RIVERSIDE CONCESSION / STORAGE BUILDING

Client : Riverside School District

GRAPHIC SYMBOLS

WALL CONSTRUCTION

- Demo - To Be Removed
- New Partitions
- To Remain / Existing

GRAPHICS

- WINDOW TYPE (A)
- DOOR NUMBER (101)
- EXTERIOR ELEVATION (SHEET LOCATION) (1 / AXX)
- BUILDING SECTION (SHEET LOCATION) (A / AXX)
- DETAIL SECTION (SHEET LOCATION) (1 / AXX)
- INTERIOR ELEVATION (SHEET LOCATION) (1 / AXX)
- PARTITION TAG (SHEET LOCATION) (#XX)
- LARGE DETAIL / PLAN (SHEET LOCATION) (1 / AXX)
- ROOM NAME (ROOM NUMBER) (ROOM 000)
- PLAN NOTE DESIGNATION (NOTE)
- REVISION CLOUD & REVISION NUMBER (1)
- COLUMN GRID (A / 1)
- EXIT UNIT DESIGNATION (36" / 100 UNITS)
- DATUM / ELEVATION (327'-0" F.F.R.)
- SPOT ELEVATION (20.00')
- STAIR / RAMP DIRECTION
- EQUIPMENT TAG (#)

MATERIAL DESIGNATIONS

ELEVATION / PLAN

- CERAMIC TILE
- BRICK
- CMU MASONRY
- CONCRETE / PLASTER
- GLAZING
- STONE MASONRY

SECTION

- EARTH
- PARTICLE BD.
- RIGID INSULATION
- GRANULAR FILL
- ROCK
- FINISHED WD.
- CONCRETE BLOCK
- CONCRETE
- METAL
- BATT INSULATION
- BRICK
- PLYWOOD / GLUELAM
- WOOD BLOCKING
- GYPSUM BD. / PLASTER

APPLICABLE CODE | CODE ANALYSIS

THE FOLLOWING CODES APPLY TO THIS PROJECT:

2018 IBC - INTERNATIONAL BUILDING CODE
2018 IECC - INTERNATIONAL ENERGY CONSERVATION CODE
2018 IMC - INTERNATIONAL MECHANICAL CODE
2018 IPC - INTERNATIONAL PLUMBING CODE
2018 IFGC - INTERNATIONAL FUEL GAS CODE
2014 NEC - NATIONAL ELECTRICAL CODE
ICC/ANSI A117.1-2017 ACCESSIBLE AND USABLE BLDGS & FACILITIES & 2018 IBC - CH. 11

PROJECT AREA - GENERAL INFORMATION:

NUMBER OF STORIES:	1 Level
BUILDING AREA:	1,280 SF
BUILDING CONSTRUCTION TYPE:	V-B *(IBC Table 503)*
ALLOWABLE HEIGHT & BUILDING AREA:	NS - 1 Stories and 40 feet *(IBC Table 504.3 504.4)* NS - 5,500 SF Max. *(IBC Table 506.2)*

USE & OCCUPANCY:

PROPOSED OCCUPANCY GROUP:	U (Utility And Miscellaneous) (IBC Section 312)
OCCUPANCY COUNT:	Utility: 1,280 / 500 G = 3 3 Occupants *(IBC Table 1004.5)*

FIRE PROTECTION:

FIRE PROTECTION:	NOT SPRINKLERED
AUTOMATIC SPRINKLER SYSTEMS:	Not Required (IBC Section 903)
FIRE RESISTANCE RATINGS:	Building Elements *(IBC Table 601)* Primary Structural Frame - 0hr Nonbearing Interior Walls - 0hr Floor / Ceiling Construction - 0hr Roof Construction - 0hr
PORTABLE FIRE EXTINGUISHERS:	(2) Provided, Tavel Distance Not Greater Than 75'
SMOKE DETECTION:	Hard Wired Smoke Detectors To Be Provided
SIGNAGE:	Illuminated Exit Signs To Be Provided as Req'd
LIGHTING:	Emergency Lighting & Audio/Visual Alarms To Be Provided as Req'd

MEANS OF EGRESS:

HORZ. EGRESS WIDTH REQUIRED:	3 x 0.20 in = 0.6" *(IBC Section 1005.3.2)*
HORZ. EGRESS WIDTH PROVIDED:	2 Exits Provided = 32" x 2 = 64"
EXIT ACCESS TRAVEL DISTANCE:	300' Without Sprinkler *(IBC Table 1017.2)* Max. Travel Distance Provided = 40'
EXITS REQUIRED:	(1) Exit Req'd *(IBC Section 1006.3.3(2))* (2) Exits Provided

ACCESSIBILITY:

ACCESSIBLE ROUTE:	Accessible Route is Provided to All Areas of Bldg Suite, to All Exits and to Accessible Parking Spaces
THRESHOLDS @ DOORS & FLR CHANGES:	1/2" Max.
SIGNAGE:	Signage to be Provided at ALL Accessible Entrances, Toilet Rooms and Parking Spaces.

ENERGY CONSERVATION:

*IEBC Section 711: Alterations to existing bldgs are permitted without requiring the entire bldg, to comply with the energy requirements of the IECC. The alterations shall conform to the requirements of the IECC as they relate to new construction only

CLIMATE ZONE:	Luzerne County - 5A
ROOFS (Attic & Other):	R-38
WALLS, ABOVE GRADE (Wood Framed):	R-13 + R-3.8ci or R-20

ci = Continuous Insulation

PLUMBING FIXTURES:

	Qty x Max Occupancy	Total Occ.
MAXIMUM OCCUPANCY PER FIXTURES:	(A-5) *(IBC Section 2902.1)*	*345*
WC MALE:	3 / 75	225
WC FEMALE:	3 / 40	120
LAVS (MALE):	2 / 200	400
LAVS (FEMALE):	2 / 150	300
SERVICE SINKS:	(1) Req'd	1

ABBREVIATIONS

#	- NUMBER, POUND	BSMT	BASEMENT	DIM	DIMENSION	EXIST	EXISTING	IC	IN CONTRACT	OPNG	OPENING	REF	REFRIGERATOR	TSSP	TAPED SPACKLED SANDED & PAINTED
@	- AT	CH	CEILING HEIGHT	DN	DOWN	EXT	EXTERIOR	INSUL	INSULATION	OSB	ORIENTED STRAND BOARD	REQ'D	REQUIRED	TYP	TYPICAL
&	- AND	CJ	CONTROL JOINT	DR	DOOR	FD	FLOOR DRAIN	INT	INTERIOR	OTB	OPEN TO BELOW	RM(S)	ROOM(S)	UNO	UNLESS NOTED OTHERWISE
AB	ANCHOR BOLT	CL	CENTER LINE	DWG(S)	DRAWING(S)	FE	FIRE EXTINGUISHER & CABINET	LAV	LAVATORY	P	PAINT	RO	ROUGH OPENING	UL	UNDERWRITERS LABORATORIES
ACT	ACOUSTICAL CEILING TILE	CLOS	CLOSET	DWLS	DOWELS	FF	FINISH FLOOR	MO	MASONRY OPENING	PC	PLUMBING CONTRACTOR	S	SOUTH	VB	VAPOR BARRIER
A/C	AIR CONDITIONING	CS	COURSE	E	EAST	FIN	FINISH	MFR	MANUFACTURER	PERF	PERFORATED	SHT	SHEET	VCT	VINYL COMPOSITION TILE
ADJ	ADJACENT	CMU	CONCRETE MASONRY UNIT	EA	EACH	FLR	FLOOR	MIN	MINIMUM	PLF	POUNDS PER LINEAR FOOT	SPEC	SPECIFICATIONS	VERT	VERTICAL
AFF	ABOVE FINISH FLOOR	CONC	CONCRETE	EC	ELECTRICAL CONTRACTOR	GC	GENERAL CONTRACTOR	MISC	MISCELLANEOUS	PLYWD	PLYWOOD	SQ	SQUARE	VIF	VERIFY IN FIELD
AHU	AIR HANDLING UNIT	CONT	CONTINUOUS	EIFS	EXTERIOR INSULATED FINISH SYSTEM	GWB	GYPSUM WALL BOARD	MTL	METAL	PMF	PRE MOLDED FILLER	STD	STANDARD	VTR	VENT TO ROOF
ALUM	ALUMINUM	CPT	CARPET			HB	HOSE BIB	N	NORTH	PSF	POUNDS PER SQUARE FOOT	STL	STEEL	W	WEST
ARCH	ARCHITECT, (URAL)	CT	CERAMIC TILE	ELEV	ELEVATION	HC	HANDICAPPED	NA	NOT APPLICABLE	PT	PRESSURE TREATED	STRUCT	STRUCTURAL	W/	WITH
BD	BOARD	DBL	DOUBLE	EPX	EPOXY	HDR	HEADER	NIC	NOT IN CONTRACT	PVC	POLYVINYL CHLORIDE	SUSP	SUSPENDED	W/O	WITHOUT
BLDG	BUILDING	DEMO	DEMOLITION	EQ	EQUAL	HM	HOLLOW METAL	NTS	NOT TO SCALE	RAD	RADIUS	TBD	TO BE DETERMINED	WD	WOOD
BM	BEAM	DS	DOWNSPOUT	EQUIP	EQUIPMENT	HORIZ	HORIZONTAL	OC	ON CENTER	RCP	REFLECTED CEILING PLAN	TBR	TO BE REMOVED	WP	WATERPROOF
BOT	BOTTOM	DIA	DIAMETER	EXH	EXHAUST	HT	HEIGHT	OFE	OWNER FURNISHED EQUIPMENT	RD	ROOF DRAIN	T&G	TONGUE & GROOVE	WWF	WELDED WIRE FABRIC

GENERAL NOTES

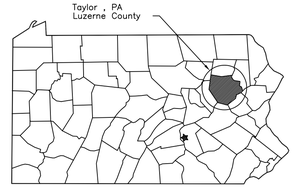
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES AND REGULATIONS.
2. CONTRACTOR SHALL THROUGHLY STUDY THE DRAWINGS AND SHALL VISIT THE SITE TO AQUAINT THEMSELVES WITH ALL EXISTING CONDITIONS AFFECTING THE INSTALLATION OF WORK IN ACCORDANCE WITH THE DEISGN INTENT OF THESE DOCUMENTS. ANY CONFLICTS SHOULD BE BROUGHT TO THE ARCHITECTS ATTENTION FOR CLARIFICATION PRIOR TO SUBMITTING A BID OR SIGNING A CONTRACT TO PERFORM THE WORK.
3. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING. LARGE SCALE DRAWINGS OR DETAILS SHALL GOVERN OVER SMALLER SCALED DRAWINGS.
4. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, APPROVALS AND CERTIFICATES REQUIRED TO FACILITATE THE IMPLEMENTATION OF THE WORK OF THE PROJECT. (FEES BY OWNER)
5. ANY DEVIATION FROM THE PLANS AND SPECIFICATIONS MUST BE SUBMITTED TO THE OWNER / ARCHITECT FOR APPROVAL.
6. ANY CHANGES OR VARIANCES FROM APPROVED PLANS MUST BE SUBMITTED TO LOCAL CODE ENFORCEMENT FOR REVIEW AND APPROVAL, PRIOR TO ANY WORK COMMENCING.
7. ALL APPROVED SETS OF PLANS, SPECIFICATIONS AND APPROVED SHOP DRAWINGS SHALL BE KEPT ON THE JOB SITE AT ALL TIMES.
8. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE PREMISES CLEAN DURING CONSTRUCTION. TRASH WILL NOT BE ALLOWED TO ACCUMULATE ON THE SITE DURING CONSTRUCTION. SAFE WORKING CONDITIONS SHALL BE MAINTAINED AT ALL TIMES.
9. WHEN ANY PART OF THE STRUCTURE IS OPEN TO THE EXTERIOR, PROTECT INTERIOR FROM WIND, RAIN AND VANDALISM.
10. COORDINATION OF ALL WORK BETWEEN DIFFERENT TRADES IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
11. DIMENSIONS ARE TO BE COORDINATED WITH ALL DISCIPLINES, VENDORS, AND DEVICES TO ASSURE PROPER PLACEMENT AND WARRANTY REQUIREMENTS.
12. THE DRYWALL SYSTEM IS BASED ON THE DETAILS OF THE U.S. GYPSUM COMPANY.
13. ALL GYPSUM ABUTTING OTHER MATERIALS IS TO BE FINISHED WITH METAL EDGES.
14. WATER RESISTANT GYPSUM BOARD DENS ARMOR PLUS IS TO BE USED BEHIND ALL PLUMBING FIXTURES.
15. ALL GWB IS TO BE PAINTED (2) COATS PRIME, (1) COAT FINISH.
16. FOR EASE OF PARTITION LAYOUT, ALL STANDARD DRYWALL PARTITIONS ARE DIMENSIONED TO FINISHED FACE OF PARTITION.
17. ALL FRAMING LUMBER TO BE 16" O.C. UNLESS SPECIFIED OTHERWISE.
18. ALL EXTERIOR WALLS ARE TO BE 2X6 FRAMING, ALL INTERIOR WALLS TO BE 2X4 FRAMING. ALL FRAMING SPECIFIED SAHLL BE SPF (NORTH) #1 / #2 OR BETTER. WALL STUDS TO BE MIN. SPF #3 STANDARD OR STUD GRADE AS SPECIFIED IN CODE.
19. PROVIDE DOUBLE STUDS AT ALL DOOR, WINDOW AND DRYWALL OPENINGS.
20. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROVIDING ALL NECESSARY BLOCKING WITHIN ANY WALLS FOR WALL MOUNTED CABINETS, MILLWORK, GRAB BARS, AND OWNER FURNISHED EQUIPMENT.
21. ALL FLOORING MATERIAL CHANGES SHALL (UNLESS OTHERWISE NOTED) SHALL OCCUR AT THE CENTERLINE OF A DOOR WITH A DIVIDER STRIP OR T-MOLD. COLOR AS SELECTED BY OWNER.

PROJECT AREA (SQUARE FEET)

GROSS BUILDING AREA:

FIRST FLOOR	1280 SF
TOTAL AREA:	**1280 SF**

PROJECT LOCATION MAP



PENNSYLVANIA

VICINITY MAP

INDEX TO DRAWINGS

Client:
Riverside Concessions / Storage Building
Client: Riverside School District

Consultants:
DMG
design management group
consulting engineers
570 299 7520
dmgeng.com

CAM architect

C. Allen Mullins architect
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606 North Main St. Wilkes-Barre, PA 18705
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Seals:
COMMONWEALTH OF PENNSYLVANIA
C. ALLEN MULLINS
REGISTERED ARCHITECT
9/20/2021

Revisions | Issues
No: Date:

Phase:
PERMIT SET

Project: Riverside Concessions Building
Date: 09/20/2022
Drawn: MM Checked: ---
Scale: 1/4" = 1'-0"
Sheet:
COVER SHEET

A0.1

GENERAL

1. THE FOLLOWING APPLY TO ALL SUBSEQUENT SECTIONS AND WORK ON THE PROJECT.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES AND REGULATIONS WHEN CARRYING OUT THE WORK OF THE PROJECT. IF A CODES, REGULATIONS, AND/OR DRAWINGS CONFLICT THE MOST STRINGENT SHALL TAKE PRECEDENCE.
3. CONTRACTOR SHALL THROUGHLY STUDY THE DRAWINGS AND SHALL VISIT THE SITE TO AQUAINT THEMSELVES WITH ALL EXISTING CONDITIONS AFFECTING THE INSTALLATION OF WORK IN ACCORDANCE WITH THE DESIGN INTENT OF THESE DOCUMENTS. ANY CONFLICTS SHOULD BE BROUGHT TO THE ARCHITECTS ATTENTION FOR CLARIFICATION PRIOR TO SUBMITTING A BID OR SIGNING A CONTRACT TO PERFORM THE WORK.
4. SUBMIT ALTERNATES OR PROPOSED SUBSTITUTION WITH A FULL DESCRIPTION OF THE PROPOSED CHANGE AND THE AFFECT ON ADJACENT AND/OR RELATED WORK. PROVIDE DETAILED DESCRIPTION OF SUBSTITUTIONS TO FACILITATE APPROVAL.
5. COORDINATE SCHEDULING, SUBMITTALS, AND WORK OF THE VARIOUS TRADES TO ASSURE EFFICIENT AND ORDERLY SEQUENCE OF INSTALLATION OF INTERDEPENDENT CONSTRUCTION ELEMENTS, WITH PROVISIONS FOR ACCOMMODATING ITEMS INSTALLED LATER.
6. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING. LARGE SCALE DRAWINGS OR DETAILS SHALL GOVERN OVER SMALLER SCALED DRAWINGS.
7. ANY DEVIATION FROM THE PLANS AND SPECIFICATIONS MUST BE SUBMITTED TO THE ARCHITECT FOR APPROVAL. ANY CHANGES OR VARIANCES FROM APPROVED PLANS MUST BE SUBMITTED TO LOCAL CODE ENFORCEMENT FOR REVIEW AND APPROVAL, PRIOR TO ANY WORK COMMENCING.
8. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE PREMISES CLEAN DURING CONSTRUCTION. TRASH WILL NOT BE ALLOWED TO ACCUMULATE ON THE SITE DURING CONSTRUCTION. SAFE WORKING CONDITIONS SHALL BE MAINTAINED AT ALL TIMES.WHEN ANY PART OF THE STRUCTURE IS OPEN TO THE EXTERIOR, PROTECT INTERIOR FROM WIND, RAIN AND VANDALISM.
9. COORDINATE COMPLETION AND CLEAN UP OF WORK OF SEPARATE TRADES.
10. VERIFY THAT SITE CONDITIONS AND SUBSTRATE SURFACES ARE ACCEPTABLE FOR SUBSEQUENT WORK. BEGINNING NEW WORK MEANS ACCEPTANCE OF EXISTING CONDITIONS.
11. VERIFY THAT EXISTING OR INSTALLED SUBSTRATE IS CAPABLE OF STRUCTURAL ATTACHMENT OF NEW WORK BEING APPLIED OR ATTACHED.
12. SHOP DRAWINGS: SUBMITTED FOR REVIEW FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS.
13. MARK EACH SHOP DRAWING TO IDENTIFY APPLICABLE PRODUCTS, MODELS, OPTIONS, AND OTHER DATA. SUPPLEMENT MANUFACTURERS' STANDARD DATA TO PROVIDE INFORMATION SPECIFIC TO THIS PROJECT.
14. SUBMIT SAMPLES TO ILLUSTRATE FUNCTIONAL AND AESTHETIC CHARACTERISTICS OF THE PRODUCT, WITH INTEGRAL PARTS AND ATTACHMENT DEVICES. COORDINATE SAMPLE SUBMITTALS FOR INTERFACING WORK. COLORS TO BE SELECTED FROM MANUFACTURER'S FULL RANGE OF STANDARD COLORS AND FINISHES UNLESS NOTED OTHERWISE.
15. SUBMIT TEST REPORTS FOR INFORMATION FOR THE LIMITED PURPOSE OF ASSESSING CONFORMANCE WITH INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS.
16. SUBMIT AND FOLLOW MANUFACTURER'S PRINTED INSTRUCTIONS FOR DELIVERY, STORAGE, ASSEMBLY, INSTALLATION, START-UP (IF APPLICABLE), ADJUSTING, AND FINISHING.
17. MONITOR QUALITY CONTROL OVER SUPPLIERS, MANUFACTURERS, PRODUCTS, SERVICES, SITE CONDITIONS, AND WORKMANSHIP, TO PRODUCE WORK OF SPECIFIED QUALITY.
18. COMPLY WITH SPECIFIED STANDARDS AS MINIMUM QUALITY FOR THE WORK EXCEPT WHERE MORE STRINGENT TOLERANCES, CODES, OR SPECIFIED REQUIREMENTS INDICATE HIGHER STANDARDS OR MORE PRECISE WORKMANSHIP.
19. FOR PRODUCTS OR WORKMANSHIP SPECIFIED BY ASSOCIATION, TRADE, OR OTHER CONSENSUS STANDARDS, COMPLY WITH REQUIREMENTS OF THE STANDARD, EXCEPT WHEN MORE RIGID REQUIREMENTS ARE SPECIFIED OR ARE REQUIRED BY APPLICABLE CODES.
20. ALL HANDICAP REQUIREMENTS (INCLUDING DOOR HARDWARE) FOR THIS PROJECT SHALL COMPLY WITH THE STATE HANDICAP CODE. THE ADA REQUIREMENTS ARE FEDERAL AND CANNOT BE ENFORCED LOCALLY. THIS PROJECT MAY BE SUBJECT TO THE ARCHITECTURAL STANDARDS OF THE AMERICANS WITH DISABILITIES ACT OF 1990. INSURANCE OF A BUILDING PERMIT DOES NOT CERTIFY COMPLIANCE WITH THE FEDERAL GUIDELINES.
21. AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL DELIVER TO THE OWNER A COMPLETE SET OF AS-BUILT DRAWINGS SHOWING LOCATIONS OF WORK INSTALLED, INCLUDING CHANGES TO ALL UNDERGROUND UTILITIES, CERTIFICATES, AFFIDAVITS, OPERATION INSTRUCTIONS, MANUFACTURE'S INSTRUCTIONS ON ALL EQUIPMENT, AND DEMONSTRATE THAT ALL IS IN PROPER WORKING ORDER.

SPECIAL GENERAL CONDITIONS

1. INSURANCE: THE CONTRACTOR & SUB-CONTRACTORS MUST CARRY $1,000,000 MINIMUM COVERAGE OF WORKMAN'S COMPENSATION & GENERAL LIABILITY INSURANCE.
2. WORKMANSHIP & CODES: ALL WORK SHALL CONFORM TO BEST INDUSTRY STANDARDS, AND ALL MATERIALS SHALL BE NEW, FIRST QUALITY AND INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURE'S INSTRUCTIONS AND RECOMMENDATIONS. ALL STANDARDS PROVIDED AND WORK PERFORMED MUST CONFORM AND / OR BE ADJUSTED TO CONFORM TO ANY AND ALL APPLICABLE CODES.
3. PERMITS & FEES: THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND FEES NECESSARY FOR COMPLETE CONSTRUCTION.

SECTION 017419 - CONSTR. WASTE MANAGEMENT & DISPOSAL

1.1 SUMMARY
A. SALVAGING NON-HAZARDOUS CONSTRUCTION WASTE.
B. RECYCLING NON-HAZARDOUS CONSTRUCTION WASTE.
C. DISPOSING OF NON-HAZARDOUS CONSTRUCTION WASTE.
1.2 WASTE MANAGEMENT PLAN
A. TYPES AND QUANTITIES OF SITE-CLEARING AND CONSTRUCTION WASTE.
B. TYPE OF WASTE AND WHETHER IT WILL BE SALVAGED, RECYCLED, OR DISPOSED OF IN LANDFILL OR INCINERATOR.
C. NET ADDITIONAL COST OR NET SAVINGS RESULTING FROM WASTE MANAGEMENT PLAN.
1.3 PLAN IMPLEMENTATION
A. ENGAGE A WASTE MANAGEMENT COORDINATOR.
B. TRAIN WORKERS, SUBCONTRACTORS, AND SUPPLIERS ON PROPER WASTE MANAGEMENT PROCEDURES.
C. RECYCLING INCENTIVES: REVENUES AND OTHER INCENTIVES FOR RECYCLING WILL BE SHARED EQUALLY TO OWNER AND CONTRACTOR.

SECTION 033000 - CAST-IN-PLACE CONCRETE

1.1 QUALITY ASSURANCE
A. QUALITY STANDARD: ACI 301.
B. MOCKUPS TO DEMONSTRATE TYPICAL JOINTS, SURFACE FINISH, TEXTURE, TOLERANCES, FLOOR TREATMENTS, AND STANDARD OF WORKMANSHIP.
1.2 PRODUCTS
A. FORM FACING MATERIALS.
B. STEEL REINFORCEMENT:
1. REINFORCING BARS: DEFORMED.
2. WELDED WIRE REINFORCEMENT: PLAIN.
C. CONCRETE MATERIALS:
1. PORTLAND CEMENT: ASTM C 150, REFER TO STRUCTURAL DESIGN SPECIFICATIONS FOR INFORMATION, GRAY, SUPPLEMENT WITH FLY ASH.
2. BLENDED HYDRAULIC CEMENT: ASTM C 595, REFER TO STRUCTURAL DESIGN SPECIFICATIONS FOR INFORMATION.
3. SILICA FUME.
4. AGGREGATE: NORMAL WEIGHT.
5. WATER.
D. MIXING: READY MIXED.
1.3 CONCRETE MIXTURES
A. COMPRESSIVE STRENGTH (28 DAYS):
1. FOOTINGS: REFER TO STRUCTURAL DESIGN SPECIFICATIONS FOR INFORMATION.
2. FOUNDATION WALLS: REFER TO STRUCTURAL DESIGN SPECIFICATIONS FOR INFORMATION.
3. SLABS-ON-GRADE: REFER TO STRUCTURAL DESIGN SPECIFICATIONS FOR INFORMATION.

1.4 INSTALLATION
A. FORMED FINISHES: SMOOTH.
B. FLOOR AND SLAB FINISHES:
1. TROWEL: SURFACES EXPOSED TO VIEW OR TO BE COVERED WITH RESILIENT FLOORING, CARPET OR CERAMIC/PORCELAIN TILE.
2. BROOM: EXTERIOR CONCRETE PLATFORMS, STEPS, AND RAMPS.
3. DRY-SHAKE FLOOR HARDENER: ALL INTERIOR SLAB AREAS, LAPIDOLITH OR SUBSTITUTIONS APPROVED BY OWNER.
1.5 FIELD QUALITY CONTROL
A. TESTING: BY CONTRACTOR/CM AGENCY.
B. SPECIAL INSPECTIONS: BY CONTRACTOR/CM SPECIAL INSPECTOR.

SECTION 051600 - SHEATHING

1.1 QUALITY ASSURANCE
A. FOREST CERTIFICATION BY A FOREST STEWARDSHIP COUNCIL-ACCREDITED CERTIFICATION BODY FOR THE FOLLOWING:
1. PLYWOOD.
1.2 MATERIALS
A. WOOD PRODUCTS, GENERAL:
1. THE FOLLOWING PRODUCTS FSC-CERTIFIED:
A. PLYWOOD.
B. FIRE-RETARDANT-TREATED PLYWOOD:
1. EXTERIOR TYPE FOR EXTERIOR LOCATIONS AND WHERE INDICATED.
2. APPLICATION: TREAT ALL PLYWOOD.
C. WALL SHEATHING:
1. PLYWOOD: EXTERIOR, STRUCTURAL I, 5/8 INCH (15.9 MM) THICK TYPICAL UNLESS NOTED OTHERWISE.
2. GYPSUM SHEATHING: 5/8 INCH (15.9 MM) THICK
D. FASTENERS: HOT-DIP GALVANIZED STEEL WHERE EXPOSED TO WEATHER, IN GROUND CONTACT, IN CONTACT WITH TREATED WOOD, OR IN AREA OF HIGH RELATIVE HUMIDITY.
E. MISCELLANEOUS MATERIALS:
1. SHEATHING TAPE.
2. ADHESIVES: LOW VOC.
1.3 INSTALLATION
A. WOOD STRUCTURAL PANEL:
1. SHEATHING:
A. SCREW TO FRAMING.

SECTION 054000 - COLD-FORMED METAL FRAMING

1.1 SUMMARY
A. EXTERIOR AND INTERIOR NON-LOAD-BEARING WALL FRAMING.
1.2 PERFORMANCE REQUIREMENTS
A. STRUCTURAL PERFORMANCE:
1. DEAD LOADS: AS DETERMINED BY SITE LOCATIONS.
2. LIVE LOADS: AS DETERMINED BY SITE LOCATIONS.
3. ROOF LOADS: AS DETERMINED BY SITE LOCATIONS.
4. SNOW LOADS: AS DETERMINED BY SITE LOCATIONS.
5. WIND LOADS: AS DETERMINED BY SITE LOCATIONS.
6. SEISMIC LOADS: AS DETERMINED BY SITE LOCATIONS.
7. DEFLECTION LIMITS: 1/240 MINIMUM, AS DETERMINED BY SITE LOCATIONS.
B. ENGINEERING DESIGN OF COLD-FORMED METAL FRAMING BY CONTRACTOR.
1.3 QUALITY ASSURANCE
A. DESIGN STANDARD: AISI'S "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" AND ITS "STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS."
1.4 MATERIALS
A. STEEL SHEET: ASTM A 1003/A 1003M, STRUCTURAL GRADE, METALLIC COATED.
B. NON-LOAD-BEARING WALL FRAMING: STANDARD C-SHAPED, PUNCHED STEEL STUDS AND U-SHAPED, UN-PUNCHED TRACK.
1. MINIMUM STEEL THICKNESS: 0.0200 INCH (0.508 MM) - 20 GAUGE.
2. VERTICAL DEFLECTION CLIPS, SINGLE DEFLECTION TRACK.
C. FRAMING ACCESSORIES: SUPPLEMENTARY FRAMING, BRACING, BRIDGING, AND SOLID BLOCKING, WEB STIFFENERS, STUD KICKERS AND GIRTS.
D. INSULATION FOR INACCESSIBLE VOIDS.
1.5 INSTALLATION
A. FASTEN FRAMING BY WELDING OR SCREW FASTENING.
1. EXTERIOR AND INTERIOR NON-LOAD-BEARING WALL STUD SPACING: 16 INCHES (406 MM).
1.6 FIELD QUALITY CONTROL
A. TESTING: BY CONTRACTOR/CONSTRUCTION MANAGER ENGAGED INDEPENDENT AGENCY.

SECTION 061000 - ROUGH CARPENTRY

1.1 MATERIALS
A. WOOD PRODUCTS, GENERAL:
1. ROUGH CARPENTRY MATERIALS FSC-CERTIFIED.
A. DIMENSION LUMBER FRAMING.
B. MISCELLANEOUS LUMBER.
2. MAXIMUM MOISTURE CONTENT OF LUMBER: 15 PERCENT FOR 2-INCH NOMINAL (38-MM ACTUAL) THICKNESS OR LESS.
B. FIRE-RETARDANT-TREATED MATERIALS
1. EXTERIOR TYPE BLOCKING FOR EXTERIOR ROOF LOCATIONS AND WHERE INDICATED.
2. APPLICATION: ITEMS INDICATED AND AS FOLLOWS:
A. CONCEALED BLOCKING.
B. PLYWOOD BACKING PANELS.

SECTION 064023 - INTERIOR ARCHITECTURAL WOODWORK

1.1 SUMMARY
A. CABINETS.
1.2 QUALITY ASSURANCE
A. QUALITY STANDARD: AWI QUALITY CERTIFICATION PROGRAM, INCLUDING INSTALLATION.
1.3 MATERIALS
A. CABINET HARDWARE:
1. HINGES: BUTT, SEMI-CONCEALED.
2. PULLS: CENTER BAR.
3. EXPOSED HARDWARE FINISHES: OIL RUBBED BRONZE.
B. CABINETS:
1. GRADE: CUSTOM.
2. AWI TYPE OF CABINET CONSTRUCTION: FLUSH OVERLAY.
3. WIC DOOR AND DRAWER FRONT STYLE: FLUSH OVERLAY.
4. CABINET INTERIOR: PLASTIC LAMINATE.
C. SOLID SURFACE COUNTERTOPS:
1. EDGE TREATMENT: SELF-EDGED OR AS INDICATED.

SECTION 07210 - THERMAL INSULATION

1.1 MATERIALS
A. INSULATION:
1. EXTRUDED-POLYSTYRENE BOARD: TYPE IV, 25 PSI (173) KPA)
2. MOLDED-POLYSTYRENE BOARD: TYPE VIII, 20 PSI (138 KPA), EXCLUDING EIFS SYSTEM
3. FOIL-FACED, POLYISOCYANURATE BOARD: TYPE I, CLASS 1.
4. UN-FACED GLASS-FIBER BLANKET: TYPE I.
5. KRAFT-FACED, GLASS-FIBER BLANKET: TYPE II, CLASS C; CATEGORY 1.
6. FOIL-FACED, GLASS-FIBER BLANKET: TYPE III, CLASS B; CATEGORY 1.
7. UN-FACED, MINERAL-WOOL BLANKET: TYPE I.
8. CLOSED-CELL SPRAY POLYURETHANE FOAM: TYPE II, MINIMUM DENSITY OF 1.5 LB/CU. FT. (24 KG/CU. M).
B. VAPOR RETARDERS: POLYETHYLENE OR REINFORCED POLYETHYLENE.
C. AUXILIARY INSULATING MATERIALS:
1. INSULATION FASTENERS.

