PIPING ABOVE TRANSFORMERS, PANELBOARDS, SWITCHBOARDS OR OTHER ELECTRICAL DISTRIBUTION EQUIPMENT.
9. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINTING DISSIMILAR METALS.
10. PROVIDE NO-HUB ADAPTER ON PVC PIPE WHERE USING NO-HUB COUPLINGS.
11. SLOPE SANITARY PIPE 2" AND SMALLER 1/4" PER FOOT; 3" AND LARGER PIPING 1/8" PER FOOT.
12. RUN ALL DRAIN LINES FROM EQUIPMENT OVERFLOW RECEIVERS, ETC. TO FLOOR / HUB DRAINS. DRAIN LINES SHALL BE HARD DRAWN COPPER INSTALLED WITH A MINIMUM OF 1/8" PER FOOT SLOPE. NO DRAIN LINE SHALL BE SMALLER THAN 3/4". INSTALL A TEE AT EACH ELBOW OF CONDENSATE DRAIN PIPING WITH A CLEANOUT PLUG ON THE BLIND TEE.

B. SANITARY DRAIN PIPING TESTING: TEST DRAIN AND VENT PIPING PER CODE REQUIREMENTS.

C. AIR ADMITTANCE VALVES NOT PERMITTED.

22 15 00 COMPRESSED AIR PIPING

A. PIPING INSTALLATION
1. DRAWINGS AND DIAGRAMS SHOW SIZE AND APPROXIMATE LOCATION OF PIPING. THE DRAWINGS SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION. PROVIDE ADDITIONAL OFFSETS TO COORDINATE WITH INSTALLATION REQUIREMENTS OF OTHER SYSTEMS.
2. ROUTE PIPING IN ORDERLY MANNER, PARALLEL TO BUILDING STRUCTURE. OFFSET PIPE CONNECTIONS AT EQUIPMENT TO ALLOW FOR SERVICE, SUCH AS REMOVAL OF THE EQUIPMENT.
3. INSTALL PIPING TO CONSERVE BUILDING SPACE AND NOT INTERFERE WITH USE OF SPACE AND OTHER WORK. GROUP PIPING WHENEVER PRACTICAL AT COMMON ELEVATIONS.
4. PROVIDE CLEARANCE FOR ACCESS TO VALVES AND FITTINGS.
5. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINTING DISSIMILAR METALS.
6. USE ONLY NEW MATERIAL, FREE OF DEFECTS, RUST AND SCALE, AND MEETING THE LATEST REVISION OF THE ASTM SPECIFICATIONS.
7. PREPARE EXPOSED UNFINISHED PIPE, FITTINGS, SUPPORTS, AND ACCESSORIES FOR FINISH PAINTING.
8. SLOPE PIPING AND ARRANGE SYSTEMS TO DRAIN AT LOW POINTS.
9. ALL TAKEOFFS SHALL BE FROM THE TOP OF THE PIPING.
10. USE ECCENTRIC FITTINGS FOR CHANGES IN HORIZONTAL PIPE SIZES TO MAINTAIN BOTTOM OF PIPE LEVEL. CONCENTRIC FITTINGS MAY BE USED FOR CHANGES IN VERTICAL PIPE SIZES.
11. INSTALL VALVE STEM BETWEEN THE VERTICAL (UPRIGHT) OR HORIZONTAL POSITION.
12. DO NOT SUPPORT WEIGHT OF PIPING ON VALVE.

B. PIPING PRESSURE TESTS
1. EACH TEST MUST BE WITNESSED BY THE OWNER'S REPRESENTATIVE. IF LEAKS ARE FOUND, REPAIR THE AREA WITH NEW MATERIALS AND REPEAT THE TEST.
2. TEST THE SYSTEM WITH AIR TO THE PRESSURE SETTING OF THE RELIEF VALVE FOR AN 8 HOUR DURATION.
3. WHERE MULTIPLE NEW PIPE BRANCHES ARE EXTENDED FROM AN EXISTING MAIN, TEST THE EXISTING MAIN AND NEW BRANCHES AT 1.5 TIMES THE SYSTEM OPERATING PRESSURE IN LIEU OF THE PRESSURE ABOVE.
4. WHERE NEW PIPING IS AN EXTENSION OF THE EXISTING SYSTEM, TEST THE NEW PIPING PRIOR TO CONNECTION TO THE EXISTING SYSTEM.
5. REMOVE RELIEF VALVE DURING TESTS.
6. RELIEVE PRESSURE IN SYSTEM AFTER PRESSURE TESTS.

C. UNIONS AND FLANGES
1. COPPER PIPE 2" AND SMALLER: BRONZE, SOLDERED JOINTS.

D. VALVES
1. MANUFACTURERS: NIBCO, APOLLO, HAMMOND, MILWAUKEE, KEYSTONE, CENTERLINE, DEZURIK, CRANE, MUELLER, POWELL, AND GRINNELL.
2. MAIN PIPING
   a. BALL VALVES 2" AND SMALLER:
      1). NIBCO MODEL T-585-70
      2). TWO PIECE, FULL PORT, THREADED ENDS, BRONZE BODY.
      3). CHROME PLATED BRASS BALL, TEFLON SEATS AND STUFFING BOX RING, LEVER HANDLE; 600 PSI WOG.
3. VALVES TO EQUIPMENT
   a. TWO PIECE, FULL PORT, THREADED ENDS BRONZE BODY.
   b. CHROME PLATED BRASS BALL, TEFLON SEATS AND STUFFING BOX RING, LEVER HANDLE, SAFETY VENT FOR PRESSURE RELIEF OF DOWNSTREAM PIPING TO EQUIPMENT; 600 PSI WOG.
   c. BALL VALVES 1" AND SMALLER: NIBCO MODEL T-585-70-SV

22 40 00 PLUMBING FIXTURES

A. FIXTURES
1. SEE SCHEDULES FOR ADDITIONAL INFORMATION.
2. LIKE FIXTURE TYPE (FAUCETS, WATER CLOSETS, LAVS) SHALL BE THE PRODUCT OF THE SAME MANUFACTURER.
3. SAFETY COVERS OVER EXPOSED WASTE AND SUPPLY PIPING AT ADA ACCESSIBLE FIXTURES SHALL BE LAV-GUARD BY TRUEBRO OR EQUIVALENT.

B. INSTALLATION
1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE CHROME PLATED RIGID SUPPLIES TO FIXTURES WITH STOPS, REDUCERS, AND ESCUTCHEONS UNLESS OTHERWISE NOTED IN SCHEDULES AND DETAILS.
3. SEAL FIXTURES TO WALL AND FLOOR SURFACES WITH MILDEW-RESISTANT SILICONE SEALANT, COLOR TO MATCH FIXTURE.
4. INSTALL BARRIER-FREE FIXTURES IN COMPLIANCE WITH LOCAL CODES AND FEDERAL ADA ACCESSIBILITY GUIDELINES.
5. EXPOSED TRAPS, PIPING, AND ESCUTCHEONS SHALL BE CHROME PLATED BRASS UNLESS OTHERWISE NOTED IN SCHEDULES AND DETAILS.
6. ADJUST LAVATORY THERMOSTATIC MIXING VALVE TO 105 DEG F MAXIMUM OUTLET TEMPERATURE.

PIPE SCHEDULE

SERVICE	LOCATION	COPPER								PEX				PVC						CAST IRON			STEEL			
		C12200 TUBE				FITTINGS			JOINTS	PIPE		FITTINGS	JOINTS	PIPE	FITTINGS				JOINTS	PIPE & FITTINGS		JOINTS	PIPE	FITTINGS	JOINTS	
		ASTM B42 TYPE L HARD DRAWN	ASTM B88 TYPE L HARD DRAWN	ASTM B42 TYPE K ANNEALED TUBING	ASTM B88 TYPE K ANNEALED TUBING	ASTM B819 TYPE K MEDICAAL GAS TUBING	ANSI B16.15, B16.18, B16.22, B16.23, B16.26, B16.29, B16.32	ANSI B16.22 WROUGHT COPPER AND BRONZE	LEAD FREE SOLDER	ASTM B32 AWS A5.8 BCuP SILVER BRAZE (1)	ASTM F876, F877, F2023	NSF P171 CL-R	ASTM F2023	ASTM F1807	PER MFR REQUIREMENTS (1)	SCH. 40 PRESSURE RATED ASTM D1785	SCH. 40 NON-PRESS. RATED ASTM D1784,...	DWV NON-PRESS. RATED ASTM F891	ASTM D2665	ASTM F1866	ASTM D2466	ASTM D2467	ASTM F656 SOLVENT WELD, ASTM D2564 SOLVENT CEMENT	HUBLESS ASTM A888, CISPI 301	BELL AND SPIGOT ASTM A74 SERVICE WEIGHT	ASTM C1277, CISPI 310 STD. SS. CLAMP & SHIELD, ASTM C564 RUBBER GASKET.	BLACK STEEL	ANSI B16.3 MALLEABLE IRON, CLASS 150	COLD PRESS MECHICAL JOINT	THREADED
WATER	ABOVE GROUND	X	X				X		X		X	X	X	X													
	BELOW GROUND			X	X		X			X	X		X	X	X												
SANITARY, SEWER, DRAIN, WASTE AND VENT	ABOVE GROUND																X	X	X		X	X	X	X			
	UNDER BUILDING														X	X		X	X		X	X	X	X			
AIR	ABOVE GROUND		X					X		X																	
	BELOW GROUND			X				X		X																	
VACUUM	INSIDE BUILDING														X		X			(2)	(2)	X					
GAS	ABOVE GROUND																										

- ALL MATERIALS SHALL COMPLY WITH LATEST VERSION OF LISTED STANDARD. ALL IMPORTED MATERIAL SHALL BE CERTIFIED BY A DOMESTIC THIRD PARTY FOR COMPLIANCE WITH STANDARD.
(1) NO JOINTS PERMITTED UNDERGROUND
(2) PROVIDE PRESSURIZED DEEP SOCKET LONG SWEEP AND WYE TYPE PATTERN FITTINGS. NO SHORT SWEEP 90'S OR TEES PERMITTED.
(4) VIEGA MEGAPRESS FITTING COMPLYING WITH ASTM A420 OR ASME B16.3. EPDM SEAL FOR WATER APPLICATIONS, HNBR SEAL FOR GAS.
10 YEAR WARRANTY IN MATERIAL AND WORKMANSHIP. INSTALL PER MFR INSTALLATION INSTRUCTIONS.

INSULATION SCHEDULE

SERVICE	LOCATION	INSULATION TYPE (1)	JACKET	PIPE SIZE <1.5"	PIPE SIZE =>1.5"
CW	GENERAL BUILDING	RIGID F.G. OR ELAST. FOAM (10)	NR	1/2"	1/2"
CW	IN WALLS	ELASTOMERIC FOAM	NR	1/2"	1/2"
CW (PEX AND CPVC)	ALL	NR	NR	NR	NR
HW, HWR	GENERAL BUILDING	RIGID F.G. OR ELAST. FOAM (10)	NR	1"	1 1/2"
HW NOT ON RECIRC. LOOP	GENERAL BUILDING	RIGID F.G. OR ELAST. FOAM (10)	NR	1"	1"
HW BRANCH	IN WALLS	ELASTOMERIC FOAM	NR	1/2"	1/2"

NR = NOT REQUIRED
COLD WATER = HARD, SOFT, IRRIGATION, HOSE STATION, ETC. AT ALL PRESSURES.
HOT WATER = WATER SYSTEMS OPERATING AT TEMPERATURES GREATER THAN 105 DEG F AT ALL PRESSURES.
(1) WHERE INSULATION IS PROVIDED ON PIPING INSULATE METERS, VALVES, BACKFLOW PREVENTERS AND ALL INLINE EQUIPMENT.
(10) INSULATION NOT REQUIRED FOR EXPOSED FINAL PIPING CONNECTIONS TO FIXTURES.

NOTE:
- P.C. SHALL PROVIDE PRODUCT SUBMITTALS TO ADMI FOR REVIEW AND APPROVAL IF PEX PIPE IS USED IN LIEU OF COPPER.

PLUMBING SPECIFICATIONS AND GENERAL SCHEDULES

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Engineering and Architecture, P.C.
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Fond du Lac, WI 54935
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COLLABORATION

AspenDental

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ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

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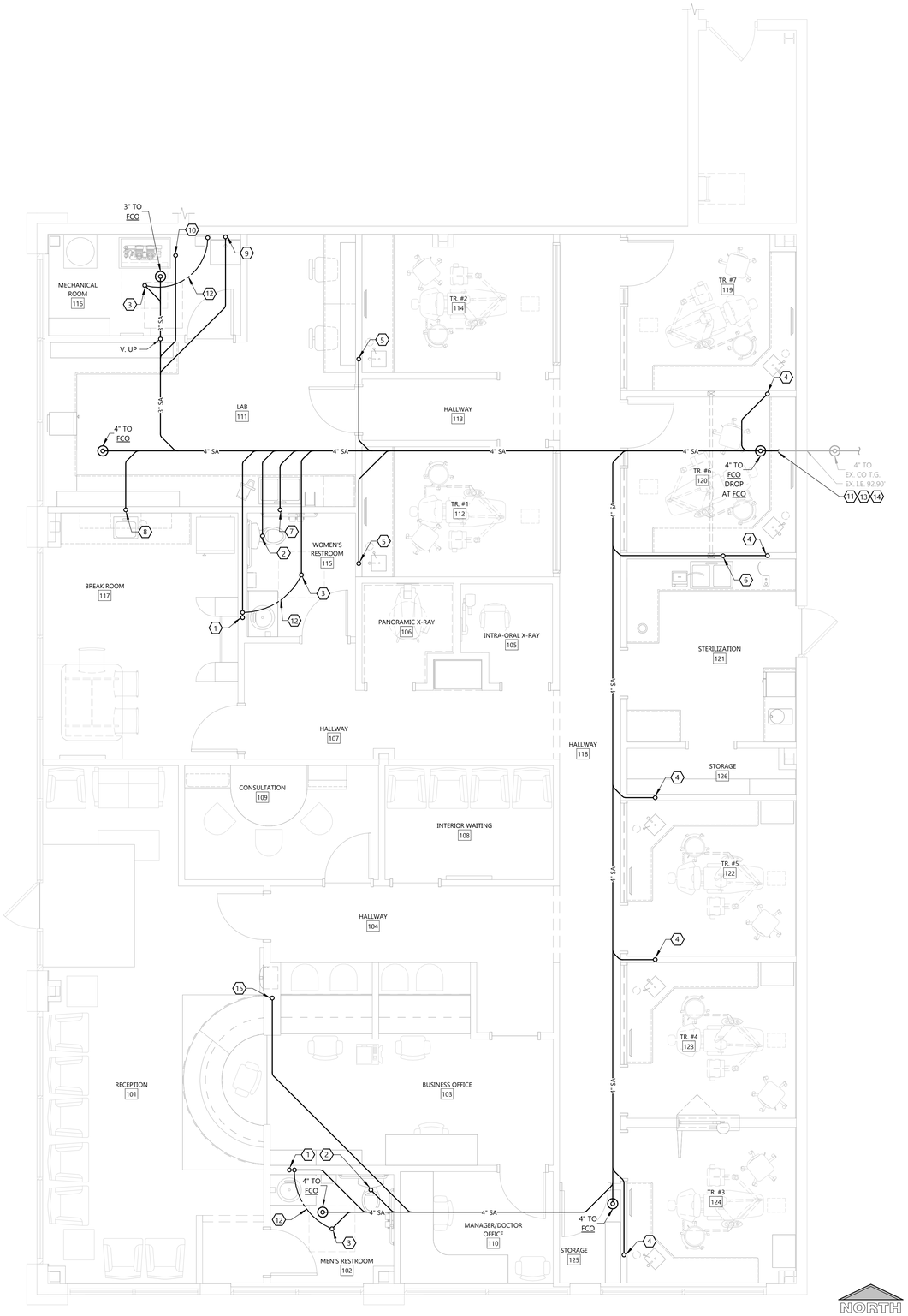

STRUCTURAL COORDINATION NOTE:

- CLOSELY COORDINATE THE PLUMBING INSTALLATION WITH THE STRUCTURE, OTHER TRADES, AND CORRESPONDING OBSTRUCTIONS. SET INVERT ELEVATIONS OF ALL BRANCH LINES, LAYOUT EXACT RUNS, AND DETERMINE FINAL PITCH ADJUSTMENTS FOR UNDERFLOOR PIPING AS NECESSARY TO ACCOMMODATE FOUNDATION WALLS, PIERS, AND FOOTINGS. ADJUST PIPING AS NEEDED TO AVOID CONFLICT IN THE FIELD. CLOSELY COORDINATE ALL UNDERFLOOR PIPING LAYOUTS WITH THE GENERAL CONTRACTOR PRIOR TO CONSTRUCTION. VERIFY ALL PIPE ROUTING THROUGH OR BENEATH THE FOUNDATION WALLS WITH THE STRUCTURAL ENGINEER TO ENSURE PROPER PLACEMENT. DO NOT PIERCE, PENETRATE, OR OTHERWISE MODIFY ANY STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.

SOIL TESTING NOTE:

- G.C. SHALL HIRE A SOIL TESTING AGENCY TO PERFORM A COMPACTION TEST OF LANDLORD DELIVERED PAD DURING & AFTER UNDERGROUND UTILITY INSTALLATION. G.C. SHALL NOT INSTALL UNDERGROUND UTILITIES IN LANDLORD DELIVERED PAD UNTIL COMPACTION REPORTS HAVE BEEN RECEIVED FROM THE LANDLORD, AND PROPER COMPACTION HAS BEEN MET. ALL REPORTS SHALL BE SUBMITTED TO ADMI.

DENTAL EQUIPMENT COORDINATION:

- PLUMBING CONTRACTOR SHALL VERIFY TYPE AND LOCATION OF ALL DENTAL EQUIPMENT, ROUGH-IN DIMENSIONS, AND REQUIRED PLUMBING CONNECTIONS. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL FLOOR FIXTURES, FLOOR DRAINS, HUB DRAINS, WATER CLOSETS, LAVATORIES AND FLOOR SINKS. DENTAL EQUIPMENT SUPPLIER SHALL FURNISH AND INSTALL ALL FIXTURES IDENTIFIED ON THEIR PLANS (WITH THE EXCEPTION OF THOSE IDENTIFIED ABOVE). DENTAL EQUIPMENT SUPPLIER SHALL INSTALL ALL DENTAL EQUIPMENT AND PROVIDE ALL FIXTURE TRAPS, SUPPLIES AND STOPS, ISOLATION VALVES, MIXING VALVES, ETC. AND MAKE FINAL CONNECTIONS TO DENTAL EQUIPMENT. PLUMBING CONTRACTOR SHALL MAKE FINAL CONNECTION TO AIR COMPRESSOR AND VACUUM SYSTEM. VERIFY ALL EQUIPMENT CONNECTIONS WITH ADMI AND DENTAL EQUIPMENT SUPPLIER PRIOR TO INSTALLATION. PROVIDE ADDITIONAL CONNECTIONS AS REQUIRED. COORDINATE ALL WORK ACCORDINGLY.

GENERAL NOTES:

- REFER TO SHEET U1.1 PRIOR TO ROUGH-IN OF FIXTURES.
- P.C. SHALL VERIFY RIM ELEVATION OF SANITARY MANHOLE UPSTREAM OF BUILDING SEWER CONNECTION TO THE MAIN IS BELOW FLOOR ELEVATION OF TENANT BUILDING. IF RIM IS ABOVE FLOOR ELEVATION, PROVIDE PRICE TO ADD A BACKWATER VALVE AND NOTIFY EXCEL ENGINEERING.
- NO DOUBLE WYE OR DOUBLE SANITARY TEE SHALL BE PERMITTED IN HORIZONTAL POSITION FOR SANITARY DRAINAGE APPLICATION.

KEYNOTES:

1. ROUTE 2" UNDERFLOOR SANITARY UP TO LAVATORY (L-1).
2. ROUTE 4" UNDERFLOOR SANITARY UP TO WATER CLOSET (WC-1H).
3. ROUTE 3" UNDERFLOOR SANITARY UP TO FLOOR DRAIN (FD-1). TAPER FLOOR TOWARDS DRAIN.
4. ROUTE 2" UNDERFLOOR SANITARY UP TO TREATMENT SINK (S-1).
5. ROUTE 2" UNDERFLOOR SANITARY UP TO TREATMENT SINK (S-2).
6. ROUTE 2" UNDERFLOOR SANITARY UP TO STERILIZATION SINK (S-3).
7. ROUTE 2" UNDERFLOOR SANITARY UP TO LABORATORY SINK (S-4).
8. ROUTE 2" UNDERFLOOR SANITARY UP TO BREAKROOM SINK (S-5).
9. ROUTE 2" UNDERFLOOR SANITARY UP TO SERVICE SINK (SS-1).
10. ROUTE 3" UNDERFLOOR SANITARY UP TO A HEIGHT OF 18" FOR VACUUM WASTE. PROVIDE UNDERFLOOR TRAP. SEE RAM-VAC DETAIL SHEET P1.2 FOR MORE INFORMATION.
11. PROVIDE UNDERFLOOR SANITARY WASTE CONNECTIONS TO THE EXISTING SANITARY SERVICE (PROVIDED BY LANDLORD). FIELD VERIFY EXISTING UNDERGROUND PIPING LOCATION, DEPTH AND SIZE AT POINT OF NEW CONNECTION PRIOR TO INSTALLATION OF ANY UNDERGROUND PIPING.
12. TRAP PRIMER PIPING.
13. P.C. SHALL PROVIDE A RECORDING OF CAMERA INSPECTION OF ON-SITE SANITARY UTILITY SERVICE TO ADMI PRIOR TO COMMENCING NEW WORK INSTALLATION AND ONCE PROJECT IS COMPLETE. P.C. SHALL ESTABLISH THE EXACT LOCATION AND SIZE OF UTILITY SERVICES PRIOR TO BUILDING ROUGH-IN. COORDINATE LOCATION OF BUILDING SERVICE ENTRANCES AND SYSTEM PIPE ROUTING WITH UTILITY SERVICE MAINS ON SITE AND ADJUST FOR SPECIFIC SITE FEATURES AND FIELD CONDITIONS ENCOUNTERED. NOTIFY ADMI AND EXCEL ENGINEERING OF ANY ABNORMALITIES.
14. PROVIDE FCO WITHIN 5' OF EXTERIOR WALL IF A CLEANOUT DOES NOT EXIST WITHIN 5' OF EXTERIOR WALL, EITHER INSIDE OR OUTSIDE.
15. ROUTE 2" UNDERFLOOR SANITARY UP TO BOTTLE FILLING STATION (BFS-1).

NORTH

UNDERGROUND PLAN

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

0' 4' 8'

PLUMBING UNDERGROUND PLAN

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COLLABORATION

AspenDental

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ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

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SHEET ISSUE JULY 12, 2023

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DENTAL EQUIPMENT COORDINATION:

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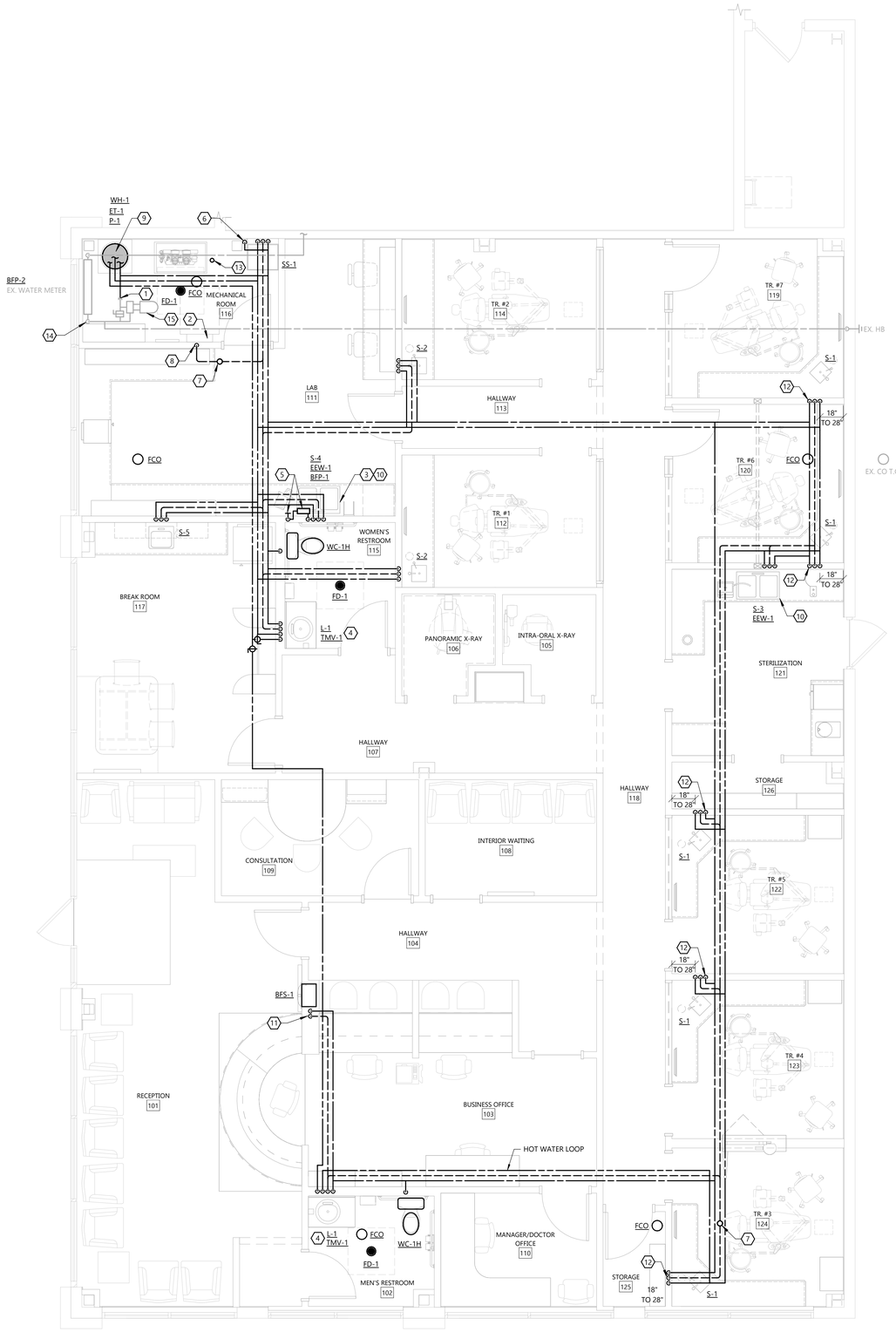
GENERAL NOTES:

- PROVIDE ADDITIONAL BFP'S AS REQUIRED AT EQUIPMENT CONNECTIONS NOT SHOWN. FIELD VERIFY LOCATIONS AND REQUIREMENTS WITH EQUIPMENT CUT SHEETS.
- SINK FAUCETS SHALL BE INSTALLED WITH CONTROL AT THE LEFT, AND SPRAYER AT THE RIGHT OF THE SPOUT.
- REFER TO SHEET U1.1 PRIOR TO ROUGH-IN OF FIXTURES.
- PIPE SIZES PROVIDED BY LANDLORD SHALL MATCH ISOMETRIC OF THESE DOCUMENTS. FIELD VERIFY AND COORDINATE WORK.
- ALL PIPING IS TO BE CONCEALED. IF BUILDING CONSTRUCTION DOES NOT PERMIT CONCEALING PIPING, LOCATIONS AND ROUTING ARE TO BE APPROVED BY ARCHITECT/OWNER PRIOR TO INSTALLATION.

KEYNOTES:

1. CONNECT NEW DOMESTIC WATER TO EXISTING DOMESTIC COLD WATER TERMINATION AS PROVIDED BY LANDLORD. FIELD VERIFY EXACT ROUTING FROM EXISTING METER TERMINATION. G.C. SHALL SET UP ACCOUNT WITH LOCAL UTILITY & INSTALL UTILITY METER. ACCOUNT SHALL BE TRANSFERRED TO ADMI AT A LATER DATE.
2. COORDINATE WITH ELECTRICAL CONTRACTOR TO MAINTAIN CODE REQUIRED CLEARANCES AROUND ELECTRICAL EQUIPMENT.
3. PLASTER TRAP ASSEMBLY FURNISHED BY SULLIVAN-SCHEIN AND INSTALLED BY THE PLUMBING CONTRACTOR ON THE SINK WASTE LINE. USE THREADED FITTINGS FOR DRAIN ASSEMBLY. SEE DETAIL 1/A5.4.
4. ROUTE 1/2" CW FROM COLD WATER STOP UNDER LAVATORY TO AUTOMATIC TRAP PRIMER (TP-2) VALVE. ROUTE 1/2" CW FROM VALVE INTO WALL AND ROUTE UNDERFLOOR TO FLOOR DRAIN CONNECTIONS. SEE DETAIL 4/P3.0.
5. PIPE 1/2" CW SUPPLY FROM SINK TO BFP-1 INSIDE CABINET BELOW SINK. PIPE IN WALL FROM BFP TO 44" A.F.F. FOR CONNECTION TO MODEL TRIMMER. TERMINATE WITH 3/8" COMPRESSION STOP. INSTALL IN ACCORDANCE WITH LOCAL CODES. PROVIDE 2" HUB DRAIN (HD) INSIDE CABINET, DISCHARGE BFP TO HD VIA AIR GAP. ELIMINATE BFP AND HD IF PERMITTED BY AUTHORITY HAVING JURISDICTION. SEE DETAILS 2/A5.4 & 5/P3.0.
6. 1/2" CW PIPING TO TRAP PRIMER (TP-1). ROUTE 1/2" CW PIPING DOWN WALL TO UNDERFLOOR. CONNECT PIPING UNDERFLOOR TO FLOOR DRAIN ASSEMBLY. SEE TRAP PRIMER DETAIL 5/P3.0.
7. EXTEND 3" VENT UP TO VTR. COORDINATE VTR LOCATION WITH MECHANICAL CONTRACTOR AND EXISTING EQUIPMENT SERVING ADJACENT TENANT SPACE. ADJUST VTR LOCATION AS REQUIRED TO MAINTAIN A MINIMUM OF 20' CLEARANCE.
8. ROUTE 3" VENT UP FROM SANITARY DRAIN SERVING CIRCUIT VENT AND CONNECT TO VENT PIPING ABOVE CEILING. VENT SHALL SERVE AS BUILDING MAIN VENT.
9. SEE WATER HEATER DETAIL 7/P3.0.
10. INSTALL EEW-1 IN THIRD HOLE OF SINK. SEE EEW DETAIL 9/P3.0.
11. PROVIDE HUB DRAIN CONNECTION AT 16" A.F.F. AND WATER VALVE 20" A.F.F. OUT OF BFS-1 ROUGH IN CLEARANCE AREA. SEE BOTTLE FILLING STATION DETAIL 9/A5.0 FOR MORE INFORMATION.
12. EXTEND WATER SUPPLY PIPING MINIMUM 6" INSIDE CABINET. TERMINATE WITH SUPPLY STOP. EXPOSED PIPING SHALL BE COPPER.
13. CONNECT RAM-VAC TO 3" TRAPPED WASTE FROM UNDERGROUND.
14. PROVIDE BALL VALVE AT 5' A.F.F.. NO FIXTURES SHALL CONNECT TO CW UPSTREAM OF THIS VALVE. PROVIDE SIGN WHICH READS "WATER SHUTOFF".
15. PRESSURE BOOSTER PUMP W/ EXPANSION TANK ABOVE CEILING PROVIDED BY LANDLORD PER MINIMUM 60 PSIG WORK LETTER REQUIREMENT. P.C. SHALL FIELD VERIFY OUTLET PRESSURE SETTING AND ADJUST AS REQUIRED TO MATCH WATER CALCULATIONS ON SHEET P2.0.



NORTH

FIRST FLOOR PLAN

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

0' 4' 8'

PLUMBING FIRST FLOOR PLAN

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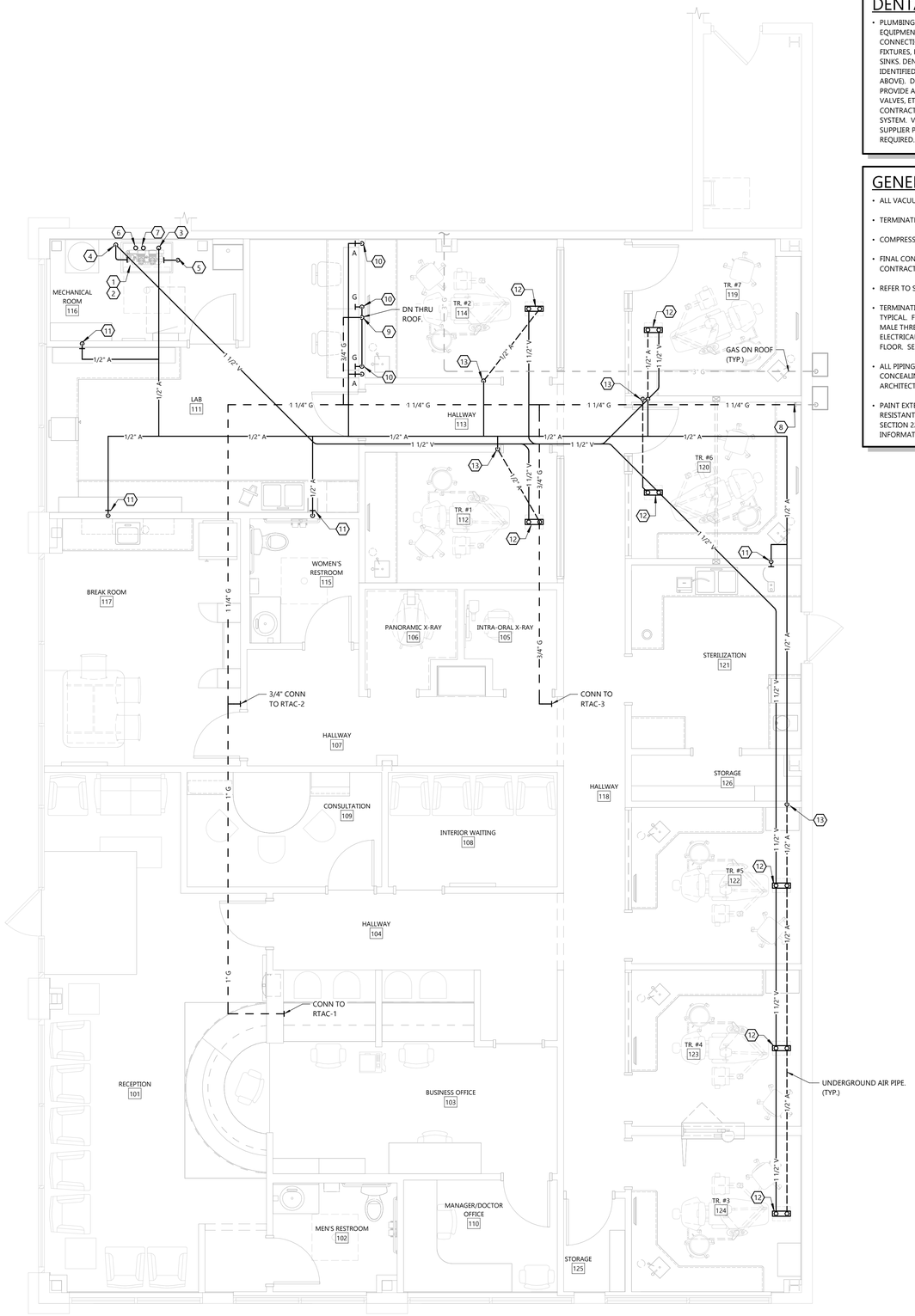


NORTH

FLOOR PLAN - AIR AND VACUUM PIPING

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

0' 4' 8'

DENTAL EQUIPMENT COORDINATION:

- PLUMBING CONTRACTOR SHALL VERIFY TYPE AND LOCATION OF ALL DENTAL EQUIPMENT, ROUGH-IN DIMENSIONS, AND REQUIRED PLUMBING CONNECTIONS. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL FLOOR FIXTURES, FLOOR DRAINS, HUB DRAINS, WATER CLOSETS, LAVATORIES AND FLOOR SINKS. DENTAL EQUIPMENT SUPPLIER SHALL FURNISH AND INSTALL ALL FIXTURES IDENTIFIED ON THEIR PLANS (WITH THE EXCEPTION OF THOSE IDENTIFIED ABOVE). DENTAL EQUIPMENT SUPPLIER SHALL INSTALL ALL DENTAL EQUIPMENT AND PROVIDE ALL FIXTURE TRAPS, SUPPLIES AND STOPS, ISOLATION VALVES, MIXING VALVES, ETC. AND MAKE FINAL CONNECTIONS TO DENTAL EQUIPMENT. PLUMBING CONTRACTOR SHALL MAKE FINAL CONNECTION TO AIR COMPRESSOR AND VACUUM SYSTEM. VERIFY ALL EQUIPMENT CONNECTIONS WITH ADMI AND DENTAL EQUIPMENT SUPPLIER PRIOR TO INSTALLATION. PROVIDE ADDITIONAL CONNECTIONS AS REQUIRED. COORDINATE ALL WORK ACCORDINGLY.

GENERAL NOTES:

- ALL VACUUM LINES SHALL BE INSTALLED BELOW SLAB UNLESS OTHERWISE NOTED.
- TERMINATE COMPRESSED AIR LINES PER DENTAL EQUIPMENT DETAILS.
- COMPRESSED AIR SHALL BE INSTALLED ABOVE CEILING UNLESS OTHERWISE NOTED.
- FINAL CONNECTIONS TO AIR COMPRESSOR AND VACUUM SYSTEM BY PLUMBING CONTRACTOR.
- REFER TO SHEET U1.1 PRIOR TO ROUGH-IN OF FIXTURES.
- TERMINATION OF 1 1/2" VACUUM LINES TO BE REDUCED TO 1/2" FEMALE THREAD TYPICAL. FOR ALL UTILITY CENTERS, TERMINATION OF 1/2" AIR LINES TO BE 1/2" MALE THREAD WITH 3/8" COMPRESSION FITTING TYPICAL. ALL PLUMBING AND ELECTRICAL FOR UTILITY CENTER SHALL BE CONTAINED WITHIN 12" X 12" AREA IN FLOOR. SEE DENTAL EQUIPMENT DRAWINGS FOR FURTHER INFORMATION.
- ALL PIPING IS TO BE CONCEALED. IF BUILDING CONSTRUCTION DOES NOT PERMIT CONCEALING PIPING, LOCATIONS AND ROUTING ARE TO BE APPROVED BY ARCHITECT/OWNER PRIOR TO INSTALLATION.
- PAINT EXTERIOR GAS PIPING NOT LOCATED ON ROOF WITH TWO (2) COATS OF RUST RESISTANT PAINT, COLOR TO MATCH ADJACENT SURFACE. SEE SPECIFICATION SECTION 22 11 23 NATURAL GAS PIPING AND ACCESSORIES FOR MORE INFORMATION.

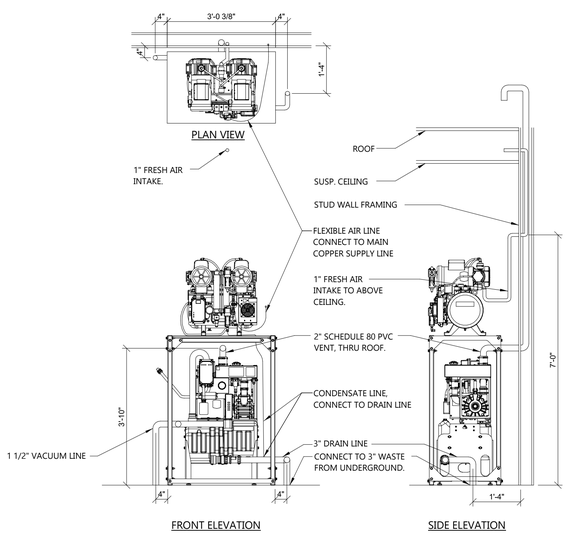
GAS LOAD SUMMARY

ITEM	MBH INPUT	REQUIRED PRESSURE
RTAC-1	150	7" W.C.
RTAC-2	67	7" W.C.
RTAC-3	67	7" W.C.
LAB	2.4	7" W.C.
Total	286.4	

- GAS PRESSURE AT METER = 7" W.C.

