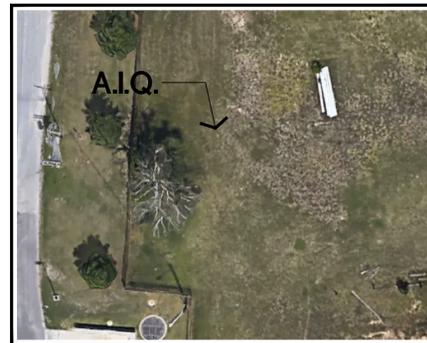
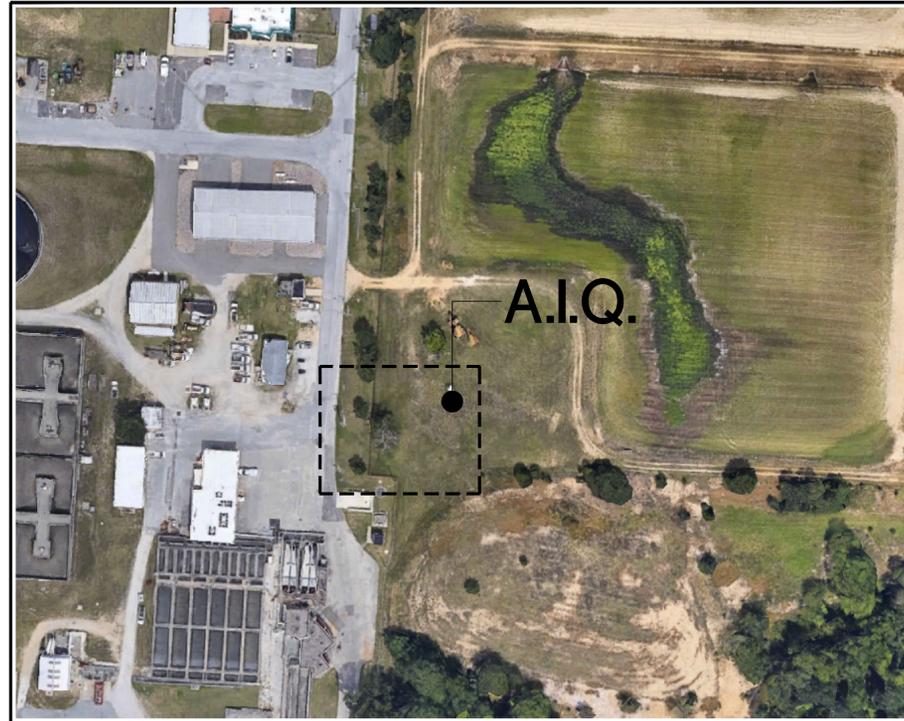


PROPOSED NEW:
**LANDIS SEWERAGE
 AUTHORITY
 LOCKER ROOM/BREAK ROOM**
 PART OF BLOCK 5401, LOT 17
 1776 SOUTH MILL ROAD, CITY OF VINELAND
 CUMBERLAND COUNTY, NEW JERSEY



SITE KEY PLAN
 SCALE: N.T.S.

KEY PLAN

ARCHITECTURAL GENERAL NOTES

DIVISION 1 - GENERAL REQUIREMENTS

- 11 PERMITS AND FEES**
 a. The Contractor shall secure all permits, licenses and inspections required by local authorities and shall obtain all final approvals upon completion of the Work.
 b. The Owner is fee-exempt.
- 12 CUTTING AND PATCHING**
 a. Do not cut structural members without prior written approval of Architect. Maintain structural integrity of the building with temporary shoring and bracing as required.
 b. For patching, provide materials whose installed performance will equal or surpass that of existing materials.
 c. For patching of exposed surfaces, provide or finish materials to visually match existing adjacent surfaces to the fullest extent possible.
 d. Protect from damage all existing structures, finishes, utilities, equipment, etc. scheduled to remain.
 e. Maintain the structural integrity of the building and temporary shoring as required.
- 13 TEMPORARY FACILITIES AND CONTROLS**
 a. The Contractor shall provide and pay for all necessary temporary facilities, including but not limited to, heat, electricity, water, dust enclosures and weather-tight enclosures as required for work under this contract.
 b. The Contractor shall extend existing utilities to the area of Work. The Owner shall pay for utility usage during the course of the Work, but the Contractor shall be responsible to provide, protect and maintain extensions, such as hoses, extension cords, etc. The Contractor must keep such connections safe for and from building occupants, who will be present throughout the Work.
 c. Existing toilet facilities in the existing building will be off limits to Contractors and Subcontractors during the Work. The Contractor shall provide suitable temporary toilets of the type and quantity necessary and acceptable to the Authority Having Jurisdiction.
 d. Temporary work of any nature, including stairs, runways and scaffolding, shall meet the safety requirements of the State of New Jersey, and other authorities having jurisdiction, including, but not limited to the following standards:
 1. NFPA 241 "Standards for Safeguarding Construction, Alterations, and Demolition";
 2. ANSI A10 Series standards for "Safety Requirements for Construction and Demolition";
 3. NECA Electrical Design Library's "Temporary Electrical Facilities."
 e. Notwithstanding the above, the Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the contract.
 f. Temporary electrical service, if necessary, shall comply with NEMA, NECA, and UL standards, and regulations for temporary electrical service. Install service in compliance with NFPA 70.
 g. At the earliest possible time, change over from use of temporary utility services to the use of permanent utilities.
 h. Collect waste daily and, when containers are full, legally dispose of waste off-site. Handle hazardous, dangerous or unsanitary waste materials in separate closed waste containers. Dispose of materials according to applicable laws and regulations. Do not burn, bury or otherwise conceal waste materials on site.
- 14 WORKMANSHIP**
 a. All work shall be performed by craftsman who are skilled and experienced in their respective trades.
 b. All installations shall operate properly in a first class manner.
 c. Workmanship shall conform to the best trade practices.
 d. Finished surfaces shall be plumb and level, straight and free from imperfections and set firmly to accurate measurements.
 e. Finished products shall be totally clean and free of covering materials, loose and foreign material, etc.
 f. All workmanship and materials shall be guaranteed for a minimum period of one (1) year after acceptance of the Owner, unless otherwise indicated.
- 15 CODES AND STANDARDS**
 a. The Contractor shall comply with all Federal, State and local laws, regulations, codes and ordinances.
 b. This project has been designed in accordance with the State of New Jersey Uniform Construction Code, N.J.A.C. 5:23, and specifically, The International Building Code, IBC 2021 (NJ edition).
 c. All electrical work shall comply to the National Electrical Code and shall be performed by a Licensed Electrician.
 d. All plumbing work shall comply with the National Standard Plumbing Code and shall be performed by Registered Plumber and shall comply with all Federal, State and Local Codes/Ordinances.
 e. Per N.J.S.A. 40A-11-18, only manufactured products of the United States, where available, shall be used for work which the City of Vineland, or any other governmental agency, shall ultimately own and maintain.
- 16 COORDINATION**
 a. Contractors and Subcontractors shall coordinate their work with adjacent work and cooperate with the other trades to facilitate the general progress of the Work.
 b. Each Trade shall afford all other trades every reasonable opportunity for installation of their work and for the temporary storage of their tools or subcontractors.
 c. Contractor shall repair and/or replace all broken parts, including glass, at no additional cost to the Owner.
 d. Drawings are diagrammatic only. The Contractor shall not scale the drawings. The Contractor shall verify all dimensions and existing conditions at the job site. If a dimensional discrepancy arises, notify the architect in writing and request clarification prior to proceeding with the Work.
- 17 INSURANCE**
 a. The Contractor shall provide and pay for insurance coverage of such type and in such amounts as will completely protect the Contractor and the Owner against any and all risks of loss or liability arising out of this contract.
 b. The Contractor shall furnish the Owner with Certificates of Insurance naming the Owner as an additional insured. No Contractor or Subcontractor will be allowed on site prior to receipt of the Certificate of Insurance by the Owner.

Revisions		
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DRAWING LIST

C-1	COVER SHEET
A-1	FLOOR PLAN & FOUNDATION PLAN
A-2	REFLECTED CEILING PLAN & FRAMING PLAN
A-3	ROOF PLAN, SCHEDULES, DOOR, FRAME & DOOR TYPES
A-4	NORTH & SOUTH ELEVATIONS
A-5	EAST & WEST ELEVATIONS
A-6	BUILDING SECTION A-A
A-7	WALL SECTIONS
A-8	INTERIOR ELEVATIONS & PARTITION TYPES
A-9	WINDOW & DOOR HEAD, JAMB & SILL DETAILS
A-10	GENERAL NOTES
M100	MECHANICAL GENERAL NOTES, LEGEND & DETAILS
M200	MECHANICAL FLOOR PLAN & SCHEDULE
M300	MECHANICAL SCHEDULE & SPECIFICATIONS
P001	PLUMBING LEGEND & SCHEDULES
P100	PLUMBING PLANS
P200	PLUMBING RISER DIAGRAMS
P300	PLUMBING SPECIFICATIONS
E100	ELECTRICAL PLANS & LEGEND
E200	ELECTRICAL SPECIFICATIONS, SCHEDULES & DETAILS

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A Project For:
**THE CUMBERLAND COUNTY
 IMPROVEMENT AUTHORITY**



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 LANDIS SEWERAGE
 AUTHORITY**
 1776 SOUTH MILL ROAD, VINELAND
 CUMBERLAND COUNTY, NEW JERSEY

Drawing LEGEND, ABBREVIATIONS & LOCATION MAP		
Scale AS NOTED	Job C-23001	Sheet C-1
Drawn LV	Date 11/13/24	1 of 1

LEGEND NOTE: ALL SYMBOLS MAY NOT BE USED

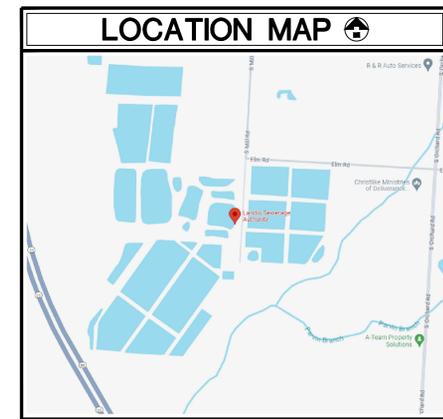
①	DOOR NUMBER		SIDE-HINGED SWING DOOR		ACOUSTICAL TILE CEILING & SUSPENSION GRID SYSTEM
△	WINDOW TYPE		BI-FOLD DOOR		RECESSED 2 X 4 FLUORESCENT FIXTURE
▶	PARTITION TYPE		WINDOW		RECESSED 2 X 2 FLUORESCENT FIXTURE
#	DETAIL		TANK-TYPE WATER CLOSET		RECESSED 4 FOOT FLUORESCENT FIXTURE
#	SECTION		WALL-HUNG LAVATORY		RECESSED DOWNLIGHT
#	ELEVATION		CEILING CASSETT DUCTLESS MINI-SPLIT		DIFFUSER
●●●●●	FIRE RATED PARTITION		MOP RECEPTOR		RETURN AIR GRILLE
▭	EXISTING PARTITION TO REMAIN		GRAB BAR		EXHAUST FAN
- - -	EXISTING PARTITION TO BE DEMOLISHED		STARTING POINT		
▭	NEW CONSTRUCTION				
○○○○○	BATT INSULATION				
▭	CMU PARTITION				

ABBREVIATIONS

AFF- Above Finished Floor	MAX- Maximum
ALUM- Aluminum	MECH- Mechanical
C-J- Control Joint	MIN- Minimum
CL- Center Line (C)	MS- Marble Sill
CLG- Ceiling	MTL- Metal
CMU- Concrete Masonry Unit	OC- On Center
C.O.- Clean Out	OD- Outside Diameter
CONC- Concrete	P-No- Plumbing Fixture Designation
CRPT- Carpet	PL- Plate
CT- Ceramic Tile	PLAM- Plastic Laminate
CW- Cold Water Piping	PLAS- Plaster
DFU- Drainage Fixture Unit	PLWD- Plywood
DN- Down	PT- Paint
DWG- Drawing	QT- Quarry Tile
E-J- Expansion Joint	SAC- Suspended Acoustic Ceiling
E.W.C.- Electric Water Cooler	SC- Solid Core (Door)
FCO- Floor Clean Out	SQ- Square
FD- Floor Drain	SS- Stainless Steel
FIN- Finish	STD- Standard
FLUOR- Fluorescent	STL- Steel
FLR- Floor	STN- Stain
FT- Feet (Foot)	TYP- Typical
GA- Gauge	TEMP- Tempered
GALV- Galvanized	UNO- Unless Noted Otherwise
GFCI- Ground Fault Current Interrupter	UR- Urinal
GWB- Gypsum Wallboard	V- Vent Piping
GYP- Gypsum	VCT- Vinyl Composition Tile
HC- Hollow Core (Door)	VIN- Vinyl
HDWD- Hardwood	VIF- Verify In Field
HM- Hollow Metal	VTR- Vent Thru Roof
HW- Hot Water Piping	W- Waste Piping
HWR- Hot Water Recirculating Pipe	WC- Water Closet
ID- Inside Diameter	WD- Wood
LAM- Laminate	WH-No- Water Heater Designation
LAV- Lavatory	X- Existing
LVT- Luxury Vinyl Tile	

BUILDING DATA

USE GROUP	B (SMALL BUILDING OR TENANT SPACE)
CONSTRUCTION CLASSIFICATION	V-B
BUILDING AREA	1,824 SF
BUILDING VOLUME	25,160 CF
BUILDING HEIGHT	+/- 13.26 FT
STORIES	1 STORY



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LEGEND

	ACOUSTICAL TILE CEILING & SUSPENSION GRID SYSTEM
	PREFINISHED METAL LINER PANEL CEILING
	RECESSED 2 X 4 LED FIXTURE
	RECESSED 2 X 2 LED FIXTURE
	SURFACE MOUNTED 4 FT LED FIXTURE
	DIFFUSER
	RETURN AIR GRILLE
	EF EXHAUST FAN
	STARTING POINT

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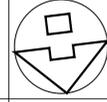


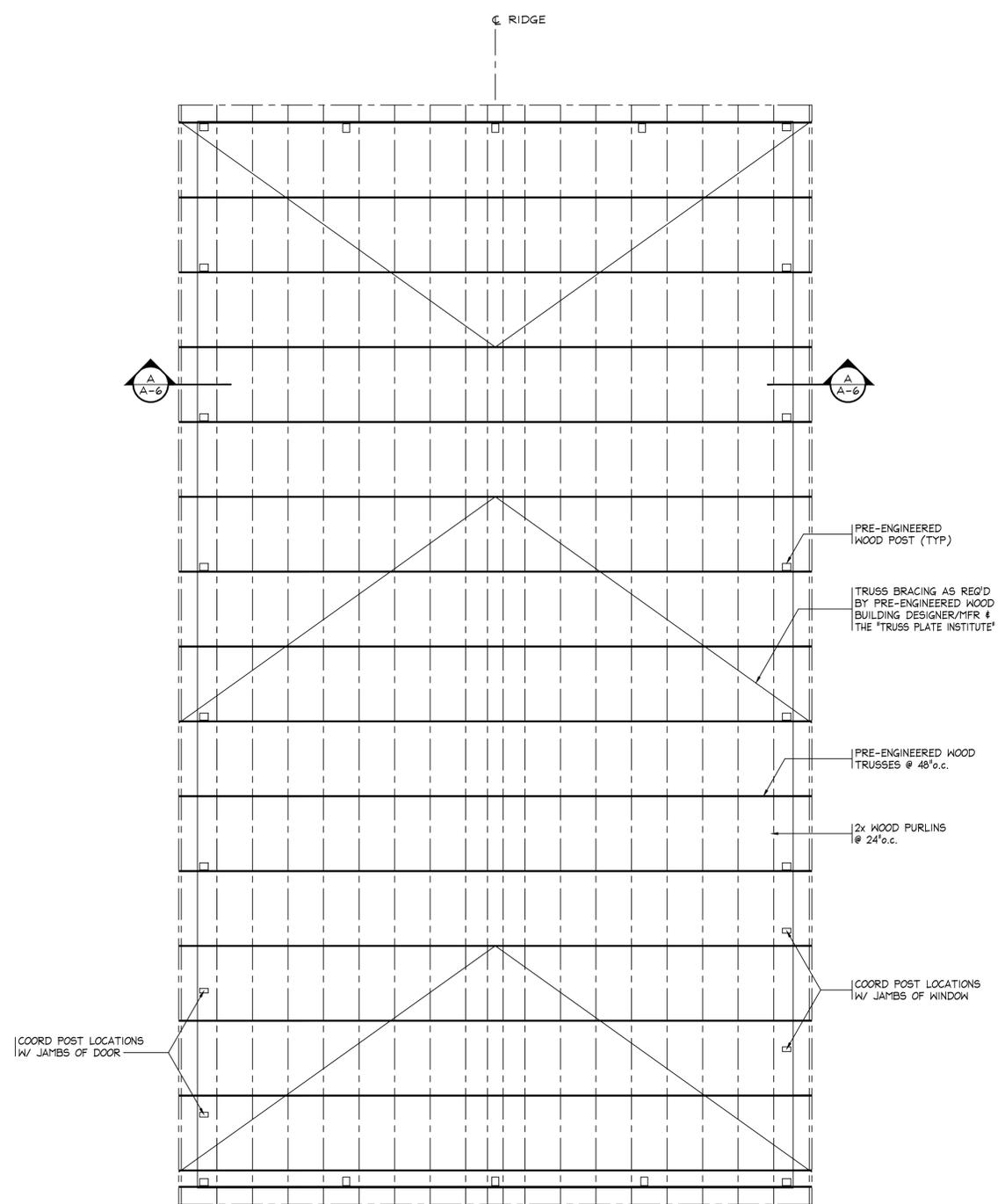
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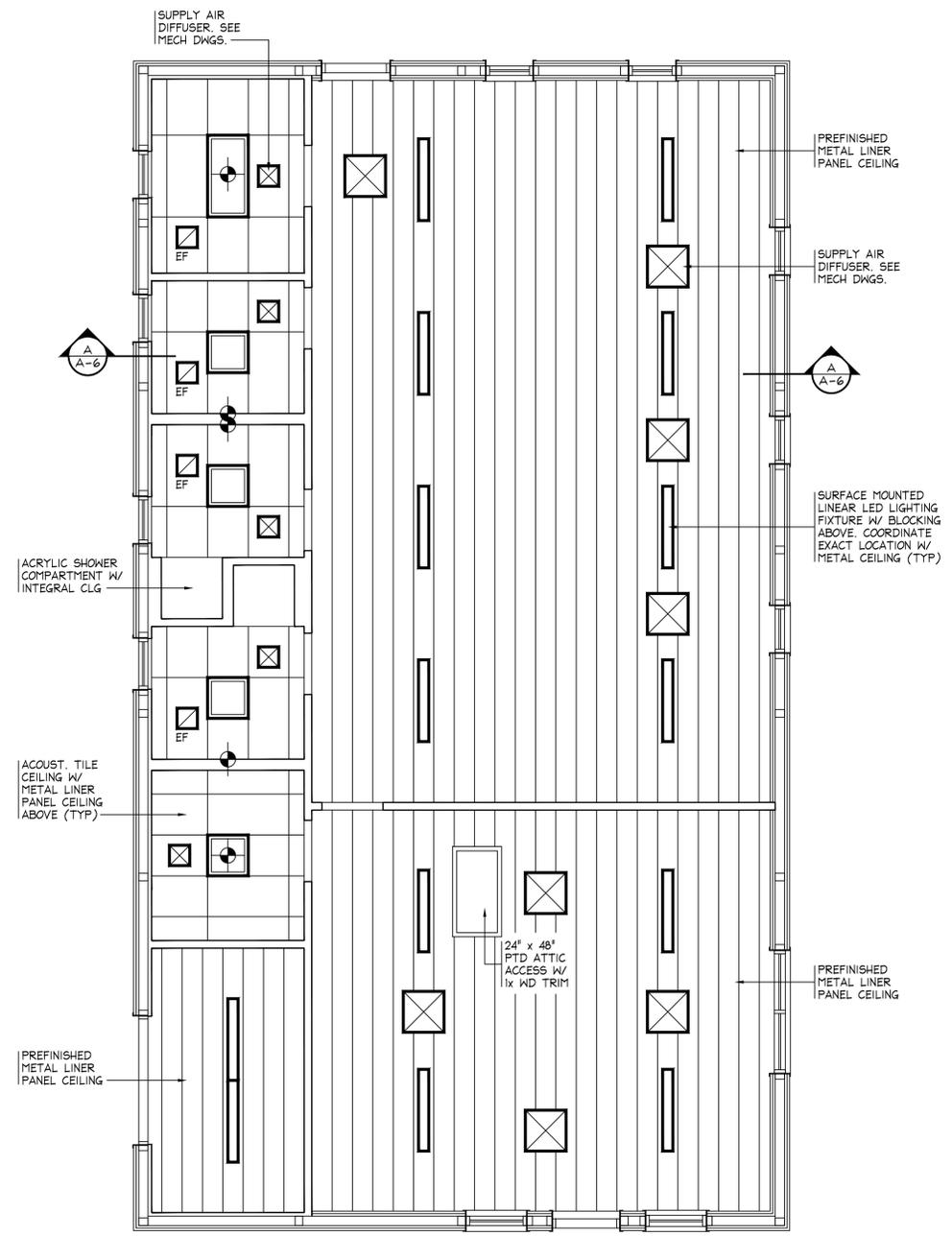
Drawing REFLECTED CEILING PLAN & FRAMING PLAN			
Scale 1/4" = 1'-0"	Job C-23001	Sheet A-2	
Drawn LV	Date 11/13/24	2 of 10	



- NOTES:
1. ROOF SYSTEM SHALL BE DESIGNED BY PRE-ENGINEERED WOOD BUILDING MFR.
 2. THE FRAMING PLAN IS DIAGRAMMATIC ONLY AND, THEREFORE, DOES NOT INDICATE EVERY MEMBER REQUIRED TO COMPLETE THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT QUANTITIES AND LOCATIONS OF THE FRAMING MEMBERS AND COORDINATE THESE WITH OTHER PORTIONS OF THE WORK.
 3. SEE SHEET A-6 FOR TRUSS BRACING DETAILS AND TRUSS GENERAL NOTES.

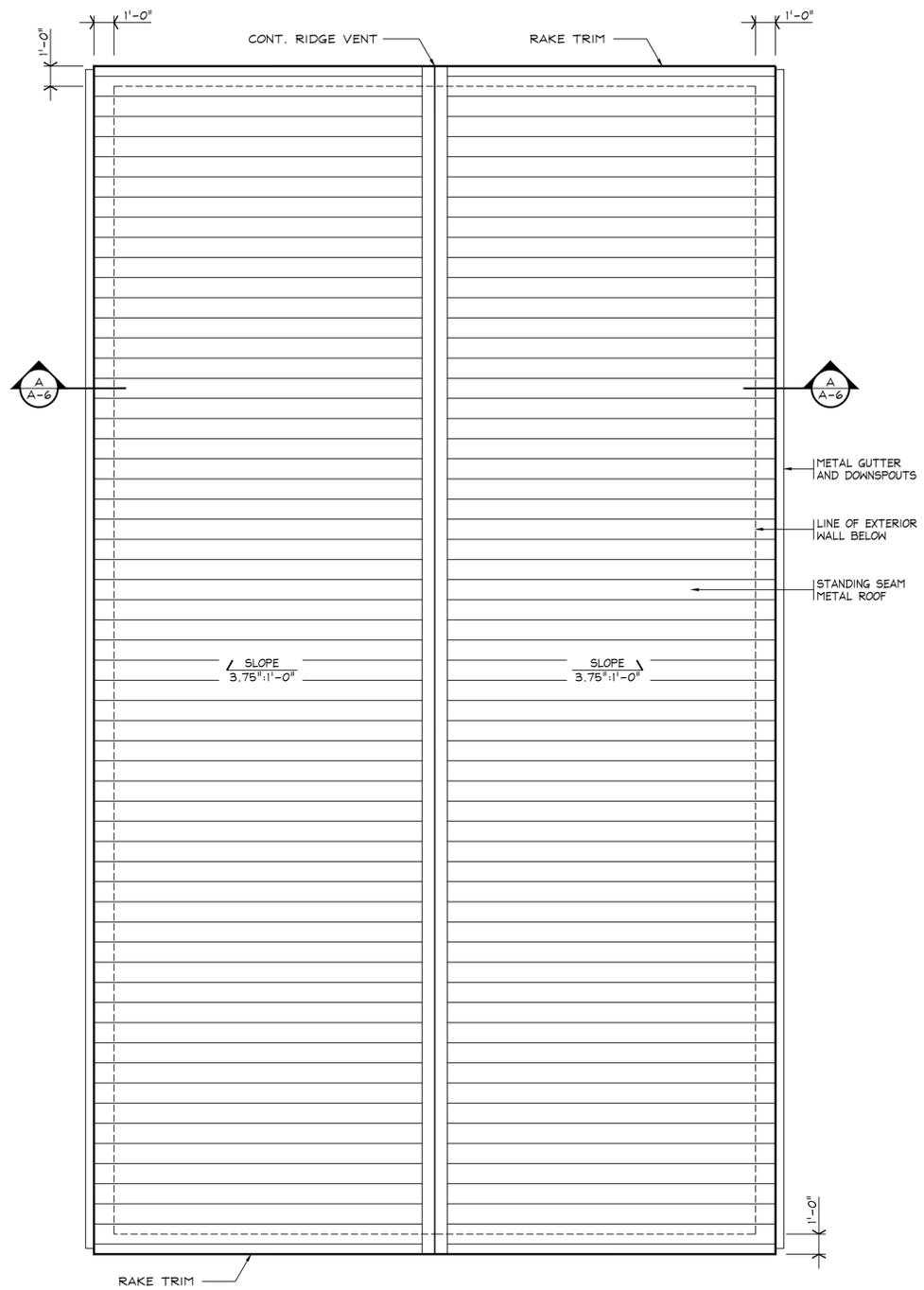
TRUSS LAYOUT AND BRACING PLAN

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



REFLECTED CEILING PLAN

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



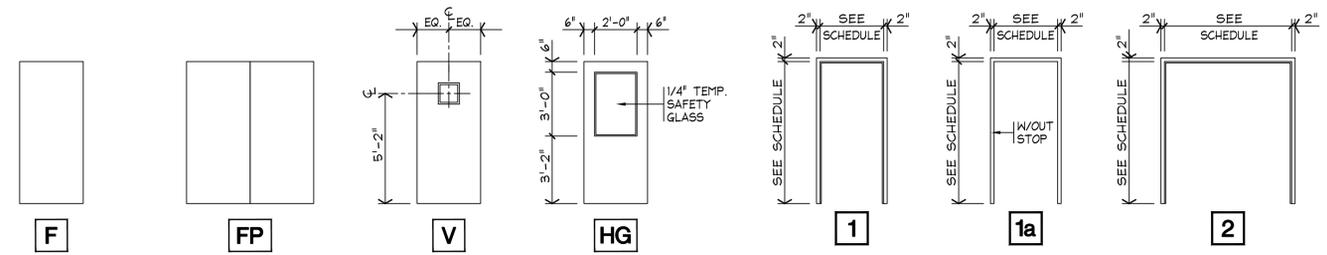
ROOF PLAN
SCALE: 1/4" = 1'-0"

DOOR SCHEDULE													
NO.	DOOR						FRAME			FIRE RATING	HDW. NO.	REMARKS	NO.
	WIDTH	HEIGHT	THK.	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH				
1	3'-0"	6'-8"	1 3/4"	HG	INSUL. HM/GLASS	PTD	1	HOL. MTL.	PTD	---	1		1
2	3'-0"	6'-8"	1 3/4"	F	INSUL. H.M.	PTD	1	HOL. MTL.	PTD	---	3		2
3	3'-0"	6'-8"	1 3/4"	V	INSUL. H.M.	PTD	1	HOL. MTL.	PTD	---	1		3
4	3'-0"	6'-8"	---	---	---	---	1a	HOL. MTL.	PTD	---	---	CASED OPENING - FRAME ONLY	4
5	3'-0"	6'-8"	1 3/4"	F	INSUL. H.M.	PTD	1	HOL. MTL.	PTD	---	4		5
6	3'-0"	6'-8"	1 3/4"	F	INSUL. H.M.	PTD	1	HOL. MTL.	PTD	---	4		6
7	3'-0"	6'-8"	1 3/4"	F	INSUL. H.M.	PTD	1	HOL. MTL.	PTD	---	4		7
8	6'-0"	6'-8"	1 3/4"	FP	INSUL. HM/GLASS	PTD	2	HOL. MTL.	PTD	---	2		8
9	3'-0"	6'-8"	1 3/4"	F	INSUL. H.M.	PTD	1	HOL. MTL.	PTD	---	5		8

ROOM FINISH SCHEDULE						
ROOM NAME	FLOOR	BASE	WALL	CEIL'G	HT.	REMARKS
LAUNDRY	LVT	VINYL	PTD GWB	ACOUST. TILE AT-1	8'-0"	PREFINISHED METAL CLG ABOVE ACT CLG
BREAK ROOM	EXPOSED CONCRETE	VINYL	PREFIN. MTL. / PTD GWB	PREFINISHED MTL.	10'-0"	
LOCKER ROOM	EXPOSED CONCRETE	VINYL	PREFIN. MTL. / PTD GWB	PREFINISHED MTL.	10'-0"	
TOILET #1	LVT	VINYL	PTD GWB	ACOUST. TILE AT-1	8'-0"	PREFINISHED METAL CLG ABOVE ACT CLG
TOILET #2	LVT	VINYL	PTD GWB	ACOUST. TILE AT-1	8'-0"	PREFINISHED METAL CLG ABOVE ACT CLG
TOILET #3	LVT	VINYL	PTD GWB	ACOUST. TILE AT-1	8'-0"	PREFINISHED METAL CLG ABOVE ACT CLG
STORAGE	EXPOSED CONCRETE	VINYL	PTD GWB	ACOUST. TILE AT-1	8'-0"	PREFINISHED METAL CLG ABOVE ACT CLG
UTILITY ROOM	EXPOSED CONCRETE	VINYL	PTD GWB	PREFINISHED MTL.	10'-0"	

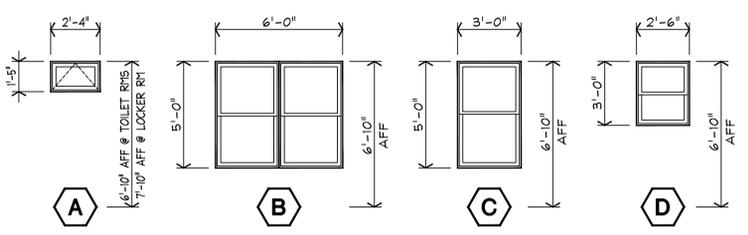
WINDOW SCHEDULE						
TYPE	MANUFACTURER	SERIES	MODEL	UNIT DIMENSION	REMARKS	TYPE
A	MI WINDOWS	3000	9660	2'-4" W x 1'-5" H	AWNING WINDOW	A
B	MI WINDOWS	3000	1556	6'-0" W x 5'-0" H	SINGLE HUNG WINDOW - PAIR	B
C	MI WINDOWS	3000	1556	3'-0" W x 5'-0" H	SINGLE HUNG WINDOW	C
D	MI WINDOWS	3000	1556	2'-6" W x 3'-0" H	SINGLE HUNG WINDOW	D

- WINDOW GENERAL NOTES:**
- WINDOWS SHALL BE PROVIDED WITH INSULATED HIGH PERFORMANCE GLASS.
 - EXTERIOR WINDOW COLOR SHALL BE WHITE, UNLESS SELECTED OTHERWISE BY OWNER.
 - ALL WINDOWS SHALL BE PROVIDED WITH FULL INSECT SCREEN; COLOR SHALL MATCH WINDOW/DOOR UNIT.
 - WINDOW HARDWARE STYLE AND COLOR SHALL BE SELECTED BY OWNER.
 - PROVIDE TEMPERED GLASS FOR UNITS IN HAZARDOUS LOCATIONS AND/OR WHERE INDICATED (T).