SECTION 07400 - ROOFING

1.1 SUMMARY
A. MANUFACTURED ROOF PANELS - STANDING-SEAM ROOF PANELS.
1.2 PERFORMANCE REQUIREMENTS
A. ROOFING SYSTEM DESIGN: UPLIFT PRESSURES CALCULATED ACCORDING TO ASCE LOCAL CODES.
1.3 QUALITY ASSURANCE
A. EXTERIOR FIRE-TEST EXPOSURE: CLASS A.
B. PRE-INSTALLATION CONFERENCE.
1.4 WARRANTY
A. MANUFACTURER'S MATERIALS AND WORKMANSHIP WARRANTY: 10 YEARS.
B. INSTALLER'S WARRANTY: TWO YEARS.
C. WEATHERTIGHT WARRANTY: 15 YEARS, NO DOLLAR LIMIT
1.5 MATERIALS
A. STANDING-SEAM ROOF PANELS: MANUFACTURER'S STANDARD FACTORY-FORMED, STANDING-SEAM ROOF PANEL DESIGNED FOR CONCEALED MECHANICAL ATTACHMENT OF PANELS TO ROOF PURLINS OR DECK.
1.6 INSTALLATION
A. COMPLY WITH PANEL MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS FOR INSTALLATION, AS APPICABLE TO PROJECT CONDITIONS AND SUPPORTING SUBSTRATES. ANCHOR PANELS AND OTHER COMPONENTS OF THE WORK SECURELY IN PLACE, WITH PROVISIONS FOR THERMAL AND STRUCTURAL MOVEMENT.

SECTION 07412 - METAL WALL PANELS

1.1 SUMMARY
A. PROVIDE MANUFACTURED WALL PANELS ASSEMBLIES COMPLYING WITH PERFORMANCE REQUIREMENTS INDICATED AND CAPABLE OF WITHSTANDING STRUCTURAL MOVEMENT, THERMALLY INDUCED MOVEMENT AND EXPOSURE TO WEATHER WITHOUT FAILURE OR INFILTRATION OF WATER INTO THE BUILDING INTERIOR.
B. STRUCTURAL PERFORMANCE: MAXIMUM DEFLECTION 1/180 OF THE SPAN.
1.2 QUALITY ASSURANCE
A. INSTALLER QUALIFICATIONS: EXPERIENCED INSTALLER WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.
B. MOCKUPS FOR EACH FORM OF CONSTRUCTION AND FINISH.
1.3 MATERIALS
A. METAL WALL PANELS: PREFINISHED ALUMINUM ZINC-COATED STEEL SHEET
B. INSULATED WALL PANELS: FABRICATE PANELS IN A MANNER THAT WILL ELIMINATE CONDENSATION ON THE INTERIOR SIDE. DESIGN JOINTS BETWEEN PANELS TO FORM WEATHERTIGHT SEALS. INSULATING CORE OF PANELS SHALL PROVIDE U-VALUE INDICATED.
C. CORE MATERIAL: EXTRUDED-POLYSTYRENE BOARD INSULATION.
1.4 INSTALLATION
A. INSULATION: IN ACCORDANCE WITH EIFS MANUFACTURERS CURRENT APPLICATION INSTRUCTIONS.
B. EXPANSION JOINTS:
1. WHERE REQUIRED BY MANUFACTURER OR
2. WHERE EXPANSION JOINTS ARE IN SUBSTRATES. OR
3. WHERE ADJOIN DISSIMILAR SUBSTRATES, MATERIALS, AND CONSTRUCTION.
4. WHERE WALL HEIGHT CHANGES.
2.0 PRODUCTS
A. METAL SPAN CF TUFF INSULATED METAL WALL PANEL

SECTION 07920 - JOINT SEALANTS

1.1 PRE-CONSTRUCTION TESTING
A. PRE-CONSTRUCTION COMPATIBILITY AND ADHESION TESTING.
B. PRE-CONSTRUCTION FIELD-ADHESION TESTING.
1.2 WARRANTY
A. INSTALLER WARRANTY: TWO YEARS.
1.3 MATERIALS
A. VOC CONTENT OF INTERIOR SEALANTS:
1. ARCHITECTURAL SEALANTS: 250 G/L.
2. SEALANT PRIMERS FOR NONPOROUS SUBSTRATES: 250 G/L.
3. SEALANT PRIMERS FOR POROUS SUBSTRATES: 775 G/L.
B. STAIN TEST: ASTM C 1248.
1.4 JOINT SEALANTS
A. MILDEW-RESISTANT, NEUTRAL-CURING, SILICONE JOINT SEALANT:
1. TYPE: SINGLE COMPONENT.
2. GRADE: NON-SAG.
3. CLASS: 100/50.
4. USES RELATED TO EXPOSURE: NON-TRAFFIC.
B. URETHANE JOINT SEALANT:
1. TYPE: MULTI-COMPONENT.
2. GRADE: POURABLE.
3. CLASS: 100/50.
4. USES RELATED TO EXPOSURE: TRAFFIC.
C. IMMERSIBLE POLYSULFIDE JOINT SEALANT:
1. TYPE: MULTI-COMPONENT.
2. GRADE: POURABLE
3. CLASS: 25.
4. USES RELATED TO EXPOSURE: IMMERSIBLE.
D. LATEX JOINT SEALANT: ACRYLIC LATEX OR SILICONIZED ACRYLIC LATEX.
E. SOLVENT-RELEASE-CURING JOINT SEALANT: BUTYL RUBBER.
F. PREFORMED JOINT SEALANT: PREFORMED SILICONE.
G. ACOUSTICAL JOINT SEALANT: NON-SAG, PAINTABLE, NON-STAINING LATEX.
H. JOINT-SEALANT BACKING: BOND-BREAKER TAPE.
1.5 FIELD QUALITY CONTROL
A. FIELD-ADHESION TESTING.
1.6 PRODUCT: GE SILICONE (50 YEAR) OR APPROVED EQUAL.

SECTION 08110 - DOORS AND FRAMES

1.1 SUMMARY
A. STANDARD HOLLOW METAL INSULATED DOORS AND FRAMES.
1.2 QUALITY ASSURANCE
A. STANDARD HOLLOW METAL QUALITY STANDARD: ANSI/SDI A250.8 (OR LOCAL CODE).
1.3 PRODUCTS
A. STANDARD HOLLOW METAL INSULATED DOORS:
1. DESIGN: FLUSH PANEL OR AS INDICATED.
2. THERMAL-RATED DOORS: EXTERIOR, THERMAL RESISTANCE U-0.34
B. EXTERIOR DOORS:
1. NON-FERROUS SHEET FACES, 16 GAUGE.
2. LEVEL 1 AND PHYSICAL PERFORMANCE LEVEL A (HEAVY DUTY).
C. STANDARD HOLLOW METAL FRAMES:
1. EXTERIOR FRAMES: GALVANIZED STEEL; FULL PROFILE WELDED.
2. FRAMES FOR STEEL DOORS: 14 GAUGE.
E. HOLLOW METAL PANELS: SAME MATERIALS, CONSTRUCTION, AND FINISH AS ADJOINING HOLLOW METAL WORK.
F. DOOR HARDWARE: PANIC TYPE EXIT DEVICE
G. DOOR THRESHOLDS: 1/4" HIGH, HEAVY DUTY FOR DELIVERY DOOR.
H. ACCESSORIES:
1. MOLDINGS AND STOPS FOR GLAZED LITES.
2. LOUVERS: SIGHT-PROOF STEEL.
A. FINISHES: FACTORY PRIMING FOR FIELD PAINTING.

1.4 WOOD DOORS: INTERIOR WOOD DOORS SHALL BE SOLID CORE AND COMPLY WITH THE FOLLOWING, INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS:

- FACE: PRE-FINISHED MAPLE
- GRADE: PREMIUM
- STYLE: PANEL DOORS AS SELECTED BY OWNER.
- CORE CONSTRUCTION: GLUED BLOCK CORE
- THICKNESS: 1-3/4" THK.
- WARRANTY: 5 YEARS
- MANUFACTURER: GRAHAM OR APPROVED EQUAL.
- FIRE RATING: AS INDICATED ON DOOR SCHEDULE.

1.5 STEEL DOORS AND HOLLOW METAL FRAMES: PROVIDE STEEL DOORS AND HOLLOW METAL FRAMES COMPLYING WITH 501-100 - RECOMMENDED SPECIFICATIONS: STANDARD STEEL DOORS AND FRAMES. DOORS AND FRAMES SHALL BE MANUFACTURED BY BENCHMARK, CECO, REPUBLIC STEEL OR APPROVED EQUAL.
1.6 INSTALLATION: INSTALL ACCORDING TO MANUFACTURE INSTRUCTIONS AND PROCEDURES.

SECTION 08710 - DOOR HARDWARE

1.1 SUMMARY
A. MECHANICAL DOOR HARDWARE FOR SWINGING DOORS.
B. CYLINDERS FOR DOOR HARDWARE.
C. ELECTRIFIED LOCAL (AUDIBLE) ALARM DOOR HARDWARE.
1.2 WARRANTY
A. MATERIALS AND WORKMANSHIP: THREE YEARS.
1.3 MAINTENANCE SERVICE
A. FULL-MAINTENANCE SERVICE: SIX MONTHS.
1.4 PRODUCTS
A. SCHEDULED DOOR HARDWARE: PRODUCTS SCHEDULED IN "DOOR HARDWARE SCHEDULE" ON DRAWINGS.
1.5 FIELD QUALITY CONTROL
A. INDEPENDENT ARCHITECTURAL HARDWARE CONSULTANT: CONTRACTOR -ENGAGED TO PERFORM INSPECTIONS.
B. OCCUPANCY ADJUSTMENT: AFTER THREE AND ELEVEN MONTHS.
1.6 DOOR HARDWARE SCHEDULE:
A. AS INDICATED ON DRAWINGS.
1.7 KEYING
A. PROVIDE TEMPORARY CONSTRUCTION CORES, CHANGE OUT TO PERMANENT CORES AT COMPLETION OF PROJECT. KEY TO MASTER AND COORDINATE WITH OWNER SPECIFICATIONS. PROVIDE 5 SETS OF EACH KEY INCLUDING MASTER AT COMPLETION OF PROJECT.

SECTION 083613 - SECTIONAL DOORS

1.1 PERFORMANCE REQUIREMENTS
A. BASIC WIND SPEED, EXTERIOR DOORS: TO BE DETERMINED DUE TO SPECIFIC SITE CONDITIONS.
B. AIR INFILTRATION: MAXIMUM RATE OF 0.08 CFM/SQ. FT. (0.406 L/S PER SQ. M)
C. WINDBORNE-DEBRIS-IMPACT-RESISTANCE PERFORMANCE.
D. SEISMIC PERFORMANCE.
1.2 QUALITY ASSURANCE
A. STANDARD FOR SECTIONAL DOORS: DASMA 102.
1.3 WARRANTY
A. MATERIALS AND WORKMANSHIP: TWO YEARS.
B. FINISH: 10 YEARS FOR FACTORY-APPLIED FINISHES.

1.4 DOOR ASSEMBLY AS INDICATED ON DRAWINGS
A. STEEL SECTIONAL DOOR.
B. R-VALUE: R-16 MINIMUM
C. STEEL SECTIONS: GALVANIZED STEEL SECTIONS 2 INCHES (51 MM NOMINAL) THICK WITH FLAT EXTERIOR SURFACE AND GALVANIZED STEEL INTERIOR FACING.
D. TRACK CONFIGURATION: STANDARD-LIFT TRACK.
E. WEATHERSEALS.
1. ELECTRIC DOOR OPERATOR: LIGHT DUTY, UP TO 10 CYCLES PER HOUR OBSTRUCTION-DETECTION DEVICE.

SECTION 08800 - GLAZING

1.1 SUMMARY
A. GLAZING REQUIRED FOR THE FOLLOWING:
1. DOORS.
2. WINDOWS.
1.2 PERFORMANCE REQUIREMENTS
A. ENGINEERING DESIGN OF GLASS BY CONTRACTOR.
1.3 QUALITY ASSURANCE
A. MOCKUPS FOR ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS
1.4 WARRANTY
A. INSULATING GLASS: NOT LESS THAN 10 YEARS.
1.5 MATERIALS
A. GLAZING GASKETS: DENSE COMPRESSION OR LOCK STRIP.
B. SILICONE GLAZING SEALANTS: NEUTRAL CURING, CLASS 100/50
C. GLAZING TAPES: BACK-BEDDING-MASTIC TYPE.
1.6 MONOLITHIC-GLASS TYPES
A. GLASS TYPE FULLY TEMPERED FLOAT GLASS.
1.7 INSULATING-GLASS TYPES
GLASS TYPE: LOW-E-COATED, DOUBLE GLAZED CLEAR INSULATING GLASS.
1. OUTDOOR LITE: HEAT-STRENGTHENED FLOAT GLASS OR FULLY TEMPERED FLOAT GLASS AS DESIGNATED ON DRAWINGS.
2. INDOOR LITE: HEAT-STRENGTHENED FLOAT GLASS OR FULLY TEMPERED FLOAT GLASS.

SECTION 09000 - FINISHES

1.1 FINISHES SHALL BE OF THE SIZE, STYLE AND MANUFACTURER INDICATED ON THE FINISH SCHEDULE AND DRAWINGS. PROVIDE (1) EXTRA CARTON OF EACH FLOOR & CEILING TILE OF EACH TYPE. ALL INTERIOR FINISHES SHALL BE INSTALLED IN ACCORDANCE W/ MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL VERIFY IF SPECIAL SURFACE PREPARATION IS REQUIRED.

SECTION 09290 - GYPSUM BOARD

1.1 MATERIALS
A. INTERIOR GYPSUM BOARD:
1. GYPSUM WALLBOARD.
2. MOISTURE- RESISTANT GYPSUM BOARD.
B. TRIM ACCESSORIES:
1. INTERIOR.
2. ALUMINUM: EXTRUDED PROFILES.
C. TEXTURE FINISHES:
1. NON-AGGREGATE FINISH.
D. AUXILIARY MATERIALS:
1. LAMINATING ADHESIVE: LOW VOC.
2. ACOUSTICAL JOINT SEALANT: LOW VOC.
E. CONTROL JOINTS:
1. LOCATE AT WINDOW CORNERS, COLUMN CORNERS WHERE POSSIBLE. MAX. SPACING 50'-0" ON CENTER. DO NOT INSTALL CONTROL JOINTS IN AREAS SCHEDULED TO RECEIVE VINYL GRAPHICS.
2. DETAIL PER DRYWALL MANUFACTURER'S RECOMMENDATIONS
F. LEVELS OF GYPSUM BOARD FINISH
1. PER GYPSUM ASSOCIATION 214-10
2. LEVEL 1 - ABOVE CEILINGS AND IN AREAS CONCEALED FROM VIEW
3. LEVEL 4 - ALL AREAS EXPOSED TO VIEW EXCLUDING WALLS SCHEDULED TO RECEIVE VINYL GRAPHICS
4. LEVEL 5 - WALL AREAS SCHEDULED TO RECEIVE VINYL GRAPHICS
G. METAL STUD FRAMING
1. FRAMING INSTALLATION PER ASTM C-745, DEFLECTION L/360.
2. MIN. 20 GAUGE STUD FRAMING AT 16" O.C.
3. PROVIDE STEEL BAR BRACING AT 48" O.C.

SECTION 093000 - TILING

1.1 QUALITY ASSURANCE
A. MOCKUP FOR FLOOR TILE INSTALLATION.
1.2 SUMMARY
A. PORCELAIN TILE
B. SURFACE PREPARATION
C. WATERPROOFING AND CRACK ISOLATION MEMBRANE SYSTEM
D. SETTING MORTAR
E. GROUT AND ACCESSORIES
1.3 TILE PRODUCTS
A. TILE TYPE: GLAZED PORCELAIN TILE.
1. BASIS-OF-DESIGN PRODUCT: AS INDICATED ON DRAWINGS.
2. SIZE: AS INDICATED ON DRAWINGS.
1.4 ACCESSORY MATERIALS
A. CRACK ISOLATION MEMBRANE: URETHANE CRACK ISOLATION MEMBRANE AND TILE-SETTING ADHESIVE.
B. SEALANTS: USE SEALANT COMPLYING WITH ASTM C920 ACCORDING TO TYPE, GRADE, CLASS AND USES REQUIRED. COLOR TO MATCH GROUT.
1.5 INTERIOR TILE INSTALLATION SCHEDULE
A. INTERIOR FLOORS ON CONCRETE:
1. INSTALL FLOOR TILE PER TCNA F-125-FULL-12: THIN-SET MORTAR ON CRACK ISOLATION MEMBRANE.
B. TILE TYPE: AS INDICATED ON DRAWINGS.
C. LATEX-MODIFIED CEMENT MORTAR: ONE PART, FLEXIBLE LATEX THIN SET MORTAR CONFORMING TO ANSI A118.4 & A118.11 (OR LOCAL CODE).
D. GROUT: STAIN RESISTANT, CRACK RESISTANT, CEMENTITIOUS GROUT. PROVIDE GROUT WITH 4% MAXIUM WATER ABSORPTION CONFORMING TO ANSI A118.7 (OR LOCAL CODE).
1.6 WARRANTY
A. THE MANUFACTURER OF THE INSTALLATION MATERIAL SHALL WARRANT FOR 15 YEARS UNPON COMPLETION OF THE INSTALLATION, WHEN INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

SECTION 095113 - ACOUSTICAL PANEL CEILINGS

1.1 SUMMARY
A. ACOUSTICAL PANELS AND EXPOSED SUSPENSION SYSTEMS.
1.2 QUALITY ASSURANCE
A. ACOUSTICAL PANEL QUALITY STANDARD: ASTM E 1264.
B. METAL SUSPENSION SYSTEM QUALITY STANDARD: ASTM C 635.
C. MOCKUPS FOR EACH FORM OF CONSTRUCTION.
1.3 MATERIALS
A. ACOUSTICAL CEILING PANELS:
1. TYPE AND FORM: REFER TO DRAWING - LIST OF FINISHES - FOR PRODUCT INFORMATION.
2. LR: NOT LESS THAN: 0.85.
3. NRC: NOT LESS THAN: 0.55.
4. CAC: NOT LESS THAN: 35.
5. THICKNESS: 5/8" INCH (15MM)
6. MODULAR SIZE: 24 BY 48 INCHES (610 BY 1220 MM).
B. METAL SUSPENSION SYSTEMS:
1. WIRE HANGERS, BRACES, AND TIES.
2. HANGER RODS OR FLAT HANGERS
3. ANGLE HANGERS.
4. SEISMIC PERIMETER STABILIZER BARS, STRUTS, AND CLIPS.
5. HOLD-DOWN CLIPS.
6. IMPACT CLIPS.
7. WIDE-FACE, CAPPED, DOUBLE-WEB STEEL: INTERMEDIATE DUTY. REFER TO DRAWING A-1.2 FOR OTHER PRODUCT INFORMATION.
C. METAL EDGE MOLDINGS AND TRIM: EXTRUDED
D. ACOUSTICAL SEALANTS.
1.4 INSTALLATION
A. INSTALLATION: ASTM C 636
1.5 FIELD QUALITY CONTROL
A. TESTING: BY CONTRACTOR/ CONSTRUCTION MANAGER -ENGAGED AGENCY TO TEST ACOUSTICAL PANEL CEILING HANGER FASTENERS.

SECTION 09920 - INTERIOR PAINTING

1.1 SUMMARY
A. SURFACE PREPARATION AND THE APPLICATION OF PAINT SYSTEMS ON INTERIOR SUBSTRATES.
1.2 QUALITY ASSURANCE
A. QUALITY STANDARDS: "MPI APPROVED PRODUCTS LIST" AND "MPI ARCHITECTURAL PAINTING SPECIFICATION MANUAL."
1.3 INTERIOR PAINTING SCHEDULE
A. CONCRETE SUBSTRATES, NON-TRAFFIC SURFACES:
1. LATEX SYSTEM: MPI INT 3.1E.
2. LATEX OVER SEALER SYSTEM: MPI INT 3.1A.
3. LATEX OVER LATEX AGGREGATE SYSTEM: MPI INT 3.1B.
4. ALKYD SYSTEM: MPI INT 3.1D.
B. CONCRETE SUBSTRATES, TRAFFIC SURFACES:
1. CLEAR SEALER SYSTEM: MPI INT 3.2F.
2. WATER-BASED CLEAR SEALER SYSTEM: MPI INT 3.2G.
C. STEEL SUBSTRATES:
1. QUICK-DRYING ENAMEL SYSTEM: MPI INT 5.1A.
2. ALKYD DRY-FALL SYSTEM: MPI INT 5.1D.
3. ALKYD SYSTEM: MPI INT 5.1E.
4. ALUMINUM PAINT SYSTEM: MPI INT 5.1M.
D. GALVANIZED-METAL SUBSTRATES:
1. ALKYD DRY-FALL SYSTEM: MPI INT 5.3F.
2. ALKYD SYSTEM: MPI INT 5.3C.
3. HIGH-PERFORMANCE ARCHITECTURAL LATEX SYSTEM: MPI INT 5.3M.
E. ALUMINUM (NOT ANODIZED OR OTHERWISE COATED) SUBSTRATES:
1. ALKYD OVER VINYL WASH PRIMER SYSTEM: MPI INT 5.4A.
2. ALKYD OVER QUICK-DRYING PRIMER SYSTEM: MPI INT 5.4J.
3. ALUMINUM PAINT SYSTEM: MPI INT 5.4D.
4. HIGH-PERFORMANCE ARCHITECTURAL LATEX SYSTEM: MPI INT 5.4F.
F. GYPSUM BOARD SUBSTRATES:
1. LATEX SYSTEM: MPI INT 9.2A.
2. ALKYD OVER LATEX PRIMER SYSTEM: MPI INT 9.2C.
3. HIGH-PERFORMANCE ARCHITECTURAL LATEX SYSTEM: MPI INT 9.2B.

SECTION 102113 - TOILET COMPARTMENTS

1.1 SUMMARY
A. TOILET COMPARTMENTS CONFIGURED AS FOLLOWS:
1. URINAL-SCREEN STYLE: WALL HUNG, FLAT PANEL.

1.2 COMPONENTS
A. PANEL CONSTRUCTION: HDPE
B. URINAL-SCREEN POST: NONE.
C. BRACKETS (FITTINGS):
1. FULL-HEIGHT (CONTINUOUS) TYPE: STAINLESS STEEL.
D. HARDWARE AND ACCESSORIES: STAINLESS STEEL.

SECTION 10425 - SIGNAGE

1.1 SUMMARY
A. CONTRACTOR TO FURNISH AND INSTALL SIGNAGE PER LOCAL, STATE AND FEDERAL CODES. SEE DRAWINGS FOR FURTHER REQUIREMENTS.
1.2 COMPONENTS
A. MATERIALS - PLASTIC, SELF ADHESIVE
B. RAISED TEXT AND TACTILE PER A.D.A. AND ANSI

SECTION 10520 - FIRE EXTINGUISHERS

1.1 SUMMARY
A. FURNISHED MATERIAL: HAND-CARRIED FIRE EXTINGUISHERS.
1.2 QUALITY ASSURANCE
A. FIRE EXTINGUISHERS: NFPA 10 AND FMG LISTED OR PER LOCAL JURISDICTION.
1.3 WARRANTY
A. MATERIALS AND WORKMANSHIP: SIX YEARS.
1.4 PRODUCTS
A. PORTABLE, HAND-CARRIED FIRE EXTINGUISHERS:
1. MULTIPURPOSE DRY-CHEMICAL TYPE, RECHARGABLE, 10 LBS, UL RATING 4A:60B:C OR PER LOCAL CODE.

SECTION 14000-FURNISHINGS

1.1 ALL FURNISHINGS (TABLES, CHAIRS, BENCHES, ETC.) SHALL BE PROVIDED AND INSTALLED BY OWNER. FURNISHINGS N.I.C.

Client:
Riverside Concessions / Storage Building
Client: Riverside School District

Consultants:
DMG
design management group
consulting engineers
570 299 7520
dmgeng.com

CAM architect
C. Allen Mullins architect
ARCHITECTS | PLANNERS
606 North Main St, Wilkes-Barre, PA 18705
T | 570 | 824.3320
F | 570 | 606.4966
www.camarchus.com

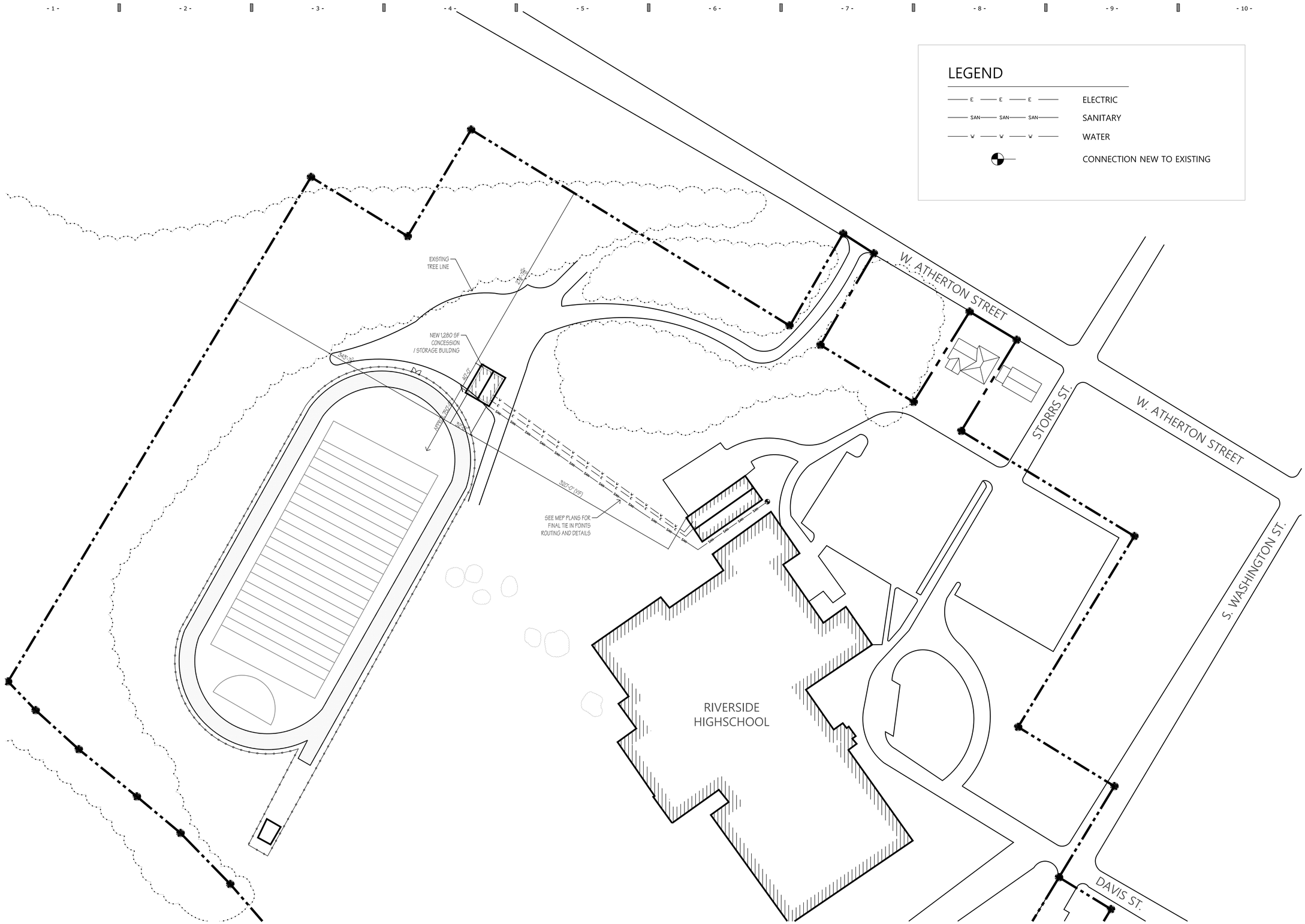
Seals:
REGISTERED ARCHITECT PENNSYLVANIA RICHARD T. MALCOLM, JR. RA405666
9/20/2021

Revisions | Issues
No: Date:

Phase:
PERMIT SET

Project: Riverside Concessions Building
Date: 09/20/2022
Drawn: MM Checked: ---
Scale: 1/4" = 1'-0"
Sheet:
SPECIFICATIONS

A0.2



SITE PLAN
NOT A LEGAL SURVEY
SCALE: 1"=60'-0"

Client:

Riverside Concessions / Storage Building

Client: Riverside School District

Consultants:

DMG
design management group
consulting engineers
570 299 7520
dmgeng.com

C. Allen Mullins architect
ARCHITECTS | PLANNERS
606 North Main St. Wilkes-Barre, PA 18705
T. [570] 824-3320
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www.camarchus.com

Seals:

9/20/2021

Revisions | Issues

No:	Date:

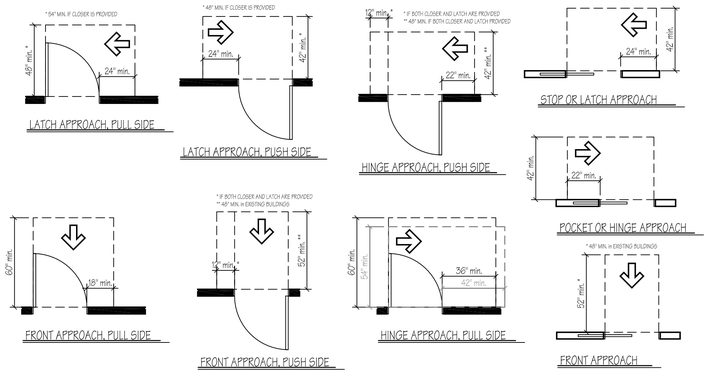
Phase: PERMIT SET

Project:	Riverside Concessions Building		
Date:	09/20/2022		
Drawn:	MM	Checked:	---
Scale:	AS NOTED		
Sheet:	SITE PLAN		

A1.1

ADA DOOR SWING & CLEARANCE REQUIREMENTS

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



TOILET ACCESSORY SCHEDULE

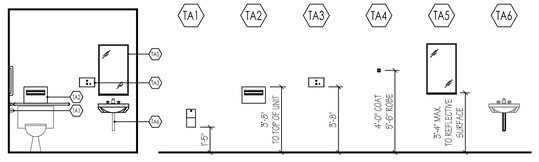
NO	DESCRIPTION	MFG.	MFG. NO.	MOUNTING	QTY.	REMARKS
GEN	GRAB BARS	AMERICAN SPECIALTIES (ASI)	3800	SURFACE	2	18" LENGTH
GEN	GRAB BARS	AMERICAN SPECIALTIES (ASI)	3800	SURFACE	2	36" LENGTH
GEN	GRAB BARS	AMERICAN SPECIALTIES (ASI)	3800	SURFACE	2	42" LENGTH
TA1	TOILET TISSUE DISPENSER	KOHLER	ELATE K-27289	SURFACE	4	
TA2	TOILET SEAT COVER DISPENSER			SURFACE	4	
TA3	WALL SOAP DISPENSER	AMERICAN SPECIALTIES (ASI)	6326	RECESSED	4	
TA4	COAT HOOKS	AMERICAN SPECIALTIES (ASI)	7308	SURFACE	4	
TA5	MIRROR	AMERICAN SPECIALTIES (ASI)	0620	SURFACE	4	24" x 36"
TA6	UNDERSINK INSULATION	-	-	-	-	

GENERAL RESTROOM NOTES:

1. PROVIDE SUBMITTAL OF TOILET ACCESSORIES FOR OWNER / ARCHITECT APPROVAL.
2. HANDWASH, COUNTERSINK, AND ANY OTHER TYPE OF LAVATORY SHALL BE ACCOMPANIED BY A SOAP DISPENSER (TA3) AND PAPER TOWEL DISPENSER.
3. PROVIDE A ROBE / COAT HOOK AT ALL RESTROOM DOORS.
4. PROVIDE A MIRROR (TA5) AT ALL RESTROOMS ABOVE SINK.
5. SILICONE SEAL AROUND ALL TOILET ROOM ACCESSORY SURFACES IN CONTACT WITH WALL SURFACE TO AVOID ANY MOISTURE PENETRATING WALL CAVITY.

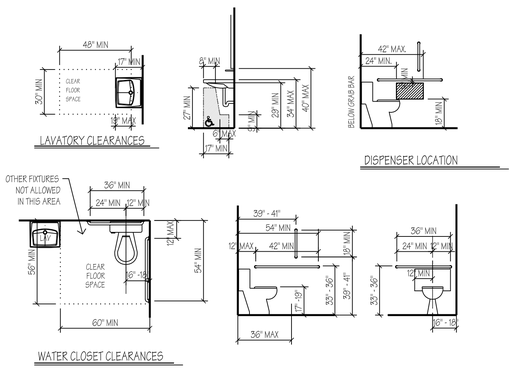
TOILET ACCESSORIES

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



ADA RESTROOM REQUIREMENTS

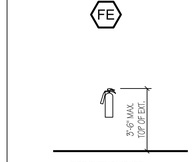
SCALE: 1/4" = 1'-0"



NOTE: WATER CLOSET FLUSH CONTROLS ON OPEN SIDE PER CODE REQUIREMENTS.