KEYNOTES:

1. AIR COMPRESSOR TO BE FURNISHED AND INSTALLED BY THE OWNER'S EQUIPMENT PROVIDER.
2. VACUUM EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE OWNER'S EQUIPMENT PROVIDER. UNIT CONTAINS INTEGRAL AMALGAM SEPARATOR.
3. ROUTE 1/2" COMPRESSED AIR LINE ABOVE CEILING AND TRANSITION TO HORIZONTAL FOR DISTRIBUTION. VERIFY LINE SIZE AND CAPACITY REQUIREMENTS WITH TENANT AND EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.
4. ROUTE 1 1/2" VACUUM PIPING DOWN BELOW FLOOR FOR DISTRIBUTION.
5. ROUTE VACUUM DISCHARGE TO ADJACENT 3" HUB DRAIN AS SHOWN ON SHEET P1.1. DISCHARGE IN ACCORDANCE WITH PLUMBING CODE. SEE RAM-VAC DETAIL FOR MORE INFORMATION.
6. CONNECT 2" PVC TO VACUUM HEADS AND ROUTE TO V.T.R.. TERMINATE ABOVE ROOF WITH GOOSENECK FITTING. DO NOT JOIN WITH SANITARY VENT. MAINTAIN ALL CODE REQUIRED CLEARANCES ON THE ROOF. COORDINATE VTR LOCATIONS WITH MECHANICAL EQUIPMENT. SEE RAM-VAC DETAIL FOR MORE INFORMATION.
7. ROUTE 1" PVC UP TO ABOVE SUSPENDED CEILING FOR FRESH AIR INTAKE FOR AIR COMPRESSOR. INSTALL AT TIME OF DENTAL EQUIPMENT INSTALLATION. DO NOT JOIN WITH SANITARY VENT. SEE RAM-VAC DETAIL FOR MORE INFORMATION.
8. ROUTE GAS PIPING ON ROOF TO TERMINATION PROVIDED BY LANDLORD. COORDINATE METER INSTALLATION WITH UTILITY. METER PROVIDED BY UTILITY. G.C. SHALL SET UP ACCOUNT & COORDINATE METER INSTALLATION WITH LOCAL UTILITY. ACCOUNT SHALL BE TRANSFERRED TO ADMI AT A LATER DATE.
9. ROUTE NEW 3/4" GAS LINE DOWN IN WALL TO RECESSED SHUTOFF BOX WITH VALVE. PROVIDE "WATTS" APU-9 10"x10" SPRING FIT ACCESS PANEL. LABEL AS "GAS SHUTOFF". ROUTE GAS TO LAB WORK STATIONS AND PROVIDE 1/2" BRANCH LINES TO INDIVIDUAL LAB STATIONS. VERIFY ROUGH-IN LOCATION WITH TENANT REPRESENTATIVE. SEE LAB WORK STATION ELEVATION 6/P3.0. PROVIDE GAS PRESSURE REGULATOR AND EXTERIOR VENT IF REQUIRED PER OWNER FURNISHED EQUIPMENT (COORDINATE WITH OWNER AS REQUIRED).
10. PROVIDE 1/2" GAS LINE AND 1/2" AIR LINE STUBBED OUT AT LAB WORK STATION ELEVATION (SEE DETAIL 6/P3.0). PLUMBING CONTRACTOR TO MAKE FINAL CONNECTIONS.
11. PROVIDE 1/2" COMPRESSED AIR CONNECTION AT 44" A.F.F. SEE DETAIL 1/MD AIR VALVE DETAIL FOR ADDITIONAL REQUIREMENTS.
12. PROVIDE 1 1/2" VACUUM CONNECTION AND 1/2" COMPRESSED AIR CONNECTION TO UTILITY CENTER. STUB PIPING UP THROUGH FLOOR TO UTILITY CENTER ENCLOSURE FOR TERMINATION BY OWNER'S EQUIPMENT PROVIDER. SEE UTILITY CENTER DETAIL ON SHEET A5.2. PROVIDE CLOSED CELL INSULATION BETWEEN THE COPPER PIPING AND CONCRETE FLOOR.
13. ROUTE 1/2" COMPRESSED AIR PIPING DOWN THRU WALL AND BELOW FLOOR FOR DISTRIBUTION. PROVIDE CLOSED CELL INSULATION BETWEEN THE COPPER PIPING AND CONCRETE FLOOR.



RAM-VAC DETAIL

NOT TO SCALE

PLUMBING FLOOR PLAN - AIR AND VACUUM PIPING

EXCEL
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100 Camelot Drive
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COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:

ASPEN DENTAL

6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

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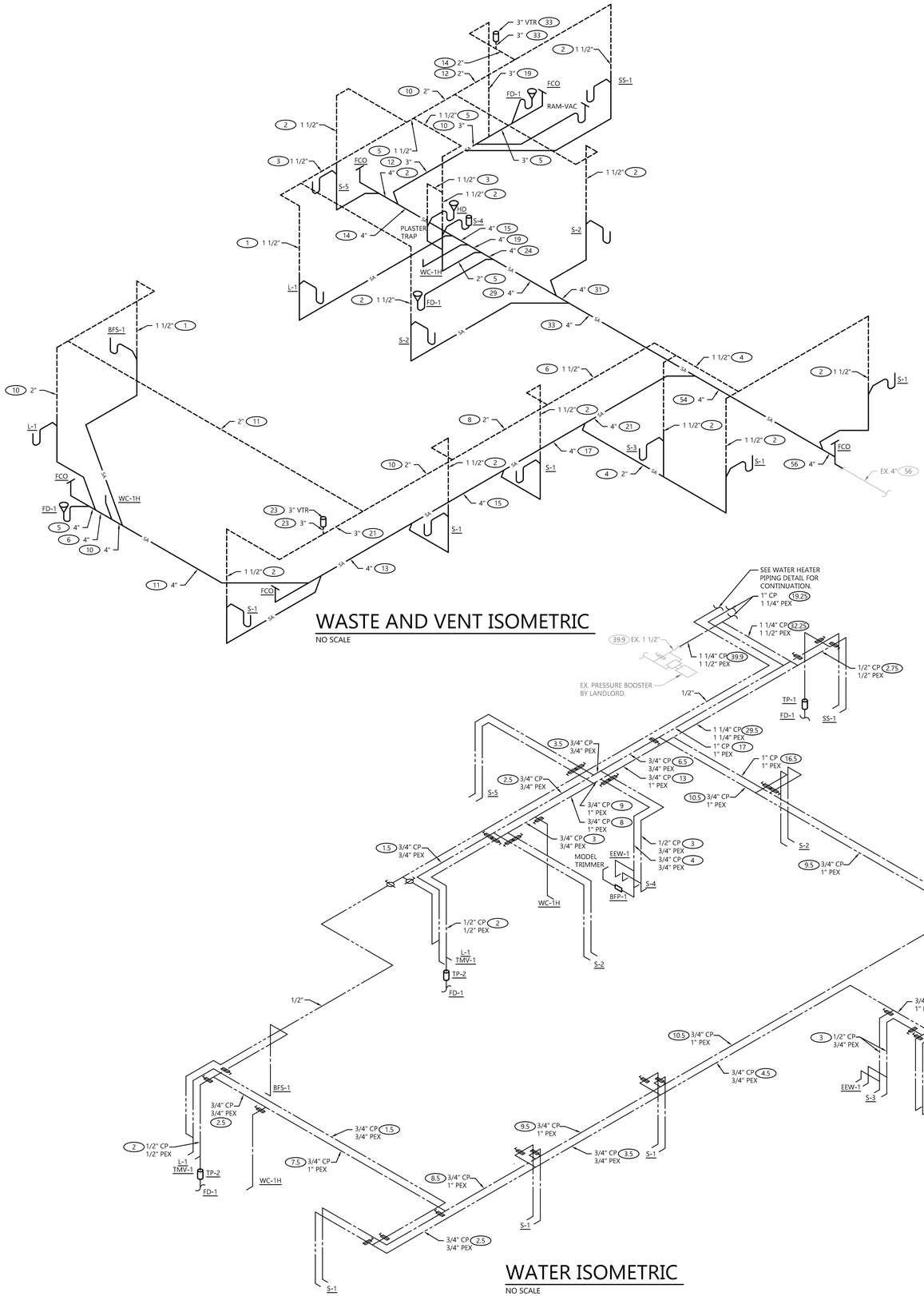

WASTE AND VENT ISOMETRIC

NO SCALE

WATER ISOMETRIC

NO SCALE

WATER CALCULATIONS

WATER PRESSURE DATA

1	ASSUMED STATIC PRESSURE AT MAIN	60 PSIG
2	ASSUMED RESIDUAL PRESSURE AT MAIN	50 PSIG
3	ASSUMED RESIDUAL FLOW AT MAIN	1000 GPM
4	BUILDING FIXTURE UNITS	39.9 F.U.
5	PREDOMINATE FLUSH TYPE	TANK
6	CONTINUOUS FLOW GPM	0 GPM
7	BUILDING DEMAND	23.6 GPM
8	RESIDUAL PRESSURE AT BUILDING DEMAND	60.0 PSIG
9	SAFETY FACTOR	5 PSIG
10	PRESSURE AVAILABLE FOR DOMESTIC USE	55.0 PSIG

WATER SERVICE AND DISTRIBUTION SIZING DATA

11	ELEVATION OF RESIDUAL TEST HYDRANT	100.00 FEET
12	ELEVATION OF WATER METER	105.00 FEET
13	ELEVATION DIFFERENCE TEST HYDRANT TO METER	5.00 FEET
14	WATER METER SIZE	1 INCHES
15	DEVELOPED LENGTH MAIN TO METER	35 FEET
16	WATER SERVICE SIZE	1 1/2 INCHES

PRESSURE AVAILABLE AFTER METER

17	PRESSURE DROP BETWEEN MAIN AND METER	2.19 PSIG/100'
18	FRICTION PRESSURE LOSS BETWEEN MAIN AND METER	0.8 PSIG
19	ELEVATION PRESSURE LOSS BETWEEN MAIN AND METER	2.2 PSIG
20	SERVICE/METER PRESSURE LOSS	20 PSIG
21	BACKFLOW PREVENTER PRESSURE LOSS	14 PSIG
22	PRESSURE AVAILABLE AFTER METER	18.4 PSIG
23	ADDITIONAL PRESSURE DUE TO BOOSTER PUMP	50 PSIG
25	AVAILABLE BUILDING WATER PRESSURE	68.4 PSIG

WATER DISTRIBUTION SIZING - COLD WATER

A	AVAILABLE BUILDING WATER PRESSURE	68.4 PSIG										
B	START POINT TAG (SEE ISOMETRIC FOR TAG LOCATION)	METER						A				
C	DIST. PREVIOUS START POINT TO THIS START POINT			WSFU				0 FT		WSFU		
D	UNIFORM LOSS PREV. START POINT TO THIS START POINT			Copper	PEX			32.93 PSIG/100'		Copper	PEX	
E	PIPE PRESSURE DROP FROM METER TO START POINT		Pipe size	Flush tank	Flush tank			0.0 PSIG		Flush tank	Flush tank	
F	CONTROLLING FIXTURE:	IDEEW-1						WC-1H				
	ROOM NAME & NO.:	STERILIZATION 121	1/2	5	3			MEN'S REST. 102	1/2	5	3	
	PRESSURE REQUIRED	30 PSIG	3/4	16.5	6			25 PSIG	3/4	16.5	6	
G	ELEV. DIFF. BETW. METER AND CONTROLLING FIXTURE	3 FEET	1	31	20.5			3 FEET	1	31	20.5	
H	PRESSURE LOSS DUE TO WATER SOFTENER	0 PSIG	1 1/4	58	34			0 PSIG	1 1/4	58	34	
I	PRESSURE LOSS DUE TO MIXING VALVE	0 PSIG	1 1/2	107	55			0 PSIG	1 1/2	107	55	
J	PRESSURE AVAILABLE FOR PIPING PRESSURE DROP	37.1 PSIG	2	260	135			42.1 PSIG	2	260	135	
K	DEVELOPED LENGTH START PT. TO CONTR. FIXTURE	75 FEET	2 1/2	469				130 FEET	2 1/2	469		
L	EQUIVALENT LENGTH START PT. TO CONTR. FIXTURE	113 FEET	3	752				195 FEET	3	752		
M	PRESSURE AVAILABLE FOR UNIFORM LOSS	32.93 PSIG/100'	4	1792				21.56 PSIG/100'	4	1792		

WATER DISTRIBUTION SIZING - HOT WATER

A	AVAILABLE BUILDING WATER PRESSURE	68.4 PSIG										
B	START POINT TAG (SEE ISOMETRIC FOR TAG LOCATION)	METER						A				
C	DIST. PREVIOUS START POINT TO THIS START POINT			WSFU				80 FT		WSFU		
D	UNIFORM LOSS PREV. START POINT TO THIS START POINT			Copper	PEX			27.44 PSIG/100'		Copper	PEX	
E	PIPE PRESSURE DROP FROM METER TO START POINT		Pipe size	Flush tank	Flush tank			22.0 PSIG		Flush tank	Flush tank	
F	CONTROLLING FIXTURE:	IDEEW-1						L-1				
	ROOM NAME & NO.:	STERILIZATION 121	1/2	5	3			MEN'S REST. 102	1/2	5	3	
	PRESSURE REQUIRED	30 PSIG	3/4	16.5	6			8 PSIG	3/4	16.5	6	
G	ELEV. DIFF. BETW. METER AND CONTROLLING FIXTURE	3 FEET	1	31	20.5			3 FEET	1	31	20.5	
H	PRESSURE LOSS DUE TO WATER SOFTENER	0 PSIG	1 1/4	58	34			0 PSIG	1 1/4	58	34	
I	PRESSURE LOSS DUE TO MIXING VALVE	0 PSIG	1 1/2	107	55			8 PSIG	1 1/2	107	55	
J	PRESSURE AVAILABLE FOR PIPING PRESSURE DROP	37.1 PSIG	2	260	135			29.1 PSIG	2	260	135	
K	DEVELOPED LENGTH START PT. TO CONTR. FIXTURE	90 FEET	2 1/2	469				95 FEET	2 1/2	469		
L	EQUIVALENT LENGTH START PT. TO CONTR. FIXTURE	135 FEET	3	752				143 FEET	3	752		
M	PRESSURE AVAILABLE FOR UNIFORM LOSS	27.44 PSIG/100'	4	1792				20.42 PSIG/100'	4	1792		

FIXTURE UNITS

NO.	FIXTURE	WASTE UNITS	WASTE TOTAL	WASTE TRAP SIZE	COLD WATER UNITS	COLD WATER TOTAL	COLD WATER BRANCH SIZE	HOT WATER UNITS	HOT WATER TOTAL	HOT WATER BRANCH SIZE	TOTAL WATER UNITS	TOTAL WATER TOTAL
1	BOTTLING STATION	1	1	1 1/4"	0.5	0.5	1/2"	-	-	-	0.5	0.5
3	FLOOR DRAIN- 3"	5	15	3"	-	-	-	-	-	-	-	-
1	HUB OUTLET- 2"	3	3	2"	-	-	-	-	-	-	-	-
1	RAM-VAC	5	5	3"	-	-	-	-	-	-	-	-
2	LAV	1	2	1 1/4"	1.5	3	1/2"	1.5	3	1/2"	2	4
7	SINK- S-1 & 2	2	14	1 1/2"	1	7	1/2"	1	7	1/2"	1.5	10.5
2	SINK- S-3 & 4	2	4	1 1/2"	3	6	1/2"	3	6	1/2"	4	8
1	SINK- S-5	2	2	1 1/2"	1	1	1/2"	1	1	1/2"	1.4	1.4
1	SINK- SERVICE- 2"	2	2	2"	2.25	2.25	1/2"	2.25	2.25	1/2"	3	3
2	WATER CLO- TANK	4	8	-	5	10	1/2"	-	-	-	5	10
3	TRAP PRIMER	-	-	-	0.5	1.5	1/2"	-	-	-	0.5	1.5
1	MODEL TRIMMER	-	-	-	1	1	1/2"	-	-	-	1	1
25	TOTAL		56			32.25			19.25			39.9

GENERAL NOTES:

- SEE UNDERGROUND PLAN AND FIXTURE UNIT SCHEDULE FOR RUNOUT TRAP SIZE TO FIXTURE.
- SEE FIXTURE UNIT SCHEDULE THIS SHEET FOR RUNOUT PIPING SIZE TO FIXTURE.
- AIR ADMITTANCE VALVES NOT PERMITTED (I.E. STUDOR VENT).
- IF PEX IS USED IN LIEU OF COPPER, P.C. SHALL PROVIDE COMPLETE MATERIAL SUBMITTALS (PIPE, FITTINGS, ETC.) TO ASPEN DENTAL MANAGEMENT INC. FOR APPROVAL PRIOR TO INSTALLATION.
- P.C. SHALL PERFORM FIRE HYDRANT FLOW TEST TO VERIFY WATER PRESSURE INFORMATION PRIOR TO INSTALLATION OF ANY WATER PIPING. PROVIDE FLOW TEST INFORMATION TO EXCEL ENGINEERING AND ASPEN DENTAL MANAGEMENT INC. FOR EVALUATION.

PLUMBING ISOMETRICS AND SCHEDULES

EXCEL

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COLLABORATION

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ASPEN DENTAL

6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

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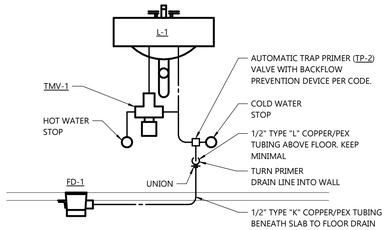


4 P3.0 TRAP PRIMER-2 DETAIL
NOT TO SCALE

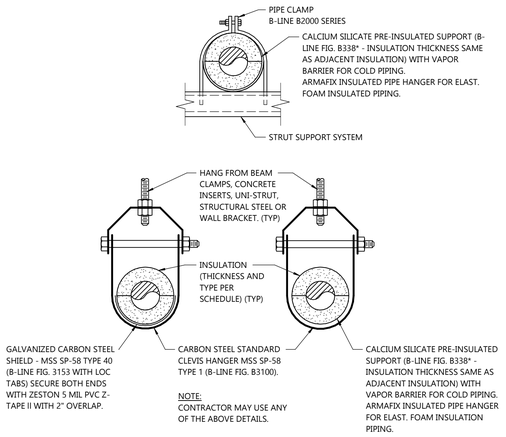
MAX. SPACING BETWEEN PIPE SUPPORTS AND MIN. HANGER ROD SIZES									
PIPE SIZE	STEEL			COPPER		PVC	PEX	MIN. ROD	
	WATER	VAPOR	NAT. GAS	WATER	VAPOR	CPVC		METAL PIPE	PLASTIC PIPE
1/4"-1/2"	7'	8'	6'	5'	6'	4'	32"	3/8"	3/8"
3/4"	7'	9'	8'	5'	7'	4'	32"	3/8"	3/8"
1"	7'	9'	8'	6'	8'	4'	32"	3/8"	3/8"
1 1/4"	7'	9'	10'	7'	9'	4'	32"	3/8"	3/8"
1 1/2"	9'	12'	10'	8'	10'	4'	32"	3/8"	3/8"
2"	10'	12'	10'	8'	11'	4'	32"	3/8"	3/8"
2 1/2"	11'	12'	10'	9'	12'	4'	32"	3/8"	3/8"
3"	12'	12'	10'	10'	12'	4'	32"	3/8"	3/8"
4"	12'	12'	10'	12'	12'	4'	-	3/8"	3/8"
6"	12'	12'	10'	12'	12'	4'	-	3/8"	3/8"
8"	12'	12'	-	-	-	4'	-	1/2"	3/8"
10"	12'	12'	-	-	-	4'	-	1/2"	3/8"
12"	12'	12'	-	-	-	4'	-	5/8"	3/8"
14"	12'	12'	-	-	-	4'	-	5/8"	3/8"
16"	12'	12'	-	-	-	4'	-	3/4"	3/8"
MAX VERT. (1)	15'	15'	-	10'	10'	10'	4'	-	-

(1) SUPPORT AT MINIMUM EVERY FLOOR LEVEL OR SPACING LISTED.
MSS = MANUFACTURER'S STANDARDIZATION SOCIETY
- INSTALL ADDITIONAL HANGERS WITHIN 12" OF ELBOWS AND TEES AND AT CONCENTRATED LOADS, INCLUDING VALVES, FLANGES AND STRAINERS 2 1/2" AND LARGER.

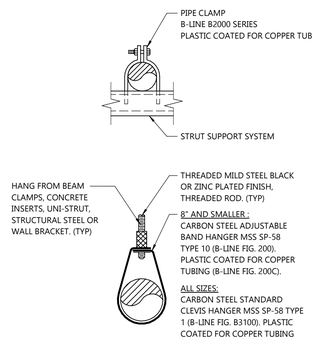
MAX. HANGER ROD CAPACITY	
ROD DIA.	MAX LOAD (1)
3/8"	600#
1/2"	1,100#
5/8"	1,800#
3/4"	2,700#

(1) MAX LOAD IS WEIGHT ALLOWED PER EACH ROD.

3 P3.0 PIPE SUPPORT AND HANGER ROD SCHEDULE
NOT TO SCALE



2 P3.0 INSULATED PIPE HANGER DETAILS
NOT TO SCALE



1 P3.0 UNINSULATED PIPE HANGER DETAIL
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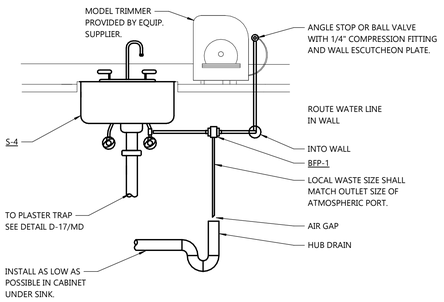
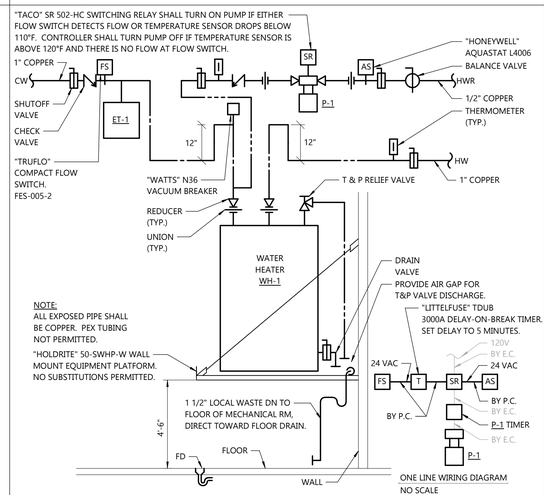


8 P3.0 MODEL TRIMMER PIPING DETAIL
NOT TO SCALE



7 P3.0 WATER HEATER PIPING DETAIL
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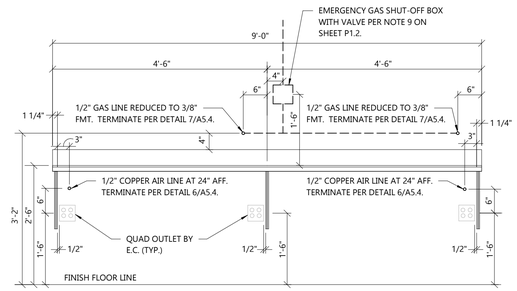

6 P3.0 LAB WORK STATION ELEVATION
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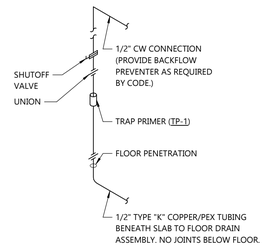
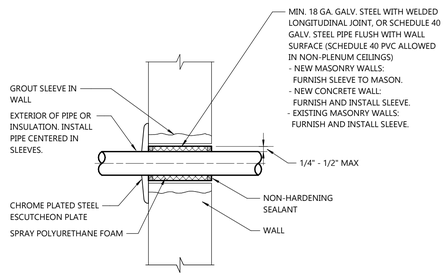


5 P3.0 TRAP PRIMER-1 DETAIL
NOT TO SCALE

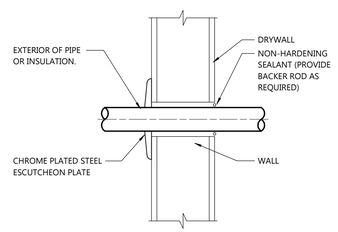


EXPOSED IN FINISHED ROOMS

CONCEALED SIDE OF WALL, EXPOSED IN MECH. EQUIP. ROOM, OR OUTDOORS

PIPE PENETRATION THRU MASONRY OR CONCRETE WALL

12 P3.0
NOT TO SCALE

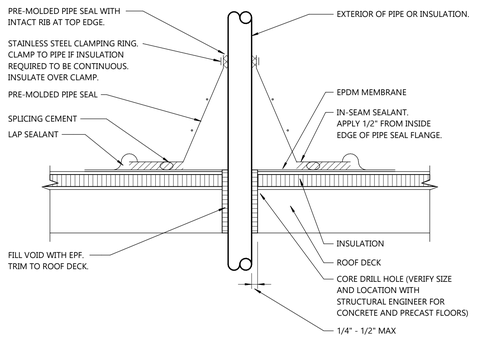


EXPOSED IN FINISHED ROOMS

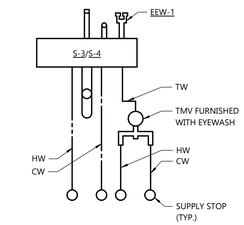
CONCEALED SIDE OF WALL, EXPOSED IN MECH. EQUIP. ROOM, OR OUTDOORS

11 P3.0 PIPE PENETRATION THRU STUD WALL
NOT TO SCALE

NOTE:
WHERE PIPE TERMINATES ABOVE ROOF. PIPE SHALL EXTEND MIN. 24" ABOVE INSULATION.



10 P3.0 ROOF PIPE BOOT PENETRATION DETAIL
NOT TO SCALE



9 P3.0 EEW DETAIL
NOT TO SCALE

PLUMBING DETAILS

EXCEL
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100 Camelot Drive
Fond du Lac, WI 54935
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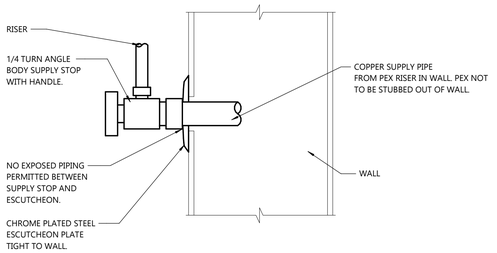
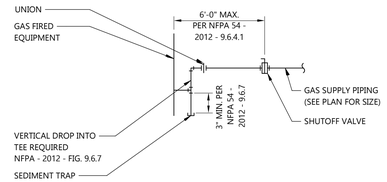
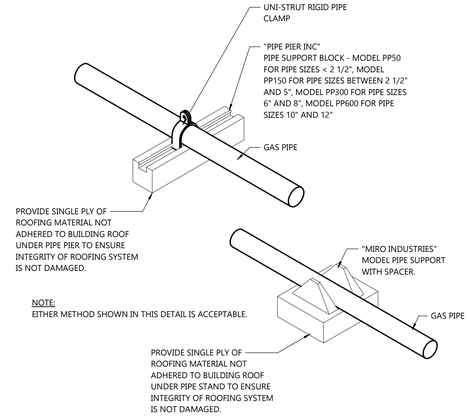


3 P3.1 ANGLE STOP DETAIL
NOT TO SCALE



2 P3.1 GAS PIPE CONNECTION DETAIL
NOT TO SCALE



1 P3.1 GAS PIPE SUPPORT ON ROOF DETAIL
NOT TO SCALE

- DETAIL APPLIES TO LOADS HUNG FROM JOIST TOP OR BOTTOM CHORDS IN EXCESS OF 100 LBS.
- LOADS HUNG FROM TOP AND BOTTOM CHORD SHALL BE CONCENTRICALLY LOADED.

7 P3.1 JOIST HANGER CONNECTION DETAIL
NOT TO SCALE

LOCAL WASTE PIPE	
UNIT	DRAIN SIZE
1/2"-3/4"-1"	1 1/2"
1 1/4"-1 1/2"	2"
2"-2 1/2"	3"
3"	3"
4" AND LARGER	4"

6 P3.1 BACKFLOW PREVENTER DETAIL
NOT TO SCALE

PLUMBING DETAILS

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SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

JOB NUMBER
230264900

SHEET NUMBER
P3.1

TRAP PRIMER SCHEDULE (T.P.)

NO.	LOCATION	CONN. SIZE	MODEL	REMARKS	SUPPLIED BY
1	MECH.	1/2"	P2-500	"PRECISION PLUMBING PRODUCTS"	TENANT G.C.
2	TOILET	3/8"	PRO1-ULP500	"PRECISION PLUMBING PRODUCTS"	TENANT G.C.

WATER CLOSET SCHEDULE (W.C.)

NO.	MT'G	FLUSH TYPE	GPF	BOWL			FLUSH VALVE TYPE	FLUSH VALVE/ SUPPLY STOP MFR/MODEL	SEAT	SUPPLIED BY
				MFR/MODEL	RIM HT. A.F.F.	PIPING CONNECTION				
1H	FLOOR	TANK	1.28	MANSFIELD 137-3173	16-1/2"	HANDLE STOP	-	BRASSCRAFT OCR1912AZX C	CHURCH 9400SSCT	TENANT P.C.

- ACCEPTABLE MANUFACTURERS:
  -SUPPLY STOPS: BRASSCRAFT, CHICAGO, KOHLER, DEARBORN, KEENEY, MCGUIRE.
- WATER SAVING 1.6 GPF, SIPHON JET ELONGATED VITREOUS CHINA WATER CLOSET BOWL WITH WHITE SOLID PLASTIC OPEN FRONT SEAT WITH SELF-SUSTAINING CHECK HINGE.
- TANK WATER CLOSETS: CLOSE-COUPLED WITH VITREOUS CHINA TANK AND COVER, FLUSH ASSEMBLY AND ANGLE SUPPLY.
- FLOOR SET WATER CLOSETS WITH BOLT CAPS.
- CONTROLS FOR ADA ACCESSIBLE FIXTURES SHALL BE ON THE OPEN SIDE.

CLEANOUT SCHEDULE

SYM.	LOCATION	SIZES	BODY MAT'L	PLUG MAT'L	ACCESS COVER		FIGURE	REMARKS	SUPPLIED BY
					MAT'L	MISC.			
FCO	FINISHED ROOMS W/O CARPET (1)	2" - 6"	C.I.	PVC	N.B.	-	Z-1400	"ZURN"	TENANT G.C.
FCO	FINISHED ROOMS WITH CARPET (1)	2" - 6"	C.I.	PVC	N.B.	CARPET MARKER	Z-1400-CM	"ZURN"	TENANT G.C.

- RECESSED TAPER THREAD PLUG WITH SLOTTED RECESS.

(1) FINISHED ROOMS ARE ROOMS WITH CARPET OR FLOOR TILE OR ROOMS ACCESSIBLE BY A DOOR LESS THAN 42" WIDE.

DRAIN SCHEDULE

SYM.	TYPE	APPLICATION	OUTLET SIZE	BODY MAT'L	STRAINER/TOP		MISC.	MODEL	REMARKS	SUPPLIED BY
					MAT'L	SIZE				
FD-1	FLOOR	PEDESTRIAN TRAFFIC	2"-3" (1)	CAST IRON	N. B. "TYPE S"	5" DIA	TRAP PRIMER CONN.	ZN-415-S-DP-P	"ZURN" (2)	TENANT G.C.
HD	HUB DRAIN	INDIRECT WASTE	(1)	-	-	-	STUB 2" A.F.F.	-	-	TENANT G.C.

(1) AS NOTED ON DRAWINGS
(2) DECORATIVE POLISHED TOP NOT REQUIRED IN MECHANICAL ROOM.

BACKFLOW PREVENTER / VACUUM BREAKER SCHEDULE (B.F.P.)

SYM.	LOC.	GPM	MAX. P.D. (PSI)	SIZE	TYPE	MAX. HAZ.	BFP/VB PRESS.	APPLICATION	ASSE STD.	MODEL	REMARKS	SUPPLIED BY
BFP-1	LAB	2.0	4.0	1/2"	BFP W/ INT. ATM. VENT	LOW	CONTIN.	MODEL TRIMMER	1012	9D (1)	"WATTS"	TENANT G.C.
BFP-2	MECH	24.0	13.0	1 1/4"	REDUCED PRESS. PRINCIPLE BFP	HIGH	CONTIN.	WATER SERVICE	1013	LF009	"WATTS"	TENANT G.C.

- ACCEPTABLE MANUFACTURERS: WATTS, CONBRACO, AMES.

(1) P.C. SHALL VERIFY SCHEDULED BFP IS ADEQUATE FOR HAZARD LEVEL WITH PLUMBING INSPECTOR. USE SCHEDULED BFP UNLESS PLUMBING INSPECTOR CLASSIFIES AS HIGHER OR LOWER HAZARD. P.C. SHALL INSTALL BFP IN ACCORDANCE WITH MFRS RECOMMENDATIONS AND CODE CLEARANCE REQUIREMENTS. RELOCATE/REROUTE AS REQUIRED IF LOCATION SHOWN ON PLAN DOES NOT MEET REQUIREMENTS. PROVIDE ALL NECESSARY DRAIN PIPING, ETC. FOR A COMPLETE INSTALLATION.

ELECTRICAL/STARTER/DISCONNECT SCHEDULE

SYM.	LOCATION	ELECTRICAL DATA					STARTER				DISCONNECT		REMARKS	SUPPLIED BY
		HP	KW	AMPS	VOLT	PH.	TYPE	LOCATION	FURN. BY	ACCESS-ORIES	DIS-CONNECT	FURN. BY		
BFS-1	SEE DWG	-	-	5.0	120	1	INTEG	INTEGRAL	EM	-	NR	-	REC.	TENANT G.C.
WH-1	MECH.	-	3.0	-	208	1	INTEG	INTEGRAL	EM	-	R	EC	-	TENANT G.C.
P-1	MECH.	-	0.04	-	120	1	(1)	MECH RM	PC	-	NR	-	-	TENANT G.C.

STARTER TYPE:
INTEG.= INTEGRAL: PROVIDED INTEGRAL WITH EQUIPMENT.
RELAY= UL LISTED MOTOR RATED RELAY WITH SEPARATE ENTRANCES FOR INPUT AND OUTPUT CONTACTS, AND LED STATUS INDICATOR.

FURNISHED BY:
EM = EQUIPMENT MANUFACTURER
PC = PLUMBING CONTRACTOR
EC = ELECTRICAL CONTRACTOR
HC = HEATING CONTRACTOR

DISCONNECT:
NR= NOT REQUIRED
R = REQUIRED

REMARKS:
REC.=RECEPTACLE

- ACCEPTABLE MANUFACTURERS: ALLEN BRADLEY, CUTLER HAMMER, SQUARE D, GENERAL ELECTRIC.
- VERIFY VOLTAGE AND PHASE WITH ELECTRICAL CONTRACTOR BEFORE ORDERING EQUIPMENT.

(1) SWITCHING RELAY AND TIMER. SEE ONE LINE WIRING DIAGRAM ON SHEET P3.0 FOR ADDITIONAL INFORMATION.

BOTTLE FILLING STATION SCHEDULE (B.F.S.)

NO.	RECESS	CAP. (GPH)	BARRIER FREE	NUMBER OF BASINS	CONTROL	RATED WATTS	FULL LOAD AMPS	MODEL	REMARKS	SUPPLIED BY
1	YES	8.0	YES	-	SENSOR	370	5.0	LZWSM8K	ELKAY	TENANT G.C.

- PROVIDE WITH 1-1/4" WITH C.O. PLUG (MCGUIRE 8872), AND ANGLE WATER STOP WITH HANDLE (BRASSCRAFT OCR19ZX C).
- CAPACITY BASED ON 50 DEGREE F WATER IN AMBIENT TEMPERATURE OF 90 DEGREES F.

WATER HEATER SCHEDULE (W.H.)

NO.	LOC.	TYPE	MOUNTING	SIZE DIA. X HT.	COMM. TANK WARR.	KW	VOLTAGE/ PHASE	AMPS	REC. GPH	TANK SIZE GAL.	MODEL	REMARKS	SUPPLIED BY
1	MECH	COMM.	PLATFORM	17.75" x 45.5"	3 YR (2)	3.0/3.0 (1)	208/1	14.4	12.0	30	ELD30	"RHEEM"	TENANT G.C.

- RECOVERY BASED ON 100 DEGREE F TEMPERATURE RISE, GLASS LINING, 100 PSIG T&P RELIEF VALVE SETTING, 150 PSIG WORKING PRESSURE.

(1) ELEMENTS WIRED FOR NON-SIMULTANEOUS OPERATION
(2) P.C. SHALL BE RESPONSIBLE FOR REGISTRATION OF WATER HEATER FOR WARRANTY PURPOSES.

CIRCULATING PUMP SCHEDULE (P.)

NO.	SERVICE	FLUID TEMP F	GPM	HEAD (FT)	RPM	MOTOR H.P.	TYPE	MODEL	REMARKS	SUPPLIED BY
1	HOT WATER CIRC	120	3	5	2800	39 WATT	IN-LINE	NBF-8	"B & G" (1)	TENANT G.C.

- LEAD FREE BRONZE BODY.

(1) PROVIDE "INTERMATIC" MODEL ST01 DIGITAL 7-DAY SWITCH TIMER TO CONTROL PUMP OPERATION. SET TIMER TO PROVIDE POWER TO PUMP 30 MINUTES BEFORE OFFICE OPENING, AND REMOVE POWER 60 MINUTES AFTER OFFICE CLOSING.

EMERGENCY EYE WASH SCHEDULE (E.E.W.)

NO.	MOUNTING	THERMOSTATIC MIXING VALVE	OPERATION	BACKFLOW PREVENTER	VALVE & TRIM MAT'L	MODEL	REMARKS	SUPPLIED BY
1	SINK	(1)	HAND	(2)	BRASS	EW1022BP-TMV	WATER SAVER	TENANT G.C.

- DECK MOUNTED EMERGENCY EYEWASH WITH DUST COVERS, HAND OPERATED, 8" UNDERCOUNTER HOSE.

(1) AP3600 TMV FURNISHED BY P.C. TMV MEETS ANSI Z358.1.
(2) IN LINE DUAL CHECK BACKFLOW PREVENTER FURNISHED BY MANUFACTURER.

EXPANSION TANK SCHEDULE (E.T.)

NO.	MOUNTING	TANK TYPE	CONN. SIZE	TANK CAP. (GAL.)	ACCEPT. CAPACITY (GAL.)	PRECHARGE PRESSURE (PSIG)	WORKING PRESS (PSIG)	DIA.	HEIGHT	WEIGHT FILLED (LBS.)	MODEL	REMARKS	SUPPLIED BY
1	PIPE	DIAPHRAGM	3/4"	2.1	1.0	(1)	150	9"	12"	16	WH 8	"FLEXCON"	TENANT G.C.

(1) VERIFY WATER PRESSURE PRIOR TO INSTALLATION. SET PRECHARGE PRESSURE TO STATIC PRESSURE IN STREET.

LAVATORY SCHEDULE (L.)

NO.	MOUNTING	OVERALL SIZE	FAUCET CENTERS	LAV MODEL	DRAIN (1)		SUPPLY STOP		FAUCET		SUPPLIED BY
					TYPE	MODEL	TYPE	MODEL	TYPE	MODEL	
1	(2)	(2)	4"	(2)	(2)	(2)	HANDLE	BRASSCRAFT OCR1912AZX C	WRIST BLADE	AM. STD. 7500.175	TENANT G.C.