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

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



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

HEADER SCHEDULE	
LENGTH OF OPENING	HEADER
UP TO 4'-0"	(2) 2 x 6
4'-0" TO 6'-0"	(2) 2 x 8
6'-0" TO 9'-0"	(2) 2 x 10
OVER 9'-0"	SEE PLAN

SCHEDULE COVERS NON-BEARING HEADERS ONLY
ALL HEADERS IN BEARING WALLS SHALL BE (3) 2 x 12 U.N.O.

Revisions		
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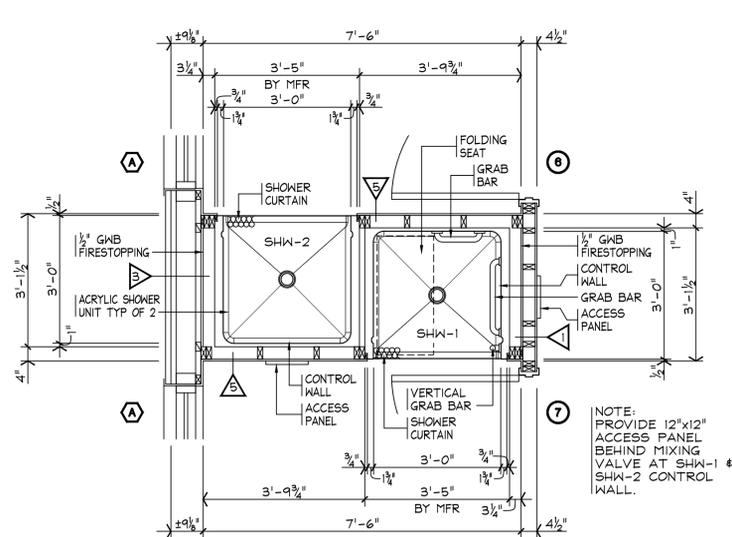


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Project:
PROPOSED NEW LOCKER ROOM/BREAK ROOM: LANDIS SEWERAGE AUTHORITY
1776 SOUTH MILL ROAD, VINELAND CUMBERLAND COUNTY, NEW JERSEY

Drawing ROOF PLAN, SCHEDULES, FRAME, WINDOW & DOOR TYPES		
Scale 1/4" = 1'-0"	Job C-23001	Sheet A-3
Drawn LV	Date 11/13/24	3 of 10



LARGE SCALE SHOWER PLAN

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

NOTE:
SHOWER UNIT SHALL BE CAST ACRYLIC W/ FIBERGLASS COMPOSITE REINFORCEMENT CERTIFIED TO MEET CSA B45.5/AFPMOZ124 STANDARD - CLARION BATHWARE MODEL ANB36RFBSC OR APPROVED EQUAL WITH THE FOLLOWING ACCESSORIES:

1. 12" GRAB BAR (BAR-12NZ) - REAR WALL
2. 18" GRAB BAR (BAR-18NZ) - VERTICAL
3. 20" GRAB BAR (BAR-20NZ) - CONTROL WALL
4. 33.5" PADDED FOLDING SEAT (SEAT-33.5NL)
5. SOAP DISH (SOAPDISH-ROUND)
6. CURTAIN ROD (CR-35 1/2)
7. CURTAIN (SC-4872WD)
8. COLLAPSIBLE THRESHOLD KIT 2.5a (SHW-1 ONLY)
9. BRASS DRAIN

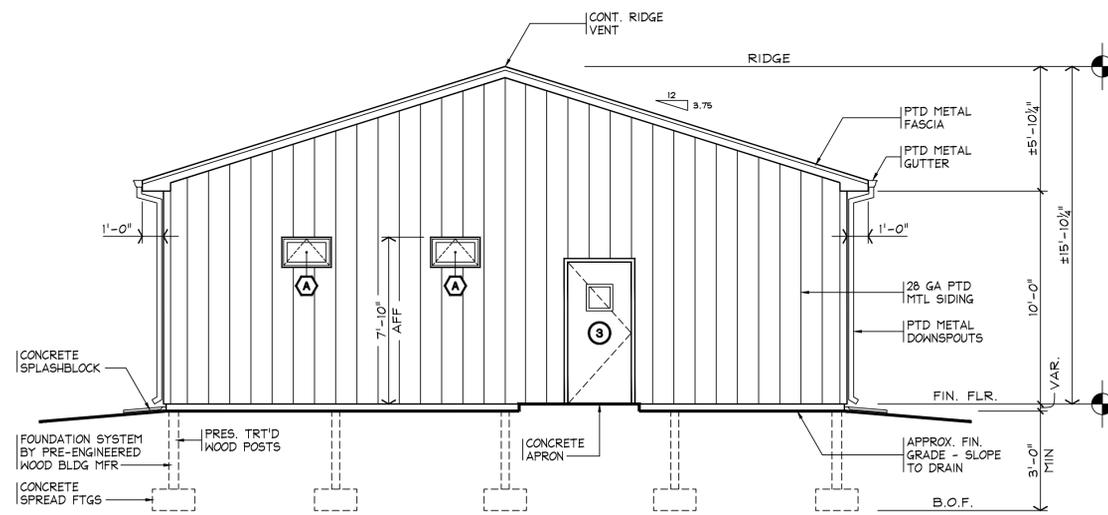
NOTE: SEE PLUMBING DRAWINGS FOR INFORMATION REGARDING: MIXING VALVES, FIXED SHOWER HEADS, DIVERTER & HAND-HELD SHOWER, ETC.

INSTALL SHOWER UNIT IN FULL CONFORMANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND IN FULL CONFORMANCE WITH NJ BARRIER FREE SUBCODE NJAC 5:23-7 & ICC A117.1-2017, AND THE ADA STANDARDS FOR ACCESSIBLE DESIGN.

INSTALL FOUNDATION MATERIAL (NON-SOLUBLE: MORTAR MIX, LIGHTWEIGHT GROUT, OR APPROVED EQUAL) UNDER THE BOTTOM OF EACH SHOWER UNIT.

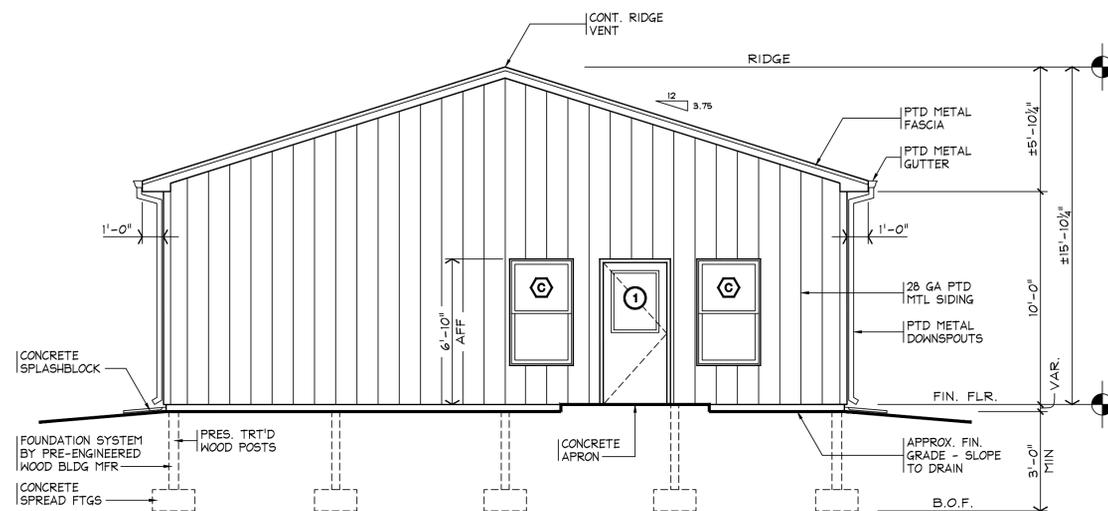
OMIT ACCESSORIES 1, 2, 3, 4 & 8 AT SHW-2:

NOTE: PROVIDE 12"x12" ACCESS PANEL BEHIND MIXING VALVE AT SHW-1 & SHW-2 CONTROL WALL.



SOUTH ELEVATION

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



NORTH ELEVATION

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

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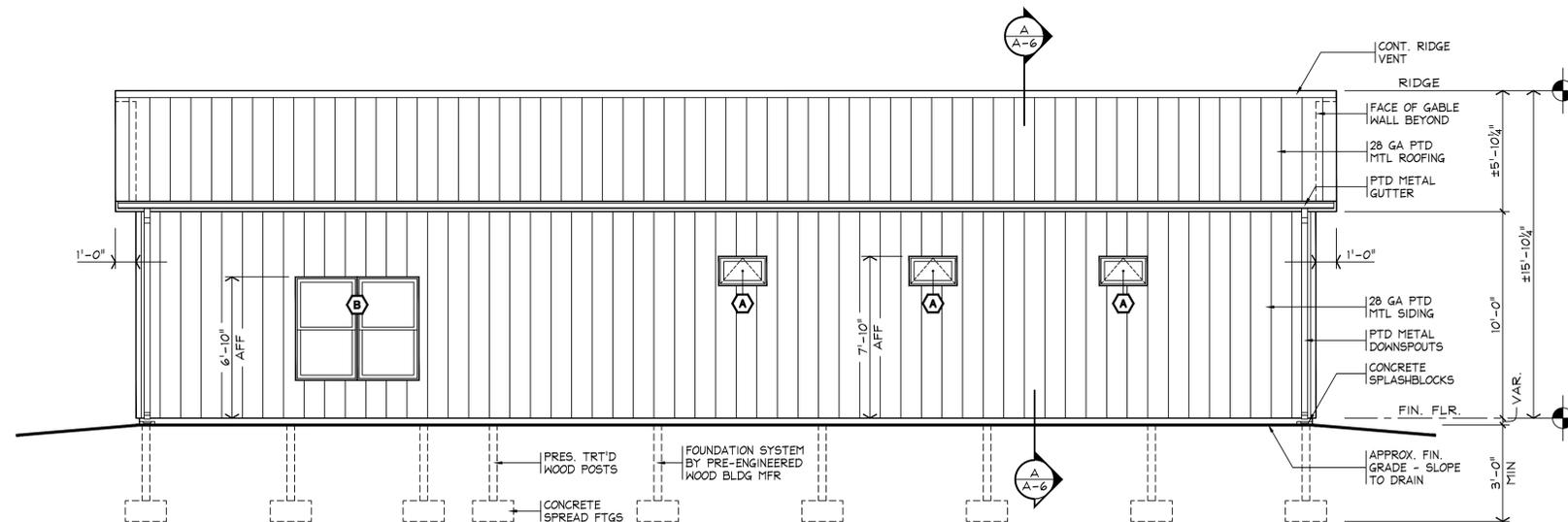
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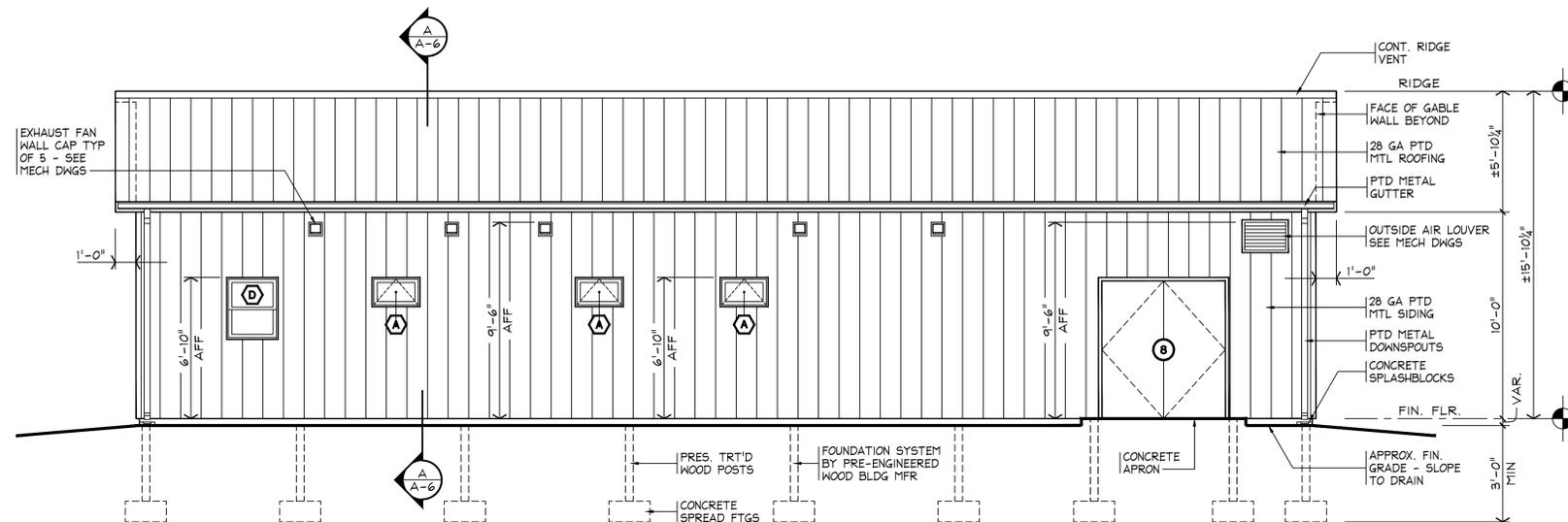
Drawing NORTH & SOUTH ELEVATIONS		
Scale 1/4" = 1'-0"	Job C-23001	
Drawn BDT	Date 11/13/24	Sheet A-4 4 of 10

Revisions		
No.	Date	Description
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WEST ELEVATION

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



EAST ELEVATION

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

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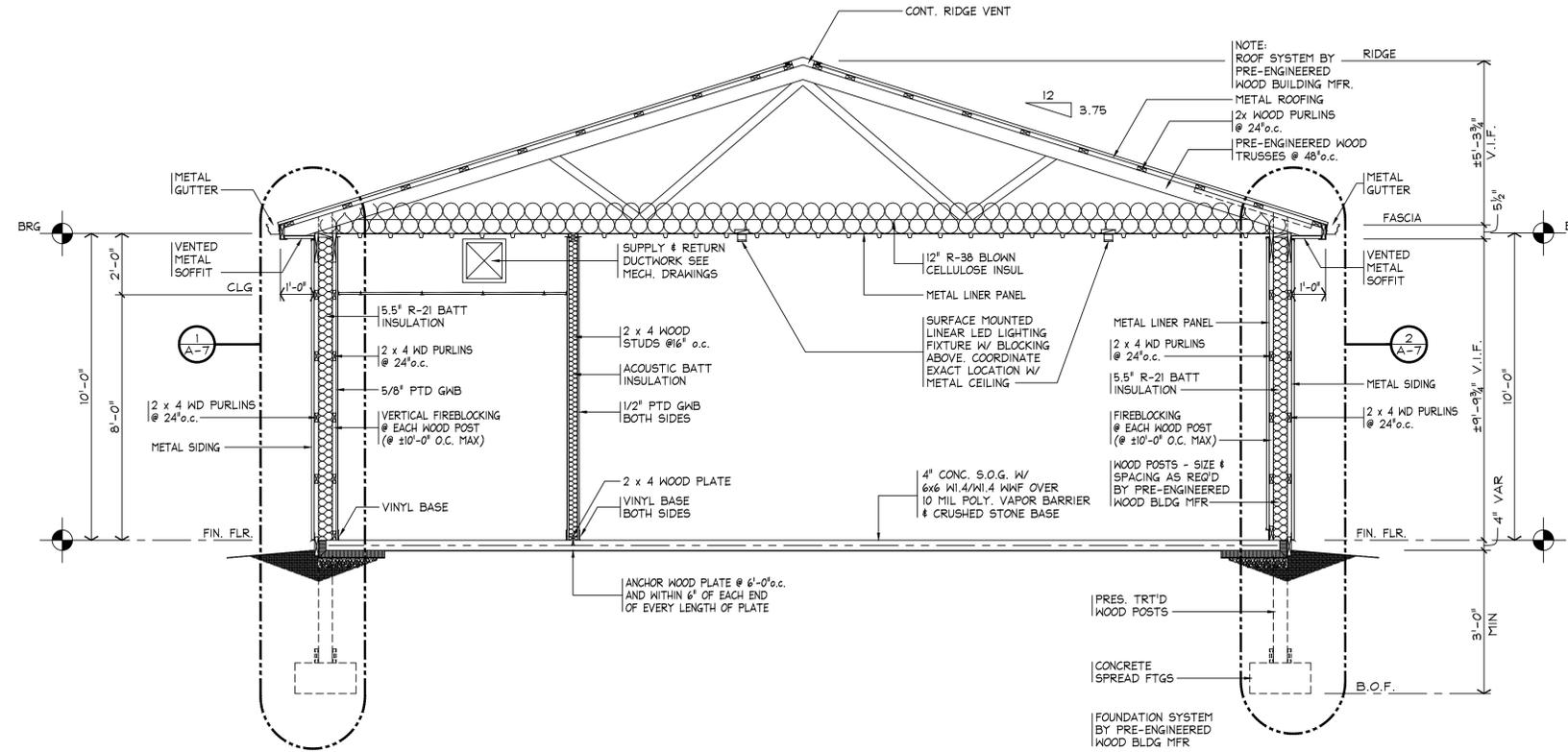
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Drawing EAST & WEST ELEVATIONS			
Scale 1/4" = 1'-0"	Job C-23001	Sheet A-5	
Drawn BDT	Date 11/13/24	5 of 10	



BUILDING SECTION A-A

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

Revisions		
No.	Date	Description
1	11/13/24	ISSUED FOR BID

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A Project For:
THE CUMBERLAND COUNTY IMPROVEMENT AUTHORITY



BDT

BRUCE D. TURNER, AIA ARCHITECT

New Jersey License Number 21 AI 01085300

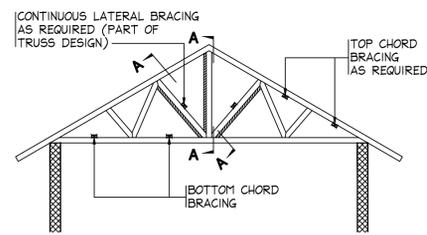
1889 Roosevelt Boulevard
Vineland, N.J. 08361
PH (856)405-0351 FAX (856)405-0352
e-mail bdtala@aol.com

Project:
**PROPOSED NEW LOCKER ROOM/BREAK ROOM:
LANDIS SEWERAGE AUTHORITY**
1776 SOUTH MILL ROAD, VINELAND
CUMBERLAND COUNTY, NEW JERSEY

Drawing
BUILDING SECTION A-A
MISC. DETAILS

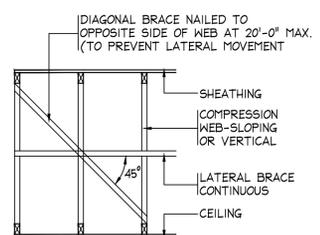
Scale 3/8" = 1'-0"	Job C-20010a	Sheet A-6
Drawn BDT	Date 11/13/24	6 of 10

TRUSS BRACING DETAILS



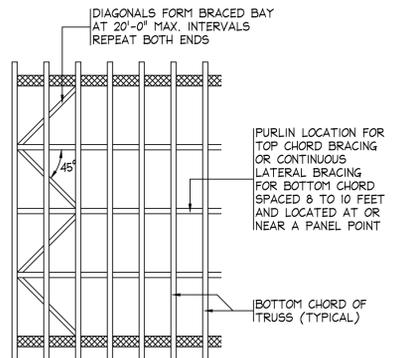
TYP TRUSS ELEVATION

N.T.S.



SECTION A-A

N.T.S.

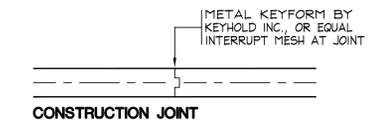


TOP/BOT CHORD BRACING

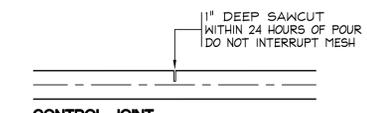
N.T.S.

TRUSS GENERAL NOTES

- WOOD TRUSSES SHALL BE BRACED IN ACCORDANCE WITH THE "TRUSS PLATE INSTITUTE" BRACING WOOD TRUSSES COMMENTARY AND RECOMMENDATIONS BTM-76
- BRACING IN THE PLANE OF WEB MEMBERS:
 - THE TRUSS FABRICATOR SHALL PROVIDE AND LOCATE CONTINUOUS LATERAL BRACING FOR EACH TRUSS MEMBER AS REQUIRED.
 - LATERAL BRACING SHALL BE RESTRAINED BY DIAGONAL BRACING (MINIMUM 2" THICK NOMINAL LUMBER). THIS BRACING SHALL BE CONTINUOUS.
 - A MINIMUM OF TWO (2) ROWS OF DIAGONAL BRACING ARE REQUIRED, ONE AT EACH VERTICAL WEB MEMBER CLOSEST TO BEARING LOCATIONS.
- THE BOTTOM CHORDS SHALL BE BRACED BY CONTINUOUS LATERAL BRACING SPACED 8 TO 10 FEET, NAILED TO THE TOP OF THE BOTTOM CHORD. DIAGONALS PLACED AT 45 TO THE LATERAL BRACES SHALL BE LOCATED AT EACH END. IF THE BUILDING EXCEEDS 60 FT IN LENGTH, DIAGONAL BRACING SHALL BE REPEATED AT 20 FT INTERVALS.
- TOP CHORD BRACING:
 - IF PLYWOOD DECKING IS APPLIED DIRECTLY TO THE TOP CHORD, PROPERLY LAPPED AND NAILED TO DEVELOP DIAPHRAGM ACTION, BRACING IS NOT REQUIRED.
 - IF PURLINS ARE USED, DIAGONAL TOP CHORD BRACING IS REQUIRED AT EACH END. IF THE BUILDING EXCEEDS 60 FT IN LENGTH DIAGONAL BRACING SHALL BE REPEATED AT 20 FT INTERVALS.
- WOOD TRUSSES ARE TO BE DESIGNED FOR THE TRUSS FABRICATOR BY A PROFESSIONAL ENGINEER AND SEALED CALCULATIONS AND DRAWINGS ARE TO BE SUBMITTED FOR REVIEW.
- FABRICATE TRUSSES TO SUPPORT ALL IMPOSED LOADS INCLUDING THE FOLLOWING:
 - ROOF LOAD
 - 30 PSF LIVE LOAD
 - 5 PSF TOP CHORD DEAD LOAD
 - 10 PSF BOTTOM CHORD DEAD LOAD
 - 0 PSF BOTTOM CHORD LIVE LOAD



CONSTRUCTION JOINT



CONTROL JOINT

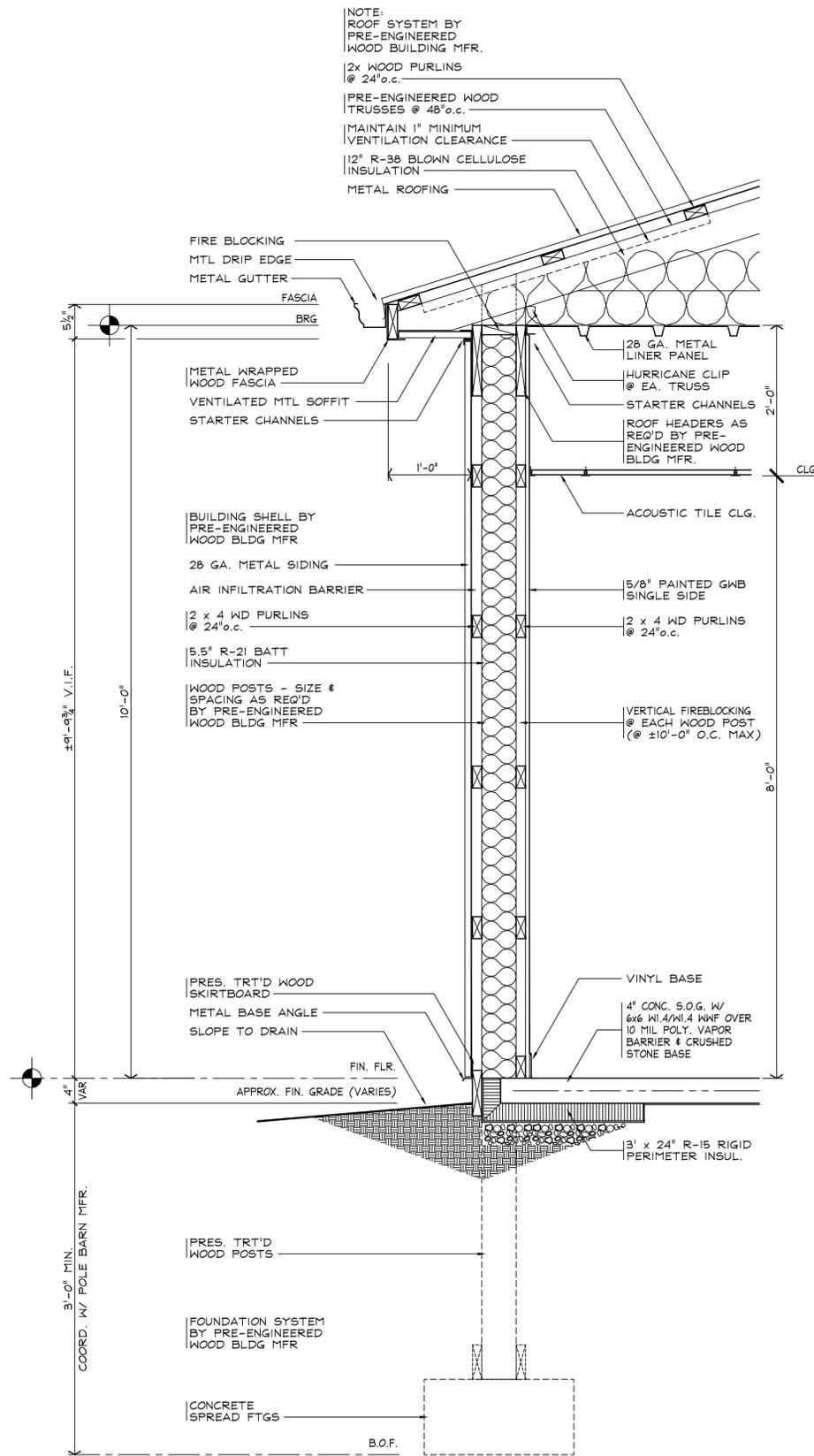
CONTROL/CONSTRUCTION JOINTS SHALL CREATE PANELS OF 400 SQ FT MAXIMUM SEE PLAN FOR PLACEMENT

TYPICAL S.O.G DETAILS

SCALE: N.T.S.

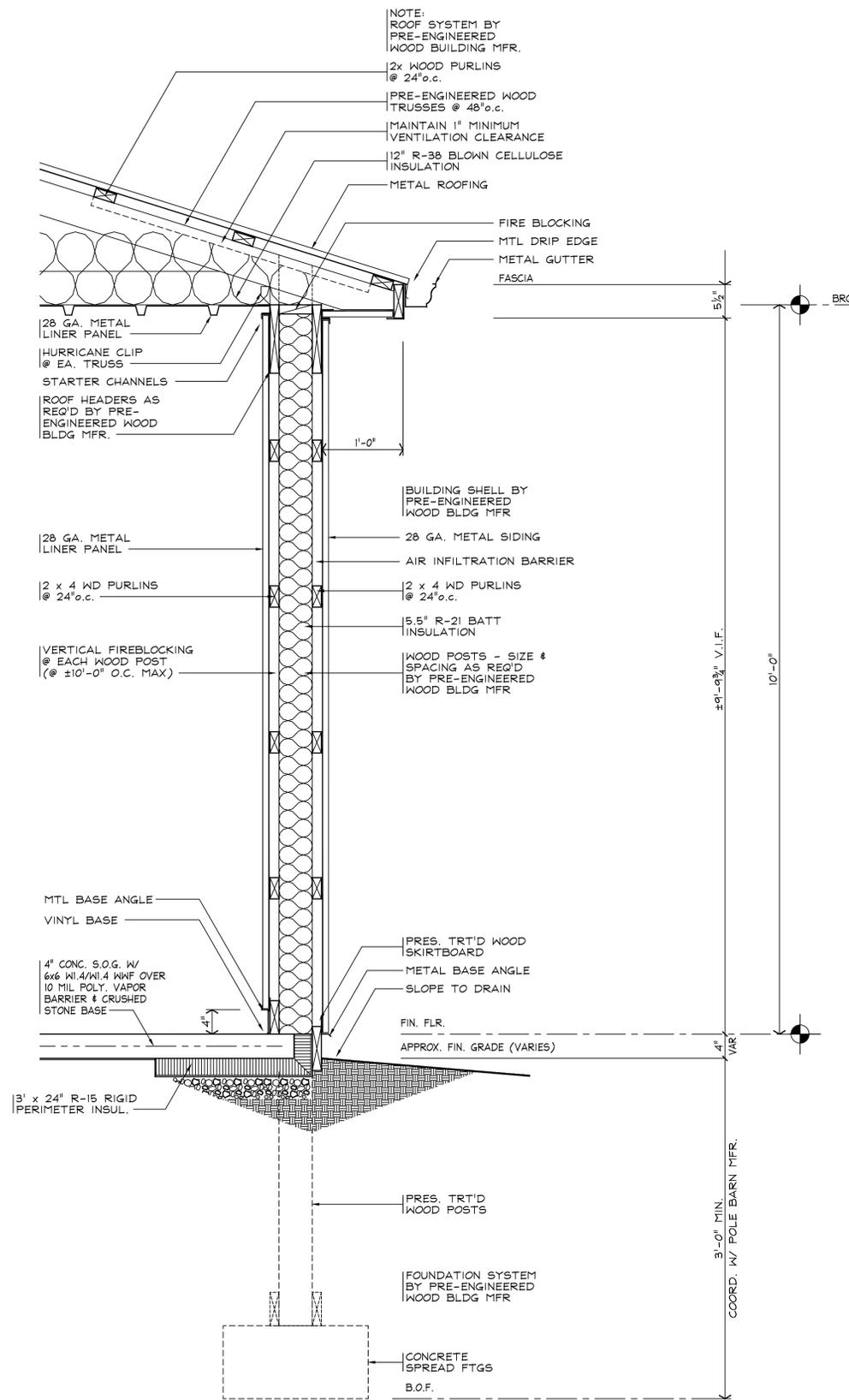
1

Revisions		
No.	Date	Description
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WALL SECTION 1

SCALE: 1" = 1'-0"



WALL SECTION 2

SCALE: 1" = 1'-0"

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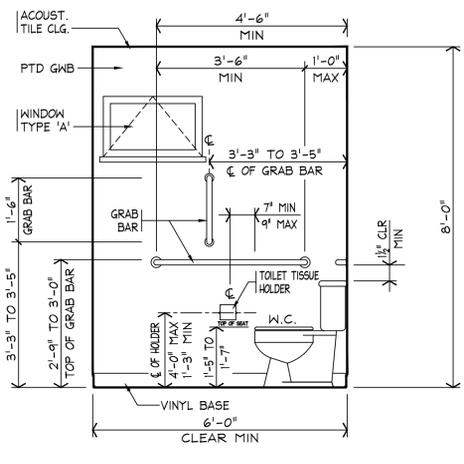
**BRUCE D. TURNER, AIA
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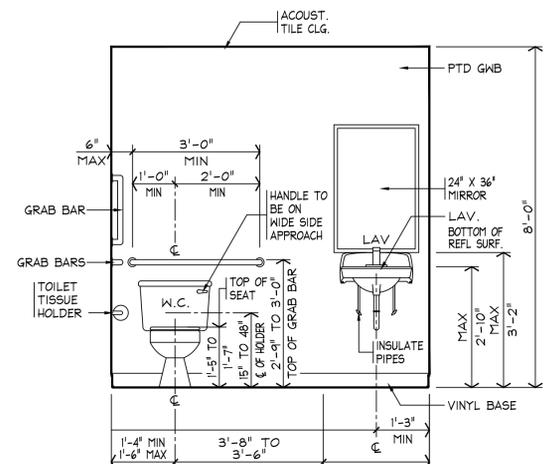
Project:
**PROPOSED NEW LOCKER ROOM/BREAK ROOM:
LANDIS SEWERAGE
AUTHORITY**
1776 SOUTH MILL ROAD, VINELAND
CUMBERLAND COUNTY, NEW JERSEY