FIRE EXT.

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



DOOR & FRAME GENERAL NOTES:

1. ALL DOOR SIZES ARE NOMINAL.
2. ALL DOORS ARE 1-3/4" THICK & 7'-0" HIGH UNLESS OTHERWISE NOTED.
3. ALL DOORS ARE FLUSH, COORDINATE STYLE / PROFILE WITH OWNER. EXTERIOR DOORS TO BE INSULATED METAL DOORS AND METAL FRAMES. INTERRIOR DOORS TO BE SOLID CORE BIRCH WOOD DOORS WITH HOLLOW METAL FRAMES.
4. COORDINATE FRAME THROAT DEPTHS WITH WALL TYPES - SEE DRWGS.
5. GLAZING IN DOOR TO BE 1" THICK INSULATED TEMPERED GLASS.
6. PROVIDE TEMPERED GLASS WHERE REQ'D BY CODE.
7. ALL FRAMES SHALL BE SHIMMED / CAULKED IN ACCORDANCE WITH ACCEPTED PRACTICES.
8. GENERAL CONTRACTOR SHALL VERIFY ALL DOOR UNDERCUT AND LOUVER LOCATIONS WITH MECHANICAL DRAWINGS.

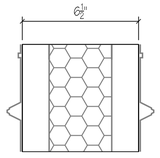
DOOR HARDWARE GENERAL NOTES:

1. GENERAL CONTRACTOR SHALL VERIFY AND COORDINATE ALL DOOR HARDWARE REQUIREMENTS FOR ALL FRAMES INDICATED. ALL SUBMITTALS ISSUED TO THE ARCHITECT SHALL REFLECT THIS FIELD VERIFIED COORDINATION.
2. ALL HARDWARE SHALL BE HEAVY DUTY, GRADE 2, WITH US 26D FINISH.
3. PROVIDE ALL PLATES, STRIKES, ETC. AS REQ'D FOR A COMPLETE ASSEMBLY.
4. PROVIDE CONCAVE STYLE WALL STOPS OR FLOOR STOPS WHERE REQ'D.
5. ALL EXTERIOR DOORS ARE TO BE PREPPED TO OWNER SPECIFICATIONS TO ACCEPT ELECTRICAL DOOR STRIKES, CLOSERS AND AUTOMATIC DOOR OPENERS.

KITCHEN EQUIPMENT

ITEM #	EQUIPMENT	QTY.
0001	CHECKOUT MILLWORK & COUNTER	1
0002	POS SYSTEM	1
0003	CONDIMENTS COUNTER - MOBILE	1
0004	PLASTICWARE DISPENSER	1
0005	SNACK / CANDY DISPLAY	1
0006	BOTTLED BEV. MERCHANDISER	1
0007	DIGITAL MENU DISPLAY, CLNG MTD.	1
0008	COFFEE BREWER	1
0009	C.T. ICE/BEVERAGE DISPENSER	1
0010	MICROWAVE	1
0011	REFRIGERATOR, REACH-IN	1
0012	FREEZER, REACH-IN	1
0013	HOT DOG ROLLER / GRILL	1
0014	HOT WELLS, C.T.	2
0015	WARMER, C.T., BUFFET	1
0016	WORK TABLE (96" x 72")	1
0017	SHELVING (18" x 36")	1

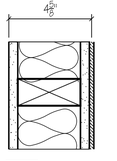
NOTE: KITCHEN PLANS ARE PRELIMINARY FOR LAYOUT PURPOSES ONLY. KITCHEN EQUIPMENT TO BE PROVIDED BY KITCHEN EQUIPMEN VENDOR / OWNER. CASEWORK & COUNTERTOPS WITH EQUIPMENT IN THEM ARE PART OF THIS CONTRACT AND TO BE PROVIDED BY GENERAL CONTRACTOR AND COORDINATED WITH KITCHEN EQUIPMENT CONTRACTOR [K.E.C.]. MAKE PLUMBING & ELECTRICAL FINALS TO EQUIPMENT PLACED BY K.E.C., IS PART OF THIS CONTRACT. SEE MECHANICAL AND ELECTRICAL DRAWINGS.



W3 EXTERIOR WALL @ STORAGE

EXTERIOR WALL
FIRE RATING:
UL DESIGN NO:
STC: --

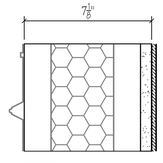
CORRUGATED METAL SIDING
2 X 4 HORIZONTAL GIRT @ 24" O.C.
BATT INSULATION (R-20) MIN.
CLOSED CELL SPRAY FOAM INSULATION (R-20) MIN. **(ADD ALT.)**
2 X 4 HORIZONTAL GIRT @ 24" O.C.
CORRUGATED METAL SIDING [WHITE]



W2 TYPICAL INTERIOR PARTITION

INTERIOR PARTITION - NON-BEARING
FIRE RATING: NON-RATED
UL DESIGN NO: --
STC: --

5/8" GYPSUM WALLBOARD
2 X 4 WOOD STUDS @ 16" O.C.
STUDS RUN FROM FLR TO BTM OF ROOF TRUSS
5/8" MR GYPSUM WALLBOARD (RESTROOM SIDE)
FRP REINFORCED PLASTIC (FRP) 4' AFF.
FRP FULL HIEGHT IN CONCESSION



W1 EXTERIOR WALL TYP

EXTERIOR WALL
FIRE RATING: NON-RATED
UL DESIGN NO:
STC: --

CORRUGATED METAL SIDING
2 X 4 HORIZONTAL GIRT @ 24" O.C.
BATT INSULATION (R-20) MIN.
CLOSED CELL SPRAY FOAM INSULATION (R-20) MIN. **(ADD ALT.)**
2 X 4 HORIZONTAL GIRT @ 24" O.C.
5/8 MR GYPSUM WALLBOARD
FRP REINFORCED PLASTIC (FRP) 4' AFF.
FRP FULL HIEGHT IN CONCESSION

TYP. WALL TYPES

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

LIST OF FINISHES

FINISH	MANUFACTURER	STYLE	# / COLOR	LOCATION	NOTES
ACOUSTICAL CEILING TILE, ACT					
ACT-1	ARMSTRONG	2x2 SQUARE LAY-IN, PRELUDE 15/16" GRID	#2712 DUNE SECOND LOOK II; WHITE		
ACT-2	ARMSTRONG	2x2 SQUARE LAY-IN, PRELUDE 15/16" GRID	#673 KITCHEN ZONE; WHITE	KITCHEN	UNPERFORATED; WASHABLE FINISH
CERAMIC / PORCELAIN TILE, CT / PT					
PT-1	MIRAGE	12" X 24" OXY COLLECTION	OX02 NAT SQ DEEPGREY	RESTROOM FLOOR, LOCKER ROOMS	
PT-2	MIRAGE	6" X 24" OXY COLLECTION	OX02 NAT SQ DEEPGREY	RESTROOM WALL BASE	
FIBERGLASS REINFORCED PLASTIC, FRP					
FRP-1	CRANE COMPOSITES	GLASBORD CLASS A	4X8 PANELS, SMOOTH GRAY	KITCHEN, BACK KITCHEN	
PAINT, P					
P-1	SHERWIN WILLIAMS	TBD	TBD		
SIDING					
M-1	TBD	VERTICAL METAL PANELS	TBD	EXTERIOR WALLS	
M-2	TBD	VERTICAL METAL PANELS	TBD	EXTERIOR WALLS	
M-3	TBD	METAL PANELS	WHITE	INTERIOR WALLS / CIELING	
ROOFING					
R-1	TBD	VERTICAL METAL PANELS	SILVER	ROOF	
SPECIALTIES, SP					
SP-1	SCRANTON PRODUCTS	HINY HIDERS	GRIP EX , TBD	RESTROOM TOILET PARTITIONS	

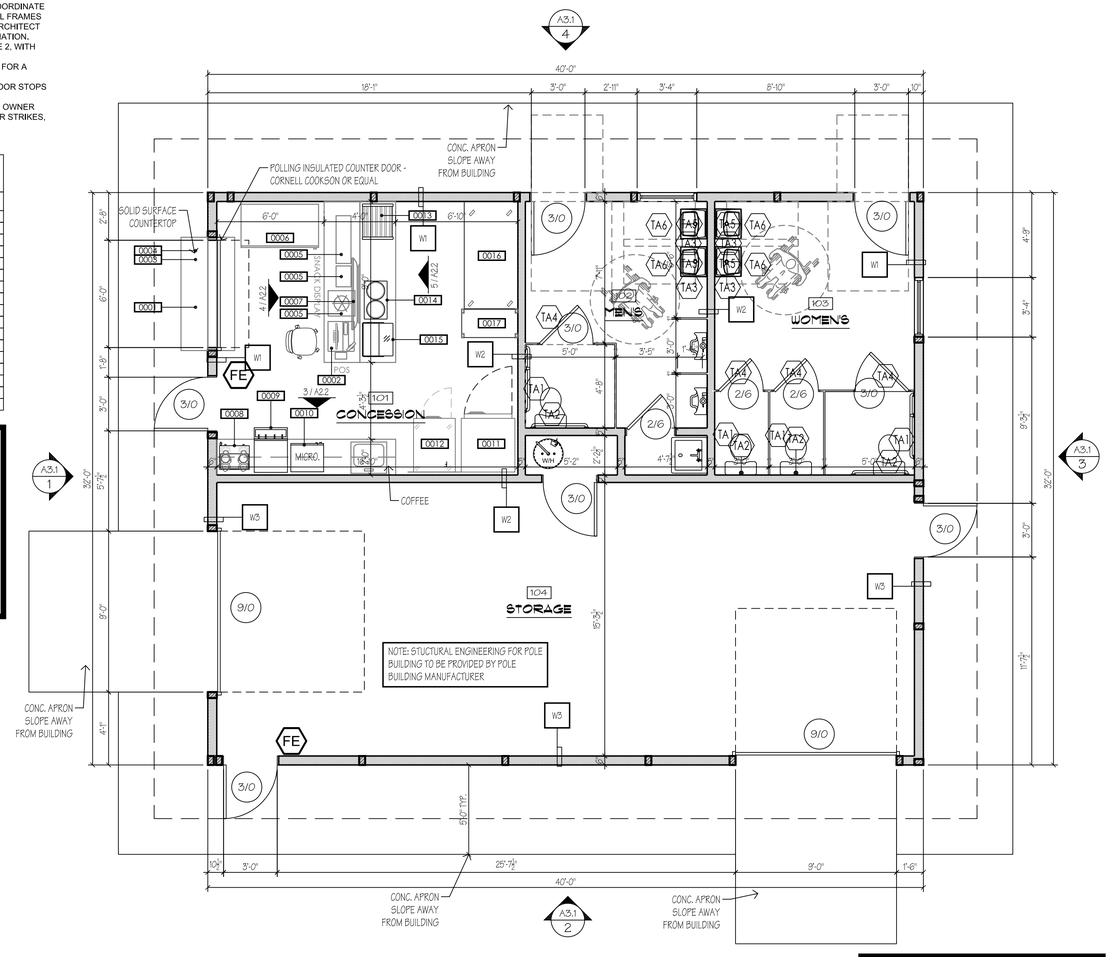
NOTE: PROVIDE SUBMITTALS & SAMPLES OF ALL FINISHES FOR OWNER / ARCHITECT APPROVAL. INSTALL ALL PRODUCTS PER MANFACTURER'S SUGGESTED DETAILS & INSTRUCTIONS.

ROOM FINISH SCHEDULE

NO	ROOM NAME	FLOOR	BASE	WALLS				CEILING		REMARKS
				N	E	S	W	FINISH	HEIGHT	
101	CONCESSION	CONC.	1 X 6 WOOD	FRP-1	FRP-1	FRP-1	FRP-1	GWB	8'-6"	
102	MEN'S	PT-1	PT-2	PAINT	PAINT	PAINT	PAINT	GWB	8'-6"	WALLS: FRP-1 4' AFF
103	WOMEN'S	PT-1	PT-2	PAINT	PAINT	PAINT	PAINT	GWB	8'-6"	WALLS: FRP-1 4' AFF
104	STORAGE	CONC.	1 X 6 WOOD	M-3	M-3	M-3	M-3	M-3	10'-0"	

GENERAL ROOM FINISH NOTES:

1. ALL DIMENSIONS TO FACE OF FINISH MATERIAL U.O.N.
2. ALL GWB IS TO BE PAINTED (1) COAT PRIME, (2) COATS FINISH.
3. M. R. GWB IS TO BE USED IN A MOISTURE / STEAM LOCATIONS.
4. ALL FLOORING MATERIAL CHANGES SHALL (U.N.O.) SHALL OCCUR AT THE CENTERLINE OF A DOOR WITH A DIVIDER STRIP OR T-MOLD.
5. PROVIDE UP TO FOUR (4) ROWS OF 2X6 WOOD BLOCKING BETWEEN STUDS FOR MILLWORK - BASE AND/OR OVERHEAD CABINETS - COORDINATE EXACT HEIGHTS AND LENGTHS OF BLOCKING WITH MILLWORK DRAWINGS (GENERALLY BLOCKING TO BE CENTERED AT 8", 36", 56" AND 84" A.F.F.). SEE & COORDINATE WITH KITCHEN EQUIPMENT DRAWINGS & CUT SHEETS.



PLAN NORTH

FLOOR PLAN

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

INSULATION NOTE:
BATT INSULATION SHOULD BE COMPLETELY UNEXPOSED. COVER WITH 'FSK SHIELD - CLASS 'A' INSULATION FACING' BY F-1 FOIL

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CAM architect

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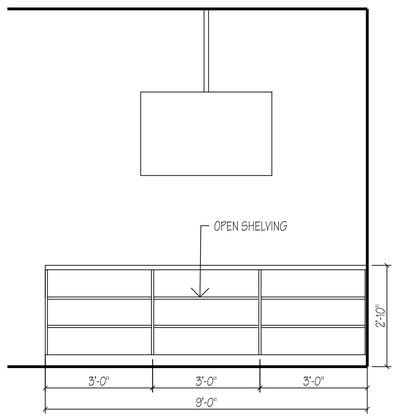
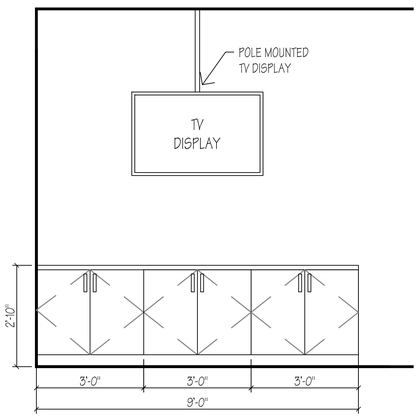
FLOOR PLAN

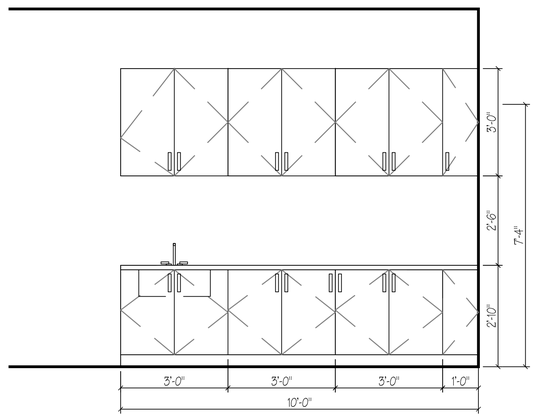
A2.1



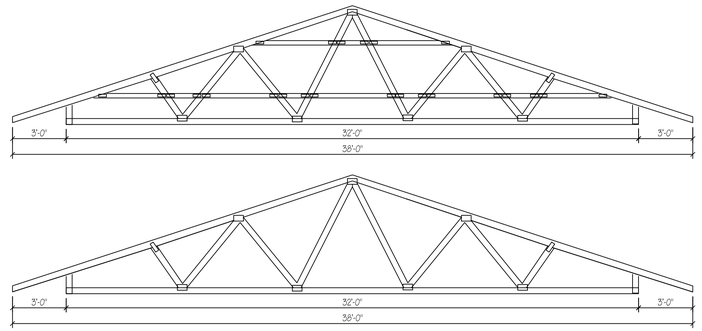
5 INTERIOR ELEVATION
SCALE: 1/2" = 1'-0"



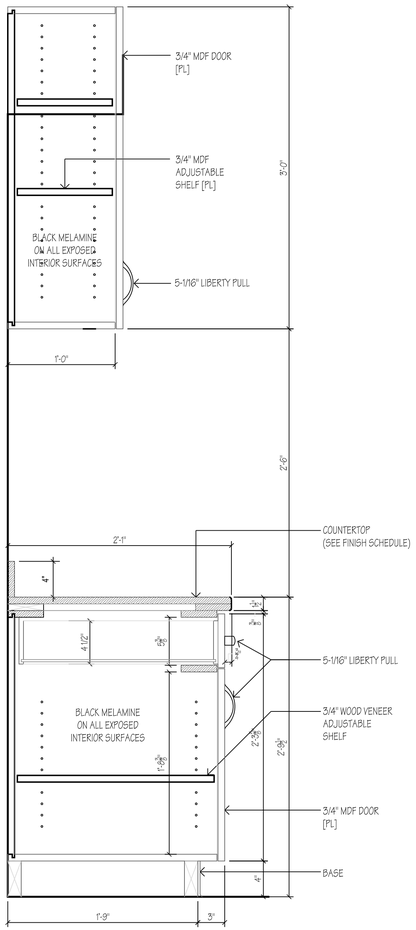
4 INTERIOR ELEVATION
SCALE: 1/2" = 1'-0"



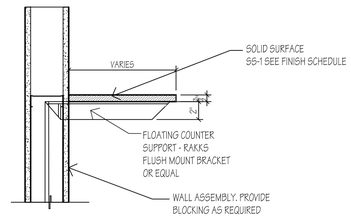
3 INTERIOR ELEVATION
SCALE: 1/2" = 1'-0"



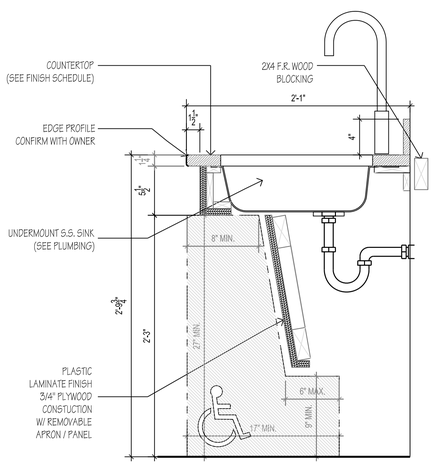
TYP. ROOF TRUSS ELEVATIONS
SCALE: 1/4" = 1'-0"



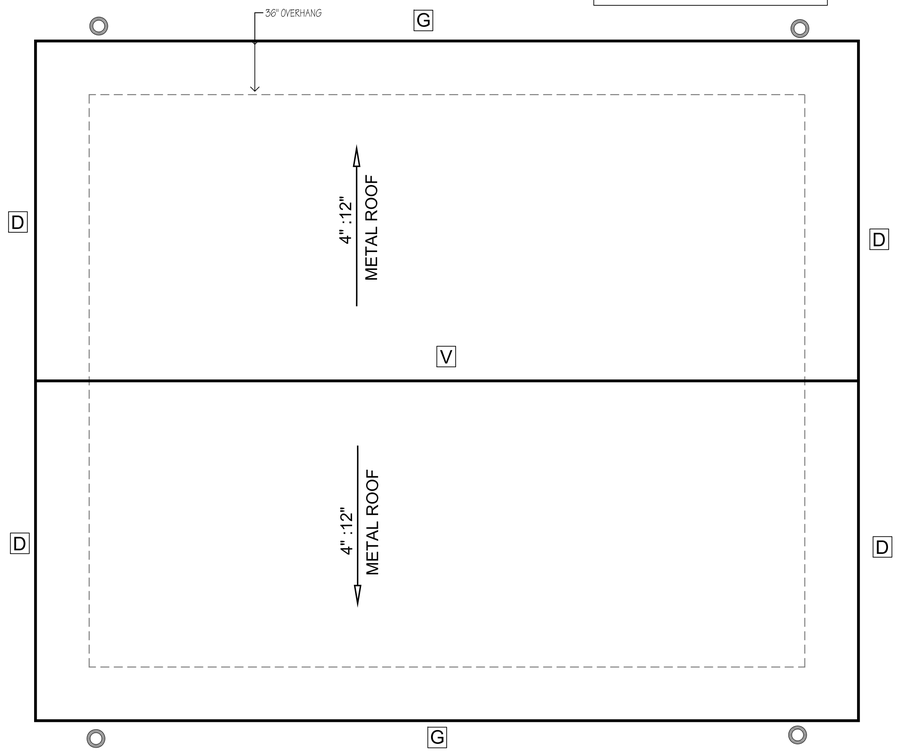
2 BASE & UPPER MILLWORK DETAIL
SCALE: 1-1/2" = 1'-0"



6 TYP. FLOATING COUNTERTOP DETAIL
SCALE: 1-1/2" = 1'-0"



1 TYP. SINK DETAIL
SCALE: 1-1/2" = 1'-0"



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

ROOFING LEGEND

SLOPE DIRECTION — ROOF SLOPE PER FOOT / SUBSTRATE

- G - GUTTER EDGE
- D - DRIP EDGE
- V - RIDGE VENT
- LOCATION OF GUTTER DOWNSPOUT

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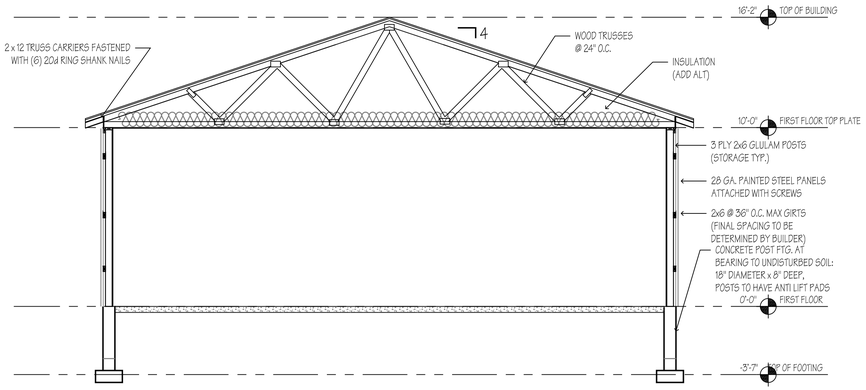
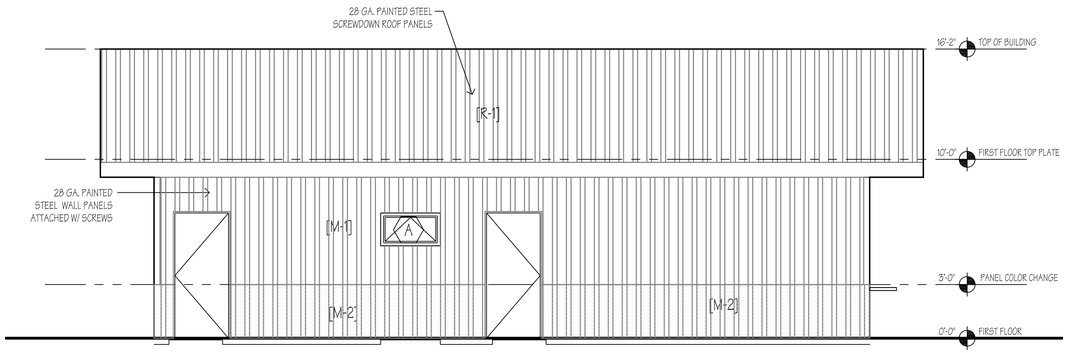
ROOF PLAN

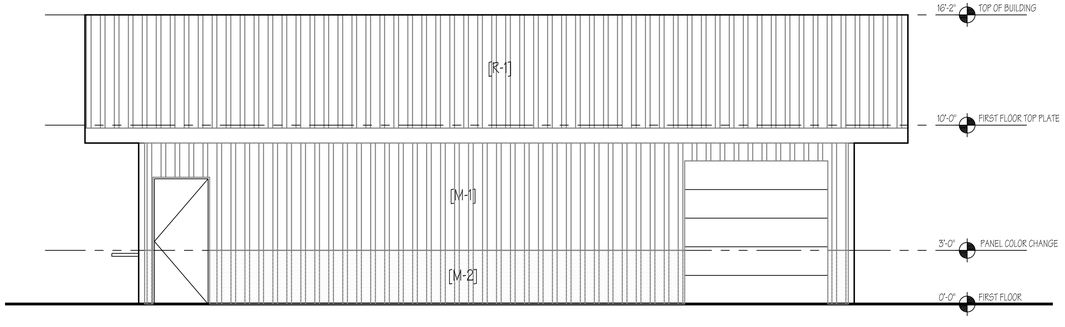
A2.2



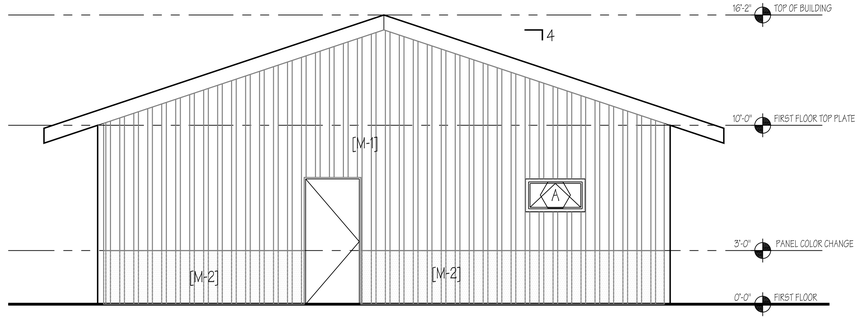
5 BUILDING SECTION
SCALE: 1/4" = 1'-0"



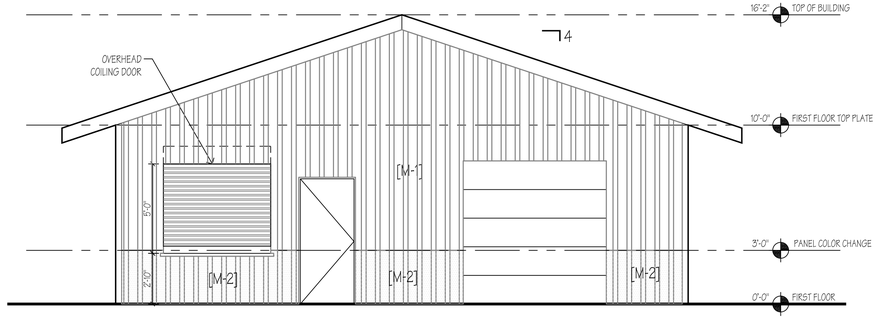
4 EXTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



2 EXTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



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



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

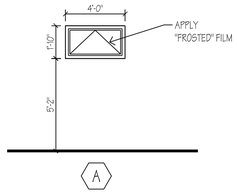
EXTERIOR FINISH SCHEDULE

FINISH	MANUFACTURER	DESCRIPTION	STYLE / COLOR	NOTES
SIDING & VENEERS				
M-1	TBD	METAL WALL PANEL	VERTICAL PANELS / TBD	
M-2	TBD	METAL WALL PANEL	VERTICAL PANELS / TBD	
ROOFING				
R-1	TBD	METAL WALL PANEL	CONCEALED FASTENER ROOF PANELS	

WINDOW SCHEDULE

NO	NOMINAL SIZE		TYPE	QTY.	COLOR	REMARKS
	WIDTH	HEIGHT				
A	4'-0"	1-10"	AWNING	2		PROVIDE FROSTED WINDOW FILM ON GLAZING

WINDOW GENERAL NOTES:
1. ALL WINDOW SIZES ARE NOMINAL.
2. ALL UNITS ARE NEW CONSTRUCTION.
3. PROVIDE TEMPERED GLASS AS REQ'D BY CODE.



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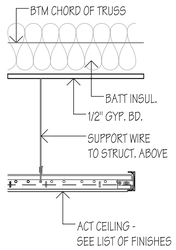
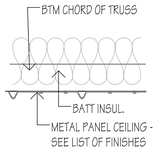
EXTERIOR ELEVATIONS

A3.1

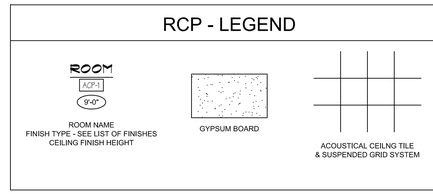


10 ACT - TYP. CEILING DETAIL
SCALE: 3/16" = 1'

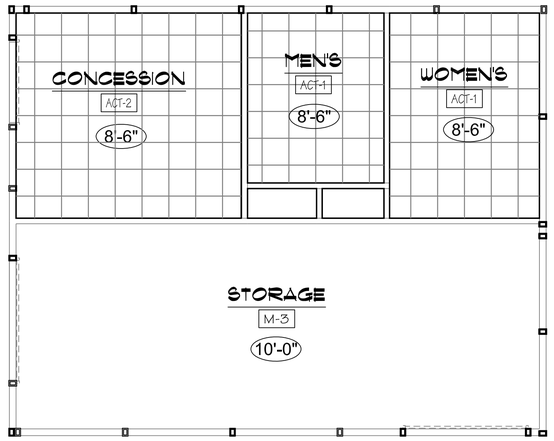


9 METAL PANEL - TYP. CEILING DETAIL
SCALE: 3/16" = 1'

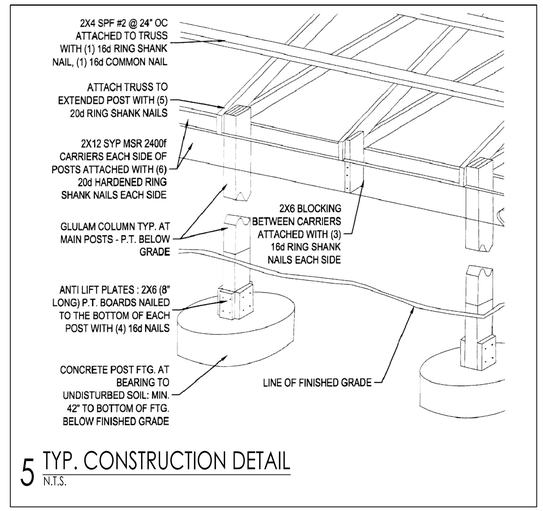
RCP - LEGEND



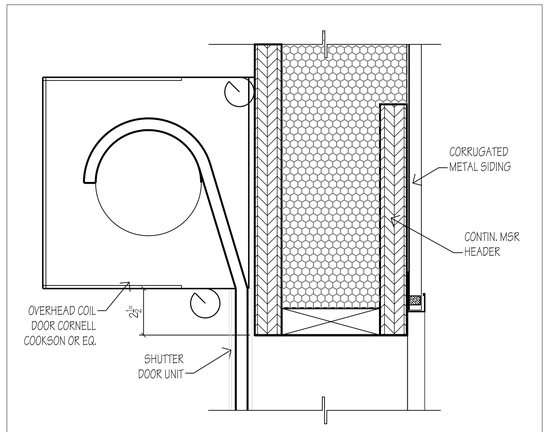
GENERAL NOTES:
1. CEILING HEIGHTS TO BE COORDINATED W/ MECHANICAL SYSTEMS. ANY CEILING HEIGHT LESS THAN 8'-0" TO BE COORD. W/ ARCHITECT.



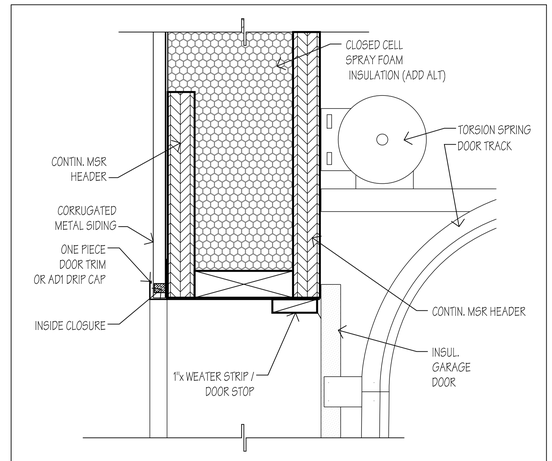
8 REFLECTED CEILING PLAN
SCALE: 3/16" = 1'



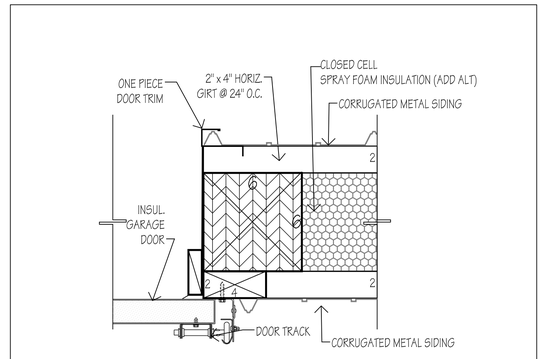
5 TYP. CONSTRUCTION DETAIL
N.T.S.