- ACCEPTABLE MANUFACTURERS:
  -DRAINS AND TRAPS: KOHLER, DEARBORN, KEENEY, MCGUIRE, BRASSCRAFT.
  -STOPS AND SUPPLIES: KOHLER, BRASSCRAFT, DEARBORN, KEENEY, MCGUIRE.
  -CARRIERS AND SUPPORTS: ANCON, JOSAM, SMITH, WADE, ZURN.
- ALL MODEL NUMBERS BASED ON KOHLER UNLESS INDICATED OTHERWISE.
- VITREOUS CHINA LAVS, 1-1/4" 17 GAUGE "P" TRAP WITH CLEANOUT PLUG (MCGUIRE 8872), BUSHING ON END OF OUTLET TUBE, WALL FLANGE.
- WALL HUNG LAVS WITH BACKSPLASH.
- FAUCETS WITH VANDAL RESISTANT AERATOR.

(1) PROVIDE TRUEBRO MODEL #102 INSULATION KIT.
(2) BASIN, STRAINER AND TAILPIECE FURNISHED BY MILLWORK CONTRACTOR, INSTALLED BY P.C..

SERVICE SINK SCHEDULE (S.S.)

NO.	MOUNTING	BASIN				FAUCET			SUPPLIED BY
		MAT'L	SIZE	RIM GUARD	MODEL	PIPING EXPOSURE	BACKFLOW PREVENTER	MFR/MODEL	
1	WALL	POLYPROPYLENE	23x25x15	-	MUSTEE 14CP	DECK MOUNT	WATTS N9-CD (2)	(1)	TENANT G.C.

(1) FAUCET, SUPPLY HOSES AND P-TRAP FURNISHED WITH BASIN BY MANUFACTURER.
(2) ASSE 1052 LISTED.

SINK SCHEDULE (S.)

NO.	SINK				FAUCET						SUPPLIED BY
	COMPARTMENT NO.	DEPTH	OVERALL SIZE	MODEL	NO. HOLES	SPOUT REACH	SPOUT HEIGHT	HANDLE	FINISH	SPRAY	MODEL	
1	1	(4)	(4)	(4)	2	5"	10"	SINGLE	CHROME	NO	DELTA 1903-DST	TENANT G.C.
2	1	(4)	(4)	(4)	2	5"	10"	SINGLE	CHROME	NO	DELTA 1903-DST	TENANT G.C.
3	2	(4)	(4)	(4)	3	8"	8.875"	SINGLE	CHROME	YES	KOHLER K-7508	TENANT G.C.
4	2	(4)	(4)	(4)	3	8"	8.875"	SINGLE	CHROME	YES	KOHLER K-7508 (1)	TENANT G.C.
5	1	(4)	(4)	(4)	2	5"	10"	SINGLE	CHROME	NO	DELTA 1903-DST (3)	TENANT G.C.

- ACCEPTABLE MANUFACTURERS:
  -STOPS AND SUPPLIES: KOHLER, BRASSCRAFT, DEARBORN, KEENEY, MCGUIRE.
  -DRAINS AND TRAPS: KOHLER, DEARBORN, KEENEY, MCGUIRE, BRASSCRAFT.
- SELF-RIMMING 20 GA. 302 S.S. SINK. ANGLE SUPPLIES WITH HANDLE STOPS (BRASSCRAFT OCR1912AZX C. PROVIDE EACH COMPARTMENT WITH STAINLESS STEEL STRAINER AND TAILPIECE (ELKAY LK-35B), AND 1-1/2" 17 GAUGE "P" TRAP W/ CLEANOUT (MCGUIRE 8912).
- VERIFY SINK CUTOUT SIZE WILL FIT IN COUNTERTOP WITH CABINET SHOP DRAWINGS PRIOR TO ORDERING.

(1) INSTALL PLASTER TRAP FURNISHED BY SULLIVAN-SCHEIN.
(3) PROVIDE TRUEBRO MODEL #102 INSULATION KIT.
(4) BASIN FURNISHED BY MILLWORK CONTRACTOR, INSTALLED BY P.C..

THERMOSTATIC MIXING VALVE SCHEDULE (T.M.V.)

NO.	SERVICE	INLETS	OUTLET	ACT. P.D. (PSI)	MAX. FLOW (GPM)	ACTUAL FLOW (GPM)	TEMP. SETTING (°F)	MODEL	REMARKS	SUPPLIED BY
1	LAVATORY	3/8"	3/8"	25	4.0	1.5	105	LFUSG-B-M2	"WATTS" (1)	TENANT G.C.

- ACCEPTABLE MANUFACTURERS: SYMMONS, WATTS, POWERS, ZURN.
- PROVIDE WITH CHECK STOPS, REMOVABLE CARTRIDGE WITH STRAINER, STAINLESS STEEL PISTON, AND SOLID WAX HYDRAULIC PRINCIPLE THERMOSTAT.

(1) LISTED FOR ASSE 1070 USE.

PLUMBING SCHEDULES

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

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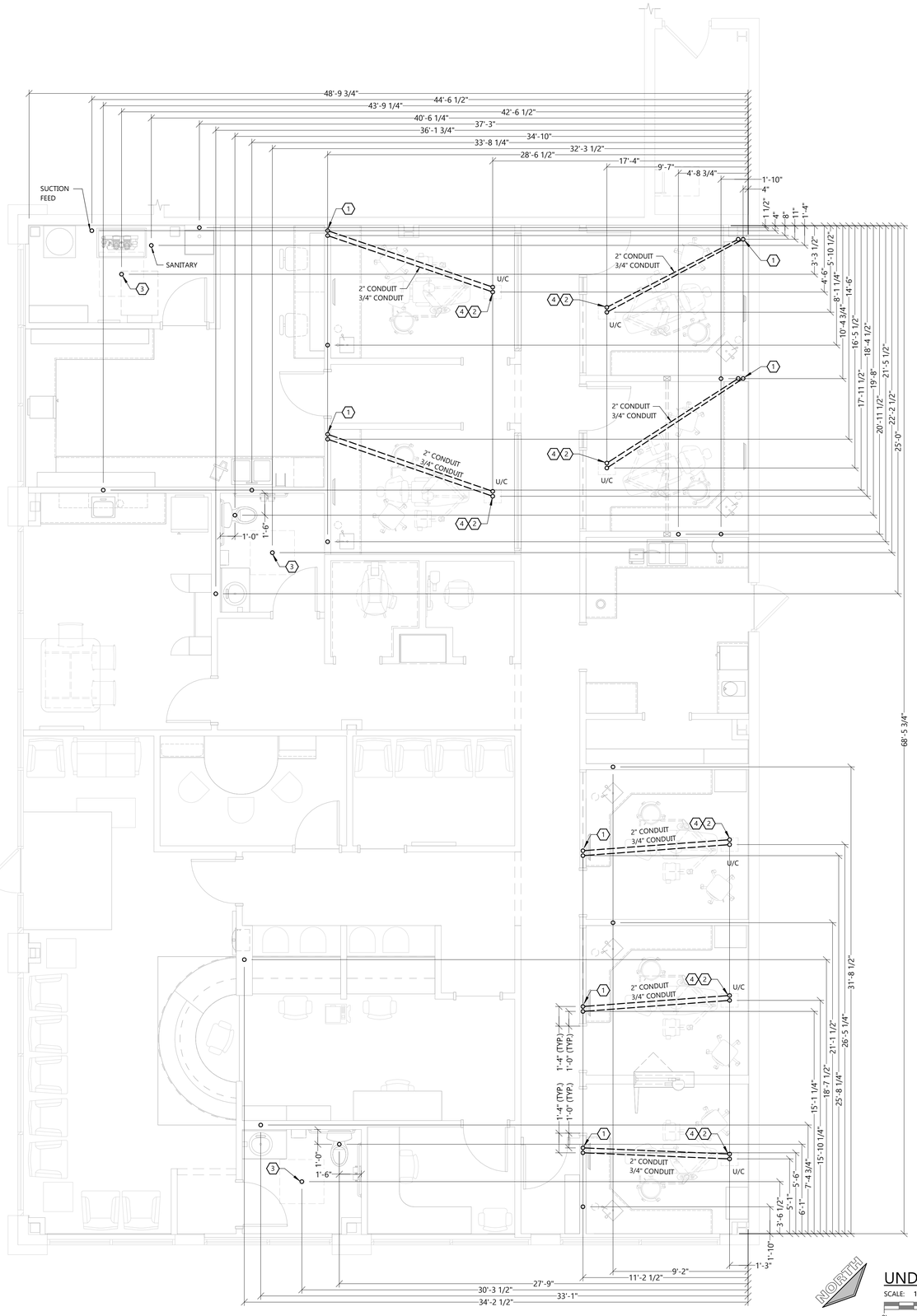
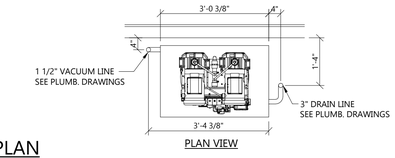


NORTH

UNDERGROUND UTILITY RISER PLAN

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

0' 4' 8'



PLAN VIEW

RAM-VAC DETAIL

NOT TO SCALE

UNDERGROUND UTILITY RISER PLAN AND DETAIL

SOIL TESTING NOTE:

- G.C. SHALL HIRE A SOIL TESTING AGENCY TO PERFORM A COMPACTION TEST OF LANDLORD DELIVERED PAD DURING & AFTER UNDERGROUND UTILITY INSTALLATION. G.C. SHALL NOT INSTALL UNDERGROUND UTILITIES IN LANDLORD DELIVERED PAD UNTIL COMPACTION REPORTS HAVE BEEN RECEIVED FROM THE LANDLORD, AND PROPER COMPACTION HAS BEEN MET. ALL REPORTS SHALL BE SUBMITTED TO ADMI.

GENERAL NOTES:

- ALL DIMENSIONS ARE TAKEN OFF THE FINISHED FACE OF THE PERIMETER WALL, AND MEASURED TO FIXTURE LOCATION AND/OR CENTER OF WALL PARTITIONS.
- ALL VACUUM LINES SHALL BE ROUTED UNDERGROUND WHENEVER POSSIBLE. P.C. MAY USE ANY WALL OR KNEEWALL UNTIL THERE IS NO MORE WALL. AT THAT POINT THE VACUUM SHALL DROP UNDERGROUND.

U/C = UTILITY CENTER

KEYNOTES:

1. POWER TO BE BROUGHT UNDER COUNTER THROUGH 3/4" POWER CONDUIT. 2" DATA CONDUIT TO BE RUN UNDERGROUND. (REFER TO ELECTRICAL DRAWINGS & DETAILS 3/E2.0 & 4/E2.0)
2. POWER TO BE BROUGHT THROUGH 3/4" POWER CONDUIT. 2" DATA CONDUIT TO BE RUN UNDERGROUND. (REFER TO ELECTRICAL DRAWINGS)
3. TAPER FLOOR TOWARDS FLOOR DRAIN.
4. SEE UTILITY CENTER DETAIL ON SHEET A5.2 FOR ADDITIONAL REQUIREMENTS.

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Always a Better Plan

100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:

ASPEN DENTAL

6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

STATE OF NEW YORK
DOUGLAS ELDERKIN
090488-01
LICENSED PROFESSIONAL ENGINEER

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DESIGN CRITERIA

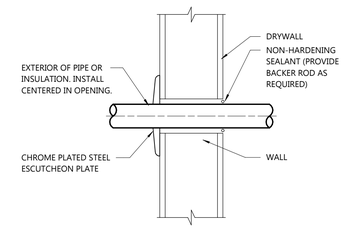
DESIGNATION	SYSTEM TYPE	HAZARD/ COMMODITY	MINIMUM DENSITY (3)	REMOTE AREA	HOSE ALLOWANCE
LH	WET	LIGHT HAZARD (1)	0.10 GPM/S.F.	1,500 S.F. (2)	100 GPM
OG1	WET	ORDINARY GROUP 1 (1)	0.15 GPM/S.F.	1,500 S.F. (2)	250 GPM

- CONTRACTOR SHALL VERIFY DESIGN CRITERIA.
(1) QUICK RESPONSE HEADS.
(2) REDUCE REMOTE AREA FOR AREAS WITH QUICK RESPONSE SPRINKLERS AS PERMITTED BY NFPA 13 VERSION ADOPTED BY AHJ.
SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR CEILING HEIGHTS.

SPRINKLER REQUIREMENTS

TAG	APPLICATION	SYSTEM TYPE	MOUNTING	BODY MAT'L	ELEMENT	SPRINKLER FINISH	ESCUTCHEON		TEMPERATURE CLASSIFICATION	CENTER OF TILE (2)
							TYPE	MAT'L/COLOR		
A	ROOMS WITH CEILING	WET	PENDENT	BRASS	GLASS BULB	WHITE	SEMI-RECESSED	(1)	ORDINARY	YES

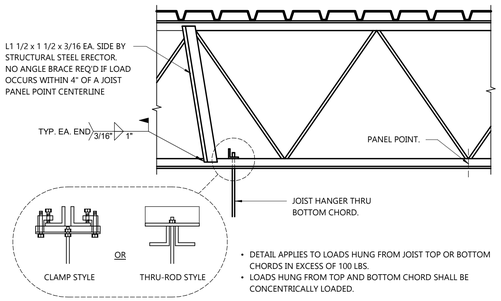
- ALL TEMPERATURES AS LISTED UNLESS OTHERWISE REQUIRED BY NFPA.
- SIDEWALL HEADS ARE ACCEPTABLE IN LIEU OF PENDENT WHERE APPLICABLE.
(1) MATCH SPRINKLER FINISH
(2) CENTER OF TILE LOCATION ESTABLISHED AFTER CEILING GRID IS INSTALLED.



EXPOSED IN FINISHED ROOMS

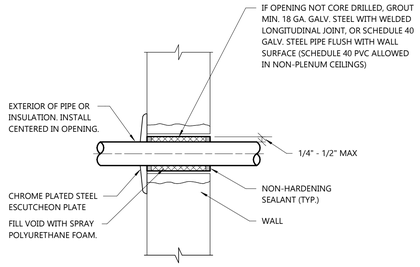
CONCEALED SIDE OF WALL, EXPOSED IN MECH. EQUIP. ROOM, OR OUTDOORS

2 FP0.1 PIPE PENETRATION THRU STUD WALL
NOT TO SCALE



- DETAIL APPLIES TO LOADS HUNG FROM JOIST TOP OR BOTTOM CHORDS IN EXCESS OF 100 LBS.
- LOADS HUNG FROM TOP AND BOTTOM CHORD SHALL BE CONCENTRICALLY LOADED.

1 FP0.1 JOIST HANGER CONNECTION DETAIL
NOT TO SCALE



EXPOSED IN FINISHED ROOMS

CONCEALED SIDE OF WALL, EXPOSED IN MECH. EQUIP. ROOM, OR OUTDOORS

3 FP0.1 PIPE PENETRATION THRU MASONRY OR CONCRETE WALL
NOT TO SCALE

FIRE PROTECTION SPECIFICATIONS

DIVISION 21 FIRE PROTECTION

21 05 00 BASIC FIRE PROTECTION REQUIREMENTS

A. SEE DIVISION 00 PROCUREMENT AND CONTRACTING AND DIVISION 01 GENERAL REQUIREMENT FOR ADDITIONAL REQUIREMENTS.
B. SHOP DRAWINGS, PRODUCT DATA, TEST RESULTS AND SAMPLE SUBMITTALS:
1. SEE DIVISION 01 33 23 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES FOR ADDITIONAL REQUIREMENTS
2. FIRE PROTECTION CONSTRUCTION ADMINISTRATION SUBMITTAL LIST:
a. ALL SCHEDULED EQUIPMENT
b. SPRINKLER SYSTEM/FIRE PROTECTION
c. HANGERS
d. PIPE IDENTIFICATION
3. PROVIDE "AS-BUILT" DRAWINGS TO THE OWNER IN AUTOCAD FORMAT.
C. FINISHING AND PAINTING
1. SEE DIVISION 09 91 00 FINISH AND PAINTING FOR ADDITIONAL REQUIREMENTS.
2. PREPARE EXPOSED PIPE, FITTINGS, SUPPORTS, AND ACCESSORIES FOR FINISH PAINTING IN ROOMS THAT WILL HAVE CEILING AND STRUCTURE PAINTED.
3. COORDINATE WORK WITH THE PAINTERS SO THAT ALL EQUIPMENT IS INSTALLED PRIOR TO PAINTING. F.P.C. SHALL PAINT ITEMS IF NOT IN PLACE PRIOR TO NORMAL ROUTINE PAINTING.
4. IF FINISH BECOMES RUSTED, CORRODED, SCRATCHED, OR FLAKED DURING STORAGE OR INSTALLATION, REFINISH THE EQUIPMENT TO THE SATISFACTION OF THE OWNER.
D. INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND REQUIREMENTS. PROVIDE ADDITIONAL WORK AND MATERIALS AS REQUIRED.
E. DETAILS AND SCHEDULES ARE SHOWN TO AID THE CONTRACTOR AND ARE NOT MEANT TO BE INCLUSIVE OF ALL DEVICES. PROVIDE REQUIRED EQUIPMENT AND ACCESSORIES FOR A COMPLETE INSTALLATION.
F. COORDINATE WORK WITH OTHER CONTRACTORS AND MAKE ADJUSTMENTS TO THE FIRE PROTECTION SYSTEM INSTALLATION WHERE IT WILL BE INSTALLED IN CLOSE PROXIMITY TO THE WORK OF OTHER TRADES. IF THE FPC INSTALLS WORK BEFORE COORDINATING IT WITH OTHER TRADES SO AS TO CAUSE INTERFERENCE WITH WORK OF OTHER TRADES, THE FPC SHALL MAKE NECESSARY CHANGES IN THE WORK TO CORRECT THE CONDITION WITHOUT EXTRA CHARGES.
G. PROVIDE ALL CUTTING AND PATCHING NECESSARY FOR FIRE PROTECTION WORK INSTALLATION UNLESS THIS WORK IS IDENTIFIED TO BE THE WORK OF OTHER CONTRACTORS. PATCHING SHALL MATCH ADJACENT SURFACES. CORE DRILL OR SAW-CUT OPENINGS THROUGH EXISTING CONCRETE.
H. FIRE RATED INTERIOR WALL AND FLOOR PIPE PENETRATIONS
1. SLEEVE REQUIRED FOR PENETRATION OF CONCRETE AND MASONRY WALLS AND FLOORS.
2. SEAL OPENING AROUND PIPE WITH A UL APPROVED FIRE-STOP SYSTEM HAVING AN F-RATING NOT LESS THAN THE HOURLY RATING OF THE ASSEMBLY BEING PENETRATED.
3. WHERE A SLEEVE IS REQUIRED, FURNISH AND INSTALL SLEEVES FOR NEW DRYWALL WALLS AND CONCRETE WALLS AND FLOORS. FURNISH SLEEVES TO THE MASON CONTRACTOR FOR INSTALLATION IN NEW MASONRY WALLS. PROVIDE SLEEVE AND GROUT SLEEVE IN EXISTING MASONRY WALLS.
I. SEALANTS
1. FIRE PROTECTION CONTRACTOR SHALL PROVIDE ALL SEALANTS WHERE JOINT IS HIDDEN AND WHERE JOINT IS EXPOSED IN MECHANICAL ROOM.
2. SEALANT CONTRACTOR SHALL PROVIDE SEALANTS AT ALL EXPOSED LOCATIONS IN FINISHED ROOMS.
J. ESCUTCHEONS
1. INSTALL ONE-PIECE (TWO PIECE FOR EXISTING PIPING) POLISHED CHROME PLATED STEEL ESCUTCHEONS AT PENETRATIONS EXPOSED IN FINISHED ROOMS (ROOMS WHICH DON'T HAVE UNFINISHED CONCRETE FLOORS).
2. ESCUTCHEONS WITH SPRINGS FOR WALL AND CEILING LOCATIONS.
3. ID TO CLOSELY FIT AROUND PIPE/INSULATION, OD THAT COMPLETELY COVERS THE OPENING.
4. ESCUTCHEONS REQUIRED IN CABINETS AND CASEWORK.
K. PROVIDE A COMPLETE DESIGN/BUILD FIRE PROTECTION SYSTEM FOR THE PROPOSED PROJECT.
L. FIRE PROTECTION CONTRACTOR SHALL BE LICENSED BY THE STATE IN WHICH THE PROJECT IS LOCATED TO FURNISH AND INSTALL FIRE PROTECTION SYSTEMS.
M. CONTRACTOR SHALL COMPLETE DESIGN AND SUBMIT FOR APPROVAL TO AUTHORITIES HAVING JURISDICTION WITHIN 60 DAYS OF CONTRACT AWARD. CONSTRUCTION REWORK COSTS INCURRED BY OTHER CONTRACTORS DUE TO FAILURE BY FPC TO OBTAIN APPROVAL IN A TIMELY MANNER SHALL BE BORNE BY THE FIRE PROTECTION CONTRACTOR.
N. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING AND SIZING THE DISTRIBUTION SYSTEMS BY HYDRAULIC CALCULATION, AND SHALL PROVIDE THE NECESSARY ENGINEERING DRAWINGS AND CALCULATIONS TO OBTAIN ACCEPTANCE OF ALL AUTHORITIES HAVING JURISDICTION.
O. IF THE CONTRACTOR'S FIRE PROTECTION DESIGN REQUIRES ANY MODIFICATIONS OR ADDITIONS TO THE BUILDING IN ORDER TO MEET THE SPRINKLER SYSTEM REQUIREMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF MODIFICATIONS OR ADDITIONS OR SHALL SPECIFICALLY NOTE IN THE BID THE WORK REQUIRED.
P. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MUNINCIPAL AND/OR STATE SUBMITTAL AND PLAN REVIEW FEES.
Q. DRAWINGS INDICATING NEW FIRE PROTECTION SYSTEMS TO BE INSTALLED WITH PIPE SIZES, ETC., AND COPY OF SYSTEMS HYDRAULIC CALCULATIONS SHALL BE SUBMITTED TO THE FOLLOWING FOR REVIEW:
1. EXCEL ENGINEERING
2. NUMBER OF PRINTS AS REQUIRED TO LOCAL FIRE DEPARTMENT AUTHORITY.
3. NUMBER OF PRINTS AS REQUIRED TO OWNER'S INSURING AUTHORITY.
R. THE REQUIREMENTS OF MUNICIPAL AND STATE CODES, LAWS, ORDINANCES AND REGULATIONS, AND NFPA ARE MADE PART OF THESE SPECIFICATIONS AND SHALL BE COMPLIED WITH AS FAR AS THEY APPLY TO THE WORK.
S. LEAVE SYSTEM IN PROPER WORKING CONDITION AT THE TIME OF FINAL CLEAN-UP.
1. PROVIDE OPERATING INSTRUCTIONS FOR A TOTAL OF TWO (2) HOURS. MAINTAIN A RECORD OF OPERATING INSTRUCTION PERIODS.
T. AVAILABLE WATER FLOW DATA
1. FPC IS RESPONSIBLE FOR VERIFYING AND OBTAINING WATER FLOW TEST DATA FOR DESIGN. TESTS TO BE REPRESENTATIVE OF HIGH WATER USE PERIODS.
U. TESTS AND INSPECTIONS
1. CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING AND CERTIFICATION OF SYSTEMS AND ORDERING INSPECTIONS AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
2. ALL TESTS SHALL BE CONDUCTED IN THE PRESENCE OF AND TO THE SATISFACTION OF THE OWNER OR AN AUTHORIZED REPRESENTATIVE.
3. INSPECTIONS SHALL BE MADE BY THE OWNER'S AUTHORIZED REPRESENTATIVE AND INSPECTORS HAVING JURISDICTION.
5. PIPING SHALL NOT BE INSTALLED BELOW OR WITHIN 45 DEG OF LIGHT EDGE.
6. DO NOT ROUTE PIPING ABOVE TRANSFORMERS, PANELBOARDS, SWITCHBOARDS OR OTHER ELECTRICAL DISTRIBUTION EQUIPMENT.
H. PROVIDE PROTECTIVE SLEEVE COVERING WHERE COPPER OR STEEL PIPING IS EMBEDDED IN MASONRY OR CONCRETE.
I. PROVIDE CLEARANCE FOR ACCESS TO VALVES AND PIPING SPECIALTIES.
J. PREPARE EXPOSED PIPE, FITTINGS, SUPPORTS, AND ACCESSORIES NOT PREFINISHED, READY FOR FINISH PAINTING.
K. PIPING SYSTEM LEAK TESTS
1. CONDUCT PRESSURE TEST WITH WATER. IF LEAKS ARE FOUND, REPAIR THE AREA WITH NEW MATERIALS AND REPEAT THE TEST.
2. TEST PIPING IN SECTIONS OR ENTIRE SYSTEM AS REQUIRED BY SEQUENCE OF CONSTRUCTION. DO NOT CONCEAL PIPE UNTIL IT HAS BEEN SUCCESSFULLY TESTED. PROVIDE TEMPORARY RESTRAINTS AT FITTINGS OR EXPANSION JOINTS IF REQUIRED FOR THE ADDITIONAL PRESSURE LOAD UNDER TEST. ENTIRE TEST MUST BE WITNESSED BY THE DIVISION'S REPRESENTATIVE.
3. USE CLEAN WATER AND REMOVE AIR FROM THE PIPING BEING TESTED WHERE POSSIBLE. MEASURE AND RECORD TEST PRESSURE AT THE HIGH POINT IN THE SYSTEM.
4. TEST SYSTEM AT 175 PSI FOR 2 HOURS SHOWING NO LEAKAGE.
5. ALL PRESSURE TESTS ARE TO BE DOCUMENTED ON NFPA CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FORMS.

21 13 15 SPECIALTIES

A. DRAIN (BALL) VALVES
1. MANUFACTURERS: NIBCO, APOLLO, CRANE, HAMMOND, WATTS.
2. NIBCO 585-70HC OR EQUIVALENT BRONZE TWO PIECE BODY, STAINLESS STEEL BALL AND TRIM, FULL PORT, LEVER HANDLE, THREADED ENDS.
3. PROVIDE DRAIN VALVES AT ALL LOW AND TRAPPED AREAS OF SYSTEM AND WHERE REQUIRED TO DRAIN RISERS. PROVIDE 3/4" HOSE CONNECTION WITH CAP AT EACH DRAIN CONNECTION.
B. INSPECTOR'S TEST CONNECTION
1. NFPA 13 COMPLETE WITH TEST AND DRAIN VALVES, SIGHT GLASS, 3/4" HOSE CONNECTION, AND SMOOTH BORE CORROSION RESISTANT ORIFICE GIVING A FLOW EQUIVALENT TO ONE SPRINKLER.
2. PROVIDE INSPECTOR'S TEST CONNECTION FROM MOST REMOTE END OF SYSTEM.

21 13 17 AUTOMATIC SPRINKLER SYSTEMS

A. SYSTEM DESCRIPTION
1. PROVIDE AUTOMATIC SPRINKLER SYSTEM TO PROTECT BUILDING AREA INDICATED.
2. SYSTEM DESIGN SHALL CONFORM TO SYSTEM SCHEDULE ON THE DRAWINGS, AND COMPLY WITH NFPA 13 AND REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.
3. UL LISTED AND LABELED SYSTEM COMPONENTS RATED FOR 175 PSIG MINIMUM OPERATING PRESSURE.
4. INCLUDE INSIDE AND OUTSIDE HOSE STREAMS IN THE DESIGN OF THE HYDRAULICALLY CALCULATED SPRINKLER SYSTEMS.
5. SIMILAR COMPONENT ITEMS SHALL BE BY THE SAME MANUFACTURER.
B. SPRINKLERS
1. MANUFACTURERS: VIKING, CENTRAL, TYCO.
2. SEE SCHEDULE ON PLANS.
C. INSTALLATION
1. INSTALL SPRINKLER HEADS TO MISS ALL LIGHTS, GRILLES AND ANY OTHER CEILING OBSTRUCTIONS.
2. APPLY PAPER COVER OVER SPRINKLER HEADS WHERE CEILING IS TO BE PAINTED OR SPRAYED. REMOVE PROTECTIVE PAPER COVER AFTER PAINTING OR SPRAYING IS COMPLETED.
3. PROVIDE MOUNTABLE METAL BOX OF SPARE HEADS WITH PROPER WRENCH FOR HEAD REPLACEMENT.

21 05 29 SUPPORTS AND HANGERS

A. PROVIDE PIPE HANGERS AND SUPPORTS IN COMPLIANCE WITH NFPA 13.
B. HANGERS SHALL NOT BE ATTACHED TO JOIST BRIDGING.
C. ATTACHMENT TO METAL DECK: HANGERS MAY BE ANCHORED TO METAL FLOOR/ROOF DECK IF ALL THE FOLLOWING CONDITIONS ARE MET:
1. MAXIMUM HANGER LOAD OF 50 LBS.
2. ANCHORED TO BOTTOM OF DECK FLUTES, NOT UPPER FLUTE.
3. ANCHOR LENGTH SHALL EXCEED DECK DEPTH.
D. FIRE RATED INTERIOR WALL AND FLOOR PIPE PENETRATIONS
1. SLEEVE REQUIRED FOR PENETRATION OF CONCRETE AND MASONRY WALLS AND FLOORS.
2. SEAL OPENING AROUND PIPE WITH A UL APPROVED FIRE-STOP SYSTEM HAVING AN F-RATING NOT LESS THAN THE HOURLY RATING OF THE ASSEMBLY BEING PENETRATED.
3. WHERE UL FIRE-STOP SYSTEM REQUIRES A SLEEVE, FURNISH AND INSTALL SLEEVES FOR NEW DRYWALL WALLS, AND CONCRETE WALLS AND FLOORS. FURNISH SLEEVES TO THE MASON CONTRACTOR FOR INSTALLATION IN NEW MASONRY WALLS. PROVIDE SLEEVE AND GROUT SLEEVE IN EXISTING MASONRY WALLS.
E. SEALANTS
1. FIRE PROTECTION CONTRACTOR SHALL PROVIDE ALL SEALANTS WHERE JOINT IS HIDDEN AND WHERE JOINT IS EXPOSED IN MECHANICAL ROOM.
2. SEALANT CONTRACTOR SHALL PROVIDE SEALANTS AT ALL EXPOSED LOCATIONS IN FINISHED ROOMS.
F. ESCUTCHEONS
1. INSTALL ONE-PIECE (TWO PIECE FOR EXISTING PIPING) POLISHED CHROME PLATED STEEL ESCUTCHEONS AT PENETRATIONS EXPOSED IN FINISHED ROOMS (ROOMS WHICH DON'T have UNFINISHED CONCRETE FLOORS).
2. ESCUTCHEONS WITH SPRINGS FOR WALL AND CEILING LOCATIONS.
3. ID TO CLOSELY FIT AROUND PIPE, OD THAT COMPLETELY COVERS THE OPENING.

21 05 53 IDENTIFICATION

A. PROVIDE IDENTIFICATION PER NFPA 13.

21 13 13 PIPING

A. DESIGN REQUIREMENTS: ALL SYSTEM COMPONENTS SHALL BE RATED FOR THE MAXIMUM WORKING PRESSURE TO WHICH THEY ARE EXPOSED BUT NOT LESS THAN 175 PSIG.
B. PIPE AND FITTINGS: PROVIDE PER NFPA 13.
C. INSTALL PIPE AND FITTINGS IN ACCORDANCE WITH NFPA 13, MANUFACTURERS INSTALLATION INSTRUCTIONS AND RECOGNIZED INDUSTRY PRACTICES.
D. INSTALL PIPING LEVEL, TAKING INTO ACCOUNT DRAINAGE REQUIREMENTS. PIPING SHALL NOT FOLLOW ROOF PITCH WHERE PITCH CHANGES.
E. INSTALL PIPING PARALLEL TO WALLS AND CEILINGS AND AT HEIGHTS WHICH DO NOT OBSTRUCT WINDOWS, DOORWAYS, STAIRWAYS, OR PASSAGEWAYS. OFFSET OR REROUTE PIPING TO CLEAR INTERFERENCES WHICH DEVELOP IN THE FIELD.
F. INSTALL PIPING TO CONSERVE BUILDING SPACE AND NOT INTERFERE WITH USE OF SPACE. CONCEAL PIPING WITHIN WALLS AND CHASES OR ABOVE CEILINGS.
G. COORDINATION
1. COORDINATE LOCATIONS OF PIPING WITH PIPING, DUCTWORK, CONDUIT AND EQUIPMENT OF OTHER CONTRACTORS.
2. REVIEW DRAWINGS FOR EXACT LOCATION OF PIPE SPACES, CEILING HEIGHTS, CEILING GRID, LIGHT FIXTURES AND GRILLES BEFORE INSTALLING PIPING.
3. INSTALL WITH SUFFICIENT CLEARANCES FOR INSTALLATION OF OTHER CONTRACTOR'S WORK.
4. PIPING SHALL NOT OBSTRUCT SERVICE CLEARANCES REQUIRED FOR EQUIPMENT.

FIRE PROTECTION SPECIFICATIONS, SCHEDULES, AND DETAILS

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

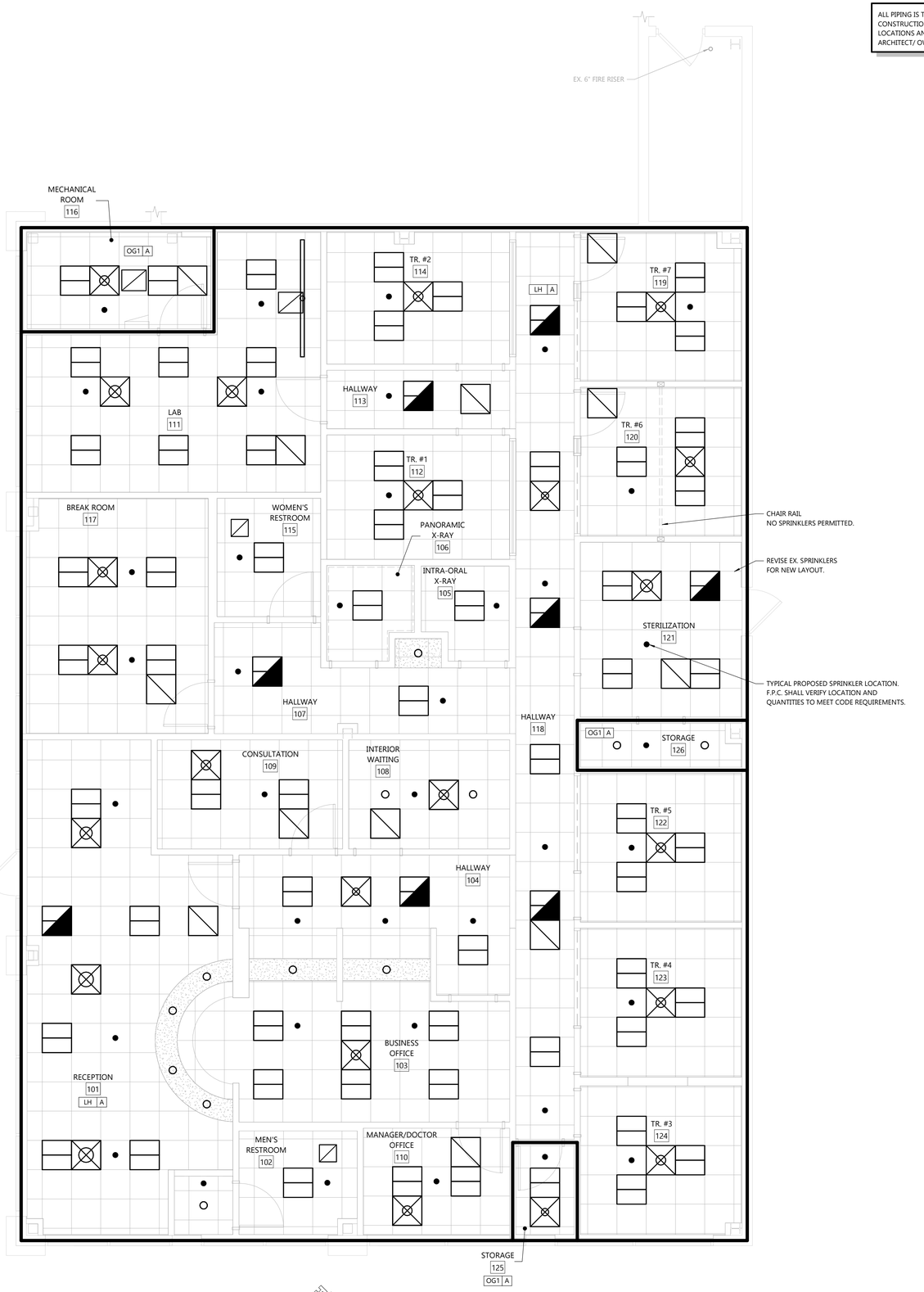
SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

JOB NUMBER
230264900

SHEET NUMBER
FP0.1

ALL PIPING IS TO BE CONCEALED. IF BUILDING CONSTRUCTION DOES NOT PERMIT CONCEALING PIPING, LOCATIONS AND ROUTING ARE TO BE APPROVED BY ARCHITECT/ OWNER PRIOR TO INSTALLATION.

X | X — INDICATES DESIGN CRITERIA DESIGNATION (SEE SCHEDULE)
INDICATES SPRINKLER DESIGNATION (SEE SCHEDULE)



NORTH

SPRINKLER PLAN

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

0' 4' 8'

SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.

FIRE PROTECTION SPRINKLER PLAN

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HVAC SPECIFICATIONS

DIVISION 23 HVAC

23 05 00 BASIC HVAC REQUIREMENTS

A. SEE DIVISION 00 PROCUREMENT AND CONTRACTING AND DIVISION 01 GENERAL REQUIREMENT FOR ADDITIONAL REQUIREMENTS.
B. HVAC CONTRACTOR SHALL VERIFY REQUIREMENTS FOR TEMPORARY HEATING WITH GENERAL CONTRACTOR AND INCLUDE IN HIS SCOPE OF WORK WHEN DIRECTED BY G.C. INSTALL IN ACCORDANCE WITH ALL CODE AND OSHA REQUIREMENTS FOR CONSTRUCTION PROJECTS.
C. SUBSTITUTIONS
   1. SEE DIVISION 01 23 00 PRODUCT SUBSTITUTION PROCEDURES FOR ADDITIONAL REQUIREMENTS.
   2. CONTRACTOR SHALL PROVIDE ALL SUPPORTING DATA AND ASSUME THE BURDEN OF PROOF THAT ANY SUBSTITUTE IS EQUIVALENT AS TO APPEARANCE, CONSTRUCTION, CAPACITY, AND PERFORMANCE. THE JUDGMENT OF EQUIVALENCY SHALL BE MADE BY THE ENGINEER AT THE TIME OF SHOP DRAWING REVIEW, NOT DURING BIDDING.
   3. WHERE SUBSTITUTE EQUIPMENT REQUIRES REDESIGN OF ANY PART OF THE PROJECT, THE COST OF REDESIGN AND ADDITIONAL COSTS OF THE WORK SHALL BE PAID BY THE CONTRACTOR. REDESIGN SHALL BE SUBJECT TO THE APPROVAL OF ALL AUTHORITIES HAVING JURISDICTION OVER THE WORK INCLUDING THE ARCHITECT/ENGINEER.
   4. CONTRACTOR SHALL ASSUME ALL COORDINATION RESPONSIBILITIES FOR SUBSTITUTE EQUIPMENT INCLUDING COORDINATION ACROSS TRADES AND COORDINATION OF PREVIOUSLY REVIEWED AND APPROVED SHOP DRAWING SUBMITTALS, SHOULD THESE SHOP DRAWINGS BE AFFECTED BY THE SUBSTITUTED EQUIPMENT.
D. SHOP DRAWINGS, PRODUCT DATA, TEST RESULTS, PROJECT CLOSEOUT DOCUMENTS:
   1. SEE DIVISION 01 33 23 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES FOR ADDITIONAL REQUIREMENTS
   2. CONSTRUCTION ADMINISTRATION SUBMITTAL LIST:
      a. DUCTWORK
      b. DUCTWORK ACCESSORIES
      c. INSULATION
      d. GRILLES
      e. FANS
      f. ROOFTOP AIR CONDITIONING UNITS.
      g. TEST AND BALANCE REPORT
   3. PROJECT CLOSEOUT
      a. PROVIDE HVAC EQUIPMENT OPERATING AND MAINTENANCE MANUALS TO THE OWNER PER NYECC C408.1.1 AND C408.3.2.2.
      b. AS-BUILT DRAWINGS SHALL BE MARKED ON A FINAL SET OF DRAWINGS WHICH INCLUDES ALL REVISIONS.
      c. PROVIDE "AS-BUILT" DRAWINGS TO THE OWNER IN AUTOCAD FORMAT
E. DETAILS AND SCHEDULES ARE SHOWN TO AID THE CONTRACTOR AND ARE NOT MEANT TO BE INCLUSIVE OF ALL DEVICES. PROVIDE REQUIRED EQUIPMENT AND ACCESSORIES FOR A COMPLETE INSTALLATION.
F. INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND REQUIREMENTS. PROVIDE ADDITIONAL WORK AND MATERIALS AS REQUIRED.
G. COORDINATE INSTALLATION OF HVAC WORK WITH THE OTHER CONTRACTORS TO AVOID CONFLICTS WITH OTHER WORK.
H. PROVIDE ALL CUTTING AND PATCHING NECESSARY FOR HVAC WORK INSTALLATION UNLESS THIS WORK IS IDENTIFIED TO BE THE WORK OF OTHER CONTRACTORS. PATCHING SHALL MATCH ADJACENT SURFACES.
I. PROJECT COMPLETION
   1. INSTALL CLEAN SET OF FILTERS IN ALL UNITS AT TIME OF TESTING AND BALANCING.
   2. CLEAN GRILLES AND EQUIPMENT AND LEAVE IN PROPER WORKING CONDITION AT THE TIME OF FINAL CLEAN-UP.