Drawing WALL SECTIONS			
Scale 1" = 1'-0"	Job C-23001	Sheet A-7	
Drawn LV	Date 11/13/24	7 of 10	



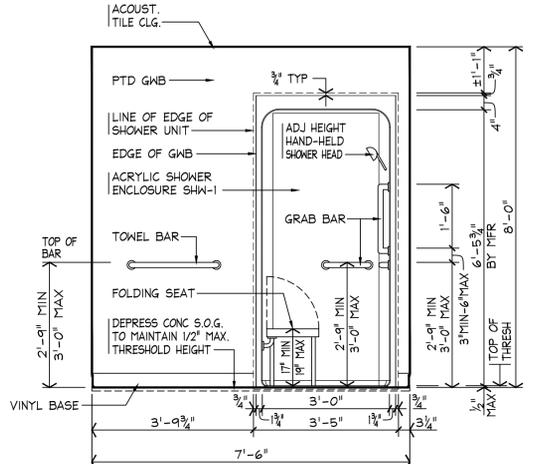
TOILET RM. ELEV. 1

SCALE: 1/2" = 1'-0"
ELEVATION 1a SIMILAR OPPOSITE HAND



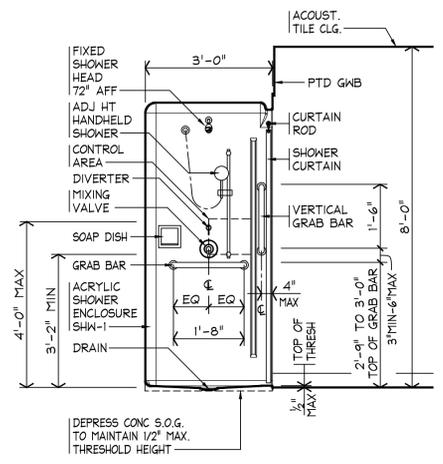
TOILET RM. ELEV. 2

SCALE: 1/2" = 1'-0"
ELEVATION 2a SIMILAR OPPOSITE HAND



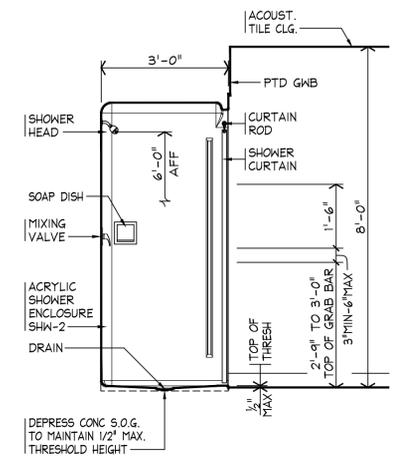
TOILET RM. ELEV. 3

SCALE: 1/2" = 1'-0"
DETAIL 3a SIMILAR @ SHW-2 EXCEPT:
1) ALTERNATE CONTROL WALL
2) W/O ACCESSIBLE ACCESSORIES



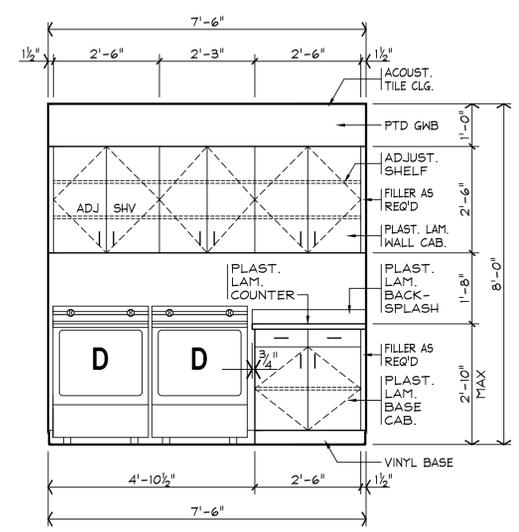
SHOWER ELEV. 4

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



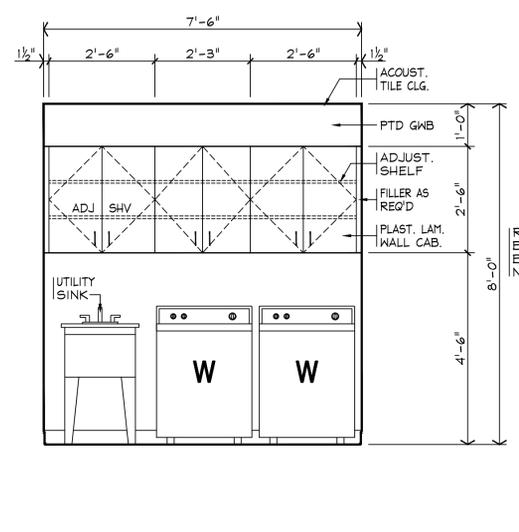
SHOWER ELEV. 4a

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



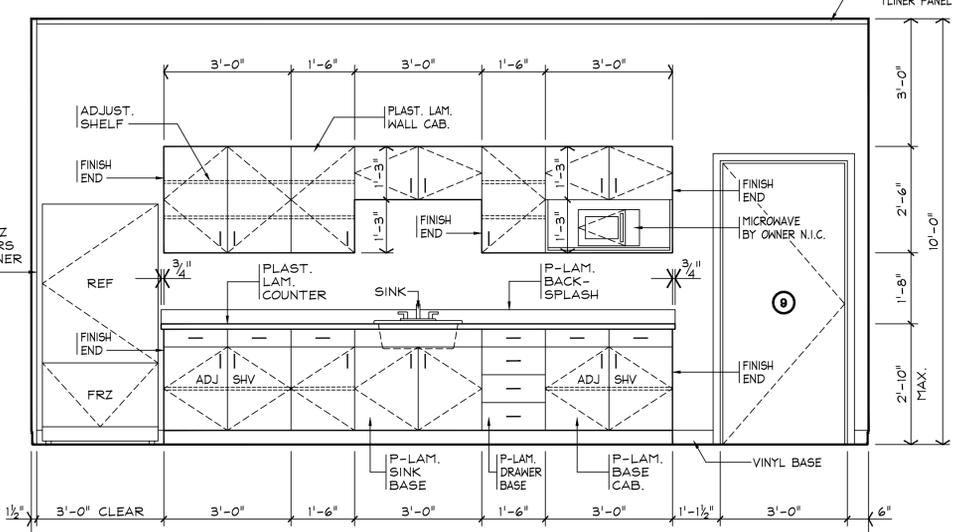
LAUNDRY RM. ELEV. 5

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



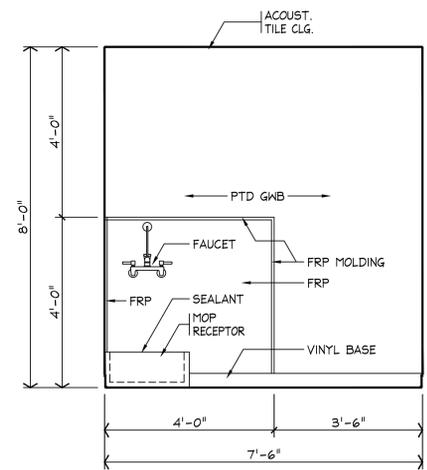
LAUNDRY RM. ELEV. 6

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



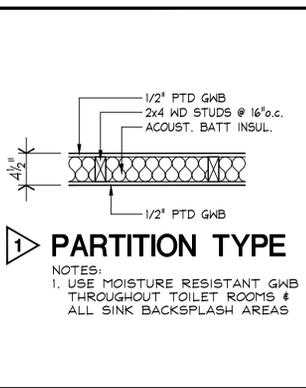
BREAK ROOM ELEVATION 7

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



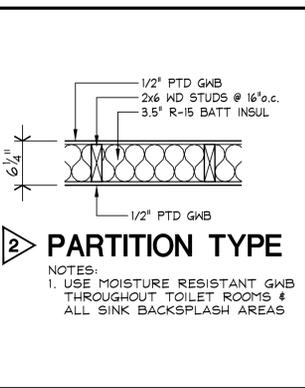
MOP RECEPT. ELEV. 8

SCALE: 1/2" = 1'-0"
ELEVATION 4a SIMILAR OPPOSITE HAND



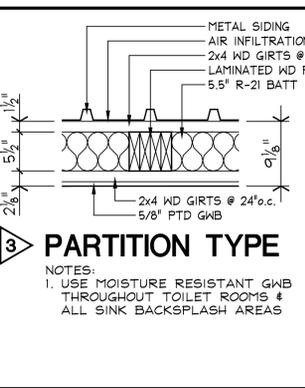
1 PARTITION TYPE

NOTES:
1. USE MOISTURE RESISTANT GWB THROUGHOUT TOILET ROOMS & ALL SINK BACKSPLASH AREAS



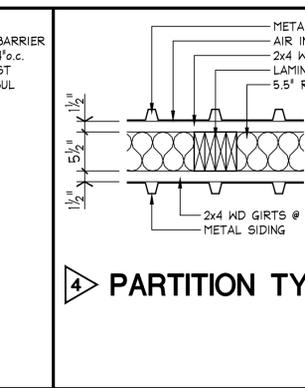
2 PARTITION TYPE

NOTES:
1. USE MOISTURE RESISTANT GWB THROUGHOUT TOILET ROOMS & ALL SINK BACKSPLASH AREAS



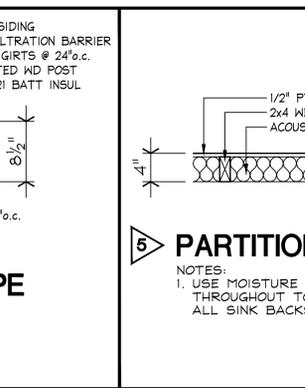
3 PARTITION TYPE

NOTES:
1. USE MOISTURE RESISTANT GWB THROUGHOUT TOILET ROOMS & ALL SINK BACKSPLASH AREAS



4 PARTITION TYPE

NOTES:
1. USE MOISTURE RESISTANT GWB THROUGHOUT TOILET ROOMS & ALL SINK BACKSPLASH AREAS



5 PARTITION TYPE

NOTES:
1. USE MOISTURE RESISTANT GWB THROUGHOUT TOILET ROOMS & ALL SINK BACKSPLASH AREAS

Revisions		
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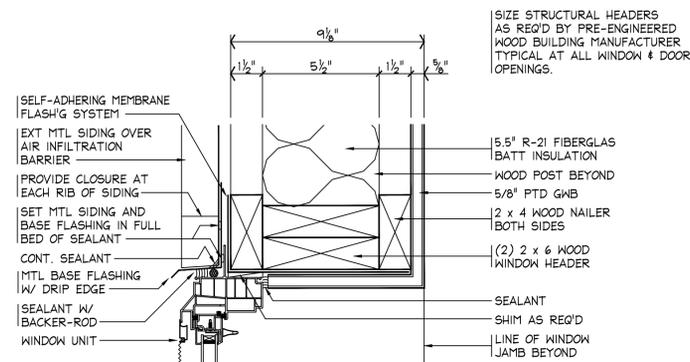
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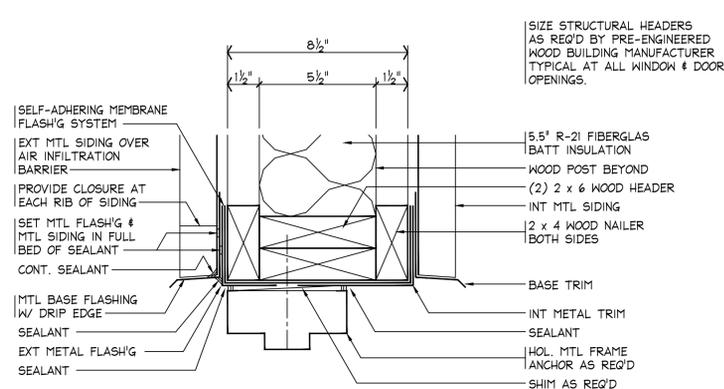
1776 SOUTH MILL ROAD, VINELAND
CUMBERLAND COUNTY, NEW JERSEY

Drawing INTERIOR ELEVATIONS & PARTITION TYPES		
Scale 1/2" = 1'-0"	Job C-23001	Sheet A-8
Drawn LV	Date 11/13/24	8 of 10

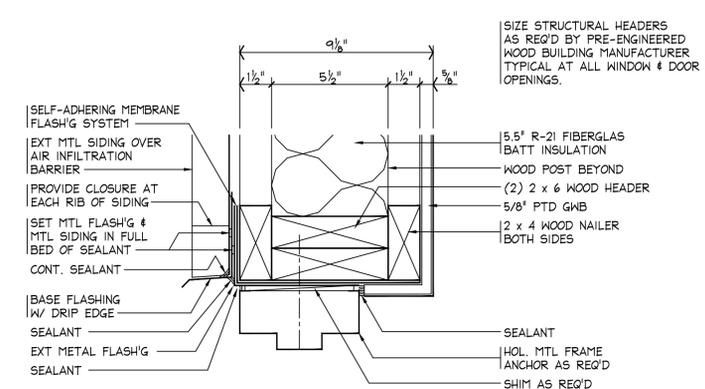
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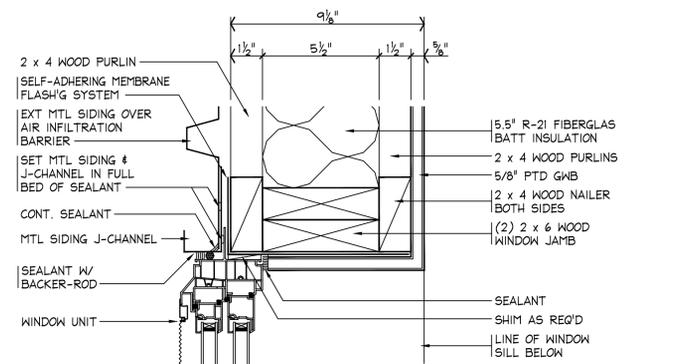
WH-1 HEAD



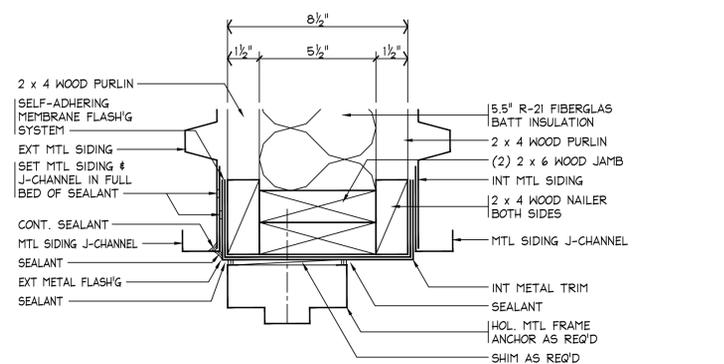
DH-1 HEAD



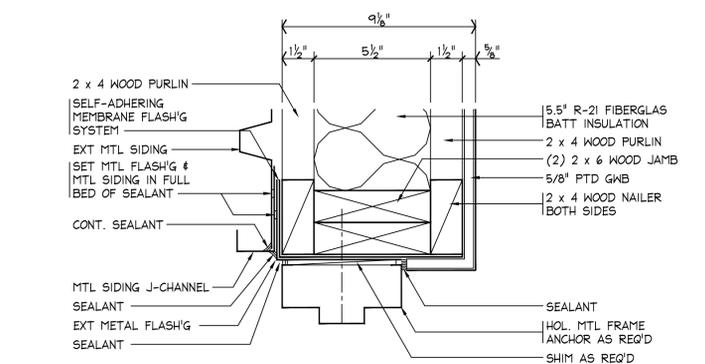
DH-2 HEAD



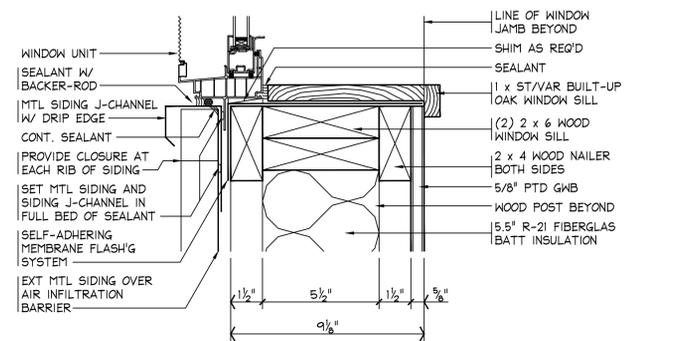
WJ-1 JAMB



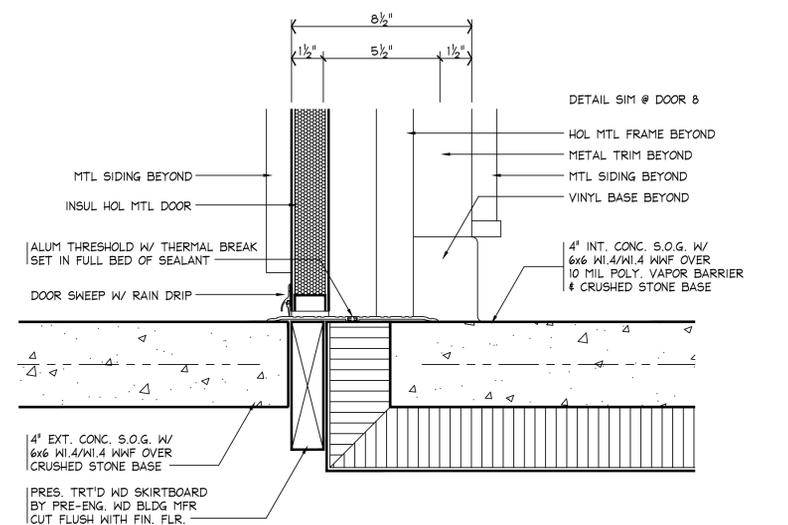
DJ-1 JAMB



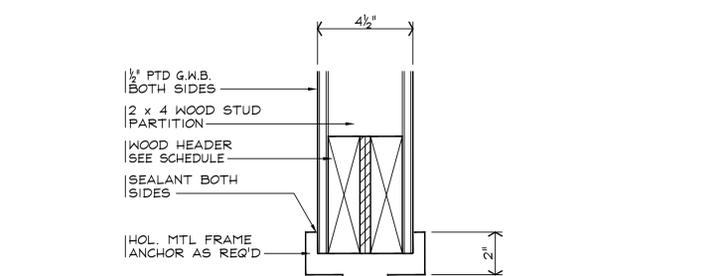
DJ-2 JAMB



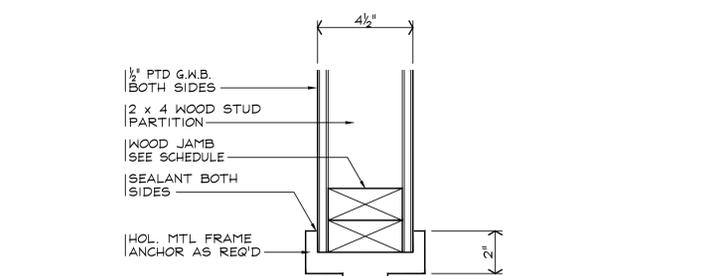
WS-1 SILL



DS-1 SILL



DH-3 HEAD



DJ-3 JAMB

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 1776 SOUTH MILL ROAD, VINELAND
 CUMBERLAND COUNTY, NEW JERSEY

Drawing:
 WINDOW & DOOR HEAD, JAMB & SILL DETAILS

Scale	Job	Sheet
3"=1'-0"	C-20010a	A-9
Drawn	Date	
BDT	11/13/24	9 of 10

ARCHITECTURAL GENERAL NOTES

DIVISION 1 - GENERAL REQUIREMENTS

Refer to sheet C-1 for Division 1 - General Requirements.

DIVISION 2 - SITEWORK

2.1 SITE CLEARING

- Contractor shall advise Owner/Architect 48 hours in advance of commencing work.
- Notify utility locator service for area where project is located before site clearing.
- Protect utilities that remain from damage.
- Protect and maintain benchmarks and survey control points from disturbance.
- Locate and clearly flag trees and vegetation to remain.
- Protect remaining trees and vegetation to remain from damage. Do not store materials or equipment or permit excavation within drip line of remaining trees.
- Strip topsoil or other organic materials, stockpile topsoil that will be reused in the work.
- Remove obstructions, trees, shrubs, grass and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.
- In areas not to be further excavated, fill depressions resulting from site clearing. Place and compact satisfactory soil materials in 6" thick layers to density of surrounding original ground.
- Dispose of waste materials, including trash, debris and excess topsoil, off Owner's property. Burning waste materials on-site is not permitted.

2.2 EARTHWORK

- Satisfactory Soil: ASTM D 2487, Soil Classification Groups GW, GP, GM, SW, SP and SM; Free of rock or gravel larger than 2" in any dimension, debris, waste, frozen materials, vegetation or other deleterious matter.
- Satisfactory Soil: ASTM D 2487, Soil Classification Groups GC, SC, ML, CL, CH, OL, ON and FT.
- Protect subgrades and foundation soils from softening and damage by water, freezing temperatures or frost.
- Do NOT use explosives.
- Excavate to subgrade elevations regardless of character of materials and obstructions encountered.
- Excavate for pavements and walkways. Trim subgrades to required lines and grades.
- Excavate for utility trenches to required slopes, lines, depths and invert elevations.
- Excavations shall not encroach on 1:1 bearing splay of footings.
- Place satisfactory soils as backfill and fill in layers not more than 8" in loose depth at optimum moisture content. Compact each layer to the following percentage of maximum dry unit weight according to ASTM D 1557:
 - Under structures and building slabs: to 98%
 - Under pavements and walkways: to 95%
 - Elsewhere: to 90%
- Grade areas to a smooth surface to cross sections, lines and elevations indicated.
- Remove surplus surplus soil material, trash and debris and legally dispose of off Owner's property.

2.3 GEOTECHNICAL INVESTIGATION

- A Geotechnical Engineering Investigation of the site, dated June 28, 2024, was performed by:
Megan Nugent, PE
Eduardo Freire, PE
Colliers Engineering & Design
5439 Harding Highway
M39 Landmark, New Jersey, 08330
877-627-3772
- Sitework, earthwork, footings, foundations, and subsurface preparations shall be performed in full conformance with the findings, conclusions, and recommendations of this report.

DIVISION 3 - CONCRETE

3.1 MATERIALS & EXECUTION

- All concrete shall be ready-mix, have a minimum compressive strength of 3,000 psi at 28 days and have a minimum of 500 LBS of cement per cubic yard. Slump (at point of concrete placement) shall be 3 inch minimum and 6 inch maximum. Concrete exposed to the weather shall have 4 percent air entrainment.
- All concrete work shall comply with the requirements of the ACI Building Code (ACI 318), the ACI Detailing Manual (ACI 315) and the Specifications for Structural Concrete for Buildings (ACI 301).
- All reinforcing steel shall be manufactured from high strength billet steel conforming to ASTM Designation A615, Grade 60. WWPF shall comply with ASTM A185.
- Lap all bars minimum 48" diameters. Lap all WWPF a minimum of 6 inches.
- Construction joints in slabs and grade beams shall be at mid-span and key jointed with reinforcing continuous across joint.
- Submit concrete mix designs for each concrete mixture proposed for use on the project.
- Provide minimum 48 hours advance notice prior to concrete placement.
- Vapor Retarder shall be clear 10-mil-thick polyethylene sheet, ASTM E1745, Class B. Place vapor retarder on prepared subgrade, with joints lapped 6 inches and sealed.

DIVISION 4 - MASONRY

NOT USED

DIVISION 5 - METALS

NOT USED

DIVISION 6 - CARPENTRY

6.1 MATERIALS & EXECUTION

- Preservative-Treated Materials: AWPA C2 lumber and AWPA C9 plywood, labeled by an inspection agency approved by ABC's Board of Review. After treatment, kiln-dry lumber and plywood to 19 and 15 percent moisture content, respectively.
- Provide preservative treated lumber where lumber is in contact with concrete or masonry or is outside of the building.
- Preservative treated lumber shall be arsenic and chromium free wood in accordance with ACG Standards and AWPA Standards as applicable, and as manufactured by Chemical Specialties, Inc., 200 E. Woodlawn Road, Suite 250, Charlotte, NC 28217, Phone 704-522-0825.
- Fire-Retardant-Treated materials: AWPA C20 lumber and AWPA C27 plywood, interior Type A treatment, labeled by a testing and inspecting agency acceptable to authorities having jurisdiction.
- Finish Carpentry: Lumber Standards: DOC PS 20 and grading rules of inspection agencies certified by American Lumber Standards Committee Board of Review. Softwood Plywood: DOC PS 1. Hardwood Plywood: HPVA HP-1.

6.2 PRE-ENGINEERED WOOD BUILDING SYSTEM

- This project includes a complete pre-engineered wood building system, including but not limited to primary and secondary structural framing systems, roofing, siding, roof and wall insulation, accessories, and footings & foundations for a whole, complete, and weatherproof building.
- The pre-engineered wood building manufacturer, through their designated and licensed design professionals, shall be fully responsible for the design of the pre-engineered wood building and footings & foundation described herein.
- The building shall conform to the latest version of the International Building Code (IBC) adopted by the State of New Jersey, and ASCE 7, current edition.
- Footings & foundations shall be in full conformance with the Geotechnical Investigation cited in Section 2.3, above.
- Design Criteria:
 - Roof Load:
 - Top Chord Live Load = 30 PSF
 - Top Chord Dead Load = 5 PSF
 - Bottom Chord Live Load = 0 PSF
 - Bottom Chord Dead Load = 10 PSF
 - Snow Load:
 - Ground Snow Load = 30 PSF
 - Wind Load:
 - Basic Wind Speed (3 Second Gust) = 115 MPH

F. Materials:

1. Metal Roofing: 28 Ga.
2. Metal Siding: 28 Ga.
3. Liner Panel (Walls): 29 Ga.
4. Liner Panel (Ceilings): 29 Ga.
- g. Framing Materials: Treated Lumber, untreated lumber, laminated lumber, metal plate connected wood trusses, primary and secondary framing, and bracing: Southern Yellow Pine, Douglas Fir, or other, of a species and grade as required to meet the design criteria specified herein.
- h. Comply with TPI "Design Specification for Metal Plate Connected Wood Trusses" and "Quality Standard for Metal Plate Connected Wood Trusses."

DIVISION 7 - THERMAL & MOISTURE PROTECTION

7.1 INSULATION

- Glass-Fiber-Blanket insulation shall conform to ASTM C665, preformed glass fiber type, faced with kraft paper face. Surface burning characteristics shall comply with ASTM E84 with a Flame spread rating of 75 or less, and a smoke developed rating of 450 or less. Flame spread and smoke developed rating are not applicable to facings behind and in substantial contact with unexposed surfaces of the ceiling, floor or wall. Provide the following thermal values:
 - Exterior Walls: R-21; 6" thickness (Coordinate with PE Building MFR).
 - Interior Partitions: Sound Attenuation Batts, 2 1/2" thickness.
 - Ceilings: R-38; 12" thickness (Blown Cellulosic Insulation, Coordinate with Pre-Engineered Wood Building Manufacturer).
- Install glass fiber blanket insulation with factory applied vapor retarder membrane facing warm side of building spaces. Lap ends and side flanges of membrane over framing members.
- Provide firestopping systems with fire-resistance ratings as required to maintain UL designations as listed in its "Fire Resistance Directory," or designations of another testing agency acceptable to authorities having jurisdiction. For exposed firestopping provide products with flame-spread ratings of less than 25 and smoke-developed ratings of less than 450, as determined according to ASTM E 84.
- Drywall joint sealsants, joint fillers and other related materials that are compatible with one another and with joint substrates under service and application conditions.
- Install sound attenuation batt insulation in locations as indicated.

7.2 RIGID PERIMETER INSULATION

- Rigid Perimeter Insulation shall be Owens Corning Foamular 250, or approved equal, closed-cell polystyrene Board insulation, conforming to ASTM C578, Type X, 3 inch thickness x 24 inch width, R-Value 5.0/inch (R-15 overall), Compressive Strength 25 psi minimum, Water Vapor Permeance OF 1.5, and a Flame-Spread Rating of 10 and a Smoke-Developed Rating of 175 in accordance with ASTM E84.

DIVISION 8 - DOORS AND WINDOWS

8.1 STEEL DOORS AND FRAMES

- Steel doors and frames shall be manufactured by Kewanee Corp, or approved equal.
- Exterior steel doors shall be 1-3/4" thick, 16 gage, galvanized sheet steel with flush top, inverted bottom channel, continuous rolled seams welded and plinished, polystyrene core and conforming to ANSI/SDI 100.
- Interior steel doors shall be 1-3/4" thick, 16 gage, galvanized sheet steel with flush top, inverted bottom channel, continuous rolled seams welded and plinished, polystyrene core and conforming to ANSI/SDI 100.
- Exterior steel frames shall be fabricated with miter or coped and continuously welded corners, 16 gage galvanized sheet steel.
- Interior steel frames shall be fabricated with miter or coped corners, knocked down for field assembly, formed from 16 gage, cold-rolled sheet steel.

8.2 DOOR HARDWARE

- Mount hardware in locations recommended by the Door Hardware Institute, unless otherwise indicated. Door hardware shall comply with the requirements of CABO/ANSI A117.1-2009.
- Hardware: (Not all devices are used)
 - Hinges: Hager BBI279, 4.5 x 4.5, 626.
 - Entry Lock: Schlage ALXV53P6, SAT, 626.
 - Storeroom Lock: Schlage ALXV80P6, SAT, 626.
 - Passage Latch: Schlage ALX10, SAT, 626.
 - Exit Device - Rim Device:
Allegation, Falcon 24-R, w/ 510L, DAN, 630, Lever Trim
 - Exit Device - Surface Vertical Rod:
Allegation, Falcon 24-V, w/ 510L, DAN, 630, Lever Trim
 - Electric Strike: Assa Abloy HES 5000, 630 (for cylindrical locks only)
 - Electric Strike: Assa Abloy HES 9600, 630 (for rim exist devices only)
(Verify Exit Device Bolt Type & Coordinate w/ Electric Strike Model #)
 - Closer: Yale 3521 BF SB with hold open (omit hold open on rated doors)
 - Threshold: Pemko 274x4A-FG.
 - Weatherstripping: Pemko 303AS (Head and Jamba)
 - Astragal: Pemko 3555 T-Shaped Astragal.
 - Drip Shoe: Pemko 216AV.
 - Drip Cap: Pemko 346C.
 - Kickplate: Hager 190S, 8" x 2" LDW, US32D. (for doors with closers)
 - Bumper as required.
 - Silencers as required (3).
- Keying: Key locks to Owner's existing master-key system;
 - Provide cylinders with six-pin tumblers;
 - Key all locks differently, and master key;
 - Provide three (3) keys for every lock;
- Hardware Sets:
 - Set #1: Doors 1 & 3:
 - Hinges: Hager BBI279, 4.5 x 4.5, NRP, 626.
 - Exit Device: Falcon 24-R, 510L, DAN, 630.
 - Closer: Yale 3521 BF SB with hold open
 - Threshold: Pemko 274x4A-FG.
 - Weatherstripping: Pemko 303AS (Head and Jamba)
 - Drip Cap: Pemko 346C.
 - Drip Shoe: Pemko 216AV.
 - Kickplate: Hager 190S, 8" x 2" LDW, US32D.
 - Bumper as required.
 - Silencers as required (3).
 - Set #2: Door 8:
 - Hinges: Hager BBI279, 4.5 x 4.5, NRP, 626.
 - Entry Lock: Schlage ALXV53P6, SAT, 626.
 - Flush Bolts: Hager 282D, US32D (Top & Bottom)
 - Closers (2): Yale 3521 BF SB with hold open
 - Threshold: Pemko 274x4A-FG.
 - Weatherstripping: Pemko 303AS (Head and Jamba)
 - Astragal: Pemko 3555 T-Shaped Astragal (Mtd to Active Door).
 - Drip Shoe: Pemko 346C.
 - Kickplate (2): Hager 190S, 8" x 2" LDW, US32D.
 - Bumper as required.
 - Silencers as required.
 - Set #3: Door 2:
 - Hinges: Hager BBI279, 4.5 x 4.5, NRP, 626.
 - Passage Latch: Schlage ALX10, SAT, 626.
 - Closer: Yale 3521 BF SB with hold open.
 - Kickplate: Hager 190S, 8" x 2" LDW, US32D.
 - Bumper as required.
 - Silencers as required.
 - Set #4: Door 5, 6 & 7:
 - Hinges: Hager BBI279, 4.5 x 4.5, 626.
 - Privacy Indicator Lock: Vizilok C5FS (R/L), 26D.
 - Closer: Yale 3521 BF SB with hold open
 - Kickplate: Hager 190S, 8" x 2" LDW, US32D.
 - Bumper as required.
 - Silencers as required (3).
 - Set #5: Door 9:
 - Hinges: Hager BBI279, 4.5 x 4.5, NRP, 626.
 - Exit Device: Schlage ALX70P6, SAT, 626.
 - Closer: Yale 3521 BF SB with hold open
 - Kickplate: Hager 190S, 8" x 2" LDW, US32D.
 - Bumper as required.
 - Silencers as required.