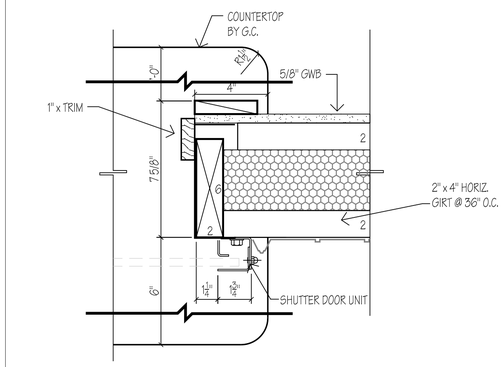
7 HEAD DETAIL [COIL / SHUTTER DOOR]
SCALE: 3" = 1'-0"



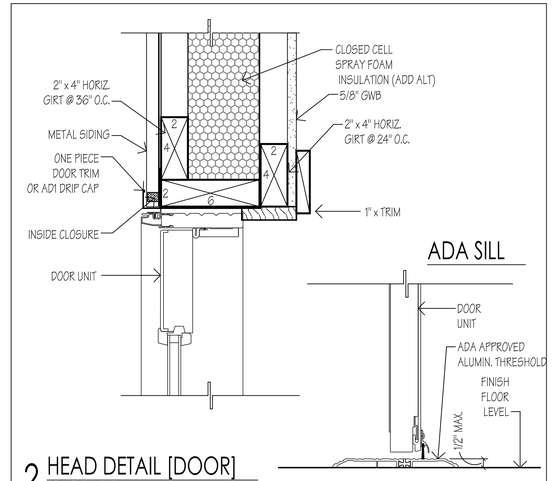
4 HEAD [SECTIONAL DOOR]
SCALE: 3" = 1'-0"



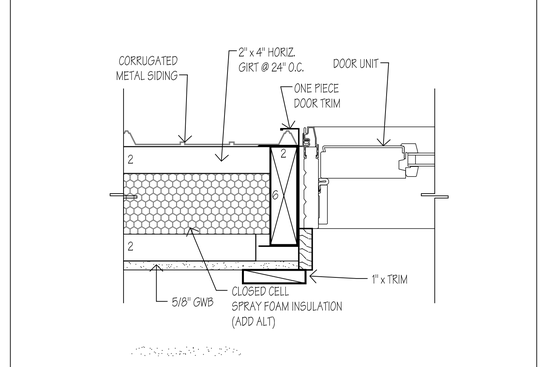
3 JAMB [SECTIONAL DOOR]
SCALE: 3" = 1'-0"



6 JAMB DETAIL [COIL / SHUTTER DOOR]
SCALE: 3" = 1'-0"



2 HEAD DETAIL [DOOR]
SCALE: 3" = 1'-0"



1 JAMB DETAIL [DOOR]
SCALE: 3" = 1'-0"

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Seals:

9/20/2021

Revisions | Issues

No: Date:

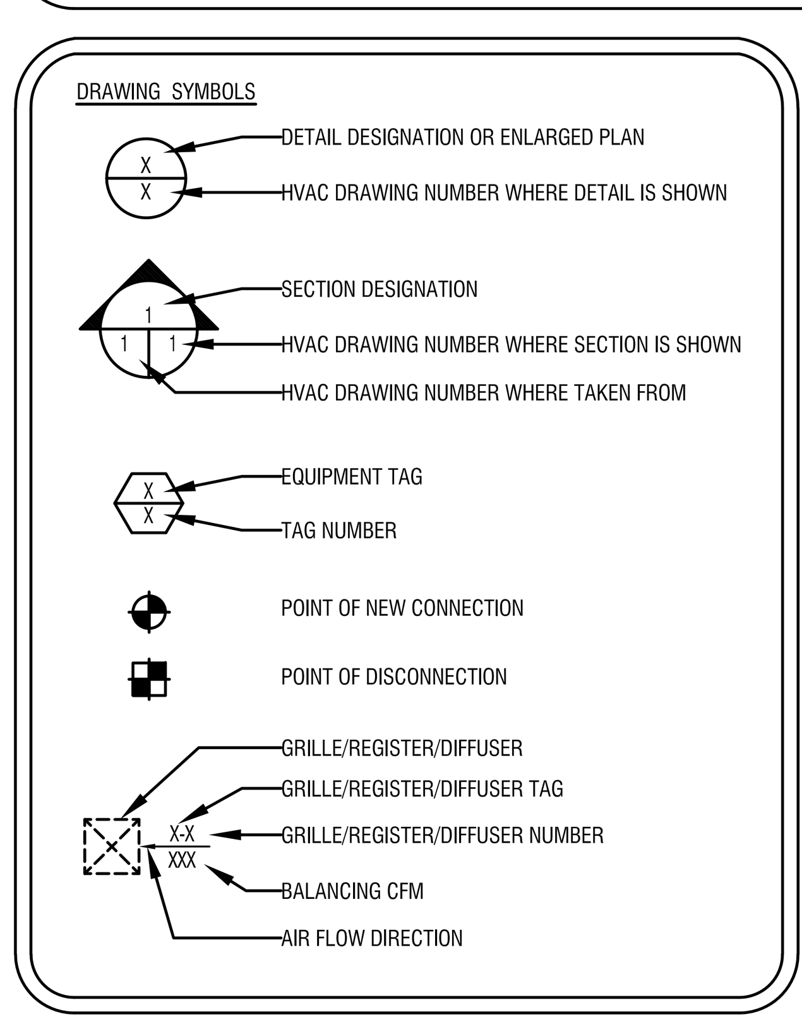
Phase: PERMIT SET

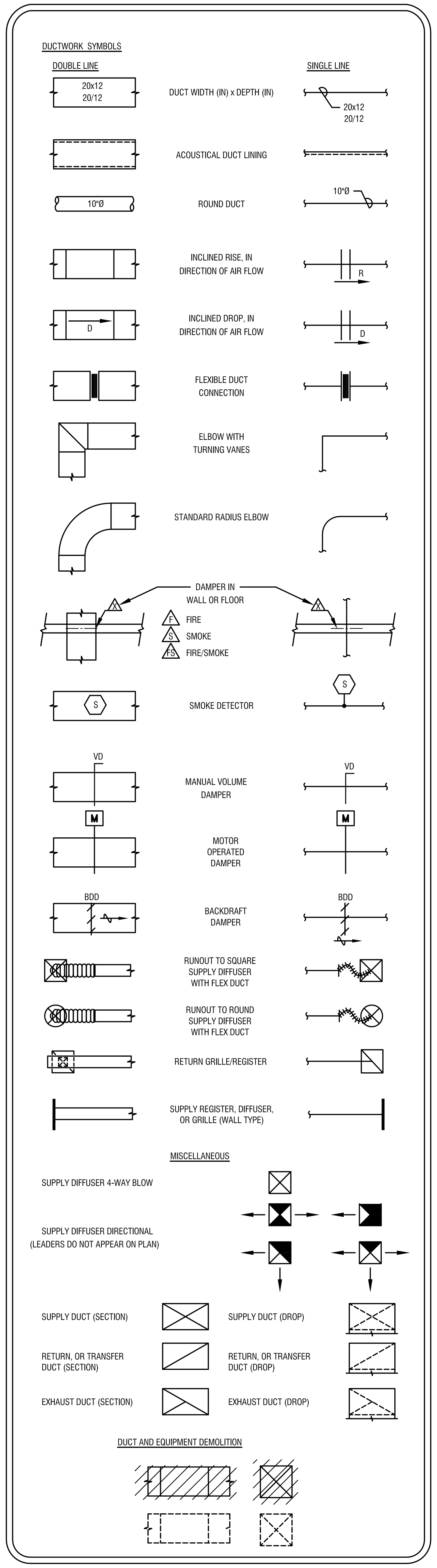
Project: Riverside Concessions Building
Date: 09/20/2022
Drawn: MM Checked: ---
Scale: AS NOTED
Sheet: CONSTRUCTION DETAILS

A4.1

MECHANICAL ABBREVIATIONS

AC	ALTERNATING CURRENT	KW	KILOWATTS
ACC	AIR COOLED CONDENSER	KWH	KILOWATT HOUR
ACU	AIR CONDITIONING UNIT		
AD	ACCESS DOOR		
ADJ	ADJUSTABLE	LAT	LEAVING AIR TEMPERATURE (°F)
AF	AIR FOIL	LBS/#	POUNDS
AFF	ABOVE FINISHED FLOOR	LD	LINEAR DIFFUSER
AHU	AIR HANDLING UNIT	LF	LINEAR FEET
AP	ACCESS PANEL	LWT	LEAVING WATER TEMPERATURE (°F)
ARCH	ARCHITECTURE		
ATC	AUTOMATIC TEMPERATURE CONTROL		
ATM	ATMOSPHERE		
AUX	AUXILIARY	MOD	MOTOR OPERATED DAMPER
AVG	AVERAGE	MAU	MAKEUP AIR UNIT
AWG	AMERICAN WIRE GAUGE	MAX	MAXIMUM
		MB	MIXING BOX
		MBH	1000 BTUH
B	BOILER	MC	MECHANICAL CONTRACTOR
BDD	BACKDRAFT DAMPER	MCC	MOTOR CONTROL CENTER
BHP	BRAKE HORSEPOWER	MFR	MANUFACTURER
BOD	BOTTOM OF DUCT	MIN	MINIMUM
BOS	BOTTOM OF STEEL	MISC	MISCELLANEOUS
BTU	BRITISH THERMAL UNIT	MMBH	1,000,000 BTUH
BTUH	BTU PER HOUR		
		NA	NOT APPLICABLE
CAV	CONSTANT AIR VOLUME	NC	NOISE CRITERIA, dB RE 20 uPa
CC	COOLING COIL	NC	NORMALLY CLOSED
CFM/ ∮	CUBIC FEET PER MINUTE ∮	NIC	NOT IN CONTRACT
CH	CHILLER	NO	NORMALLY OPEN
C&I	CONTROLS & INSTRUMENTATION	NTS	NOT TO SCALE
CLG	CEILING		
CMU	CONCRETE MASONRY UNIT	OA	OUTSIDE AIR
CO	CARBON MONOXIDE	OAT	OUTSIDE AIR TEMPERATURE
C02	CARBON DIOXIDE	OAD	OUTSIDE AIR DAMPER
COND	CONDENSATE	OBD	OPPOSED BLADE DAMPER
CONN	CONNECTION	OZ	OUNCE
CONT.	CONTINUATION		
CORR	CORRIDOR		
CT	COOLING TOWER	P	PUMP
CU	CONDENSING UNIT	PC	PLUMBING CONTRACTOR
CUH	CABINET UNIT HEATER	PD	PRESSURE DROP
CV	CONTROL VALVE	PH	PHASE
CU FT	CUBIC FEET	PHC	PREHEAT COIL
CVS	CONTROL VALVE STATION	PROP	PROPELLER
		PSI	POUNDS PER SQUARE INCH
D	DIFFUSER OR REGISTER	PSIG	PSI, GAUGE
dB	DECIBEL, RE 10 WATT	P+F	PITCH AND FLOW
DBT	DRY BULB TEMPERATURE (°F)		
DDC	DIRECT DIGITAL CONTROL	QTY	QUANTITY
DEG	DEGREE FAHRENHEIT (°F)		
DIA	DIAMETER		
DIM	DIMENSION	R	REGISTER
DN	DOWN	RA	RETURN AIR
DP	DEW POINT TEMPERATURE (°F)	RC	ROOM CRITERIA, dB RE 20 uPa
DX	DIRECT EXPANSION	RF	RETURN/RELIEF AIR FAN
DWG	DRAWING	RH	RELATIVE HUMIDITY
		RHC	REHEAT COIL
		RPM	REVOLUTIONS PER MINUTE
E	EXHAUST		
EA	EXHAUST AIR		
EAT	ENTERING AIR TEMPERATURE (°F)	S	SMOKE DETECTOR
EC	ELECTRICAL CONTRACTOR	SA	SUPPLY AIR
EER	ENERGY EFFICIENCY RATIO	SEER	SEASONAL ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN	SENS	SENSIBLE
EFF	EFFICIENCY	SF	SQUARE FEET
ELEV	ELEVATION	SP	STATIC PRESSURE (IN. WG.)
ESP	EXTERNAL STATIC PRESSURE	SPEC	SPECIFICATION
ET	EXPANSION TANK	SQ	SQUARE
EWT	ENTERING WATER TEMPERATURE (°F)	SS	STAINLESS STEEL
		SV	SOLENOID VALVE
F	FILTER		
FA	FACE AREA		
FC	FORWARD CURVED	T	THERMOSTAT
FCU	FAN COIL UNIT	TEMP	TEMPERATURE (°F)
FD	FLOOR DRAIN	TOD	TOP OF DUCT
FLR	FLOOR	TOP	TOP OF PIPE
FP	FIRE PROTECTION	TOS	TOP OF STEEL
FPM	FEET PER MINUTE	TSP	TOTAL STATIC PRESSURE
FR	FINNED RADIATION	TSTAT	THERMOSTAT
FT	FEET	TxD	TRANSFER DUCT
FVEL	FACE VELOCITY	TYP	TYPICAL
F&T	FLOAT AND THERMOSTATIC		
		UC	UNDERCUT
		UH	UNIT HEATER
GA	GAUGE OR GAGE	UL	UNDERWRITERS LABORATORY
GAL	GALLON	UV	UNIT VENTILATOR
GALV	GALVANIZED	UVL	ULTRA VIOLET LIGHT
GC	GENERAL CONTRACTOR		
GH	GRAVITY HOOD	V	VALVE, VOLT
GPM	GALLONS PER MINUTE	VA	VOLT-AMPERE
		VD	VOLUME DAMPER
HC	HEATING COIL	VEL	VELOCITY
HOA	HAND-OFF-AUTOMATIC	VFD	VARIABLE FREQUENCY DRIVE
HP	HORSEPOWER	VFV	VAV, WITH FAN
HR	HOUR	VOL	VOLUME
HVU	HEATING & VENTILATING UNIT		
HWST	HOT WATER SUPPLY TEMPERATURE		
HX	HEAT EXCHANGER	W	WATT
		WB	WET BULB TEMPERATURE (°F)
IB	INVERTED BUCKET TRAP	WC	WATER COLUMN
IFB	INTEGRAL FACE & BYPASS	WG	WATER GAUGE
IN	INCH	WMS	WIRE MESH SCREEN
IPS	IRON PIPE SIZE		





GENERAL PIPING NOTES:

1. INSTALL PIPING TO ALLOW ACCESS VALVES, AIR VENTS, EQUIPMENT REQUIRING ACCESS, AND TO PROVIDE MAXIMUM HEADROOM.
2. PROVIDE OFFSETS TO MAINTAIN CEILING HEIGHT AND TO COORDINATE WITH OTHER TRADES.
3. INSTALL VALVES IN HORIZONTAL PIPING WITH VALVE STEMS AT OR ABOVE THE PIPE CENTERLINE.
4. ARRANGE PIPING FOR VENTING OF AIR AND DRAINAGE OF THE ENTIRE SYSTEM.
5. INSTALL CONDENSATE DRAIN PIPING PITCHED AT 1/8" PER FOOT IN DIRECTION OF FLOW.

GENERAL DUCTWORK NOTES:

1. CHANGES IN SHAPE OR DIMENSION SHALL BE MADE WITH MAXIMUM TRANSITION OF 1 TO 7.
2. SEPARATE GALVANIZED SHEET METAL FROM ALUMINUM OR COPPER WITH LEAD OR FELT GASKETS.
3. PROVIDE SUPPLEMENTAL STIFFENING AND SUPPORT TO DUCTS AND APPARATUS CASINGS TO PREVENT DRUMMING, SAGGING, AND TO PROVIDE A STRUCTURALLY SOUND ASSEMBLY.
4. INSTALL DUCT FROM SHOWER EXHAUST GRILLES GRADING DOWN TO EXHAUST GRILLE, WITHOUT DIPS OR TRAPS.
5. PROVIDE OFFSETS AND TRANSITIONS TO COORDINATE WITH OTHER WORK.
6. PROVIDE DUCTWORK AND TRANSITIONS TO CONNECT DUCTWORK TO EQUIPMENT AND COILS.
7. INSTALL FLEXIBLE DUCTWORK IN A FULLY EXTENDED CONDITION WITHOUT SAGS OR KINKS.
8. INSTALL DUCT MOUNTED SMOKE DETECTORS IN ACCESSIBLE LOCATIONS.
9. UNLESS NOTED OTHERWISE, PROVIDE 1'' THICK DUCT LINING FOR A MINIMUM OF 10 FEET OF DUCTWORK FROM THE SUPPLY AIR DISCHARGE AND RETURN AIR INLET OF AIR HANDLING UNITS, ENERGY RECOVERY UNITS, AND BLOWER COILS. FOR ALL LINED DUCTWORK, DIMENSIONS INDICATED ON DRAWINGS SHALL BE INSIDE CLEAR DIMENSIONS MEASURED FROM FACE-OF-LINER TO FACE-OF-LINER. LINING IS NOT REQUIRED FOR TOILET EXHAUST FANS. ROOF MOUNTED DUCTS ARE TO BE LINED AS DESCRIBED ABOVE AND ARE TO BE INSULATED WITH 2'' THICK RIGID INSULATION AND WRAPPED WITH EPDM MATERIAL, SAME COLOR AS ROOF.
10. INSTALL DUCTS CONVEYING GREASE LADEN AIR AT A PITCH OF 1/4" PER FOOT OPPOSITE THE DIRECTION OF FLOW

GENERAL AUTOMATIC TEMPERATURE CONTROLS NOTES:

1. TRANSFORMERS OR FILTERS FOR OPERATION OF AUTOMATIC TEMPERATURE CONTROLS FROM BUILDING POWER CIRCUITS SHALL BE PROVIDED UNDER DIVISION 23.
2. WIRING LOWER THAN 110 VOLTS FOR INTERLOCKED DEVICES, DDC CONTROLLERS, TERMINAL CONTROL UNITS, FLOW MEASURING DEVICES, AND OTHER POWER CONSUMING CONTROL DEVICES SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 23. WIRING 110 VOLTS AND HIGHER FOR INTERLOCKED DEVICES, DDC CONTROLLERS, TERMINAL CONTROL UNITS, FLOW MEASURING DEVICES, AND OTHER POWER CONSUMING CONTROL DEVICES SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 26.
3. PROVIDE SUPPLEMENTAL STIFFENING AND SUPPORTS TO DUCTS AND APPARATUS CASINGS TO PREVENT DRUMMING, SAGGING AND TO PROVIDE A STRUCTURALLY SOUND ASSEMBLY.
4. BRANCH CIRCUIT WIRING AND CONDUIT FURNISHED FOR CONTROL EQUIPMENT POWER SHALL BE SEPARATE FROM OTHER POWER WIRING. EACH CIRCUIT SHALL EXTEND TO A 120V BRANCH CIRCUIT PANEL, AND IDENTIFIED 120V, 20 AMPERE, SINGLE POLE BRANCH CIRCUIT BREAKER FURNISHED IN THE PANEL TO SERVE THE CIRCUIT. NO MORE THAN 2 DDC CONTROLLER INSTALLATIONS SHALL OPERATE FROM A SINGLE 120V BRANCH CIRCUIT, UNLESS INDICATED OTHERWISE.
5. WHERE SYSTEMS ARE SERVED BY EMERGENCY POWER, CONTROLS FOR OPERATION OF THOSE SYSTEMS SHALL ALSO BE SERVED BY EMERGENCY POWER.
6. WHERE DAMPERS PREVENT AIRFLOW THROUGH AN AIR HANDLING UNIT OR FAN, THOSE DAMPERS SHALL BE PROVEN OPEN PRIOR TO STARTING THE UNIT OR FAN. PROOF SHALL BE BY MECHANICAL SAFETY LIMIT SWITCH ACTIVATED BY THE DAMPER BLADE. FOR SERVICE WITH VARIABLE FREQUENCY DRIVES THE SWITCH SHALL BE WIRED IN THE AUTOMATIC AND HAND/TEST POSITIONS AND IN THE BYPASS POSITION FOR VARIABLE FREQUENCY DRIVES WITH BYPASS.
7. ALL LOW VOLTAGE WIRING AND AIR PIPING OR TUBING SHALL BE PLENUM RATED. MECHANICAL CONTRACTOR SHALL FURNISH ALL LOW VOLTAGE WIRING, AIR PIPING, AND TUBING REQUIRED FOR AUTOMATIC TEMPERATURE CONTROLS SYSTEMS. LOW VOLTAGE WIRING IS ALL WIRE OPERATING AT A VOLTAGE LOWER THAN 110 VOLTS.
8. ALL TEMPERATURE CONTROL SHALL HAVE A 5 DEGREE DEAD-BAND WITH OVERLAP RESTRICTIONS. EQUIPMENT SHALL BE PROVIDED WITH AT LEASE ONE MEANS OF EMERGENCY SHUT DOWN. SET BACK CONTROL SHALL ALLOW FOR AUTOMATIC RESTART AS WELL AS TEMPORARY OPERATION AS REQUIRED BY MAINTENANCE.

ADDITIONAL MECHANICAL REQUIREMENTS:

1. DRAWINGS ARE SCHEMATIC IN NATURE INTENDED TO EXEMPLIFY CODE COMPLIANCE FOR THE PURPOSE OF OBTAINING A CONSTRUCTION PERMIT. THE CONTRACTOR SHALL ASSURE THE PROPER INSTALLATION AND OPERATION OF ALL ASSOCIATED SYSTEMS.
2. THE INSTALLATION AND MATERIALS SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL CODES.
3. PROVIDE R-6 (INSTALLED VALUE) DUCTWORK INSULATION WITH VAPOR BARRIER IN INTERIOR SPACES. INSTALL PER THE MANUFACTURER'S WRITTEN INSTRUCTIONS. INSULATION SHALL BE PROVIDED ON RETURN AIR SYSTEMS WHERE THE DUCTWORK IS NOT LOCATED WITHIN CONDITIONED SPACES. WHERE DUCTWORK IS INSTALLED OUTSIDE, PROVIDE R-12 BOARD WITH WEATHER PROOF JACKET. MATERIALS SHALL BE COMPLIANCE WITH ALL APPLICABLE ASTM TESTS AS WELL AS NFPA 90A AND 90B.
4. DUCTWORK SHALL BE GALVANIZED SHEET STEEL IN THE GAUGE AS REQUIRED PER THE LATEST VERSION OF SMACNA GUIDELINES.
5. PROVIDE SUPPLEMENTAL STIFFENING AND SUPPORTS TO DUCTS AND APPARATUS CASINGS TO PREVENT DRUMMING, SAGGING AND TO PROVIDE A STRUCTURALLY SOUND ASSEMBLY.
6. PROVIDE ALL DUCTWORK FITTINGS INCLUDING BUT NOT LIMITED TO TEES, TAPS, ELBOWS, VOLUME DAMPERS ETC IN ACCORDANCE WITH THE LATEST VERSION OF SMACNA GUIDELINES.
7. COORDINATE ELECTRICAL POWER REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR. PROVIDE MEANS OF DISCONNECT FOR EQIPMENT AS REQUIRED.
8. THE CONTRACTOR SHALL ADJUST DUCTWORK AND EQUIPMENT LAYOUT IN FIELD AS REQUIRED TO FACILITATE A NEAT AND HIGH QUALITY INSTALLATION.
9. PROVIDE CONTROL WIRING AND DEVICES IN COMPLIANCE WITH THE CURRENTLY ADOPTED VERSION OF THE NATIONAL ELECTRIC CODE.
10. DO NOT INSTALL SERVICEABLE EQUIPMENT WITHIN 10' OF ROOF EDGES
11. DO NOT INSTALL AIR INTAKES WITHIN 10' OF EXHAUST TERMINALS OR PLUMBING VENTS
12. FURNISH IOM MANUALS AND AS-BUILT DRAWINGS WITH 90 DAYS OF COMPLETION OF WORK
13. ALL EXPOSED DUCTWORK SHALL BE DOUBLE WALLED OR INTERNALLY LINED TO PREVENT THE FORMATION OF CONDENSATION.
14. ALL REFRIGERATION PIPING SHALL BE ACR TYPE COPPER TUBE WITH BRAZED FITTINGS. SIZED IN ACCORDANCE WITH ASSOCIATED EQUIPMENT MANUFACTURER'S WRITTEN INSTRUCTIONS. INSULATE ALL REFRIGERANT PIPING WITH 1" FLEXIBLE ELASTOMERIC LINER. PROVIDE INSULATION MANUFACTURER'S WEATHER-PROOF MASTIC FOR ALL OUTDOOR INSTALLATIONS.

GENERAL MECHANICAL NOTES:

1. CODES AND STANDARDS LISTED IN SPECIFICATIONS AND DRAWINGS ARE MINIMUM STANDARDS. WHERE REQUIREMENTS ON THE DRAWINGS OR SPECIFICATIONS EXCEED THE MINIMUM CODE REQUIREMENTS, THE DRAWINGS OR SPECIFICATIONS SHALL GOVERN.
2. THE POWER RATING OF MOTORS AND OTHER MECHANICAL EQUIPMENT AND THE ELECTRICAL CHARACTERISTICS OF ELECTRICAL SYSTEMS SERVING THEM HAVE BEEN ESTABLISHED AS MINIMUMS WHICH ALLOW THAT EQUIPMENT TO FUNCTION PROPERLY TO PRODUCE THE REQUIRED CAPACITIES. POWER RATINGS INCLUDE REASONABLE SAFETY FACTORS TO ACCOMMODATE COMMON DIFFERENCES BETWEEN DESIGN PARAMETERS AND FIELD CONSTRUCTION PRACTICES. EQUIPMENT WITH POWER RATINGS LESS THAN THOSE INDICATED ON THE DRAWINGS SHALL NOT BE PERMITTED.
3. REASONABLE EFFORTS HAVE BEEN MADE TO COORDINATE ELECTRICAL REQUIREMENTS OF MECHANICAL EQUIPMENT WITH THE ELECTRICAL SYSTEMS SERVING THAT EQUIPMENT. DIFFERENCES AMONG MANUFACTURERS OF MECHANICAL EQUIPMENT MAKE IT IMPOSSIBLE TO PRODUCE A SINGLE ELECTRICAL DESIGN WHICH WILL SATISFY THE VARYING ELECTRICAL REQUIREMENTS OF THE THOSE MANUFACTURERS. CONSEQUENTLY, THE CONTRACTOR SHALL COORDINATE THE ELECTRICAL REQUIREMENTS OF THE MECHANICAL EQUIPMENT ACTUALLY FURNISHED ON THIS PROJECT WITH THE EQUIPMENT ACTUALLY FURNISHED ON THIS PROJECT AND PROVIDE ELECTRICAL SYSTEMS REQUIRED BY THAT EQUIPMENT. THIS COORDINATION EFFORT SHALL BE COMPLETED PRIOR TO THE INSTALLATION OF EITHER THE MECHANICAL EQUIPMENT OR THE ELECTRICAL SYSTEMS SERVING THAT EQUIPMENT. ELECTRICAL SYSTEM REVISIONS REQUIRED TO COORDINATE WITH THE MECHANICAL EQUIPMENT ACTUALLY FURNISHED SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
4. DRAWINGS INDICATE GENERAL LOCATIONS OF FIXTURES, APPARATUS, EQUIPMENT, PIPING, AND DUCTWORK. CHANGES ON LOCATION SHALL BE MADE TO ACCOMMODATE EXISTING OR NEW BUILDING CONDITIONS AND COORDINATION WITH OTHER TRADES, INCLUDING HVAC, PLUMBING, ELECTRICAL, FIRE PROTECTION, STRUCTURAL, AND ARCHITECTURAL, SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.
5. THOROUGHLY CLEAN/FLUSH EXISTING AND NEW HYDRONIC PIPING SYSTEMS WITH CLEAN WATER. AFTERWARDS, REMOVE AND CLEAN OR REPLACE STRAINER SCREENS.
6. ALL HVAC SYSTEMS SHALL BE TESTED AND BALANCED ACCORDING TO NEBB AND SMACNA STANDARDS. PROVIDE REPORT UPON COMPLETION.
7. PROVIDE ACCESS TO EQUIPMENT AND PORTIONS OF BUILDING SYSTEMS REQUIRING SERVICE.
8. DO NOT INSTALL DUCTWORK, PIPING, OR EQUIPMENT IN ELECTRICAL ROOMS, ELEVATOR ROOMS, OR ELEVATOR SHAFTS, UNLESS EXPLICITLY INDICATED ON THE DRAWINGS. PIPING, DUCTWORK, AND EQUIPMENT (SWITCHGEAR, SWITCHBOARDS, PANELS, MOTOR CONTROL CENTERS, VARIABLE FREQUENCY DRIVES, TRANSFORMERS, OR STARTERS) SHALL NOT BE INSTALLED DIRECTLY ABOVE OR 42" IN FRONT OF ELECTRICAL EQUIPMENT FROM THE FLOOR TO THE STRUCTURE ABOVE.
9. PROVIDE START UP AND COMMISSIONING OF ALL EQUIPMENT PROVIDED IN COMPLIANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS. PROVIDE START UP AND WARRANTEE PAPERWORK AT THE COMPLETION OF WORK. WORK SHALL BE COMPLETED BY THE MANUFACTURER OR A MANUFACTURERS' CERTIFIED FIRM OR TECHNICIAN. CONFIRM CALIBRATION OF ALL SENSORS AND ADJUST AS REQUIRED.
10. UNLESS INDICATED OTHERWISE, EQUIPMENT AND MATERIALS SHALL BE NEW AND OF THE CUSTOMARY STANDARD AND QUALITY FURNISHED BY THE DESIGNATED MANUFACTURER FOR THAT CATALOG NUMBER.
11. AIR SYSTEMS SHALL OPERATE WITHOUT AERODYNAMIC NOISE GENERATED FROM FAULTY INSTALLATION OF DUCTWORK, DIFFUSERS, OR ANY PORTION OF THE AIR DISTRIBUTION SYSTEM.
12. SUPPORT PIPING INDEPENDENTLY OF EQUIPMENT. HANGER RODS SHALL BE SUSPENDED FROM THE STRUCTURE. DO NOT SUSPEND FROM OTHER PIPING, CONDUIT, EQUIPMENT, OR DUCTWORK.
13. ALL WORK REFERENCED UNDER DIVISION 23 SHALL BE DONE BY THE MECHANICAL CONTRACTOR.
14. DRAWINGS INDICATE DESIGN INTENT. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL INSTALLATIONS. CONTRACTOR IS RESPONSIBLE FOR COORDINATION BETWEEN OTHER TRADES TO ASSURE THE PROPER INSTALLATION OF ALL EQUIPMENT.
15. ALL PIPING, DUCTWORK, INSULATION, CONDUITS, SUPPORTS AND HVAC EQUIPMENT EXPOSED TO VIEW SHALL BE PAINTED. COLOR SHALL BE SELECTED BY ARCHITECT.
16. WHERE DUCTWORK IS EXPOSED DUCT SEAMS SHALL BE MINIMIZED AND SHALL BE OF HIGH QUALITY WORKMANSHIP. ALL DUCTWORK SHALL BE CONSTRUCTED AND SEALED IN ACCORDANCE WITH SMACNA STANDARDS.
17. ALL MATERIALS EXPOSED WITHIN THE PLENUM SHALL BE NON COMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E-84.