23 05 13 MOTORS AND ELECTRICAL WORK

A. MOTORS
   1. MANUFACTURERS: GENERAL ELECTRIC, LOUIS ALLIS, MARATHON, AND BALDOR.
   2. MOTORS LESS THAN 250 WATTS: EQUIPMENT MANUFACTURER'S STANDARD AND NEED NOT CONFORM TO THESE SPECIFICATIONS.
   3. OPEN DRIP-PROOF TYPE EXCEPT TOTALLY ENCLOSED FAN COOLED FOR THE FOLLOWING MOTORS:
      a. EXTERIOR LOCATIONS
      b. WHERE NOTED ON EQUIPMENT SCHEDULES
   4. DESIGN FOR CONTINUOUS OPERATION IN 40 DEGREES C ENVIRONMENT AND FOR TEMPERATURE RISE IN ACCORDANCE WITH NEMA MG 1 LIMITS.
   5. SINGLE PHASE POWER (PERMANENT-SPLIT CAPACITOR MOTORS) WITH STARTING TORQUE EXCEEDING ONE FOURTH OF FULL LOAD TORQUE AND STARTING CURRENT UP TO SIX TIMES FULL LOAD CURRENT. CLASS A (50 DEGREES C TEMPERATURE RISE) INSULATION, MINIMUM 1.0 SERVICE FACTOR, PRELUBRICATED SLEEVE OR BALL BEARINGS, AUTOMATIC RESET OVERLOAD PROTECTOR.
   6. THREE PHASE POWER (SQUIRREL CAGE MOTORS) WITH STARTING TORQUE BETWEEN 1 AND 1-1/2 TIMES FULL LOAD TORQUE AND STARTING CURRENT SIX TIMES FULL LOAD CURRENT. NEMA DESIGN B MOTOR AND INSULATION SYSTEM. MINIMUM 1.15 SERVICE FACTOR FOR OPEN DRIP-PROOF MOTORS, 1.0 (MINIMUM) FOR OTHER TYPES. MINIMUM 85% NOMINAL POWER FACTOR UNDER RATED LOAD CONDITIONS. GREASE LUBRICATED ANTI-FRICTION BALL BEARINGS, RATED FOR MINIMUM AFBMA 9, L-10 LIFE OF 200,000 HOURS.
B. STARTERS
   1. SEE ELECTRICAL STARTER DISCONNECT SCHEDULE ON PLANS.

23 07 00 INSULATION

A. GENERAL
   1. SEE INSULATION SCHEDULES ON PLANS FOR ADDITIONAL INFORMATION.
   2. INSULATION, INSULATION SYSTEM AND JACKETS SHALL MEET UL-723/ASTM E84 REQUIREMENTS OF MAX. FIRE HAZARD CLASSIFICATIONS OF 25, AND MAX. FLAME SPREAD, FUEL CONTRIBUTED, AND SMOKE DEVELOPED OF 50.
   3. INSTALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND MICA PUBLICATION "NATIONAL COMMERCIAL AND INDUSTRIAL STANDARDS", 2011 SEVENTH EDITION.
   4. CONTINUE INSULATION WITHOUT INTERRUPTIONS THROUGH WALLS AND FLOOR PENETRATIONS AND HANGERS.
B. FIBERGLASS (F.G.) INSULATION
   1. FLEX. F.G.:
      a. O.C. SOFTR DUCT WRAP, KNAUF FRIENDLY FEEL DUCT WRAP, CERTAINTEED SOFTTOUCH, JOHNS MANVILLE MICROLITE EQ FSK DUCT WRAP.
      b. GLASS FIBER INSULATION FACTORY LAMINATED TO FRK/FSK VAPOR RETARDER. LISTED THICKNESS IS NOMINAL.
      c. 0.75 LB/CU. FT., R=3.3 / NOMINAL INCH AT 75 DEG F.
      d. MAX 250 DEG F. JACKET MAX 150 DEG F, 0.02 PERM.
C. DUCT INSULATION REQUIREMENTS
   1. INSULATE FITTINGS, JOINTS, FLANGES, FLEXIBLE CONNECTIONS, DAMPERS, AND IN-LINE ACCESSORIES WITHOUT INTERNAL LINING/INSULATION WITH SAME MATERIAL AND THICKNESS AS SPECIFIED FOR THE DUCT SYSTEM. STOP AND POINT INSULATION AROUND ACCESS DOORS AND DAMPER OPERATORS TO ALLOW OPERATION WITHOUT DISTURBING WRAPPING.

23 31 13 DUCTWORK

A. PERFORM WORK IN ACCORDANCE WITH THE LATEST EDITIONS OF SMACNA - HVAC DUCT CONSTRUCTION STANDARDS.
B. GENERAL
   1. PAINT THE INSIDE OF ALL DUCTS VISIBLE THROUGH GRILLES IN ROOMS WITH CEILINGS WITH DULL BLACK PAINT.
   2. CERTAIN VERTICAL AND HORIZONTAL OFFSETS ARE INDICATED IN DUCTS TO INDICATE THE GENERAL POSITION RELATIONSHIP OF THE DUCTWORK SYSTEMS; PROVIDE ADDITIONAL OFFSETS AS REQUIRED TO COORDINATE WITH THE INSTALLATION OF OTHER SYSTEMS, CEILINGS AND STRUCTURE. THE DRAWINGS SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION OF DUCTWORK.
   3. PROVIDE TEMPORARY CLOSURES OF METAL OR TAPED POLYETHYLENE ON OPEN DUCTWORK TO PREVENT CONSTRUCTION DUST FROM ENTERING DUCTWORK SYSTEM.
   4. LOCATE DUCTS WITH SUFFICIENT SPACE AROUND EQUIPMENT TO ALLOW NORMAL OPERATING AND MAINTENANCE ACTIVITIES.
   5. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15 DEGREES WHENEVER POSSIBLE. 30 DEGREE MAXIMUM.
   6. ROUND DUCTS MAY BE SUBSTITUTED FOR RECTANGULAR IF SIZED IN ACCORDANCE WITH ASHRAE TABLES OF EQUIVALENT RECTANGULAR AND ROUND DUCTS.
C. ROUND DUCTWORK
   1. CONCEALED BRANCH DUCTWORK TO GRILLES AND DIFFUSERS MAY BE LONGITUDINAL LOCKSEAM. ALL OTHER ROUND DUCTWORK SHALL BE SPIRAL LOCKSEAM WITH FITTINGS AND COUPLINGS MINIMUM 2 GAUGES HEAVIER THAN DUCT.
D. FLEXIBLE DUCTWORK
   1. MANUFACTURERS: THERMAFLEX, FLEXMASTER, CLEVAFLEX.
   2. U.L. 181 LISTED CLASS 1 FACTORY FABRICATED FLEXIBLE AIR DUCT, COMPLY WITH NFPA 90A, FLAME SPREAD OF 25 OR LESS, SMOKE DEVELOPED RATING OF 50 OR LESS.
   3. MINIMUM PRESSURE RANGE -1/2" TO 4" W.C., TEMPERATURE RANGE 0-200 DEG F.
   4. ACOUSTIC: THERMAFLEX M-KE OR G-KM, FLEXMASTER TYPE 1 OR 6
      a. POLYETHYLENE, SPUNBOUND NYLON OR CHLORINATED POLYETHYLENE LINER.
      b. DUCTWORK TO HAVE TESTED ACOUSTICAL PERFORMANCE NOT LESS THAN 2 DB LESS THAN THE TYPES SPECIFIED.
   5. SEMI-RIGID FLEXIBLE ALUMINUM DUCTWORK NOT PERMITTED.
   6. SUPPLY DUCTWORK SHALL BE INSULATED WITH FIBERGLASS INSULATION, MINIMUM R VALUE 4, WITH VAPOR BARRIER JACKET WITH MAXIMUM 0.10 PERM RATING
   7. CONNECT TO SUPPLY DUCTWORK BY SLIDING CORE OVER COLLAR, TAPE JOINT WITH MINIMUM 3 WRAPS OF TAPE, AND APPLY METAL BAND CLAMP OR PANDUIT. FOR INSULATED DUCTWORK, PULL INSULATION AND OUTER JACKET BACK INTO POSITION, AND TAPE WITH MINIMUM 3 WRAPS OF TAPE BETWEEN FLEX DUCT AND DUCT INSULATION.
   8. CONNECT TO GRILLES AND RETURN AND TRANSFER DUCTWORK WITH METAL BAND CLAMP OR PANDUIT.
   9. MAXIMUM LENGTH FROM DUCTWORK TO GRILLES OR SLOTS 8'-0" WITH ONE 90 DEG ELBOW.
   10. DO NOT RUN THROUGH WALLS OR PARTITIONS.
E. DUCTWORK SEALANTS
   1. MANUFACTURERS: HARDCAST SURE-GRIP 404 SOLVENT BASED DUCT SEALANT OR EQUIVALENT.
      a. SYNTHETIC RUBBER RESIN BASE.
      b. -20 TO 200 DEG F.
      c. PRESSURE CLASSES UP TO 10" W.C., MEETING SEAL CLASS A.
      d. MAXIMUM FLAME SPREAD OF 25, SMOKE DEVELOPED OF 50.
      e. APPLY MINIMUM 20-MIL THICK WET FILM AT TEMPERATURES BETWEEN 35-100 DEG F.
   2. HARDCAST ALUMA-GRIP 701 OR EQUIVALENT PRESSURE SENSITIVE DUCT JOINT ROLLED SEALANT MAY BE USED IN PLACE OF MASTIC. SEALANT SHALL COMPLY WITH THE FOLLOWING:
      a. MILL FINISH ALUMINUM SUSTRATE WITH GRAY ADHESIVE.
      b. MINIMUM 30 MIL THICK
      c. MIN. 17 LB PER LINEAR INCH PEEL STRENGTH
      d. MAX FLAME SPREAD OF 25, MAX SMOKE DEVELOPED OF 50 WHEN TESTED IN ACCORDANCE WITH ASTM G-53.
      e. VOC: 0 G/L, COMPLIANT WITH LEED SCAQMD RULE 1168.
      f. PRESSURE CLASSES UP TO 10" W.C.
F. DUCT CLEANING
   1. PROTECT DUCTWORK AGAINST ENTRY OF FOREIGN MATTER DURING CONSTRUCTION. PROVIDE TEMPORARY END CAPS AND SEALS. PROVIDE TEMPORARY FILTERS OVER RETURN OR EXHAUST AIR INLETS IF DUCTWORK IS USED DURING CONSTRUCTION.
   2. REMOVE ALL DIRT AND FOREIGN MATTER AND CLEAN DIFFUSERS, REGISTERS, AND GRILLES BEFORE OPERATING FANS.
G. SEALING DUCT PENETRATIONS
   1. THRU NON-RATED WALLS WHERE DRYWALL, CONCRETE, OR MASONRY EXTENDS TO STRUCTURE, FILL VOID BETWEEN DUCT AND WALL WITH MINERAL WOOL AND CAULK BOTH SIDES WITH NON-HARDENING CAULK.

23 33 00 DUCTWORK ACCESSORIES

A. GENERAL - ALL DUCT ACCESSORIES SHALL BE CONSTRUCTED OF SAME MATERIAL AS DUCTWORK BEING INSTALLED IN.
B. TURNING VANES
   1. MANUFACTURERS: AERO/DYNE CO. H.E.P., HART & COOLEY, UNITED MCGILL, SEMCO.
   2. RECTANGULAR DUCTWORK: AIRFOIL TURNING VANES IN ACCORDANCE WITH SMACNA FIG. 2-3 AND 2-4. VANE RADIUS AS PROVIDED BY AERO/DYNE H.E.P. OR 4-1/2 INCHES WITH A 3-1/2 INCH SPACING.
   3. ROUND DUCTWORK: TWO-PIECE MITERED, MINIMUM 20 GAUGE.
C. CONTROL DAMPER INSTALLATION
   1. RECEIVE CONTROL DAMPERS FROM TEMPERATURE CONTROL CONTRACTOR AND INSTALL DAMPERS.
   2. DAMPER SECTIONS AND MULTIPLE SECTION ASSEMBLIES MUST BE COMPLETELY SQUARE AND FREE FROM RACKING, TWISTING, OR BENDING.
   3. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION OF CONTROL DAMPERS.
   4. INSTALL EXTENDED SHAFT OR JACKSHAFT PER MANUFACTURER'S INSTRUCTIONS.
   5. PROVIDE A VISIBLE INDICATION OF DAMPER POSITION ON THE DRIVE SHAFT END.
   6. AFTER INSTALLATION OF LOW-LEAKAGE DAMPERS WITH SEALS, CAULK BETWEEN FRAME AND DUCT OR OPENING TO PREVENT LEAKAGE AROUND PERIMETER OF DAMPER.
D. MANUAL VOLUME DAMPERS
   1. MANUFACTURERS: RUSKIN, VENT PRODUCTS, UNITED MCGILL.
   2. DAMPERS WITH EXTENDED SHAFTS AND QUADRANTS, OPERATOR WITH LOCKING DEVICE, POSITION INDICATOR, AND ELEVATED PLATFORM FOR EXTERNALLY INSULATED DUCTWORK.
   3. EVERY SUPPLY, RETURN AND EXHAUST GRILLE SHALL HAVE EITHER A VOLUME DAMPER IN THE BRANCH DUCT OR AT THE GRILLE WHERE SHOWN. IF ONE IS NOT SHOWN, CONTRACTOR SHALL PROVIDE VOLUME DAMPER IN DUCT IF DUCT IS ACCESSIBLE, OTHERWISE AT THE GRILLE.
   4. RECTANGULAR DAMPERS WHICH DO NOT EXCEED 12" HIGH OR 36" WIDE: BUTTERFLY DAMPER, MINIMUM 22 GAUGE. SHAFT ALONG ENTIRE LENGTH OF DAMPER FOR DAMPERS EXCEEDING 18" IN WIDTH.
   5. RECTANGULAR DAMPERS GREATER THAN 12" HIGH OR 36" WIDE: MULTI-BLADE DAMPER WITH CONNECTING LINKAGE TO CONTROL FROM A SINGLE POINT. BLADES MINIMUM 16 GAUGE WITH OPPOSED BLADE ACTION.
   6. ROUND DAMPERS: MINIMUM 20 GAUGE BUTTERFLY DAMPER.
E. TAKE-OFF FITTINGS
   1. MANUFACTURERS: FLEXMASTER, UNITED MCGILL.
   2. ROUND BRANCH TAKE-OFFS TO MULTIPLE GRILLES SHALL BE CONICAL.
   3. RECTANGULAR BRANCH TAKE-OFFS TO MULTIPLE GRILLES SHALL BE PER DUCT FITTING DETAIL ON PLANS.
   4. ROUND TAKE-OFFS TO INDIVIDUAL GRILLES AND SLOT DIFFUSERS: ONE PIECE SPIN-IN WITH INTEGRAL FACTORY INSTALLED LOCKING TYPE BALANCING DAMPERS.
F. DUCT ACCESS DOORS
   1. MANUFACTURERS: CESCO, FLEXMASTER, VENT PRODUCTS, KEES, UNITED MCGILL, SEMCO, DUCTMATE.
   2. HINGE, LATCHES, HANDLES, AND RUBBER GASKET IN FRAME. 1" INSULATED DOUBLE WALL CONSTRUCTION FOR DOORS IN LINED OR EXTERNALLY INSULATED DUCTWORK. ATTACHMENT CABLES FOR SPIN-IN UNITS. DOOR SUITABLE FOR DUCT STATIC PRESSURE CLASS.
   3. DOOR SIZE 2" LESS THAN THE WIDTH OF THE DUCT (MAX. DOOR SIZE 24"X 24" (24" DIA.).
   4. ROUND DUCTWORK: 16 GAUGE ROLLED SHEET METAL HINGED ACCESS DOOR WITH BUCKLE LOCKS.
   5. PROVIDE AT:
      a. MOTOR OPERATED AND BACKDRAFT DAMPERS
      b. UPSTREAM SIDE OF TURNING VANES IN RETURN AND EXHAUST DUCTWORK
      c. AT ANY DEVICE IN THE DUCT WHICH REQUIRES MAINTENANCE, SERVICE OR CLEANING.
   6. USE HINGED ACCESS DOORS WHERE POSSIBLE. USE CAM OPERATED REMOVABLE DOORS WHERE SPACE PREVENTS THE OPENING OF A HINGED MODEL.
G. FLEXIBLE CONNECTIONS
   1. MANUFACTURERS: VENTFABRICS, DURO-DYNE.
   2. MATERIAL BOLTED SECURELY TO THE EQUIPMENT AND CONNECTING DUCTWORK WITH #16 GAUGE GALVANIZED IRON BAND (LOOP) CLAMPS BOLTED TIGHT TO MAKE AN AIRTIGHT CONNECTION, MINIMUM 6" WIDE.
   3. PROVIDE AT INLET AND OUTLET OF ALL ROOFTOP UNITS AND FANS IN ACCORDANCE WITH SMACNA FIGURE 2-19.
   4. CONVENTIONAL INTERIOR: VENTGLAS, -20 TO 200 DEG F., 30 OZ. PER SQUARE YARD GLASS FABRIC DOUBLE COATED WITH NEOPRENE, UL 214 APPROVED.
H. BACKDRAFT DAMPERS
   1. MANUFACTURERS: RUSKIN, VENT PRODUCTS.
   2. ALUMINUM FRAME AND BLADE CONSTRUCTION WITH BLADE AND EDGE SEALS. LEAKAGE LESS THAN 12 CFM PER SQ. FT. AT 1/2" W.G., COUNTERBALANCE TO OPEN AT APPROXIMATELY 1/8" STATIC PRESSURE.

23 90 00 TEMPERATURE CONTROLS

A. ALL PRODUCTS USED IN THIS INSTALLATION SHALL BE NEW, CURRENTLY UNDER MANUFACTURE, AND SHALL BE APPLIED IN STANDARD OFF THE SHELF PRODUCTS. THIS INSTALLATION SHALL NOT BE USED AS A TEST SITE FOR ANY NEW PRODUCTS UNLESS EXPLICITLY APPROVED BY THE ENGINEER IN WRITING. SPARE PARTS SHALL BE AVAILABLE FOR AT LEAST 5 YEARS AFTER COMPLETION OF THIS CONTRACT.
B. 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.
C. LABOR AND MATERIALS FOR THE CONTROL SYSTEM SPECIFIED SHALL BE WARRANTED FREE FROM DEFECTS FOR A PERIOD OF 12 MONTHS AFTER FINAL COMPLETION AND ACCEPTANCE. CONTROL SYSTEM FAILURES DURING THE WARRANTY PERIOD SHALL BE ADJUSTED, REPAIRED, OR REPLACED AT NO ADDITIONAL COST OR REDUCTION IN SERVICE TO THE OWNER.
D. POWER SUPPLIES: UL LISTED TRANSFORMERS WITH CLASS 2 CURRENT-LIMITING TYPE OR OVERCURRENT PROTECTION; LIMIT CONNECTED LOADS TO 80 PERCENT OF RATED CAPACITY. DC POWER SUPPLY SHALL MATCH OUTPUT CURRENT AND VOLTAGE REQUIREMENTS AND BE FULL-WAVE RECTIFIER TYPE.
E. POWER LINE FILTERING: INTERNAL OR EXTERNAL TRANSIENT VOLTAGE AND SURGE SUPPRESSION.
F. THERMOSTAT INSTALLATION
   1. INSTALL ALL THERMOSTATS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
   2. ROOM THERMOSTATS SHALL BE INSTALLED ON CONCEALED JUNCTION BOXES PROPERLY SUPPORTED BY THE WALL FRAMING WITH CONDUIT STUB TO ABOVE THE CEILING.
   3. COORDINATE LOCATION OF THERMOSTATS WITH PLANS AND ROOM DETAILS BEFORE INSTALLATION.
   4. ALL WIRES ATTACHED TO THERMOSTAT SHALL BE AIR SEALED IN THEIR RACEWAYS OR IN THE WALL TO STOP AIR TRANSMITTED FROM OTHER AREAS AFFECTING SENSOR READINGS.
G. ELECTRICAL WIRING AND CONNECTION INSTALLATION
   1. ALL CONTROL AND INTERLOCK WIRING SHALL COMPLY WITH NATIONAL AND LOCAL ELECTRICAL CODES AND ELECTRICAL SPECIFICATION. WHERE THE REQUIREMENTS OF THIS SECTION DIFFER WITH THOSE IN THE ELECTRICAL SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL TAKE PRECEDENCE.
   2. ALL NEC CLASS 1 (LINE VOLTAGE) WIRING SHALL BE UL LISTED IN APPROVED RACEWAY PER NEC AND ELECTRICAL SPECIFICATIONS.
   3. SEE ELECTRICAL SPECIFICATIONS FOR CONDUIT REQUIREMENTS.
   4. ALL LOW-VOLTAGE WIRING SHALL MEET NEC CLASS 2 REQUIREMENTS. (LOW-VOLTAGE POWER CIRCUITS SHALL BE SUB-FUSED WHEN REQUIRED TO MEET CLASS 2 CURRENT-LIMIT).
   5. ALL WIRING IN MECHANICAL, ELECTRICAL, OR SERVICE ROOMS AND WHERE SUBJECT TO DAMAGE SHALL BE INSTALLED IN RACEWAY.
   6. WHERE NEC CLASS 2 (CURRENT-LIMITED) WIRES ARE IN CONCEALED AND ACCESSIBLE LOCATIONS, APPROVED CABLES NOT IN RACEWAY MAY BE USED PROVIDED THAT CABLES ARE UL LISTED FOR THE INTENDED APPLICATION.
   7. DO NOT INSTALL CLASS 2 WIRING IN RACEWAY, BOXES AND PANELS CONTAINING CLASS 1 WIRING.
   8. SUPPORT CABLES AND RACEWAYS FROM STRUCTURAL MEMBERS. CABLES AND RACEWAYS SHALL NOT BE SUPPORTED BY DUCTWORK, ELECTRICAL RACEWAYS, PIPING, OR CEILING SUSPENSION SYSTEMS. SECURE AND SUPPORT CABLE AT INTERVALS NOT EXCEEDING 30 INCHES AND NOT MORE THAN 6 INCHES FROM CABINETS, BOXES, FITTINGS, OUTLETS, RACKS, FRAMES, AND TERMINALS.
   9. INSTALL WIRING IN SLEEVES WHERE IT PASSES THROUGH WALLS AND FLOORS. MAINTAIN FIRE RATING AT ALL PENETRATIONS.
   10. SIZE OF WIRE AND RACEWAY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND BE PER THE MANUFACTURER'S RECOMMENDATION AND NEC REQUIREMENTS.
   11. FLEXIBLE METAL RACEWAYS ARE NOT PERMITTED OVER 6 FEET.

23 90 10 SEQUENCE OF OPERATION

A. ROOFTOP AIR CONDITIONING UNITS
   1. PROVIDE A HONEYWELL VISION PRO TH8320R1003 SEVEN DAY PROGRAMMABLE HEATING/COOLING THERMOSTAT CAPABLE OF 2 STAGES OF HEATING AND 2 STAGES OF COOLING (CONVENTIONAL), WITH ECONOMIZER/TIME OF DAY OUTPUT.
      a. SET FAN SETTING TO "ON" FOR FAN TO RUN CONTINUOUSLY IN OCCUPIED PERIODS, AND TO RUN WITH EQUIPMENT OPERATION DURING UNOCCUPIED PERIODS.
      b. SET INSTALLER SETUP NUMBERS TO MATCH INSTALLED SYSTEM IN ADDITION TO THE FOLLOWING (CONTACT ENGINEER WITH ANY QUESTIONS REGARDING ANY SETUP NUMBERS):
         1). 101 APPLICATION: COMMERCIAL
         2). 326 EXTENDED FAN RUN TIME IN HEAT: 60 SECONDS.
   2. ECONOMIZER PACKAGE PROVIDED WITH ROOFTOP UNIT. MONITOR FAULT DETECTION AND DIAGNOSTICS SYSTEM FOR FAULTS.
   3. MOUNT AND WIRE ALL CONTROL WIRING ASSOCIATED WITH THE ROOFTOP AND PROVIDE ANY ADDITIONAL DEVICES NECESSARY FOR A COMPLETE OPERATIONAL SYSTEM.

23 95 00 TESTING, ADJUSTING AND BALANCING

A. QUALITY ASSURANCE
   1. PERFORM TOTAL SYSTEM BALANCE IN ACCORDANCE WITH AABC NATIONAL STANDARDS FOR FIELD MEASUREMENT AND INSTRUMENTATION, TOTAL SYSTEM BALANCE OR NEBB PROCEDURAL STANDARDS FOR TESTING, BALANCING AND ADJUSTING OF ENVIRONMENTAL SYSTEMS, AND ASHRAE STANDARD 111.
   2. THE TESTING, ADJUSTING AND BALANCING (TAB) CONTRACTOR SHALL BE AN INDEPENDENT COMPANY SPECIALIZING IN THE TESTING, ADJUSTING, AND BALANCING OF SYSTEMS WITH MINIMUM THREE YEARS EXPERIENCE AND NOT ASSOCIATED WITH THE SUPPLIERS OF EQUIPMENT OR THE INSTALLING CONTRACTOR.
   3. PERFORM WORK UNDER SUPERVISION OF AABC CERTIFIED TEST AND BALANCE ENGINEER OR NEBB CERTIFIED TESTING, BALANCING AND ADJUSTING SUPERVISOR.
B. SUBMITTALS
   1. CONTRACTOR SHALL SUBMIT THE FINAL TESTING AND BALANCING REPORT PRIOR TO PROJECT COMPLETION AND IN ADVANCE OF DATE OF OCCUPANCY. SUBMIT REPORTS ON AABC NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE OR NEBB FORMS.
   2. SUBMIT THE DESIGN AND ACTUAL DATA FOR EACH SCHEDULED PIECE OF EQUIPMENT: MODEL; SUPPLY, RETURN, AND OUTSIDE AIR FLOWS; STATIC PRESSURE PROFILES OF AIR HANDLING UNIT COMPONENTS AND ALL FANS; FAN RPM, BHP, AMPERAGE; FAN AND MOTOR SHEAVE, DIAMETER, BORE AND MAKE; BELT SIZE AND QUANTITY; MOTOR SHEAVE CENTER LINE AND OPERATOR DISTANCE; ROOM AIR FLOW.
C. INSTALLATION TOLERANCES
   1. AIR HANDLING SYSTEMS: ADJUST SUPPLY SYSTEMS TO WITHIN PLUS OR MINUS 5 PERCENT OF DESIGN AND RETURN AND EXHAUST SYSTEMS TO PLUS OR MINUS 10 PERCENT OF DESIGN.
   2. AIR OUTLETS AND INLETS: ADJUST TOTAL AIR FLOW TO SPACE TO WITHIN PLUS 10 PERCENT AND MINUS 5 PERCENT OF DESIGN.
   3. ADJUST OUTLETS AND INLETS IN SPACE TO WITHIN PLUS OR MINUS 10 PERCENT OF DESIGN.
D. AIR SYSTEM BALANCE
   1. VARY TOTAL SYSTEM AIR QUANTITIES BY ADJUSTING FAN SPEEDS. VARY BRANCH AIR QUANTITIES BY DAMPER REGULATION.
   2. ADJUST SETTINGS ON DIRECT DRIVE FANS WITH ECM MOTORS AS REQUIRED TO ACHIEVE DESIGN AIRFLOW.
   3. ADJUST OUTSIDE AIR, RETURN AIR, AND EXHAUST AIR AUTOMATIC DAMPERS FOR DESIGN CONDITIONS.
   4. TEST AIR HANDLING UNITS AT MINIMUM AND 100% OUTSIDE AIR.
E. FANS WITH FIXED MOTOR SHEAVES - TEST THE FAN EQUIPMENT. IF THE DESIGN CONDITIONS ARE NOT OBTAINED, CALCULATE THE FINAL FIXED MOTOR SHEAVE AND/OR BELTS REQUIRED TO OBTAIN DESIGN CONDITIONS. HEATING CONTRACTOR SHALL OBTAIN THE FINAL FIXED MOTOR SHEAVE AND BELT(S) FROM THE FAN MANUFACTURER AND TURN THEM OVER TO THE TAB CONTRACTOR FOR INSTALLATION.

PROJECT DESIGN CRITERIA

MECHANICAL CODE	**2020 NYMC**
ENERGY CODE	**2020 NYECC**
SEISMIC DESIGN CATEGORY	**B**
NEAREST ASHRAE CITY	**NEW YORK STEWART INTL. ARPT.**
ELEVATION	**491**

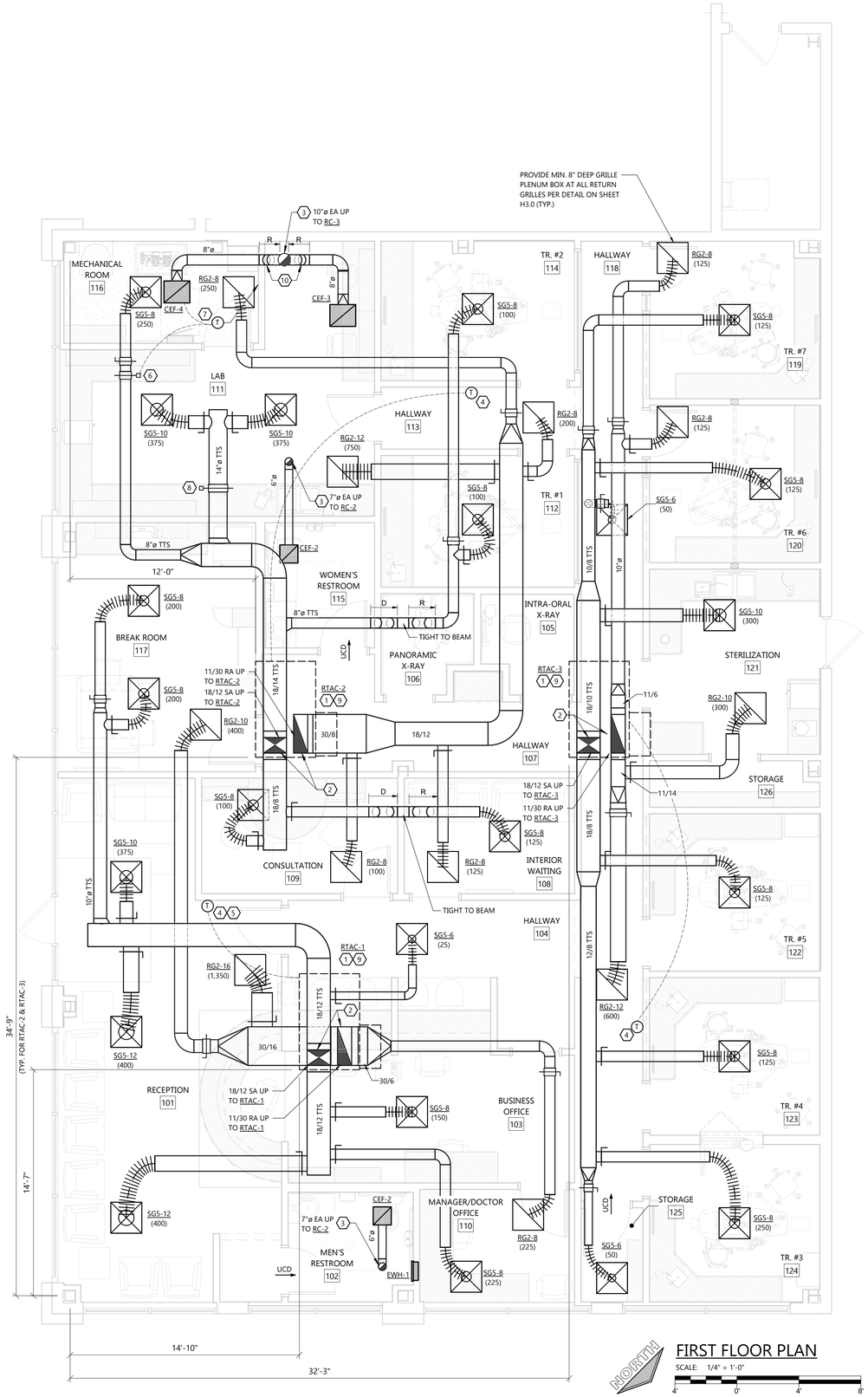
	OUTSIDE	
	DB	WB
WINTER:	**2.7**	**N/A**
SUMMER:	**90.3**	**75.7**

BASED ON ASHRAE 0.4% DESIGN CONDITIONS.

LEGEND

NOTE: ALL SYMBOLS SHOWN MAY NOT APPEAR ON DRAWINGS.

SYM.	ABBR.	IDENTIFICATION	SYM.	ABBR.	IDENTIFICATION
DUCTWORK					
R	R	DUCT (R)ISE/(D)ROP			SA OR OA DUCT DOWN OR AWAY
		RADIUS ELBOW			EA DUCT DOWN OR AWAY
		SQUARE ELBOW WITH TURNING VANES			RA DUCT DOWN OR AWAY
		SQUARE ELBOW WITHOUT TURNING VANES		VD	VOLUME DAMPER
		SQUARE OR RECTANGULAR BRANCH TAKEOFF		BDD	BACKDRAFT DAMPER
		RECTANGULAR TO ROUND TAKEOFF		MOD	MOTOR OPERATED DAMPER
		TEE WITH TURNING VANES	DS	DSD	DUCT SMOKE DETECTOR
		ROUND TO ROUND CONICAL TAKEOFF	F	FD	FIRE DAMPER
		CONCENTRIC TRANSITION	S	SD	SMOKE DAMPER
		CONCENTRIC TRANSITION	F/S	FSD	FIRE/SMOKE DAMPER
		SQUARE TO ROUND TRANS.		SG	SUPPLY GRILLE
		DUCT CAP		EG,RG, TG	(E)XHAUST / (R)ETURN / (T)RANSFER GRILLE
	ALD	ACOUSTICALLY LINED DUCT		UCD	UNDERCUT DOOR (BY GC)
	SA	SUPPLY AIR DUCT UP	DTG (0 SF)	DTG	DOOR TRANSFER GRILLE
	OA	OUTSIDE AIR DUCT UP		FC	FLEXIBLE CONNECTION
	RA	RETURN AIR DUCT UP		AD	ACCESS DOOR
	EA	EXHAUST AIR DUCT UP			
MISCELLANEOUS AND CONTROLS					
		DETAIL OR SECTION NUMBER / SHEET NUMBER			STATIC PRESS. SENSOR
H		HUMIDISTAT / HUMID. SENSOR	SS		SLAB TEMPERATURE SENSOR
T		THERMOSTAT / TEMP. SENSOR			COMBINATION STARTER
VFD	VFD	VARIABLE FREQUENCY DRIVE	MS		MANUAL STARTER
	AFF	ABOVE FINISHED FLOOR		OC	ON CENTER
	AFG	ABOVE FINISHED GRADE		PC	PLUMBING CONTRACTOR
	AP	ACCESS PANEL		RAO	RETURN AIR OPENING
	BJ	BETWEEN JOISTS		TAO	TRANSFER AIR OPENING
	BOD	BOTTOM OF DUCT		EAO	EXHAUST AIR OPENING
	BOG	BOTTOM OF GRILLE		TCC	TEMPERATURE CONTROL CONTRACTOR
	EC	ELECTRICAL CONTRACTOR		TCP	TEMPERATURE CONTROL PANEL
	GC	GENERAL CONTRACTOR / CONSTRUCTION MANAGER		TJ	THRU JOISTS
	HC	HVAC CONTRACTOR		TYP.	TYPICAL
	IMP	INSULATED METAL PANEL		TTS	TIGHT TO STRUCTURE
	NIC	NOT IN CONTRACT		TV	TURNING VANES
	NTS	NOT TO SCALE		WWM	WELDED WIRE MESH
PIPING					
		SHUTOFF VALVE		PRV	PRESS. REDUCING VALVE
		BALANCE VALVE		SRV	SAFETY RELIEF VALVE
		CHECK VALVE			STEAM TRAP
		COMBINATION VALVE			ANCHOR
		STRAINER			GUIDE
		DRAIN VALVE			PIPING BOTTOM TAKE-OFF
		GLOBE VALVE			PIPING TOP TAKE-OFF
		THERMOMETER			PIPE DOWN OR AWAY
	PG	PRESSURE GAUGE			PIPE UP
		GAUGE COCK			PIP



GENERAL NOTES

- MAKE TRANSITION FROM DUCTWORK SIZES SHOWN ON THE DRAWINGS TO EQUIPMENT DUCT CONNECTION SIZES. VERIFY EQUIPMENT CONNECTION SIZES IN THE FIELD. ACTUAL EQUIPMENT SIZES SHALL TAKE PRECEDENCE OVER SIZES SHOWN ON PLANS.
- IF DUCT SYSTEMS ARE USED FOR TEMPORARY HEAT, PROVIDE TEMPORARY FILTERS AT RETURN AIR OPENINGS AND INSTALL FILTERS IN THE UNITS EQUIVALENT TO THE EFFICIENCY OF THE SPECIFIED FILTERS FOR THE UNIT. IF PROPER EFFICIENCY FILTERS ARE NOT INSTALLED IN UNIT, UNIT AND ALL DUCTWORK DOWNSTREAM OF UNIT SHALL BE CLEANED BEFORE TEST AND BALANCE.
- COORDINATE GRILLE LOCATIONS WITH FINAL REFLECTED CEILING PLAN AND CORRESPONDING LIGHTING CONFIGURATION.
- BALANCE REPORT REQUIRED FOR FINAL APPROVAL. SEE SECTION 23 95 00 TESTING, ADJUSTING, AND BALANCING SPECIFICATIONS ON SHEET H0.1 FOR DETAILS.