8.3 VINYL WINDOWS

- Vinyl windows shall be manufactured by MI Windows and Doors, LLC, a Miter Brand, Series V3000, or approved equal. Contact www.miwindows.com.
- Window units shall be double hung and awning style windows, color white, with regressed blocks, folding operators, nailing fins, dual-opposing locks, high-performance Low-E glass, warm edge spacers, low friction constant force balance & welded multi-chambered frame.
- Install window units plumb and square in opening in full conformance with manufacturer's installation instructions and recommendations.
- Seal perimeter of all window opening heads, jambs and sills, with self-adhering, cross-laminated, high-density polyethylene sheet backed with a pressure sensitive rubberized asphalt adhesive; Grace, Vybar Plus or approved equal.

DIVISION 9 - FINISHES

9.1 GENERAL

- All Interior Finishes shall be classified in accordance with ASTM E84.
- Interior finishes shall have a 450 maximum smoke development rating.
- Flame Spread Ratings:
 - Required vertical exits and Passageways shall be Class III.
 - Corridors providing exit egress shall be Class III.
 - Walls and Ceilings in enclosed spaces shall be Class III.
- Interior floor finishes shall comply with DOC FF-1 Fill Test (CSPC 16 CFR, part 360).

9.2 GYPSUM BOARD

- Partitions and ceilings: provide all labor and materials necessary to install all gypsum board finishes, walls, ceilings, soffits, etc., including studs, furring, blocking, grounds, column closures, taping and spackling, etc.
- Drywall construction system shall be as manufactured by U.S. Gypsum Company or approved equal, and installed in strict accordance with the manufacturer's recommendations.
- Gypsum wallboard shall conform to ASTM C36 and have the following minimum thicknesses, unless noted otherwise:
 - 1/2" for framing members spaced 16" o.c.
 - 5/8" for framing members spaced 24" o.c. (unless noted otherwise).
 - 5/8" Type "X" where indicated and/or for rated assemblies.
 - 5/8" high density, acoustical gypsum wallboard for assemblies with sound isolating products/designs.
- All gypsum wallboard in bathrooms and wet areas, or at locations subject to repeated damp conditions and moisture accumulation such as bathtub and shower compartments shall be water resistant type to comply with ASTM C79.
- Gypsum wallboard shall be taped and spackled, 3 coats, ready to receive final finish.
- Screeds with trims and other fastenings shall be in accordance with the recommendations of the approved wallboard manufacturer.
- Where fire-resistance-rated assemblies are required, provide materials and construction identical to assemblies tested according to ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
- Gypsum wallboard shall be full height of metal stud framing, unless noted otherwise. If gypsum wallboard terminates below top track of wall, install thermalfiber firestop in all stud cavities.

9.3 PAINTING

- Provide a complete system of compatible components that is recommended by the manufacturer for the application indicated.
 - Gypsum Board: One coat latex primer sealer, two coats latex enamel, flat.
 - Plaster: One coat latex primer sealer, two coats latex enamel, flat.
 - Wood - Painted: One coat latex primer, two coats latex semi-gloss.
 - Wood - Transparent: One coat stain, one coat sealer, two coats satin varnish.
 - Steel: Touch-up w/ rust inhibitive primer, two coats alkyl enamel, gloss.
- Paint all exposed surfaces, unless noted otherwise.
- Prime concealed surfaces with primer paint.
- Comply with manufacturer's instructions for surface preparation, environmental and substrate conditions, product mixing and application.
- Provide colors as selected by Owner. Assume different color for each room and different colors for walls, ceiling and trim.

9.4 RESILIENT TILE FLOORING

- Luxury Vinyl Tile (LVT) shall be Mannington Commercial, No Reservations Xpress - Wood, or approved equal; 7.25" x 48"; 0.1575" thick, color: Benevolence NR102, or as selected by Owner/Architect. Install in a linear pattern, with end joints offset and staggered to create a random appearance.
- Vinyl base shall be standard vinyl wall base; 4" height, 1/8" thick, covered profile, continuous roll, as manufactured by Mannington Commercial, BurkeBase Type TV, Color: Rocky 660, or as selected by Owner/Architect.
- Troubleable leveling and patching compound shall be latex modified, portland cement or blended hydraulic cement-based formulation approved by flooring manufacturer for application indicated.
- Remove subfloor ridges and bumps. Fill minor or local low spots, cracks, joints, holes and other defects with subfloor filler to achieve smooth, hard, flat surface.
- Adhesives shall be water-resistant type as recommended by manufacturer to suit LVT floor covering and substrate conditions.
- Provide transition/reducing strips tapered to meet abutting materials.
- Clean floors as recommended by manufacturer.

9.5 ACOUSTICAL TILE CEILING

- Acoustic tile ceilings shall comply with ASTM E 1264 for Class A materials, tested per ASTM E 84. Install in full conformance with manufacturer's instructions.
 - ACT-1: Armstrong, Fine fissured; 24x48x5/8, Lay-In; Color - White, #1733.
- Ceiling suspension system shall be direct hung, complying with ASTM C 635, intermediate-duty. System shall be capable of supporting imposed loads to a deflection of L/360, maximum; Armstrong, Model: Prelude XL.

9.6 FRP PANELS

- FRP Panels shall be catalized thermoset polymer composite with glass fiber reinforcement and a UV stabilized polymer gelcoat surface, complying with ASTM E 1264 for Class A materials tested per ASTM E 84, as manufactured by Marlite, or approved equal, color as selected by Owner/Architect. Install in full conformance with manufacturer's instructions. Provide all necessary trims, accessories, and adhesives for a complete installation.

DIVISION 10 - SPECIALTIES

10.1 FIRE EXTINGUISHERS

- JL Industries, Cosmic 10E, or approved equal to comply with NFPA 10 and authority having jurisdiction - 10 LBS Capacity, 18.25 lbs, UL Rating 4A-80B-C.
 - M646 mounting bracket.
 - Maximum distance of travel to extinguisher < 75'-0"
 - Mount extinguishers 3'-6" AFF max. to the top of the extinguisher.

10.2 ROOF TRUSS WARNING PLACARD

- An identifying emblem shall be permanently affixed to the front of the structure indicating a structure with wood truss construction.
- The emblem shall be of a bright and reflective color, or made of reflective material.
- The shape of the emblem shall be an isosceles triangle and the size shall be 12 inches horizontally by six inches vertically.
- The shape shall bear the letter "R" of a size and color to be made conspicuous.
- The emblem shall be of a bright and reflective color, or made of reflective material.
- The emblem shall be permanently affixed to the left of the main entrance door at a height between four and six feet above the ground.

SAFEGUARDS DURING CONSTRUCTION

11.1 GENERAL

- The contractor shall be solely responsible for methods and means of construction and shall be designated the responsible party for site safety during construction.
- Construction equipment and materials shall be stored and placed so as not to endanger the public, workers or adjoining property for the duration of the construction project.
- Required exits, existing building elements, fire protection devices and sanitary safeguards shall be maintained at all times during the prosecution of the work.
- Waste materials shall be removed in a manner that prevents injury or damage to persons, adjoining properties and public rights-of-way.
- Fire safety during demolition shall comply with the requirements of the AHJ and Chapter 33 of the 2018 International Fire Code, New Jersey Edition.
- Pedestrians shall be protected during construction, remodeling and demolition activities as required by Chapter 33 and Table 3306.1 of the 2018 International Building Code, New Jersey Edition. Signs shall be provided to direct pedestrian traffic.
- At all times during the duration of the construction project, adjoining properties shall be protected from damage caused by the work.
- Construction materials and equipment shall not be placed or stored so as to obstruct access to fire hydrants, standpipes, fire or police alarm boxes, catch basins, manholes, or so as to interfere with the passage of water in the gutter.
- Provide temporary, approved, ordinary hazard, portable fire extinguishers, a minimum of one per floor, at each stairway, in every storage shed, and where special hazards exist, such as the storage and use of flammable and combustible liquids.
- The contractor shall safeguard against all fire hazards attendant upon construction operations.
- Required means of egress shall be maintained at all times during the duration of the construction project.
- Existing City of Vineland monuments shall be preserved to the greatest extent practicable. Should the monumentation be damaged or destroyed, the responsible party shall reimburse the City of Vineland for the replacement of said monumentation.

11.2 PRIVATE PROPERTY MARKOUT

- Private property markout shall be in addition to public property markout secured by 811 or as otherwise indicated herein.
- The contractor shall be responsible to ensure that private property markout has been completed prior to any excavation or earthmoving activities.
- Private property markout shall endeavor to identify all locatable utilities within the area of construction/disturbance.
- Locate within approximately 10 feet of each side of the proposed scope of work.
- Trace any utilities for which there are structures visible from the work area.
- Utilities shall be marked on the surface using paint, flags, or other appropriate means.
- Owner will provide drawings or other information to notify the private property markout company of any utilities known to be entering the work area for which there are no apparent surface features or structures that are visible from the work area.
- Areas shall be laid out, marked, and cleared of obstructions prior to commencing private property markout operations.
- Utilize Underground Scanning GPR Antenna, Electromagnetic Pipe Locator, Traceable Rodder, GPS and any other instruments necessary.
- Technicians shall have OSHA 10 safety training or greater.

Revisions

No.	Date	Description
1	11/13/24	ISSUED FOR BID

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A Project For:
**THE CUMBERLAND COUNTY
IMPROVEMENT AUTHORITY**



BDT

**BRUCE D. TURNER, AIA
ARCHITECT**

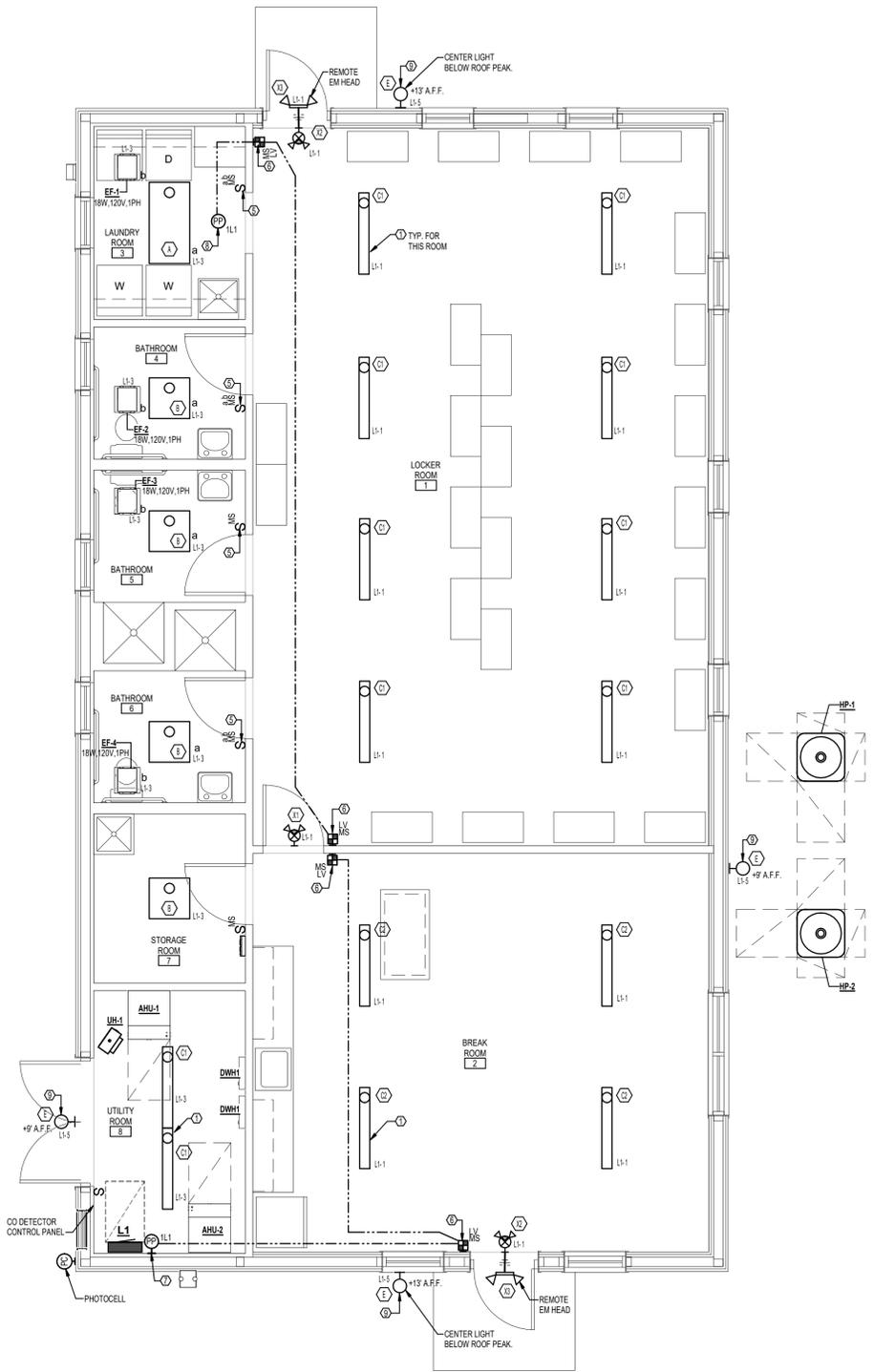
New Jersey License Number 21 AI 01085300

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PH (856)405-0351 FAX (856)405-0352
e-mail: bdtalia@aol.com

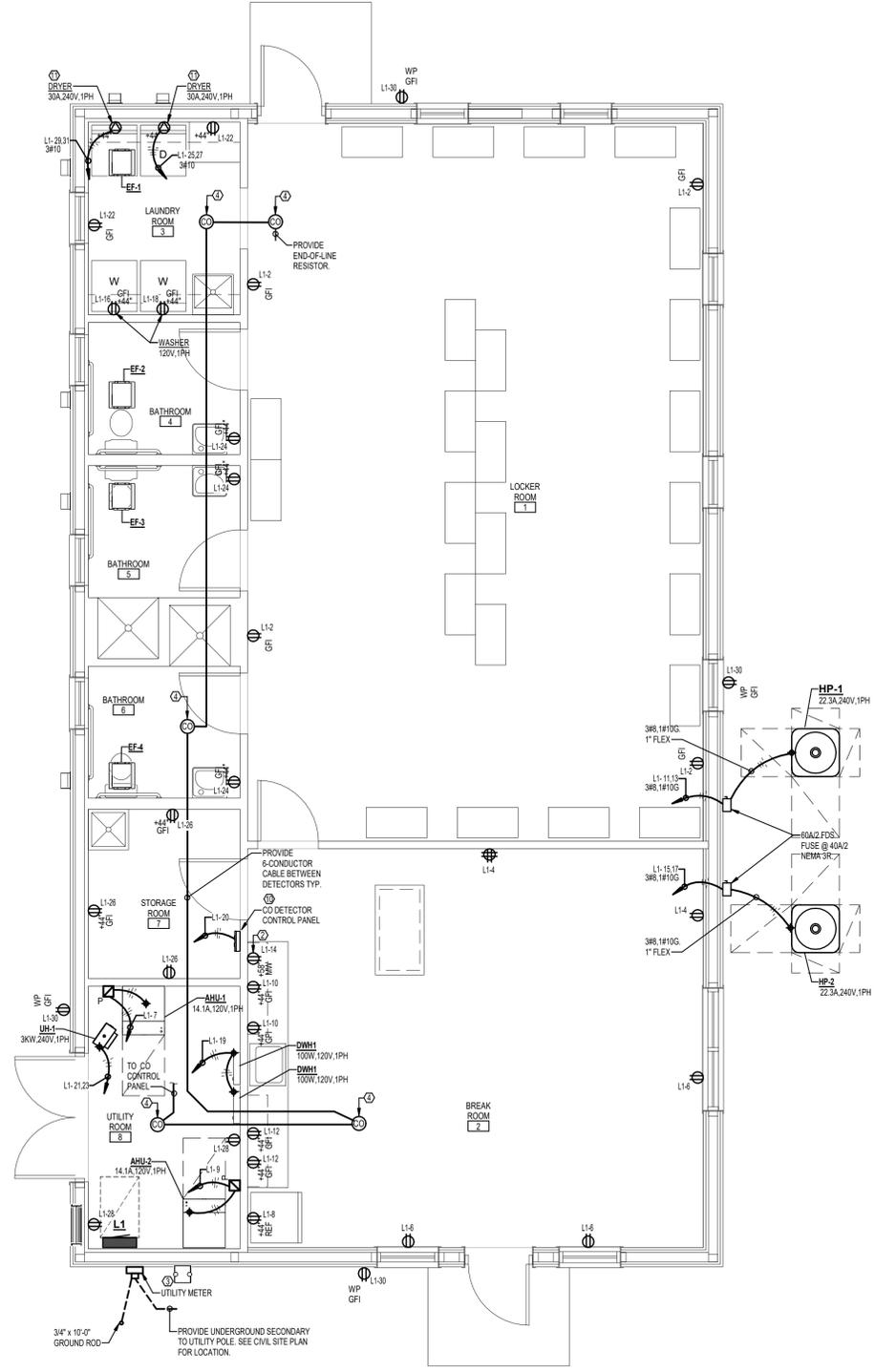
Project:
**PROPOSED NEW LOCKER ROOM/BREAK ROOM
LANDIS SEWERAGE
AUTHORITY**
1776 SOUTH MILL ROAD, VINELAND
CUMBERLAND COUNTY, NEW JERSEY

Scale	Job	Sheet
AS NOTED	C-23001	A-10
Drawing	Date	10 of 10
GENERAL NOTES	LV	11/13/24

LIGHTING	
	WALL MOUNTED LIGHTING FIXTURE AS SCHEDULED.
	2 X 4 CEILING OUTLET AND LIGHTING FIXTURE AS SCHEDULED. CONNECTED TO NORMAL BRANCH CIRCUIT.
	2 X 2 CEILING OUTLET AND LIGHTING FIXTURE AS SCHEDULED. CONNECTED TO NORMAL BRANCH CIRCUIT.
	WALL OUTLET AND EXIT LIGHT FIXTURE WITH EMERGENCY HEADS AS SCHEDULED.
	WALL OUTLET AND EXIT LIGHT FIXTURE AS SCHEDULED.
	ARROWS INDICATE EGRESS EXIT SIGNAGE CHEVRONS REQUIRED.
	WALL MOUNTED EMERGENCY LIGHTING FIXTURE WITH TWIN HEADS AND REMOTE BATTERY BACKUP.
	SYMBOL INDICATES FIXTURE TYPE WHEN SHOWN ON LIGHTING PLANS ADJACENT TO FIXTURE.
	LOWER CASE LETTERS AT OUTLETS INDICATES SWITCHING ARRANGEMENT.
	SINGLE POLE 20A SWITCH. MOUNT 48" A.F.F. TO TOP, UNLESS NOTED OTHERWISE. SUBSCRIPT:
	3 = THREEWAY
	MS = VACUANCY SENSOR SIMILAR TO SENSOR SWITCH WSX SERIES, UNLESS NOTED OTHERWISE.
	DIMMER SWITCH 1KW RATED UNLESS NOTED OTHERWISE MOUNT 48" A.F.F. TO TOP UNLESS NOTED OTHERWISE.
	LV = LOW VOLTAGE
	MS = VACUANCY SENSOR SIMILAR TO SENSOR SWITCH WSX SERIES, UNLESS NOTED OTHERWISE.
POWER	
	WALL MOUNTED JUNCTION BOX. MOUNT AT 18" A.F.F. TO BOTTOM, UNLESS NOTED OTHERWISE.
	WALL OUTLET WITH 20A 125V DUPLEX RECEPTACLE. MOUNT 18" A.F.F. TO BOTTOM, UNLESS NOTED OTHERWISE.
	WALL OUTLET WITH 20A 125V DUPLEX RECEPTACLE. WP - INDICATES WATER-PROOF. GFI - INDICATES GROUND FAULT CIRCUIT INTERRUPTING. MOUNT 18" A.F.F. TO BOTTOM, UNLESS NOTED OTHERWISE.
	120 / 240V SURFACE MOUNTED PANELBOARD. DASH LINE INDICATES N.E.C. CLEARANCE.
	FUSIBLE DISCONNECT SWITCH. MOUNT 4'-0" A.F.F. TO CENTER, UNLESS NOTED OTHERWISE. DASH LINE INDICATES N.E.C. CLEARANCE.
	MANUAL MOTOR CONTROLLER WITH PLOT LIGHT TO SUIT MOTOR. MOUNT 48" A.F.F. TO TOP, UNLESS NOTED OTHERWISE.
FIRE ALARM SYSTEM	
	UL-2075 CEILING MOUNTED CARBON MONOXIDE DETECTOR. DETECTOR SHALL HAVE INTEGRAL SOUNDER OR SOUNDER BASE AND TROUBLE RELAY. DETECTOR SHALL BE BY SYSTEM SENSOR OR APPROVED EQUAL.
GENERAL DEVICE SUBSCRIPTS	
"1,2,3"	NUMBER AT OUTLET INDICATES CIRCUIT ARRANGEMENT.
"GFI"	INDICATES GROUND FAULT CURRENT INTERRUPTER DEVICE. (5mA)
"WP"	INDICATES WEATHER PROOF WHEN SHOWN ADJACENT TO SYMBOLS ON LIGHTING, POWER, OR SYSTEMS PLANS. PROVIDE APPROPRIATE ENCLOSURES AND/OR COVERS.
"MW"	INDICATES RECEPTACLE IS DEDICATED FOR MICROWAVE WHEN SHOWN ON POWER PLANS.
"REF"	INDICATES REFRIGERATOR.
RACEWAYS	
	LOW VOLTAGE CONTROL WIRING. CATEGORY 5e DATA CABLE WITH WHITE OUTER JACKET.
	CIRCUIT CONCEALED BENEATH FLOOR.
	CIRCUIT EXPOSED.
	CIRCUIT CONCEALED IN CEILING OR WALL. CROSSBARS INDICATE NUMBER OF CONDUCTORS REQUIRED. CONDUIT NOT SIZED IS 1/2". CONDUCTORS NOT SIZED ARE NO. 12.
	HOMERUN TO PANELBOARD INDICATED. NUMBER OF ARROWHEADS INDICATES CIRCUIT NUMBERS. PREFIX INDICATES PANEL NUMBER.
	EQUIPMENT POINT OF CONNECTION. VERIFY WITH EQUIPMENT PROVIDER AND / OR INSTALLER.



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



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

ELECTRICAL GENERAL NOTES:

- PROVIDE ALL TEMPORARY EGRESS EXIT LIGHTING FIXTURES AS REQUIRED DURING CONSTRUCTION.
- COORDINATE CONDUIT ROUTING WITH MECHANICAL CONTRACTOR TO AVOID CONFLICTS WITH EQUIPMENT AND EQUIPMENT CLEARANCES.
- CONDUIT SHALL BE RUN WITH SMOOTH, EASY BENDS. EXPOSED CONDUIT SHALL BE RUN PARALLEL OR PERPENDICULAR TO WALLS, CEILING, BEAMS, AND COLUMNS. CONCEALED CONDUIT MAY BE RUN AT ANGLES OTHER THAN PARALLEL OR PERPENDICULAR TO BUILDING LINES BUT SHALL BE GROUPED IN A NEAT AND WORKMANLIKE MANNER. DISSIMILAR ANGLES AND CRISSCROSS ARRANGEMENT WILL NOT BE ACCEPTABLE.
- EXPOSED PARALLEL OR BANKED RACEWAYS SHALL BE RUN TOGETHER TO PROVIDE A NEAT APPEARANCE. BENDS IN PARALLEL OR BANKED RUNS SHALL BE MADE FROM THE SAME CENTER LINE SO THAT THE BENDS ARE PARALLEL. STANDARD MANUFACTURERS' BENDS ARE ALLOWED FOR GROUPS OF 90 DEGREE BENDS IF THE CONDUITS ARE CLOSE TO THE SAME SIZES. THIS SHALL REQUIRE THAT THERE BE A CHANGE IN THE PLANE OF THE RUN, SUCH AS FROM WALL TO CEILING, AND THE RACEWAYS OF THE SAME SIZE. IN OTHER CASES, PARALLEL RACEWAYS SHALL BE FIELD-BENT.
- CONDUITS SHALL NOT BE EMBEDDED IN FLOOR SLABS.
- COORDINATE LIGHTING FIXTURE LOCATIONS WITH ARCHITECTURAL REFLECTED FLEX PLAN.
- FINAL CONNECTION TO ALL CEILING MOUNTED DEVICES SHALL BE MADE WITH FLEX CONDUIT.
- EACH BRANCH CIRCUIT SHALL INCORPORATE A DEDICATED NEUTRAL CONDUCTOR WHERE NEUTRAL IS REQUIRED. THE NEUTRAL CONDUCTOR SHALL NOT BE SHARED BETWEEN CIRCUITS.
- EACH CONDUIT CONTAINING BRANCH CIRCUITS SHALL CONTAIN A GREEN EQUIPMENT GROUND CONDUCTOR.
- ALL RECEPTACLES LOCATED WITHIN 6 FEET OF A SINK OR WATER SOURCE SHALL INCLUDE INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER (GFI).
- SEAL AROUND ALL WALL PENETRATIONS.

KEYNOTES

- SURFACE MOUNT FIXTURE TO METAL CEILING. PROVIDE STRUT OR BLOCKING ABOVE FIXTURE IN CEILING CAVITY TO SUPPORT FROM BUILDING STRUCTURE.
- MOUNT RECEPTACLE ABOVE MICROWAVE SHELF. COORDINATE LOCATION WITH CABINET PROVIDER.
- COORDINATE REQUIREMENTS WITH UTILITY COMPANY. PROVIDE APPROVED METER BASE AND SOCKET PER UTILITY STANDARDS.
- INTERCONNECT ALARM DEVICES. ALL ALARM DEVICES SOUND UPON ACTIVATION OF A SINGLE DEVICE.
- WALL SENSOR SHALL BE PASSIVE INFRARED DUAL RELAY TYPE. CAPABLE OF INDIVIDUAL LIGHT AND FAN CONTROL. SENSOR SHALL TURN LIGHT AND FAN ON AUTOMATICALLY UPON INITIAL DETECTION. MINIMUM RUN TIME OF FAN SHALL BE SET INDEPENDENTLY FROM LIGHT RUN TIME. WALL SWITCH SHALL BE SENSOR SWITCH WSX-FAN OR APPROVED EQUAL. DEVICE AND FACEPLATE COLOR SHALL MATCH OTHER WIRING DEVICES.
- WALL SENSOR SHALL BE DUAL TECHNOLOGY TYPE. WITH DIMMING. ACUITY LIGHT NEXX POT LV DX OR APPROVED EQUAL. DEVICE AND FACEPLATE COLOR SHALL MATCH OTHER WIRING DEVICES. PROVIDE DIMMING POWER PACK ABOVE ACCESSIBLE CEILING CAVITY, UNLESS NOTED OTHERWISE.
- POWER PACK FOR BREAKROOM LIGHTING CONTROL. MOUNT DEVICE ON WALL ABOVE PANELBOARD.
- POWER PACK FOR LOCKER ROOM LIGHTING CONTROL. MOUNT IN ACCESSIBLE CEILING CAVITY.
- ROUTE EXTERIOR LIGHTING THROUGH PHOTO-CELL. EXTERIOR LIGHTS SHALL BE SET TO ON AT DUSK AND OFF AT DAWN.
- CONTROL PANEL FOR CARBON MONOXIDE DETECTORS. PANEL SHALL BE UL LISTED TO POWER AND MONITOR CONVENTIONAL DETECTORS AND HAVE INTEGRAL DISPLAY WITH NAVIGATION KEYS, SILENCE AND RESET KEYS, INTEGRAL STANDBY POWER BATTERY. PANEL SHALL PROVIDE CIRCUIT SUPERVISION FOR DETECTORS AND INCLUDE INDICATION LIGHTS FOR ALARM, TROUBLE, AND SUPERVISORY. CONTROL PANEL SHALL PROVIDE POWER TO DETECTOR SOUNDER OR SOUNDER BASES. PROVIDE CONTROL PANEL WITH DETECTORS FOR A COMPLETE AND OPERABLE CARBON MONOXIDE DETECTION SYSTEM. PROVIDE ALL REQUIRED SYSTEM PROGRAMMING. SUBMIT SHOP DRAWINGS FOR REVIEW FOR ALL COMPONENTS OF CONTROL PANEL AND DETECTORS.
- PROVIDE A 30A, 250V, 4 WIRE, NEMA 14-30R RECEPTACLE FOR OWNER SUPPLIED DRYER. COORDINATE LOCATION WITH ARCHITECT. PROVIDE A MATCHING CORB-SET FOR THE DRYER.