CONTROL SYMBOLS

Ⓣ	THERMOSTAT	DP	DIFFERENTIAL PRESSURE SENSOR	AF	AIR FLOW SENSOR	⊠	FUSED DISCONNECT
Ⓒ	CO2 SENSOR	P	STATIC PRESSURE SENSOR	WF	WATER FLOW SENSOR	⊠	MOTOR STARTER
CO	CO SENSOR	S ⟨S⟩	SMOKE DETECTOR	CS	CURRENT SENSING RELAY	⊠	COMBINATION STARTER DISCONNECT
Ⓢ	TEMPERATURE SENSOR	MS	MOTOR STARTER CONTACT	LS	LIMIT SWITCH	U	USER DEFINED
Ⓔ	EMERGENCY BOILER SHUTOFF	R	CONTROL RELAY	LS	LIMIT SWITCH	U	USER DEFINED
T	DUCT OR PIPE MOUNTED TEMPERATURE SENSOR	M	MOTORIZED ACTUATOR	Tx	TRANSFORMER W/ LOAD SIDE DISCONNECT		
F	FREEZE STAT	Me	MOTORIZED ACTUATOR W/ END SWITCH		UN FUSED DISCONNECT		

ALL INSTALLATIONS AND MATERIALS SHALL MEET THE FOLLOWING:

1. INTERNATIONAL BUILDING CODE; 2018
2. INTERNATIONAL FIRE CODE; 2018
3. INTERNATIONAL ENERGY CONSERVATION CODE; 2018
4. INTERNATIONAL MECHANICAL CODE; 2018
5. INTERNATIONAL FUEL GAS CODE; 2018
6. ALL FEDERAL, STATE AND LOCAL ORDINANCES

Client:
TRACK CONCESSIONS BUILDING
Client: Riverside School District
300 Davis St.
Taylor, Pa 18517

Consultants:

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Seals:

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
KURTIS JOSEPH SEARING
ENGINEER
PE074964

Revisions | Issues
No: Date:

Phase:
PERMIT SET

Project: Track Concessions Building
Date: 09/20/2022
Drawn: WG Checked: RW
Scale: AS NOTED
Sheet:
MECHANICAL COVER SHEET
M-1

GAS FIRED UNIT HEATER SCHEDULE

TAG NO.	BASIS OF DESIGN		AREA SERVED	CFM	HP	AMPS	INPUT MBH	OUTPUT MBH	GAS CONN. SIZE	VENT/COMBUSTION AIR SIZE	TYPE	WEIGHT	VOLTS/ PH/Hz	NOTES
	MANUFACTURER	MODEL												
GUH-1	REZNOR	UDZ-30	STORAGE	450	.06	1.9	30	24.6	1/2"	4"	SEE NOTES	60 LBS.	115/1/60	1,2,3

NOTES:

1. TYPES:
   H=HORIZONTAL BLOW
   LP=PROPANE
2. PROVIDE WITH PROPANE GAS VALVE.
3. PROVIDE UNIT WITH THE FOLLOWING OPTIONS AND ACCESSORIES:
   -VERTICAL CONCENTRIC AIR/VENT KIT
   -THERMOSTAT
   -DISCONNECT SWITCH
   -CEILING SUSPENSION KIT

ELECTRICAL HEATER SCHEDULE

TAG NO.	BASIS OF DESIGN		AREA SERVED	TYPE	MOUNTING	CFM	KW	AMP	VOLTS/ PH/Hz	THERMOSTAT	DIMENSIONS WxHxD (IN)	NOTES
	MANUFACTURER	MODEL										
EH-1A,B	MARLEY	CWH1101DSF	SEE PLAN	FAN-FORCED	WALL	100	.5	4.2	120/1	ON UNIT	10-5/8"x12-1/8"x1"	1,2
EH-2A,B	MARLEY	CWH3404F	SEE PLAN	FAN-FORCED	WALL	100	3.0	14.5	208/1	ON UNIT	15-3/4"x18-1/4"x3-3/4"	1,2
EH-3	MARLEY	CDF-548	CONCESSION	FAN-FORCED	CEILING	300	2.0	9.6	208/1	SEE NOTE	24"x8"x24"	1,3

NOTES:

1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. COORDINATE INSTALLATION WITH ALL OTHER TRADES.
2. PROVIDE COMPLETE WITH RECESSED MOUNTING FRAME, BUILT-IN THERMOSTAT AND DISCONNECT SWITCH.
3. PROVIDE COMPLETE WITH CEILING RECESSED MOUNTING KIT, WALL MOUNTED THERMOSTAT, AND DISCONNECT SWITCH.

EXHAUST FAN SCHEDULE

MARK	AREA SERVED	BASE OF DESIGN		FAN TYPE	DRIVE	CFM	ESP	RPM	MOTOR HP/W	VOLTAGE	ROOF/WALL OPENING (IN.)	WEIGHT (LBS.)	NOTES
		MANUFACTURER	MODEL										
EF-1	SEE PLAN	GREENHECK	CSP-A410	INLINE	DIRECT	350	0.30	1000	119 W	115V/1Ø	18X6	50	1,2,3,4,5

NOTES:

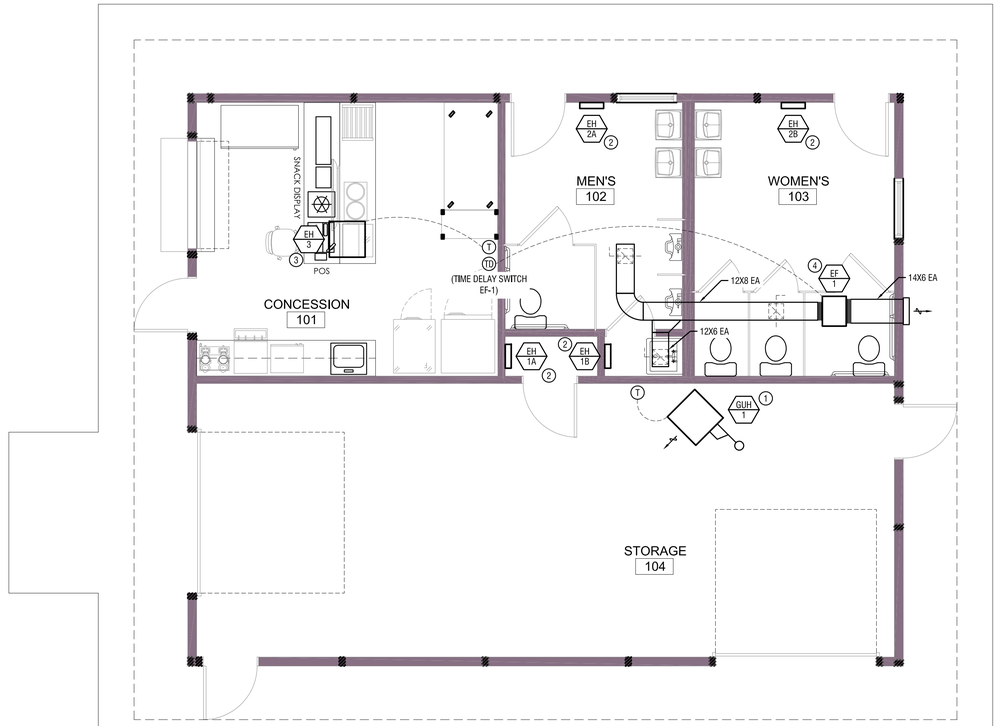
1. INSTALL IN ACCORDANCE WITH MANUFACTURER WRITTEN INSTRUCTIONS. COORDINATE INSTALLATION WITH ALL TRADES.
2. PROVIDE BACK DRAFT DAMPER AND SPRING HANGER KIT.
3. PROVIDE ECM MOTOR WITH SPEED CONTROL DIAL AND STARTER CONTACTS/RELAY AND LOCAL DISCONNECT SWITCH.
4. PROVIDE MANUFACTURER'S18X6 WALL LOUVER DISCHARGE ACCESSORY. COORDINATE LOUVER COLOR WITH ARCHITECT PRIOR TO PURCHASE.
5. FAN TO ENERGIZE WHEN EITHER RESTROOM OCCUPANCY SENSOR ACTIVATES. PROVIDE WITH MANUFACTURER'S TIME DELAY SWITCH AND MOUNT IN CONCESSION AREA.

DIFFUSER, GRILLE, AND REGISTER SCHEDULE

MARK	CFM	BASE OF DESIGN		TYPE	THROW T150-T100-T50 (FT)	NECK SIZE (IN)	MODULE SIZE (IN)	MAX. NC LEVEL	MAX. SP LEVEL	NOTES
		MANUFACTURER	MODEL							
E-1	50-150	PRICE	80	EGG CRATE	NA	10X10	10X10	25	0,1	1,2,3,4

NOTES:

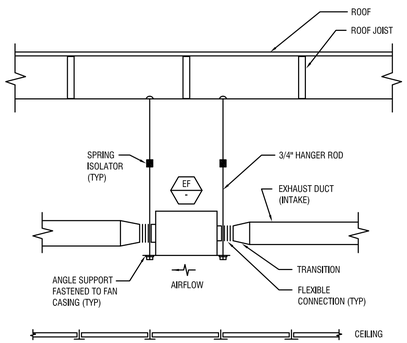
1. INSTALL IN ACCORDANCE WITH MANUFACTURER WRITTEN INSTRUCTIONS. COORDINATE WITH ALL TRADES.
2. PROVIDE WITH FACTORY INSTALLED OPPOSED BLADE DAMPER.
3. COORDINATE MOUNTING HARDWARE WITH ARCHITECTURAL CEILING AND WALL FINISHES
4. DUCT RUNNOUT SIZES SHALL MATCH DIFFUSER OR GRILLE CONNECTION DIMENSIONS UNLESS OTHERWISE NOTED.



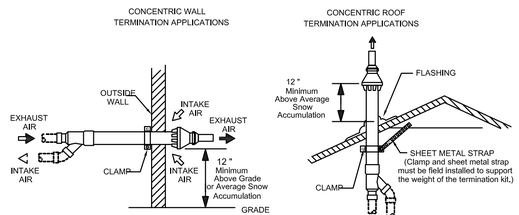
1 / M-2 MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

KEYED CONSTRUCTION NOTES

1. GAS FIRED UNIT HEATER. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND SUSPEND FROM CEILING USING MOUNTING KIT ACCESSORY. ANGLE DISCHARGE LOUVERS DOWNWARD TOWARD FLOOR SPACE. PROVIDE WITH MANUFACTURER'S COMBUSTION CONCENTRIC VENTING KIT AND TERMINATE UP THROUGH ROOF. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND MAINTAIN CODE AND EQUIPMENT MANUFACTURER REQUIRED CLEARANCES FROM OUTSIDE AIR INTAKES.
2. WALL MOUNTED FAN FORCED ELECTRIC HEATER. PROVIDE WITH UNIT MOUNT THERMOSTAT.
3. CEILING MOUNTED RECESSED FAN FORCED ELECTRIC HEATER. PROVIDE WITH WALL MOUNTED THERMOSTAT.
4. INLINE FAN SUSPENDED ABOVE CEILING. PROVIDE FLEXIBLE CONNECTIONS ON FAN INLET AND OUTLET. FAN TO BE SET TO RUN WHEN EITHER RESTROOM OCCUPANCY SENSOR ACTIVATES. PROVIDE WITH TIME DELAY SWITCH MOUNTED IN CONCESSION AREA.

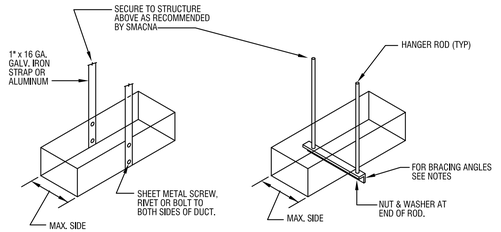


2 / M-2 INLINE EXHAUST FAN DETAIL
SCALE: NTS



NOTE: REFER TO THE ADOPTED FUEL GAS CODE FOR MORE INFORMATION

3 / M-2 CONCENRIC INTAKE/FLUE DETAIL
SCALE: NTS



TYPE "A"
(8 FT. MAX. HANGER SPACING. ALSO PROVIDE 3 HANGERS AT EACH TAKE-OFF OR BRANCH.)

TYPE "B", "C", & "D"
(8 FT. MAX. HANGER SPACING)

DUCT DIMENSION	HANGER TYPE	ROD DIA.	ANGLE SIZE	MAX SPACING
UP TO 18"	A	1" STRAP	———	8'-0"
19" TO 60"	B	5/16"	1-1/2" x 1-1/2" x 1/8"	8'-0"
61" TO 96"	C	3/8"	1-1/2" X 1-1/2" x 3/16"	8'-0"
OVER 96"	D	1/2"	2" x 2" x 1/4"	4'-0"

NOTES:
1. FOR SEVERAL DUCTS ON ONE HANGER, TYPE "B", "C", OR "D" MAY BE USED. SIZE OF HANGER WILL BE SELECTED ON SUM OF DUCT WIDTHS EQUAL TO MAX. WIDTH OF DUCT SCHEDULE.
2. DO NOT ATTACH DUCT HANGERS TO ROOF DECK OR BOTTOM CORD OF JOISTS. PROVIDE ANGLE BRACING AS REQUIRED.
3. CONNECTIONS TO CONCRETE FLOOR SLABS IS PERMITTED. INSTALL PER SPECIFICATION

4 / M-2 DUCT HANGERS
SCALE: NTS

Client:
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Sheet:

MECHANICAL FLOOR PLAN, SCHEDULES, & DETAILS

M-2

GENERAL ABBREVIATIONS

[E]	EXISTING	GEN	GENERATOR
[ETR]	EXISTING TO REMAIN	GFI	GROUND FAULT INTERRUPTER
[F]	FUTURE	GND, G	GROUND
[N]	NEW	GRMC	GALVANIZED RIGID METAL CONDUIT
Δ	DELTA	GRS	GALVANIZED RIGID STEEL
Y	WYE	GSR	GROUND SENSING RELAY
ϕ	PHASE	HGT	HEIGHT
1/C	SINGLE CONDUCTOR	HID	HIGH INTENSITY DISCHARGE
3/C	THREE CONDUCTOR	HOA	HAND OFF AUTO
A, AMP	AMPERE	HP	HORSEPOWER
AC	ALTERNATING CURRENT	HPS	HIGH PRESSURE SODIUM
A/C	AIR CONDITIONER	HZ	HERTZ
ADA	AMERICANS WITH DISABILITIES ACT	IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
ADDTL	ADDITIONAL	IMC	INTERMEDIATE METAL CONDUIT
AF	AMP FRAME/AMP FUSE	INCAND	INCANDESCENT
AFF	ABOVE FINISHED FLOOR	INSUL	INSULATION
AFG	ABOVE FINISHED GRADE	INT	INTERIOR/INTERLOCK
AHJ	AUTHORITY HAVING JURISDICTION	JB	JUNCTION BOX
AHU	AIR HANDLING UNIT	KCMIL	THOUSAND CIRCULAR MILLS
AIC	INTERRUPTING CAPACITY (AMPERES)	KW	KILOWATT
AL	ALUMINUM	KWH	KILOWATT HOUR
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	KV	KILOVOLT
APPROX	APPROXIMATELY	KVA	KILOVOLT AMPERE
ARCH	ARCHITECTURAL	LA	LIGHTNING ARRESTER
AS	AMP SWITCH	LAB	LABORATORY
ASY	ASYMMETRICAL	LF	LINEAR FEET
ATC	AUTOMATIC TEMPERATURE CONTROL	LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
ATS	AUTOMATIC TRANSFER SWITCH	LT	LIGHT
AUX	AUXILIARY	LTG	LIGHTING
AT	AMP TRIP	MC/M.C	METAL CLAD/MECHANICAL CONTRACTOR
AWG	AMERICAN WIRE GAUGE	MCB	MAIN CIRCUIT BREAKER
BATT	BATTERY	MCC	MOTOR CONTROL CENTER
BFC	BELOW FINISHED CEILING	MDP	MAIN DISTRIBUTION PANEL
BFG	BELOW FINISHED GRADE	MH	METAL HALIDE
BSMT	BASEMENT	MIN	MINIMUM
BLDG	BUILDING	MISC	MISCELLANEOUS
BRKR	BREAKER	MLO	MAIN LUGS ONLY
BMS	BALANCED MAGNETIC SWITCH	MTD	MOUNTED
BR	BRANCH	N	NEUTRAL
BRF	BELOW RAISED FLOOR	NC	NORMALLY CLOSED
C, COND	CONDUIT	NEC	NATIONAL ELECTRIC CODE
CB	CIRCUIT BREAKER	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CCTV	CLOSED CIRCUIT TELEVISION	NESC	NATIONAL ELECTRICAL SAFETY CODE
CD	CENTIGRADE DEGREE	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
C.E	CONCRETE ENCASED	NIC	NOT IN CONTRACT
CKT	CIRCUIT	NO	NORMALLY OPEN
CKTD	CIRCUITED	NTS	NOT TO SCALE
CLG	CEILING	O.C.	ON CENTER
COAX	COAXIAL	P	POLE
CONC	CONCRETE	PA	PUBLIC ADDRESS
CONTR	CONTRACTOR	PB	PULL BOX/PUSH BUTTON
CLF	CURRENT LIMITING FUSES	P.C	PLUMBING CONTRACTOR
CT	CURRENT TRANSFORMER	PCU	POWER CONDITIONING UNIT
CU	COPPER	PH	PHASE
DB	DUCTBANK	PNL	PANEL
DC	DIRECT CURRENT	PRI	PRIMARY
DISC	DISCONNECT	PSI	POUNDS PER SQUARE INCH
DIST	DISTRIBUTION	PT	POTENTIAL TRANSFORMER
DIV	DIVISION	PVC	POLY VINYL CHLORIDE
DWG	DRAWING	RECEPT	RECEPTACLE
EA	EACH	REQD	REQUIRED
EB	ELECTRONIC BALLAST	RGS	RIGID GALVANIZED STEEL
E.C	ELECTRICAL CONTRACTOR	RM	ROOM
EF	EXHAUST FAN	RMC	RIGID METALLIC CONDUIT
EGC	EQUIPMENT GROUNDING CONDUCTOR	RNC	RIGID NONMETALLIC CONDUIT
EL	ELEVATION	SEC	SECONDARY
ELEC	ELECTRIC	SECT	SECTION
EMER	EMERGENCY	SF	SQUARE FEET
EMT	ELECTRICAL METALLIC TUBING	SN	SOLID NEUTRAL
ENCL	ENCLOSURE	SP	SPARE
EPO	EMERGENCY POWER OFF	SPECS	SPECIFICATIONS
EPR	ETHYLENE PROPYLENE RUBBER	SUSP	SUSPENDED
EQUIP	EQUIPMENT	SW	SWITCH
EWC	ELECTRIC WATER COOLER	SWBD	SWITCHBOARD
EWH	ELECTRIC WATER HEATER	SYM	SYMMETRICAL
EX	EXAMPLE	TEL	TELEPHONE
EXIST	EXISTING	THRU	THROUGH
EXT	EXTERNAL/EXTERIOR	TR	TRIP
F	FUSE/FRAME	TS	TAMPER SWITCH
FA	FIRE ALARM	TYP	TYPICAL
FDR	FEEDER	U.G., U/G	UNDERGROUND
FIN	FINISHED	UL	UNDERWRITERS LABORATORY
FIXT	FIXTURE	U.O.N	UNLESS OTHERWISE NOTED
FL	FLOOR	UPS	UNINTERRUPTIBLE POWER SUPPLY
FLA	FULL LOAD AMPS	V	VOLT/VOLTAGE
FLEX	FLEXIBLE	VD	VOLTAGE DROP
FLUOR	FLUORESCENT	VCR	VACUUM CIRCUIT RECLOSER
FMC	FLEXIBLE METAL CONDUIT	W	WATT
FS	FLOW SWITCH	W/	WITH
FT	FEET/FOOT	WP	WEATHERPROOF
FU	FUSE	XFMR	TRANSFORMER
G.C	GENERAL CONTRACTOR		
GEC	GROUNDING ELECTRODE CONDUCTOR		

ADDITION ABBREVIATIONS MAY BE DERIVED IN THE SPECIFICATIONS.

GRAPHIC CONVENTIONS

- XX / X — EQUIPMENT TAG, TOP INDICATES EQUIPMENT DESIGNATION, BOTTOM INDICATES EQUIPMENT NUMBER, SEE M/P DRAWINGS FOR FURTHER INFORMATION
- XX / XX — PLAN CALLOUT, TOP INDICATES CALLOUT REFERENCE NUMBER, BOTTOM INDICATES SHEET NUMBER
- XX / XX — ELEVATION CALLOUT, TOP INDICATES CALLOUT REFERENCE NUMBER, BOTTOM INDICATES SHEET NUMBER
- XX / XX — SECTION CALLOUT, TOP INDICATES CALLOUT REFERENCE NUMBER, BOTTOM INDICATES SHEET NUMBER
- REVISION AREA
- X — REVISION TAG
- X — CONSTRUCTION KEYED NOTE TAG
- X — DEMOLITION KEYED NOTE TAG
- POINT OF CONNECTION BETWEEN NEW AND EXISTING
- LIMIT OF DEMOLITION BETWEEN EXISTING TO REMAIN AND TO BE REMOVED

ELECTRICAL GENERAL NOTES

1. THE ENTIRE INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE ENFORCED REVISIONS OF THE BUILDING CODE, NFPA 70, NEMA, UL LISTINGS, MANUFACTURERS' RECOMMENDATIONS, THE NATIONAL BOARD OF UNDERWRITERS, STATE CODES, LOCAL CODES, AND ALL AUTHORITIES HAVING JURISDICTION.
2. GENERAL WORK PRACTICES FOR ELECTRICAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NECA 1, GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION, PUBLISHED BY THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION. ALL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER, RECTILINEAR TO BUILDING STRUCTURE. CARE SHALL BE EXERCISED TO MINIMIZE ANY INCONVENIENCE OR DISTURBANCE TO SPACES OUTSIDE THE AREA OF WORK.
3. ALL MATERIAL AND EQUIPMENT SHALL BE LISTED AND LABELLED FOR THE APPLICATION BY UNDERWRITERS LABORATORIES AND INSTALLED ACCORDING TO ITS LISTING.
4. ALL DEVICES SHOWN ON DRAWINGS ARE DIAGRAMMATIC IN LOCATION AND SHOWN TO INDICATE THE EXTENT, GENERAL CHARACTER, AND GENERAL WIRING REQUIREMENTS ONLY.
5. THE TERM "FURNISH" SHALL MEAN TO OBTAIN AND SUPPLY TO THE JOB SITE. THE TERM "INSTALL" SHALL MEAN TO FIX IN POSITION AND CONNECT FOR USE. THE TERM "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL. THE TERM "WORK" SHALL MEAN ALL LABOR, MATERIAL, EQUIPMENT, SCAFFOLDING, RIGGING, TOOLS, SUPERVISION, SERVICES, SETUP, PROGRAMMING, AND OTHER INCIDENTALS NECESSARY FOR COMPLETE AND OPERABLE INSTALLATION.
6. THE CONTRACTOR SHALL PROVIDE ALL WORK REQUIRED FOR A COMPLETE AND OPERATIONAL INSTALLATION OF THE ELECTRICAL SYSTEMS AS INDICATED OR IMPLIED BY THE DESIGN DOCUMENTS.
7. THE CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS (DRAWINGS, SPECIFICATIONS, EQUIPMENT CUT SHEETS, ETC.) FOR ALL TRADES AND PROVIDE ALL ELECTRICAL WORK REQUIRED FOR COMPLETE AND OPERABLE INSTALLATION.
8. THE CONTRACTOR SHALL COORDINATE ALL WORK, ELECTRICAL REQUIREMENTS, AND THE ACTUAL LOCATIONS OF ALL EQUIPMENT, CASEWORK, DEVICES, FIXTURES, SWITCHES, SENSORS, ETC., WITH ALL DRAWINGS, SPECIFICATIONS, AND WITH ALL TRADES IN THE FIELD PRIOR TO PROVIDING PRICING AND PERFORMING ANY ROUGH-IN WORK.
9. THE CONTRACTOR IS HEREBY CAUTIONED THAT THE ELECTRICAL POWER CHARACTERISTICS (VOLTAGE, PHASE, HORSEPOWER, AMPERAGE, ETC.) OF EQUIPMENT ARE BASED ON INFORMATION AVAILABLE AT THE TIME OF PROJECT DESIGN. CONTRACTOR SHALL VERIFY ACTUAL CHARACTERISTICS FOR EACH PIECE OF EQUIPMENT TO BE INSTALLED PRIOR TO ORDERING EQUIPMENT OR PERFORMING ANY ROUGH-IN WORK.
10. DEVICES INDICATED TO BE INSTALLED IN THE SAME LOCATIONS WITH DIFFERENT ELEVATIONS SHALL BE ALIGNED VERTICALLY AND HORIZONTALLY. FOR ALL MOUNTING HEIGHTS AND LOCATIONS (SWITCHES, OUTLETS, FIRE ALARM AUDIBLE AND VISUAL DEVICES, FIRE ALARM PULL STATIONS, SECURITY DEVICES, CARD READERS, SENSORS, ETC.), REFER TO THE ARCHITECTURAL DRAWINGS AND COORDINATE ALL LOCATIONS BETWEEN TRADES.
11. ADJUSTMENTS TO WIRING DEVICES TO AVOID STRUCTURAL OR OTHER INTERFERENCES AS WELL AS WORK INDICATED WITH MINOR DETAILS OMITTED SHALL BE PROVIDED WITHOUT EXTRA COST.
12. ANY CHANGES AND/OR MODIFICATIONS MUST BE REVIEWED AND APPROVED BY THE ENGINEER AND/OR OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
13. REMOVE ALL TRASH, DEBRIS, AND DEMOLITION MATERIAL FROM THE PREMISES AT THE END OF EACH WORK DAY. JOB SITE SHALL BE KEPT IN "BROOM CLEAN" CONDITION.
14. ELECTRICAL PANELS AND DISCONNECTS SHALL BE LABELED WITH ENGRAVED PLASTIC TAGS MOUNTED ON THE OUTSIDE OF THE EQUIPMENT AND BEARING THE VOLTAGE AND DESIGNATION OF THE EQUIPMENT.
15. PROVIDE ALL PANELBOARD SCHEDULES IN AN EDITABLE ELECTRONIC FORMAT (MS WORD OR EXCEL). LIGHTING CIRCUIT BREAKER LABELS SHALL BE SPECIFIC TO THE AREA. USE BUILDING COLUMNS, ROOM NAMES, ETC. FOR A MORE ACCURATE LOCATION.
16. ALL RECEPTACLES AND BRANCH CIRCUITS WITHIN 6 FEET OF SINKS, 20 FEET OF WATER TANKS, IN KITCHENS, IN GARAGES, SERVING ELECTRIC WATER FOUNTAINS, AND ALL OTHER LOCATIONS REQUIRED BY THE NEC SHALL BE PROVIDED WITH GROUND FAULT PROTECTION.
17. ALL EQUIPMENT SHALL BE NEMA RATED AND LISTED FOR THE APPLICATION AND ENVIRONMENT.
18. IN THE EVENT THAT LOCAL EQUIPMENT DISCONNECTS CANNOT BE LOCATED SUCH THAT WORKING CLEARANCES ARE MAINTAINED, THE NEXT UPSTREAM OVERCURRENT DEVICE SHALL BE INDIVIDUALLY CAPABLE OF BEING LOCKED IN THE OPEN POSITION IN ACCORDANCE WITH 440.14 AND 430.102.
19. ALL FIRE/SMOKE RATINGS SHALL BE MAINTAINED. APPLY FIRESTOPPING AND SEALANT AS REQUIRED.
20. FLASH ALL ROOF PENETRATIONS IN ACCORDANCE WITH THE ROOFING SYSTEM MANUFACTURER AND THE CONTRACT DOCUMENTS.
21. PROVIDE ALL WORK REQUIRED FOR A COMPLETE AND OPERABLE INSTALLATION OF THE FIRE ALARM, SECURITY, AND ANY OTHER SPECIAL SYSTEMS. COORDINATE EXACT REQUIREMENTS WITH OWNER'S VENDORS.
22. WHERE NO CIRCUIT IS DESIGNATED FOR A DEVICE (INCLUDING EQUIPMENT NOT SHOWN ON DRAWINGS), THE E.C. SHALL CIRCUIT TO THE NEAREST AVAILABLE PANEL WITH CONDUCTOR, RACEWAY, AND BREAKER SIZED PER THE LATEST ADOPTED REVISION OF THE NEC.
23. ALL WIRE AND CONDUIT SHALL BE CONCEALED IN WALLS, CEILING PLENUMS, BULKHEADS AND IN ROOF STRUCTURAL AREAS, U.O.N. THE E.C. SHALL COORDINATE FULLY WITH ALL OTHER TRADES TO INSTALL ALL CONDUIT AND WIRING IN THESE ASSOCIATED STRUCTURES. ANY OTHER MEANS OF PATHWAY SUGGESTED MUST FIRST BE APPROVED FROM THE ELECTRICAL ENGINEER BEFORE INSTALLATION CAN PROCEED.
24. PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS PERTAINING TO THIS WORK. THE CONTRACTOR SHALL INVESTIGATE ALL RELOCATIONS AND NEW WORK AND MAKE ALLOWANCES IN HIS BID FOR ALL CHANGES TO THE ELECTRICAL SYSTEM WHICH ARE NECESSARY. FAILURE TO COMPLY WITH THIS SHALL NOT CONSTITUTE A REASON FOR PAYMENT OF EXTRA MONIES DURING THE CONSTRUCTION PHASE.
25. MAKE ALL NECESSARY ARRANGEMENTS WITH THE OWNER FOR THE INSTALLATION OF TEMPORARY LIGHTING AND POWER SERVICES TAILORED FOR THIS PROJECT. SET TEMPORARY METERS IN ACCORDANCE WITH THE UTILITY PROVIDER'S REQUIREMENTS. INSTALL AND MAINTAIN ALL TEMPORARY LIGHT AND POWER WIRING, INCLUDING, BUT NOT LIMITED TO CONDUITS, WIRE, SWITCHES, FUSE BOXES, RECEPTACLES, DISTRIBUTION PANELBOARDS, FUSED DISCONNECT SWITCHES, GROUND FAULT INTERRUPTION EQUIPMENT, FIXTURES, LAMPS, FUSES AND ANY OTHER MATERIAL AND/OR EQUIPMENT REQUIRED TO PROVIDE SUFFICIENT ILLUMINATION AND POWER, AS REQUIRED BY THE STATE LABOR BOARD, O.S.H.A., OR ALL OTHER AUTHORITIES HAVING JURISDICTION FOR ALL AREAS OF THE SITE WHERE WORK WILL BE PERFORMED BY ANY CONTRACTOR. PROVIDE TEMPORARY POWER CIRCUITS, OUTLETS, ETC. IN ACCORDANCE WITH THE POWER REQUIREMENTS OF THE VARIOUS VOLTAGE/AMPERAGE/HORSEPOWER RATINGS OF THE EQUIPMENT AND TOOLS TO BE USED BY THE CONTRACTORS IN CONSTRUCTION WORK. ONCE THE PERMANENT LIGHTING AND POWER SYSTEMS ARE INSTALLED AND OPERATIONAL, MAKE THE CUT-OVER. REMOVE ALL TEMPORARY ELECTRICAL DISTRIBUTION COMPONENTS AND SYSTEM AFTER CUT-OVER.

LIGHTING

- A a / LP1-X — LUMINAIRE WITH OUTLET BOX. SHADING INDICATES EMERGENCY SUPPLY/NIGHT LIGHTING CIRCUIT. *A* INDICATES FIXTURE TYPE. (SEE FIXTURE SCHEDULE. TYP.) *LP1-X* INDICATES CIRCUIT NUMBER. (TYP.) *a* INDICATES SWITCH CONTROL. (TYP.)
- CEILING-MOUNTED LUMINAIRE
- WALL-MOUNTED LUMINAIRE
- POLE, BASE, ARM, AND SITE LIGHTING LUMINAIRE
- CEILING OR WALL-MOUNTED EXIT SIGN (SHADED QUADRANT INDICATES FACE) WITH CHEVRONS AND EMERGENCY HEADS AS INDICATED ON FLOOR PLANS
- BATTERY OPERATED EMERGENCY LIGHTING UNIT WITH DUAL HEADS
- DUAL REMOTE HEAD FOR BATTERY OPERATED EMERGENCY LIGHTING UNIT

SWITCHES

- S — WALL OUTLET BOX AND SINGLE POLE SWITCH (20 AMP)
- S^{3} — WALL OUTLET BOX AND THREE-WAY SWITCH (20 AMP)
- S^{4} — WALL OUTLET BOX AND FOUR-WAY SWITCH (20 AMP)
- S^{WP} — WALL OUTLET BOX AND SINGLE-POLE SWITCH (20 AMP, NON-LOCK, WITH WEATHERPROOF COVER)
- S^{K} — WALL OUTLET BOX SINGLE POLE KEY SWITCH (20 AMP)
- S^{K3} — WALL OUTLET BOX AND THREE-WAY KEY SWITCH (20 AMP)
- S^{K4} — WALL OUTLET BOX AND FOUR-WAY KEY SWITCH (20 AMP)
- S^{D} — WALL OUTLET BOX AND DIMMER SWITCH
- S^{LV} — LOW VOLTAGE LIGHTING SWITCH
- S^{T} — TIME SWITCH
- (OS) — WALL-MOUNTED OCCUPANCY SENSOR
- (OS) — CEILING-MOUNTED OCCUPANCY SENSOR
- D — AUTOMATIC DAYLIGHTING CONTROL SENSOR
- RC — ROOM CONTROLLER

SWITCHING NOTES:

1. MOUNT SWITCHES AT 42" U.O.N.
2. SWITCHES SHALL BE RATED FOR LOAD CONTROLLED.
3. DIMMERS SHALL BE COMPATIBLE FOR LIGHTING FIXTURE LAMP SOURCE AND BALLAST/DRIVER BEING CONTROLLED.
4. WHERE MULTIPLE SWITCHES ARE SHOWN, PROVIDE GANG SWITCH IN SINGLE ENCLOSURE WITH SINGLE FACEPLATE.
5. LOWERCASE LETTER DENOTES SWITCH CONTROL.