KEYNOTES

1. ROOF TOP UNIT FOR NEW TENANT CONSTRUCTION. SEE RTAC SCHEDULE ON SHEET H4.0 & T2.0 FOR RESPONSIBILITY OF INSTALLATION.
2. TRANSITION FROM RTAC SUPPLY AND RETURN DUCT SIZES TO SIZE SHOWN ON PLAN. TRANSITION SIZE IN VERTICAL IF TRANSITION CAN MEET SPECIFICATIONS, OTHERWISE TRANSITION AFTER ELBOW. PROVIDE TURNING VANES IN DUCT ELBOWS OR TEES.
3. COORDINATE BUILDING PENETRATION WITH LANDLORD, PROVIDE GRAVITY BACK DRAFT DAMPER BELOW ROOF DECK. EXHAUST OUTLET LOCATION MUST BE AT LEAST 10'-0" AWAY FROM ANY OUTSIDE AIR INTAKE.
4. MOUNT PROGRAMMABLE THERMOSTAT AT 48" A.F.F. IN LOCATIONS AS SHOWN, UNLESS LOCAL CODE AUTHORITY WILL ALLOW A MOUNTING HEIGHT OF 60" A.F.F. THERMOSTATS SHALL BE HONEYWELL VISION PRO 8000 SERIES PROGRAMMABLE THERMOSTAT.
5. PROVIDE A LOCKING COVER FOR THE THERMOSTAT LOCATED IN THE RECEPTION AREA. TURN OVER LOCKBOX KEYS TO ASPEN DENTAL MANAGEMENT UPON JOB COMPLETION.
6. MOTOR OPERATED DAMPER WITH 120V, 2 POSITION SPRING RETURN, NORMALLY OPEN DAMPER ACTUATOR TO SERVE MECHANICAL ROOM.
   DAMPER: "GREENHECK" MODEL VCDR-53 OR EQUIVALENT
   ACTUATOR: "BELIMO" MODEL TFB120 OR EQUIVALENT
7. HONEYWELL MODEL T651A OR EQUIVALENT REVERSE ACTING THERMOSTAT FURNISHED BY HVAC CONTRACTOR. CONDUIT AND WIRING PROVIDED BY ELECTRICAL CONTRACTOR. REFER TO SHEET E1.1P. TURN ON FAN AND CLOSE MECHANICAL ROOM MOTOR OPERATED DAMPER ON A RISE IN SPACE TEMPERATURE ABOVE SETPOINT. MOUNT THERMOSTAT AT 48" A.F.F. IN LOCATION AS SHOWN, UNLESS LOCAL CODE AUTHORITY WILL ALLOW A MOUNTING HEIGHT OF 60" A.F.F.
8. MOTOR OPERATED DAMPER WITH 120V, 2 POSITION, SPRING RETURN, NORMALLY OPEN DAMPER ACTUATOR WIRED TO WALL SWITCH BY E.C. TO CLOSE DAMPER WHEN SWITCH IS "ON"
   DAMPER: "GREENHECK" MODEL VCDR-53 OR EQUIVALENT
   ACTUATOR: "BELIMO" MODEL TFB120 OR EQUIVALENT
9. CONTRACTOR SHALL PROVIDE INTEGRAL WATER-LEVEL MONITORING DEVICE IN THE PRIMARY DRAIN PAN TO SHUT OFF THE EQUIPMENT PER IMC 307.2.3.1.
10. EXHAUST AIR DUCT UP AT 45 DEG. INTO EXHAUST AIR DUCT UP TO ROOF CAP.

EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES

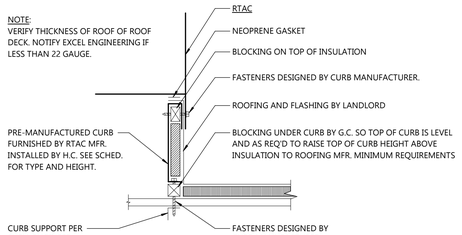
SHEET ISSUE JULY 12, 2023

REVISIONS

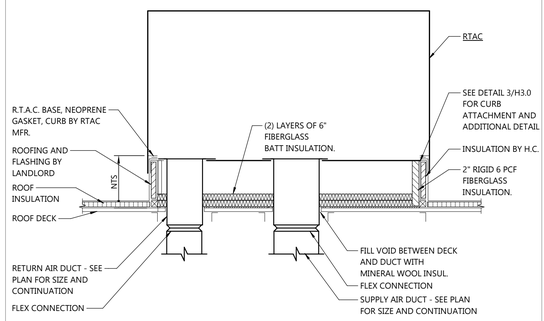
JOB NUMBER
230264900

SHEET NUMBER
H1.1

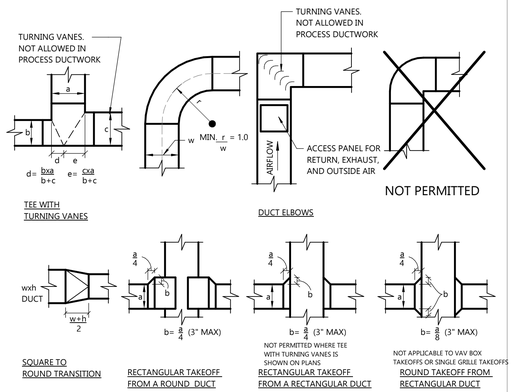
HVAC FIRST FLOOR PLAN



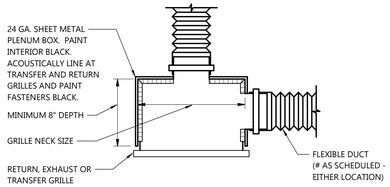
3 H3.0 RTAC AND CURB ATTACHMENT DETAIL
NOT TO SCALE



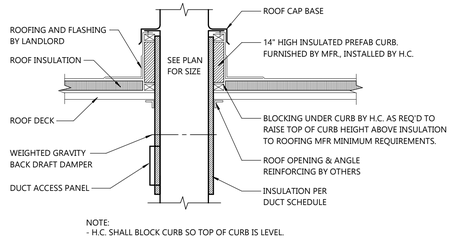
2 H3.0 TYPICAL RTAC AND CURB DETAIL
NOT TO SCALE



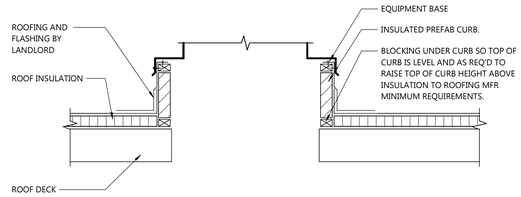
1 H3.0 DUCT FITTING DETAILS
NOT TO SCALE



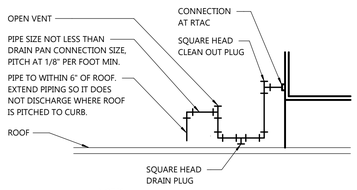
6 H3.0 GRILLE PLENUM BOX DETAIL
NOT TO SCALE



5 H3.0 ROOF CAP AND CURB DETAIL
NOT TO SCALE



4 H3.0 TYPICAL ROOF CURB DETAIL
NOT TO SCALE



NOTES:
- FILL TRAP MANUALLY ON INITIAL START-UP.
- TRAP EACH COMPONENT DRAIN CONNECTION.
- PIPE SIZE TO MATCH DRAIN CONNECTION AT RTAC.

8 H3.0 RTAC CONDENSATE DRAIN TRAP PIPING DETAIL
NOT TO SCALE

UNITS WITH COVER PLATE IN BASEPAN

Step 1 — Mount the Cover Plate

The cover plate is located in the compressor compartment of the unit, directly below the control box (see Fig. 1). Remove the blank cover plate from the unit. Discard the blank cover plate but reserve the screws. Depending on the number of connectors required, select either the (3) hole or the (4) hole cover plate. Adhere the gasket to the underside of the selected cover plate. Attach the desired bulkhead connectors to the cover plate (see Table 3) and then, using the reserved screws, attach the cover plate with the bulkhead connectors to the opening in the basepan.

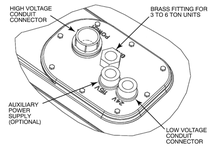


Fig. 1 — Thru-Base Gas Connection Fittings (Four Hole Cover Plate Shown)

Table 3 — Hole Size Requirements

COUPLING SIZE	USAGE	REQUIRED HOLE SIZE (MAX) (PRE-PUNCHED)
1/2-in.	24-v control wiring	7/8-in. (22.2 mm)
1/2-in.	115-v accessory wiring	7/8-in. (22.2 mm)
3/4-in.	High-voltage power wiring and accessory convenience outlet wiring* (3 to 6 ton units)	1 1/8-in. (29.0 mm)
1/2-in. NPT	Gas line	1 1/8-in. (29.0mm)

Step 2 — Run Wiring and Connect Conduit

IMPORTANT: Liquid-tight conduit must be used on outdoor appliances.

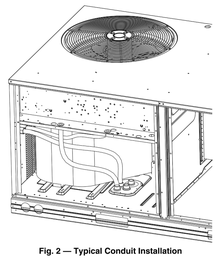


Fig. 2 — Typical Conduit Installation

NOTE:
-CAP AND SEAL ANY UNUSED FITTINGS.

7 H3.0 THRU-BASE CONNECTION DETAIL
NOT TO SCALE

HVAC DETAILS

EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

JOB NUMBER
230264900

SHEET NUMBER
H3.0

ELECTRIC WALL HEATER SCHEDULE - (E.W.H.)

NO.	CFM	EAT F	LAT F	MBH	KW	THERMOSTAT	CABINET		MODEL	REMARKS
							RECESS DEPTH	HGT. AFF		
1	100	60	107	5.1	1.5	INTEG., PREWIRED, TAMPER-RESISTANT	3-3/4"	12"	FRC-1512	"BERKO"

- ACCEPTABLE MANUFACTURERS: BERKO, RAYWALL, Q-MARK, MARKEL.
- PROVIDE ALL EWH'S WITH PREWIRED DISCONNECT SWITCH, PREWIRED AUTOMATIC RESET THERMAL OVERLOAD PROTECTION, BUILT-IN FAN DELAY CONTROLS, 16 GAUGE FRONT BAR GRILLE.
- COLOR TO BE NORTHERN WHITE. PROVIDE COLOR SAMPLE TO OWNER FOR FINAL SELECTION AND CONFIRMATION.

SUPPLY GRILLE SCHEDULE (S.G.)

NO.	TYPE	CFM RANGE	NECK/ FACE SIZE	INLET DUCT DIA.	MAT'L	VOL. DMPR	FINISH	FRAME	THROW	MODEL	REMARKS
5-6	LOUVER	0-75	24 X 24	6"	ALUM.	(1)	WHITE	LAY-IN	4-WAY	TMS-AA	"TITUS"
5-8	LOUVER	76-275	24 X 24	8"	ALUM.	(1)	WHITE	LAY-IN	4-WAY	TMS-AA	"TITUS"
5-10	LOUVER	276-375	24 X 24	10"	ALUM.	(1)	WHITE	LAY-IN	4-WAY	TMS-AA	"TITUS"
5-12	LOUVER	376-550	24 X 24	12"	ALUM.	(1)	WHITE	LAY-IN	4-WAY	TMS-AA	"TITUS"
5-14	LOUVER	551-750	24 X 24	14"	ALUM.	(1)	WHITE	LAY-IN	4-WAY	TMS-AA	"TITUS"

- ACCEPTABLE MANUFACTURERS: TITUS, PRICE, KRUEGER, CARNES, SHOEMAKER.
- NOT ALL SUPPLY GRILLES SCHEDULED ARE USED ON THE PROJECT.
- PROVIDE R-6 MOLDED BACKED INSULATION BLANKET.
- BRANCH DUCT SIZE TO GRILLE SHALL BE SAME SIZE AS NECK UNLESS OTHERWISE NOTED.
(1) VOLUME DAMPER AT THE GRILLE INDICATED BY A "D" AFTER THE GRILLE DESIGNATION. EXAMPLE: SG5D-6 IS SG5-6 WITH A DAMPER.

RETURN GRILLE SCHEDULE (R.G.)

NO.	TYPE	MAX. CFM	NECK/ FACE SIZE	FLEX. DUCT. DIA.	MAT'L	VOL. DMPR	FINISH	FRAME	MODEL	REMARKS
2-6	EGG CRATE	75	24 X 24	6"	ALUM.	(1)	WHITE	LAY-IN (3)	50F (5)	"TITUS"
2-8	EGG CRATE	250	24 X 24	8"	ALUM.	(1)	WHITE	LAY-IN (3)	50F (5)	"TITUS"
2-10	EGG CRATE	450	24 X 24	10"	ALUM.	(1)	WHITE	LAY-IN (3)	50F (5)	"TITUS"
2-12	EGG CRATE	750	24 X 24	12"	ALUM.	(1)	WHITE	LAY-IN (3)	50F (5)	"TITUS"
2-14	EGG CRATE	1,100	24 X 24	14"	ALUM.	(1)	WHITE	LAY-IN (3)	50F (5)	"TITUS"
2-16	EGG CRATE	1,600	24 X 24	16"	ALUM.	(1)	WHITE	LAY-IN (3)	50F (5)	"TITUS"
2-18	EGG CRATE	2,200	24 X 24	18"	ALUM.	(1)	WHITE	LAY-IN (3)	50F (5)	"TITUS"

- ACCEPTABLE MANUFACTURERS: TITUS, PRICE, KRUEGER, CARNES, SHOEMAKER.
- NOT ALL RETURN GRILLES SCHEDULED ARE USED ON THE PROJECT.
- PROVIDE MIN. 8" DEEP PLENUM BOX AT ALL RETURN GRILLES (TYP.)
- BRANCH DUCT SIZE TO GRILLE SHALL BE SAME SIZE AS NECK UNLESS OTHERWISE NOTED.
(1) VOLUME DAMPER AT THE GRILLE INDICATED BY A "D" AFTER THE GRILLE DESIGNATION. EXAMPLE: RG2D-6 IS RG2-6 WITH A DAMPER.
(3) SURFACE MOUNT BORDER WITH NO SCREW HOLES FOR LAY-IN APPLICATION.
(5) 1/2 X 1/2 X 1/2 CORE

DUCTWORK AND DUCTWORK INSULATION SCHEDULE

SERVICE		LOCATION	DUCT MAT'L	SMACNA PRESS. CLASS	INSULATION		INSUL. JACKET
					RECTANGULAR DUCT	ROUND DUCT	
SUPPLY	SINGLE ZONE SYSTEMS	CONCEALED	GALV. ST.	+1"	1.5" FLEX. F.G.	1.5" FLEX. F.G.	N.R.
RETURN	UPSTREAM OF FAN	CONCEALED	GALV. ST.	-1"	1.5" FLEX. F.G.	1.5" FLEX. F.G.	N.R.
EXHAUST	DOWNSTREAM OF FAN	CONCEALED	GALV. ST.	+1"	1.5" FLEX. F.G. (1)	1.5" FLEX. F.G. (1)	N.R.

N.R. = NOT REQUIRED
EXPOSED = VISIBLE FROM OCCUPIED SPACE.
CONCEALED = HIDDEN FROM VIEW BY WALLS AND CEILINGS.
MATERIALS:
GALV. STEEL: ASTM A653, LOCK FORMING QUALITY, 1.25 OUNCES/ S.F. ZINC COATING (G90 IN ACCORDANCE WITH ASTM A90 BOTH SIDES).
- ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTIONS IN DUCTWORK SHALL BE SEALED PER 2020 NYECC 403.11.1.
(1) INSULATE FROM 18" UPSTREAM OF THE BACKDRAFT DAMPER TO THE POINT WHERE THE DUCT EXITS THE BUILDING.

ELECTRICAL/STARTER/DISCONNECT SCHEDULE

SYM.	ELECTRICAL DATA							STARTER				SMOKE DETECTOR	DISCONNECT		REMARKS
	HP	KW	AMPS	MCA	MOP	VOLT	PH.	TYPE	LOCATION	FURN. BY	AUX. CONTACT	ACCESS-ORIES		DIS-CONNECT	FURN. BY	
RTAC-1	-	-	-	28.0	40	208	3	INTEG.	INTEGRAL	EM	-	-	-	3R	EM (4)	-
RTAC-2	-	-	-	26.0	30	208	3	INTEG.	INTEGRAL	EM	-	-	-	3R	EM (4)	-
RTAC-3	-	-	-	20.0	30	208	3	INTEG.	INTEGRAL	EM	-	-	-	3R	EM (4)	-
EWH-1	-	1.5	-	-	-	120	1	INTEG.	INTEGRAL	EM	-	-	-	R	EM	-
CEF-1	-	0.08	-	-	-	120	1	(1)	(1)	EC	-	-	-	R	EM	-
CEF-2	-	0.08	-	-	-	120	1	(1)	(1)	EC	-	-	-	R	EM	-
CEF-3	-	0.23	-	-	-	120	1	(2)	(2)	EC	-	-	-	R	EM	-
CEF-4	-	0.23	-	-	-	120	1	(3)	(3)	EC	-	-	-	R	EM	-

STARTER TYPE:
INTEG.= INTEGRAL: PROVIDED INTEGRAL WITH EQUIPMENT.

FURNISHED BY:
EM = EQUIPMENT MANUFACTURER
HC = HEATING CONTRACTOR
EC = ELECTRICAL CONTRACTOR

ACCESSORIES:
HOA = HAND-OFF-AUTO
PL =LED PILOT LIGHT
PB = PUSH BUTTON

DISCONNECT:
NR= NOT REQUIRED
R = REQUIRED
3R = NEMA 3R

REMARKS:
REC.=RECEPTACLE

- VERIFY VOLTAGE AND PHASE WITH ELECTRICAL CONTRACTOR BEFORE ORDERING EQUIPMENT.
(1) POWER ROUTED THRU INTERIOR LIGHTING CONTACTOR BY E.C. SEE ELECTRICAL PLANS.
(2) LOCAL WALL SWITCH PROVIDED BY E.C. TO TURN ON FAN.
(3) FAN WIRED TO REVERSE ACTING THERMOSTAT BY E.C.
(4) DISCONNECT FACTORY MOUNTED AND PREWIRED BY EQUIPMENT MANUFACTURER.

CABINET EXHAUST FAN SCHEDULE (C.E.F.)

NO.	AREA SERVED	TYPE	CFM	S.P. " W.C.	RPM	MOTOR WATTS	MAX. SONES	DUCT COLLAR SIZE (IN.)	MODEL	REMARKS
1	TOILET RM	CEILING	100	0.38	950	80	2	6	SP-B110 (3)	"GREENHECK"
2	TOILET RM	CEILING	100	0.38	950	80	2	6	SP-B110 (3)	"GREENHECK"
3	LAB	CEILING	300	0.5	1,054	224	3.5	8 X 8	SP-A510 (3)	"GREENHECK"
4	MECH RM	CEILING	300	0.5	1,054	224	3.5	8 X 8	SP-A510 (3)	"GREENHECK"

- ACCEPTABLE MANUFACTURERS: GREENHECK, COOK, PENN-BARRY, CARNES.
- SUPPORT FROM STRUCTURE, ISOLATE FAN AND ASSOCIATED DUCTWORK.
- PROVIDE SPEED CONTROL MOUNTED ON FAN HOUSING. INTERNAL PLUG-IN DISCONNECT AND BACKDRAFT DAMPER
(3) PROVIDE WHITE ALUMINUM GRILLE.

ROOF CAP SCHEDULE (R.C.)

NO.	SERVICE	TYPE	THROAT	CFM	APD.	SCREEN	DAMPER	MODEL	REMARKS
1	EXHAUST	FLAT	7	100	0.01	BIRD	NO	RCC-7 (1)	"GREENHECK"
2	EXHAUST	FLAT	7	100	0.01	BIRD	NO	RCC-7 (1)	"GREENHECK"
3	EXHAUST	FLAT	10	600	0.09	BIRD	NO	GRS-10 (1)	"GREENHECK"

- ACCEPTABLE MANUFACTURERS: GREENHECK, CARNES
(1) PROVIDE 14" HIGH ROOF CURB.

ROOFTOP AIR CONDITIONING UNIT SCHEDULE (R.T.A.C.)

NO.	NOM. TONS	SUPPLY FAN						RELIEF		COOLING				HEATING				OUTSIDE AIR	SMOKE DETECTOR	CURB		MCA	MOP	VOLT/ PHASE	EFFICIENCY			WEIGHT (LBS.)	MODEL	REMARKS
		CFM	OA CFM	EXT. SP	DRIVE TYPE	MOTOR BHP	MOD. TYPE	BAR.	FAN	EAT DB / WB	MBH CAP.	AMB. TEMP F	NO. COMPR.	NO. STAGES	KW	MBH IN	MBH OUT	NO. STAGES		HEIGHT BY MFR.	TYPE				MIN. CODE	UNIT RATING	TEST PROC.			
1	5	1,975	250	1	DIRECT	1.49	-	X	-	80/67	54.7	105	1	1	-	150	120	2	ECON (2)	NO (1)	14"	STANDARD	28.0	40	208/3	14.0 SEER	14.0 SEER	ARI 210/240	850	48FC	CARRIER (4)(5)
2	4	1,425	200	1	DIRECT	0.92	-	X	-	80/67	43.6	105	1	1	-	67	54	2	ECON (2)	NO (1)	14"	STANDARD	26.0	30	208/3	14.0 SEER	14.0 SEER	ARI 210/240	850	48FC	CARRIER (4)(5)
3	3	1,150	150	1	DIRECT	0.55	-	X	-	80/67	31.9	105	1	1	-	67	54	2	ECON (2)	NO (1)	14"	STANDARD	20.0	30	208/3	14.0 SEER	14.0 SEER	ARI 210/240	850	48FC	CARRIER (4)(5)

- H.C. TO PROVIDE ROOFTOP UNITS AND CURBS. ROOFTOP UNITS ARE PRE-ORDERED BY ASPEN DENTAL MANAGEMENT (ADMI). QUOTES AND SELECTIONS ARE SENT BY ADMI TO THE G.C. FOR DISTRIBUTION TO THE H.C.
- SEE MOTOR SPECIFICATIONS FOR MOTOR REQUIREMENTS.
- PROVIDE WITH 2" ASHRAE STD 52.2 MERV 8 T.A. FILTERS .
- RTAC DESIGNED TO PREVENT RAIN INTRUSION INTO THE AIRSTREAM WHEN TESTED AT DESIGN AND NO AIRFLOW PER SECTION 58 OF UL 1995.
- PROVIDE UNIT MOUNTED NEMA 3R DISCONNECT, STAINLESS STEEL HEAT EXCHANGER, LIQUID-TIGHT THRU UNIT BASE ELECTRICAL CONNECTION, HINGED ACCESS PANELS AND HINGED DOOR FOR ECONOMIZER.
(1) DUCT SMOKE DETECTOR IS NOT REQUIRED PER IMC 606.2.1 AS RETURN AIR FLOW DOES NOT EXCEED 2,000 CFM IN ANY LOCATION AND SYSTEMS DO NOT SHARE COMMON SUPPLY OR RETURN AIR DUCTS.
(2) PROVIDE ULTRA LOW LEAK CODE COMPLIANT ECONOMIZER WITH FAULT DETECTION, ENTHALPY CONTROL AND BAROMETRIC RELIEF.
(4) PROVIDE WITH HAIL GUARD FOR CONDENSING COILS.
(5) PROVIDE EPOXY COATED CONDENSER COIL TO PROVIDE PROTECTION IN COASTAL ENVIRONMENTS.

HVAC SCHEDULES

EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

JOB NUMBER
230264900

SHEET NUMBER
H4.0

LEGEND

NOTE: ALL SYMBOLS SHOWN MAY NOT APPEAR ON DRAWINGS. ALL MOUNTING HEIGHTS ARE TYPICAL UNLESS NOTED OTHERWISE.

SYM.	IDENTIFICATION	SYM.	IDENTIFICATION
LIGHTING			
	RECESSED, SURFACE, OR PENDANT MOUNTED LIGHT FIXTURE		EMERGENCY LIGHT MOUNT 11'-0" AFF. TO TOP OR 8" BELOW CEILING, WHICHEVER IS LOWER
	WALL MOUNTED LIGHT FIXTURE. MOUNT 7'-0" AFF. OR 8" ABOVE MIRROR		RECESSED EMERGENCY LIGHT
	RECESSED, SURFACE MOUNTED, OR CHAIN HUNG LIGHT FIXTURE		EXIT LIGHT
	PENDANT FIXTURE		OCCUPANCY SENSOR
	EXTERIOR WALL MOUNTED OR INTEROR WALL WASH FIXTURE		WALL MOUNTED OCCUPANCY SENSOR WITH SWITCH D = DIMMER
	SINGLE HEAD POLE		DUAL LEVEL/CIRCUIT OCCUPANCY SENSOR WITH SWITCH
	TWIN HEAD POLE MOUNTED FIXTURE	PC	PHOTO CONTROL
WIRING DEVICES			
$	SINGLE POLE SWITCH. MOUNT 46" AFF. TO CENTER, 3 = 3 WAY, 4 = 4 WAY, P = PILOT, D = DIMMER, K = KEYED	MW	DUPLEX RECEPTACLE. MOUNT IN CABINET BEHIND MICROWAVE, FIELD VERIFY HEIGHT
$$	DUAL LEVEL SWITCH. MOUNT 46" AFF. TO CENTER SEE DETAIL		POWER RECEPTACLE. MOUNT 18" AFF. TO CENTER
$	LOW VOLTAGE SWITCH. MOUNT 46" AFF. TO CENTER		SWITCH BOTTOM HALF OF RECEPTACLE, TOP HALF UNSWITCHED
	SIMPLEX RECEPTACLE. MOUNT 18" AFF. TO CENTER		SPECIAL OUTLET
	DUPLEX RECEPTACLE. MOUNT 18" AFF. TO CENTER	J	JUNCTION BOX
	DOUBLE DUPLEX RECEPTACLE. MOUNT 18" AFF. TO CENTER		SWITCH BOTTOM HALF OF GFI PROTECTED RECEPTACLE, TOP HALF UNSWITCHED
	GFI PROTECTED DUPLEX RECEPTACLE. MOUNT 18" AFF. TO CENTER		DUPLEX RECEPTACLE SURFACE MOUNTED CLG = CEILING/SOFFIT MOUNTED
	GFI PROTECTED DOUBLE DUPLEX RECEPTACLE. MOUNT 18" AFF. TO CENTER		BLANK BOX 4" EXTRA DEEP BOX, SINGLE GANG RING, BLANKPLATE, 1" C STUB INTO ACCESSIBLE SPACE, MOUNT 18" AFF. TO CENTER
	DUPLEX RECEPTACLE MOUNT VERTICALLY 6" ABOVE BACKSPLASH TO CENTER. IF NO BACKSPLASH MOUNT 6" ABOVE COUNTER		ABOVE COUNTER BLANK BOX, 4" EXTRA DEEP BOX, SINGLE GANG RING, BLANKPLATE, 1"C STUBBED INTO ACCESSIBLE SPACE, MOUNT 6" ABOVE BACKSPLASH TO CENTER
	GFI PROTECTED DUPLEX RECEPTACLE MOUNT VERTICALLY 6" ABOVE BACKSPLASH TO CENTER. IF NO BACKSPLASH MOUNT 6" ABOVE COUNTER		COMBINATION FLOOR OUTLET/BLANK JUNCTION BOX - WIREMOLD - RESOURCE RFB/SERIES OR EQUIVALENT, 1" C STUB INTO ACCESSIBLE SPACE
MOTORS / MOTOR CONTROL / EQUIPMENT			
	DISCONNECT FURNISHED BY EC F = FUSIBLE	MS	MANUAL STARTER
	NON-COMBINATION STARTER		MOTOR CONNECTION
	COMBINATION STARTER		MOTOR CONNECTION REQUIRING REMOTE STARTER/VFD
	SURFACE MOUNTED PANELBOARD		EQUIPMENT CONNECTION
	RECESSED PANELBOARD		SURFACE MOUNTED RACEWAY
FIRE ALARM / LIFE SAFETY			
	STROBE. MOUNT 84" AFF. TO TOP OR 6" BELOW CEILING WHICHEVER IS LOWER	M	MAGNETIC DOOR HOLDER
	SPEAKER. CEILING MOUNTED W = WALL MOUNTED	FS	SPRINKLER FLOW SWITCH
	HORN/STROBE. MOUNT 84" AFF. TO TOP OR 6" BELOW CEILING WHICHEVER IS LOWER	TS	SPRINKLER TAMPER SWITCH
	SPEAKER/STROBE. MOUNT 84" AFF. TO TOP OR 6" BELOW CEILNG WHICHEVER IS LOWER		SPRINKLER BELL
	HORN (SOUNDER). MOUNT 84" AFF. TO TOP OR 6" BELOW CEILING WHICHEVER IS LOWER	FACP	FIRE ALARM CONTROL PANEL
F	PULL STATION. MOUNT 46" AFF. TO CENTER	FAA	FIRE ALARM ANNUNCIATOR PANEL
H	HEAT DETECTOR	ARS	AREA OF REFUGE STATION
S	SMOKE DETECTOR	ARL	AREA OF REFUGE LIGHTING
S_D	DUCT SMOKE DETECTOR	ARM	AREA OF REFUGE MASTER PANEL
S_E	ELEVATOR SMOKE DETECTOR	ECM	EMERGENCY COMMUNICATIONS MASTER
S_{SB}	SMOKE DETECTOR WITH SOUNDER BASE	ECS	EMERGENCY COMMUNICATIONS STATION
Co	CARBON MONOXIDE DETECTOR		
MISCELLANEOUS			
	CONDUIT STUB THROUGH WALL BUSHED EACH END		PUSHBUTTON, PROVIDE JUNCTION BOX AND CONDUIT, MOUNT AT SWITCH HEIGHT
	CONDUIT WITH BUSHING ON END.		GROUND ROD
	ELECTRICAL HOMERUN, CIRCUIT AS SHOWN		EXO-THERMIC WELD CONNECTION
*PNL-X	SHARED ELECTRICAL HOMERUN WHEN WIRE TAG HAS (*) ASTERISK PRECEDING PANEL-CIRCUIT INFO	N	NURSE CALL DOME LIGHT
	RELAY CIRCUIT	P	NURSE CALL PULL CORD
	ITEMS AND/OR DEVICES CIRCUITED TOGETHER		DETAIL OR SECTION NUMBER SHEET NUMBER
	ITEMS AND/OR DEVICES CIRCUITED TOGETHER, BUT SWITCHED SEPARATELY		
ABBREVIATIONS			
AC	ABOVE COUNTER	HC	HVAC CONTRACTOR
AFF.	ABOVE FINISHED FLOOR	IG	ISOLATED GROUND
AFG	ABOVE FINISHED GRADE	LCP	LIGHTING CONTROL PANEL
		NL	NIGHT LIGHT
DISC	DISCONNECT	NTS	NOT TO SCALE
DW	DISHWASHER	OC	ON CENTER
EC	ELECTRICAL CONTRACTOR	PC	PLUMBING CONTRACTOR
ELEV	ELEVATION	PNL	PANELBOARD
EM	EMERGENCY	REF	REFRIGERATOR
ETR	EXISTING TO REMAIN	UC	UNDER COUNTER
EWC	ELECTRIC WATER COOLER	UNO	UNLESS NOTED OTHERWISE
FPC	FIRE PROTECTION CONTRACTOR	3R	NEMA 3R
GC	GENERAL CONTRACTOR/CONSTRUCTION MANAGER	4X	NEMA 4X
GDSP	GARBAGE DISPOSAL	WT	WATER TIGHT
GFI	GROUND FAULT CIRCUIT INTERRUPTER	XFMR	TRANSFORMER
FIRE RATED WALLS			
	FIRE - 1 HOUR		FIRE - 3 HOUR
	FIRE - 2 HOUR		FIRE - 4 HOUR
SECURITY			
DC	DOOR CONTACT	K	KEY PAD
ES	ELECTRIC STRIKE	L	LED INDICATOR LIGHT
CR	CARD READER	FP	FINGER PRINT SCANNER
RE	REQUEST TO EXIT	AL	DOOR ALARM
I	INTERCOM		CAMERA
COMMUNICATION			
	WALL MOUNTED SPEAKER		CEILING MOUNTED SPEAKER
V	LOCAL VOLUME CONTROL	TV	TELEVISION OUTLET MOUNT 18" AFF. TO CENTER

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	VOLTAGE	LIGHT SOURCE	FIXTURE WATTS	MANUFACTURER SERIES	REMARKS
A	2X2 LAY-IN TROFFER - LED - DIMMABLE	120 V	LED	29 VA	METALUX / 22EN-LD2-34-UNV-L830-A3/8-4/18GDIM-CD-1-U	OFCI
B	6" ROUND RECESSED DOWNLIGHT - LED - DIMMABLE	120 V	LED	17 VA	HALO / H750T-ML5615LSVWFL9FS1E-6925SC	OFCI (3)
EM1	WALL / CEILING BATTERY EMERGENCY LIGHT	120 V	LED	5 VA	EVENLITE / TCL-2-W	OFCI
R2	EXTERIOR TWINHEAD REMOTE EMERGENCY LAMPS	120 V	LED	4 VA	EVENLITE / PRW-LED-2-MV	OFCI
S81	8' LINEAR STRIP - 0-10V DIMMABLE - WHITE HOUSING - ROUND FROSTED LENS	120 V	LED	55 VA	METALUX /8TSNLED-LD5-75SL-LN-UNV-L850-CD1-U / SCF-48-B	OFCI (1)(2)
XE	COMBO SIGNLE/DOUBLE FACE EXIT W/EM HEADS	120 V	LED	4 VA	EVENLITE / TCXCOM-2x2-G-U-W	OFCI

- COORDINATE FIXTURE LOCATIONS, CEILING COMPATIBILITY AND TRIM TYPE WITH ARCHITECT'S REFLECTED CEILING GRID. MAKE ADJUSTMENTS TO LAYOUT AS REQUIRED.

REMARKS:

OFCI = OWNER FURNISHED, CONTRACTOR INSTALLED.

(1) PROVIDE CADDY T-GRID BOXHANGER AND 4" BOX FOR MOUNTING VERIFY STEM LENGTH TO MOUNT BOTTOM OF FIXTURE AT 7'-0" AFF

(2) ALL MOUNTING STEMSSUPPLIED BUY OWNER

(3) LIGHT HOUSING FOR "B" FIXTURE PROVIDED BY EC. HOUSING TO BE COOPER H750T

NOTE:
ALL LIGHT FIXTURES LISTED ON THE SCHEDULE ABOVE WILL BE FURNISHED BY OWNER AND INSTALLED BY E.C.
E.C. SHALL PROVIDE ALL NECESSARY MOUNTING ACCESSORIES, HARDWARE HANGARS, SWITCHES, ETC THAT ARE NOT SUPPLIED WITH FIXTURE/DEVICE UNLESS OTHERWISE NOTED IN THE ABOVE SCHEDULE.

3 ø FEEDER SCHEDULES - COPPER

3 WIRE FEEDERS			4 WIRE FEEDERS		
FEEDER DESIGNATION	CONDUIT SIZE(S)	CONDUCTORS & GROUNDING CONDUCTOR(S) SIZES	FEEDER DESIGNATION	CONDUIT SIZE(S)	CONDUCTORS & GROUNDING CONDUCTOR(S) SIZES
20 - 3G	3/4"	(3) #12 & #12 GND	20 - 4G	3/4"	(4) #12 & #12 GND
25 - 3G	3/4"	(3) #10 & #10 GND	25 - 4G	3/4"	(4) #10 & #10 GND
30 - 3G	3/4"	(3) #10 & #10 GND	30 - 4G	3/4"	(4) #10 & #10 GND
35 - 3G	3/4"	(3) #10 & #10 GND	35 - 4G	3/4"	(4) #10 & #10 GND
40 - 3G	1"	(3) #8 & #10 GND	40 - 4G	1"	(4) #8 & #10 GND
45 - 3G	1"	(3) #8 & #10 GND	45 - 4G	1"	(4) #8 & #10 GND
50 - 3G	1"	(3) #8 & #10 GND	50 - 4G	1"	(4) #8 & #10 GND
60 - 3G	1"	(3) #6 & #8 GND	60 - 4G	1"	(4) #6 & #8 GND
70 - 3G	1"	(3) #4 & #8 GND	70 - 4G	1-1/4"	(4) #4 & #8 GND
80 - 3G	1"	(3) #4 & #8 GND	80 - 4G	1-1/4"	(4) #4 & #8 GND
90 - 3G	1-1/4"	(3) #3 & #8 GND	90 - 4G	1-1/4"	(4) #3 & #8 GND
100 - 3G	1-1/4"	(3) #3 & #8 GND	100 - 4G	1-1/4"	(4) #3 & #8 GND
110 - 3G	1-1/4"	(3) #2 & #6 GND	110 - 4G	1-1/2"	(4) #2 & #6 GND
125 - 3G	1-1/4"	(3) #1 & #6 GND	125 - 4G	1-1/2"	(4) #1 & #6 GND
150 - 3G	1-1/2"	(3) #1/0 & #6 GND	150 - 4G	2"	(4) #1/0 & #6 GND
175 - 3G	2"	(3) #2/0 & #6 GND	175 - 4G	2"	(4) #2/0 & #6 GND
200 - 3G	2"	(3) #3/0 & #4 GND	200 - 4G	2"	(4) #3/0 & #4 GND
225 - 3G	2"	(3) #4/0 & #4 GND	225 - 4G	2-1/2"	(4) #4/0 & #4 GND
400 - 3G	3"	(3) 500 kcmil & #3 GND	400 - 4G	3-1/2"	(4) 500 kcmil & #3 GND

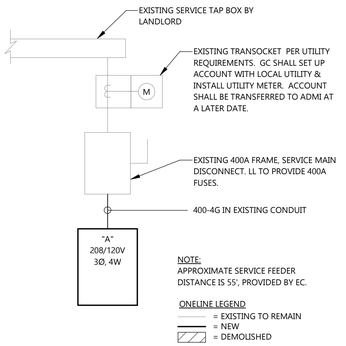
NOTE: Ground Conductor Size May Be Reduced Based On Overcurrent And/Or Ground Fault Protection Equipment (NEC 250)

NOTE: Conductor Sizes Listed Above Are For Copper.

BRANCH CIRCUIT FEEDER SCHEDULE

AMP / POLE	CONDUIT SIZE	CONDUCTORS & GROUNDING CONDUCTOR SIZES
15A/1P OR 15A/2P	1/2"	(2) #12 & #12 GND
20A/1P OR 20A/2P	3/4"	(2) #12 & #12 GND
15A/3P OR 20A/3P	3/4"	(3) #12 & #12 GND
25A/1P OR 25A/2P	3/4"	(2) #10 & #10 GND
30A/1P OR 30A/2P	3/4"	(2) #10 & #10 GND
25A/3P OR 30A/3P	3/4"	(3) #10 & #10 GND
35A/1P OR 35A/2P	3/4"	(2) # 10 & #10 GND
40A/1P OR 40A/2P	1"	(2) # 8 & #10 GND
35A/3P OR 40A/3P	1"	(3) #8 & #10 GND
45A/1P OR 45A/2P	1"	(2) #8 & #10 GND
45A/3P OR 50A/3P	1"	(3) #8 & #10 GND
50A/1P OR 50A/2P	1"	(2) #8 & #10 GND
60A/1P OR 60A/2P	1"	(2) #6 & #8 GND
60A/3P	1-1/4"	(3) #6 & #8 GND
70A/3P OR 80A/3P	1-1/4"	(3) #4 & #8 GND
90A/3P	1-1/4"	(3) #3 & #8 GND
100A/3P OR 110A/3P	1-1/2"	(3) #2 & #6 GND
125A/3P	1-1/2"	(3) #1 & #6 GND

- PROVIDE BRANCH CIRCUIT FEEDERS AS NOTED ABOVE, UNLESS NOTED OTHERWISE.