LANDIS SEWERAGE
AUTHORITY
NEW LOCKER ROOM /
BREAKROOM

BCCLT
CONSULTING ENGINEERS

Evanston, IL • Indianapolis, IN • Fort Wayne, IN • Louisville, KY •
Vineland, NJ

CONSULTANT

D//
F//

revisions:

#	DATE	RELEASED FOR BIDDING	DESCRIPTION
1	11/13/24	RELEASED FOR BIDDING	

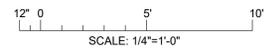
issued for:
BIDDING

project no: 24103
scale: As indicated
date: 11/13/2024

**ELECTRICAL PLANS,
LEGEND, AND
GENERAL NOTES**

sheet:

E100
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ELECTRICAL SPECIFICATIONS:

COMMON WORK

- THE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT CONFORMANCE WITH THE LATEST EDITION AND SUPPLEMENTS IN FORCE AT THE TIME OF PERMITTING OF THE 2020 NATIONAL ELECTRICAL CODE, THE RULES AND REGULATIONS OF THE NEW JERSEY UNIFORM BUILDING CODE, THE APPLICABLE STANDARDS OF THE NATIONAL FIRE PROTECTION ASSOCIATION, AND THE APPLICABLE REQUIREMENTS FOR THE OCCUPATIONAL SAFETY AND HEALTH ACT OF THE UNITED STATES DEPARTMENT OF LABOR. ALL MATERIALS AND EQUIPMENT EMPLOYED SHALL BE APPROVED BY AND BEAR THE LABEL OF THE UNDERWRITERS LABORATORIES, INC. IF OCCUPERS THAT DRAWINGS CONFLICT WITH ANY APPLICABLE CODE, THEN THIS CONTRACTOR SHALL IMMEDIATELY BRING SAME TO ATTENTION OF ARCHITECT OR HIS REPRESENTATIVE FOR RESOLUTION.
- ALL ELECTRICAL INSTALLATIONS SHALL MEET NATIONAL ELECTRICAL INSTALLATION STANDARDS AS ESTABLISHED BY THE NATIONAL ELECTRICAL CONTRACTOR ASSOCIATION (NECA).
- THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATE THE GENERAL DESIGN AND ARRANGEMENT OF THE PROPOSED WORK. THE EXACT ROUTING OF CIRCUIT AND FINAL LOCATIONS OF ALL ELECTRICAL EQUIPMENT, LIGHTING FIXTURES, AND OTHER SYSTEMS, UNLESS SPECIFICALLY DIMENSIONED ON THE DRAWINGS SHALL BE SUBJECT TO BUILDING AND STRUCTURAL CONDITIONS, GRID SYSTEMS, AND WORK OF OTHER TRADES INVOLVED IN THE CONSTRUCTION AND SUBJECT TO THE APPROVAL OF THE ARCHITECT. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE CONTRACT DOCUMENTS AND SHALL BE RESPONSIBLE FOR THE FINAL LOCATION OF HIS PARTICULAR EQUIPMENT TO SUIT FIELD CONDITIONS ENCOUNTERED AND TO AVOID INTERFERENCES WITH OTHER TRADES WORK WITHOUT EXTRA COST TO THE OWNER OR THE ARCHITECT. THE ARCHITECT RESERVES THE RIGHT TO MAKE MINOR CHANGES IN OUTLET AND EQUIPMENT LOCATIONS AT ANY TIME PRIOR TO ROUGH-IN OF THE ELECTRICAL WORK WITHOUT INCURRING ANY ADDITIONAL COSTS.
- CONTRACTOR SHALL PROVIDE A COORDINATION DRAWING SHOWING GENERAL ROUTING OF ALL DUCTWORK, ALL PIPES, CONDUITS, CABLES, ETC. BEFORE CONSTRUCTION COMMENCES OR MATERIAL ORDERING BY THE M.E.P. CONTRACTORS. THE COORDINATION DRAWING SHALL BE REVIEWED BY THE OWNER, ARCHITECT AND ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL TRADES. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE CONTRACTOR WITH INFORMATION REQUIRED FOR THE COORDINATION DRAWING. ANY REWORK REQUIRED DUE TO THE LACK OF INFORMATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL COORDINATE ELECTRICAL INSTALLATIONS WITH PLUMBING CONTRACTOR, HVAC CONTRACTOR AND GENERAL CONTRACTOR. DUCT ROUTING HAS FIRST PRIORITY.
- WHERE SIZES ARE NOT PROVIDED FOR MATERIAL AND EQUIPMENT, THE MATERIAL AND EQUIPMENT SHALL BE SIZED IN ACCORDANCE WITH THE LATEST ADDITION OF THE NATIONAL ELECTRICAL CODE AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- THIS CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT, APPARATUS, MATERIALS, AND WORKMANSHIP ENTERING INTO THE CONTRACT TO BE THE BEST OF ITS RESPECTIVE KIND AND SHALL REPLACE ALL PARTS AT HIS EXPENSE WHICH ARE DEFECTIVE WITHIN ONE YEAR FROM FINAL ACCEPTANCE OF THE WORK BY THE ARCHITECT. ITEMS OF EQUIPMENT WHICH MAY HAVE LONGER WARRANTIES SHALL HAVE WARRANTIES AND GUARANTEES COMPLETED, IN ORDER, AND IN EFFECT AT THE TIME OF FINAL ACCEPTANCE OF THE WORK BY THE ARCHITECT. THIS CONTRACTOR SHALL FURNISH ALL SUCH WARRANTIES AND GUARANTEES AT THE TIME OF FINAL ACCEPTANCE OF THE WORK.
- ALL WORK THAT IS NOT INSTALLED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS SHALL BE REPAIRED OR REPLACED AT THE DIRECTION OF THE ARCHITECT.
- SUBMITTALS**
 - SUBMITTAL DATA SHALL INCLUDE SPECIFICATION DATA, SUCH AS METAL GAUGES, FINISHES, OPTIONAL ACCESSORIES; EVEN THOUGH SUCH EQUIPMENT AND MATERIALS MAY BE AS SPECIFIED. IN ADDITION, THE SUBMITTAL DATA SHALL INCLUDE PERFORMANCE (CERTIFICATION) DATA, WIRING DIAGRAMS WHERE APPLICABLE, ACCURATE DIMENSIONAL DATA, AND A RECOMMENDED SPARE PARTS LIST. OUTLINE OR DIMENSIONAL DRAWINGS ALONE ARE NOT ACCEPTABLE.
 - NO ROUGH-IN OR CONNECTIONS SHALL BE DONE UNTIL ACCEPTED EQUIPMENT SUBMITTALS ARE IN THE HANDS OF THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ACCEPTED DRAWINGS AND TO MAKE ALL CONNECTIONS IN THE NEAREST AND MOST WORKMANLIKE MANNER POSSIBLE. THIS CONTRACTOR SHALL COORDINATE WITH ALL OTHER CONTRACTORS HAVING ANY CONNECTIONS OR ROUGH-IN TO THE EQUIPMENT.
 - IN GENERAL, NORMAL CATALOG INFORMATION (WITH THE PARTICULAR ITEMS UNDERLINED OR OTHERWISE DENOTED AS BEING THE SUBMITTED ITEM) WILL BE ACCEPTED AS SUBMITTAL DATA. INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS MUST BE THAT INFORMATION SPECIFICALLY APPLICABLE TO THE ITEMS FURNISHED, WHICH IS ORDINARILY SUPPLIED WITH THE EQUIPMENT TO THE OWNER FOR ANY MODIFICATIONS INDICATED. WIRING DIAGRAMS MUST BE CORRECT FOR THE APPLICATION. GENERALIZED WIRING DIAGRAMS SHOWING ALTERNATE METHODS OF CONNECTION, WILL NOT BE ACCEPTABLE UNLESS ALL UNRELATED SECTIONS ARE MARKED OUT. SUBMITTAL DATA SHEETS WHICH INDICATE SEVERAL DIFFERENT MODEL NUMBERS, FIGURE NUMBERS, OPTIONAL ACCESSORIES, OR INSTALLATION ARRANGEMENTS SHALL BE CLEARLY MARKED TO INDICATE THE SPECIFIC ITEMS OF EQUIPMENT BEING FURNISHED. SAMPLES AND CERTIFICATES SHALL BE FURNISHED AS REQUESTED. SUBMITTAL DATA MUST BE COMPLETE FOR EACH PIECE OF EQUIPMENT; PECULIAR DATA WILL NOT BE PROCESSED.
 - IT SHALL BE NOTED THAT ACCEPTANCE OF SHOP DRAWINGS BY THE ARCHITECT APPLIES ONLY TO GENERAL DESIGN, ARRANGEMENT, TYPE, CAPACITY, AND QUALITY. SUCH ACCEPTANCE DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR FURNISHING THE PROPER EQUIPMENT.
 - CORRECTIONS OR COMMENTS MADE ON THE SUBMITTALS DURING THE ARCHITECT'S REVIEW DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS. THE ARCHITECT'S REVIEW OF SUBMITTALS IS ONLY FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT AND GENERAL CONFORMANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S RESPONSIBILITY INCLUDES, BUT IS NOT LIMITED TO, CONFORMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.

ELECTRICAL EQUIPMENT

- PANEL BOARDS**
 - DESIGN BASIS: SQUARE D N200 SERIES (OR APPROVED SIMILAR) WITH NEUTRAL BAR, GROUND BAR AND ISOLATED GROUND BAR WHERE INDICATED. PANELS SHALL BE RATED AS INDICATED IN PANEL SCHEDULES AND ONE-LINE DIAGRAM DRAWING. PROVIDE PANELS WITH MAIN BREAKER OR MAIN LUGS AS SCHEDULED AND COMPLETE WITH TYPE, QUANTITY OF BRANCH BREAKERS (BOLT-ON TYPE) INDICATED. PROVIDE WITH DOOR-IN-DOOR COVER. INSTALL PANELS FLUSH OR SURFACE MOUNTED AS INDICATED/REQUIRED.

- SAFETY DISCONNECT SWITCHES**
 - DESIGN BASIS: SQUARE D CLASS 3110 - HEAVY DUTY TYPE (OR APPROVED SIMILAR). REFERENCE PLAN DRAWINGS AND SCHEDULES FOR DISCONNECT SIZES AND RATINGS INCLUDING FUSED NON-FUSED AND NEMA CLASS RATINGS.

MANUAL AND MAGNETIC MOTOR CONTROLLERS

- MANUAL MOTOR CONTROLLER** - DESIGN BASIS: SQUARE D CLASS 2510 (OR APPROVED SIMILAR) FRACTIONAL HORSEPOWER MANUAL STARTER WITH MELTING ALLOY TYPE THERMAL OVERLOAD RELAY. PROVIDE WITH PILOT LIGHT WHERE INDICATED ON DRAWINGS.

FUSES

- TYPE RK-1: 250-V, ZERO TO 600A, 200KAIC, TIME DELAY (MOTOR BRANCH CIRCUITS)
- TYPE RK-5: 250-V, ZERO TO 600A, 200KAIC, TIME DELAY (OTHER BRANCH CIRCUITS)

RACEWAYS & BOXES

- METAL CONDUIT**
 - LISTING AND LABELING: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
 - GRC: COMPLY WITH ANSI C80.1 AND UL 6.
 - IMC: COMPLY WITH ANSI C80.6 AND UL 1242.
 - EMT: COMPLY WITH ANSI C80.3 AND UL 797.
 - FMC: COMPLY WITH UL 120C-COATED STEEL.
 - LFMC: FLEXIBLE STEEL CONDUIT WITH PVC JACKET AND COMPLYING WITH UL 300.

NONMETALLIC CONDUIT

- LISTING AND LABELING: NONMETALLIC CONDUIT SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- RNC: TYPE EPC-40-PVC, COMPLYING WITH NEMA TC 2 AND UL 651 UNLESS OTHERWISE INDICATED.

BOXES

- SHEET METAL OUTLET AND DEVICE BOXES: COMPLY WITH NEMA OS 1 AND UL 514.
- CAST METAL OUTLET AND DEVICE BOXES: COMPLY WITH NEMA FB 1, FERROUS ALLOY OR ALUMINUM, TYPE FD, WITH GASKETED COVER.
- NONMETALLIC OUTLET AND DEVICE BOXES: COMPLY WITH NEMA OS 2 AND UL 514C.

ELECTRICAL SPECIFICATIONS (CONT.):

APPLICATION FOR RACEWAYS & BOXES:

- OUTDOORS: APPLY RACEWAY PRODUCTS AS SPECIFIED BELOW UNLESS OTHERWISE INDICATED:**
 - EXPOSED CONDUIT: GRC OR IMC.
 - CONCEALED CONDUIT: ABOVEGROUND: GRC IMC OR EMT.
 - UNDERGROUND CONDUIT: RNC, TYPE EPC-40-PVC, DIRECT BURIED.
 - CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, ELECTRIC SOLENOID, OR MOTOR-DRIVEN EQUIPMENT): LFMC OR LFNC.
 - BOXES AND ENCLOSURES: ABOVEGROUND: NEMA 250, TYPE 3R.
- INDOORS: APPLY RACEWAY PRODUCTS AS SPECIFIED BELOW UNLESS OTHERWISE INDICATED:**
 - EXPOSED, NOT SUBJECT TO PHYSICAL DAMAGE: EMT.
 - EXPOSED, NOT SUBJECT TO SEVERE PHYSICAL DAMAGE: EMT.
 - EXPOSED AND SUBJECT TO SEVERE PHYSICAL DAMAGE: GRC OR IMC. RACEWAY LOCATIONS INCLUDE KITCHEN AREA.
 - CONCEALED IN CEILINGS AND INTERIOR WALLS AND PARTITIONS: EMT.
 - CONNECTION TO VIBRATING EQUIPMENT (INCLUDING ELECTRIC SOLENOID OR MOTOR-DRIVEN EQUIPMENT): FMC, EXCEPT USE LFMC IN DAMP OR WET LOCATIONS.
 - DAMP OR WET LOCATIONS: GRC OR IMC.
 - BOXES AND ENCLOSURES: NEMA 250, TYPE 1.
 - MINIMUM RACEWAY SIZE: 12.5 INCH TRADE SIZE.
 - MOUNT BOXES AT HEIGHTS INDICATED ON DRAWINGS. IF MOUNTING HEIGHTS OF BOXES ARE NOT INDIVIDUALLY INDICATED, GIVE PRIORITY TO ADA REQUIREMENTS. INSTALL BOXES WITH HEIGHT MEASURED TO BOTTOM OF BOX UNLESS OTHERWISE INDICATED.
 - HORIZONTALLY SEPARATE BOXES MOUNTED ON OPPOSITE SIDES OF WALLS SO THEY ARE NOT IN THE SAME VERTICAL CAVITY.

WIRING AND RACEWAYS

- ALL WIRING SHALL BE COPPER THIN/THIN WITH A MINIMUM SIZE OF 12 AWG. ALL FEEDERS AND BRANCH CIRCUITS SHALL BE SINGLE CONDUCTORS IN RACEWAY. CONCEAL BRANCH CIRCUITS AND FEEDERS WITHIN WALLS, CEILINGS, AND BENEATH FLOORS, UNLESS NOTED OTHERWISE. BRANCH CIRCUITS AND FEEDERS SHALL NOT BE ENCASED WITHIN FLOOR SLABS NOR THERMOPLASTIC CONDUCTOR SHALL BE PULLED THROUGH RACEWAYS AT AMBIENT TEMPERATURES BELOW 33 DEG. F.
- METAL CLAD CABLE (TYPE MC) MAY BE USED FOR CONCEALED BRANCH CIRCUITS WITHIN WALL CAVITIES TO WIRING DEVICES. MC CABLE SHALL NOT BE USED FOR HOMERUNS OR FOR ROUTING CIRCUITS BETWEEN ROOMS. PROVIDE ANTI-SHORT BUSHINGS AT TERMINATIONS. PROVIDE METAL STUD GROMMETS WHERE ROUTING MC CABLE THROUGH METAL STUDS. MC CABLE SHALL BE PROPERLY SUPPORTED AND SERVICED PER THE NEC AND AS INDICATED BY THE CABLE MANUFACTURER.

GROUNDING AND BONDING

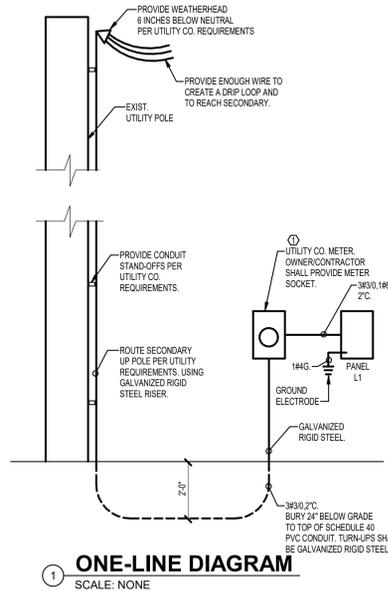
- ALL GROUNDING AND BONDING INSTALLATIONS SHALL CONFORM NFPA 70 - NEC ARTICLE 250 IN ITS ENTIRETY AND WITH UL-467.
- USE ONLY CADWELDED CONNECTIONS FOR GROUNDING OF MAIN SERVICE AND GRID.

WIRING DEVICES

- WIRING DEVICES, COMPONENTS AND ACCESSORIES SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- OBTAIN EACH TYPE OF WIRING DEVICE AND ASSOCIATED WALL PLATE FROM SINGLE SOURCE FROM SINGLE MANUFACTURER.
- ALL NORMAL SOURCE POWER WIRING DEVICES SHALL BE IVORY WITH IVORY THERMOPLASTIC NYLON PLATES.
- CONVENIENCE RECEPTACLES SHALL BE DUPLEX TYPE AND SHALL BE 120V, 20A NEMA 5-20R CONFIGURATION. RECEPTACLES SHALL COMPLY WITH NEMA WD 1, NEMA WD 6, UL-498, AND UL-94 CLASS A. RECEPTACLES SHALL INCLUDE INDICATOR LIGHT THAT SHOWS WHEN THE GFCI HAS MALFUNCTIONED OR NO LONGER PROVIDES PROPER GFCI PROTECTION.
- TOGGLE SWITCHES SHALL BE SINGLE POLE, THREE-WAY AND/OR FOUR-WAY AS INDICATED ON DRAWINGS. SWITCHES SHALL BE RATED 20A - 120/277V AND SHALL COMPLY WITH NEMA WD 1 AND UL 20.
- LINE VOLTAGE OCCUPANCY SENSOR WALL SWITCH SHALL BE SENSOR SWITCH MODEL WXS P0T SA (OR APPROVED SIMILAR), DUAL TECHNOLOGY, MANUAL-ON AND AUTO-OFF. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- LOW VOLTAGE OCCUPANCY SENSOR WALL SWITCH SHALL BE NLIGHT MODEL NWSX P0T XX (OR APPROVED SIMILAR), DUAL TECHNOLOGY, MANUAL-ON AND AUTO-OFF. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- LINE VOLTAGE OCCUPANCY SENSOR DIMMING WALL SWITCH SHALL BE SENSOR SWITCH MODEL WXS P0T D SA (OR APPROVED SIMILAR), DUAL TECHNOLOGY, MANUAL-ON AND AUTO-OFF. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. VERIFY DIMMER FULLY COMPATIBLE WITH THE LIGHTING FIXTURE(S) INSTALLED WHICH DEVICE CONTROLS PRIOR TO PURCHASE/INSTALLATION. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH LIGHTING FIXTURE AND VENDOR FOR FULL FIXTURE RANGE DIMMING CAPABILITY.

PROJECT DOCUMENTATION AND CLOSEOUTS

- PROVIDE ONE SET OF ACCURATE RECORD DRAWINGS.
- PROVIDE ELECTRONIC MEDIA AND TWO SETS OF OPERATING AND MAINTENANCE MANUALS AND WARRANTIES IN 3-RING BINDER UPON COMPLETION OF PROJECT. OPERATION AND MAINTENANCE MANUALS SHALL INCLUDE AT A MINIMUM THE FOLLOWING:
- SUBMITTAL DATA INDICATE EQUIPMENT RATINGS, SELECTED OPTIONS AND MAINTENANCE & TESTING REQUIREMENTS.
- OPERATION AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRED MAINTENANCE. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY INDICATED.
- A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE.



ONE-LINE DIAGRAM

SCALE: NONE

LIGHTING FIXTURE SCHEDULE										
TYPE	DESCRIPTION	MANUFACTURER	SERIES	LAMP			BALLAST / DRIVER	VOLTAGE	MOUNTING	
				TYPE	NO.	LUMENS				WATTS
A	2x4 LED EDGE LIT FLAT PANEL LIGHTING FIXTURE, WHITE POWDER COATED ALUMINUM FRAME, SATIN WHITE ACRYLIC LENS.	LITHONIA	EPANL-2X4-4000LM-80CRI-35K-MIN1-MVOLT	LED 3500K	--	4241	38	0-10V, DIMMING TO 1%	120-277V	RECESSED
B	2x2 LED EDGE LIT FLAT PANEL LIGHTING FIXTURE, WHITE POWDER COATED ALUMINUM FRAME, SATIN WHITE ACRYLIC LENS.	LITHONIA	EPANL-2X2-4000LM-80CRI-35K-MIN1-MVOLT	LED 3500K	--	4121	37	0-10V, DIMMING TO 1%	120-277V	RECESSED
C1	1x4 LED LINEAR LIGHTING FIXTURE, WHITE POWDER COATED ALUMINUM FRAME, WIDE DIFFUSE ACRYLIC LENS.	LITHONIA	CLX-1X4-5000LM-SEF-FDL-WD-MVOLT-G21-35K-80CRI	LED 3500K	--	5000	35	0-10V, DIMMING TO 1%	120-277V	SURFACE
C2	1x4 LED LINEAR LIGHTING FIXTURE, WHITE POWDER COATED ALUMINUM FRAME, WIDE DIFFUSE ACRYLIC LENS.	LITHONIA	CLX-1X4-7000LM-SEF-FDL-WD-MVOLT-G21-35K-80CRI	LED 3500K	--	6745	49	0-10V, DIMMING TO 1%	120-277V	SURFACE
E	LED WALL PACK WITH SELECTABLE LUMEN OUTPUT, AND SELECTABLE COLOR TEMPERATURE, COLD WEATHER STARTING, (-40 DEGREE F) DIE-CAST ALUMINUM HOUSING, TEMPERED LENS.	RAB	WP2XFU60	LED 3500K	--	5214 - 9140	35,45,60	HIGH POWER FACTOR	120/277V	WALL
X1	SINGLE SIDED LED EGRESS EXIT SIGN WITH TWIN EMERGENCY LAMP HEADS, WHITE THERMOPLASTIC HOUSING, RED STENCIL LETTERS, EMERGENCY BATTERY PACK (90 MIN) AND SELF DIAGNOSTICS.	LITHONIA	ECRG-RD-M6	LED	--		2	--	120/277	UNIVERSAL
X2	SINGLE SIDED LED EGRESS EXIT SIGN WITH TWIN EMERGENCY LAMP HEADS, WHITE THERMOPLASTIC HOUSING, RED STENCIL LETTERS, EMERGENCY BATTERY PACK (90 MIN) AND SELF DIAGNOSTICS), AND REMOTE LAMP CAPABILITY.	LITHONIA	ECRG-HO-RD-M6	LED	--		4.3	--	120/277	UNIVERSAL
X3	TWIN LED EMERGENCY REMOTE HEAD, ROUND LIGHT HOUSING, AND GREY HOUSING.	LITHONIA	ERE-GYT-WP-RD	LED	2	--	1.5	--	3.6V	WALL

Branch Panel: L1										
Location: UTILITY ROOM			Volts: 120/240 Single			Mains Type: Main Circuit Breakers				
Supply From:			Phases: 1			Mains Rating: 200 A				
Mounting: Surface			Wires: 3							
Enclosure: NEMA 1			A.I.C. Rating: 10KAIC							
Notes:										
CKT	Circuit Description	Trip	Poles	A	B	Poles	Trip	Circuit Description	CKT	
1	Lighting, Locker Room, Break Room	20 A	1	338 VA	800 VA	1	20 A	Recepts, Locker Rm.	2	
3	Lighting, Laundry, B/Rooms, Strm, Utility...	20 A	1		268 VA	600 VA	1	20 A	Recepts, Break Rm.	4
5	Lighting, Exterior	20 A	1	232 VA	600 VA	1	20 A	Recepts, Break Rm.	6	
7	AHU-1, Utility Rm.	20 A	1	1920 VA	960 VA	1	20 A	Ref. Recept, Break Rm.	8	
9	AHU-2, Utility Rm.	20 A	1	1692 VA	400 VA	1	20 A	GFI Recept, Break Rm.	10	
11	HP-1, Exterior	40 A	2	2676 VA	400 VA	1	20 A	GFI Recept, Break Rm.	12	
13	--	--	--	2676 VA	1200 VA	1	20 A	MW Recept, Break Rm.	14	
15	HP-2, Exterior	40 A	2	2676 VA	200 VA	1	20 A	Washer Recept, Laundry Rm.	16	
17	--	--	--	2676 VA	200 VA	1	20 A	Washer Recept, Laundry Rm.	18	
19	Tankless Water Heaters, Utility Rm.	20 A	1	600 VA	550 VA	1	20 A	Smoke Alarms, Util. Bath., Laundr. Br.Rm.	20	
21	Unit Heater UH-1, Utility Rm.	20 A	2	1500 VA	400 VA	1	20 A	GFI Recept.s Laundry Rm.	22	
23	--	--	--	1500 VA	600 VA	1	20 A	GFI Recept.s Bathrooms	24	
25	Dryer Receptacle, Laundry Rm.	30 A	2	2100 VA	600 VA	1	20 A	Recept.s Store Rm.	26	
27	--	--	--	2100 VA	400 VA	1	20 A	Recept.s Utility Rm.	28	
29	Dryer Receptacle, Laundry Rm.	30 A	2	2100 VA	800 VA	1	20 A	WP,GFI Recept.s Exterior	30	
31	--	--	--	2100 VA	0 VA	1	20 A	Spare	32	
33	Spare	20 A	1	0 VA	0 VA	1	20 A	Spare	34	
35	Spare	20 A	1	0 VA	0 VA	0 VA	0 VA	Spare	36	
37	Spare	20 A	1	0 VA	0 VA	1	20 A	Spare	38	
39	Spare	20 A	1	0 VA	0 VA	0 VA	0 VA	Spare	40	
41	Spare	20 A	1	0 VA	0 VA	1	20 A	Spare	42	
				Total Load:	18314 VA	17550 VA				
				Total Amps:	153 A	146 A				

Legend:

Panel Totals			
Total Conn. Load:	35564 VA		
Total Est. Demand:	28576 VA		
Total Conn. Current:	148 A		
Total Est. Demand:	119 A		

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THE LANDIS SEWERAGE AUTHORITY

LANDIS SEWERAGE AUTHORITY

AUTHORITY

NEW LOCKER ROOM / BREAKROOM



BCCLT CONSULTING ENGINEERS

Evansville, In • Indianapolis, In • Fort Wayne, In • Louisville, Ky • Vinland, NJ

CONSULTANT

D// F//

revisions:

#	DATE	RELEASED FOR BIDDING	DESCRIPTION
1	11/13/24		

issued for:

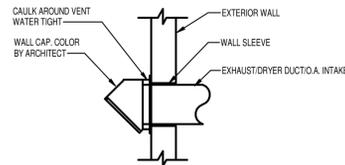
BIDDING

project no: 24103
scale: Scale: None
date: 11/13/2024

SPECIFICATIONS, SCHEDULES, AND DETAILS

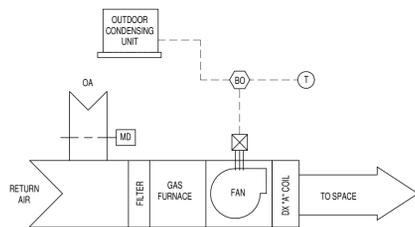
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E200
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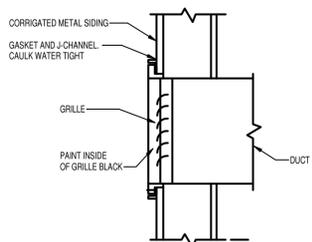
- NOTES:
- FOR DRYER EXHAUST PROVIDE WALL CAP WITH BACKDRAFT DAMPER. FOR BATHROOM EXHAUST AND O.A. INTAKE PROVIDE WALL CAP WITH INSECT SCREEN IN LIEU OF BACKDRAFT DAMPER.
 - PROVIDE FLASHING AND WEATHER TIGHT SEAL AROUND DUCT WHERE DUCTWORK PENETRATES EXTERIOR WALL.

1 SIDEWALL EXHAUST/DRYER/O.A. DETAIL
SCALE: NONE

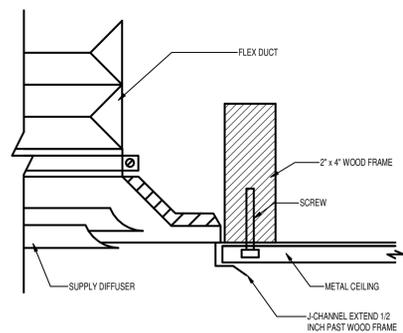


- LOCAL PROGRAMMABLE ROOM THERMOSTAT SHALL PROVIDE FULL CONTROL ADJUSTMENT OF SPLIT SYSTEM OUTDOOR CONDENSING UNIT/COMPRESSOR/DX REFRIGERANT SYSTEM AND INDOOR FURNACE.
- PROGRAMMABLE THERMOSTATS SHALL HAVE OCCUPIED AND UNOCCUPIED SETTINGS. UNITS SHALL BE ON IN OCCUPIED MODE AND CYCLE ON/OFF IN UNOCCUPIED MODE AS REQUIRED.
 - IN OCCUPIED MODE FURNACE/CONDENSING UNIT SHALL PROVIDE HEATING OR COOLING AS REQUIRED TO MEET THE SPACE SETPOINT. OA DAMPER SHALL BE OPEN TO MINIMAL POSITION.
 - IN UNOCCUPIED MODE, INDOOR OUTDOOR UNIT SHALL CYCLE ON/OFF AS REQUIRED TO MEET SPACE SETPOINT. OA DAMPER SHALL BE CLOSED IN UNOCCUPIED MODE.

2 FURNACES AND CONDENSING UNIT CONTROLS
SCALE: NONE



3 SIDEWALL GRILLE MOUNTING DETAIL
SCALE: NONE

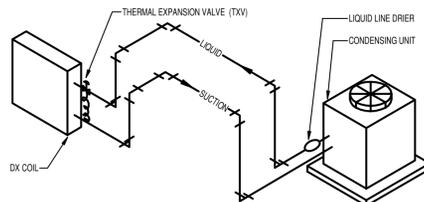


4 SUPPLY DIFFUSER THROUGH METAL CEILING DETAIL
SCALE: NONE

HVAC SYMBOLS AND ABBREVIATIONS LEGEND

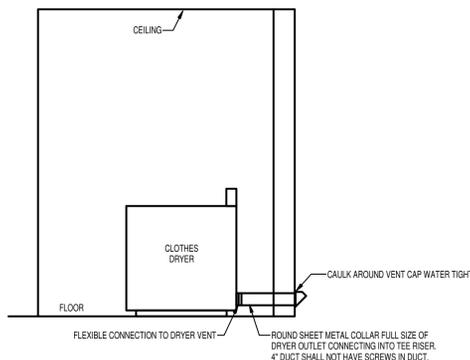
SYMBOLS	3D	2D	DESCRIPTION
			ADJUSTABLE ROOM THERMOSTAT
			SUPPLY DUCT UP-DOWN
			RETURN DUCT UP-DOWN
			EXHAUST DUCT UP-DOWN
			SUPPLY AIR DIFFUSER
			EXHAUST FAN

E.A.	EXHAUST AIR
O.A.	OUTSIDE AIR
S.A.	SUPPLY AIR
R.A.	RETURN AIR
CAP.	CAPACITY
PRESS.	PRESSURE
TEMP.	TEMPERATURE
MIN.	MINIMUM
MAX.	MAXIMUM
CONC.	CONCRETE
AHU	AIR HANDLING UNIT
SF	SUPPLY FAN
RF	RETURN FAN
BTUH	BTUH
A.F.F.	ABOVE FINISHED FLOOR
EF	EXHAUST FAN
TYP.	TYPICAL
CONN.	CONNECTION
HTR	HEATER
VAV	VARIABLE AIR VOLUME
CLG.	CEILING
T.C.	TEMPERATURE CONTROL
DN.	DOWN
MECH.	MECHANICAL
RM	ROOM
S.P.	STATIC PRESSURE
SHT.	SHEET
ASSOC.	ASSOCIATED
REF.	REFERENCE



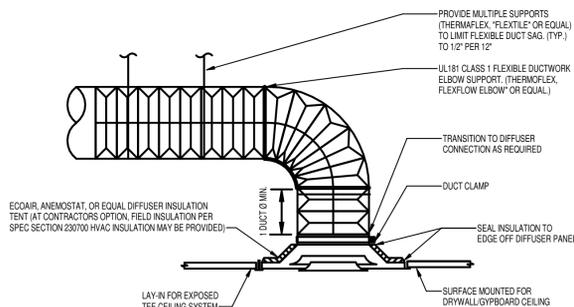
- NOTES:
- SEE MANUFACTURER'S PIPING DIAGRAM FOR SIZING, CHARGING AND LONG LINE REQUIREMENTS.
 - SLOPE SUCTION LINE TOWARDS COMPRESSOR WHERE POSSIBLE.
 - PVC SLEEVES AT ALL WALL, FLOOR AND CEILING PENETRATIONS.
 - SEE SPEC SECTION FOR DETAILS ON TESTING PROCEDURES.

5 CONDENSER/HEAT PUMP PIPING
SCALE: NONE



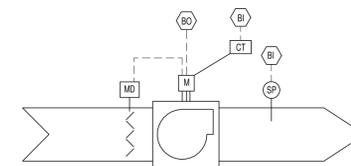
- NOTE:
- PROVIDE DRYER PLACARD, PERMANENT LABEL ON WALL BEHIND DRYER. SHALL LIST ACTUAL NET EQUIVALENT LENGTH OF DRYER DUCT.