WIRING DEVICES

- WALL OUTLET BOX AND 20 AMP DUPLEX RECEPTACLE
- WALL OUTLET BOX AND 20 AMP DUPLEX RECEPTACLE, MOUNTED 6" ABOVE COUNTER BACKSPLASH
- TWO GANG WALL OUTLET BOX AND TWO 20 AMP DUPLEX RECEPTACLES
- TWO GANG WALL OUTLET BOX AND TWO 20 AMP DUPLEX RECEPTACLES, MOUNTED 6" ABOVE COUNTER BACKSPLASH
- WALL OUTLET BOX AND 20 AMP SINGLE RECEPTACLE
- WALL OUTLET BOX AND SPECIAL PURPOSE RECEPTACLE
- FLUSH FLOOR BOX WITH FIRE/SMOKE RATED PENETRATION, COVER, AND 20 AMP RECEPTACLE(S)/DATA OUTLET(S) CONFIGURATION AS INDICATED. PROVIDE MINIMUM 3/4" CONDUIT(2) TO NEAREST WALL AND UP TO ACCESSIBLE FINISHED CEILING U.O.N.
- CEILING OUTLET BOX AND 20 AMP RECEPTACLE CONFIGURATION AS INDICATED
- PLUGMOLD WITH DIVIDER. PROVIDE RECEPTACLES AND TELE/DATA OUTLETS AS INDICATED.
- J — FLUSH WALL JUNCTION BOX OR JUNCTION BOX ABOVE CEILING.

WIRING DEVICES NOTATIONS

+XX	DIMENSIONED HEIGHT A.F.F.
"a"	LOWERCASE LETTER DENOTES SWITCH CONTROL.
"EX"	EXISTING DEVICE
"GFI"	GROUND FAULT CIRCUIT INTERRUPTER PERSONAL PROTECTION
"GFP"	GROUND FAULT PROTECTION OF EQUIPMENT
"IG"	ISOLATED GROUND (RECEPTACLES INCLUDE SEPARATE GREEN GROUND CONDUCTOR TO ISOLATED GROUND BUS IN PANEL)
"WP"	WEATHERPROOF

SYMBOLS LEGEND NOTE

NOT ALL SYMBOLS AND ABBREVIATIONS INDICATED ARE APPLICABLE TO THIS PROJECT. INDIVIDUAL DRAWINGS MAY DEFINE UNIQUE SYMBOLS FOR CONVENIENCE.

EQUIPMENT

- 208/120V PANELBOARD
- 480/277V BRANCH CIRCUIT PANELBOARD
- UNFUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- COMBINATION DISCONNECT SWITCH AND MAGNETIC MOTOR CONTROLLER
- MAGNETIC MOTOR STARTER OR CONTACTOR
- MOTOR CONNECTION
- S^{M} — MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOADS
- T — TRANSFORMER
- M — MOTORIZED DAMPER LOCATION (FURNISHED UNDER DIVISION 23)
- TC — TIME CLOCK
- EPO — EMERGENCY POWER OFF SWITCH
- R — ENCAPSULATED RELAY/SHUTDOWN RELAY
- SPD — SURGE PROTECTION DEVICE
- VFD — VARIABLE FREQUENCY DRIVE

FIRE ALARM

- F — WALL-MOUNTED FLUSH MANUAL PULL STATION
- AV — WALL-MOUNTED AUDIO AND VISUAL ALARM WITH CANDELA RATING AS NOTED
- V — WALL-MOUNTED VISUAL ALARM WITH CANDELA RATING AS NOTED
- S — CEILING-MOUNTED SMOKE DETECTOR, "CO" DENOTES COMBINATION CARBON MONOXIDE/SMOKE DETECTOR
- H — CEILING-MOUNTED HEAT DETECTOR, "CO" DENOTES COMBINATION CARBON MONOXIDE/SMOKE DETECTOR
- D — DUCT-MOUNTED SMOKE DETECTOR, "CO" DENOTES COMBINATION CARBON MONOXIDE/SMOKE DETECTOR
- FS — SPRINKLER SYSTEM FLOW SWITCH CONNECTION
- PS — SPRINKLER SYSTEM PRESSURE SWITCH CONNECTION
- TS — SPRINKLER SYSTEM TAMPER SWITCH CONNECTION
- IM — FIRE ADDRESSABLE INTERFACE MODULE
- REMOTE TEST STATION WITH LED INDICATOR AND KEY SWITCH
- CZ — FIRE ALARM SYSTEM CONTROL MODULE
- MZ — FIRE ALARM SYSTEM MONITOR MODULE
- FACP — FIRE ALARM SYSTEM CONTROL PANEL
- FAAP — FIRE ALARM SYSTEM ANNUNCIATOR PANEL

TELECOMMUNICATIONS

- COMBINATION TELE/DATA WALL OUTLET BOX WITH MINIMUM 1" CONDUIT TO ABOVE ACCESSIBLE FINISHED CEILING (PROVIDE PULL CORD AND END BUSHING) MOUNTED AT 18" A.F.F. U.O.N. SEE DRAWINGS FOR CABLE TYPE, QTY, ETC.
- FLUSH FLOOR BOX FOR ONE TELEPHONE AND ONE DATA JACK WITH COVER. PROVIDE MINIMUM 1" CONDUIT TO NEAREST WALL AND UP TO ABOVE ACCESSIBLE CEILING (PROVIDE PULL CORD AND END BUSHING) U.O.N. SEE DRAWINGS FOR CABLE TYPE, QTY, ETC.
- TV — FLUSH-MOUNTED TELEVISION CABLE LOCATION WITH RECESSED FLAT PANEL MOUNTING ENCLOSURE EQUIPPED WITH RECEPTACLE, DATA DROP, AND CABLE TV COAX CONNECTION (COORDINATE LOCATION AND MOUNTING HEIGHT WITH ARCHITECT.) SEE DRAWINGS FOR CABLE TYPE, QTY, ETC.

RACEWAYS

- HOMERUN TO PANEL
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- CONDUIT WITH CAP
- 12 — LADDER TYPE CABLE TRAY (NUMBER INDICATES WIDTH)
- OH — OVERHEAD CONDUCTORS
- UNDERGROUND DUCTBANK SYSTEM
- X / X — DUCTBANK SYSTEM SECTION CALLOUT, "X-X" INDICATES CORRESPONDING SECTION

COORDINATION NOTE

THE HVAC, PLUMBING, AND ELECTRICAL CONTRACTORS SHALL BE AWARE THAT THE CEILING HEIGHTS, SOFFITS AND SPACE CONDITIONS ON THIS PROJECT ARE CRITICAL AND SPACE ALLOCATION MUST BE COORDINATED BETWEEN ALL TRADES AND MAINTAINED. EACH CONTRACTOR OR TRADE SHALL REFER TO THE STRUCTURAL AND ARCHITECTURAL DRAWINGS IN ADDITION TO THE HVAC, PLUMBING, AND ELECTRICAL DRAWINGS TO DETERMINE ACCEPTABLE LAYERING OF ALL EQUIPMENT.

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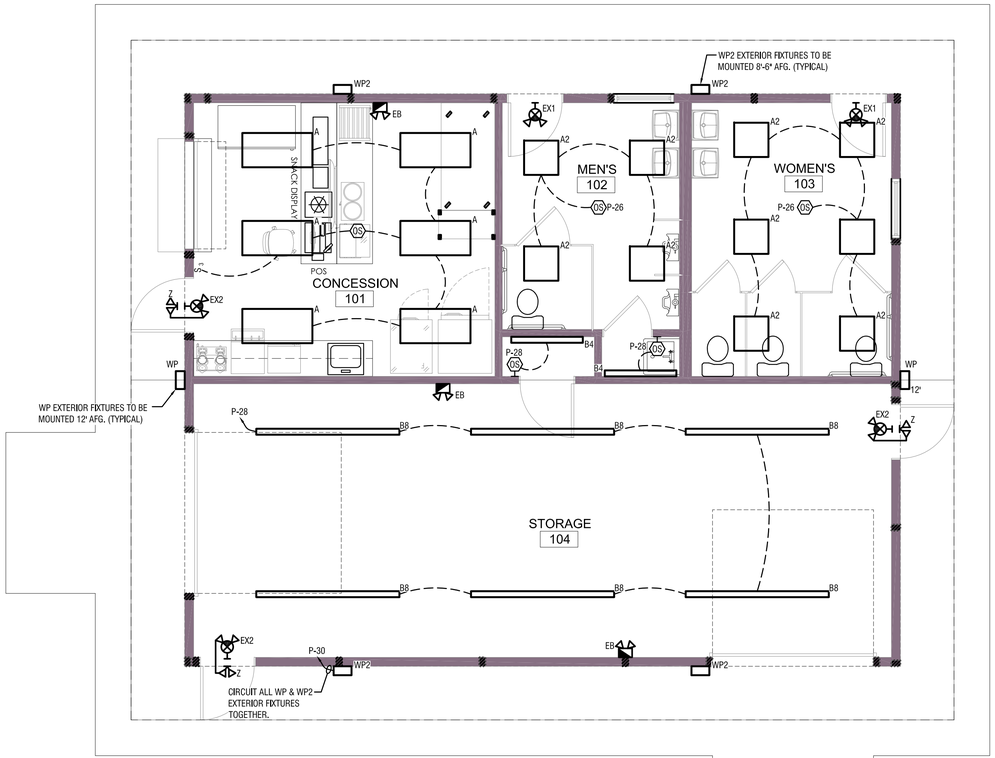
Scale: AS NOTED
Sheet:

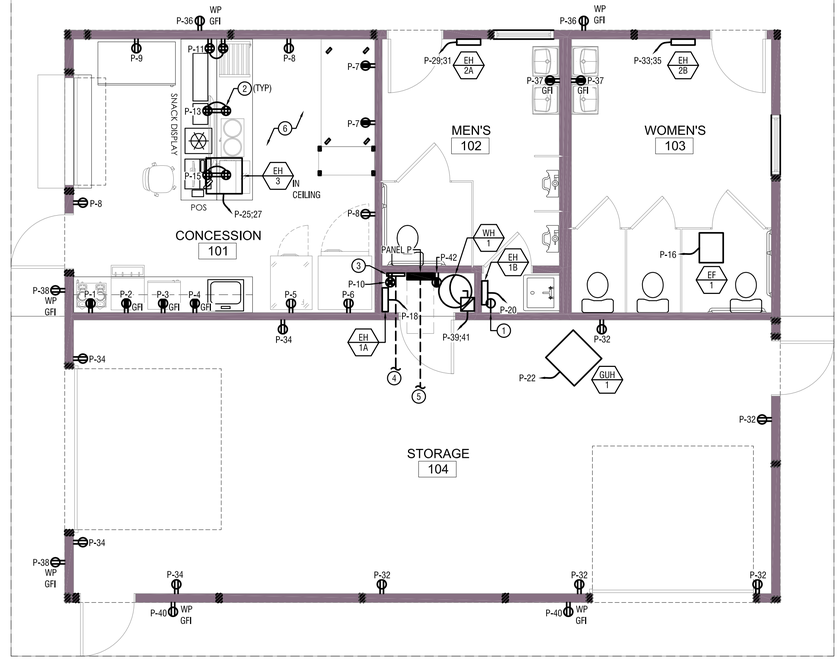
ELECTRICAL COVER SHEET

E-1



1 E-2 ELECTRICAL LIGHTING PLAN

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



1 E-2 ELECTRICAL POWER PLAN

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

KEYED CONSTRUCTION NOTES

1. RECEPTACLE FOR DOMESTIC WATER HEAT TRACE. COORDINATE FINAL LOCATION WITH P.C. PRIOR TO ROUGH-IN.
2. RECEPTACLES IN MILLWORK. COORDINATE FINAL LOCATION AND HEIGHT WITH OWNER PRIOR TO ROUGH-IN.
3. PROVIDE 24"x24"x3/4" PLYWOOD BACKBOARD FOR COMMUNICATION.
4. UNDERGROUND COMMUNICATION CONDUIT FROM SITE TO BACKBOARD. SEE DRAWING E-3 FOR CONTINUATION.
5. UNDERGROUND CPOWER CONDUIT FROM SITE TO PANELBOARD. SEE DRAWING E-3 FOR CONTINUATION.
6. COORDINATE ALL RECEPTACLE LOCATIONS AND HEIGHT WITH OWNER AND KITCHEN EQUIPMENT VENDOR PRIOR TO ROUGH-IN.

BUILDING LIGHTING FIXTURE SCHEDULE

TYPE	CATALOG No.	DESCRIPTION	LAMP	VOLTS	REMARKS
A	COLUMBIA LIGHTING OR EQUAL CFP24-55/41/3440	2'x4' FLAT PANEL FIXTURE	50W LED	UNV	
A2	COLUMBIA LIGHTING OR EQUAL CFP22-40/33/2840	2'x2' FLAT PANEL FIXTURE	40W LED	UNV	
B4	COLUMBIA LIGHTING OR EQUAL MPS4-40ML-FW-E-U	4' LINEAR STRIP LIGHT	32W LED	UNV	
B8	COLUMBIA LIGHTING OR EQUAL MPS8-40HL-FW-ED-U-NXS	8' LINEAR STRIP LIGHT	83W LED	UNV	PROVIDE WITH OCCUPANCY SENSOR
EB	DUAL LITE OR EQUAL EV2	EMERGENCY BATTERY PACK WITH HEADS	(2) 1W LED	UNV	
EX1	DUAL LITE OR EQUAL EVCURW	EMERGENCY EXIT SIGN WITH HEADS	(2) 1W LED	UNV	
EX2	DUAL LITE OR EQUAL EVCURWD4	EMERGENCY EXIT SIGN WITH HEADS AND REMOTE CAPACITY	(2) 1W LED	UNV	
WP	LSI LIGHTING OR EQUAL XWS-LED-5L-FTW-UNV-DIM-40-80-PCI120-XX	SMALL WALL SCONCE	39W LED	UNV	PROVIDE WITH PHOTOCELL
WP2	LSI LIGHTING OR EQUAL XWS-LED-6L-FTW-UNV-DIM-40-80-PCI120-XX	SMALL WALL SCONCE	52W LED	UNV	PROVIDE WITH PHOTOCELL
Z	DUAL LITE OR EQUAL EV0	EXTERIOR DUAL REMOTE HEADS	(2) 1W LED	UNV	
DS	HUBBELL CONTROL SOLUTIONS CAT. No. OMNIDT2000BP1277	LINE VOLTAGE, DUAL TECH. OCCUPANCY & VACANCY CEILING MOUNTED SENSOR	NA	UNV	
DS	HUBBELL CONTROL SOLUTIONS CAT. No. LHMTS1-X	LINE VOLTAGE, DUAL TECH. OCCUPANCY & VACANCY WALL MOUNTED SENSOR	NA	UNV	

NOTES:
1. COORDINATE FINAL FIXTURE SELECTIONS, COLOR TEMPERATURE, AND FINISHES WITH ARCHITECT AND OWNER.
2. PROVIDE ALL REQUIRED POWER PACKS AND MOUNTING DEVICES FOR OCCUPANCY SENSORS. INCLUDE ALL MOUNTING, DRIVERS, FILTERS, POWER PACKS, AND OTHER SUPPORTING PARTS FOR A COMPLETE AND WORKING SYSTEM.
3. LOCATION OF ALL OCCUPANCY SENSORS IS APPROXIMATE. REVIEW MANUFACTURER'S WRITTEN INSTRUCTIONS BEFORE INSTALLING.
4. TO PREVENT FALSE ACTIVATION, MOUNT ULTRASONIC CEILING-MOUNT SENSORS AT LEAST SIX FEET AWAY FROM DIFFUSERS.

Client:
TRACK CONCESSIONS BUILDING
Client: Riverside School District
300 Davis St.
Taylor, Pa 18517

Consultants:

DMG
design management group
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ENGINEER
PE074964

Revisions | Issues

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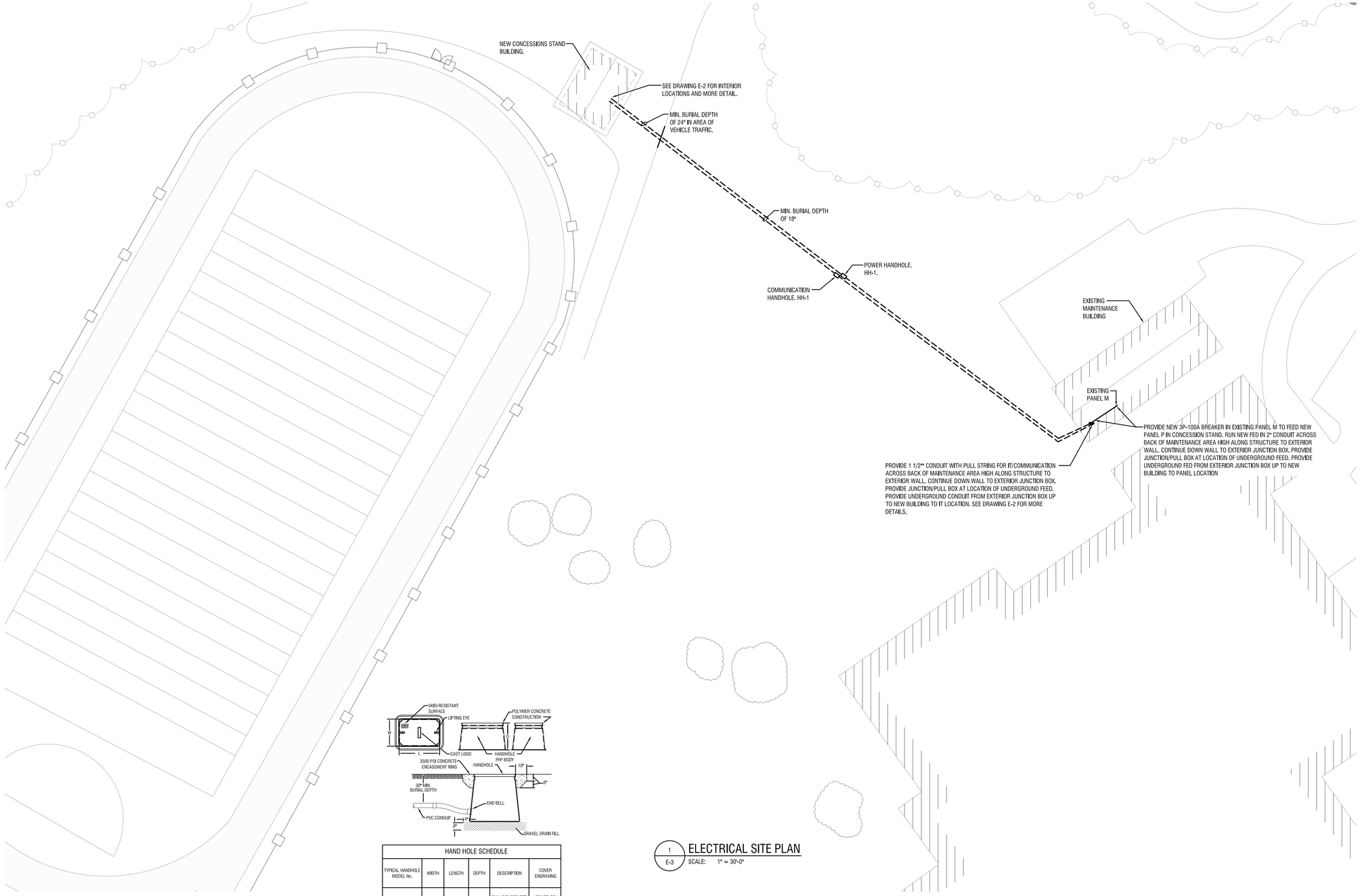
ELECTRICAL LIGHTING & POWER PLANS

E-2



1 E-3 ELECTRICAL SITE PLAN
SCALE: 1" = 30'-0"

HAND HOLE SCHEDULE					
TYPICAL HANDHOLE MODEL No.	WIDTH	LENGTH	DEPTH	DESCRIPTION	COVER ENGRAVING
HH-1	12"	12"	36"	PULL BOX FOR SITE CABLING	POWER OR COMM.

NOTES:
1. TYPICAL HANDHOLE IS 12" X 12" X 36" DUAZITE BOX WITH OPEN OR SOLID BOTTOM. COVER SHALL BE TIER 8 TRAFFIC RATED. ALL HANDHOLES SHALL BE UL LISTED AND BE SUITABLE FOR TIER 8 LOADING.
2. ALL HANDHOLES SHALL BE INSTALLED AT DEPTH TO SIT FLUSH WITH FINAL GRADE. DEPTH TO VARY AS REQUIRED. MINIMUM SIZE HANDHOLES ARE SHOWN, PROVIDE LARGER BOXES AS REQUIRED.
3. ALL HANDHOLES SHALL BE GASKETED, PRECAST POLYMER CONCRETE SPLICE BOXES SUITABLE FOR POWER AND CONTROL WIRING. PROVIDE ALL HANDHOLES WITH BASES AND STAINLESS STEEL HEX BOLTS.

2 E-3 TYPICAL HANDHOLE DETAIL
SCALE: NOT TO SCALE

Client:
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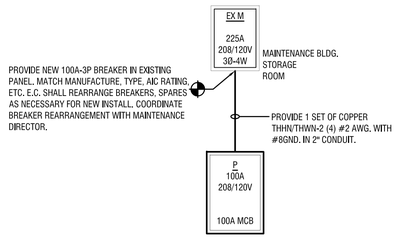
ELECTRICAL SITE PLAN
E-3

NEW PANELBOARD SCHEDULE

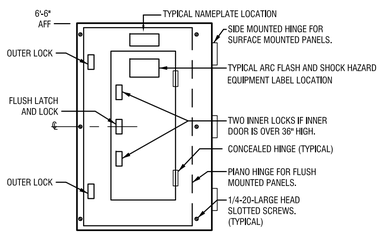
DESIGNATION:			MAINS:		100A	VOLTAGE:		208/120V-3Ø-4W		LOCATION:	SEE FLOOR PLAN			SINGLE:		x			
P			TYPE:		1	MIN. AIC RATING:		22,000		SUPPLY:	EXISTING PANEL M			DOUBLE:					
			O.C. DEVICE:		100A MCB					MOUNTING:	SURFACE			TRIPLE:					
CKT	POLE	TRIP	WIRE	GND	C	LOAD	KVA Ø A		KVA Ø B		KVA Ø C		LOAD	C	GND	WIRE	TRIP	POLE	CKT
1	1	20	12	12	**	COFFEE	1.20	0.18					COUNTER RECEPTACLE	**	12	12	20	1	2
3	1	20	12	12	**	COUNTER RECEPTACLE			0.18	0.18			COUNTER RECEPTACLE	**	12	12	20	1	4
5	1	20	12	12	**	FREEZER					1.50	1.20	REFRIGERATOR	**	12	12	20	1	6
7	1	20	12	12	**	RECEPTAC.ES	0.36	0.54					RECEPTACLES	**	12	12	20	1	8
9	1	20	12	12	**	DRINK MERCH.			1.00	0.36			COMM. BOARD RECEPT	**	12	12	20	1	10
11	1	20	12	12	**	UNDERCOUNTER RECEPTACLES					0.72		SPARE				20	1	12
13	1	20	12	12	**	UNDERCOUNTER RECEPTACLES	0.72						SPARE				20	1	14
15	1	20	12	12	**	UNDERCOUNTER RECEPTACLES			0.72	0.25			EF-1	**	12	12	20	1	16
17	1	20				SPARE						0.50	EH-1A	**	12	12	20	1	18
19	1	20				SPARE		0.50					EH-1B	**	12	12	20	1	20
21	2	20				SPARE			0.20				GUH-1	**	12	12	20	1	22
23	/										0.25		HEAT TRACE	**	12	12	20	1	24
25	2	20	12	12	**	EH-3	1.00	0.70					LIGHTING	**	12	12	20	1	26
27	/								11.00	0.60			LIGHTING	**	12	12	20	1	28
29	2	20	12	12	**	EWH-2A					1.50	0.30	EXTERIOR LIGHTING	**	12	12	20	1	30
31	/						1.50						RECEPTACLES	**	12	12	20	1	32
33	2	20	12	12	**	EWH-2B			1.50				RECEPTACLES	**	12	12	20	1	34
35	/										1.50	0.36	EXTERIOR RECEPTACLES	**	12	12	20	1	36
37	1	20	12	12	**	RESTROOM RECEPTACLES	0.36	0.36					EXTERIOR RECEPTACLES	**	12	12	20	1	38
39	2	30	10	10	**	WH-1			2.00	0.36			EXTERIOR RECEPTACLES	**	12	12	20	1	40
41	/										2.00	0.18	PANEL RECEPTACLE	3/4"	12	12	20	1	42
						TOTAL/PHASE	7.42		18.35		10.01								

*** SEE ONE-LINE DIAGRAM**
**** CONDUCTORS SHALL BE IN EMT CONDUIT WHERE SUBJECT TO PHYSICAL DAMAGE. METAL CLAD (MC) CAN BE USED IN CONCEALED PLACES AND NOT SUBJECT TO PHYSICAL DAMAGE.**

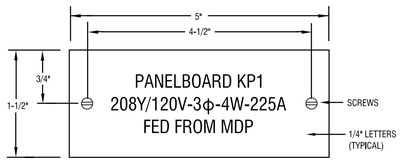
CONNECTED LOAD	35.78	(kVA)
DEMAND LOAD @ 0.80	28.62	(kVA)
DEMAND	79.45	(A)



1 / E-4 ONE-LINE DIAGRAM
SCALE: N.T.S.



TYPICAL PANELBOARD ELEVATION

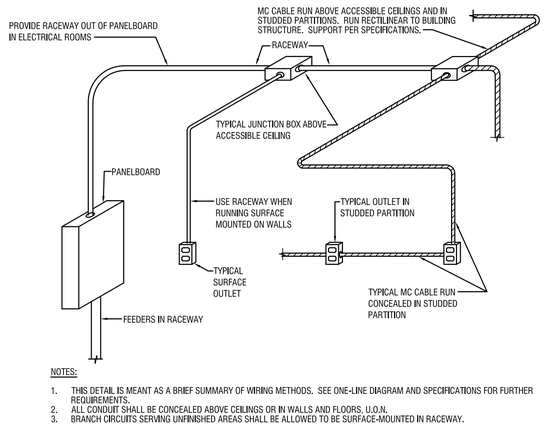


TYPICAL NAMEPLATE

NOTES:
1. ALL BOLTS SHALL HAVE LARGE (3/8") ROUND HEAD. NO WASHERS ALLOWED.
2. PROVIDE UNISTRUT MOUNTING ARRANGEMENT DICTATED BY FIELD CONDITIONS. SECURELY FASTEN ALL SUPPORT POINTS INTO THE SLAB, WALL OR BEAM.
3. PROVIDE ARC FLASH AND SHOCK HAZARD EQUIPMENT LABELS PER THE LATEST REVISION OF NFPA 70E.

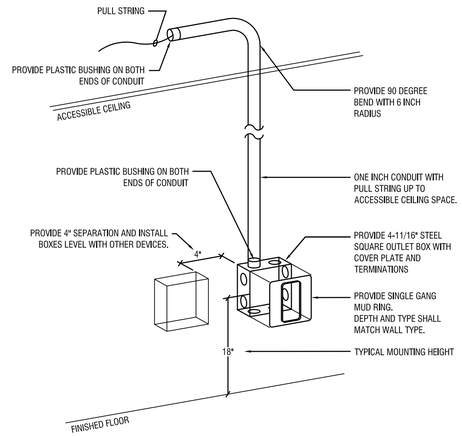
NOTES:
1. LABEL ALL PANELBOARDS, TRANSFER SWITCHES, TRANSFORMERS, CONTROL PANELS, DISCONNECTS, ETC, GREATER THAN 60A, AND MINI SUBSTATIONS.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL LABELING REQUIREMENTS.
3. NAMEPLATE TO BE 1/16" THICK BLACK BAKELITE PLASTIC WITH WHITE RECESSED ENGRAVED LETTERS.
4. SECURE NAMEPLATE TO SURFACES WITH (2) FLAT HEAD BRASS SCREWS. ADHESIVE CEMENT SHALL NOT BE ALLOWED.
5. NAMEPLATE INFORMATION SHALL INCLUDE NAME, VOLTAGE, AMPERAGE AND EQUIPMENT FED FROM.

2 / E-4 TYPICAL PANELBOARD ELEVATION AND LABELING DETAIL
SCALE: N.T.S.

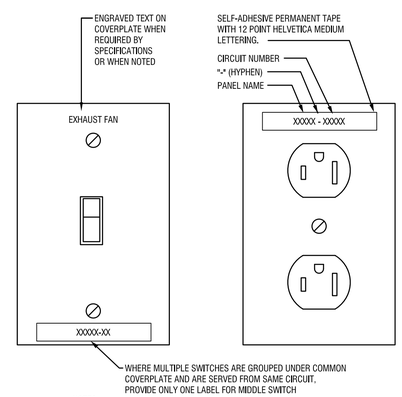


NOTES:
1. THIS DETAIL IS MEANT AS A BRIEF SUMMARY OF WIRING METHODS. SEE ONE-LINE DIAGRAM AND SPECIFICATIONS FOR FURTHER REQUIREMENTS.
2. ALL CONDUIT SHALL BE CONCEALED ABOVE CEILINGS OR IN WALLS AND FLOORS, U.O.N.
3. BRANCH CIRCUITS SERVING UNFINISHED AREAS SHALL BE ALLOWED TO BE SURFACE-MOUNTED IN RACEWAY.

3 / E-4 TYPICAL BRANCH CIRCUIT CONDUIT & WIRING
SCALE: N.T.S.

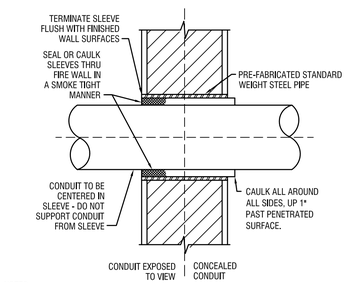


4 / E-4 TYPICAL TELE/DATA BOX INSTALLATION DETAIL
SCALE: N.T.S.



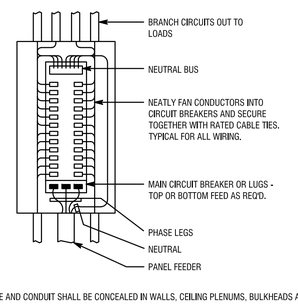
NOTES:
1. SEE SPECIFICATIONS FOR ADDITIONAL LABELING INFORMATION AND COLORS OF LABELS FOR DIFFERENT SYSTEMS.
2. MODIFY TEXT AS REQUIRED
3. LABEL DEVICES IN SURFACE METAL RACEWAYS, POWER POLES, FLOOR BOXES, CONCEALED MULTI-SERVICE POWER BOXES, ETC, SIMILARLY.

5 / E-4 DEVICE CIRCUIT LABELING DETAIL
SCALE: N.T.S.



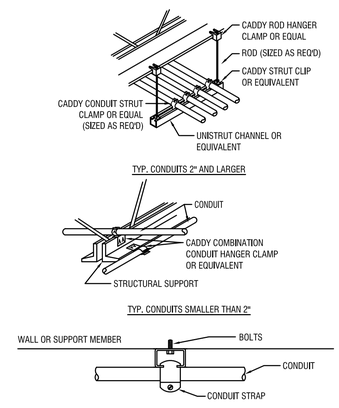
NOTES:
1. PROVIDE FIRESTOPPING AT ALL PENETRATIONS THROUGH RATED ASSEMBLIES IN A SMOKE-TIGHT MANNER AND TO MAINTAIN A UL 319 CLOSURE. FIRE RETARDING MATERIAL TO MAINTAIN RATING TO THAT OF SURFACE BEING PENETRATED.
2. PROVIDE PRE-FABRICATED, STANDARD WEIGHT, STEEL PIPE SLEEVAE. CONDUIT TO BE CENTERED IN SLEEVE. DO NOT SUPPORT CONDUIT FROM SLEEVE.
3. IN UNFINISHED AREAS, CAULK ALL AROUND ALL SIDES, UP 1" PAST PENETRATED SURFACE.
4. IN FINISHED AREAS, TERMINATE SLEEVE AND SEALANT FLUSH WITH WALL SURFACE.