ONELINE DIAGRAM

NOT TO SCALE

PANELBOARD: A

LOCATION: MECHANICAL ROOM 116
SUPPLY FROM: UTILITY
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTS: 120/208 WYE
PHASES: 3
WIRES: 4

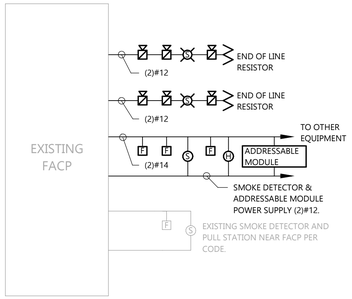
A.I.C. RATING: 22,000(1)
MAINS TYPE: MLO
BUS RATING: 400A
MCB RATING:

NOTES:

SEE BRANCH CIRCUIT FEEDER SCHEDULE FOR FEEDER DESIGNATIONS.
(1) CONTRACTOR SHALL VERIFY AVAILABLE FAULT CURRENT PRIOR TO ORDERING EQUIPMENT
(G) PREFIX /SUFFIX DENOTES GFI TYPE BREAKER

CKT	CIRCUIT DESCRIPTION	TRIP	POLES	A		B		C		POLES	TRIP	CIRCUIT DESCRIPTION	CKT
1	LIGHTING - NIGHT LIGHTS	20 A	1	238	360					1	20 A	RECEPTACLE - MECH ROOM	2
3	LIGHTING - CARE AREAS AND LABS	20 A	1			1075	180			1	20 A	RECEPTACLE - MECH ROOM	4
5	LIGHTING - OFFICES, PUBLIC SPACES, AND B.O.H.	20 A	1					1291	720	1	20 A	RECEPTACLE - PHONE CABINET	6
7	MOTOR - BATHROOM FANS, CIRC PUMP	20 A	1	800	720					1	20 A	RECEPTACLE - BREAK AREA	8
9	CONTRACTOR CIRCUIT	20 A	1			0	1650			1	20 A (G)	RECEPTACLE - BREAK AREA MW	10
11	RECEPTACLE - LAB	20 A	1					360	1800	1	20 A (G)	RECEPTACLE - BREAK AREA REF	12
13	RECEPTACLE - LAB	20 A	1	360	900					1	20 A	RECEPTACLE - HALLWAY / WOMEN RESTROOM	14
15	RECEPTACLE - LAB	20 A	1			360	1500			1	20 A	OTHER - HAND DRYER WOMENS	16
17	RECEPTACLE - LAB	20 A	1					360	900	1	20 A	RECEPTACLE - CONSULTATION / INT. WAITING	18
19	RECEPTACLE - LAB	20 A	1	180	720					1	20 A	RECEPTACLE - RECEPTION / MENS	20
21	RECEPTACLE - LAB REF	(G) 20 A	1			1800	540			1	20 A	RECEPTACLE - TREATMENT #7	22
23	RECEPTACLE - LAB	20 A	1					360	900	1	20 A	RECEPTACLE - TREATMENT #7	24
25	RECEPTACLE - LAB	20 A	1	360	540					1	20 A	RECEPTACLE - STERILIZATION	26
27	RECEPTACLE - LAB	20 A	1			360	360			1	20 A	RECEPTACLE - STERILIZATION CPU	28
29	RECEPTACLE - LAB	20 A	1					720	540	1	20 A	RECEPTACLE - TREATMENT #6	30
31	RECEPTACLE - LAB	20 A	1	180	900					1	20 A	RECEPTACLE - TREATMENT #6	32
33	RECEPTACLE - INTRA-ORAL X-RAY / SCAN	20 A	1			180	1080			1	20 A	RECEPTACLE - TREATMENT #5	34
35	RECEPTACLE - OPEN / CLOSED	20 A	1					360	1080	1	20 A	RECEPTACLE - TREATMENT #4	36
37	RECEPTACLE - TREATMENT #1	20 A	1	1080	1440					1	20 A	OTHER - PASS THROUGH X-RAY	38
39	RECEPTACLE - TREATMENT #2	20 A	1			1080	1080			1	20 A	RECEPTACLE - TREATMENT #3	40
41	RECEPTACLE - MANAGER / DOCTOR OFFICE	20 A	1					900	360	1	20 A	RECEPTACLE - INTRA-ORAL CPU	42
43	OTHER - HAND DRYER MENS	20 A	1	1500	1000					1	20 A	OTHER - INTRA-ORAL X-RAY	44
45	RECEPTACLE - BUSINESS OFFICE	20 A	1			360	180			1	20 A (G)	RECEPTACLE - BOTTLE FILLER	46
47	RECEPTACLE - BUSINESS OFFICE	20 A	1					720	1200	1	20 A	OTHER - SIGNAGE	48
49	RECEPTACLE - BUSINESS OFFICE	20 A	1	720	1200					1	20 A	OTHER - SIGNAGE	50
51	RECEPTACLE - BUSINESS OFFICE	20 A	1			540	1200			1	20 A	OTHER - SIGNAGE	52
53	ELECTRIC HEAT - EWH-1	20 A	1					1500	0	1	20 A --	SPARE	54
55	SPARE	-- 20 A	1	0	0					1	20 A --	SPARE	56
57	SPARE	-- 20 A	1			0	0			1	20 A --	SPARE	58
59	SPARE	-- 20 A	1					0	0	1	20 A --	SPARE	60
61	SPARE	-- 20 A	1	0	0					1	20 A --	SPARE	62
63	SPARE	-- 20 A	1			0	0			1	20 A --	SPARE	64
65	RECEPTACLE - ROOFTOP	20 A	1					540	2250	2	20 A	MOTOR - WH-1	66
67	MOTOR - RTAC-1	30 A	3	3360	2250					--	-- --	--	68
69	--	-- --	--			3360	1000			2	20 A	RECEPTACLE - PANORAMIC X-RAY	70
71	--	-- --	--					3360	1000	--	-- --	--	72
73	MOTOR - RTAC-2	30 A	3	3120	1700					1	20 A (G)	RECEPTACLE - STERILIZER	74
75	--	-- --	--			3120	0			1	20 A --	SPARE	76
77	--	-- --	--					3120	465	2	15 A	MOTOR - VACUUM SYSTEM	78
79	MOTOR - RTAC-3	45 A	3	2400	465					--	-- --	--	80
81	--	-- --	--			2400	1492			2	30 A	MOTOR - AIR COMPRESSOR	82
83	--	-- --	--					2400	1492	--	-- --	--	84
		TOTAL LOAD:		26493 VA		24897 VA		28698 VA					
		TOTAL AMPS:		223 A		207 A		241 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Lighting	2435 VA	125.00%	3044 VA		
Motor	35854 VA	107.03%	38374 VA	**TOTAL CONN. LOAD**	80088 VA
Other	9569 VA	100.00%	9569 VA	**TOTAL EST. DEMAND**	72852 VA
Receptacle	30730 VA	66.27%	20365 VA	**TOTAL CONN.**	222 A
				TOTAL EST. DEMAND	202 A



NOTES:

- SEE FLOOR PLANS AND SPECIFICATIONS FOR DEVICE QUANTITIES AND EQUIPMENT REQUIRED.
- PROVIDE BOXES FOR ALL DETECTORS PER MANUFACTURER'S REQUIREMENTS.

ELECTRICAL LEGEND, GENERAL SCHEDULES & ONELINE

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

JOB NUMBER
230264900

SHEET NUMBER
E0.1

ELECTRICAL SPECIFICATIONS

DIVISION 26 ELECTRICAL

00 72 00. GENERAL CONDITIONS

A. SEE SHEET A0.1.

01 11 00 GENERAL REQUIREMENT

A. SEE SHEET A0.1.
B. IN AS MUCH AS THE SPECIFICATIONS ARE BRIEF, THE CONTRACTOR SHALL PROVIDE WORKMANSHIP THAT IS OF THE BEST QUALITY WITH THE BEST POSSIBLE APPEARANCE AND UTILITY. FAULTY WORK SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER. INDUSTRY STANDARDS SHALL BE USED AS THE GUIDE FOR QUALITY OF MATERIALS AND WORKMANSHIP.
C. ENTIRE INSTALLATION SHALL BE PREPARED IN A FIRST-CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEMS SHALL BE FULLY OPERATIONAL. ACCEPTANCE BY OWNER SHALL BE A CONDITION OF THE CONTRACT. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES IN ORDER TO AVOID INTERFERENCES OR DISPUTES AMONG RESPECTIVE TRADES.
D. ELECTRICAL CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE PLANS (ARCHITECTURAL, MEP, EQUIPMENT SUPPLIER DRAWINGS, LANDLORD DRAWINGS, ETC.) AND SHALL VERIFY EXISTING CONDITIONS AT THE SITE.
E. THE ELECTRICAL CONTRACTOR'S CONTRACT SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING: WIRING, CONDUIT, PANELBOARDS, TRANSFORMERS, SWITCHES, RECEPTACLES, TIME CLOCK, JUNCTION BOXES AND LABOR.
F. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY AND ALL ITEMS NECESSARY TO COMPLETE THIS PROJECT AS DRAWN.
G. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ELECTRICAL EQUIPMENT AND WIRING IN ACCEPTANCE WITH THE LANDLORD'S DESIGN CRITERIA.

09 91 00 FINISH AND PAINTING

A. PREPARE EXPOSED CONDUIT, FITTINGS, SUPPORTS, AND ACCESSORIES FOR FINISH PAINTING IN ROOMS THAT WILL HAVE CEILING AND STRUCTURE PAINTED.
B. E.C. SHALL PROVIDE A FACTORY OR FIELD APPLIED PRIME AND FINISH COAT OF COLOR SELECTED BY THE OWNER'S REPRESENTATIVE TO ALL ROOF MOUNTED EQUIPMENT AND OTHER EXTERIOR MATERIALS, INCLUDING SUPPORT HARDWARE.
C. COORDINATE WORK WITH THE PAINTERS SO THAT ALL EQUIPMENT IS INSTALLED PRIOR TO PAINTING. E.C. SHALL PAINT ITEMS IF NOT IN PLACE PRIOR TO NORMAL ROUTINE PAINTING.
D. IF FINISH BECOMES RUSTED, CORRODED, SCRATCHED, OR FLAKED DURING STORAGE OR INSTALLATION, REFINISH THE EQUIPMENT TO THE SATISFACTION OF THE OWNER.
E. WHERE THE ELECTRICAL CONTRACTOR IS REQUIRED TO PAINT, THE PAINTING SHALL BE DONE IN ACCORDANCE WITH THE PAINTING PORTION OF THE ARCHITECTURAL SPECIFICATION.

26 05 01 BASIC ELECTRICAL REQUIREMENTS

A. SHOP DRAWINGS:
   1. SEE SPECIFICATIONS ON SHEET A0.1 FOR ADDITIONAL REQUIREMENTS AND SUBMISSION PROCEDURES
   2. INCLUDE OUTLINE AND GENERAL ARRANGEMENT DRAWINGS, DATA SHEETS AND WIRING DIAGRAMS.
   3. SHOP DRAWINGS SHALL CLEARLY INDICATE SPECIFIC MODEL BEING PROVIDED WHERE CUT SHEETS SHOW MULTIPLE MODELS.
   4. FAILURE TO SUBMIT SHOP DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING THE SPECIFIED EQUIPMENT AND MATERIALS.
B. DETAILS AND SCHEDULES ARE SHOWN TO AID THE CONTRACTOR AND ARE NOT MEANT TO BE INCLUSIVE OF ALL DEVICES. PROVIDE REQUIRED EQUIPMENT AND ACCESSORIES FOR A COMPLETE INSTALLATION.
C. INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND REQUIREMENTS. PROVIDE ADDITIONAL WORK AND MATERIALS AS REQUIRED.
D. THE CONTRACTOR HAS THE SOLE RESPONSIBILITY FOR AND SHALL HAVE CONTROL OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND SAFETY PRECAUTIONS AND PROCEDURES USED TO CONSTRUCT THE WORK.
E. COORDINATE INSTALLATION OF ELECTRICAL WORK WITH THE OTHER CONTRACTORS TO AVOID CONFLICTS WITH OTHER WORK.
F. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITION AT ALL POINTS IN THE BUILDING. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION.
G. COMPLY WITH THE REQUIREMENTS OF NFPA; NATIONAL, STATE AND LOCAL ELECTRICAL CODES AND LOCAL UTILITY REGULATIONS.
H. MATERIAL SHALL BEAR U.L. AND/OR OTHER APPROVED AGENCY LISTING.
I. INSTALL MOTOR STARTERS FURNISHED BY HVAC AND PLUMBING CONTRACTORS, AND WIRE FROM THE POWER SOURCE TO THE STARTER AND FROM THE STARTER TO THE MOTOR.
J. VERIFY ELECTRICAL SIZE AND CONNECTION REQUIREMENTS FOR EQUIPMENT FURNISHED BY OTHERS WITH FINAL SHOP DRAWINGS.
K. PROVIDE ALL CUTTING AND PATCHING NECESSARY FOR ELECTRICAL WORK INSTALLATION UNLESS THIS WORK IS IDENTIFIED TO BE THE WORK OF OTHER CONTRACTORS. PATCHING SHALL MATCH ADJACENT SURFACES. CORE DRILL OR SAW-CUT OPENINGS THROUGH EXISTING CONCRETE.
L. PROJECT COMPLETION
   1. CLEAN FIXTURES AND EQUIPMENT AND LEAVE IN PROPER WORKING CONDITION AT THE TIME OF FINAL CLEAN-UP.
   2. MARK RECORD DRAWINGS ON A FINAL SET OF DRAWINGS WHICH INCLUDES ALL REVISIONS.
M. LOCATION
   1. THE ARCHITECT SHALL RESERVE THE RIGHT TO MAKE OUTLET POSITION CHANGES UP TO 10' BEFORE INSTALLATION.
   2. DO NOT LOCATE OUTLETS OR EQUIPMENT WHERE THE USEFULNESS AND/OR OPERATION WILL BE AFFECTED BY THE WORK OF OTHER TRADES, DOOR SWING, COUNTER, EQUIPMENT, ETC.
N. ACCESS
   1. INSTALL EQUIPMENT, JUNCTION BOXES, PULL BOXES AND ACCESSORIES TO PERMIT ACCESS WITHOUT RELOCATING INSTALLED OR YET TO BE INSTALLED EQUIPMENT.
   2. ACCESS PANELS
      a. FURNISH ACCESS PANELS OF ADEQUATE SIZE TO PERMIT SERVICE OF CONCEALED DEVICES. PANELS SHALL BE SUITABLE FOR INSTALLATION IN THE MATERIAL FORMING THE FINISHED SURFACE, WITH FLUSH METAL FRAME, FLUSH HINGED STEEL DOOR, FLUSH SCREWDRIVER OPERATED LATCH.
      b. PANELS UL LISTED TO CONFORM TO THE FIRE RATING OF THE SURFACE INSTALLED IN.
      c. TURN ACCESS PANEL OVER TO CONTRACTOR SKILLED IN THE CONSTRUCTION OF THE SURFACES INVOLVED FOR INSTALLATION.
      d. ARCHITECT TO APPROVE ACCESS PANEL LOCATION PRIOR TO INSTALLATION OF EQUIPMENT REQUIRING ACCESS.
      e. COORDINATE WITH THE OTHER CONTRACTORS AND WHEREVER PRACTICAL, GROUP DEVICES IN SUCH A MANNER SO AS TO MINIMIZE PANELS.
O. ELECTRICAL CONTRACTOR TO PROVIDE PULL WIRE IN EMPTY CONDUIT FOR TELEPHONE OR AS REQUIRED BY LOCAL PHONE COMPANY.
P. ALL NEW MATERIALS, WORKMANSHIP AND EQUIPMENT SHALL BE GUARANTEED FOR ONE YEAR AFTER SYSTEM ACCEPTANCE.
Q. ALL WIRING SHALL BE IN CONDUIT AS REQUIRED BY LOCAL CODE AND SHALL BE CONCEALED WHERE POSSIBLE. WHERE EXPOSED, RUN IN STRAIGHT LINES PARALLEL AND/ OR PERPENDICULAR TO BUILDING LINES.
R. ELECTRICAL CONTRACTOR SHALL INCLUDE ALL MISCELLANEOUS ITEMS REQUIRED TO COMPETE THE WORK.
S. ELECTRICAL CONTRACTOR SHALL NOT SCALE DRAWINGS FOR DIMENSIONS BUT SHALL CONTACT THE OWNER'S REPRESENTATIVE REGARDING ANY DIMENSIONAL DATA REQUIRED AND SHALL VERIFY EXACT LOCATION AND MOUNTING HEIGHTS OF ALL FIXTURES, NOT SPECIFIED ON DRAWINGS OR DETAILS WITH OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
T. ELECTRICAL CONTRACTOR SHALL INSTALL ALL FIXTURES FURNISHED BY OWNER. ELECTRICAL CONTRACTOR SHALL FURNISH ALL LAMPS AND MISCELLANEOUS HARDWARE TO COMPLETE INSTALLATION. EC IS RESPONSIBLE TO REPLACE ANY NON-WORKING FIXTURES. ALL SUCH INSTALLATION AND HOOK-UPS ARE BY ELECTRICAL CONTRACTOR.
U. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL OR REMOVE AND REPLACE AS NECESSARY ALL DAMAGED LIGHT FIXTURE LENSES, LOUVERS, BAFFLES, HOUSINGS, ETC. RECEIVED ON JOB IN DAMAGED OR DEFECTIVE CONDITION WITH REPLACEMENT UNITS.
V. ELECTRICAL CONTRACTOR TO PROVIDE CIRCUIT "LOCK-ON" CLIPS AND INSTALL SAME ON THE FOLLOWING CIRCUITS: WATER HEATER, NIGHT / EMERGENCY LIGHTING, PHONE, AND COMPUTERS.
W. ELECTRICAL CONTRACTOR SHALL BALANCE THE LOADS ACROSS ALL PHASES AND SHALL PROVIDE A CIRCUIT DIRECTORY WITH TYPED CIRCUIT DESIGNATION CARD UNDER PLASTIC COVER ON THE INSIDE OF EACH PANEL DOOR. ELECTRICAL CONTRACTOR SHALL ALSO FURNISH AND INSTALL NAMEPLATES ON ALL DISCONNECT SWITCHES AND PANELS. ALL NEW ELECTRICAL MATERIALS, PRODUCTS AND EQUIPMENT (INCLUDING ALL COMPONENTS THEREOF) SHALL BEAR THE UNDERWRITER'S LABORATORIES LABEL AND MEET THE APPROPRIATE ASTM, NEC AND NEMA STANDARDS.
X. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE A TEMPORARY LIGHTING AND POWER SYSTEM (WITH GROUND FAULT PROTECTION) FOR THE WORK OF ALL TRADES DURING CONSTRUCTION AND SHALL REMOVE THE SAME PRIOR TO THE COMPLETION OF THE PROJECT.

26 05 19 LOW VOLTAGE POWER CONDUCTORS AND CABLES (600V AND LESS)

A. TYPE AND SIZE
   1. NO. 10 & 12: SOLID OR STRANDED COPPER, 600V, THHN/THWN.
   2. NO. 8 TO 3: STRANDED COPPER, 600V, THHN/THWN.
   3. NO. 2 TO 4/0: STRANDED COPPER, 600V, THHN/THWN.
   4. 250 KCMIL AND LARGER: STRANDED COPPER, 600V, XHHW.
   5. MINIMUM BRANCH CIRCUIT WIRE SIZE NO. 12.
   6. CONTROL WIRING: STRANDED COPPER, MINIMUM NO. 12.
   7. GREEN INSULATION, COPPER STRANDED EQUIPMENT GROUND.
   8. TYPE AC OR MC CABLE SHALL NOT BE PERMITTED. ALL WIRING SHALL BE INSTALLED IN CONDUIT.
   9. WIRING UTILIZED IN ALL PATIENT CARE AREAS SHALL MEET THE REQUIREMENTS OF ARTICLE 517 OF THE NEC. ALL EXAM AND TREATMENT ROOMS SHALL BE CONSIDERED PATIENT CARE AREAS.
B. NEUTRALS AND GROUNDS SHALL BE COLOR CODED PER NEC.
C. WIRE COLORS
   1. 120/208-VOLTSYSTEM: PHASE-A (BLACK), PHASE-B (RED), PHASE-C (BLUE).
D. TWO PERCENT VOLTAGE DROP AT PANELBOARDS AND THREE PERCENT FOR BRANCH CIRCUITS FOR FIVE PERCENT VOLTAGE DROP PER NEC.
E. PROVIDE GROUND CONDUCTOR(S) WITH EVERY BRANCH CIRCUIT AND EVERY FEEDER.
F. PROVIDE A SEPARATE GROUND CONDUCTOR AND A SEPARATE NEUTRAL CONDUCTOR WHEN AN INDIVIDUAL RECEPTACLE OR PIECE OF EQUIPMENT IS SHOWN WITH AN INDIVIDUAL HOMERUN.
G. PROVIDE A SEPARATE NEUTRAL CONDUCTOR FOR EACH LIGHTING BRANCH CIRCUIT THAT SERVES ELECTRONIC FLUORESCENT BALLASTS AND SOLID-STATE LED DRIVERS OR PROVIDE A NEUTRAL CONDUCTOR ONE SIZE LARGER THAN THE LARGEST SOURCE CONDUCTOR WHEN THE NEUTRAL IS SHARED.
H. TESTING: ALL CIRCUITS SHALL BE TESTED FOR PROPER OPERATION AND FUNCTION. REPAIR ALL NON-WORKING, NEWLY INSTALLED, CIRCUITS.

26 22 00 LOW VOLTAGE TRANSFORMERS (600V AND LESS)

A. MANUFACTURERS
   1. SQUARE D.
   2. CUTLER-HAMMER
   3. SIEMENS
   4. GENERAL ELECTRIC
B. TRANSFORMER CRITERIA:
   1. UL LISTED AND CONFORM TO REQUIREMENTS OF ANSI/NFPA 70.
   2. PRIMARY AND SECONDARY WINDINGS: COPPER
   3. EFFICIENCY SHALL MEET OR EXCEED DEPARTMENT OF ENERGY STANDARDS.
   4. RATE OF RISE: 150 DEGREE C TEMPERATURE RISE ABOVE 40 DEGREE C AMBIENT.
   5. INSULATION CLASS: 220 DEGREES CELSIUS CLASS 115 DEGREES CELSIUS MAXIMUM RISE ABOVE 40 DEGREES CELSIUS FOR TRANSFORMERS 15 KILOVOLTAMPS (KVA) OR SMALLER; 220 DEGREES CELSIUS CLASS 80 DEGREES CELSIUS MAXIMUM RISE ABOVE 40 DEGREES CELSIUS FOR TRANSFORMERS LARGER THAN 15 KVA.
   6. MAXIMUM IMPEDANCE: 5.75%.
   7. NUMBER OF TAPS: MANUFACTURER'S STANDARD
C. MOUNTING
   1. SUITABLE FOR TRAPEZE AND WALL BRACKET MOUNTING.
   2. PROVIDE ALL NECESSARY MOUNTING HARDWARE, BRACKETS, AND RODS FOR INSTALLING TRANSFORMERS.
D. MANUFACTURER'S STANDARD PAINT OVER CORROSION-RESISTANT PRETREATMENT AND PRIMER.
E. PROVIDE SPRING PRESSURE CONNECTIONS. CUPPED OR SLIT WASHERS ARE ACCEPTABLE. PROVIDE ANTI-OXIDIZING AGENTS ON TERMINATIONS.
F. PROVIDE LUGS RATED FOR COPPER CONDUCTORS. LUGS SHALL BE EITHER SILVER OR TIN PLATED.

26 05 29 HANGERS AND SUPPORTS

A. CONDUIT HANGERS, ATTACHMENTS, AND SUPPORTS
   1. PROVIDE PROPER FITTINGS AND SUPPORT SUITABLE FOR AMBIENT/ENVIRONMENTAL CONDITIONS AND SERVICE DUTY.
   2. ATTACH TO STRUCTURAL COMPONENTS TO NOT JEOPARDIZE STRUCTURAL INTEGRITY.
   3. PROVIDE ANGLES, CHANNELS, AND BEAMS AS REQUIRED.
B. BACKBOARDS
   1. 3/4" PLYWOOD PAINTED ON BOTH SIDES AND EDGES WITH TWO COATS OF WHITE ENAMEL PAINT TO MOUNT EQUIPMENT WHERE SHOWN.
   2. SUPPORT WITH PAINTED OR GALVANIZED STEEL CHANNEL.
C. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY AND ALL BLOCKING, CHAINS, HANGERS, ETC AS REQUIRED TO SUPPORT LIGHTING SYSTEMS.

26 05 30 CONDUIT

A. RMC
   1. ALLOWED FOR ALL SIZES INSIDE ABOVE GRADE.
   2. REQUIRED FOR ALL SIZES OF OUTDOOR ABOVE GRADE, BELOW GRADE AND IN CONCRETE SLAB.
   3. REQUIRED WHERE CALLED OUT ON PLANS.
   4. GALVANIZED RIGID STEEL WITH GALVANIZED RIGID STEEL FITTINGS, THREADED WATERTIGHT.
B. ELECTRIC METALLIC TUBING (EMT)
   1. ALLOWED FOR INSIDE ABOVE GRADE CONDUIT 2" AND SMALLER.
   2. STEEL SET SCREW OR COMPRESSION TYPE FITTINGS WITH INSULATED THROAT.
   3. CAST METAL SET SCREW FITTINGS NOT ALLOWED.
C. PVC
   1. USE FOR LOW VOLTAGE CABLING ONLY CONCRETE, UNDER FLOOR SLABS, OR IN EARTH WHEN PERMITTED BY CODE AND LOCAL ORDINANCES
   2. MINIMUM SIZE 3/4".
   3. SCHEDULE 40 PVC.
D. FLEXIBLE
   1. MINIMUM SIZE 1/2".
   2. MAXIMUM LENGTH 36" FOR CONNECTION TO HVAC EQUIPMENT
   3. MAXIMUM LENGTH 72" FOR CONNECTION TO FIXTURES IN TILE CEILINGS.
   4. STEEL FITTINGS WITH INSULATED THROAT, UL LISTED.
E. FITTINGS
   1. FITTING MATERIAL SHALL MATCH CONDUIT MATERIAL UNLESS OTHERWISE NOTED IN PLANS AND SPECIFICATIONS OR WITH WRITTEN APPROVAL BY ENGINEER.
F. INSTALLATION
   1. CONCEAL ALL CONDUIT IN FINISHED AREAS.
   2. ROUTE CONDUIT IN ORDERLY MANNER, LEVEL, PARALLEL AND AT RIGHT ANGLES TO BUILDING STRUCTURE.
   3. ALL CONDUIT UNDERGROUND OR IN CONCRETE SHALL BE RIGID CONDUIT. ALL OTHER CONDUIT MAY BE EMT
   4. DRAWINGS AND DIAGRAMS SHOW SIZE AND APPROXIMATE LOCATION OF CONDUIT. THE DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION. PROVIDE ADDITIONAL OFFSETS AS REQUIRED FOR FIELD CONDITIONS.
   5. INSTALL UL APPROVED EXPANSION FITTINGS COMPLETE WITH GROUNDING JUMPERS WHERE CONDUITS CROSS BUILDINGS EXPANSION JOINTS AND IN LONG CONDUIT RUNS WHERE DIFFERENTIAL EXPANSION OR CONTRACTION WOULD CAUSE BENDING OR SEPARATION.
   6. INSTALL CONDUIT WITH ADEQUATE DRAINAGE.
   7. PROVIDE PULL STRING IN ALL EMPTY CONDUITS.
   8. WHEN REQUIRED BY STATE AND LOCAL CODES AND ORDINANCES, PROVIDE SEPARATE CONDUIT/RACEWAY FOR FIRE ALARM AND TELECOMMUNICATION SYSTEMS.
   9. ROUTE CONDUIT ABOVE LAY-IN SUSPENDED CEILINGS SO AS NOT TO INTERFERE WITH TILE REMOVAL.
   10. INSTALL FLEXIBLE STEEL CONDUIT DROPS FROM INDEPENDENT JUNCTION BOX MOUNTED ABOVE CEILING TO RECESSED LIGHT FIXTURES.
   11. SECURE CONDUITS WITH AT LEAST ONE CORROSION PROOF MALLEABLE ALLOY STRAP OR HANGER EVERY 8 FT. DO NOT USE PERFORATED STRAPPING.
   12. PROVIDE UL LISTED FIRE-WALL PENETRATIONS WHEN CONDUIT PASS THROUGH A FIRE RATED WALL.

26 05 33 BOXES

G. FLUSH INTERIOR 4" SQUARE STEEL BOXES WITH RAISED COVERS AND SQUARE CUT CORNERS. PROVIDE BOXES RATED FOR THROUGH FEED.
H. PROVIDE CAST BOXES FOR EXTERIOR USE DEVICES. PROVIDE COVERS WITH GASKETS.
I. JUNCTION AND SPLICE BOXES SHALL HAVE GALVANIZED SCREW COVERS AND BE NOT LESS THAN CODE DIMENSIONS. THROUGH-WALL AND BACK-TO-BACK BOXES NOT ALLOWED.
J. OUTLET AND JUNCTION BOXES USED AS SURFACE METAL RACEWAY SHALL BE MANUFACTURED BY THE SURFACE METAL RACEWAY MANUFACTURER TO BE COMPATIBLE WITH THE RACEWAY USED.
K. VERIFY LOCATION PRIOR TO ROUGH-IN. MATCH THE HEIGHT OF EXISTING DEVICES FOR INSTALLATIONS IN ADDITIONS TO EXISTING FACILITIES.

26 05 35 PENETRATIONS

A. SLEEVES
   1. FURNISH RIGID CONDUIT SLEEVES FOR CABLES PASSING THROUGH MASONRY, CONCRETE, OR OTHER SIMILAR CONSTRUCTION.
   2. EXTEND SLEEVES COMPLETELY THROUGH CONSTRUCTION. EXTEND 1" ABOVE FLOORS. EXTEND 3" ABOVE THE FLOR IN MECHANICAL ROOMS AND OTHER AREAS WHERE WATER MAY ACCUMULATE.
   3. SLEEVES FOR CONDUITS 4" AND SMALLER: TWO SIZES LARGER THAN CONDUIT.
   4. FURNISH SLEEVE TO MASON FOR MASONRY WALLS.
   5. FURNISH, INSTALL, AND GROUT SLEEVE IN EXISTING MASONRY AND NEW CONCRETE WALLS.
   6. SLEEVE NOT REQUIRED FOR DRYWALL WALLS OR CORE DRILLED HOLE IN CONCRETE WALL.
B. NON-FIRE RATED INTERIOR WALL AND FLOOR PENETRATIONS: FILL VOID BETWEEN CONDUIT AND SLEEVE, CONCRETE, OR DRYWALL WITH EXPANDING POLYURETHANE FOAM. CAULK BETWEEN CONDUIT AND SLEEVE OR WALL WITH NON-HARDENING CAULK.
C. FIRE RATED INTERIOR WALL AND FLOOR PENETRATIONS: SEAL OPENING AROUND PIPE WITH A UL APPROVED FIRE-STOP SYSTEM HAVING AN F-RATING NOT LESS THAN THE HOURLY RATING OF THE ASSEMBLY BEING PENETRATED.
D. CONTRACTOR SHALL USE CAUTION PRIOR TO MAKING PENETRATIONS AS TO NOT DISTURB ANY EXISTING UTILITIES THAT MIGHT BE PRESENT IN EXISTING WALLS, CEILINGS OR FLOORS. THIS CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UTILITIES IN EXISTING WALLS, CEILINGS OR FLOORS.
E. SEAL ALL RACEWAY, CABLE AND CONDUIT PENETRATIONS THROUGH ALL WALLS IN THE ELECTRICAL ROOM(S).

26 05 53 IDENTIFICATION FOR ELECTRICAL SYSTEMS

A. ENGRAVED LABELS: ENGRAVED 3-LAYER PHENOLIC LABEL WITH BLACK LETTERS ON WHITE MATERIAL, UNLESS OTHER COLORS ARE CALLED OUT ON THE DRAWINGS OR DETAILS. LABELS MINIMUM 3/4" HIGH AND 3" LONG. LABELS MAY BE ATTACHED WITH DOUBLE BACKED ADHESIVE TAPE UNLESS INDICATED OTHERWISE. LABELS REQUIRED AT:
   1. PANELBOARDS:
      a. MOUNT IDENTIFICATION LABEL AT THE TOP OF THE FRONT COVER. MOUNT ON THE INSIDE OF DOOR FOR RECESSED PANELBOARDS.
      b. FAULT CURRENT AMPERE RATING
      c. PROVIDE TYPEWRITTEN DIRECTORY ACCURATELY INDICATING ROOMS AND/OR EQUIPMENT BEING SERVED AS REQUIRED BY NEC.
   2. DISCONNECTS:
      LABEL EQUIPMENT THAT IT SERVES.

26 24 16 PANELBOARDS

A. MANUFACTURER:
   1. EATON CUTLER HAMMER
   2. GENERAL ELECTRIC
   3. ITE — SIEMENS
   4. SQUARE D
B. CABINET
   1. NEMA 1 CABINET, OR AS LISTED IN PANEL SCHEDULES, CODE GAUGE STEEL CONSISTING OF A BOX WITH A REMOVABLE FRONT WITH HINGED DOOR AND LATCH.
   2. FABRICATE WITH STRAIGHT EDGES AND SQUARE CORNERS.
   3. BOXES SHALL BE MINIMUM 20" WIDE.
   4. MANUFACTURER'S STANDARD FINISH, PRIME COAT AND BAKED ENAMEL FINISH.
   5. RECESSED DOUBLE TUB PANELBOARDS SHALL HAVE TUBS OF THE SAME HEIGHT.
C. PROVIDE A NAMEPLATE LISTING OF THE PANEL TYPE AND NUMBER OF PROTECTIVE AND SWITCHING DEVICES AND RATINGS.
D. BUS BARS FOR THE MAINS SHALL BE COPPER SIZED IN ACCORDANCE WITH UL STANDARDS. INCLUDE FULL SIZE NEUTRAL BARS UNLESS OTHERWISE NOTED. PROVIDE GROUND BUS.
E. NEUTRAL BUSSING SHALL HAVE ONE LUG FOR EVERY BRANCH CIRCUIT THAT THE PANELBOARD IS CAPABLE OF SUPPORTING.
F. BUS SPACES FOR FUTURE SWITCHING AND PROTECTIVE DEVICES FOR THE MAXIMUM DEVICES AND SWITCHES THAT THE PANELBOARD CAN ACCOMMODATE.
G. CIRCUIT BREAKERS:
   1. UNLESS INDICATED OTHERWISE, CIRCUIT BREAKERS SHALL BE PLUG-ON, INDIVIDUALLY REPLACEABLE, THERMAL-MAGNETIC, AUTOMATIC FREE TRIPPING, SEPARATELY INDICATING "ON", "TRIPPED", AND "OFF", AMBIENT COMPENSATED AT 40 DEGREES C., SINGLE, DOUBLE, OR TRIPLE POLE, AS REQUIRED BY THE PANEL SCHEDULES.
   2. CIRCUIT BREAKERS INDICATED AS MULTIPLE POLE SHALL BE COMMON TRIP.
   3. SHUNT TRIP BREAKERS SHALL HAVE INTEGRAL RELAYS.

26 27 26 WIRING DEVICES

A. MANUFACTURERS: COOPER, HUBBELL, LEVITON AND PASS & SEYMOUR.
B. COLOR
   1. SWITCH AND RECEPTACLE COLORS SHALL BE WHITE.
   2. COVER PLATE COLORS SHALL BE BRUSHED STAINLESS STEEL.
C. WALL SWITCHES:
   1. 20-AMPERE LEVITON 1221-2 SINGLE POLE, 1223-2 THREE-WAY AND 1224-2 FOUR-WAY.
   2. SEE LEGEND FOR MOUNTING HEIGHTS.
D. DIMMERS:
   1. 0-10V DIMMER
      a. 20 AMPERE SLIDE DIMMER WITH INTEGRAL ON/OFF SWITCH. DIMMER SHALL BE RATED FOR A LED LOAD OF 1200 WATTS MINIMUM, COOPER SF10P OR COOPER DF10P.
   2. 120V DIMMER
      a. SINGLE POLE SLIDE DIMMER WITH INTEGRALL ON/OFF SWITCH. DIMMER SHALL BE RATED FOR LED LOAD OF 300 WATTS MINIMUM. COOPER SAL06P.
   3. PROVIDE COLOR CHANGE KIT AS NECESSARY TO MEET DEVICE COLOR SPECIFICATIONS.
   4. CONTRACTOR SHALL VERIFY WITH THEIR SUPPLIER(S) ALL DIMMERS AND DIMMABLE FIXTURES ARE 100% COMPATIBLE.
E. RECEPTACLES:
   1. ALL TREATMENT ROOMS SHALL BE CONSIDERED PATIENT CARE SPACES.
   2. DUPLEX GROUNDED RECEPTACLES: 20 AMPERE SPECIFICATION GRADE. LEVITON 5362.
   3. DUPLEX GROUNDED RECEPTACLES IN PATIENT CARE AREAS: 20 AMPERE SPECIFICATION GRADE, LEVITON T8300.
   4. GFCI RECEPTACLES: 20-AMPERE HUBBELL SPECIFICATION GRADE WITH LOCK OUT CAPABILITY UPON GFCI FAILURE.
   5. GFCI RECEPTACLES IN PATIENT CARE AREAS: 20-AMPERE HUBBELL HOSPITAL GRADE WITH LOCK OUT CAPABILITY UPON GFCI FAILURE.
   6. USB CHARGER DUPLEX RECEPTACLE, 20 AMPERE WITH 2 USB 3 AMP CHARGING PORTS, LEVITON T5832
   7. RECEPTACLES UTILIZED IN DWELLING UNITS, PEDIATRIC LOCATIONS AND AREAS WHERE CHILDREN ARE CARED FOR SHALL BE MARKED "TAMPER-RESISTANT" PER NEC.
   8. EXTERIOR RECEPTACLES SHALL BE MARKED "WEATHER-RESISTANT" PER NEC.
   9. ALL CONVIENENCE OUTLETS SHALL FLUSH MOUNTED.
   10. SEE LEGEND FOR MOUNTING HEIGHTS.
   11. NO CONVIENENCE RECEPTACLES SHALL BE LOCATED ON CERAMIC TILE OR MIRRORED SURFACE UNLESS SPECIFICALLY REQUIRE BY LOCAL CODES.
   12. REVIEW RECEPTACLE LAYOUT WITH OWNER PRIOR TO ROUGH-IN.
   13. VERIFY ACTUAL LOCATION OF EQUIPMENT WITH OWNER PRIOR TO ROUGH-IN.
   14. MAKE CONNECTIONS THROUGH THE USE OF PIG-TAILS.
F. COVER PLATE
   1. INTERIOR: BRUSHED STAINLESS STEEL.
   2. EXTERIOR: WEATHER-PROOF, GASKETED, LIFT COVER. RECEPTACLE COVER SHALL ALLOW CONTINUED USE WHEN COVER IS CLOSED.
G. BLANK TELEVISION AND TELEPHONE OUTLETS: 4" SQUARE EXTRA DEEP BOX, SINGLE GANG RING AND BLANK COVER PLATE. PROVIDE CONDUIT FROM EACH BOX INTO AN ACCESSIBLE SPACE. TERMINATE CONDUIT WITH INSULATED CONNECTORS ON BOTH ENDS.