6 DRYER CONNECTION DETAIL
SCALE: NONE



- NOTES:
- FLEX DUCT TO BE 4' MIN. AND 5' MAX. IN LENGTH.
 - CONTRACTOR HAS THE OPTION OF INSTALLING AN INSULATED SHEET METAL TEE WITH CAP IN LIEU OF FLEX FLOW ELBOW.

7 SUPPLY DIFFUSER CONNECTION DETAIL
SCALE: NONE



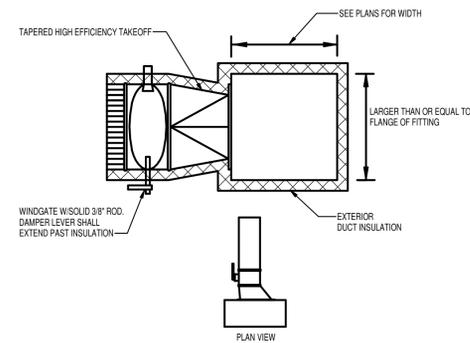
EXHAUST FANS CONTROL DIAGRAM

SCALE: NONE

EXHAUST FANS SEQUENCE OF OPERATION

EF-1.2.3
FAN SHALL BE INTERLOCKED TO OPERATE WITH BATHROOM LIGHTSWITCH.

8 EXHAUST FAN CONTROLS
SCALE: NONE



- NOTE:
- MINIMUM OF 6 SCREWS SHALL BE USED TO SECURE TO DUCT MAIN.
 - HETO DESIGNED AND TESTED TO SURPASS SMAACNA CLASS 3 LEAKAGE STANDARDS.
 - PRE-SEALED WITH GASKET MADE OF EPDM RUBBER AND CO-POLYMER.
 - ROUND TO ROUND USED TAPERED OR SHOE WITH SADDLE AND DAMPER.

9 VOLUME DAMPER TAPERED FITTING W/ DAMPER DETAIL
SCALE: NONE

GENERAL NOTES:

- CONTRACTOR SHALL PROVIDE MANUFACTURER'S RECOMMENDED ACCESS TO ALL EQUIPMENT. ACCESS SHALL BE REMOVABLE CEILING TILES OR CEILING ACCESS PANELS. COORDINATE LOCATION OF MECHANICAL EQUIPMENT WITH OTHER TRADES TO AVOID CONFLICT.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR LOCATION OF GRILLES AND DIFFUSERS.
- FOR ALL WALLS THAT ARE EXTENDED TO STRUCTURE PROVIDE SLEEVES FOR PIPING AND DUCTWORK PENETRATING WALLS (REFERENCE SPECIFICATIONS).
- DRAWINGS ARE DIAGRAMMATIC. PROVIDE ADDITIONAL OFFSETS, TRANSITIONS, ETC. AS REQUIRED TO AVOID INTERFERENCE'S ENCOUNTERED. FULL COORDINATION DRAWINGS WITH OTHER TRADES ARE REQUIRED.
- IF THE CONTRACTOR DOES NOT CLEARLY UNDERSTAND THESE PLANS OR IS NOT SURE OF THEIR MEANING. HE SHOULD OBTAIN THE ARCHITECTS WRITTEN EXPLANATION AND INTERPRETATION PRIOR TO SUBMITTING THEIR BID, SINCE THE CONTRACTORS WILL BE HELD RIGIDLY TO THE INTERPRETATION OF THE ARCHITECT.
- CUT, PATCH, REPAIR AND RESTORE TO ORIGINAL CONDITION TO ALL OPENINGS IN WALLS, FLOORS, CEILINGS, ETC. WHERE REQUIRED. PATCHING SHALL MATCH EXISTING CONSTRUCTION & FINISHES. COORDINATE ALL PATCHING AND FINISHES WITH ARCHITECT.
- PROVIDE BALANCING DAMPERS FOR ALL S.A., R.A. AND E.A. DUCT BRANCH TAKEOFFS AND RUNOUTS TO GRILLES, DIFFUSERS, ETC.
- USE RADIUS ELBOWS. IF SPACE ISN'T AVAILABLE, MITERED ELBOWS ARE ACCEPTABLE. PROVIDE TURNING VANES IN ALL RECTANGULAR MITERED ELBOWS. SUPPLY AND RETURN DUCTWORK.
- INSTALL FLEX DUCTS FULLY EXTENDED. DO NOT BEND DUCTS ACROSS SHARP CORNERS. BENDS OF FLEX DUCTS SHALL NOT EXCEED A MINIMUM OF 1.5 DUCT DIAMETERS. AVOID CONTACT OF FLEX DUCT WITH METAL FIXTURES, WATER LINES, PIPES, OR CONDUITS.

AIR BALANCING SCOPE:

- BALANCE ALL GRILLES AND DIFFUSERS TO THE VALUES INDICATED.
- RECORD FINAL AIR FLOW RATES WITHIN THE PROJECT AREA. AT THE AIR HANDLING UNIT AND EXHAUST FAN(S). TOTAL AIR FLOWRATES WITHIN THE PROJECT AREA AND AT THE SOURCE EQUIPMENT SHALL BE WITHIN 10% OF EXISTING CONDITION / DESIGN FLOW RATES.



THE LANDIS SEWERAGE AUTHORITY

LANDIS SEWERAGE
AUTHORITY
NEW LOCKER ROOM /
BREAKROOM

BCCLT
CONSULTING ENGINEERS

Evansville, In • Indianapolis, In • Fort Wayne, In • Louisville, Ky •
Vineland, NJ

CONSULTANT

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revisions:

1 11/13/24 RELEASED FOR BIDDING
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date: 11/13/2024

MECHANICAL
GENERAL NOTES,
LEGEND AND
DETAILS

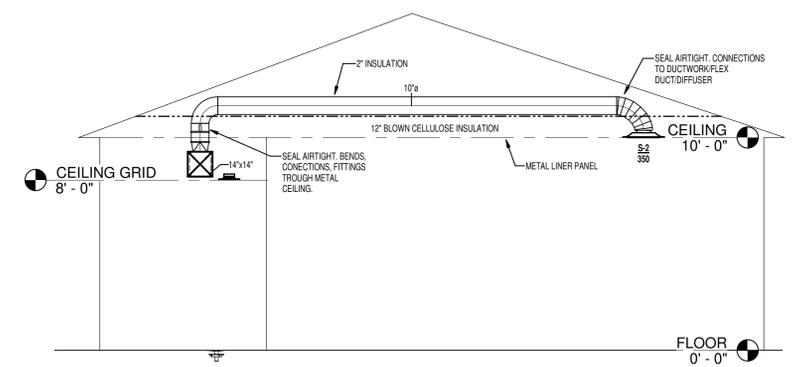
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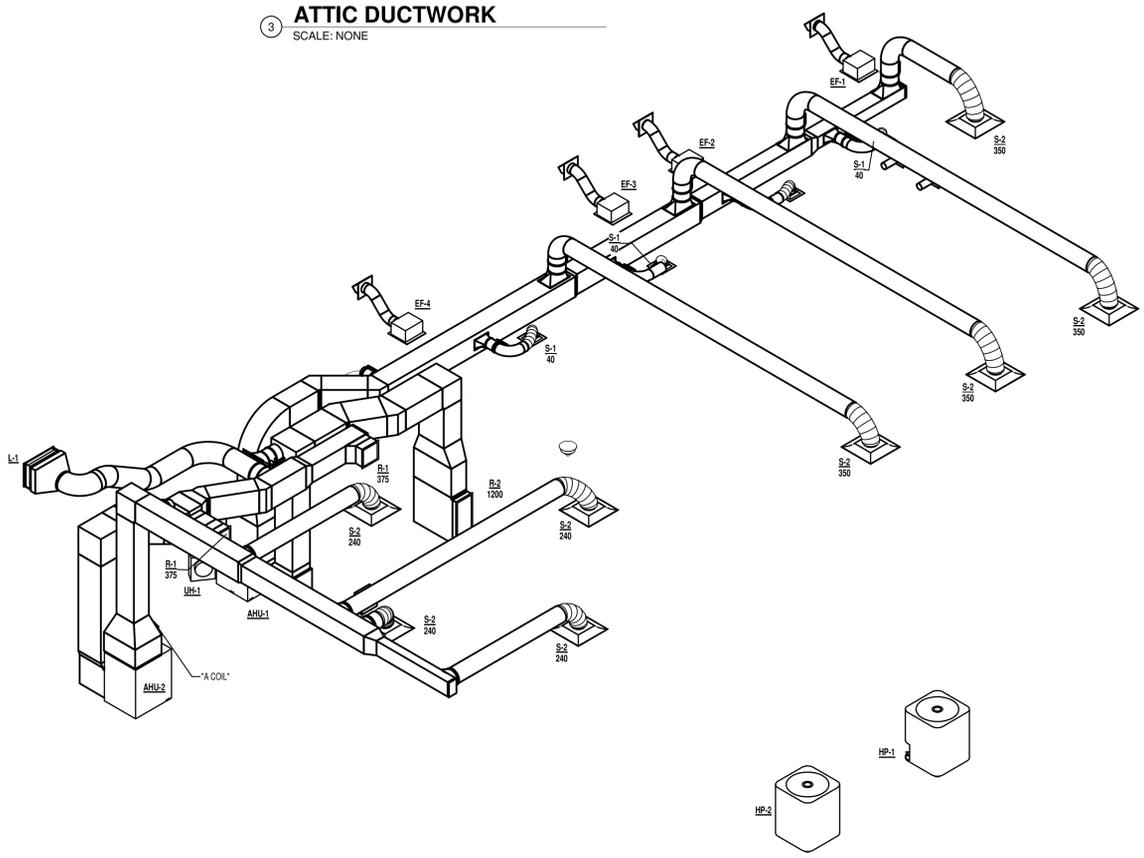
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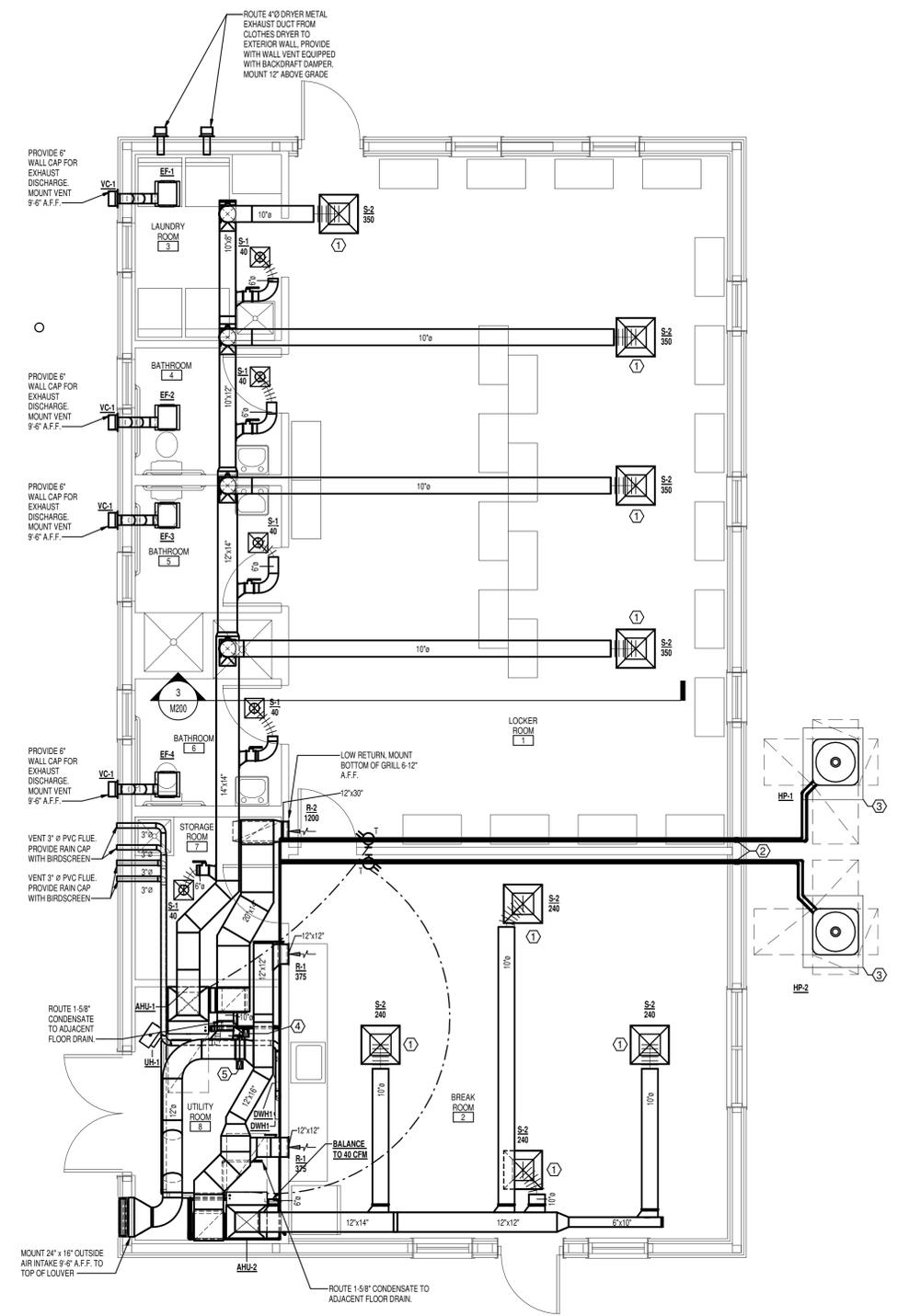
1. PROVIDE DIFFUSER WITH INTEGRAL VOLUME DAMPER.
2. ROUTE REFRIGERANT LINES DOWN INSIDE WALL, TURN OUT 8" ABOVE GRADE TO CONDENSERS. INSULATE WITH 1'-1/2" INSULATION AND WRAP WITH METAL COVER.
3. INSTALL ON 4" CONCRETE PAD. THE PAD SHOULD EXCEED HEAT PUMP HEIGHT AND WIDTH DIMENSIONS BY 4". BOLT IN PLACE WITH (4) 3/8" LAG BOLTS, USING LARGE METAL WASHERS.
4. MOTORIZED DAMPER TO OPEN WHEN FAN STARTS. BALANCE OPEN DAMPER TO 400 CFM.
5. MOTORIZED DAMPER TO OPEN WHEN FAN STARTS. BALANCE OPEN DAMPER TO 250 CFM.



3 ATTIC DUCTWORK
SCALE: NONE



2 MECHANICAL ISO VIEW
SCALE: NONE



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

Landis Sewerage Authority Locker Room: Required OA Cal.

Unit	Room #	Room Tag	Area	cfm/sqft	Occupant Density	OA cfm/person	Required OA	Unit OA cfm
AHU-1	1	Locker Room	780	0.25	20.00	0	195	209
	3	Laundry Room	68	0.12	0.27	10	11	
	4	Bath Room	43	0	0.04	0	0	
	5	Bath Room	54	0	0.05	0	0	
	7	Storage Room	56	0.06	0.00	5	3	
	6	Bath Room	53	0	0.05	0	0	
AHU-2	2	Break Room	430	0.12	32.00	5	212	217
	8	Utility Room	93	0.06	0.00	0	6	

SCHEDULE OF GRILLES & DIFFUSERS

NOTES:
 1. FINISH SHALL BE AS DIRECTED BY ARCHITECT FROM MANUFACTURER STANDARD OPTIONS FOR MATERIALS DENOTED BY MODEL NUMBER.
 2. SHOP DRAWINGS MUST INCLUDE PERFORMANCE DATA OR THEY WILL BE REJECTED.
 3. PROVIDE FACE MOUNTED BALANCING DAMPER

MARK	MANUFACTURER	MODEL No.	CORE TYPE	PANEL SIZE	INLET DIMENSION	NOMINAL CFM	THROW	PRESSURE DROP (IN.)	SOUND N.C.	THROWS	MOUNTING	NOTES
R-1	TITUS	355RL	LOUVER	14" x 14"	12" x12"	440	-	0.07	15	-	WALL	ALL
R-2	TITUS	355RL	LOUVER	14" x 32"	12" x30"	1145	-	0.07	18	-	WALL	ALL
S-1	TITUS	TMS	LOUVER	12" x 12"	6"	78	3	0.05	< 10	2-3-6	LAY-IN	ALL
S-2	TITUS	TMS	LOUVER	24" x 24"	10"	382	7	0.08	15	5-7-13	LAY-IN	ALL

SCHEDULE OF LOUVERS

NOTES:
 1. DESIGN SHALL BE DRAINABLE PREVENT INFILTRATION OF WIND DRIVEN RAIN.
 2. PROVIDE WITH BIRDSCREEN.
 3. PROVIDE WITH COUNTER BALANCE BACKDRAFT DAMPER.
 4. SHOP DRAWINGS MUST INCLUDE PERFORMANCE DATA OR THEY WILL BE REJECTED.
 5. FLANGE FRAME CAN BE USED AS AN OPTION.

MARK	MANUFACTURER	MODEL No.	DESCRIPTION	TYPE	CFM	PRESSURE DROP	VELOCITY	FREE AREA	CONNECTION DUCT SIZE	MOUNTING	NOTES
L-1	GREENHECK	EHH-601	OA INTAKE	LOUVER	650	0.11 in-wg	730 FPM	1 SF	24" x 16"	WALL	1,2,4,5
VC-1	GREENHECK	WC-6	EXHAUST FAN	LOUVER	120	0.40 in-wg	1040 FPM	0 SF	6" DIAMETER	WALL	1,2,3,4

SCHEDULE OF ELECTRIC UNIT HEATERS

NOTES:
 1. PROVIDE UNITS WITH CIRCUIT BREAKERS AND INTERNAL TRANSFORMER.
 2. PROVIDE WITH REMOTE THERMOSTAT.
 3. PROVIDE UNIT WITH FACTORY INSTALLED FAN SPEED & HEAT SELECTOR SWITCH.
 4. PROVIDE UNIT WITH DISCONNECT SWITCH AND OVERLOAD PROTECTION.
 5. SHOP DRAWINGS MUST INCLUDE PERFORMANCE DATA OR THEY WILL BE REJECTED.

MARK	MANUFACTURER	MODEL No.	HEATING CAPACITY	CFM	KW	MOTOR H.P.	RPM	ELECTRICAL CHARACTERISTICS		NOTES
								VOLTAGE	PHASE	
UH-1	QMARK	MUH03-21	10.2 Btu/h	350	3	1/100	800	240	1	ALL

SCHEDULE OF CONDENSING UNITS

NOTES:
 1. DIVISION 26 SHALL PROVIDE DISCONNECT SWITCH.
 2. PROVIDE SINGLE POINT WIRING KIT AND ALL DAMPERS, SENSORS, AND CONTROL COMPONENTS AS REQUIRED FOR SEQUENCE OF OPERATION INDICATED.
 3. SLOPE SUCTION LINE TOWARD EVAPORATOR.
 4. REFRIGERANT LINES SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATIONS WITH LONG LINE KITS AND OTHER ACCESSORIES AS REQUIRED.
 5. MAINTAIN 24" (MIN.) BETWEEN UNITS TO ALLOW PROPER AIRFLOW.
 6. SHOP DRAWINGS MUST INCLUDE PERFORMANCE DATA OR THEY WILL BE REJECTED.

MARK	MANUFACTURER	MODEL No.	CAPACITY	MINIMUM EFFICIENCY (EER/SEER)	MINIMUM STARTING AND OPERATING TEMPERATURE	ELECTRICAL CHARACTERISTICS			NOTES
						VOLTAGE	PHASE	MCAM/OP (AMPS)	
HP-1	TRANE	4TWR6048N1	45500.0 Btu/h	12/16	17 °F	208	1	28/45	ALL
HP-2	TRANE	4TWR6036N1	28400.0 Btu/h	11.7/14.3	17 °F	208	1	15/25	ALL

SCHEDULE OF EXHAUST FANS

NOTES:
 1. PROVIDE WITH BACKDRAFT DAMPER AND DISCONNECT.
 2. SHOP DRAWINGS MUST INCLUDE PERFORMANCE DATA OR THEY WILL BE REJECTED.
 3. FAN TURNS ON WITH LIGHTSWITCH

MARK	AREA SERVED	MANUFACTURER	MODEL No.	SIZE	WATTS	FRPM	CFM	STATIC PRESSURE	ELECTRICAL CHARACTERISTICS	FAN MOUNTING	NOTES
									VOLTAGE	PHASE	
EF-1	LAUNDRY ROOM	GREENHECK	SP-A50	90-VG	6	838	70	0.35 in-wg	115	1	CEILING ALL
EF-2	BATHROOM	GREENHECK	SP-A50	90-VG	6	838	70	0.35 in-wg	115	1	CEILING ALL
EF-3	BATHROOM	GREENHECK	SP-A90	130-VG	12	1041	120	0.40 in-wg	115	1	CEILING ALL
EF-4	BATHROOM	GREENHECK	SP-A50	130-VG	12	1041	120	0.40 in-wg	115	1	CEILING ALL

SCHEDULE OF FURNACE

NOTES:
 1. PROVIDE ALL DAMPERS, SENSORS, AND CONTROL COMPONENTS AS REQUIRED FOR SEQUENCE OF OPERATION INDICATED.
 2. EXTERNAL STATIC PRESSURE, E.S.P. INCLUDES ONLY THE DUCT SYSTEM LOSSES.
 3. SHOP DRAWINGS MUST INCLUDE PERFORMANCE DATA OR THEY WILL BE REJECTED.
 4. YVC LIGHT 4. YVC LIGHT KIT TO COOLING COIL.
 5. 7 DAY PROGRAMMABLE THERMOSTAT.

MARK	MANUFACTURER	MODEL No.	CFM	MINIMUM OUTSIDE AIR CFM	NET GAS CAPACITY	HEATING CAPACITY	COOLING NET	COOLING SENSIBLE	MOTOR H.P.	E.S.P.	ELECTRICAL CHARACTERISTICS		NOTES
											VOLTAGE	PHASE	
AHU-1	TRANE	S9X2B080U4PSBA	1600	400	80000.0 Btu/h	77600.0 Btu/h	47058 Btu/h	34802 Btu/h	3/4	0.90 in-wg	120	1	ALL
AHU-2	TRANE	S9X2B040U3PSBA	1000	250	40000.0 Btu/h	38800.0 Btu/h	29451 Btu/h	22354 Btu/h	1/2	0.70 in-wg	120	1	ALL

MECHANICAL SPECIFICATIONS

PART 1 - GENERAL
 1.1 MECHANICAL CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TOOLS AND SERVICES FOR A COMPLETE INSTALLATION OF EQUIPMENT AND SYSTEM OF EQUIPMENT, CONTROLS, CONTAINED IN CONTRACT DOCUMENTS.

- A. WORK INCLUDED:
- HEATING VENTILATION AND AIR CONDITIONING SYSTEM CONTROLS AND MECHANICAL SYSTEM INSULATION.
 - PROVIDE ANCHORS BOLTS, SLEEVE, SUPPORTS AND SIMILAR ITEMS TO BE BUILT INTO CONCRETE MASONRY.
 - CONTRACTOR TO PROVIDE PREPARATION FOR TESTING AND BALANCE OF MECHANICAL SYSTEMS, AND CORRECTION OF DEFICIENCIES.
 - MECHANICAL CONTRACTOR SHALL MAKE PREPARATION, SUBMITTAL OF SHOP DRAWINGS AND PRODUCT DATA.
 - CONTRACTOR SHALL MAINTAIN A RECORD SET OF BLUE PRINTS AND MARKING THEM TO INDICATE ANY DEVIATIONS MADE TO SUIT CONTIONS AND PROCTION OF MECHANICAL AS-BUILT DRAWINGS.

1.2 JOB CONDITIONS
 A. SUBMITTAL OF BID IMPLIES BIDDER HAS READ APPLICABLE PARAGRAPHS OF THE SPECIFICATION, DRAWINGS, AND WILL BE BOUND BY THEIR CONDITIONS.

1.3 LOCAL CONDITIONS
 A. MECHANICAL CONTRACTOR SHALL CONFIRM WITH LOCAL CONDITIONS, COORDINATE WITH LOCAL UTILITIES ON SIZE OF UTILITY SERVICES.

1.4 INTENT
 A. IT IS THE INTENT OF BOTH THE DRAWINGS AND SPECIFICATIONS TO COVER ALL MECHANICAL REQUIREMENTS IN THEIR ENTIRETY, OR AS NEARLY AS POSSIBLE.
 B. MECHANICAL WORK ARE IN PART DIAGRAMMATIC, INTENDED TO CONVERTY THE SCOPE OF WORK, AND INDICATE GENERAL ARRANGEMENT OF EQUIPMENT, DUCTWORK, ETC., AND APPROXIMATE SIZES AND LOCATIONS OF EQUIPMENT AND MATERIALS.
 WHERE AN ITEM IS REASONABLY NECESSARY BUT NOT SPECIFICALLY MENTIONED, SUCH AS DUCT HANGERS OR TRANSITIONS, PIPING OFFSETS, DRAWINGS, ETC., FOR A COMPLETE SYSTEM PROVIDE THE SAME.

1.5 DEVIATIONS
 A. MINOR DEVIATIONS FROM THE CONTRACT DRAWINGS MAY BE MADE TO ALLOW FOR BETTER ACCESSIBILITY AND WITH CONSENT OF CONSTRUCTION MANAGER, BUT CHANGE OF MAGNITUDE, OR WHICH INVOLVE EXTRA COST, SHALL NOT BE MADE WITHOUT PRIOR APPROVAL.
 B. SHOULD CONTRACTOR FIND DURING PROGRESS OF WORK, CONDITIONS WHICH DICTATE A MODIFICATION OF ANY PARTICULAR REQUIREMENTS, REPORT SUCH ITEM PROMPTLY, DECISION OR INSTRUCTION.

1.6 QUALITY ASSURANCE
 A. CONTRACTOR TO COMPLY WITH APPLICABLE LOCAL, STATE AND FEDERAL CODES.
 B. WORKMANSHIP THROUGHOUT, IN ALL TRADES AND BY ALL CONTRACTORS AND SUBCONTRACTORS, SHALL BE OF THE HIGHEST CALIBER, AND ACCEPTABLE TO OWNER AND THEIR AGENT.

1.7 CODES AND STANDARDS
 A. PERFORM WORK SPECIFIED IN THIS DIVISIONS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS LISTED, AND SUCH STANDARDS THAT MAY BE SPECIFIED IN OTHER SECTIONS. WHEN THESE SPECIFICATIONS ARE MORE STRINGENT, THEY SHALL TAKE PRECEDENCE IN CASE OF CONFLICT, OBTAIN A DECISION FROM THE CONSTRUCTION MANAGER.

- AABC: ASSOCIATED AIR BALANCE COUNCIL.
- ADC: AIR DIFFUSER COUNCIL.
- AMCA: AIR MOVING AND CONDITIONING ASSOCIATION.
- ANSI: AMERICAN NATIONAL STANDARDS INSTITUTE.
- NFPA 54: NATIONAL FUEL AND GAS CODES.
- NFPA 90A: AIR CONDITIONING AND VENTILATION SYSTEMS.
- NFPA 101: LIFE SAFETY CODE.
- NFPA: NATIONAL FIRE PROTECTION ASSOCIATION.
- ASHRAE: AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS.
- ARI: AIR-CONDITIONING AND REFRIGERATION INSTITUTE.
- ASME: AMERICAN SOCIETY OF MECHANICAL ENGINEERS.
- UL: UNDERWRITERS LABORATORIES, INC.
- IBC: INTERNATIONAL BUILDING CODES.
- IMC: INTERNATIONAL MECHANICAL CODES.
- IPC: INTERNATIONAL PLUMBING CODES.
- STATE ENDRY CODES HAVING JURISDICTION.
- AGA: AMERICAN GAS ASSOCIATION.
- NATIONAL STANDARD PLUMBING CODE (OR APPLICABLE STATE PLUMBING CODE).
- HANDICAPPED CODES AND 411.17 AND ADA.
- MSS: MANUFACTURER'S STANDARDIZATION SOCIETY OF THE VALVE AND FITTING INDUSTRY.
- NEMA: NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION.
- SMANNA: SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION.
- ASSE: AMERICAN SOCIETY OF SANITARY ENGINEERS.
- OSHA: OCCUPATIONAL SAFETY ACT.
- ANS: AMERICAN WELDING STANDARDS.
- FM: FACTORY MUTUAL.
- LOCAL UTILITY AUTHORITIES.
- NATIONAL STATE AND LOCAL CODES OF ALL AUTHORITIES HAVING JURISDICTION.
- PDI: PLUMBING AND DRAINAGE INSTITUTE.

1.8 MECHANICAL NOTES AND CONDITIONS

- A. UNDER THIS DIVISION WORK SHALL PROVIDE EVERYTHING REQUIRED TO CONSTRUCT AND INSTALL A COMPLETE AND PROPER OPERATING MECHANICAL SYSTEM AS INDICATED, SPECIFIC AND ELSEWHERE REQUIRED.
 B. WHERE SUCH STANDARDS HAVE BEEN ESTABLISHED AND LISTED BY UNDERWRITERS LABORATORIES, ALL MATERIAL SHALL BEAR UNDERWRITERS LABEL.
 C. MATERIALS, EQUIPMENTS AND APPLIANCES SHALL CONFORM TO LATEST INDUSTRY STANDARDS.
 D. INSTALLATION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATION ENFORCED BY LOCAL AUTHORITIES. IN THE EVENT OF NO LOCAL AUTHORITY, CURRENT NATIONAL CODES SHALL GOVERN.
 E. WHEN INSTALLING THE EQUIPMENT, USE EXTREME CARE TO ENSURE THAT NOISE AND VIBRATIONS ARE HELD TO A MINIMUM. CORRECT OBJECTIONABLE NOISES, PROVIDE VIBRATION ELIMINATORS AS REQUIRED FOR PROPER RESULTS.
 F. PERMITS AND CERTIFICATES SHALL BE OBTAINED FROM PROPER AUTHORITIES. THE COST OF PERMITS, CERTIFICATES AND ALL FEES REQUIRED WITH THE INSTALLATION SHALL BE BORNE BY THE CONTRACTOR.
 G. CONTRACTOR TO MAKE KNOWN ARRANGEMENT OF WORK AND CHECK ARRANGEMENT AND LOCATION OF OTHER TRADES TO AVOID CONFLICT. EXAMINE DRAWINGS OF OTHER TRADES TO DETERMINE EXACT EQUIPMENT LOCATION FOR ROUGHINS.
 H. CONTRACTOR TO NOTIFY OWNER REPRESENTATIVE A MINIMUM OF 24 HOURS IN ADVANCE BEFORE TESTING EQUIPMENT OR PIPING. PIPING IS NOT TO BE INSULATED, CONCEALED OR BEFORE TRENCHES ARE BACKFILL. FAILING TO COMPLY, CONTRACTOR SHALL UNCOVER AND RETEST LINES, REPAIRING DAMAGE TO OTHER CONTRACTORS WORK, AS WELL AS THEIR OWN.
 I. BEFORE RECEIVING FINAL PAYMENT, INSPECT INSTALLATION TO ASSURE THAT WORK IS COMPLETE AND REQUIREMENTS OF CONTRACT HAS BEEN FULFILLED AND MECHANICAL CONTRACTOR SHALL PROVIDE TO OWNER COPIES OF OPERATION AND MAINTENANCE MANUALS.
 J. THE MECHANICAL CONTRACTOR SHALL DO CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF WORK. DO NO MORE CUTTING THAN NECESSARY. CUTTING OF STRUCTURAL MEMBERS WILL NOT BE PERMITTED UNLESS INSTRUCTED BY STRUCTURAL ENGINEER OF RECORD.