6 / E-4 RATED PENETRATION DETAIL
SCALE: N.T.S.



NOTES:
1. ALL WIRE AND CONDUIT SHALL BE CONCEALED IN WALLS, CEILING PLENUMS, BULKHEADS AND IN ROOF STRUCTURAL AREAS, U.O.N. THE E.C. SHALL COORDINATE FULLY WITH ALL OTHER TRADES TO INSTALL ALL CONDUIT AND WIRING IN THESE ASSOCIATED STRUCTURES. ANY OTHER MEANS OF PATHWAY SUGGESTED MUST FIRST BE APPROVED FROM THE ELECTRICAL ENGINEER BEFORE INSTALLATION CAN PROCEED.
2. ALL RACEWAYS AND MC CABLE SHALL BE RECTILINEAR TO BUILDING STRUCTURE AND SUPPORTED PER SPECIFICATIONS.
3. PROVIDE ARC FLASH STUDY AND CORRESPONDING ARC FLASH AND SHOCK HAZARD EQUIPMENT LABELS PER THE LATEST REVISIONS OF IEEE 1584 AND NFPA 70E.

7 / E-4 TYP. PANEL WIRING DETAIL
SCALE: N.T.S



NOTES:
1. THESE ARE TYPICAL ARRANGEMENTS. PROVIDE HANGERS, SUPPORTS, UNISTRUT MOUNTING, ETC, DICTATED BY FIELD CONDITIONS, SECURELY FASTEN ALL SUPPORT POINTS INTO THE SLAB, WALL, OR BEAM.
2. PROVIDE CLEVIS HANGERS FOR ALL SINGLE CONDUIT RUNS 2" AND LARGER
3. ALL SUPPORT SPACING SHALL BE IN COMPLIANCE WITH NEC REQUIREMENTS.

8 / E-4 HANGER AND SUPPORT DETAIL
SCALE: N.T.S.

Client:
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ELECTRICAL ONE-LINE, DETAILS & PANELBOARD SCHEDULE

E-4

PLUMBING ABBREVIATIONS

ABV	ABOVE
ABV CLG	ABOVE CEILING
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AP	ACCESS PANEL
AV	ACID VENT
AW	ACID WASTE
BLW	BELOW
BF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BFP	BACKFLOW PREVENTER
BOJ	BOTTOM OF JOIST
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STEEL
BTUB	BATHTUB
BTUH	BRITISH THERMAL UNITS PER HOUR
BWV	BACKWATER VALVE
CB	CATCH BASIN
CD	CONDENSATE DRAIN
CFH	CUBIC FEET PER HOUR
CIP	CAST IRON PIPE
CLG	CEILING
CO	CLEANOUT
CONC	CONCRETE
CONN	CONNECT
CONT	CONTINUATION
CS	COUNTERTOP SINK
CW	DOMESTIC COLD WATER
C	CENTER LINE
DEPT	DEPARTMENT
DIP	DUCTILE IRON PIPE
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DIA	DIAMETER
DN	DOWN
EC	ELECTRICAL CONTRACTOR
EL	ELEVATION
EWC	ELECTRICAL WATER COOLER
EX	EXISTING
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATIONS
FHC	FIRE HOSE CABINET
FL	FLOOR
GC	GENERAL CONTRACTOR
GH	GROUND HYDRANT
GI	GREASE INTERCEPTOR LINE
GPM	GALLON PER MINUTE
GW	GRAYWATER
GW-IR	GRAYWATER-IRRIGATION
H	HANDICAPPED
HB	HOSE BIBB
HE	HOSE END
HC	HEATING CONTRACTOR
HP	HORSEPOWER
HW	DOMESTIC HOT WATER
HWH	HOT WATER HEATER
HWR	DOMESTIC HOT WATER RETURN
ID	INSIDE DIAMETER
INV	INVERT
IW	INDIRECT WASTE
KW	KILOWATT
LAV	LAVATORY
LM	LAUNDRY MACHINE
MAX	MAXIMUM
MB	MOP BASIN
MBH	THOUSAND BTU'S PER HOUR
MC	MECHANICAL CONTRACTOR
MH	MANHOLE
MIN	MINIMUM
N/C	NORMALLY CLOSED
NFHB	NON-FREEZE HOSE BIBB
NIC	NOT IN CONTRACT
N/O	NORMALLY OPEN
OD	OVERFLOW DRAIN
OSD	OPEN SITE DRAIN
OS&Y	OUTSIDE STEM AND YOKE
PC	PLUMBING CONTRACTOR
PD	PUMPED DISCHARGE LINE
PRV	PRESSURE REDUCING VALVE
PSI	PER SQUARE INCH
PVC	POLY VINYL CHLORIDE
R	RISER
RD	ROOF DRAIN
RL	RAINWATER LEADER
RPM	REVOLUTION PER MINUTE
RWC	RAINWATER CONDUCTOR
S	SOIL LINE/STACK
SAN	SANITARY
SD	SHOWER DRAIN
SH	SHOWER
SOV	SHUT-OFF VALVE
SP	SPRINKLER
SS	SERVICE SINK
SW	STORM WATER
TEMP	TEMPERATURE
TMV	THERMOSTATIC MIXING VALVE
TYP	TYPICAL
UR	URINAL
V	VENT
VTR	VENT THRU ROOF
W	WASTE
w/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WCO	WALL CLAENOUT
WF	WASH FOUNTAIN
WH	WALL HYDRANT

COORDINATION NOTE

THE HVAC, PLUMBING, AND ELECTRICAL CONTRACTORS SHALL BE AWARE THAT THE CEILING HEIGHTS, SOFFITS AND SPACE CONDITIONS ON THIS PROJECT ARE CRITICAL AND SPACE ALLOCATION MUST BE COORDINATED BETWEEN ALL TRADES AND MAINTAINED. EACH CONTRACTOR OR TRADE SHALL REFER TO THE STRUCTURAL AND ARCHITECTURAL DRAWINGS IN ADDITION TO THE HVAC, PLUMBING, AND ELECTRICAL DRAWINGS TO DETERMINE ACCEPTABLE LAYERING OF ALL EQUIPMENT.

GRAPHIC CONVENTIONS

XX / X	EQUIPMENT TAG, TOP INDICATES EQUIPMENT DESIGNATION, BOTTOM INDICATES EQUIPMENT NUMBER
XX / XX	PLAN CALLOUT, TOP INDICATES CALLOUT REFERENCE NUMBER, BOTTOM INDICATES SHEET NUMBER
XX / XX	ELEVATION CALLOUT, TOP INDICATES CALLOUT REFERENCE NUMBER, BOTTOM INDICATES SHEET NUMBER
XX / XX	SECTION CALLOUT, TOP INDICATES CALLOUT REFERENCE NUMBER, BOTTOM INDICATES SHEET NUMBER
	REVISION AREA
X	REVISION TAG
X	CONSTRUCTION KEYED NOTE TAG
X	DEMOLITION KEYED NOTE TAG
	POINT OF CONNECTION BETWEEN NEW AND EXISTING
	LIMIT OF DEMOLITION BETWEEN EXISTING TO REMAIN AND TO BE REMOVED

PLUMBING LEGEND

NOT ALL SYMBOLS ARE USED ON DRAWINGS

- COLD WATER LINE (CW)
- HOT WATER LINE (HW)
- HOT WATER RETURN LINE (HWR)
- 140°- 140°F HOT WATER LINE (140°)
- 140°R 140°F HOT WATER RETURN LINE (140°F)
- GW GRAYWATER (GW)
- GWR GRAYWATER RETURN (GWR)
- GW-IR GRAYWATER IRRIGATION
- VENT LINE (V)
- SAN SANITARY LINE (SAN)
- SAN EXISTING SANITARY LINE BELOW SLAB OR FLOOR(SAN)
- A COMPRESSED AIR (A)
- CD CONDENSATE DRAIN LINE MANUAL (CD)
- PD CONDENSATE DRAIN LINE PUMPED (PD)
- F FIRE; SPRINKLE SUPPLY LINE
- DW DEIONIZED OR DISTILLED WATER (DW)
- G NATURAL GAS (G)
- LPG PROPANE OR LIQUEFIED PETROLEUM GAS (LPG)

- RWC RAINWATER LINE (RWC)
- ST STORM WATER LINE OUTSIDE BUILDING (ST)
- TPL TRAP PRIMER LINE (TPL)
- TW TEMPERED WATER LINE (TEMP °F)
- V VACUUM (V)
- AV ACID VENT LINE (AV)
- AW ACID WASTE LINE (AW)
- SOLV SOLVENT WASTE LINE (SOLV)
- AC ACETYLENE LINE (AC)
- AR ARGON LINE (AR)
- CO2 CARBON DIOXIDE LINE (CO2)
- MA MEDICAL AIR LINE (MA)
- MV MEDICAL VACUUM LINE (MV)
- N2 NITROGEN LINE (N2)
- NO NITROGEN OXIDE (NO)

- O2 OXYGEN LINE (O2)
- AUTOMATIC THREE-WAY ATC CONTROL VALVE
- AUTOMATIC THREE-WAY ATC CONTROL VALVE
- BACKFLOW PREVENTER
- BALANCING VALVE
- BALL VALVE
- BALL VALVE IN VERTICAL
- BUTTERFLY VALVE
- CHECK VALVE
- DOUBLE CHECK VALVE
- SOLENOID VALVE
- GATE VALVE IN VERTICAL
- GLOBE VALVE
- PRESSURE REDUCING VALVE

- COMBINATION TEMPERATURE/PRESSURE RELIEF VALVE
- THERMOMETER
- TEMPERATURE GAUGE IN THERMOWELL
- UNION
- SHOCK ASSORBER/WATER HAMMER ARRESTOR *A* INDICATES SIZE; SEE SCHEDULE
- CIRCULATING OF IN-LINE PUMP (PLAN)
- CIRCULATING OF IN-LINE PUMP (SCHEMATIC)
- G GAS METER
- W WATER METER
- M A AIR VENT; MANUAL & AUTOMATIC
- FLEXIBLE CONNECTOR
- EXPANSION JOINT
- MOMENT GUIDE
- PIPE ANCHOR
- MOMENT GUIDE
- PIPE CAP

- PIPE REDUCER - CONCENTRIC
- PIPE REDUCER - ECCENTRIC
- P PIPE PITCHING DOWNWARD IN DIRECTION OF ARROW
- POINT OF NEW CONNECTION TO EXISTING
- LIMIT OF DEMOLITION
- TEE OUTLET DROP
- TEE OUTLET RISE
- PIPE DROPPING
- PIPE RISING
- RUNNING TRAP
- DIRECTION OF FLOW
- FIXTURE DRAIN WITH TRAP
- FD FLOOR DRAIN WITH TRAP (FD)
- FD FLOOR DRAIN WITHOUT TRAP (FD)
- FCO FLOOR CLEANOUT (FCO)

- CO CLEANOUT FLUSH (FC)
- WCO WALL CLEANOUT (WCO)
- RD ROOF DRAIN (RD)
- HB HOSE BIBB (HB)
- NFWH A NON FREEZE WALL HYDRANT (NFWH)
- FUNNEL DRAIN
- REMOVE EXISTING
- OUTSIDE SCREW AND YOKE VALVE (OS&Y)
- PLUG VALVE; NON-LUBRICATED TYPE
- *Y* STRAINER
- *Y* STRAINER w/BLOWDOWN VALVE AND HOSE BIBB
- GAS SHUT-OFF COCK
- PRESSURE GAUGE w/SHUT-OFF COCK

PLUMBING GENERAL NOTES

GENERAL PLUMBING NOTES:

1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEM AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
2. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF WORK TO BE PERFORMED, THE DRAWINGS ARE NOT INTENDED TO SHOW EVERY PIPE, FITTING, VALVE OR APPURTENANCE REQUIRED FOR A COMPLETE INSTALLATION. DO NOT SCALE LOCATION DIMENSIONS FROM THESE DRAWINGS. DRAWINGS ARE NOT TO BE SCALED FOR THE ACCURATE CUTTING OF PIPE OR ITS EXACT LOCATION. BEFORE ANY PIPING IS INSTALLED, CONFER WITH ALL OTHER CONTRACTORS IN ORDER TO ESTABLISH THE LOCATION OF THEIR PIPING, CONDUIT, DUCTWORK, GRILLES, FOUNDATIONS, STRUCTURAL STEEL, LIGHTING FIXTURES AND OTHER EQUIPMENT SO AS TO AVOID INTERFERENCE. FAILURE TO COORDINATE SHALL NOT RESULT IN ANY ADDITIONAL EXPENSES TO THE OWNER AND ENGINEER.
3. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL CONDITIONS AND DIMENSIONS AND FOR COORDINATION OF THEIR WORK WITH THAT OF ALL OTHER TRADES. PERFORM WORK IN A NEAT, ORDERLY MANNER AND WITH THE LEAST POSSIBLE INTERFERENCES.
4. WORK SHALL CONFORM TO OR MEET THE REQUIREMENTS OF THE MOST CURRENT PENNSYLVANIA EDITION OF:
   - A. INTERNATIONAL PLUMBING CODE; 2018
   - B. INTERNATIONAL ENERGY CONSERVATION CODE; 2018 IECC
   - C. INTERNATIONAL BUILDING CODE; 2018 IBC
   - D. NEC (NFPA 70); 2017
   - E. INTERNATIONAL FUEL GAS CODE; 2018 IFGC
   - F. ALL FEDERAL, STATE AND LOCAL CODES AND ORDINANCES
5. CONTRACTOR SHALL CONFORM TO NSF 61 (605.4, 606.5, 702.1, 702.2, 703.3) FOR THE WATER DISTRIBUTION PIPING AND SANITARY DRAINAGE.
6. VALVES AND FITTINGS UTILIZED IN THE WATER SUPPLY SYSTEM SHALL HAVE A MAXIMUM LEAD CONTENT OF 8% LEAD. LEAD FREE SOLDER THAT CONFORMS ASTM B32 AND FLUX THAT CONFORMS TO ASTM B 828. LEAD FREE SHALL MEAN A CHEMICAL COMPOSITION EQUAL TO OR LESS THAN 0.2% LEAD. PIPE, PIPE FITTINGS, JOINTS, VALVES, FAUCETS AND FIXTURE FITTINGS UTILIZED TO SUPPLY WATER FOR DRINKING OR COOKING PURPOSES SHALL COMPLY WITH NSF 372 AND SHALL HAVE A WEIGHTED AVERAGED LEAD CONTENT OF 0.25 PERCENT OR LESS.
7. CONTRACTOR SHALL PROTECT THE PIPING FROM STRESS AND STRAIN. CONTRACTOR SHALL PROTECT THE IN-SLAB PIPING FORM CORROSION AND STRESS/STRAIN TO CONFORM TO THE INTERNATIONAL PLUMBING CODE. REFER TO PIPING SUPPORT SPACING SCHEDULE OF THE CODE.
8. ALL MATERIALS, EQUIPMENT AND DEVICES SHALL, AS A MINIMUM, MEET THE REQUIREMENTS OF UL WHERE UL REQUIREMENTS ARE ESTABLISHED FOR THOSE ITEMS. ALL ITEMS SHALL BE CLASSIFIED BY UL AS SUITABLE FOR THE PURPOSE OF THE CODE.
9. ALL HOT WATER HEATERS TO CONFORM TO REQUIREMENTS OF INTERNATIONAL ENERGY CONSERVATION CODE - IECC (SECTION C404).
10. WHERE PIPES PENETRATE FIRE RATED OR SMOKE RATED BARRIERS (WALLS, FLOORS AND CEILINGS). SEAL PENETRATIONS IN ACCORDANCE WITH NFPA 90A WITH UL LISTED FIRE STOPPING SYSTEM.
11. REFER TO SCHEMATIC DIAGRAMS FOR ALL PIPE SIZES AND PIPING LOCATIONS NOT SHOWN ON THE PLANS UNLESS NOTED OTHERWISE ON THE DRAWINGS. ALL WASTE PIPING BELOW GRADE SHALL BE A MINIMUM OF 2" IN SIZE.
12. INSTALL CLEANOUTS (TEST TEES) AT THE BASE OF ALL SOIL STACKS AND RAINWATER CONDUCTORS.
13. COORDINATE LOCATION OF PIPING ABOVE CEILING WITH ELECTRICAL PANELS BY ELECTRICAL CONTRACTOR. DO NOT INSTALL PIPING IN DEDICATED SPACE FOR ELECTRIC PANEL.
14. ANY REFERENCE TO "GC" OR "GENERAL CONTRACTOR" SHALL MEAN THE APPROPRIATE GENERAL TRADES CONTRACTOR, AS DERNED IN DIVISION 1. THIS REFERENCE IS NOT TO OUTLINE WORK AMONG GENERAL TRADES CONTRACTOR, BUT TO NOTE WHAT WORK IS NOT A PART OF THE PLUMBING CONTRACT.
15. ALL EQUIPMENT AND MATERIALS INCORPORATED IN THIS WORK SHALL BE NEW UNLESS NOTED OTHERWISE AND SHALL BE CURRENT PRODUCTS BY MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SUCH PRODUCTS.
16. ALL FACTORY APPLIED COATINGS AND FINISHES SHALL BE PROVIDED WITHOUT RUST, SCRATCHES OR DENTS.
17. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, APPROVALS AND INSPECTIONS AS REQUIRED TO COMPLETE INSTALLATIONS INDICATED ON THESE DRAWINGS.
18. PROVIDE OWNER WITH CERTIFICATES OF FINAL INSPECTION AND ACCEPTANCE FROM THE AUTHORITY HAVING JURISDICTION.
19. PROVIDE OWNER WITH TWO (2) SETS OF O&M (OPERATING AND MAINTENANCE) MANUALS WHICH SHALL INCLUDE:
    - A. ALL PRODUCT, EQUIPMENT AND FIXTURE DESCRIPTIONS AND SUBMITTAL DATA INCLUDING PARTS ORDERING INFORMATION.
    - B. INSTALLATION INSTRUCTIONS.
    - C. OPERATING AND MAINTENANCE INSTRUCTIONS.
    - D. WARRANTIES AND GUARANTEES.
    - E. PROVIDE ALL DATA IN A BOUND 8-1/2"x11" 3-RING BINDER FOR TEST AND BALANCE REPORTS.

COORDINATION REQUIREMENTS

1. COORDINATE LOCATIONS AND INSTALLATION OF PLUMBING WORK WITH OTHER TRADES TO AVOID CONFLICTS AND INTERFERENCES, MODIFICATIONS DUE TO FIELD CONDITIONS SHALL BE COMPLETELY RESOLVED BY CONTRACTOR IN ACCORDANCE WITH RECOMMENDATIONS OF THE CONSTRUCTION MANAGER OR GENERAL CONTRACTOR.
2. COORDINATE FINAL LOCATIONS OF PLUMBING EQUIPMENT WITH ARCHITECTURAL PLANS.
3. PROVIDE TO THE CONSTRUCTION MANAGER, GENERAL CONTRACTOR AND ALL OTHER TRADES DIMENSIONED LOCATIONS AND SIZES OF ALL REQUIRED FLOOR, WALL AND ROOF OPENINGS. PROVIDE FOR INSTALLATION OF SLEEVES AND FRAMING AS REQUIRED.

PLUMBING INSTALLATION REQUIREMENTS:

1. INSTALL ALL EQUIPMENT AND MATERIAL IN ACCORDANCE WITH MANUFACTURER PRINTED INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS. MAINTAIN CLEARANCES FOR CLEARANCE ACCESS TO MAINTAIN AND SERVICE EQUIPMENT, VALVES AND CONTROLS.
2. ALL INSTALLATION AND WORK SHALL BE PERFORMED IN A NEAT, WORKMANLIKE MANNER SO AS NOT TO DAMAGE ANY SURFACES, EQUIPMENT OR MATERIALS.
3. ALL EQUIPMENT AND PIPING SHALL BE SUPPORTED IN AN APPROVED MANNER FROM THE BUILDING STRUCTURE AND INCLUDE HANGERS AND RESTRAINTS IN ACCORDANCE WITH ALL APPLICABLE CODES AND SEISMIC RESTRAINT REQUIREMENTS. PLUMBING CONTRACTOR SHALL PROVIDE ALL ROOF OPENINGS, FLASHING, AUXILIARY STEEL, THREADED RODS, ETC., TO SUPPORT EQUIPMENT ON OR FROM THE STRUCTURE.
4. PROVIDE PIPE ESCUTCHEONS AT ALL EXPOSED PENETRATIONS OF FLOORS, WALLS AND CEILINGS.
5. PROVIDE LINK-SEALS OR EQUAL WHEN PIPING PENETRATES AN EXTERIOR WALL OR FLOOR SLAB. INSTALL SLEEVES OR CORE DRILL AT PROPER DIAMETER TO ASSURE WEATHERPROOF/MOISTER PROOF INSTALLATION.
6. THE MANUFACTURERS AND MODEL NUMBERS LISTED ON THE SCHEDULES AND DETAILS ARE THE BASIS OF DESIGN FOR THIS PROJECT. THIS INFORMATION IS PROVIDED FOR REFERENCE PURPOSE ONLY AND IS NOT INTENDED TO PRECLUDE SUBMITTAL OF OTHER MANUFACTURERS OF EQUAL QUALITY SUBJECT TO APPROVAL BY THE CONSTRUCTION MANAGER OR GENERAL CONTRACTOR.
7. PIPE SIZES ARE IN INCHES UNLESS NOTED OTHERWISE.
8. SLOPE SANITARY SEWER PIPING A MINIMUM OF 1/4" PER FOOT FOR PIPE 2" AND SMALLER AND 1/8" PER FOOT FOR PIPE LARGER THAN 2".
9. RUNOUTS TO EQUIPMENT SHALL BE SIZED AS INDICATED AND INCREASED OR REDUCED AT POINT OF FINAL CONNECTION TO EQUIPMENT.
10. ALL SYSTEMS SHALL BE TESTED FOR PROPER OPERATION IN ACCORDANCE WITH APPLICABLE CODE OR REGULATION.
11. PLUMBING CONTRACTOR SHALL SEAL ALL PIPE PENETRATIONS THROUGH WALLS, FLOORS AND ROOF WATERTIGHT. SEAL ALL PIPE PENETRATIONS THROUGH FIRE-RATED PARTITIONS WITH UL RATED FIRE RETARDANT CAULKING COMPOUND.
12. ALL CHANGES IN PIPE DIRECTION MUST COMPLY WITH THE FITTING INDICATED IN THE APPROPIATE SECTION IF THE INTERNATIONAL PLUMBING CODE.

PIPING MATERIALS:

1. REFER TO IPC 2015 FOR ALL APPLICABLE ASTM NUMBER/REQUIREMENTS AS WELL AS PIPING SUPPORT REQUIREMENTS, FOR ALL SYSTEMS AND MATERIALS.
2. ABOVE GROUND DOMESTIC WATER MAY BE TYPE L COPPER WITH SOLDERED JOINTS AND FITTINGS, SCHEDULE 40 CPVC WITH CHEMICAL WELD JOINTS AND FITTINGS OR PEX WITH ASSOCIATED COMPRESSION JOINTS AND FITTINGS. PEX SYSTEMS SHALL BE SUPPORTED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND INTERNATIONAL PLUMBING CODE (IPC). DO NOT INSTALL PLASTIC PIPING SYSTEMS IN RETURN AIR PLENUMS. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.
3. UNDERGROUND DOMESTIC WATER SHALL BE DUCTILE IRON, TYPE K COPPER WITH SOLDERED JOINTS AND FITTINGS OR HDPE WITH FUSION WELDED JOINTS AND FITTINGS. SERVICE PIPING MUST MEET THE UTILITY PROVIDERS REQUIREMENTS.
4. ABOVE GROUND GAS PIPING SHALL BE SCHEDULE 40 STEEL THREADED AND COUPLED, WELDED OR FLANGED. LISTED FLEXIBLE GAS PIPING IS ALLOWABLE FOR FINAL CONNECTIONS TO EQUIPMENT AND APPLIANCES UNLESS OTHERWISE NOTED. DO NOT INSTALL THREADED OR FLANGED FITTINGS IN WALLS, BELOW GROUND OR ANY OTHER NON ACCESSIBLE SPACES.
5. UNDERGROUND GAS PIPING SHALL BE SCHEDULE 40 WELDED, OR HDPE FUSION WELDED. FLEXIBLE GAS PIPING IS ALLOWABLE IN USED IN PVC CONDUIT.
6. ABOVE OR BELOW GROUND SANITARY AND VENT PIPING MAY BE SCHEDULE 40 SOLID CORE PVC OR STANDARD WEIGHT CAST IRON SOIL PIPE. JOINTS AND FITTINGS MAY BE HUBLESS, HUB AND SPIGOT OR CHEMICAL WELDED. DO NOT INSTALL PLASTIC PIPING IN RETURN AIR PLENUMS. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.
7. PRESSURIZED OR PUMPED SANITARY LINES SHALL BE CPVC OR TYPE L COPPER WITH SOLDERED JOINTS AND FITTINGS WHEN PLASTIC IS NOT PERMITTED.

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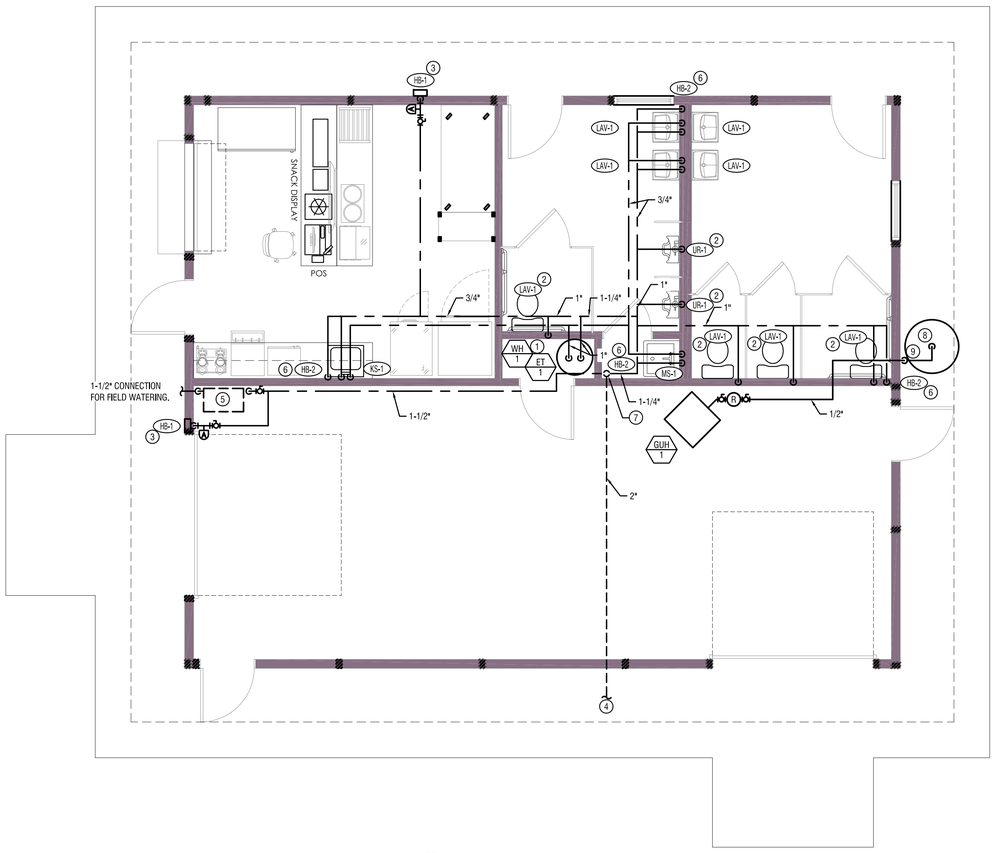
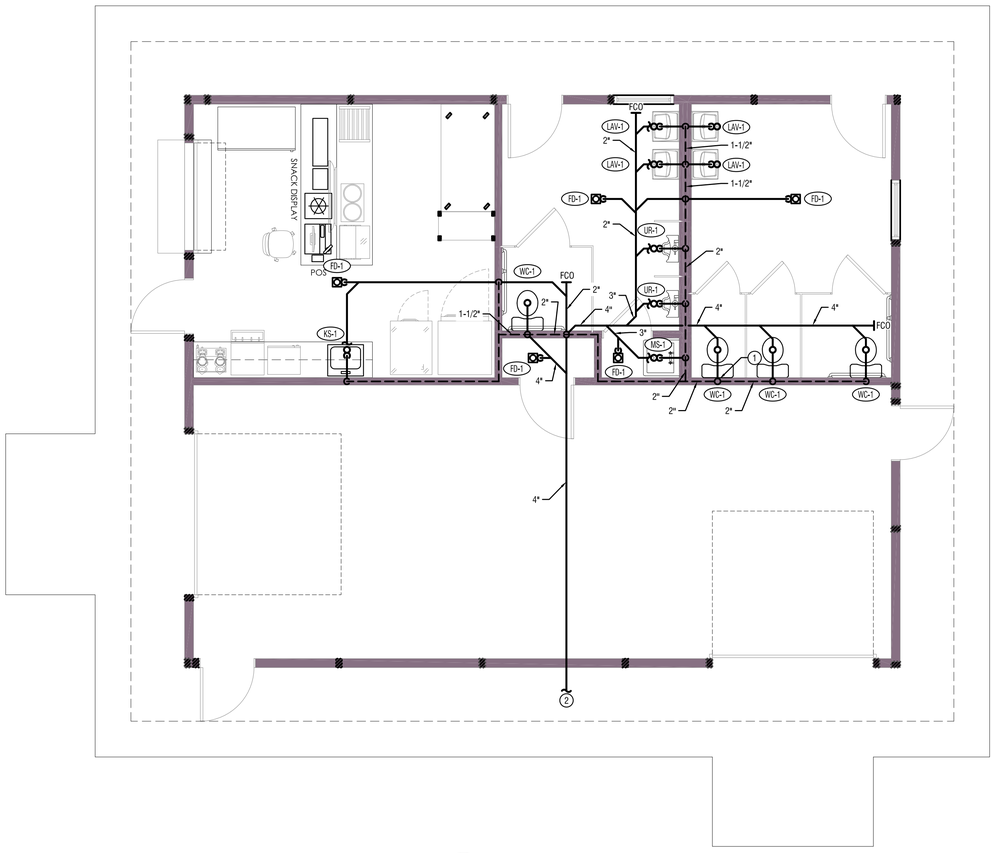
PLUMBING COVER SHEET

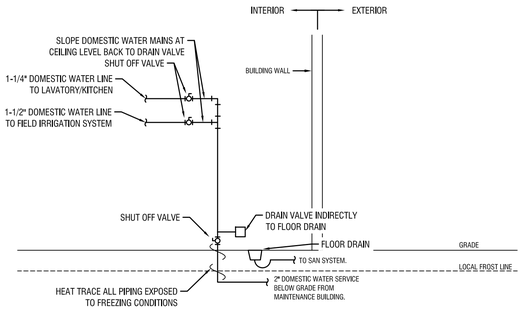
P-1



1 P-2 PLUMBING PLAN - WATER
SCALE: 1/4" = 1'-0"



2 P-2 PLUMBING PLAN - WASTE & VENT
SCALE: 1/4" = 1'-0"



3 P-2 DOMESTIC WATER RISER INTO SPACE
SCALE: NOT TO SCALE

GENERAL NOTES

1. PROVIDE HEAT TRACE ON ALL PIPING EXPOSED TO FREEZING CONDITIONS.
2. ALL PIPING INSTALLED WITHIN AREAS SUBJECT TO FREEZING SHALL BE PROTECTED WITH HEAT TRACE SYSTEM. CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE HEAT TRACE SYSTEM OF HEATING CABLES, COMPONENTS, AND CONTROLS ON ALL PIPING EXPOSED TO UNHEATED AREAS TO PREVENT FREEZING. THE HEATING CABLE SHALL OPERATE ON LINE VOLTAGES OF 120 VOLTS WITHOUT THE USE OF TRANSFORMERS AND OUTPUT 5.0 W/FT. CONTRACTOR TO VERIFY LINE VOLTAGE IN FIELD. THE HEATING CABLE AND COMPONENTS SHALL BE BSX SELF REGULATING HEATING CABLE AS MANUFACTURED BY THERMON OR APPROVED EQUAL.
3. COLD WATER PIPING EXPOSED ABOVE GRADE SHALL BE INSULATED IN ACCORDANCE WITH PLUMBING FIXTURE INSULATION SCHEDULE.
4. COORDINATE HEAT TRACE ELECTRICAL REQUIREMENTS WITH EC PRIOR TO CONSTRICTION.