26 27 27 OCCUPANCY SENSORS / VACANCY SENSORS

A. MANUFACTURERS: COOPER, HUBBELL, LEVITON, SENSOR SWITCH, & THE WATT STOPPER.
   1. COLOR: SHALL BE THE SAME COLOR AS WIRING DEVICES. REFERENCE SPECIFICATION SECTION 26 27 26.
   2. SHALL BE FROM THE SAME MANUFACTURER AS THE WIRING DEVICES.
B. SENSOR TECHNOLOGY
   1. ULTRASONIC (US).
      a. RESTROOMS
      b. HALLWAYS
   2. PASSIVE INFRARED (PIR).
      a. STORAGE ROOMS
   3. DUAL TECHNOLOGY (PASSIVE INFRARED & ULTRASONIC)
      a. OFFICES
      b. CONFERENCE ROOMS
      c. CLASSROOMS
      d. OTHER SPACES
C. SENSOR PERFORMANCE
   1. INFRARED:
      a. UTILIZE MULTIPLE SEGMENTED LENS, WITH INTERNAL GROOVES TO ELIMINATE DUST AND RESIDUE BUILD-UP.
   2. ULTRASONIC:
      a. UTILIZE AN OPERATING FREQUENCY OF 32 KHZ OR 40 KHZ THAT SHALL BE CRYSTAL CONTROLLED TO OPERATE WITHIN PLUS OR MINUS 0.005% TOLERANCE. UTILIZE DOPPLER SHIFT ULTRASONIC DETECTION TECHNOLOGY.
   3. DUAL TECHNOLOGY:
      a. UTILIZE MULTIPLE SEGMENTED LENS, WITH INTERNAL GROOVES TO ELIMINATE DUST AND RESIDUE BUILD-UP.
      b. UTILIZE AN OPERATING FREQUENCY OF 32 KHZ OR 40 KHZ THAT SHALL BE CRYSTAL CONTROLLED TO OPERATE WITHIN PLUS OR MINUS 0.005% TOLERANCE.
      c. INCORPORATE DOPPLER SHIFT ULTRASONIC AND PASSIVE INFRARED MOTION DETECTION TECHNOLOGIES. PRODUCTS THAT REACT TO NOISE OR AMBIENT SOUND SHALL NOT BE CONSIDERED.
   4. SENSOR DEVICES SHALL HAVE EITHER INTEGRAL DUAL RELAYS OR CONTROL SEPARATE DUAL RELAY POWER PACKS TO ACHIEVE DUAL LEVEL LIGHTING WHEN DUAL LEVEL CONTROL IS INDICATED.
   5. INTEGRAL ADJUSTABLE LIGHT LEVEL SENSOR WITH CAPACITY TO CONTROL ONE OR MORE RELAY WHEN THE SELECTED ADEQUATE DAYLIGHT IS PRESENT.
   6. UTILIZE ZERO CROSSING CIRCUITRY WHICH INCREASES RELAY LIFE AND SENSORS LONGEVITY.
   7. SHOULD POWER BE INTERRUPTED AND SUBSEQUENTLY RESTORED, SETTINGS AND PARAMETERS SAVED IN PROTECTED MEMORY SHALL NOT BE LOST.
   8. SENSORS SHALL BE SIZED FOR THE ROOM THEY SERVE BY MANUFACTURER'S VENDOR OR COVER 1,500 SQUARE FEET WITH STANDARD LENS AND UP TO 90 LINEAR FEET WITH LONG RANGE LENS FOR WALKING MOTION WHEN MOUNTED AT A CEILING HEIGHT OF 12 FEET.
   9. INDEPENDENT SENSITIVITY ADJUSTMENTS AND LED DISPLAY FOR EACH SENSING TECHNOLOGY.
   10. SENSOR SHALL HAVE STANDARD 5 YEAR WARRANTY AND BE UL LISTED.
D. CONTROL STRATEGIES
   1. AUTOMATIC CONTROLS SHALL BE MANUAL ON, OR SHALL TURN ON NOT MORE THAN 50% OF THE OF THE CONTROLLED LAMPS WITH THE REMAINING LAMPS BEING CONTROLLED MANUALLY.
      a. EXCEPTION: PUBLIC CORRIDORS, STAIRWAYS, RESTROOMS, PRIMARY ENTRANCES AND LOBBIES SHALL HAVE FULL ON AUTOMATIC CONTROLS.
   2. AUTOMATIC CONTROLS SHALL TURN LIGHTS OFF WITHIN 30 MINUTES OF ALL OCCUPANTS LEAVING THE SPACE.
   3. RETRIGGER TIME DELAY: ONLY ONE MOTION IS NECESSARY TO TURN ON THE LIGHTS WITHIN 5 SECONDS AFTER TURNING OFF.
   4. E.C. SHALL INCLUDE TIME IN HIS BID TO WORK WITH THE OWNER AND MANUFACTURER TO DETERMINE THE PROPER TIME AND SENSOR SETTINGS FOR EACH SENSOR IN

ELECTRICAL SPECIFICATIONS CONT.

28 31 10 DIGITAL, ADDRESSABLE FIRE ALARM SYSTEM

A. THIS SPECIFICATION IS A DESIGN BUILD PERFORMANCE BASED SPECIFICATION. THE CONTRACT DOCUMENTS ARE TO RELAY THE MINIMUM DESIGN INTENT. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE A COMPLETE APPROVED AND OPERABLE SYSTEM.
B. IN THE EVENT OF ANY INCONSISTENCY, CONFLICT, OR AMBIGUITY BETWEEN OR AMONG THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, THE MORE STRINGENT REQUIREMENT SHALL TAKE PRECEDENCE WITH NO ADDITONAL COST TO THE OWNER.
C. MANUFACTURERS: SIMPLEXGRINNELL, EDWARDS SYSTEM TECHNOLOGY, NOTIFIER, SIEMENS, HONEYWELL, GAMEWELL, GE, HOCHIKI.
D. CONTRACTOR SHALL PROVIDE ALL REQUIRED STATE SUBMITTALS FOR FIRE ALARM INSTALLATION, AND INCLUDE ALL ASSOCIATED PLAN APPROVAL FEES.
E. FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR FINAL DESIGN AND LAYOUT OF DEVICES TO MEET CODE.
F. QUALITY ASSURANCE
   1. EQUIPMENT AND INSTALLATION SHALL CONFORM TO THE NFPA 72, NEC, AND LOCAL AUTHORITIES HAVING JURISDICTION.
   2. ALL FIRE ALARM EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS.
   3. ALL TECHNICIANS PERFORMING WORK ON THIS PROJECT SHALL BE FACTORY TRAINED AND AT MINIMUM, NICET LEVEL TWO CERTIFIED IN FIRE ALARM SYSTEMS. THE SYSTEM'S VENDOR MUST EMPLOY FACTORY TRAINED TECHNICIANS AND MAINTAIN A SERVICE ORGANIZATION WITHIN 100 MILES OF THE JOB SITE, HAVE A MINIMUM OF 10 YEARS EXPERIENCE SERVICING FIRE ALARM SYSTEMS AND PROVIDE 24 HOUR EMERGENCY SERVICE.
   4. ALL FIRE SUPPRESSION DEVICES THAT REQUIRE CONNECTION TO THE FIRE ALARM CONTROL PANEL SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND FIRE SUPPRESSION CONTRACTOR AND INCORPORATED INTO THE BID.
G. PROJECT CLOSEOUT
   1. THE COMPLETED SYSTEM SHALL BE TESTED IN ACCORDANCE WITH NFPA STANDARD 72H. PROVIDE A CERTIFIED TEST REPORT FROM THE MANUFACTURER'S REPRESENTATIVE THAT THE SYSTEM COMPLIES WITH NFPA AND STATE CODES.
   2. PROVIDE A "FIRE ALARM SYSTEM RECORD OF COMPLETION" PER NFPA 72, CHAPTER 4.
   3. SEE "BASIC ELECTRICAL REQUIREMENTS" FOR OPERATING INSTRUCTION REQUIREMENTS.
   4. THE EQUIPMENT AND WIRING SHALL BE WARRANTED TO BE FREE FROM ELECTRICAL AND MECHANICAL DEFECTS FOR A PERIOD OF ONE (1) YEAR. THE YEAR SHALL COMMENCE UPON COMPLETE INSTALLATION AND SUCCESSFUL START-UP OF THE SYSTEM.
H. SYSTEM WIRING
   1. SEE SCHEMATICS AND DETAILS ON DRAWINGS FOR ADDITIONAL REQUIREMENTS.
   2. THE SYSTEM WIRING AND INSTALLATION SHALL BE IN COMPLIANCE WITH APPLICABLE CODES, PROJECT DRAWINGS AND AS REQUIRED BY THE MANUFACTURER. ALL WIRING SHALL BE COLOR CODED, TAGGED AND CHECKED TO ASSURE THAT IT IS FREE FROM SHORTS AND GROUNDS. PROVIDE RECORD DRAWINGS OF INSTALLATION.
   3. PROVIDE DUCT SEAL COMPOUND AT EACH SMOKE DETECTOR TO SEAL THE CONDUIT.
   4. WHEN CONDUIT AND/OR JUNCTION BOXES ARE REQUIRED BY LOCAL ORDINANCES OR AHJ, PAINT THE BOX COVERS AND CONDUIT BODIES RED AND LABEL "F.A.".
I. WHEN REMOTE POWER SUPPLIES ARE REQUIRED, POWER SUPPLIES ARE TO BE MOUNTED IN MECHANICAL ROOMS OR OTHER AREAS ADJACENT TO PANELBOARDS AND WHERE EASILY ACCESSIBLE. PROVIDE BATTERY BACK-UP FOR EACH REMOTE POWER SUPPLY. PROVIDE ONE DEDICATED 120 VOLT BRANCH CIRCUIT PER POWER SUPPLY. INCLUDE COST OF BRANCH CIRCUITS IN BID.
J. FIRE ALARM CONTROL PANEL (FACP)
   1. FACP (PROVIDED AS PART SHELL BUILD OUT). CONTRACTOR SHALL FIELD VERIFY MANUFACTURERE AND PROVIDE NEW FIRE ALARMAS DEVICES THAT ARE COMPATIBLE WITH EXISTING FACP.
K. DEVICES
   1. STROBE:
      a. SHALL BE COMPATIBLE WITH EXISTING FACP.
      b. UL LISTED VANDAL RESISTANT SOLID STATE XENON FLASHTUBE CAPABLE OF EITHER CEILING OR WALL MOUNTING.
      c. PYRAMIDAL SHAPED LEXAN LENS WITH "FIRE" LETTERING VISIBLE FROM A 180 DEGREE FIELD OF VIEW.
      d. CANDELA REQUIREMENTS DETERMINED BY CONTRACTOR'S VENDOR.
      e. STROBE LOCATION ON PLAN IS APPROXIMATE. THE INDICATOR SHALL BE VISIBLE FROM ALL USABLE SPACES WITHIN THE ROOM. MOUNT VISUAL INDICATOR WHERE IT DOES NOT CONFLICT WITH OTHER WALL FINISHES OR EQUIPMENT.
      f. PROVIDE SYNCHRONIZED STROBES WHERE THREE OR MORE STROBES CAN BE VIEWED FROM ONE LOCATION OR WHERE INDICATED BY AHJ.
   2. HORN/ STROBE :
      a. SHALL BE COMPATIBLE WITH EXISTING FACP.
      b. STROBE AS SPECIFIED ABOVE WITH A COMMON ENCLOSURE FOR THE HORN DEVICE.
      c. SOUND OUTPUT LEVELS DETERMINED BY CONTRACTOR'S VENDOR.
      d. EXTERNAL: PROVIDE WEATHERPROOF AUDIBLE / VISIBLE SIGNAL EQUIVALENT TO FARR-LARM SERIES 3300 AT EXTERIOR OF BUILDING NEAR SIAMESE CONNECTION. SHIELD SHALL STATE "WHEN ALARM SOUNDS CALL POLICE OR FIRE DEPARTMENT" OR SIMILAR VERBIAGE.
   3. ADDRESSABLE PULL STATIONS:
      a. SHALL BE COMPATIBLE WITH EXISTING FACP.
      b. U.L. LISTED.
      c. COMMUNICATE THE STATION'S STATUS (ALARM/NORMAL) TO THE CONTROL PANEL OVER TWO WIRES WHICH ALSO PROVIDE POWER TO THE PULL STATION.
      d. MECHANICALLY LATCH UPON OPERATION AND REMAIN SO UNTIL MANUALLY RESET BY OPENING WITH A KEY COMMON TO ALL SYSTEMS LOCKS AND CONTROL PANEL.
      e. DOUBLE ACTION AND IDENTIFIED FOR LOCAL USE BY RAISED WHITE LOCAL LETTERING.
      f. HINGED FRONT TO A BACKPLATE ASSEMBLY.
      g. CAPABLE OF FIELD PROGRAMMING IT'S "ADDRESS" LOCATION ON AN ADDRESSABLE SIGNALING LINE CIRCUIT.
   4. SMOKE DETECTORS:
      a. SHALL BE COMPATIBLE WITH EXISTING FACP.
      b. SMOKE SENSORS SHALL BE SOLID STATE PHOTOELECTRIC SMOKE DENSITY MEASURING DEVICES HAVING NO SELF-CONTAINED ALARM SET POINT (FIXED THRESHOLD) AND SHALL COMMUNICATE ACTUAL CHAMBER VALUES TO THE SYSTEM CONTROL PANEL.
      c. SMOKE SENSORS AND BASES SHALL BE LISTED TO UL STANDARD 268 AND DOCUMENTED COMPATIBLE WITH THE CONTROL EQUIPMENT TO WHICH THEY ARE CONNECTED, AND FOR BOTH CEILING AND WALL MOUNT APPLICATIONS.
      d. EACH SENSOR WILL BE CAPABLE OF SENSING UP TO (7) SENSITIVITY LEVELS RANGING BETWEEN .6% AND 4.0%.
      e. PHOTOELECTRIC SENSOR SHALL HAVE A FINE 30 MESH INSECT SCREEN.
      f. SENSOR ELECTRONICS SHALL BE COMPLETELY SHIELDED TO PROTECT AGAINST FALSE ALARMS FROM EMI AND RFI.
      g. SMOKE DETECTORS SHALL NOT BE INSTALLED UNTIL FINAL ROOM FINISHES AND CARPETING HAVE BEEN COMPLETED, OR PROTECT BY A PLASTIC BAG TO PREVENT DUST ENTERING THE SMOKE DETECTOR.
   5. HEAT DETECTORS:
      a. SHALL BE COMPATIBLE WITH EXISTING FACP.
      b. SENSOR SHALL BE A COMBINATION RATE OF RISE/FIXED TEMPERATURE SENSOR. U.L. LISTED AS A RATE COMPENSATED HEAT DETECTOR.
      c. EACH SENSOR CAPABLE OF OPERATING AT A SELECTABLE RATE OF RISE OPERATION OF 15 OR 20 DEGREES FAHRENHEIT PER MINUTE AND IS SELF-RESTORABLE.
      d. EACH SENSOR CAPABLE OF FIXED TEMPERATURE OPERATION SELECTABLE FOR EITHER 117 OR 135 DEGREES FAHRENHEIT, INDEPENDENT OF THE RATE OF RISE SETTING.
      e. EACH SENSOR CONFIGURABLE FOR UTILITY MONITORING AND CAPABLE OF SENSING TEMPERATURE BETWEEN 32 AND 158 DEGREES FAHRENHEIT.
L. SYSTEM OPERATION
   1. PROVIDE REQUIRED PROGRAMMING. VENDOR SHALL MEET WITH THE OWNER TO DETERMINE IF THERE ARE ANY EXTRAORDINARY PROGRAMMING CIRCUMSTANCES.
   2. SMOKE DETECTION OPERATION:
      a. CONTROL PANEL SHALL MAKE THE ALARM DECISION FOR EACH SENSOR.
      b. CONTROL PANEL SHALL DETERMINE THE CONDITION OF EACH SENSOR BY COMPARING THE SENSOR VALUE TO THE STORED VALUES.
      c. CONTROL PANEL SHALL MAINTAIN A MOVING AVERAGE OF THE SENSORS' SMOKE CHAMBER VALUE TO AUTOMATICALLY COMPENSATE (MOVE THE THRESHOLD) FOR DUST AND DIRTY CONDITIONS THAT COULD AFFECT DETECTION OPERATIONS. THE SYSTEM SHALL AUTOMATICALLY MAINTAIN A CONSTANT SMOKE OBSCURATION SENSITIVITY FOR EACH SENSOR (VIA THE FLOATING THRESHOLD) BY COMPENSATING FOR ENVIRONMENTAL FACTORS.
      d. THE SYSTEM SHALL AUTOMATICALLY INDICATE WHEN AN INDIVIDUAL SENSOR NEEDS CLEANING. WHEN A SENSOR'S AVERAGE VALUE REACHES A PREDETERMINED VALUE, A "DIRTY SENSOR" TROUBLE CONDITION SHALL BE AUDIBLY AND VISUALLY INDICATED AT THE CONTROL PANEL. THE LED ON THE SENSOR BASE SHALL GLOW STEADY. IF A "DIRTY SENSOR" IS LEFT UNATTENDED, AND ITS AVERAGE VALUE INCREASES TO A SECOND PREDETERMINED VALUE, AN "EXCESSIVELY DIRECT SENSOR" TROUBLE CONDITION SHALL BE INDICATED AT THE CONTROL PANEL. TO PREVENT FALSE ALARMS, THESE "DIRTY" CONDITIONS SHALL IN NO WAY DECREASE THE AMOUNT OF SMOKE OBSCURATION NECESSARY FOR SYSTEM ACTIVATION.
      e. CONTROL PANEL SHALL CONTINUOUSLY PERFORM AN AUTOMATIC SELF-TEST ROUTINE ON EACH SENSOR WHICH WILL FUNCTIONALLY CHECK SENSOR ELECTRONICS AND ENSURE THE ACCURACY OF THE VALUES BEING TRANSMITTED TO THE CONTROL PANEL. ANY SENSOR THAT FAILS THIS TEST SHALL INDICATE A "SELF TEST ABNORMAL" TROUBLE CONDITION.
      f. THE ACTIVATION OF ANY SYSTEM SMOKE DETECTOR IN ALL PUBLIC AND COMMON AREAS SHALL INITIATE AN ALARM VERIFICATION OPERATION WHEREBY THE PANEL WILL RESET THE ACTIVATED DETECTOR AND WAIT FOR A SECOND ALARM ACTIVATION. IF, WITHIN ONE MINUTE AFTER RESETTING, A SECOND ALARM IS REPORTED FROM THE SAME OR ANY OTHER SMOKE DETECTOR, THE SYSTEM SHALL PROCESS THE ALARM AS DESCRIBED PREVIOUSLY. IF NO SECOND ALARM OCCURS WITHIN ONE MINUTE, THE SYSTEM IS TO RESUME NORMAL OPERATION. THE ALARM VERIFICATION OPERATION IS TO BE U.L. LISTED.
   3. ALARM ACTIVATION:
      a. ANY INITIATION OF SMOKE DETECTORS, PULL STATIONS OR FLOW SWITCHES SHALL PUT THE SYSTEM INTO GENERAL ALARM CONDITIONS.
      b. EXTERNAL AUDIBLE / VISIBLE SIGNAL AT FIRE DEPARTMENT CONNECTION SHALL ONLY ALARM ON FLOW SWITCH INITIATION.
      c. ALL AUDIBLE ALARM INDICATING APPLIANCES SHALL SOUND UNTIL SILENCED BY THE ALARM SILENCE SWITCH AT THE CONTROL PANEL. SIGNALS SHALL NOT BE SILENCED DURING ALARM SILENCE INHIBIT MODE.
      d. XENON STROBES SHALL DISPLAY A CONTINUOUS PATTERN UNTIL SYSTEM IS RESET.
   4. RTAC/AHU SHUT DOWN (ROOFTOP AIR CONDITIONING UNIT/AIR HANDLING UNIT)
      a. NEW RTAC: RETURN AIR SMOKE DETECTOR AND INTERLOCK TO SHUTDOWN RTAC BY RTAC MANUFACTURER. PROVIDE AN ADAPTER MODULE WITH ADDRESS TO MONITOR THE DUCT TYPE SMOKE DETECTOR.
      b. EC SHALL COORDINATE DUCT SMOKE DETECTOR INSTALLATION WITH THE HVAC CONTRACTOR. FURNISH THE APPROPRIATE MOUNTING BRACKETS, CLEARANCES AND SAMPLING TUBE LENGTH TO PROVIDE AN APPROVED INSTALLATION.
   5. SPRINKLER SYSTEM
      a. EXISTING.
   6. MOUNTING HEIGHTS
      a. FIRE PULL STATION, STROBES AND COMBINATION HORN/STROBE DEVICES: SEE FLOOR PLANS LEGEND FOR MOUNTING HEIGHTS.
      b. FIRE ALARM REMOTE ANNUNCIATOR PANEL: 48" TO BOTTOM
      c. FIRE ALARM CONTROL PANEL - MOUNT SUCH THAT THE TOP OF THE FIRE ALARM CONTROL PANEL IS NOT HIGHER THAN 72".
      d. FLOOR PLAN GRAPHIC, ADJACENT TO FIRE ALARM ANNUNCIATORS.
   7. INTERCONNECTION OF FIRE ALARM TO OTHER SYSTEMS
      a. THE FIRE ALARM SYSTEM SHALL BE INTERCONNECTED TO THE FOLLOWING SYSTEMS:
         1). ALARM DIALER FOR CONNECTION TO OFF-SITE MONITORING.
      b. TO ACCOMMODATE JOB SITE CHANGES, THE TYPE OF "OFF-SITE MONITORING" IS TO BE ON SITE CONFIGURABLE TO PROVIDE EITHER A "REVERSE POLARITY", "LOCAL ENERGY", "SHUNT" OR DRY CONTACT CONNECTION.

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COLLABORATION

AspenDental

PROJECT INFORMATION

PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

JOB NUMBER
230264900

SHEET NUMBER
E0.3

LIGHTING PLAN GENERAL NOTES

- FIXTURE SHADING INDICATES THAT FIXTURE SHALL BE ON NIGHT LIGHT CIRCUIT.
- VERIFY ALL EXPOSED CONDUIT ROUTING WITH ARCHITECT/ENGINEER WHERE CONDUIT IS EXPOSED IN FINISHED ROOMS.
- E.C. SHALL PROVIDE ALL APPURTENCES AND ACCESSORIES INCLUDING, BUT NOT LIMITED TO, PHOTOCELLS, CONTACTORS, SWITCHES, HANGERS, ETC., IN ORDER TO PROVIDE A COMPLETE AND OPERABLE SYSTEM.
- COORDINATE FIXTURE LOCATIONS AND MOUNTING ASSEMBLIES WITH OTHER TRADES AND TYPE OF CONSTRUCTION TO ENSURE ADEQUATE MOUNTING.
- ALL TYPE "XE" AND "EM1" EMERGENCY LIGHTS WITH 90 MINUTE BATTERY BACK-UP. BATTERY CHARGER TO BE CIRCUITED TO UNSWITCHED LEG OF LOCAL LIGHT CIRCUIT.
- ALL WALL MOUNTED EMERGENCY LIGHTS 8'-0" AFF.
- SEE ARCHITECTURAL REFLECTED CEILING AND ELEVATION PLANS FOR LOCATION OF ALL LIGHTING FIXTURES. LOCATE FIXTURES IN ACCORDANCE WITH CEILING AND ELEVATION PLANS.

LIGHTING PLAN KEYNOTES

1. SEE INTERIOR LIGHTING CONTROL DETAIL #3/E1.1L FOR SWITCHING SCHEMES.
2. CIRCUIT NIGHT LIGHT UNSWITCHED TO CIRCUIT A-1.
3. PROVIDE SWITCH BANK AT 48" A.F.F.
4. PROVIDE 0-10V SLIDE DIMMER WITH ON/OFF SWITCH, PER SPECIFICATIONS FOR ALL DIMMERS CONTROLLING "A" FIXTURES. SEE 0-10V DIMMER WIRING DIAGRAM #2/E1.1L.
5. WIRE REMOTE EXTERIOR EGRESS EMERGENCY HEADS FROM EXIT LIGHT BATTERY AS SHOWN, IF EXTERIOR EGRESS EMERGENCY LIGHTING IS NOT ALREADY EXISTING.
6. MOUNT BOTTOM OF FIXTURE AT 7'-0" A.F.F
7. PROVIDE EXIT AS DOUBLE FACE.
8. LIGHT HOUSING FOR "B" FIXTURE TO BE PROVIDED BY EC. HOUSING TO BE COOPER H750T .
9. PROVIDE SLIDE DIMMER WITH ON/OFF SWITCH PER SPECIFICATIONS. TYPICAL ALL DIMMERS CONTROLLING "B" FIXTURES.
10. MOUNT EXIT LIGHT TO FACE OF SOFFIT.

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PROPOSED BUILD-OUT FOR:

ASPEN DENTAL

6 LOCEY LANE • HARRIMAN, NY 10926

2019

PROFESSIONAL SEAL

SHEET DATES

SHEET ISSUE JULY 12, 2023

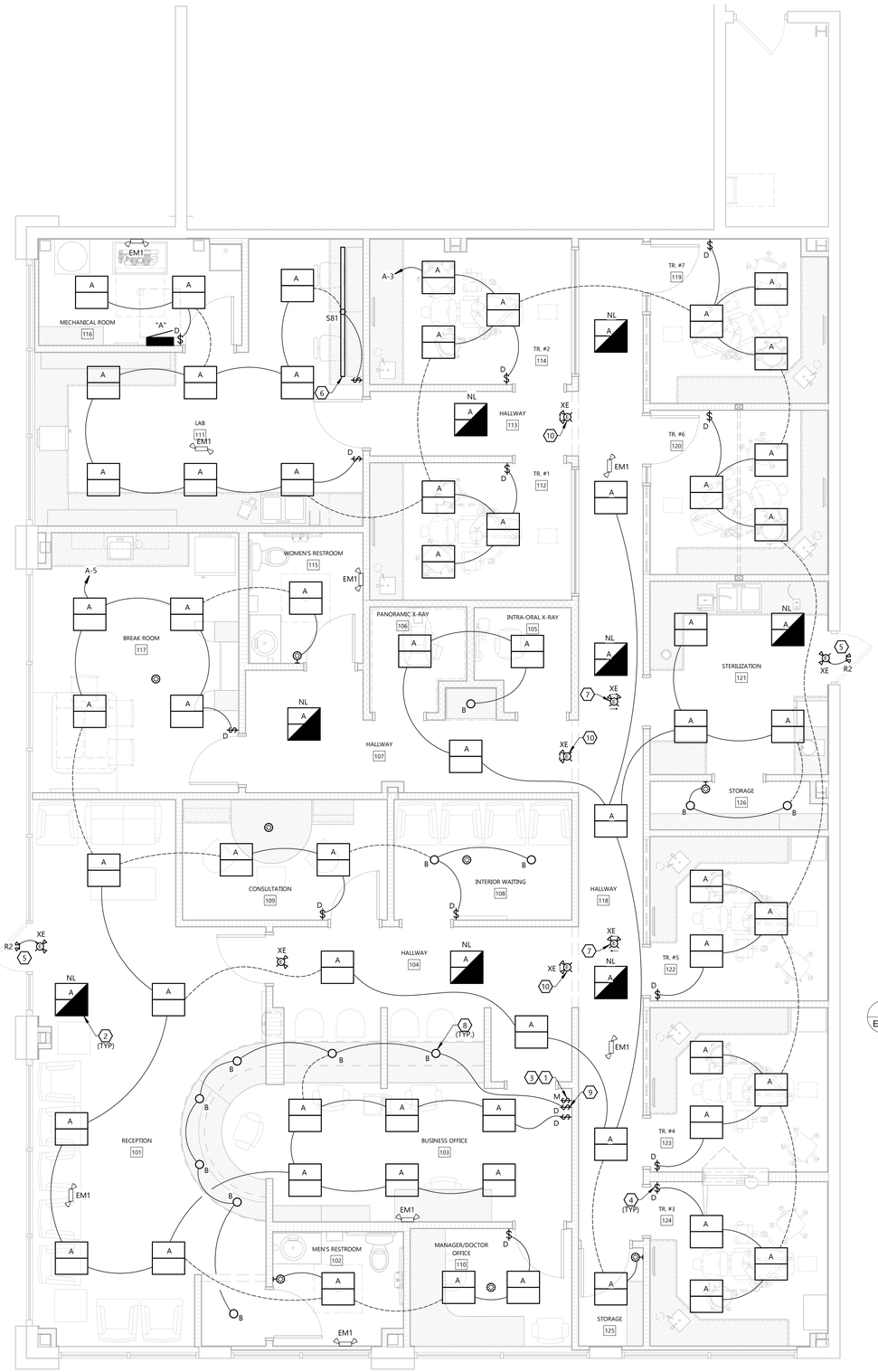
REVISIONS

JOB NUMBER

230264900

SHEET NUMBER

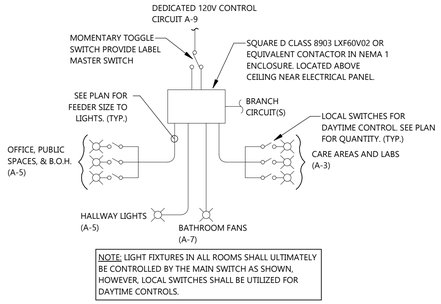
E1.1L



FLOOR PLAN - LIGHTING

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

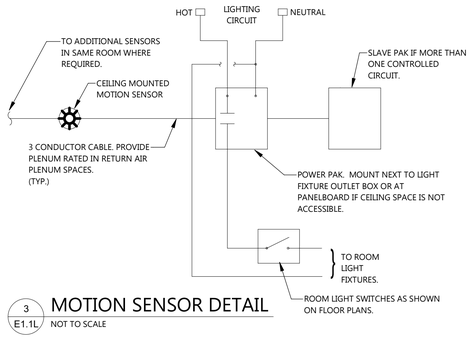
4' 0' 4' 8'



NOTE: LIGHT FIXTURES IN ALL ROOMS SHALL ULTIMATELY BE CONTROLLED BY THE MAIN SWITCH AS SHOWN, HOWEVER, LOCAL SWITCHES SHALL BE UTILIZED FOR DAYTIME CONTROLS.

4 E1.1L INTERIOR LIGHTING CONTROL DETAIL

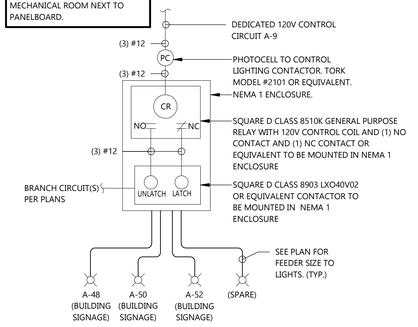
NOT TO SCALE



3 E1.1L MOTION SENSOR DETAIL

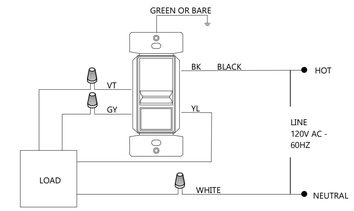
NOT TO SCALE

CONTACTORS SHALL BE LOCATED IN MECHANICAL ROOM NEXT TO PANELBOARD.



5 E1.1L EXTERIOR LIGHTING AND SIGNAGE CONTROL DETAIL

NOT TO SCALE



NOTE: WIRING DIAGRAM IS BASED ON COOPER SF10P 0-10V DIMMER.

2 E1.1L 0-10V DIMMER WIRING DIAGRAM

NOT TO SCALE

ELECTRICAL FLOOR PLAN - LIGHTING

LEGEND

NOTE:ALL SYMBOLS SHOWN MAY NOT APPEAR ON DRAWINGS.

SYM.	IDENTIFICATION
COMMUNICATION	
▶	DATA OUTLET PROVIDE DEDICATED CAT5E HOME RUN FROM TELEPHONE CABINET FOR EACH SYMBOL SHOWN UNLESS OTHERWISE NOTED.
▷	COAX OUTLET PROVIDE DEDICATED QUAD SHIELDED RG6 COAX HOME RUN FROM TELEPHONE CABINET FOR EACH SYMBOL SHOWN.
▽C	UTILITY CENTER FURNISHED BY G.C.

DIVISION 27 COMMUNICATIONS

27 05 00. TELECOMMUNICATION PREMISE WIRING

A. INSTALLER QUALIFICATIONS: AN EXPERIENCED INSTALLER WHO IS A REGISTERED COMMUNICATION DISTRIBUTION DESIGNER CERTIFIED BY THE BUILDING INDUSTRY CONSULTING SERVICE INTERNATIONAL.

B. QUALITY CONTROL:
1. COMPLY WITH NFPA 70.
2. 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.
3. SYSTEM REQUIREMENTS: COORDINATE THE FEATURES OF MATERIALS AND EQUIPMENT SO THEY FORM AN INTEGRATED SYSTEM. MATCH COMPONENTS AND INTERCONNECTIONS FOR OPTIMUM FUTURE PERFORMANCE.
4. CONTRACTOR SHALL TEST EACH CABLE TO INSURE THAT THE INSTALLATION MEETS EIA/TIA STANDARDS. THREE COPIES OF THIS REPORT SHALL BE PROVIDED TO THE OWNER AS PART OF RECORD DRAWINGS.

C. ABBREVIATIONS:
1. EIA - ELECTRONIC INDUSTRIAL ALLIANCE
2. IDC - INTERNATIONAL DATA CORPORATION
3. IDF - INTERMEDIATE DISTRIBUTION FRAME (CLOSET)
4. MDF - MAIN DISTRIBUTION FRAME (CLOSET)
5. PVC - POLYVINYL CHLORIDE
6. STP - SHIELDED TWISTED PAIR (CABLE)
7. TIA - TELECOMMUNICATION INDUSTRY ASSOCIATION
8. UTP - UNSHIELDED TWISTED PAIR (CABLE)

D. RACEWAYS AND BOXES: FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.

E. BRANCH CABLES:
1. TWISTED-PAIR CABLES, CONNECTORS, AND TERMINAL EQUIPMENT: LISTED AS COMPLYING WITH CATEGORIES 6 OF EIA/TIA-568-A.
   a) CONDUCTORS: SOLID COPPER.
   b) COLOR: BLUE
   c) UTP CABLE: COMPLY WITH EIA/TIA-568-A. FOUR THERMOPLASTIC-INSULATED, INDIVIDUALLY TWISTED PAIRS OF CONDUCTORS; NO. 24 AWG, COLOR-CODED; ENCLOSED IN PVC JACKET.
   d) UTP PLENUM CABLE: LISTED FOR USE IN AIR-HANDLING SPACES. FEATURES ARE AS SPECIFIED ABOVE, EXCEPT MATERIALS ARE MODIFIED AS REQUIRED FOR LISTING.
   e) CABLE LABELS: SELF-ADHESIVE VINYL OR VINYL-CLOTH WRAPAROUND TAPE MARKERS, MACHINE PRINTED WITH ALPHANUMERIC CABLE DESIGNATIONS.

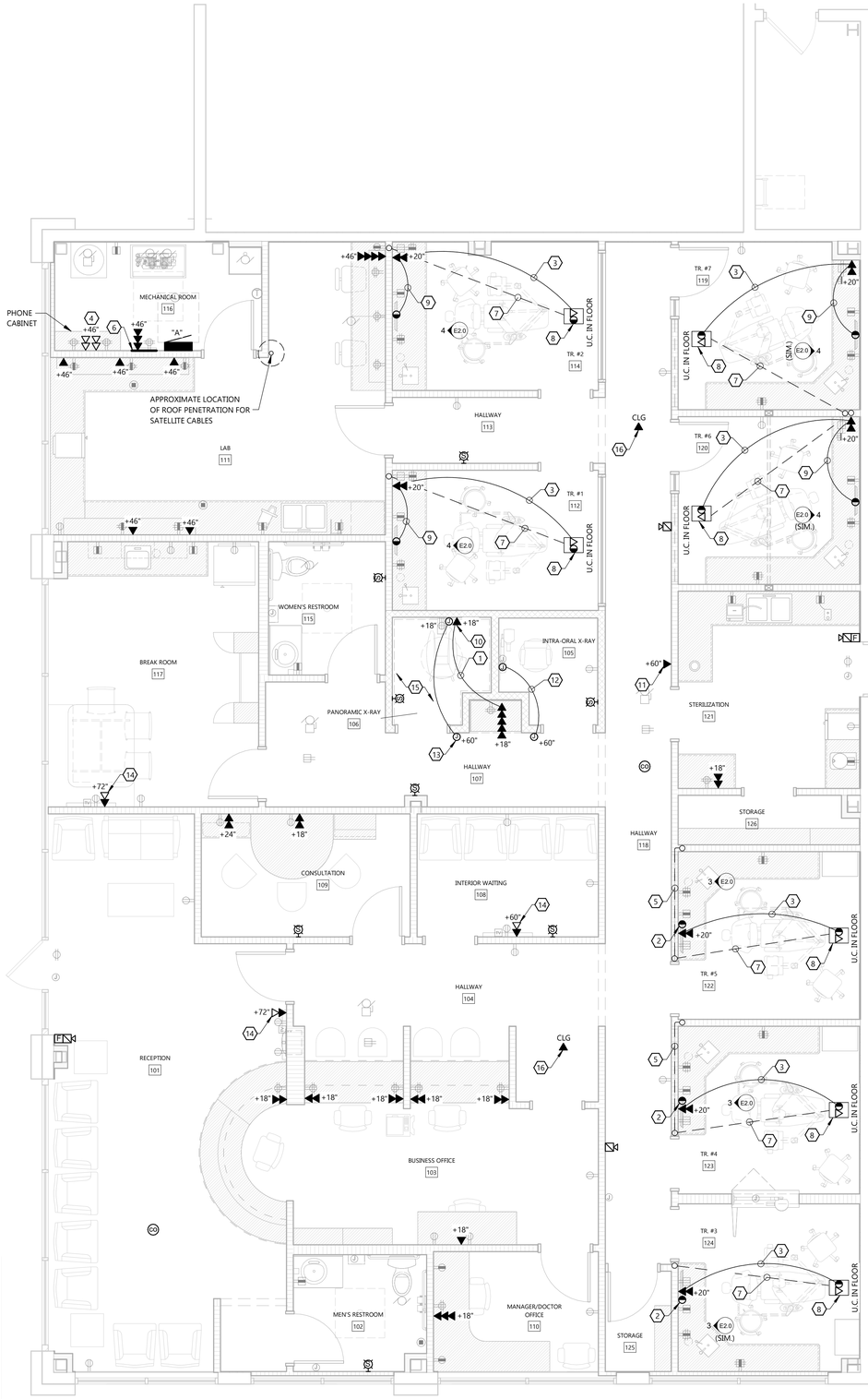
H. WIRING METHOD:
1. INSTALL WIRING IN RACEWAY AND CABLE TRAY EXCEPT WITHIN CONSOLES, CABINETS, DESKS, AND COUNTERS EXCEPT IN ACCESSIBLE CEILING SPACES AND IN GYPSUM BOARD PARTITIONS WHERE CABLE WIRING METHOD MAY BE USED.
2. USE UL-LISTED PLENUM CABLE FOR ALL LOCATIONS.
3. CONCEAL RACEWAY AND WIRING EXCEPT IN UNFINISHED SPACES.
4. USE TECHNIQUES, PRACTICES, AND METHODS THAT ARE CONSISTENT WITH EIA/TIA-568 RATING OF COMPONENTS AND THAT ENSURE CATEGORY PERFORMANCE LEVEL FOR THE COMPLETED AND LINKED SIGNAL PATHS, END TO END.
5. DO NOT DAMAGE CONDUCTORS, SHIELD, OR JACKET.
6. DO NOT BEND CABLE IN HANDLING OR IN INSTALLING TO SMALLER RADII THAN MINIMUMS RECOMMENDED BY MANUFACTURER.
7. PULL CABLES WITHOUT EXCEEDING CABLE MANUFACTURER'S RECOMMENDED PULLING TENSIONS.
8. SECURE AND SUPPORT CABLE AT INTERVALS NOT EXCEEDING 30 INCHES (760 MM) AND NOT MORE THAN 6 INCHES (150 MM) FROM CABINETS, BOXES, FITTINGS, OUTLETS, RACKS, FRAMES, AND TERMINALS.
9. SEPARATION OF WIRES: COMPLY WITH EIA/TIA-569 RULES FOR SEPARATING UNSHIELDED COPPER COMMUNICATION AND DATA-PROCESSING EQUIPMENT CABLES FROM POTENTIAL EMI SOURCES, INCLUDING ELECTRICAL POWER LINES AND EQUIPMENT.
10. MAKE SPLICES, TAPS, AND TERMINATIONS ONLY AT INDICATED OUTLETS, TERMINALS, AND CROSS-CONNECT AND PATCH PANELS.
11. USE SPLICE AND TAP CONNECTORS COMPATIBLE WITH MEDIA TYPES.