1.9 SHEET METAL DUCTWORK

- A. HVAC SYSTEMS SUPPLY, RETURN AND EXHAUST RECTANGULAR AND ROUND DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST SMANNA EDITION "LOW PRESSURE DUCT CONSTRUCTION STANDARDS" NO LESS THAN 2 INCH W.C. ALL DUCTWORK TO BE SHOP FABRICATED FROM GALVANIZED SHEET METAL COMPLYING WITH ANSIASTM A572, OR LIQUID BASED CEMENT.
 B. TYPES OF JOINT CONNECTIONS BRACING WITH THE LATEST EDITION OF SMANNA AND ASHRAE GUIDE. DUCTS SHALL BE SUBSTANTIALLY AIR TIGHT.
 C. ALL DUCTWORK IS TO BE SEALED. (NO DUCT TAPE) USE ONLY WATER BASED DUCT MASTIC.
 D. WHEN LOCAL CODES REQUIRED, ROUND DUCT SHALL BE CONSTRUCTED OF GALVANIZED STEEL, 26 GAUGE FOR UP TO 12" DIAMETER AND 24 GAUGE FOR 12" TO 24" DIAMETER.
 E. BACK DRAFT DAMPERS SHALL BE INSTALLED IN EXHAUST AIR DUCT AT FANS NOTED.
 F. ALL EXPOSED DUCTWORK LOCATED IN DINING AREAS SHALL BE PAINTED AS DIRECTED BY ARCHITECT.
 G. FIRE DAMPERS SHALL MEET OR EXCEED NFPA BULLETIN 90A SPECIFICATIONS. INSTALL IN OUTSIDE AIR INTAKE WHERE REQUIRED BY LOCAL CODE.

1.10 GRILLES, REGISTERS AND DIFFUSERS

- A. GRILLES, REGISTERS AND DIFFUSERS SHALL BE MANUFACTURED OF EXTRUDED ALUMINUM AND SHALL BE FURNISHED IN COLOR AS NOTED IN SCHEDULE. UNITS SHALL BE AS MANUFACTURED BY TITUS, TUTTLE AND BAILEY KRUEGER OR METALAIR. ALL GRILLES, REGISTERS AND DIFFUSERS SHALL BE BY ONE MANUFACTURER.
 B. SQUARE CEILING DIFFUSERS SHALL BE FULLY ADJUSTABLE FROM HORIZONTAL TO VERTICAL. THROW UNITS SHALL BE EQUIPPED WITH OPPOSED BLADE VOLUME DAMPER.
 C. ALL EXHAUST REGISTERS SHALL BE FURNISHED WITH AN INTEGRAL OPPOSED BLADE VOLUME CAMPER, CONSTRUCTED OF ALUMINUM SURFACE OR LAY-IN AS NOTED.
 D. ALL VISIBLE SHEET METAL BEHIND GRILLES, REGISTERS AND DIFFUSERS SHALL BE PAINTED FLAT BLACK.
 E. DINING ROOMS RETURN TO BE A RETURN AIR OPENING ON TOP OF RETURN DUCTS WITH OPPOSED BLADE DAMPER, BREAKROOM RETURN TO BE MULTIPLE GRILLES WITH 1" WASHABLE OR THROWAW FILTERS.

1.11 FLEXIBLE DUCTWORK

- A. INSULATED LOW PRESSURE FLEXIBLE UL 181, CLASS 1, 2 PLY DUCT SHALL BE FACTORY FABRICATED ASSEMBLY CONSISTING OF A ZINC-COATED SPRING HELIX, NON OREFORMED PLASTIC INNER LINER, WRAPPED WITH FIBERGLASS INSULATION. THE ASSEMBLY SHALL BE SHEATHED IN A BARRIER THAT SHALL MEET THE CLASS 1 REQUIREMENTS OF NFPA BULLETIN NO. 90A, AND BE UL LABELED, THE "R" VALUES MEASURED @ 75 °F SHALL BE 3.5 OR GREATER PER ASTM C177.71.
 B. FLEXIBLE DUCT SHALL BE CERTAIN TEED, "CERTAIN TEED" IS MANUFACTURED BY THE CERTAIN TEED CORPORATION, P.O. BOX 860, VALLEY Forge, PA. 19482 OR ATCO TO SERIES AS MANUFACTURED BY ATCO RUBBER PRODUCTS, IN 4820 MARK IV PARKWAY, FORT WORTH, TEXAS 76106.
 C. INSTALL FLEXIBLE DUCT IN A FULLY EXTENDED CONDITION FREE OF SAGS AND KINKS. USING ONLY MINIMUM LENGTH REQUIRED TO MAKE THE SUSPENDED ON 36" CENTERS WITH A MINIMUM 3/4" WIDE FLAT BANDING MATERIALS. ALL JOINTS AND CONNECTIONS SHALL BE MADE WITH 1" POSITIVE LOCKING STEEL STRAPS.
 D. NOTE: ALL EXPOSED DUCTWORK LOCATED IN DINING AREAS SHALL BE RIGID FROM MAIN TRUNK DUCT TO DIFFUSERS.

1.12 INSULATION

- A. INSULATION SHALL BE KNIAUF INSULATION, CERTAIN TEED CORP., JOHN MANVILLE, OWENS-CORNING FIBERGLASS CORP. OR EQUAL, APPLIED BY CONTRACTOR OR MANUFACTURER'S REPRESENTATIVE, REGULARLY ENGAGED IN THE APPLICATION OF INSULATION. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 B. ALL INSULATION MATERIALS, COATINGS AND OTHER ACCESSORIES SHALL HAVE A FIRE HAZARD RATING NOT TO EXCEED 25 FOR FLAME SPREAD. PRODUCTS OR THER CARTONS SHALL BEAR A LABEL INDICATING CONFORMANCE TO REQUIREMENTS.
 C. ROUND DUCT SHALL BE EXTERNALLY INSULATED WITH 1 1/2" THICK TYPE 150 FLEXIBLE BLANKET WITH AN INTEGRAL VAPOR BARRIER, ALUMINUM REINFORCED FOIL SCRIM-KRAFT (FSK).
 D. RECTANGULAR SUPPLY AND RETURN AIR DUCTS TO BE EXTERNALLY INSULATED WITH 2" THICK TYPE 100 FLEXIBLE BLANKET INSULATION WITH VAPOR BARRIER ALUMINUM REINFORCED FOIL SCRIM-KRAFT (FSK).
 E. REFRIGERANT LINES - ALL LINES TO BE INSULATED WITH 1" FLEXIBLE UNICELLULAR.

1.13 CALIBRATIONS TEXT AND BALANCING

A. A COMPLETELY INSTALLED OPERATION AND BALANCED SYSTEM SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER PRIOR FOR ACCEPTANCE. LISTED BELOW IS THE DIVISION SPECIFIC.

- SET ALL OF HVAC EQUIPMENT TO RPM AND AMPS DRAWS TO LISTED ON SHOP DRAWING SHEET.
- CHECK AND SET ALL EVAPORATOR FANS FOR PROPER ROTATION.
- CONNECT AND SET MOTOR OPERATION OUTSIDE AIR DAMPERS AND CONTROLLERS TO THE SETTING LISTED IN THE SHOP DRAWING.
- CONTRACTOR SHALL VERIFY THAT THE HVAC TRANSFORMERS IS CONNECTED TO PROPER VOLTAGE TAPS.
- INSTALL THERMOSTATS AND SET FOR PROPER OPERATION.
- INSTALL AND CHECK ALL DIFFUSERS FOR PROPER LOCATIONS AND THROW PATTERN.
- WIRED AND CHECKOUT NIGHT SETBACK SYSTEM FOR PROPER OPERATION.
- THE MECHANICAL CONTRACTOR RESPONSIBLE TO INSTALL ALL DIFFUSERS FOR PROPER THROW PATTERNS.

- B. CERTIFIED AIR BALANCE AGENCY TO DO THE FOLLOWING BUT NOT LIMITED TO:
- ADJUST FANS AND VOLUME DAMPERS TO DELIVER SUPPLY, RETURN OR EXHAUST DESIGN AIR QUANTITIES TO OR FROM EACH SPACE.
 - CHECK AND ADJUST SUPPLY, RETURN, OUTSIDE, EXHAUST AND RELIEF AIR DAMPERS.
 - ADJUST INDIVIDUAL OUTLETS FOR PROPER AIR MOVEMENT.
 - TEST AND RECORD MOTOR ELECTRICAL CHARACTERISTICS, RPM, SERVICE FACTOR, MEASURE VOLTAGE, FULL LOAD AMPERES AND CONNECTED LOAD AMPERAGE.
 - CHECK FOR AIR FLOW BLOCKAGES.
 - ON THE RESTROOM EXHAUST FANS, CHECK THE SPEED TAP AND TELL THE MECHANICAL CONTRACTOR TO ADJUST IF REQUIRED.
 - CHECK THERMOSTATS AND TEMPERATURE SENSORS FOR PROPER FUNCTION OPERATION.
 - TESTING AND BALANCING CONTRACTOR TO DO A COMPLETE INSTALLATION INSPECTION.
 - IN THE RESTROOM MEASURE THE SUPPLY AIR DIFFUSER AND EXHAUST AIR FAN AND ADJUST THE VOLUMES NEAR THE VALUES LISTED ON THE DRAWING.

SCHEDULE OF PLUMBING FIXTURES

MARK	FIXTURE	MANUFACTURER	MODEL No.	FIXTURE TYPE	FIXTURE MATERIAL	FIXTURE STYLE	FAUCET / VALVE				DRAIN				DOMESTIC CW	DOMESTIC HW	SANITARY WASTE	SANITARY VENT	REMARKS				
							MANUFACTURER	MODEL No.	SPOUT	HANDLES	CENTERS	SUPPLY STOPS	TYPE	SIZE						TRAP / ARM SIZE	TAILPIECE		
L1	LAVATORY	ZURN	Z5344	WALL-HUNG A.D.A. HEIGHT	VITREOUS CHINA	20" X 18" 3-HOLE	ZURN	Z81000-XL	INTEGRAL	SINGLE LEVER	4"	ZURN	Z81016-XL-LR-8860-12-PC	ZURN	Z8746-PC	1 1/4"	17 GAUGE 1.25" x 1.5"	OFFSET	1/2"	1/2"	1 1/2"	1 1/2"	PROVIDE WITH CONCEALED ARM WALL CARRIER Z1231-EZR. P-TRAP SHALL BE ADJUSTABLE CAST BRASS WITH CLEANOUT. PROVIDE ZURN Z8946-3-NT PROTECTIVE COVERINGS FOR ALL TAILPIECES, TRAP, SUPPLIES. PROVIDE WITH THERMOSTATIC MIXING VALVE.
MB1	MOP BASIN	ZURN	Z1996-24-MH-WG	FLOOR-SET	HIGH DENSITY COMPOSITE BASIN	24"x24"x10"	ZURN	Z843M1-XL-CS-HCT-WHK-5H	3/4" HOSE SPOUT W/ VACUUM BREAKER	LEVERS	8"								3/4"	3/4"	3"	1 1/2"	WITH 60" VINYL HOSE, HOSE BRACKET, VINYL BUMPER GUARD, 24"x24" WALL GUARDS, COMPLETE WITH PAIL HOOK AND WALL BRACE.
S1	SINK	ELKAY	LRAD252160	SELF-RIMMING ADA	18 GAUGE, 304 STAINLESS STEEL	25"x21" 3-HOLE	ZURN	Z871G3-XL	8" SWING SPOUT 2.2 GPM AERATOR	DOME LEVERS	8"	ZURN	Z81016-XL-LR-8860-12-PC	ZURN	Z8746-PC	1 1/2"	17 GAUGE 1.5"	STANDARD	1/2"	1/2"	1 1/2"	1 1/2"	P-TRAP SHALL BE ADJUSTABLE CAST BRASS W/ CLEANOUT. PREMOLDED PROTECTIVE COVERINGS FOR TAILPIECES, TRAP, AND SUPPLIES. ZURN FULLY ADJUSTABLE CARRIER. PROVIDE WITH THERMOSTATIC MIXING VALVE.
SH1	SHOWER	CLARION BATHWARE	AN3636BFSC	SHOWER	WHITE ACRYLIC	A.D.A.	ZURN	Z7301-SS-MT-DV2P-HW	---	SINGLE LEVER	---								1/2"	1/2"	2"	1 1/2"	PROVIDE WITH ZURN Z415 2" DRAIN WITH POLISHED STAINLESS STEEL STRAINER. REFER TO ARCHITECT SCHEDULE FOR SHOWER ACCESSORIES
SH2	SHOWER	CLARION BATHWARE	AN3636BFSC	SHOWER	WHITE ACRYLIC	STANDARD	ZURN	Z7301-SS-MT	---	SINGLE LEVER	---								1/2"	1/2"	2"	1 1/2"	PROVIDE WITH ZURN Z415 2" DRAIN WITH POLISHED STAINLESS STEEL STRAINER. REFER TO ARCHITECT SCHEDULE FOR SHOWER ACCESSORIES
US1	LAUNDRY TUB	FIAT	MS2660-DF1	FLOOR MOUNT	POLYETHYLENE	FREE STANDING	ZURN	Z812B1-XL	5 3/8" GOOSENECK 1.5 GPM VP FEMALE LAMINAR FLOW OUTLET	DUAL HANDLES	4"	ZURN	Z81016-XL-LR-8860-12-PC	ZURN	Z8739-17-PC	1 1/4"	17 GAUGE 1 1/2" X 1 1/2"	OFFSET	1/2"	1/2"	1 1/2"	1 1/2"	P-TRAP SHALL BE ADJUSTABLE CAST BRASS W/ CLEANOUT. PROVIDE WITH HEAVY DUTY STEEL LEGS AND LEVELERS.
WB1	WASHER BOX	GUY GRAY	SSWB1		304 STAINLESS STEEL, 20 GAUGE														3/4"	3/4"	2"	1 1/2"	MOUNT 42" A.F.F. PROVIDE ADDITIONAL FRAMING AROUND BOX FOR SECURE MOUNTING.
WC1	WATER CLOSET	ZURN	Z5551-K	FLOOR MOUNT FLUSH TANK	VITREOUS CHINA	A.D.A. PRESSURE-ASSISTED SIPHON JET ENCASED				LEVER									1/2"		4"	2"	1.6 GALLON FLUSH, ZURN Z5955SS-EL-AM-STS SEAT. TOILET FLANGE BOLTS SHALL BE DOUBLE NUTTED. PROVIDE LEVER ON WIDE SIDE OF APPROACH LHRH AS REQUIRED
WH1	WALL HYDRANT	ZURN	Z1320-NB	NON-FREEZE	CAST NICKEL BRONZE BOX & BRONZE VALVE					KEY OPERATED									3/4"				ANTI-SIPHON, AUTOMATIC DRAINING, NON-FREEZE w/INTEGRAL BACKFLOW PREVENTER. INCLUDE OPERATING KEY. MOUNT 18" ABOVE FINISH GRADE

SCHEDULE OF DOMESTIC WATER HEATERS

MARK	MANUFACTURER	MODEL NO.	FLOW AT 80°F TEMPERATURE RISE (GPM)	BTUH INPUT	HOT WATER TEMP OUT	EFFICIENCY	REMARKS	MARK
DWH1	RHEEM	RTGH-SR111	5.5	199,000	120	96%	SEE BELOW	DWH1

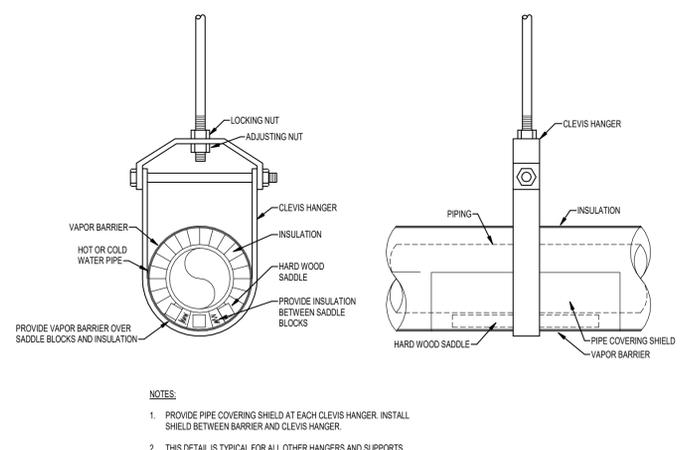
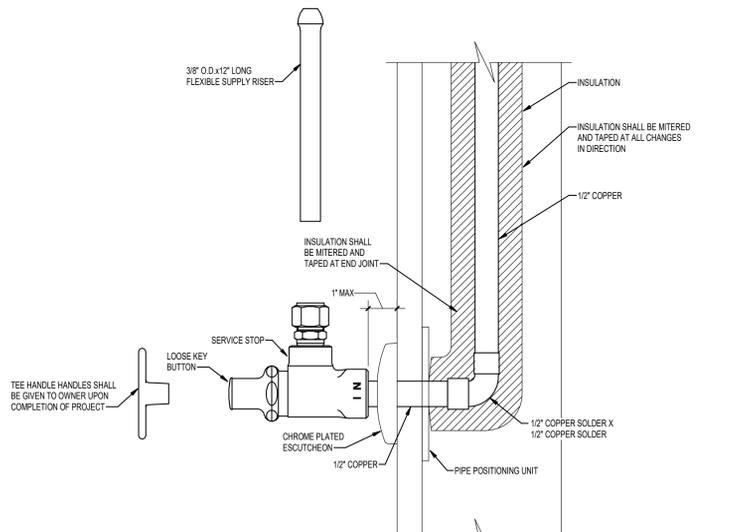
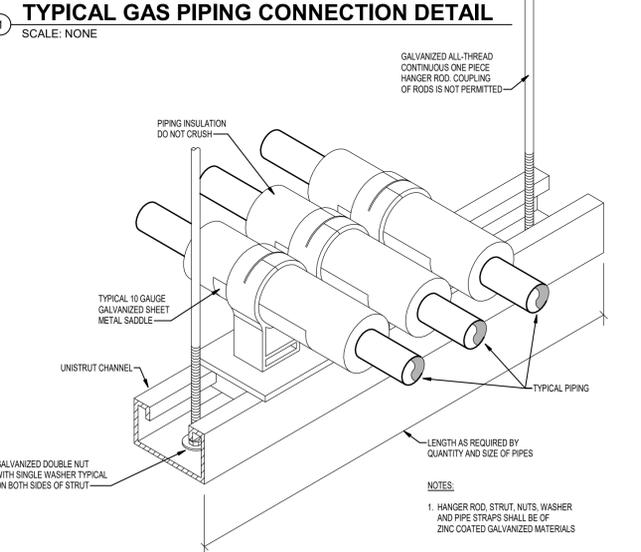
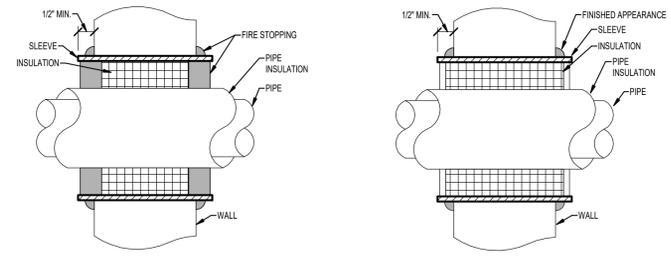
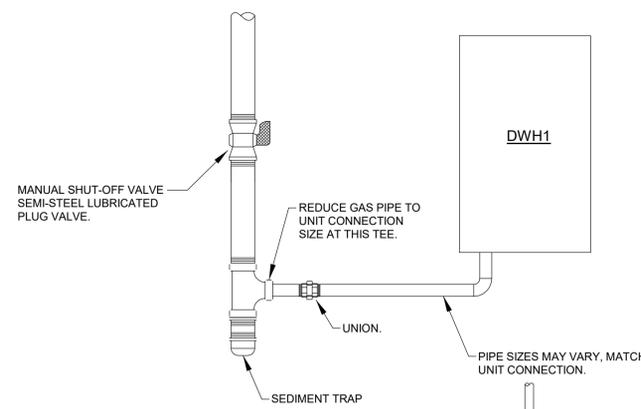
NOTES:
 1. FUEL SOURCE SHALL BE NATURAL GAS.
 2. PROVIDE ASME RATED RELIEF VALVE AND CONDENSATE NEUTRALIZATION KIT FOR WATER HEATER.
 3. PROVIDE ALL REQUIRED CLEARANCES AROUND WATER HEATER. CONTRACTOR SHALL VERIFY WATER HEATER WILL FIT IN ALLOTTED SPACE.
 4. FURNISH AND INSTALL OUTSIDE AIR PIPE, EXHAUST PIPE, AND COMPLETE SYSTEM FOR WATER HEATER COMBUSTION AND VENTING REQUIREMENTS.
 5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL STATE FORMS, SUBMITTALS, FEES, PERMITS, ETC. AS REQUIRED FOR WATER HEATER INSTALLATION.
 6. BASIS OF DESIGN IS INDICATED IN SCHEDULE, REFER TO SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS. EQUIPMENT MUST MEET ALL THE PERFORMANCE REQUIREMENTS INDICATED

SCHEDULE OF DRAINS AND CLEANOUTS

MARK	FIXTURE	MANUFACTURER	MODEL No.	TYPE	MATERIAL	STYLE	REMARKS
FCO	FLOOR CLEANOUT	ZURN	ZN1400-VP-BP	NO HUB OR NEO-LOCK	CAST IRON / NICKEL BRONZE TOP	SCORIATED ROUND TOP	VANDAL RESISTANT SECURED TOP. PROVIDE NICKEL BRONZE TOP IN FINISHED AREAS, BRONZE TOP IN UNFINISHED.
FD1	FLOOR DRAIN	ZURN	ZN415B	NO HUB OR NEO-LOCK	CAST IRON / NICKEL BRONZE TOP	6" ROUND	PROVIDE COMPLETE WITH SURESEAL FLOOR DRAIN TRAP SEAL.
FD2	FLOOR DRAIN	ZURN	Z-507	NO HUB, OR NEO-LOCK	CAST IRON / CAST IRON TOP	7" ROUND	PROVIDE COMPLETE WITH SURESEAL FLOOR DRAIN TRAP SEAL.

PLUMBING LEGEND

ABBREVIATION	SYMBOLS
CO	CLEANOUT
CW	DOMESTIC COLD WATER
DWH	DOMESTIC WATER HEATER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
G	NATURAL GAS
HB	HOSE BIBB
HR	DOMESTIC HOT WATER RETURN
HW	DOMESTIC HOT WATER
L	LAVATORY
MB	MOP BASIN
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
S	COMMERCIAL SINK
SH	SHOWER
V	SANITARY VENT
VTR	VENT THRU ROOF
W	SANITARY WASTE
WB	WASHER BOX
WC	WATER CLOSET
WH	WALL HYDRANT
YCO	YARD CLEANOUT
3D	2D
	SANITARY WASTE
	SANITARY VENT
	NATURAL GAS
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RETURN
	GATE VALVE
	PRESSURE REDUCING VALVE
	BALL VALVE
	CHECK VALVE
	CIRCUIT SETTER
	STRAINER
	BALANCING STATION (SEE DETAIL)
	REDUCED PRESSURE BACKFLOW PREVENTER
	GAS VALVE
	UNION
	FLOW-IN DIRECTION OF ARROW
	VALVE IN VERTICAL
	RISE OR DROP
	BRANCH CONNECTION
	RISER DOWN
	RISE UP
	HOSE BIBB
	WALL HYDRANT
	THERMOMETER
	PRESSURE GAUGE
	END CAP
	KEYNOTE



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PLUMBING LEGEND AND SCHEDULES

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PLUMBING PLANS

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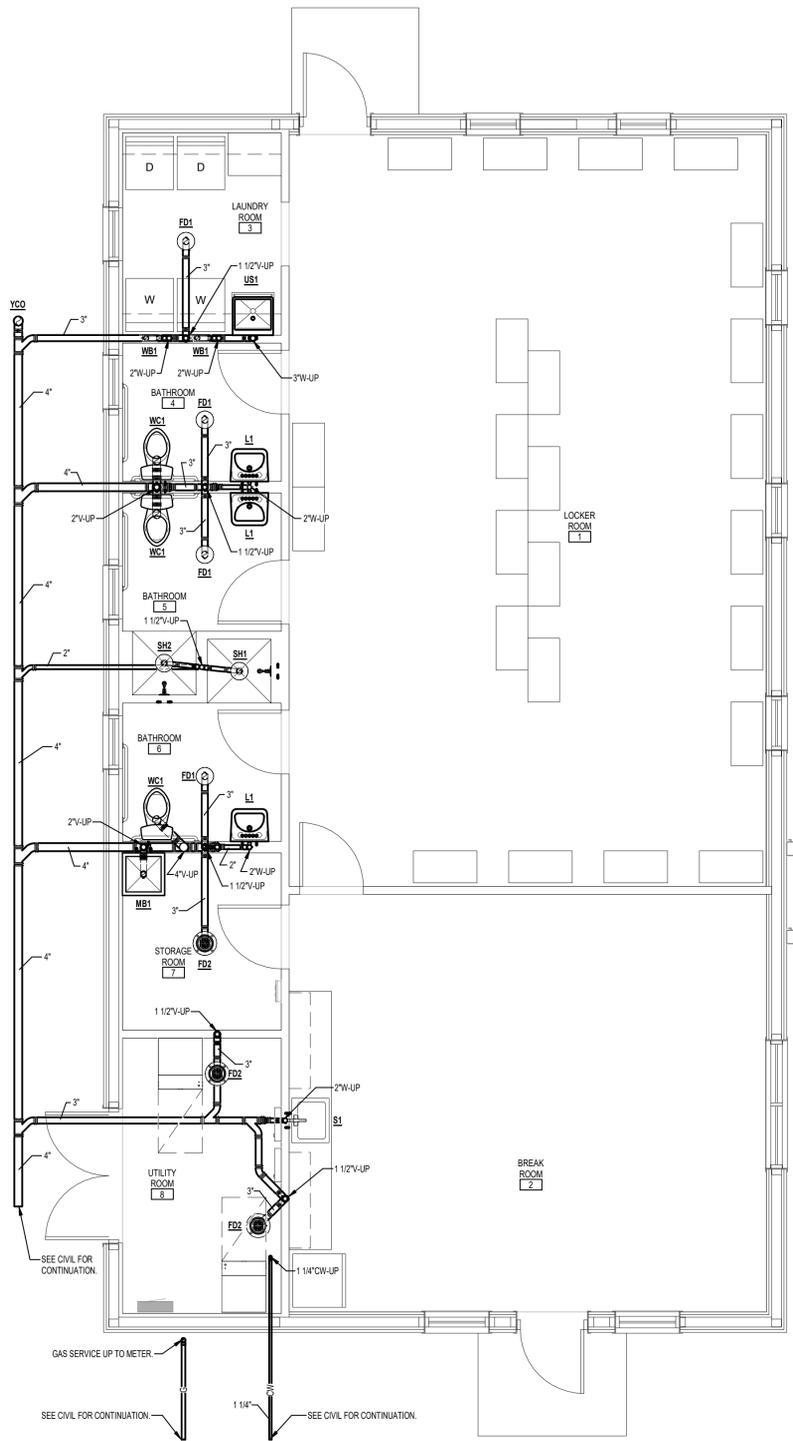
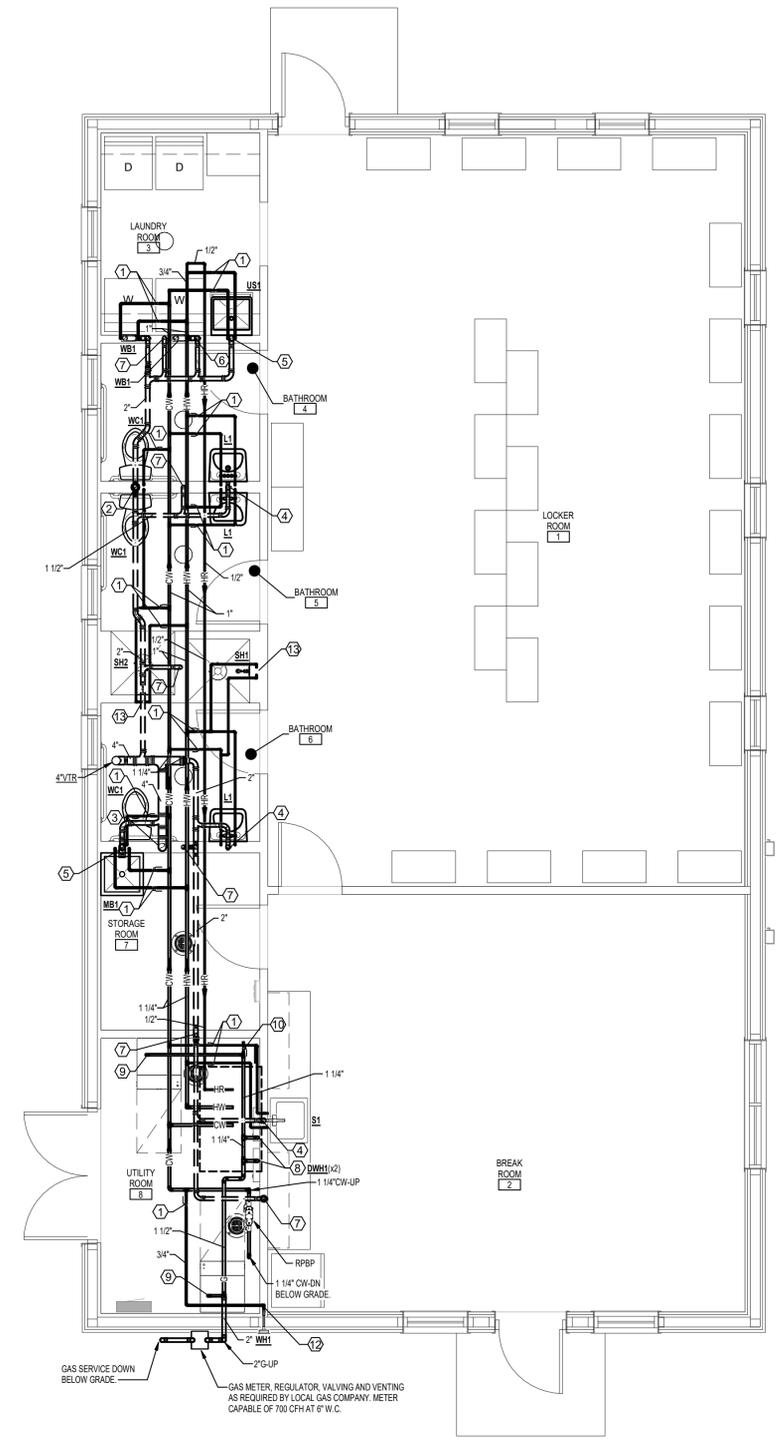
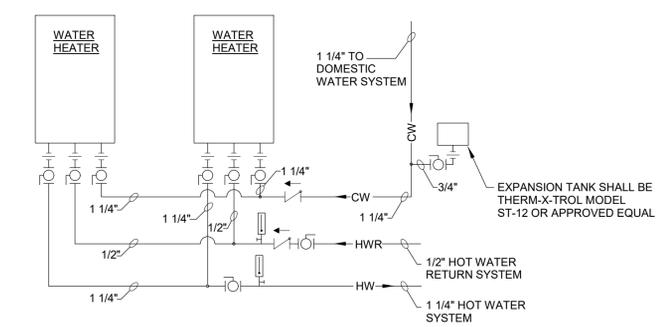
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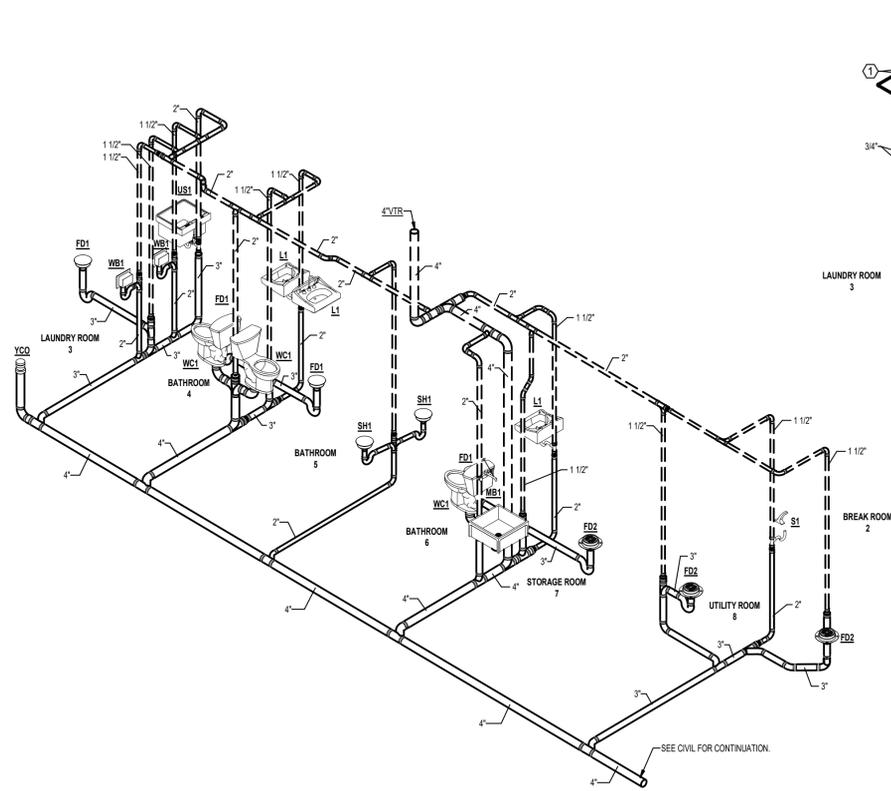
GENERAL NOTES: APPLIES TO ALL SHEETS