KEYED CONSTRUCTION NOTES

1. CONNECT CW INET AND HW OUTLET PIPING TO WH AND MIXING VALVE. PROVIDE EXPANSION TANK. PROVIDE MATERIALS, HOUSE KEEPING PAD, AND SIZE LINES AS INDICATED WITHIN THE MANUFACTURER'S WRITTEN INSTRUCTIONS. ROUTE DRAIN LINE DOWN TO NEAREST FLOOR DRAIN. PROVIDE PROPER AIR GAP. SEE SCHEDULE FOR MORE INFORMATION. SLOPE DOMESTIC HOT WATER LINES BACK TO WATER HEATER FOR WINTERIZATION.
2. PROVIDE WATER HAMMER (A) PRIOR TO CONNECTION TO WATER CLOSET/URINAL. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTION. SEE SCHEDULE FOR MORE INFORMATION.
3. NON-FREEZE HOSE BIB. COORDINATE WITH ACTUAL WALL DIMENSIONS PRIOR TO ORDERING. PLACE HYDRANTS AS REQUIRED TO ALLOW CLEARANCE FOR COLD WATER CONNECTIONS AT REAR OF ASSEMBLY. PROVIDE SHOCK ABSORBER AND BALL VALVE.
4. APPROXIMATE LOCATION OF DOMESTIC WATER LINE INTO BUILDING BELOW GRADE. UNDER SLAB PIPING SHALL BE TYPE K COPPER. PROVIDE ADEQUATE COVER OVER INVERT OF PIPING BELOW LOCAL FROST LINE TO PREVENT FROM FREEZING. SEE P-3 FOR DOMESTIC WATER CONTINUATION.
5. APPROXIMATE LOCATION OF 1-1/2" DOMESTIC WATER LINE DOWN TO FUTURE FIELD IRRIGATION PUMP EQUIPMENT. PROVIDE SHUT OFF VALVE AND BACKFLOW PREVENTOR ON DROP. PROVIDE 1-1/2" THREADED CONNECTION FOR FIELD WATERING SYSTEM HOSE. INSTALL PER IRRIGATION EQUIPMENT MANUFACTURER'S WRITTEN INSTRUCTION.
6. SLOPE DOMESTIC COLD WATER LINES TOWARDS HB-2, HB-2 TO BE LOW ON WALL TO ALLOW FOR DOMESTIC COLD WATER LINES TO DRAIN SYSTEM FOR WINTERIZATION. COORDINATE HB-2 HEIGHT ON WALL WITH BUILDING OWNER AND P.C. PRIOR TO CONSTRUCTION.
7. APPROXIMATE LOCATION OF DOMESTIC COLD WATER RISE UP FROM BELOW GRADE TO CEILING LEVEL HEIGHT. PROVIDE SHUT OFF VALVE ON RISE. PROVIDE MAIN SHUT OFF VALVE AND DRAIN VALVE ON VERTICAL RISE. ROUTE OUTLET OF DRAIN VALVE TO NEARBY FLOOR DRAIN. PROVIDE HEAT TRACE SYSTEM ON ALL PIPING SUBJECT TO FREEZING CONDITIONS. SEE DETAIL FOR MORE INFORMATION.
8. APPROXIMATE LOCATION OF NEW PROPANE GAS TANK ON HOUSE KEEPING PAD. PROVIDE SHUT OFF VALVE AND REGULATOR ON NEW PROPANE GAS LINE CONNECTION. COORDINATE PROPANE GAS TANK SIZE AND CONNECTION REQUIREMENTS WITH PROPANE PROVIDER/SUPPLIER PRIOR TO CONSTRUCTION. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTION.
9. APPROXIMATE LOCATION OF PROPANE GAS LINE UP TO CEILING LEVEL HEIGHT.

GENERAL CONSTRUCTION NOTES

1. ALL DOMESTIC WATER / GAS LINES SHOWN ON THIS FLOOR PLAN TO BE INSTALLED ABOVE CEILING LEVEL, UNLESS OTHERWISE NOTED.
2. DOMESTIC WATER RISE/DROPS SHALL BE CONCEALED, UNLESS OTHERWISE DIRECTED BY THE OWNER/ARCHITECT. COORDINATE ANY REQUIRED DEMOLITION/REPAIR OF EXISTING WALLS, NEW WALL FUROUTS, PIPE CHASES, ETC. WITH OWNER, ARCHITECT, AND GC PRIOR TO CONSTRUCTION.
3. COORDINATE DIMENSIONS OF CHASES AND WALL TYPES FOR ALL FIXTURE CARRIERS OF WALL HUNG PLUMBING FIXTURES PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL VERIFY ADEQUATE DRAIN-DOWNS FOR WINTERIZING ARE PROVIDED IN AREAS INSTALLED WITH WATER PIPING.
5. PLUMBING CONTRACTOR SHALL INSTALL ALL DOMESTIC WATER PIPING WITHIN THE BUILDING SUCH THAT IT CAN BE DRAINED AND WINTERIZED TO AVOID FREEZING. PITCH PIPING, PROVIDE ADDITIONAL SHUTOFF AND DRAIN VALVES, ETC. AS REQUIRED.

KEYED CONSTRUCTION NOTES

1. APPROXIMATE LOCATION OF SANITARY LINE OUT TO SITE. PROVIDE ADEQUATE COVER OVER INVERT OF PIPING TO BELOW LOCAL FROST LINE TO PREVENT FROM FROM FREEZING. SEE P-3 FOR SANITARY LINE CONTINUATION.
2. 3" VENT STACK UP, 4" VENT THRU ROOF. COORDINATE ROOF PENETRATION LOCATION TO MAINTAIN 10'-0" CLEARANCE AWAY FROM ANY INTAKES OF MECHANICAL EQUIPMENT ON ROOFTOP ABOVE.

GENERAL CONSTRUCTION NOTES

1. ALL SANITARY LINES SHOWN ON THIS FLOOR PLAN TO BE INSTALLED BELOW FLOOR LEVEL AND VENT PIPING ABOVE CEILING LEVEL, UNLESS OTHERWISE NOTED.
2. SANITARY & VENT PIPE RISE/DROPS SHALL BE CONCEALED, UNLESS OTHERWISE DIRECTED BY THE OWNER/ARCHITECT. COORDINATE ANY REQUIRED DEMOLITION/REPAIR OF EXISTING WALLS, NEW WALL FUROUTS, PIPE CHASES, ETC. WITH OWNER, ARCHITECT, AND GC PRIOR TO CONSTRUCTION.
3. ALL DRAINAGE PIPING 2-1/2" DIAMETER AND SMALLER TO BE PITCHED AT MINIMUM OF 1/4" PER FOOT, 3" TO 6" DIAMETER AT 1/8" PER FOOT, AND 8" AND LARGER AT 1/16" PER FOOT.
4. COORDINATE DIMENSIONS OF CHASES AND WALL TYPES FOR ALL FIXTURE CARRIERS OF WALL HUNG PLUMBING FIXTURES PRIOR TO CONSTRUCTION.

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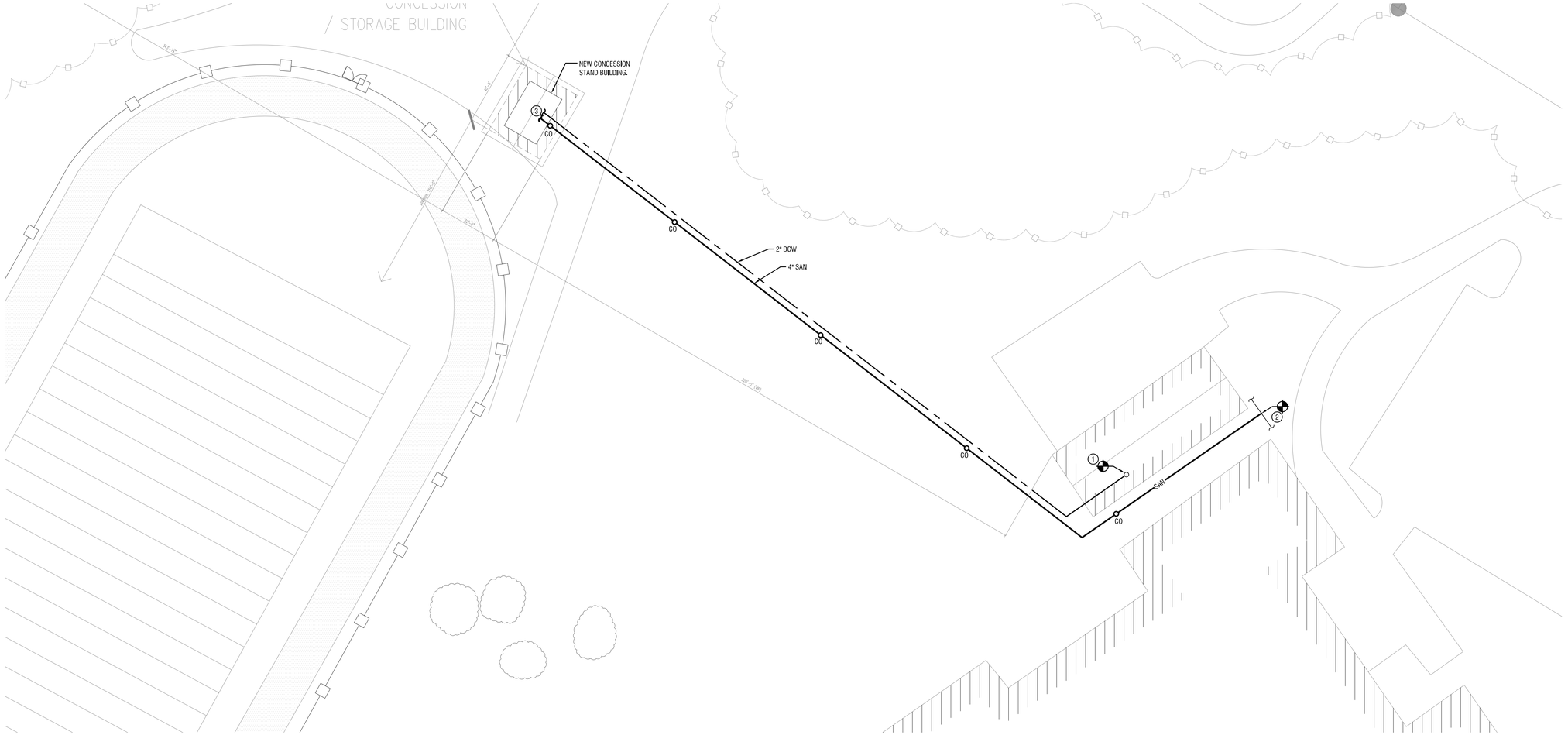
PLUMBING PLANS

P-2



1 / P-3 PLUMBING SITE PLAN
SCALE: 1" = 30'-0"

KEYED CONSTRUCTION NOTES

1. APPROXIMATE LOCATION OF NEW DOMESTIC WATER LINE CONNECTION TO EXISTING WATER WATER LINE. FIELD VERIFY BEST POSSIBLE LOCATION OF NEW CONNECTION. PROVIDE SHUT OFF VALVE ON NEW CONNECTION.
2. APPROXIMATE LOCATION OF NEW SANITARY LINE CONNECTION TO EXISTING SANITARY MAIN. FIELD VERIFY BEST POSSIBLE LOCATION OF NEW CONNECTION.
3. APPROXIMATE LOCATION OF NEW SANITARY LINE AND DOMESTIC WATER LINE INTO CONCESSION STAND BUILDING. SEE P-2 FOR CONTINUATION.

GENERAL CONSTRUCTION NOTES

1. ALL DRAINAGE PIPING 2-1/2" DIAMETER AND SMALLER TO BE PITCHED AT MINIMUM OF 1/4" PER FOOT, 3" TO 6" DIAMETER AT 1/8" PER FOOT, AND 8" AND LARGER AT 1/16" PER FOOT.
2. PROVIDE ADEQUATE COVER OVER INVERTS OF PIPING BELOW LOCAL FROST LINE TO PREVENT FROM FREEZING.

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PLUMBING SITE PLANS

P-3

MAXIMUM HANGER SPACING PER IPC

ITEM	MAXIMUM HORIZONTAL SPACING (FT.)	MAXIMUM VERTICAL SPACING (FT.)
ABS PIPE	4	10
ALUMINUM TUBING	10	15
BRASS PIPE	10	10
CAST IRON	5	15
COPPER OR COPPER-ALLOY PIPE	12	15
COPPER OR COPPER-ALLOY TUBING 1 1/4" DIAMETER OR SMALLER	6	10
COPPER OR COPPER-ALLOY TUBING 1 1/2" DIAMETER OR LARGER	10	10
CROSS-LINKED POLYETHYLENE (PEX) PIPE	2.67 (32 INCHES)	10
CROSS-LINKED POLYETHYLENE/ALUMINU,M/CORSS-LINKED POLYETHYLENE (PEX-AL-PEX) PIPE (PEX) PIPE	2.67 (32 INCHES)	4
CPVC PIPE OR TUBING, 1" OR SMALLER	3	10
CPVC PIPE OR TUBING, 1 1/4" OR LARGER	4	10
STEEL PIPE	12	15
PB PIPE OR TUBING	2.67	4
POLYETHYLENE/ALUMINUM/POLYETHYKENE (PE-AL-PE) PIPE	2.67	4
POLYPROPYLENE (PP) PIPE OR TUBING 1" OR SMALLER	2.67	10
POLYPROPYLENE (PP) PIPE OR TUBING 1 1/4" OR LARGER	4	10
PVC PIPE	4	10
STAINLESS STEEL DRAINAGE SYSTEMS	10	10

NOTES:

1. PIPE HANGERS SHALL ENCIRCLE PIPE INSULATION.
2. PROVIDE MAXIMUM HANGER SPACING AS PER THE SCHEDULE ABOVE OF PER SPECIFICATIONS WHICH EVER IS MORE STRINGENT.

PLUMBING FIXTURE INSULATION SCHEDULE

PIPING	INSULATION TYPE	INSULATION THICKNESS		NOTES
		LESS THAN 1 1/2" DIA.	1 1/2" DIA. AND LARGER	
DOMESTIC COLD WATER	FIBERGLASS	1/2"	1"	1, 2, 3, 4, & 5
DOMESTIC HOT WATER	FIBERGLASS	1"	1 1/2"	1, 2, 3, 4, & 5
DOMESTIC HOT WATER RETURN	FIBERGLASS	1"	1 1/2"	1, 2, 3, 4, & 5

NOTES:

1. INSULATE PIPING PER SECTION OF THE INTERNATIONAL ENERGY CONSERVATION CODE (IECC). CONDUCTIVITY NOT TO EXCEED 0.27 BTU PER/IN*FT2*F°.
2. INSULATION SHALL BE APPLIED BY AN EXPERIENCED PERSONNEL IN ACCORDANCE WITH BEST TRADE PRACTICE GUIDED BY MANUFACTURER'S PRINTED INSTALLATION INSTRUCTION/DIRECTIONS
3. INSULATION SHALL BE MANVILLE MICRO-LOK FIBERGLASS PIPE INSULATION TYPE AP-T OR APPROVED EQUAL.
4. ALL INSULATION JACKETS, FACING AND ADHESIVES USED TO ADHERE JACKET OR FACING TO THE INSULATION, INCLUDING FITTING AND BUTT STRIPS SHALL HAVE NON-COMBUSTIBLE FIRE AND SMOKE HAZARD RATING AND LABEL AS TESTED BY ASTM-84-91A, NFPA 255 AND UL 723 NOT EXCEEDING FLAME SPREAD OF 25 AND SMOKE DEVELOPED OF 50.
5. FITTING AND VALVES SHALL BE INSULATED WITH MANVILLE FACTORY PERCUT HI-LO TEMP FIBERGLASS INSULATION AND ZESTON 25/50 RATED OVC INSULATION FITTING COVERS. EPOLUX 670 WHITE VAPOR BARRIER COATING, OR APPROVED EQUAL, SHALL BE APPLIED AROUND THE EDGES OF THE ADJOINING PIPE INSULATION AND ON THE FITTING COVER THROAT OVERLAP SEAM. THE FITTING COVER SHALL BE SECURED WITH PRESSURE SENSITIVE PEARL GRAY Z-TAPE ALONG THE CIRCUMFERENTIAL EDGES. THE TAPE SHALL EXTEND ALL OVER THE ADJACENT PIPE INSULATION WITH AN OVERLAP ON ITSELF OF 2". ALL INSULATION MATERIAL SHALL COMPLY WITH THE NEW WORK BUILDING CODE REQUIREMENTS.

PLUMBING FIXTURE SCHEDULE

TAG NO.	FIXTURE	FIXTURE MODEL	FIXTURE MODEL	C.W.	H.W.	W.	TRAP	V.	TRIM	TRIM MANUFACTURER	TRIM MODEL	SPECIFICATION
WC-1	WATER CLOSET ADA (FLUSH TANK)	KOHLER	K-3493	1/2"	-	4"	-	2"	SEAT	CHURCH	94005C	ELONGATED PRESSURE-ASSISTED TOILET 1.6 GPF. VITREOUS CHINA, LOW CONSUMPTION, FULLY-GLAZED 2-1/4" TRAPWAY. EQUIPPED WITH SLOAN FLUSHMATE. ELONGATED OPEN FRONT SOLID PLASTIC SEAT. MOUNTED AT ADA COMPLIANT HEIGHT.
LAV-1	LAVATORY ADA	AMERICAN STD.	0355.012	1/2"	1/2"	1 1/2"	1 1/2"	1 1/2"	FAUCET	AMERICAN STANDARD	6055.205	WALL-HUNG SINK ACCESSIBLE, VITREOUS CHINA WITH FRONT OVERFLOW. D-SHAPED BOWL AND SELF-DRAINING DECK AREA WITH CONTOURED BACK, SIDE SPLASH SHIELDS AND FAUCET LEDGE. FAUCET SHALL BE CENTER SET WITH 0.5 GPM AERATOR, TOUCHLESS, DC POWERED WITH 4-YEAR LI-ION BATTER. ASSEMBLY MUST MEET ADA.
UR-1	URINAL	AMERICAN STD.	6590.001	3/4"	-	2"	2"	2"	FLUSH VALVE	AMERICAN STANDARD	6063.101.002	WALL HUNG, VITREOUS CHINA, ULTRA HIGH EFFICIENCY, FLUSHING RIM, ELONGATED 14" RIM FROM FINISHED WALL, WASHOUT FLUSH ACTION, TOP SPUD UNIVERSAL URINAL. MATCHING EXPOSED BATTERY POWERED (CR-P2 LITHIUM), ELECTRONIC SENSOR OPERATED, SELF CLEANING PISTON WITH INTEGRAL WIPER SPRING, FULLY MECHANICAL MANUAL OVERRIDE BUTTON, 1.0 GPF FLUSH VALVE. MOUNTED AT ADA COMPLAINT HEIGHT.
KS-1	KITCHEN SINK	DAYTON SPECIFICATIONS	DPC1202010	1/2"	1/2"	1 1/2"	1 1/2"	1 1/2"	FAUCET	KOHLER	K-10433	STAINLESS STEEL DROP IN SINK (20" X 20" X 10-1/8"). SINGLE FAUCET HOLE. FURNISH WITH TWO FUNCTION PULL OUT SPRAYHEAD (1.5 GPM). 10-1/8" SWING SPOUT REACH WITH SINGLE HANDLE.
MS-1	JANITORS SINK/MOP BASIN	ACORN	TDF-24	3/4"	3/4"	3"	3"	2"	FAUCET	AMERICAN STANDARD	8351.076	MOP SINK SHALL BE MADE OF PRECAST TERAZZO TO PRODUCE A COMPRESSIVE STRENGTH OF AT LEAST 3000 PSI SEVEN DAYS AFTER CASTING. ALL EXPOSED SURFACES SHALL BE GROUND SMOOTH AND SEALED. NO AIR HOLES OR PITS SHALL BE ALLOWED ON THE FINISHED SURFACE. SINK SHALL HAVE COVED CORNERS AND BE PITCHED TO THE DRAIN OUTLET FOR POSITIVE DRAINAGE. INTEGRAL DRAIN SHALL HAVE A STAINLESS STEEL STRAINER AND PROVIDE FOR AN INSIDE CAULKED CONNECTION TO A 3" PIPE. 3" CAST BRASS SPOUT, EXPOSED YOKE WALL-MOUNT UTILITY FAUCET SHALL FEATURE A CAST BRASS BODY WITH INTEGRAL STOPS. CAST BRASS SPOUT WITH BUCKET HOOK AND VANDAL-RESISTANT METAL LEVER HANDLES. SHALL ALSO FEATURE A 1/4 TURN WASHERLESS CERAMIC DISC VALVE CARTRIDGES.
HB-1	NON FREEZE HOSE BIB	JOSAM	71350	3/4"	-	-	-	-	-	-	-	VANDAL RESISTANT WALL HYDRANT IN STAINLESS STEEL WALL BOX WITH INTEGRAL VACUUM BREAKER/BACKFLOW PREVENTER. COORDINATE WALL DIMENSIONS WITH BUILDING OWNER AND P.C. PRIOR TO ORDERING.
HB-2	HOSE BIB	PRIER	C-244	1/2"	-	-	-	-	-	-	-	VANDAL RESISTANT NON FREEZE WALL HYDRANT WITH ANTI-SIPHON VACUUM BREAKER AND BACKFLOW CHECK VALVE. COORDINATE WALL DIMENSIONS AND INLET STYLES WITH BUILDING OWNER AND P.C. PRIOR TO ORDERING. USED TO DRAIN SYSTEM.
FD-1	FLOOR DRAIN (GENERAL USE, SHOWER)	JAY R. SMITH	2005	-	-	2"	2"	1 1/2"	-	-	-	GENERAL SERVICE FLOOR DRAIN FOR USE IN SHOWERS, TOILETS, KITCHENS AND OTHER FINISHED AREAS WHERE FOOT TRAFFIC IS EXPECTED. THE ROUND TOP STRAINER HEAD IS USED FOR ALL TYPES OF POURED FINISHED FLOORS. THE SQUARE TOP IS PARTICULARLY ADAPTABLE TO FLOORS THAT ARE FINISHED IN MATERIAL OF SQUARE OR STRAIGHT LINE PATTERN. REVERSIBLE FLASHING COLLAR PERMITS ADJUSTMENT OF THE STRAINER TO MEET FINISHED FLOOR LEVEL.
FCO	FLOOR CLEANOUT	JAY R. SMITH		-	-	VARIES	VARIES	-	-	-	-	DUCO CAST IRON CLEANOUT WITH ROUND ADJUSTABLE SCORIATED SECURED NICKEL BRONZE TOP WITH BRONZE CLOSURE PLUG.

NOTES:

1. ALL FIXTURES SHALL BE PROVIDED WITH SUPPLIES AND STOPS. PROVIDE DRAINS, STRAINERS, TRAPS AND TAIL PIECES AS REQUIRED. WHERE ADA ACCESSIBILITY IS INDICATED, PROVIDE OFFSET TAIL PIECES. ALL EXPOSED TRAP AND DRAIN PIPING SHALL BE INSULATED OR PROVIDED WITH AN INSUALATED SHROUDING SYSTEM AS MANUFACTURED BY TRUBERO OR EQUAL.
2. WATER CLOSETS SHALL BE PROVIDED WITH MATCHING SEATS WITH SELF SUSTAINING CHECK HINGES AND ANTI-MICROBIAL COATINGS
3. FLOOR DRAINS SHALL BE PROVIDED WITH TRAPS AND TRAP SEALS UNLESS A PRIMING SYSTEM IS EXPLICITLY INDICATED ON THE DRAWINGS.
4. ALL WALL HUNG FIXTURES SHALL BE PROVIDED WITH THE APPROPRIATE CARRYING DEVICE AS MANUFACTURED BY JAY R. SMITH OR EQUAL.
5. PROVIDE ACORN ST70 ASSE ANTI-SCALD VALVES (TEMPERED WATER/ MAX 110 °F) ON ALL HOT WATER FIXTURES EXCEPT FOR KITCHEN EQUIPMENT, MOP AND SERVICE SINKS, SPECIAL CLEANING DEVICES (HOT WATER HOSE BIBS OR HYDRANTS), OR LAUNDRY EQUIPMENT.
6. COORDINATE FINAL SELECTIONS AND FINISHES OF ALL PLUMBING FIXTURES WITH OWNER AND ARCHITECT PRIOR TO PURCHASE.

EXPANSION TANK SCHEDULE

TAG NO.	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	SERVICE ZONE	ACCEPTABLE VOLUME (GAL)	CONNECTION SIZE	SIZE DIA.* x H*	NOTES
ET-1	AMTROL	ST-12-C	WH-1	3.2	3/4"	12" x 8"	1,2,3,4

NOTES:

1. CONSTRUCTION SHALL BE FACTORY FABRICATED STEEL, WELDED TO TANK BEFORE TESTING AND LABELING. INCLUDING ASME B1.20.1, PIPE THREAD.
2. COMPLY WITH NSF 61 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING FINISH INTO AND THROUGH TANK FITTINGS.
3. FACTORY INSTALLED AIR CHARGING VALVE.
4. WORKING PRESSURE RATING 150 PSIG, AIR PRECHARGE PRESSURE: 55 PSIG

PROPANE CALCULATIONS

LONGEST RUN	UNIT/EQUIPMENT	QTY	MBH (EACH)	TOTAL MBH	BRANCH PIPE SIZE (IN)
APPROX. 30 FT.	GAS FIRED UNIT HEATER	1	30	30	1/2"
			TOTAL	30.00	1/2"

NOTES:

1. ALL GAS PIPING IS BASED ON SCHEDULE 40 METALLIC PIPE AT AN INLET PRESSURE OF 2.0 PSI, PRESSURE DROP OF 1.0 PSI, AND SPECIFIC GRAVITY OF 1.50. VERIFY INLET PRESSURE AND CONNECTED GAS LOAD WITH GAS UTILITY PROVIDER PRIOR TO ANY NEW WORK.
2. GAS PIPING SIZED IN ACCORDANCE WITH PIPE SIZING TABLE 402.4(25) AND PIPE LENGTHS DETERMINED IN ACCORDANCE WITH 402.4.2 BRANCH LENGTH METHOD OF THE 2018 INTERNATIONAL FUEL GAS CODE .

ELECTRIC WATER HEATER SCHEDULE

TAG NO.	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	TYPE	WATTAGE INPUT	GPM FLOW RATE @ TEMP RISE °F	CONNECTIONS INLET	CONNECTIONS OUTLET	VOLTS/PH/Hz	NOTES
WH-1	A.O.SMITH	DEL-30	STORAGE	4 KW	16 GPM @ 100°F	3/4"	3/4"	208/1/60	1,2,3,4,5,6

NOTES:

1. FURNISHED WITH ALL STANDARD EQUIPMENT INCLUDING TEMPERATURE AND PRESSURE (T&P) RELIEF VALVE (IF REQUIRED BY LOCAL AHJ).
2. THE HEATER WILL BE FACTORY ASSEMBLED AND TESTED REQUIRING ONLY CONNECTIONS TO THE ELECTRIC AND PLUMBING SYSTEM.
3. MAINTAIN ALL REQUIRED CLEARANCES AROUND HEATER IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION MANUAL (12" ABOVE AND BELOW, 6" IN FRONT AND TO THE SIDES OF HEATER)/
3. COPPER IMMERSION HEATING ELEMENTS WITH BRASS TOP. 99.8% ENERGY EFFICIENT. THREADED FOR EAST REPLACEMENT.
4. INCLUDE ALL HANGING BRACKETS AS REQUIRED. EXTEND RELIEF VALVE/DRAIN PIPING ALONG WALL TO NEAREST FLOOR DRAIN/MOP BASIN.
5. PROVIDE ACORN MV-17-1 (TMV-1) MASTER MIXING VALVE ROUGH BRONZE WITH ALL STANDARD EQUIPMENT INCLUDING PARAFFIN COPPER ACTUATOR, HEAVY DUTY COMBINATION STRAINER, CHECKSTOPS AND TAMPER RESISTANT TEMPERATURE ADJUSTABLE CONTROL.
6. VERIFY TEMPERATURE SETTING WITH OWNER.

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TRACK CONCESSIONS BUILDING
Client: Riverside School District
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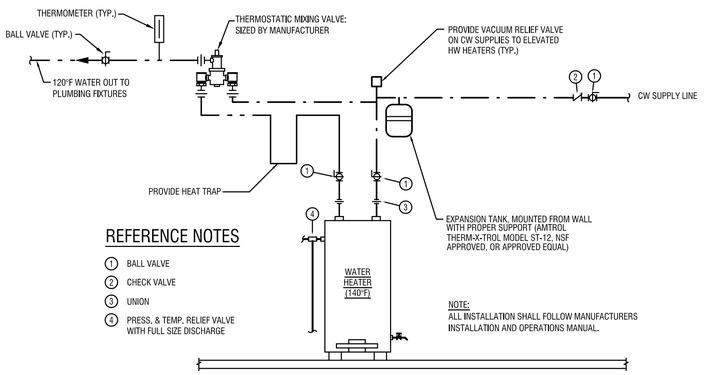
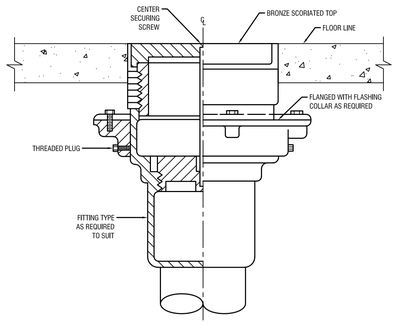
PLUMBING SCHEDULES

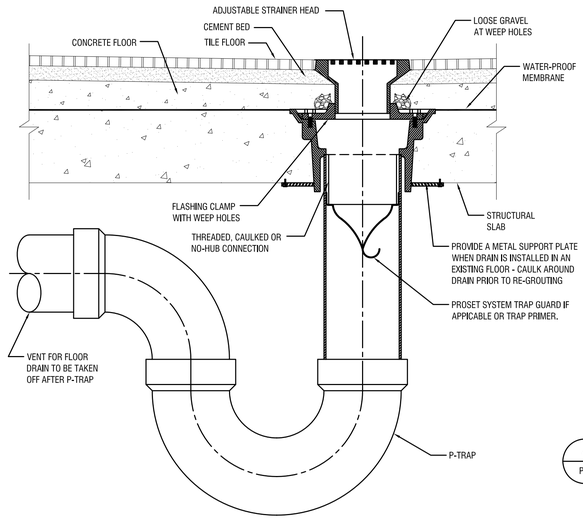
P-4



1 / P-5 SCHEMATIC PIPING ARRANGEMENT FOR ELECTRIC WATER HEATER
SCALE: NOT TO SCALE



2 / P-5 TYPICAL FLOOR CLEANOUT DETAIL
SCALE: NOT TO SCALE



3 / P-5 TYPICAL FLOOR DRAIN DETAIL
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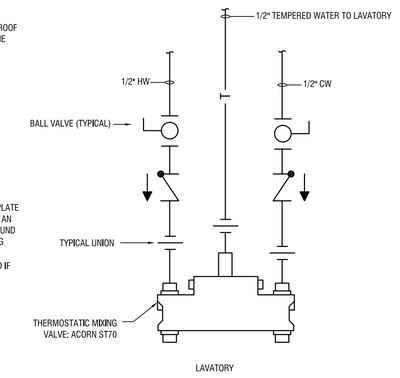
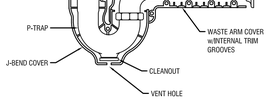


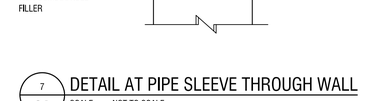
4 / P-5 LAVATORY ANTI-SCALD VALVE DETAIL
SCALE: NOT TO SCALE



5 / P-5 TYPICAL SINK GUARD ADA DETAIL
SCALE: NOT TO SCALE

NOTES:
1. AN OPEN VENT TERMINAL FROM A DRAINAGE SYSTEM SHALL NOT BE LOCATED DIRECTLY BENEATH ANY DOOR, OPERABLE WINDOW, OR OTHER INTAKE OPENING OF THE BUILDING OR OF AN ADJACENT BUILDING, AND ANY SUCH VENT TERMINAL SHALL NOT BE WITHIN 10 FEET HORIZONTALLY OF SUCH AN OPENING UNLESS IT IS AT LEAST 2 FEET ABOVE THE TOP OF SUCH OPENING
2. FOLLOW ROOF MANUFACTURER'S FLASHING INSTRUCTIONS WHERE REQUIRED MANUFACTURER'S WARRANTY

6 / P-5 VENT PIPE THROUGH ROOF DETAIL
SCALE: NOT TO SCALE



7 / P-5 DETAIL AT PIPE SLEEVE THROUGH WALL
SCALE: NOT TO SCALE

8 / P-5 GAS PIPING - EQUIPMENT CONNECTION
SCALE: NOT TO SCALE

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P-5