I. SYSTEM LABELING:
1. USE A UNIQUE, THREE-SYLLABLE ALPHANUMERIC DESIGNATION FOR EACH CABLE, AND LABEL CABLE AND JACKS, CONNECTORS, AND TERMINALS TO WHICH IT CONNECTS WITH THE SAME DESIGNATION. USE LOGICAL AND SYSTEMATIC DESIGNATIONS FOR FACILITY'S ARCHITECTURAL ARRANGEMENT.
   a) FIRST SYLLABLE IDENTIFIES AND LOCATES WIRING CLOSET OR EQUIPMENT ROOM WHERE CABLE ORIGINATES.
   b) SECOND SYLLABLE IDENTIFIES AND LOCATES CROSS-CONNECT OR PATCH-PANEL FIELD IN WHICH CABLE TERMINATES.
   c) THIRD SYLLABLE DESIGNATES TYPE OF MEDIA (COPPER OR FIBER) AND POSITION OCCUPIED BY CABLE PAIRS OR FIBERS IN THE FIELD.
2. WORKSTATION: LABEL CABLES WITHIN OUTLET BOXES.
3. DISTRIBUTION CABINETS: LABEL EACH UNIT AND FIELD WITHIN THAT UNIT.
4. WITHIN CONNECTOR FIELDS, IN WIRING CLOSETS AND EQUIPMENT ROOMS: LABEL EACH CONNECTOR AND EACH DISCRETE UNIT OF CABLE-TERMINATING AND CONNECTING HARDWARE
5. CABLES, GENERAL: LABEL EACH CABLE WITHIN 4 INCHES (100 MM) OF EACH TERMINATION AND TAP, WHERE IT IS ACCESSIBLE IN A CABINET OR JUNCTION OR OUTLET BOX, AND ELSEWHERE AS INDICATED.
6. EXPOSED CABLES AND CABLES IN CABLE TRAYS AND WIRE TROUGHS: LABEL EACH CABLE AT INTERVALS NOT EXCEEDING 15 FEET (4.5 M).
7. CABLE SCHEDULE: POST IN PROMINENT LOCATION IN EACH MDF AND IDF. LIST INCOMING AND OUTGOING CABLES AND THEIR DESIGNATIONS, ORIGINS, AND DESTINATIONS. PROTECT WITH CLEAR PLASTIC COVER. PROVIDE ELECTRONIC COPY OF FINAL COMPREHENSIVE SCHEDULES FOR PROJECT, IN SOFTWARE AND FORMAT SELECTED BY OWNER OR OWNER'S IT STAFF.

RESPONSIBILITY MATRIX (LV)

ITEM	DESCRIPTION	FURNISHED BY	PRODUCT INFO	SUPPLIER INFO	REMARKS
CONDUITS/CHASES/BOXES	PER PLAN	GC/EC	-	-	
DATA CABLES	CAT5E	GC/LV	-	-	
COAX	RG6 (QUAD SHIELDED)	GC/LV		-	
HDMI CABLE	PER PLAN	GC/LV	10' LENGTH 25' LENGTH TYPE A MELE CONNECTORS CL2/CL3 JACKET HIGH SPEED CATEGORY 2	-	
ROOF PENETRATION	PER PLAN	GC	-	-	

FURNISHED BY:
LV = LOW VOLTAGE CONTRACTOR
EC = ELECTRICAL CONTRACTOR
ADMI = ASPEN DENTAL MANAGEMENT INC
GC = GENERAL CONTRACTOR



NORTH

FLOOR PLAN - LOW VOLTAGE

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

4' 0' 4' 8'

LOW VOTAGE GENERAL NOTES

- ALL DATA CABLE SHALL BE CAT5E.
- ALL COAXIAL CABLE SHALL BE RG6 (QUAD SHIELDED).
- ALL DATA AND COAXIAL CABLES SHALL HAVE MINIMUM 10' SERVICE COIL ABOVE CEILING, 2' MINIMUM COILED IN UTILITY BOX, AND 20' COILED AT PHONE CABINET.
- HOME RUN ALL DATA AND COAXIAL CABLES TO PHONE CABINET LOCATED IN THE (BREAK ROOM) UNLESS OTHERWISE NOTED.
- CLEARLY LABEL ALL CABLES AT BOTH ENDS.
- VERIFY ALL EXPOSED CONDUIT ROUTING WITH ARCHITECT/ENGINEER WHERE CONDUIT IS EXPOSED IN FINISHED ROOMS.
- ALL RACEWAYS (CONDUITS, PULL STRINGS, WOOD CHASES) ARE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR OR MILLWORK CONTRACTOR.
- ONELINE DIAGRAMS AND RISER DIAGRAMS ARE DIAGRAMMATIC REPRESENTATION TO AID THE CONTRACTOR IN UNDERSTANDING THE FUNCTION AND OPERATION OF THE SYSTEMS. E.C. SHALL REVIEW THE ONELINES, RISERS AND FLOOR PLANS FOR THE EXACT QUANTITIES AND LOCATION OF ALL EQUIPMENT. E.C. SHALL FURNISH AND INSTALL ALL EQUIPMENT SHOWN ON ANY OR ALL OF THESE DIAGRAMS AND DRAWINGS. DETAILED WIRING DIAGRAMS SHOWING ACTUAL WIRING FOR THE SYSTEMS FURNISHED SHALL BE A PART OF THE SHOP DRAWING SUBMITTAL.
- DEVICE LOCATIONS MAY BE DISTORTED FOR CLARITY. LOCATED DEVICES SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS.
- CONTRACTOR SHALL COORDINATE WITH THE OTHER TRADES TO VERIFY SPACES ARE CLEAR OF OBSTRUCTIONS. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITION AT ALL POINTS IN THE BUILDING. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION.
- FURNISH OTHER TRADES ADVANCE INFORMATION ON LOCATIONS AND SIZES OF PIPING, DUCTWORK, EQUIPMENT, FRAMES, BOXES, SLEEVE AND OPENINGS NEEDED FOR WORK. FURNISH INFORMATION AND SHOP DRAWINGS TO PERMIT TRADES AFFECTED TO INSTALL THEIR WORK PROPERLY AND WITHOUT DELAY.
- SEE HVAC AND PLUMBING PLANS FOR LOCATIONS OF HEATING, VENTILATING, AIR CONDITIONING AND PLUMBING EQUIPMENT. DO NOT REFERENCE ELECTRICAL DRAWINGS FOR EXACT LOCATION.
- SCHEDULE REQUIRED POWER, TELEPHONE, OR DATA OUTAGES IN OCCUPIED AREAS OF THE BUILDING WITH THE OWNER. CONTRACTOR SHALL WORK UNTIL SERVICE IS RESTORED. OUTAGE WORK SHALL BE DONE AFTER OR BEFORE NORMAL WORKING HOURS, ON WEEKENDS OR HOLIDAYS.

LOW VOLTAGE PLAN KEYNOTES

1. ONE (1) DATA CABLE BETWEEN PANORAMIC X-RAY UNIT TO JUNCTION BOX IN DIGITAL ALCOVE AND TO TWO (2) DATA CABLES TO TELEPHONE CABINET.
2. PROVIDE ONE (1) 10FT HDMI CABLE PER RESPONSIBILITY MATRIX FROM COMPUTER TO MONITOR.
3. TWO (2) 25FT HDMI CABLES PER RESPONSIBILITY MATRIX BETWEEN UTILITY CENTER AND COMPUTER WORK STATION. INSTALL IN 2" UNDERGROUND CONDUIT. CONDUIT FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. SEE DETAIL #3 OR #4/ SHEET E2.0 AS NOTED IN FLOOR PLANS.
4. FOUR (4) COAX CABLES BETWEEN PHONE CABINET AND SATELLITE DISH. ALL ROOF PENETRATIONS ARE BY GENERAL CONTRACTOR. SATELLITE DISH FURNISHED AND INSTALLED BY ASPEN DENTAL MANAGEMENT INC.
5. PROVIDE 1" CONDUIT IN WALL TO ACCESSIBLE CEILING. SEE DETAIL #3/ SHEET E2.0.
6. THREE (3) DATA CABLES FROM MECHANICAL ROOM DEMARK TO PHONE CABINET. INSTALL ABOVE CEILING.
7. 2" CONDUIT BELOW FINISHED GRADE PROVIDED BY ELECTRICAL CONTRACTOR. SEE ELECTRICAL PLANS FOR MORE INFORMATION.
8. ROUTE ONE (1) COAX CABLE ABOVE CEILING FROM PHONE CABINET TO LOW VOLTAGE JUNCTION UNDER COUNTER AND THEN RUN THROUGH 2" UNDERGROUND CONDUIT TO UTILITY CENTER. SEE DETAIL #3/ SHEET A5.2 FOR UTILITY CENTER INFORMATION.
9. ONE (1) 10FT HDMI CABLE PER RESPONSIBILITY MATRIX BETWEEN COMPUTER WORK STATION AND WALL MOUNT VIEW SCREEN. CONDUIT FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
10. ROUTE DATA THROUGH SAME JUNCTION BOX AS SHOWN ON E1.1P. SEE KEYED NOTE 18 ON E1.1P.
11. EC TO PROVIDE FLUSH MOUNT NON-METALLIC LOW VOLTAGE RING, AND ROUTE CAT5E WIRE FROM LOW VOLTAGE RING LOCATION TO MECHANICAL ROOM AND COIL 24" ON EACH END WITH MALE CONNECTOR BOTH ENDS (TYP.). SEE DETAIL #4/ SHEET A5.4. CONTROL PANEL PROVIDED BY EQUIPMENT SUPPLIER.
12. EC TO PROVIDE CONTROL WIRES WITH 6'-0" OF COIL ON EACH END BETWEEN JUNCTION BOXES. SEE DETAIL #4/ SHEET A5.3.
13. EC TO PROVIDE JUNCTION BOX FOR X-RAY CONTROL BOX ASSEMBLY. SEE DETAIL #5/ SHEET A5.3.
14. ROUTE ONE (1) COAX CABLE ABOVE CEILING FROM PHONE CABINET TO LOW VOLTAGE JUNCTION BEHIND TV.
15. ALL ELECTRICAL BACK BOXES IN THIS AREA SHALL BE LEAD LINED. SEE DETAIL #9/E2.0 FOR MORE INFORMATION.
16. PROVIDE CAT5E CABLE FROM PHONE CABINET AND COIL 5FT OF CABLE ABOVE CEILING FOR WIFI. VERIFY EXACT LOCATION WITH OWNER PRIOR TO ROUGH IN.

COORDINATE LOCATION OF ALL EXPOSED CONDUIT WITH OWNER PRIOR TO INSTALLATION

ELECTRICAL FLOOR PLAN - LOW VOLTAGE

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

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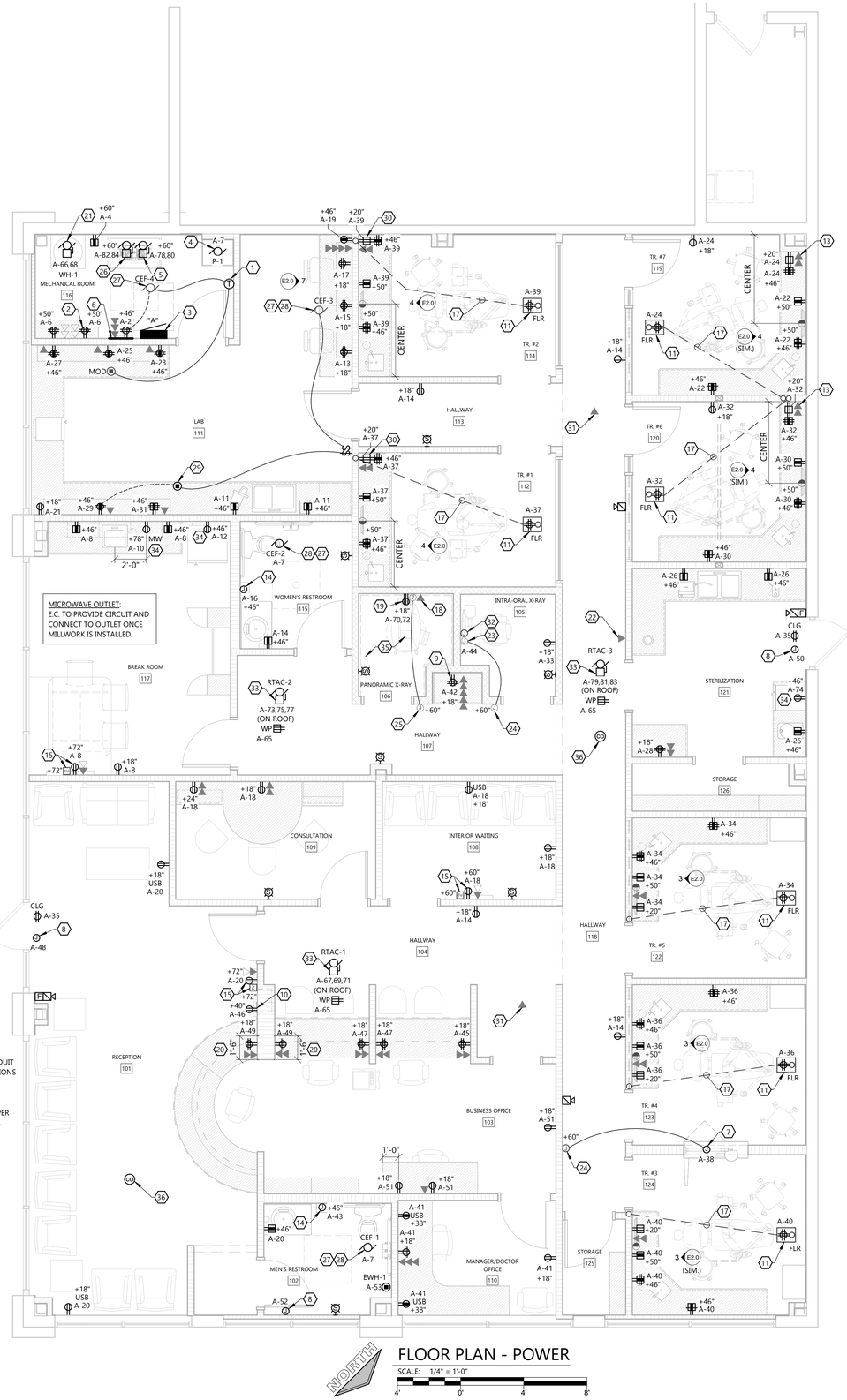
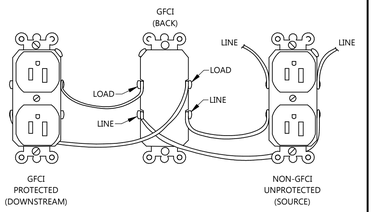


FLOOR PLAN - POWER

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

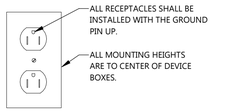
4' 0' 4' 8'

COORDINATE LOCATION OF ALL EXPOSED CONDUIT WITH OWNER PRIOR TO INSTALLATION



GFCI RECEPTACLE WIRING DIAGRAM

NOT TO SCALE



TYPICAL RECEPTACLE INSTALLATION DETAIL

NOT TO SCALE

ALL WIRING IN PATIENT CARE SPACES SHALL MEET ALL THE REQUIREMENTS OF ARTICLE 517. ALL TREATMENTS ROOMS SHALL BE CONSIDERED PATIENT CARE SPACES

POWER GENERAL NOTES

- ALL CONDUITS STUBBED OUT OF BUILDING SHALL BE PER CONDUIT PENETRATION DETAIL/SHEET E3.0.
- VERIFY ALL EXPOSED CONDUIT ROUTING WITH ARCHITECT/ENGINEER WHERE CONDUIT IS EXPOSED IN FINISHED ROOMS.
- PROVIDE GFI PROTECTION FOR ALL SINGLE-PHASE RECEPTACLES IN THE FOLLOWING LOCATIONS: BATHROOMS, KITCHENS, ROOFS, SERVING WATER COOLERS, WITHIN 6'-0" OF A SINK, AND ALL OTHER WET LOCATIONS.
- COORDINATE ALL RECEPTACLE, DATA AND TELEPHONE PORT LOCATIONS WITH FURNITURE LAYOUT AND OWNER'S FURNITURE SUPPLIER PRIOR TO ROUGH-IN.
- COORDINATE THE VOLTAGE, AMPERAGE, PHASE, CONNECTION TYPE, ROUGH-IN LOCATION, ETC. OF ALL EQUIPMENT WITH THE CONTRACTOR INSTALLING THE EQUIPMENT.
- FIRE ALARM SYSTEM INSTALLATION AND WIRING SHALL BE PER NFPA REGULATIONS AND LOCAL FIRE DISTRICT REQUIREMENTS.
- REFER TO ASPEN DENTAL MANAGEMENT, INC. UNDERGROUND LAYOUT DRAWING FOR EXACT LOCATION(S) OF ALL UNDERGROUND UTILITIES.
- ALL ITEMS OR DEVICES SHOWN "DARKER" ARE NEW LOW VOLTAGE DEVICES. ALL ITEMS OR DEVICES SHOWN "LIGHTER" ARE POWER DEVICES. POWER DEVICES ARE SHOWN FOR REFERENCE ONLY. REFER TO POWER SHEETS FOR MORE INFORMATION.

POWER PLAN KEYNOTES

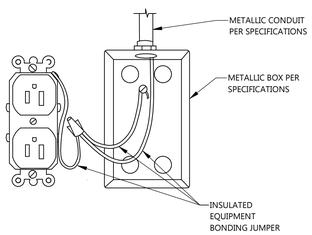
ALL KEYNOTES MAY NOT APPEAR ON THIS SHEET.

1. REVERSE ACTING THERMOSTAT (HONEYWELL T651A) TURN ON FAN AND CLOSE MECHANICAL ROOM MOTOR OPERATED DAMPER ON A RISE IN SPACE TEMPERATURE ABOVE SET POINT. THERMOSTAT FURNISHED BY HEATING CONTRACTOR REFER TO SHEET H1.1 FOR MORE INFORMATION AND MOUNTING HEIGHT. CONDUIT AND WIRING PROVIDED BY E.C.
2. PROVIDE TWO (2) 120V, 1Ø, 20 AMP DOUBLE DUPLEX RECEPTACLES FOR EQUIPMENT IN TELEPHONE CABINET. LOCATE RECEPTACLES AS CLOSE TOGETHER AS POSSIBLE.
3. NEW ELECTRICAL SERVICE PER ONELINE DIAGRAM. PROVIDE NEW CIRCUIT BREAKERS AS SHOWN IN PANEL SCHEDULES AND PER SPECIFICATIONS.
4. PROVIDE DISCONNECT IN MECH. ROOM ADJACENT TO PUMP FOR SERVICE. PROVIDE POWER FROM SWITCHING RELAY TO TIMESWITCH TO PUMP PER DETAIL. L.V. WIRING PROVIDED BY P.C. SEE WATER HEATER DETAIL ON P3.0. AND DETAIL #3/E3.0 FOR MORE INFORMATION.
5. FURNISH AND INSTALL 208V, 2-POLE, NEMA 1 FUSED DISCONNECT FOR VACUUM SYSTEM. PROVIDE WITH FRN8 FUSES. SEE DETAIL #5/SHEET E2.0.
6. PROVIDE TELEPHONE BACKBOARD SEE TELEPHONE BOARD DETAIL ON SHEET E2.0.
7. FURNISH AND INSTALL JUNCTION BOXES FOR PASS-THROUGH X-RAY CONTROL WIRING. SEE DETAIL #6/SHEET E2.0.
8. FURNISH AND INSTALL AND MAKE FINAL CONNECTIONS TO OWNER SIGNAGE. PROVIDE 120V, 1Ø, 20 AMP CIRCUIT FOR SIGNAGE. FIELD VERIFY EXACT ROUGH-IN LOCATION. PROVIDE TIME CLOCK/PHOTOCELL FOR CONTROL. SEE EXTERIOR LIGHTING CONTROL DETAIL SHEET E1.1L. COORDINATE WITH OWNER / LANDLORD. SEE DETAIL #9/E2.0 FOR SIGN J-BOX/ROOF PENETRATION DETAIL.
9. PROVIDE 120V, 1Ø, 20 AMP QUAD RECEPTACLE FOR X-RAY COMPUTER AND CONTROLS. SEE DETAIL #3/ SHEET A5.1.
10. BOTTLE FILLING STATION. SEE DETAIL #1/SHEET E3.0 FOR MORE INFORMATION. PROVIDE GFI PROTECTION VIA GFI PROTECTED BREAKER AS NOTED IN PANEL SCHEDULE.
11. SEE DETAIL #3/ SHEET A5.2 FOR ROUGH-IN REQUIREMENTS.
12. NOT USED.
13. RECEPTACLES AND J-BOXES TO BE NO LESS THAN 4" AND NO MORE THAN 18" OFF CORNER.
14. ELECTRICAL CONTRACTOR SHALL PROVIDE ELECTRIC HAND DRYER JUNCTION BOX AND ASSOCIATED 120V, 1Ø, 20 AMP CIRCUIT. TOP OF CONTROLS AND AIR DISCHARGE TO BE A MAXIMUM OF 48" A.F.F. DRYER SHALL BE EQUIVALENT TO SURFACE MOUNTED HAND DRYER EXCEL DRYER, INC. XLERATOR MODEL #XL-BW SUPPLIED AND INSTALLED BY G.C.
15. FURNISH AND INSTALL DUPLEX RECEPTACLE AND PLASTER RING WITH PULL STRING TO ABOVE CEILING AT HEIGHT SHOWN ON PLANS FOR PLASMA TV.
16. NOTE USED.
17. 2" CONDUIT BELOW FINISHED GRADE. USE UNDERGROUND LAYOUT DRAWING SHEET U1.1 FOR EXACT CONDUIT LOCATION.
18. INSTALL JUNCTION BOX OR PLASTER RING WITH 2" CONDUIT RUN TO ABOVE CEILING. REFER TO DETAIL #1/SHEET E2.0.
19. PROVIDE 220V, 20 AMP RECEPTACLE TO SERVE X-RAY EQUIPMENT. ELECTRICAL CONTRACTOR TO SUPPLY MALE END. COORDINATE RECEPTACLE AND CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDER (NEMA 6-20R). LEAVE MALE END TAPED TO OUTLET. REFER TO DETAIL #1/SHEET E2.0.
20. LOCATE RECEPTACLE AND DATA OUTLET WITHIN DIMENSIONS SHOWN.
21. FURNISH AND INSTALL 208V, 1Ø, 20 AMP, NEMA 1 DISCONNECT FOR WATER HEATER ABOVE CEILING. PROVIDE ELECTRICAL CONNECTIONS TO WATER HEATER IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. COORDINATE MOUNTING LOCATION WITH EQUIPMENT IN ROOM.
22. ELECTRICAL CONTRACTOR SHALL FLUSH MOUNT NON-METALLIC LOW VOLTAGE RING. ROUTE CAT 6 WIRE FROM LOW VOLTAGE RING LOCATION TO MECHANICAL ROOM AND COIL 24" ON EACH END WITH MALE CONNECTOR BOTH ENDS (TYP.). SEE DETAIL #4/ SHEET A5.4. CONTROL PANEL PROVIDED BY EQUIPMENT SUPPLIER.
23. FURNISH AND INSTALL CIRCUIT AND CONDUIT WITH PULL STRING. CONTROL WIRE FURNISHED BY OTHERS. SEE DETAIL #2/SHEET E2.0.
24. PROVIDE JUNCTION BOX AND CONDUIT WITH PULL STRING. CONTROL WIRE FURNISHED BY OTHERS. SEE DETAIL #4/ SHEET A5.3.
25. PROVIDE JUNCTION BOX FOR X-RAY CONTROL BOX ASSEMBLY. SEE DETAIL # 5/ SHEET A5.3.
26. PROVIDE 30A BLADED DISCONNECT TO SERVE AIR COMPRESSOR, SEE DETAIL #5/SHEET E2.0 FOR LOCATION.
27. FANS ARE TO BE FURNISHED AND INSTALLED BY THE HEATING CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR. SEE FAN SCHEDULE FOR ADDITIONAL INFORMATION.
28. ROUTE CIRCUIT THROUGH CONTACTOR. SEE DETAIL ON E1.1L.
29. MOTOR OPERATED DAMPER WITH 120V, 2 POSITION, SPRING RETURN, NORMALLY OPEN DAMPER PROVIDED BY H.C. E.C. SHALL PROVIDE WALL SWITCH AND WIRE FROM SWITCH TO ACTUATOR TO CLOSE DAMPER WHEN SWITCH IS "ON".
30. RECEPTACLES AND J-BOXES SHALL BE NO LESS THAN 4" AND NO MORE THAN 10" OFF CORNER.
31. PROVIDE DATA OUTLET IN CEILING FOR WIFI. VERIFY EXACT LOCATION WITH OWNER PRIOR TO ROUGH IN.
32. INSTALL JUNCTION BOX OR PLASTER RING WITH 3/4" CONDUIT TO ABOVE CEILING. REFER TO DETAIL #2/SHEET E2.0.
33. INTEGRAL DISCONNECT PROVIDED WITH RTAC.
34. PROVIDE GFI PROTECTION VIA GFI PROTECTED BREAKER AS NOTED IN PANEL SCHEDULE.
35. ALL ELECTRICAL BACK BOXES IN THIS AREA SHALL BE LEAD LINED. SEE DETAIL #9/E2.0 FOR MORE INFORMATION.
36. PROVIDE CARBON MONOXIDE DETECTOR IN ACCORDANCE WITH 1228.4 TITLE 19 NYCCR.

NEC
517.13 (A) All branch circuits serving patient care areas shall be provided with an effective ground-fault current path by installation in a metal raceway system, or a cable having a metallic armor or sheath assembly. The metal raceway system, or metallic cable armor, or sheath assembly shall itself qualify as an equipment grounding conductor in accordance with 250.118

517.13 (B) Insulated Equipment Grounding Conductor.
(1) General. The following shall be directly connec ted to an insulated copper equipment grounding conductor that is installed with the branch circuit conductors in the wiring meth-ods as provided in 517.13(A).
(1) The grounding terminals of all receptacles.
(2) Metal boxes and enclosures containing receptacles.
(3) All non-current-carrying conductive surfaces of fixed electrical equipment likely to become energized that are subject to personal contact, operating at over 100 volts.

Exception: An insulated equipment bonding jumper that directly connects to the equipment grounding conductor is per-mitted to connect the box and receptacle(s) to the equipment grounding conductor.



PATIENT CARE AREA RECEPTACLE GROUNDING

NOT TO SCALE

ELECTRICAL FLOOR PLAN - POWER

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

AspenDental

PROJECT INFORMATION

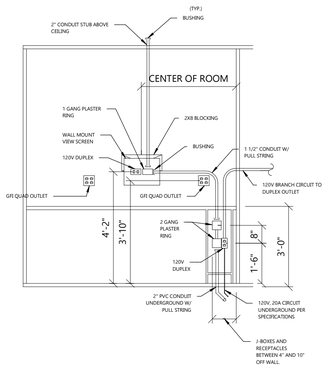
PROPOSED BUILD-OUT FOR:
ASPEN DENTAL
6 LOCEY LANE • HARRIMAN, NY 10926

PROFESSIONAL SEAL

SHEET DATES
SHEET ISSUE JULY 12, 2023
REVISIONS

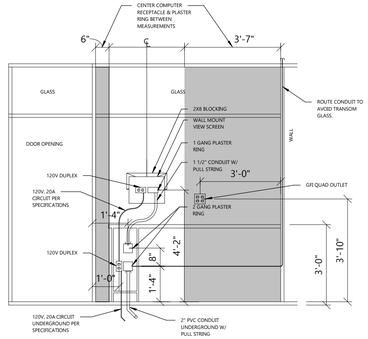
JOB NUMBER
230264900

SHEET NUMBER
E1.1P



4 E2.0 TREATMENT ROOM ELEVATION 1

NOT TO SCALE



3 E2.0 TREATMENT ROOM ELEVATION 2

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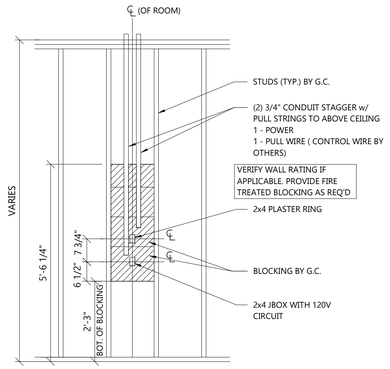
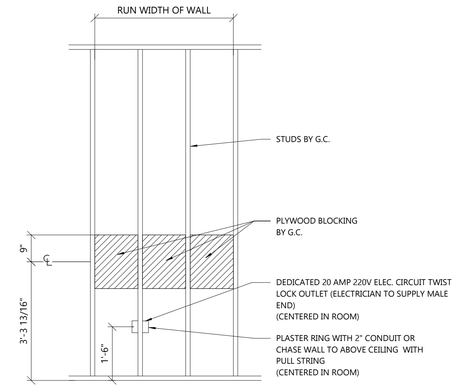


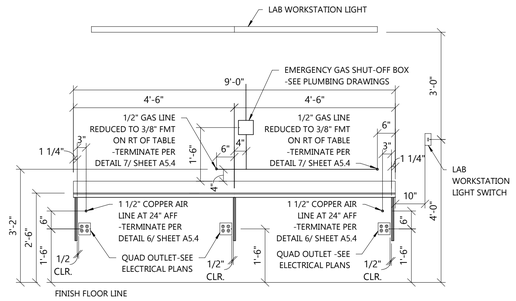
2 E2.0 CS 2200 X-RAY SUPPORT

NOT TO SCALE



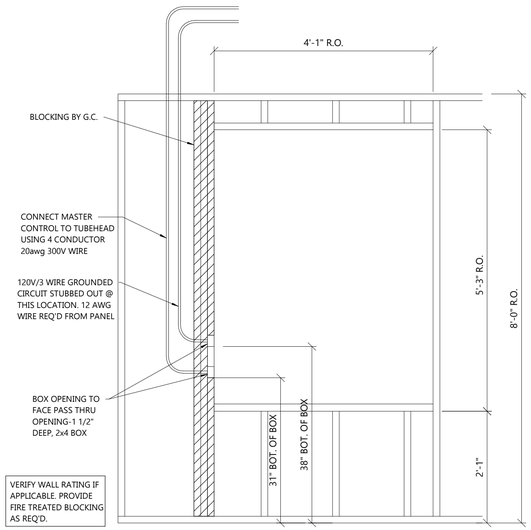
1 E2.0 PANORAMIC BLOCKING DETAIL

NOT TO SCALE

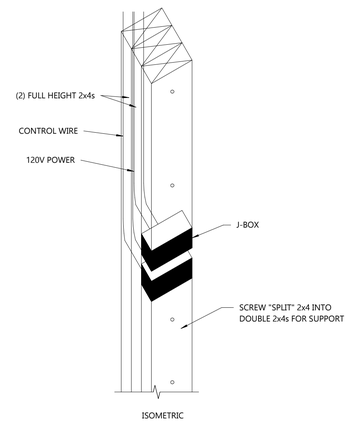


7 E2.0 LAB WORK STATION

NOT TO SCALE



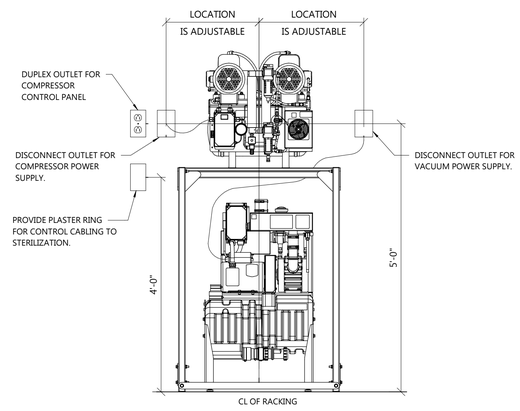
WALL ELEVATION



ISOMETRIC

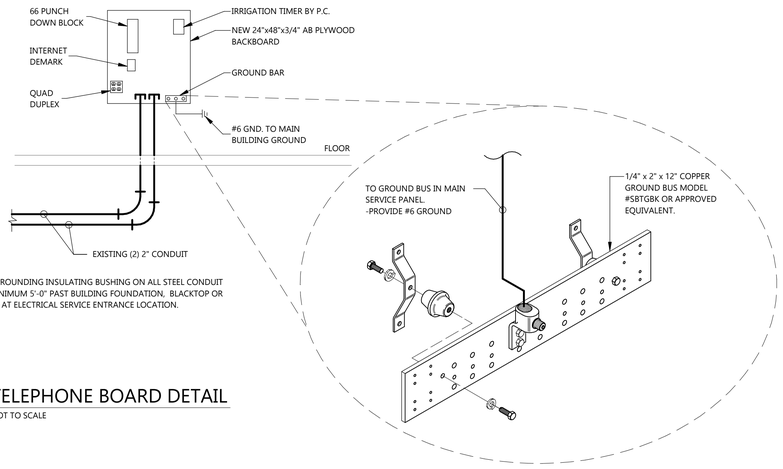
6 E2.0 PASS THROUGHT X-RAY BLOCKING DETAIL

NOT TO SCALE



5 E2.0 COMPRESSOR / VACUUM RACK DETAIL

NOT TO SCALE

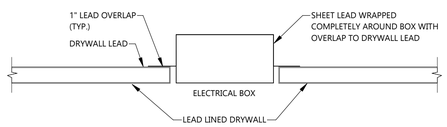


NOTES:

- PROVIDE GROUNDING INSULATING BUSHING ON ALL STEEL CONDUIT STUBS. MINIMUM 5'-0" PAST BUILDING FOUNDATION, BLACKTOP OR CONCRETE AT ELECTRICAL SERVICE ENTRANCE LOCATION.

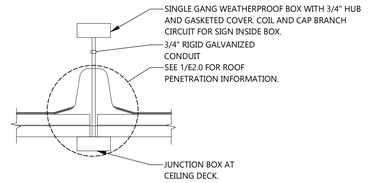
10 E2.0 TELEPHONE BOARD DETAIL

NOT TO SCALE



9 E2.0 LEAD LINED BACK BOX DETAIL

NOT TO SCALE



LOCATE JUNCTION BOX & PENETRATION WITH IN 3'0" OF PARAPET NEAR CENTER OF SIGN.

8 E2.0 SIGN J-BOX/ROOF PENETRATION DETAIL

NOT TO SCALE

ELECTRICAL DETAILS

EXCEL
Engineering and Architecture, P.C.
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
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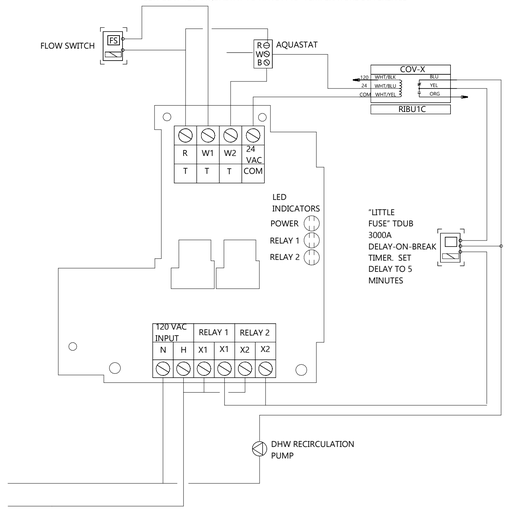
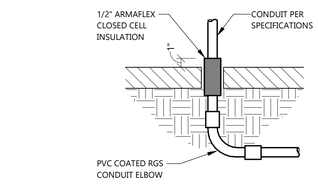
SHEET NUMBER
E2.0

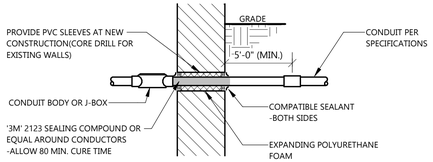
TACO SR 501-HC-4 SWITCHING RELAY SHALL TURN ON PUMP IF EITHER FLOW SWITCH DETECTS FLOW OR TEMPERATURE SENSOR DROPS BELOW 110°F. CONTROLLER SHALL TURN PUMP OFF IF TEMPERATURE SENSOR IS ABOVE 120°F AND THERE IS NO FLOW SWITCH. AQUASTAT BREAKS R-B AND MAKES R-W ON RISE AT SETPOINT 120° AQUASTAT TO HAVE A 10° TEMPERATURE DIFFERENCE



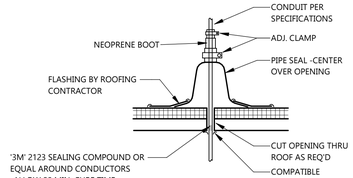
3 E3.0 TACO SWITCHING RELAY WIRING DIAGRAM
NOT TO SCALE



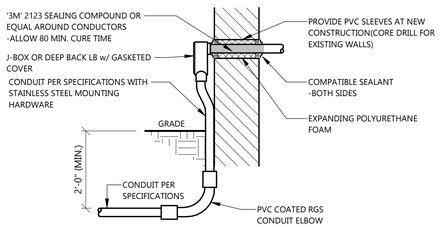
SLAB ON GRADE FLOORS



BELOW GRADE WALLS



MEMBRANE ROOF



ABOVE GRADE WALLS

NOTES:
- SEE SPECIFICATIONS FOR CONDUIT MATERIAL BEYOND COUPLINGS.
- SEE SPECIFICATIONS FOR INTERIOR WALL AND FLOOR PENETRATION REQ'S.

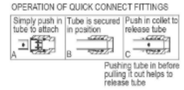
2 E3.0 CONDUIT PENETRATION DETAILS
NOT TO SCALE

ELKAY SPECIFICATIONS

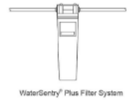
Elkay EZH2O In-Wall Bottle Filling Station
Filtered 8 GPH Stainless
Model LZWSM8K

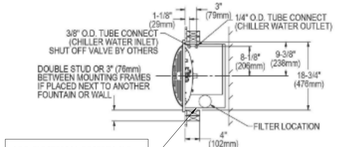
meets UL requirements for self-extinguishing material.
- Refrigerant Control: Refrigerant R-134a is controlled by accurately calibrated capillary tube.
- Temperature Control: Easily accessible enclosed adjustable thermostat is factory preset. Requires no adjustment other than for altitude requirements.

OPERATION OF QUICK CONNECT FITTINGS



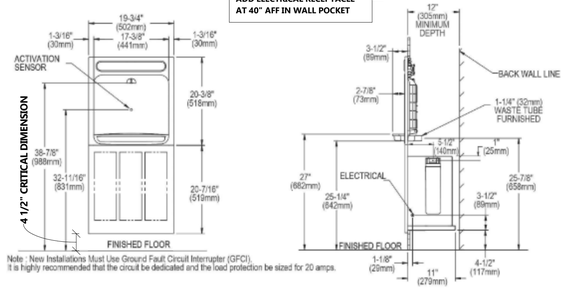
IMPORTANT! INSTALLER PLEASE NOTE :
The grounding of electrical equipment such as telephone, computers, etc., to water lines is a common procedure. This grounding may be in the building or may occur away from the building. This grounding can cause electrical feedback into a water cooler, creating an electrolysis which causes a metallic taste or causes an increase in the metal content of the water. This condition is avoidable by using the proper materials as indicated below. The drain fittings which are provided by the installer should also be plastic to electrically isolate the cooler from the building plumbing system.
These products are designed to operate on 20 psi to 105 psi supply line pressure.





BOTTLE FILLER SPECIFICATIONS

ADD ELECTRICAL RECEPTACLE AT 40" AFF IN WALL POCKET



Note : New Installations Must Use Ground Fault Circuit Interrupter (GFCI).
It is highly recommended that the circuit be dedicated and the load protection be sized for 20 amps.

In keeping with our policy of continuing product improvement, Elkay reserves the right to change product specifications without notice. Please visit elkay.com for the most current version of Elkay product specification sheets. This specification describes an Elkay product with design, quality, and functional benefits to the user. When making a comparison of other producers' offerings, be certain these features are not overlooked.

1 E3.0 BOTTLE FILLING STATION
NOT TO SCALE

ELECTRICAL DETAILS

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