- A. CONDITIONS SHOWN ON THE PLANS RELATIVE TO THE WORK TO BE PERFORMED ARE BASED ON THE BEST INFORMATION AVAILABLE AND SUBJECT TO VERIFICATION. VERIFY LOCATIONS AND ELEVATIONS OF UTILITIES TO BE CROSSED OR CONNECTED. CORRECT DEFICIENCIES CAUSED BY FAILURE TO PERFORM SUCH VERIFICATIONS AT NO EXPENSE TO OWNER. IMMEDIATELY NOTIFY ARCHITECT AND ENGINEER OF CONDITION IN CONFLICT WITH THE DETAILS/PLANS.
- B. EXISTING INFORMATION SHOWN ON FLOOR PLANS IS FROM ORIGINAL RECORD DRAWINGS AND FIELD INVESTIGATION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS IN THE FIELD BEFORE COMMENCEMENT OF WORK. THE CONTRACTOR IS REQUIRED TO REPORT TO THE ARCHITECT DISCREPANCIES OR INCONSISTENCIES BETWEEN THE SPECIFIED DESIGN AND EXISTING CONDITIONS FOR CLARIFICATION PRIOR TO COMMENCEMENT OF THE WORK. ABSOLUTE ACCURACY OF THE DRAWINGS CANNOT BE GUARANTEED. WHILE EVERY EFFORT HAS BEEN MADE TO COORDINATE THE LOCATION OF EXISTING EQUIPMENT, PIPING, ETC. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE EXACT REQUIREMENTS GOVERNED BY ACTUAL JOB CONDITIONS.
- C. PLUMBING SYSTEMS SHALL BE DESIGNED AND INSTALLED PER LOCAL PLUMBING CODE.
- D. REPORT TO ARCHITECT IN WRITING, CONDITIONS WHICH WILL PREVENT PROPER PROVISION OF THIS WORK.
- E. THE DRAWINGS SHOWING THE LOCATIONS OF PLUMBING EQUIPMENT, PIPING, ETC. ARE DIAGRAMMATIC. CONTRACTOR SHALL PROVIDE ALL OFFSETS, ADJUSTMENTS ETC. JOB CONDITIONS MAY NOT PERMIT THEIR INSTALLATION AT THE LOCATIONS SHOWN. THE PLUMBING DRAWINGS SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT, PIPING, DEVICES, ETC. & SHALL BE FOLLOWED AS CLOSE AS POSSIBLE.
- F. LOCATE VALVES FOR SERVICE ACCESSIBILITY. PROVIDE VALVE TAGS & PLASTIC LAMINATE IDENTIFICATION ON CEILING FOR ALL NEW AND EXISTING VALVES AND EQUIPMENT LOCATED WITHIN THE CONSTRUCTION LIMITS AS INDICATED IN THE SPECIFICATIONS.
- G. CONTRACTOR SHALL VERIFY REQUIREMENTS TO OWNER PROVIDED EQUIPMENT WITH EQUIPMENT MANUFACTURER. PROVIDE ALL UTILITIES & ACCESSORIES REQUIRED FOR THIS EQUIPMENT FOR A COMPLETE OPERABLE SYSTEM.
- H. SEAL ALL OPENINGS NEW & EXISTING AROUND PLUMBING & UTILITY LINES PENETRATING FIRE WALLS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF FIRE WALLS & ARCHITECTURAL SPECS FOR MATERIAL & INSTALLATION.
- I. CONTRACTOR SHALL COORDINATE WITH ARCHITECT ALL CONSTRUCTION PHASING AS IT APPLIES TO DEMOLITION & NEW WORK.

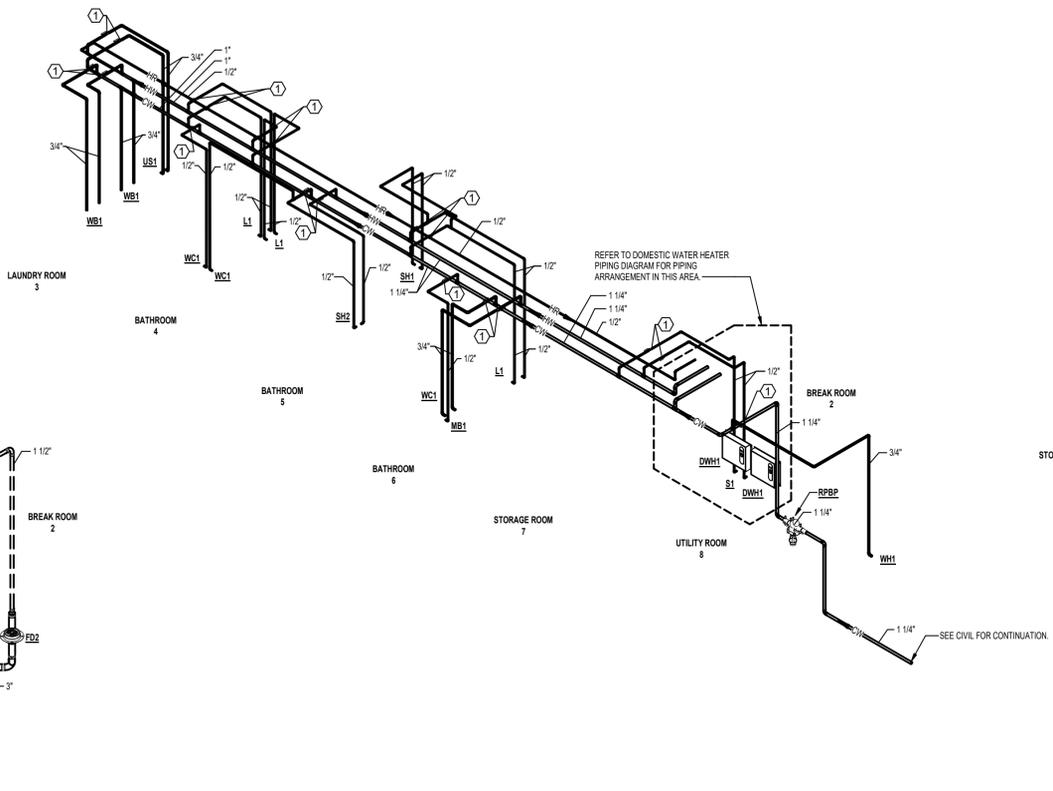
KEYED NOTES:

1. ISOLATION VALVE(S).
2. 2" VENT, 1/2" COLD WATER DOWN TO FIXTURE.
3. 4" VENT, 1/2" COLD WATER DOWN TO FIXTURE.
4. 1 1/2" VENT, 1/2" HOT AND COLD WATER DOWN TO FIXTURE.
5. 2" VENT, 3/4" HOT AND COLD WATER DOWN TO FIXTURE.
6. 1 1/2" VENT, 3/4" HOT AND COLD WATER DOWN TO FIXTURE.
7. 1 1/2" VENT DOWN.
8. 1 1/4" NATURAL GAS DOWN TO DWH1. PROVIDE GAS COCK, UNION AND DIRT LEG. SEE DETAIL. 199.9 CFH.
9. 1" NATURAL GAS DOWN TO AHU. PROVIDE GAS COCK, UNION AND DIRT LEG. SEE DETAIL. 120 CFH.
10. PROVIDE 3/4" STUBOUT VALVE AND CAPPED FOR FUTURE GAS DRYERS.
11. REFER TO DOMESTIC WATER HEATER PIPING DIAGRAM FOR PIPING ARRANGEMENT IN THIS AREA.
12. 3/4" COLD WATER DOWN TO FIXTURE.
13. 1/2" HOT AND COLD WATER DOWN TO SHOWER.

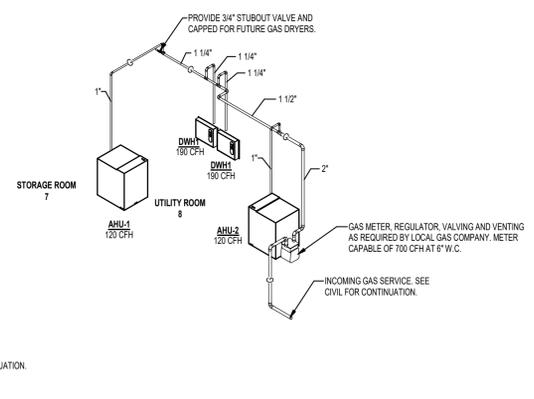




2 WASTE AND VENT RISER DIAGRAM
SCALE: NONE



1 DOMESTIC WATER RISER DIAGRAM
SCALE: NONE



3 NATURAL GAS RISER DIAGRAM
SCALE: NONE

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PLUMBING RISER
DIAGRAMS

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PLUMBING SPECIFICATIONS

GUARANTEES AND WARRANTIES

GUARANTEE ALL EQUIPMENT, APPARATUS, MATERIALS, AND WORKMANSHIP AND REPLACE ALL PARTS, WHICH HAVE BEEN PROVEN DEFECTIVE, WITHIN ONE YEAR FROM FINAL ACCEPTANCE OF THE WORK BY THE ARCHITECT. ITEMS OF EQUIPMENT WHICH HAVE LONGER GUARANTEES SHALL HAVE WARRANTIES AND GUARANTEES IN EFFECT AT THE TIME OF FINAL ACCEPTANCE OF THE WORK BY THE ARCHITECT. FURNISH ALL SUCH WARRANTIES AND GUARANTEES AT THE TIME OF FINAL ACCEPTANCE OF THE WORK.

COORDINATION BETWEEN TRADES

CAREFULLY EXAMINE ALL EXISTING CONDITIONS ALONG WITH THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND ALL OTHER DRAWINGS AND SPECIFICATIONS PERTAINING TO THE CONSTRUCTION OF THIS PROJECT BEFORE FABRICATING AND INSTALLING THE WORK DESCRIBED AND INDICATED UNDER THESE DRAWINGS AND SPECIFICATIONS. COOPERATE WITH ALL OTHER CONTRACTORS IN LOCATING PIPING, SLEEVES, EQUIPMENT, ETC., IN ORDER TO AVOID CONFLICT WITH ALL OTHER CONTRACTORS' WORK. NO EXTRA COMPENSATION WILL BE ALLOWED TO COVER THE COST OF RELOCATING PIPING, OR EQUIPMENT FOUND ENCRoACHING ON SPACE REQUIRED BY OTHER TRADES.

ANY DISCREPANCIES OCCURRING ON THE ACCOMPANYING DRAWINGS AND BETWEEN THE DRAWINGS AND THE SPECIFICATIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO ANY FABRICATION AND INSTALLATION SO THAT A WORKABLE SOLUTION CAN BE PRESENTED. EXTRA PAYMENT WILL NOT BE ALLOWED FOR THE RELOCATION OF, OR REVISION TO, PIPING, EQUIPMENT, ETC., NOT INSTALLED IN ACCORDANCE WITH THE ABOVE INSTRUCTIONS, AND WHICH INTERFERES WITH WORK AND EQUIPMENT OF OTHER TRADES.

PROTECTION OF THE BUILDING AND STORED EQUIPMENT

DO NOT STORE MATERIALS OR EQUIPMENT ON ANY FLOOR OR ROOF OF THE BUILDING IN SUCH QUANTITY THAT WILL OVERLOAD THE BUILDING IN ANY WAY. DO NOT MOVE HEAVY EQUIPMENT ACROSS ANY FLOOR OR ROOF WITHOUT FIRST SUBMITTING THE DETAILS OF THE WORK TO THE ENGINEER/OWNER AND HAVING OBTAINED HIS APPROVAL. IN CASES WHERE FREQUENT MOVEMENT OF MEN OR MATERIALS OVER THE ROOF IS ENCOUNTERED, PROVIDE WALKING BOARDS OR OTHER SUITABLE PROTECTION FOR THE ROOFING.

PROVIDE SUITABLE STORAGE FOR, AND COMPLETELY PROTECT ALL MATERIALS AND EQUIPMENT PRIOR TO INSTALLATION. STORAGE SHALL BE DRY, CLEAN AND SAFE. ANY MATERIALS OR EQUIPMENT LOST THROUGH THEFT OR MISHANDLING SHALL BE REPLACED, ALL WITHOUT ADDITIONAL COST TO THE OWNER.

DRAWINGS

THE DRAWINGS ACCOMPANYING THESE SPECIFICATIONS ARE DIAGRAMMATIC AND INDICATE THE GENERAL DESIGN AND ARRANGEMENT OF THE PROPOSED WORK. THE EXACT ROUTING AND/OR LOCATION OF PIPING, EQUIPMENT, ETC., UNLESS SPECIFICALLY DIMENSIONED, SHALL BE DETERMINED TO SUIT FIELD CONDITIONS ENCOUNTERED, AND TO AVOID INTERFERENCES WITH OTHER CONTRACTORS' WORK.

EQUIPMENT CONNECTIONS

MAKE ALL WATER CONNECTIONS, DRAINAGE CONNECTIONS, AND ETC., TO FIXTURES AND EQUIPMENT FURNISHED UNDER THIS CONTRACT WHENEVER SUCH FIXTURES AND EQUIPMENT ARE SHOWN ON ANY OF THE DRAWINGS OR MENTIONED IN ANY SECTION OF THE SPECIFICATIONS, UNLESS OTHERWISE SPECIFICALLY SPECIFIED HEREINAFTER.

SHOP DRAWINGS AND OTHER RELATED SUBMITTALS

SUBMITTAL DATA SHALL INCLUDE SPECIFICATION DATA, SUCH AS METAL GAUGES, FINISHES, OPTIONAL ACCESSORIES, ETC., EVEN THOUGH SUCH FIXTURES, EQUIPMENT AND MATERIALS MAY BE DETAILED ON THE DRAWINGS OR SPECIFIED. IN ADDITION, THE SUBMITTAL DATA SHALL INCLUDE PERFORMANCE (CERTIFICATION) DATA, WIRING DIAGRAMS WHERE APPLICABLE, ACCURATE DIMENSIONAL DATA AND A RECOMMENDED SPARE PARTS LIST. OUTLINE OR DIMENSIONAL DRAWINGS ALONE ARE NOT ACCEPTABLE. NO ROUGHING-IN, CONNECTIONS, ETC. SHALL BE DONE UNTIL THE ARCHITECT HAS REVIEWED THE FIXTURE AND EQUIPMENT SUBMITTALS ARE THE SUBMITTALS ARE BACK IN THE HANDS OF THE CONTRACTORS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN DRAWINGS AND TO MAKE ALL CONNECTIONS, ETC., IN THE NEATEST AND MOST WORKMANLIKE MANNER POSSIBLE.

SUBSTITUTION OF MATERIALS AND EQUIPMENT

WHEN THE CONTRACTOR REQUESTS APPROVAL OF SUBSTITUTE MATERIALS AND/OR EQUIPMENT, EXCEPT WHEN UNDER FORMAL ALTERNATE PROPOSAL, IT SHALL BE UNDERSTOOD AND AGREED THAT SUCH SUBSTITUTION, IF APPROVED, WILL BE MADE WITHOUT COST TO THE OWNER, REGARDLESS OF CHANGES IN CONNECTIONS, SPACING, ELECTRICAL SERVICE, ETC. IN ALL CASES WHERE SUBSTITUTIONS AFFECT OTHER TRADES THE CONTRACTOR OFFERING SUCH SUBSTITUTIONS SHALL REIMBURSE ALL AFFECTED CONTRACTORS FOR ALL NECESSARY CHANGES IN THEIR WORK.

WORK IN ACCORDANCE WITH REGULATIONS

ALL WORK AND MATERIAL ON THIS PROJECT SHALL BE IN COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

ESTABLISHED FEDERAL STANDARDS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION UNDER THE DEPARTMENT OF LABOR.

PERMITS AND APPROVALS

ALL PERMITS AND CERTIFICATES OF APPROVAL FOR THE COMPLETE SYSTEM SHALL BE OBTAINED BY THE RESPECTIVE CONTRACTORS FROM THE AUTHORITIES GOVERNING SUCH WORK. THE COST OF ALL PERMITS AND APPROVALS SHALL BE BORNE BY THE CONTRACTOR FURNISHING THE WORK.

OPERATION MANUAL

FURNISH OWNER WITH THREE (3) BOUND SETS OF OPERATION MANUALS AT COMPLETION OF PROJECT. MANUALS SHALL INCLUDE CONTRACTOR'S NAME AND TELEPHONE NUMBERS THAT CAN BE CALLED FOR SERVICE CALLS. INCLUDE THE FOLLOWING IN THE MANUALS FOR TRANSMITTAL TO THE OWNER:

ALL PROJECT STAMPED ACCEPTABLE SHOP DRAWINGS AND COPIES OF ALL CERTIFICATES, LUBRICATION SCHEDULES AND PROCEDURES, SPARE PARTS LIST, INDICATE ALL ITEMS THAT SHOULD BE MAINTAINED AT THE SITE BY OWNER, MAINTENANCE AND TROUBLE-SHOOTING SUGGESTIONS FOR EQUIPMENT, WIRING DIAGRAMS, CERTIFICATION OF OWNER INSTRUCTION OF SYSTEM AND EQUIPMENT

PLUMBING FIXTURE AND EQUIPMENT INSTALLATION

ALL FIXTURE AND EQUIPMENT SHALL BE INSTALLED AT LOCATIONS INDICATED.

ASSEMBLY AND INSTALLATION OF FIXTURES AND EQUIPMENT SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

FIXTURES AND EQUIPMENT SHALL BE SECURELY ANCHORED IN PLACE. CARE SHALL BE EXERCISED TO CORRECTLY ORIENT EQUIPMENT BEFORE SECURING IN PLACE.

PIPE HANGERS

ALL PIPE HANGERS AND SUPPORTS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY STANDARDS SP-58 AND SP-69, LATEST EDITIONS.

PIPE INSULATION

- INSULATION SHALL CONFORM TO ASTM C1290, ASTM C1136 AND ASTM C55, HEAVY DENSITY FIBER GLASS AND SHALL BE A ONE-PIECE MOLDED FIBER GLASS PIPE INSULATION HAVING A "K" FACTOR OF 0.24 AT A MEAN TEMPERATURE OF 75OF. INSULATION SHALL HAVE A FRK - FOIL REINFORCE KRAFT (FRK) CONSTRUCTED OF GLASS FIBER REINFORCED ALUMINUM FOIL AND WHITE KRAFT PAPER TO FORM A VAPOR BARRIER. DENSITY SHALL BE A MINIMUM OF 4 PCF. PRODUCTS MEETING THIS SPECIFICATION ARE OWENS-CORNING FIBERGLASS "ASJ/SSL II", CERTAIN-TEED "SNAP-ON", AND MANVILLE "MICRO-LOK", KNAUF "PIPE INSULATION", OR APPROVED EQUAL.
- APPLY INSULATION TO CLEAN DRY PIPING WITH ALL JOINTS TIGHTLY BUTTED. SECURE THE FACTORY SUPPLIED SELF-SEALING LAP SMOOTHLY AND SECURELY AT THE LONGITUDINAL LAPS. ADHERE 3" WIDE BUTT STRIPS SMOOTHLY AND SECURELY OVER ALL END JOINTS WITH VAPOR BARRIER ADHESIVE TO INSURE A CONTINUOUS VAPOR BARRIER.
- INSULATE ALL CONCEALED FITTINGS, VALVES, FLANGES, ETC., WITH MITERED SEGMENTS OF PIPE INSULATION, OVERSIZED PIPE INSULATION. INSULATE ALL EXPOSED FITTINGS, VALVES, FLANGES, ETC. WITH MOLDED FITTINGS. COAT EACH FITTING WITH TWO 1/8" COATS OF VAPOR BARRIER MASTIC REINFORCED WITH GLASS FABRIC EXTENDING 2" ONTO ADJACENT PIPES.
- MECHANICAL EQUIPMENT ROOMS AND FINISHED AREAS SHALL BE ADDITIONALLY FINISHED WITH PVC JACKETING AND FITTING COVERS PREMOLDED CONFORMING TO 25/50 FLAME AND SMOKE RATING ASTM E-84. ASTM-3-84-81A MINIMUM 0.025" THICKNESS MANUFACTURED BY PROTO 25/50 RATED LO SMOKE PVC OR APPROVED EQUAL.
- THE INSULATION ON THE DOMESTIC HOT AND COLD WATER PIPING SHALL BE 1" THICK.

DOMESTIC WATER PIPING:

ABOVE GROUND PIPING SHALL BE COPPER, TYPE L MEETING ASTM B-88. FITTINGS SHALL BE SEAMLESS WROUGHT COPPER WITH SOLDER JOINT ENDS MEETING ANSI-B16.22 AND ASTM B-75. SOLDER SHALL BE 95-5 TIN-ANTIMONY MEETING ASTM B-32.

BALL VALVES SHALL CONFORM TO MSS SP-110. VALVES SHALL BE RATED FOR A MINIMUM OF 600 LB. WOG, 150 SWP. VALVES SHALL BE 2-PIECE BRONZE BODY, FULL PORT, SINGLE UNION END, CHROME PLATED BALL, TFE PACKING, BLOWOUT PROOF STEM. VALVES SHALL HAVE EXTENDED LEVER, NIB-SEAL® FOR THE INSULATION THICKNESS INSTALLED. BALL VALVES SHALL BE NIBCO, APOLLO, WATTS, OR APPROVED EQUAL. FIGURE NUMBERS ARE NIBCO, FIGURE S-585-70-SU, SOLDERED; FIGURE T-585-70-SU, THREADED. UNDERSLAB SHALL BE COPPER, TYPE K, SOFT, ASTM B-88. NO JOINTS ALLOWED UNDERSLAB. ALL PIPING PASSING THROUGH WALLS SHALL HAVE A CHROME PLATED SINGLE PIECE ESCUTCHEON.

CLEANING AND PREPARATION FOR SERVICE, FLUSHING MAINS. IMMEDIATELY UPON COMPLETION OF THE WATER DISTRIBUTION SYSTEM, TEST ALL VALVES TO INSURE THEIR FULL OPENING AND FLUSH OUT THE SYSTEM AS FOLLOWS: OPEN AND PERMIT THE FLOW TO CONTINUE UNTIL THE WATER RUNS CLEAR. THEREAFTER, REPEAT THE OPERATION AT THE NEXT VALVE AND PROCEED IN ORDER TO THE VALVE FARTHEST FROM THE SOURCE OF SUPPLY. USE OUTLETS IN BUILDINGS TO FLUSH THE UPPER ENDS OF MAINS AND SERVICE LINES. AS SOON AS THE WATER DISTRIBUTION SYSTEM HAS BEEN FLUSHED OUT, IT SHALL BE STERILIZED BY THE FOLLOWING OR OTHER METHOD SATISFACTORY TO THE ARCHITECT AND THE LOCAL GOVERNING AUTHORITY. INTRODUCE CHLORINE OR SODIUM HYPOCHLORITE, FILLING THE LINES SLOWLY AND APPLYING THE STERILIZING AGENT AT A RATE OF 50 PARTS PER MILLION OF CHLORINE, AS DETERMINED BY RESIDUAL CHLORINE TESTS AT THE ENDS OF THE LINES. OPEN AND CLOSE ALL VALVES WHILE THE SYSTEM IS BEING CHLORINATED. AFTER THE STERILIZATION AGENT HAS BEEN APPLIED FOR 24 HOURS, TEST FOR RESIDUAL CHLORINE AT THE ENDS OF THE LINES. IF LESS THAN 25 P.P.M. IS INDICATED, REPEAT THE STERILIZATION PROCESS. WHEN TESTS SHOW AT LEAST 25 P.P.M. OF RESIDUAL CHLORINE, FLUSH OUT THE SYSTEM UNTIL ALL TRACES OF THE CHEMICAL USED ARE REMOVED. A FINAL CERTIFICATE OF APPROVAL SHALL BE OBTAINED FROM THE LOCAL GOVERNING AUTHORITY AND SUBMITTED TO THE ARCHITECT AFTER COMPLETION OF ALL WORK AND BEFORE FINAL PAYMENT IS MADE.

PIPE - SANITARY WASTE AND VENT

SANITARY WASTE AND VENT PIPING SHALL BE ONE OF THE FOLLOWING:

COPPER TUBE AND FITTINGS
COPPER DWV TUBE: ASTM B 306, DRAINAGE TUBE, DRAWN TEMPER WITH COPPER DRAINAGE FITTINGS: ASME B16.23, CAST COPPER OR ASME B16.29, WROUGHT COPPER, SOLDER-JOINT FITTINGS.

HUBLESS CAST-IRON SOIL PIPE AND FITTINGS
PIPE AND FITTINGS: ASTM A 888 OR CISPI 301 WITH HEAVY DUTY SHIELDED COUPLINGS: ASTM C 1277 ASSEMBLY OF METAL SHIELD OR HOUSING, CORROSION-RESISTANT FASTENERS, AND RUBBER SLEEVE WITH INTEGRAL, CENTER PIPE STOP.

HUB-AND-SPIGOT, CAST-IRON SOIL PIPE AND FITTINGS
PIPE AND FITTING SHALL CONFORM TO ASTM A 74, SERVICE CLASS AND GASKETS TO ASTM C 564, RUBBER.

SOLID-WALL, SCHEDULE 40 DWV PVC CONFORMING TO ASTM D 2665. FITTINGS SHALL BE ASTM D 2665 SOCKET TYPE CONFORMING TO ASTM D 3311. THE ADHESIVE PRIMER SHALL HAVE A VOC CONTENT OF 550 GL OR LESS. THE SOLVENT CEMENT SHALL HAVE A VOC CONTENT OF 510 GL OR LESS.

MAKE CHANGES IN DIRECTION FOR SOIL AND WASTE DRAINAGE AND VENT PIPING USING APPROPRIATE BRANCHES, BENDS, AND LONG-SWEEP BENDS. SANITARY TEES AND SHORT-SWEEP 1/4 BENDS MAY BE USED ON VERTICAL STACKS IF CHANGE IN DIRECTION OF FLOW IS FROM HORIZONTAL TO VERTICAL. USE LONG-TURN, DOUBLE Y-BRANCH AND 1/8-BEND FITTINGS IF 2 FIXTURES ARE INSTALLED BACK TO BACK OR SIDE BY SIDE WITH COMMON DRAIN PIPE. STRAIGHT TEES, ELBOWS, AND CROSSES MAY BE USED ON VENT LINES. DO NOT CHANGE DIRECTION OF FLOW MORE THAN 90 DEGREES. USE PROPER SIZE OF STANDARD INCREASERS AND REDUCERS IF PIPES OF DIFFERENT SIZES ARE CONNECTED. REDUCING SIZE OF DRAINAGE PIPING IN DIRECTION OF FLOW IS PROHIBITED. LAY BURIED BUILDING DRAINAGE PIPING BEGINNING AT LOW POINT OF EACH SYSTEM. INSTALL TRUE TO GRADES AND ALIGNMENT INDICATED, WITH UNBROKEN CONTINUITY OF INVERT. PLACE HUB ENDS OF PIPING UPSTREAM. INSTALL REQUIRED GASKETS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR USE OF LUBRICANTS, CEMENTS, AND OTHER INSTALLATION REQUIREMENTS. MAINTAIN SWAB IN PIPING AND PULL PAST EACH JOINT AS COMPLETED. INSTALL SOIL AND WASTE DRAINAGE AND VENT PIPING AT THE STATE PLUMBING CODES MINIMUM SLOPES. SLEEVES ARE REQUIRED FOR SOIL PIPING PASSING THROUGH CONCRETE SLABS-ON-GRADE IF SLAB IS WITHOUT MEMBRANE WATERPROOFING. INSTALL PVC SOIL AND WASTE DRAINAGE AND VENT PIPING ACCORDING TO ASTM D 2665. INSTALL UNDERGROUND PVC SOIL AND WASTE DRAINAGE PIPING ACCORDING TO ASTM D 2321. DO NOT ENCLOSE, COVER, OR PUT PIPING INTO OPERATION UNTIL IT IS INSPECTED AND APPROVED BY AUTHORITIES HAVING JURISDICTION.

EXCAVATION AND BACKFILL

SAWCUT CONCRETE FLOOR AND PATCH TO MATCH EXISTING FLOOR. MATERIALS TO BE EXCAVATED SHALL INCLUDE EARTH, OR ANY OTHER MATERIAL ENCOUNTERED WITHIN THE LIMITS OF TRENCH EXCAVATION FOR THE UTILITIES TO THE DEPTH AND EXTENT REQUIRED TO INSTALL THE UTILITIES. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH EXISTING SITE CONDITIONS BY EXAMINATION OF BOTH THE ACTUAL SITE AND CONTRACT DOCUMENTS. BACKFILL TRENCHES ONLY AFTER PIPING HAS BEEN INSPECTED, TESTED AND LOCATIONS OF UTILITIES AND APPURTENANCES HAVE BEEN RECORDED.

CLEANING, TESTING AND PREPARATION FOR START-UP

ALL FIXTURES, EQUIPMENT AND PIPING SHALL BE CLEANED OF ALL FOREIGN MATERIAL.

ALL CONTROLS AND SAFETY DEVICES SHALL BE CHECKED TO DETERMINE THAT THEY ARE IN PLACE AND PROPERLY INSTALLED.

WHERE EQUIPMENT IS INTENDED TO CONTAIN FLUIDS, IT SHALL BE FILLED AND TESTED FOR LEAKS AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.

EQUIPMENT SHALL BE OPERATED FOR A REASONABLE TIME TO DETERMINE ANY UNDUE VIBRATION, HEATING OF PARTS, OR OTHER IMPROPER OPERATION.

STARTUP, TESTING AND BALANCING

THIS SECTION INCLUDES FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, INSTRUMENTS, ETC., REQUIRED TO COMPLETELY BALANCE, TEST, AND PLACE IN SERVICE THE MECHANICAL SYSTEMS AND EQUIPMENT.

BEFORE BALANCING AND ADJUSTING IS STARTED, CONTRACTOR SHALL HAVE COMPLETED THEREON THE DATE OF TEST, NAME OF BALANCING CONTRACTOR AND NAME OF PERSON(S) PERFORMING TESTING.

EACH PAGE OF THE REPORT SHALL HAVE RECORDED THEREON THE DATE OF TEST, NAME OF BALANCING CONTRACTOR AND NAME OF PERSON(S) PERFORMING TESTING.

revisions:

#	DATE	RELEASED FOR BIDDING DESCRIPTION
1	11/13/24	RELEASED FOR BIDDING

issued for:

BIDDING

project no: 24103
scale: 12" = 1'-0"
date: 11/13/2024

PLUMBING SPECIFICATIONS

sheet: