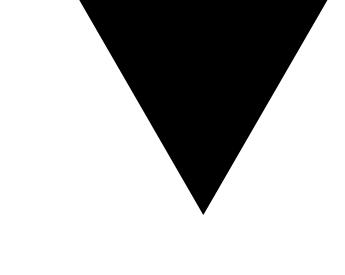
## RENOVATION FOR:

# PLEASURE RIDGE PARK FIRE STATION 1

4500 KERRICK LN. LOUISVILLE, KY 40258



#### ARCHITECT:

KEYES ARCHITECTS AND ASSOCIATES 3005 TAYLOR BOULEVARD LOUISVILLE, KENTUCKY 40208 PH: (502) 636-5113 CONTACT: CHARLES J. KEYES III EMAIL:ckeyes@keyesarchitects.com ARCHITECT: CHARLES J. KEYES III

#### SURVEYOR/CIVIL ENGINEER

LJB INC. CIVIL DESIGNER SURVEYOR 4010 DUPONT CIRCLE SUITE 478. LOUISVILLE, KY. 40207 PH:(502) 899-9611 CONTACT: KARL A. LENTZ IV EMAIL: klentz@ljbinc.com

#### MECH. & ELEC. ENGINEER

E.C. ENGINEERING, INC. P.O. BOX 91977 LOUISVILLE,KY.40291 PH: (502) 494-4219 CONTACT: ERNIE CRUSE EMAIL: ecruse@engltg.com

#### **OWNER**

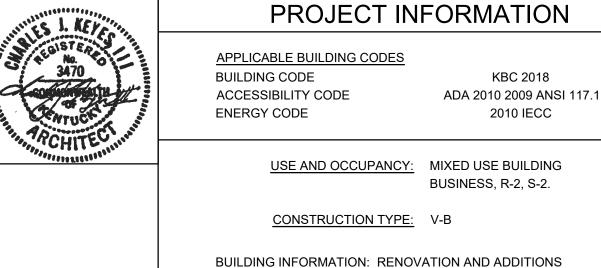
PLEASURE RIDGE PARK FIRE DISTRICT 9500 STONESTREET ROAD LOUISVILLE, KY. 40272 PH:(502) 935-3878 CONTACT: MAJOR ALLEN RICHARD EMAIL: arichard@prpfire.org

#### PLUMBING DESIGN

DOUBLE "S"DESIGNS 3317 PIONEER TRAIL SHEPERDSVILLE, KY. 40165 PH: (502) 664-7936 CONTACT: SONNY SKIDMORE EMAIL: doublesdesignservice@gmail.com

#### GEOTECHNICAL ENGINEER

GREENBAUM ASSOCIATES, INC. 994 LONGFIELD AVENUE LOUISVILLE,KY. 40215 PH: (502) 361-8447 CONTACT: Sandor R. Greenbaum, P.E. EMAIL: srg@geo-engineers.com



8,495.5 S.F **EXISTING BUILDING:** 3,221.3 S.F. **BUILDING ADDITION:** 774.8 S.F. ALTERNATE #1:

2010 IECC

16,487.90 S.F.

FIRE SUPPRESSION: FULLY SPRINKLED (COMBINATION WET &

OCCUPANCY ALLOWANCE							
FUNCTION OF SPACE	ALLOWANCE	AREA	OCCUPANCY				
BUSINESS/VISITORS	2 OFFICERS	3,580					
RESIDENTIAL-2	10 STAFF	2,696	1				
STORAGE-2	FIRE BAYS	6,201					
TC	14						

# STRUCTURAL ENGINEER

RICHARD BARRIOS, CONSULTING ENGINEER 10212 WORTHINGTON LANE PROSPECT, KY 40059 PH: (502) 873-5741 CONTACT: RICHARD BARRIOS EMAIL: rbarrios6@att.com

Sheet Number	Sheet Title
T1.01	Title Sheet
	Civil
C0.0	Civil Title
C1.0	Demolition Plan
C2.0	Layout Grading, Drainage & EPSC Plan
C3.0	Detail Sheet
	Demolition Plans & Details
D1.01	Demolition Plan
	Foundation Plans & Details
F1.01	Foundation Plan
F2.01	Foundation Details
	Structural
S1.01	Roof Framing Plan
	Life Safety Plans
LS1.01	Life Safety Plan
	Floor Plans
A1.00	Existing Floor Plan
A1.01	Proposed Floor Plan
A1.02	Dimension Plan
	Exterior Elevations
A2.01	Exterior Elevations
	Schedules and Standards
A3.01	Commercial ADA-Ansi Guidelines
A3.02	Dorm ADA-Ansi Guidelines
A3.03	Accessibility Site Details
A3.04	Schedules
	Reflected Ceiling Plans
A4.01	Reflected Ceiling Plan
A4.02	Furniture Plan
	Details & Sections
A5.01	Building Sections
A5.02	Building Sections
A5.03	Wall Sections
A5.04	Wall Sections
A5.05	Storm Shelter Wall Sections & Details
A5.06	Fire Rated Wall Sections & Details
A6.01	Door Details
A6.02	Door Details

Window Details

**Sheet List Table** 

A7.01	Cabinetry Plan
A7.02	Cabinetry Details
A7.03	Cabinetry Details
A7.04	Cabinetry Details
A7.05	Cabinetry Details
	Equipment Plan
EQ1.01	Equipment Plan
	Mechanical
MD1.00	Mechanical Demolition Floor Plan
M1.01	Mechanical Zoning and Thermostat Floor Plan
M1.02	Mechanical Floor Plan
M1.03	Mechanical VRF Schedules, Details, and Schematics
M1.04	Mechanical Schedules
M1.05	Mechanical Specifications and Details
	Plumbling
P1.00	Plumbing Utility Plan
P1.01	Waste & Vent Plan
P1.02	Domestic Water Plan
P1.03	Gas Pipping
P1.04	Plumbing Notes
	Electrical
ED1.01	Demolition Plan
EU1.01	Electrical Site Utilities Plan
E1.01	Lighting Plan
E1.02	Power Plan
E1.03	Power Riser Diagram
E2.01	Electrical General Requirements
E2.02	Electrical Requirements
	Specifications
SP1.01	Specifications
SP1.02	Specifications
SP1.03	Specifications
SP1.04	Specifications

Millwork Plans and Details

#### EROSION PREVENTION AND SEDIMENT CONTROL NOTES

THE APPROVED EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) PLAN SHALL BE IMPLEMENTED PRIOR TO ANY LAND—DISTURBING ACTIVITY ON THE CONSTRUCTION SITE. ANY MODIFICATIONS TO THE APPROVED EPSC PLAN MUST BE REVIEWED AND APPROVED BY MSD'S PRIVATE DEVELOPMENT REVIEW OFFICE. EPSC BMP'S SHALL BE INSTALLED PER THE PLAN AND MSD STANDARDS.

DETENTION BASINS, IF APPLICABLE, SHALL BE CONSTRUCTED FIRST AND SHALL PERFORM AS SEDIMENT BASINS DURING CONSTRUCTION UNTIL THE CONTRIBUTING DRAINAGE AREAS ARE SEEDED AND STABILIZED.

ACTIONS MUST BE TAKEN TO MINIMIZE THE TRACKING OF MUD AND SOIL FROM

CONSTRUCTION AREAS ONTO PUBLIC ROADWAYS. SOIL TRACKED ONTO THE ROADWAY SHALL BE REMOVED DAILY.

SOIL STOCKPILES SHALL BE LOCATED AWAY FROM STREAMS, PONDS, SWALES AND ADEQUATELY CONTAINED THROUGH THE USE OF SILT FENCE.

ALL STREAM CROSSINGS MUST UTILIZE LOW-WATER CROSSING STRUCTURES PER MSD STANDARD DRAWING ER-02.

WHERE CONSTRUCTION OR LAND DISTURBANCE ACTIVITY WILL OR HAS TEMPORARILY CEASED ON ANY PORTION OF A SITE, TEMPORARY SITE STABILIZATION MEASURES SHALL BE REQUIRED AS SOON AS PRACTICABLE, BUT

NO LATER THAN 14 CALENDAR DAYS AFTER THE ACTIVITY HAS CEASED.

SEDIMENT-LADEN GROUNDWATER ENCOUNTERED DURING TRENCHING, BORING OR OTHER EXCAVATION ACTIVITIES SHALL BE PUMPED TO A SEDIMENT TRAPPING DEVICE PRIOR TO BEING DISCHARGE INTO A STREAM, POND, SWALE OR CATCH



#### TUCKY UNDERGROUND PROTECTION

The Contractor shall comply with the U.S. Dept of Labor Safety and Health regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (P.L. 91—596) and under Section 107 of the Contract Work Hours and Safety Standards Act (P.L. 91—54). During all phases of this project (including excavations or trenching) the Contractor shall be responsible for safety at all times.

#### GENERAL NOTES

- 1. COMPATIBLE UTILITY LINES (ELECTRIC, PHONE, CABLE) SHALL BE PLACED IN COMMON TRENCH UNLESS OTHERWISE REQUIRED BY THE APPROPRIATE AGENCIES.
- THE DEVELOPMENT LIES IN THE PLEASURE RIDGE PARK FIRE DISTRICT.
   MITIGATION MEASURES FOR DUST CONTROL SHALL BE IN PLACE DURING CONSTRUCTION TO PREVENT FUGITIVE PARTICULATE EMISSIONS FROM REACHING EXISTING ROADS AND NEIGHBORING PROPERTIES.
- 4. MOSQUITO CONTROL IN ACCORDANCE WITH CHAPTER 96 OF THE LOUISVILLE JEFFERSON COUNTY METRO ORDINANCES.

#### MSD NOTES

- 1. CONSTRUCTION PLANS AND DOCUMENTS SHALL COMPLY WITH LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT DESIGN MANUAL AND STANDARD SPECIFICATIONS AND OTHER LOCAL, STATE, AND FEDERAL ORDINANCES.
- 2. NO PORTION OF THE SUBJECT PROPERTY IS LOCATED IN THE 100 YEAR FLOODPLAIN PER FIRM MAP 2111C0089E DATED DEC. 5, 2006.
- 3. SANITARY SEWER SERVICE TO BE PROVIDED BY EXISTING SANITARY SEWER SERVING THE SITE. NO ADDITIONAL SANITARY SERVICE REQUIRED FOR THIS PROJECT. SITE SERVICED BY MORRIS FORMAN WQTC.
- 4. THE PROJECT IS SUBJECT TO MS4 WATER QUALITY REGULATIONS ONCE THE INCREMENTAL AREA OF DISTURBANCE SUMS EQUAL TO OR GREATER THAN 1 ACRE OF DISTURBANCE. PER THIS COMMUNITY FACILITY REVIEW PLAN, THE APPROXIMATE AREA OF DISTURBANCE IS 10,0058 SF (0.23 ACRES)
- 5. STORMWATER TO BE DIRECTED TO THE EXISTING DRAINAGE SYSTEM.

# SITE CONSTRUCTION PLANS FOR PROPOSED BUILDING EXPANSION: PLEASURE RIDGE PARK FIRE STATION #1

4500 KERRICK LANE LOUISVILLE, KY. 40258



LOCATION MAP

NOT TO SCALE

#### INDEX OF DRAWINGS

C1.0 - DEMOLITON PLAN C2.0 - LAYOUT, GRADING, DRAINAGE, & EPSC PLAN

C3.0 - DETAIL SHEET

#### OWNER

PLEASURE RIDGE PARK FIRE DISTRICT
4500 KERRICK LANE
LOUISVILLE, KY. 40258
D.B. 5924, PG. 390
PARCEL ID: 10320464000

STORM & SANITARY SEWER PUBLIC WORKS METROPOLITAN SEWER DISTRICT (MSD) METROPOLITAN PUBLIC WORKS 700 WEST LIBERTY STREET 444 S. 5th STREET, Suite 500 LOUISVILLE, KENTUCKY 40203 LOUISVILLE, KENTUCKY 40203 PHONE: 502-540-6000 PHONE: 502-574-5810 CABLE TELEVISION PLEASURE RIDGE PARK FIRE SPECTRUM DISTRICT 10168 LINN STATION ROAD, Suite 120 4500 KERRICK LANE LOUISVILLE, KENTUCKY 40223 LOUISVILLE, KENTUCKY 40217 PHONE: 502-664-8155 PHONE: 502-935-1932 AT&T COMMUNICATION LOUISVILLE WATER COMPANY 3719 BARDSTOWN ROAD, FLOOR 2 550 SOUTH 3RD STREET LOUISVILLE, KENTUCKY 40218 LOUISVILLE, KENTUCKY 40202 PHONE: 502-8665 PHONE: 502-569-33600 TELECOMMUNICATIONS KTC-DIXIE HIGHWAY KENTUCKY TRANSPORTATION CABINET 2421 HOLLOWAY ROAD PERMITS, DISTRICT - 5 LOUISVILLE CONTACT: JASON RICHARDSON LOUISVILLE, KENTUCKY 40299 PHONE: 502-210-5400 PHONE: 502-593-5585 NATURAL GAS LOUISVILLE GAS AND ELECTRIC LOUISVILLE GAS AND ELECTRIC 6900 Enterprise Drive LOUISVILLE, KENTUCKY 40214 6900 Enterprise Drive LOUISVILLE, KENTUCKY 40214 Auburndale Service Center Auburndale Service Center PHONE: 502-384-8239 PHONE: 502-384-8239

EXISTING INCREASE TOTAL IMPERVIOUS IMPERVIOUS 50,960 SQ.FT. 1,375 SQ.FT. 52,335 SQ.FT. 2.70 % INCREASE

AREA OF DISTURBANCE = 10,058 SQ.FT. (0.23 ACRES)

#### RECAPITULATION

1. EXISTING ZONING C2
2. FORM DISTRICT SUBURBAN MARKETPLACE
3. EXISTING USE FIRE STATION

4. LAND AREA 1.68 ACRES (73,296.29 SQ.FT.)
5. BUILDING AREA

A. EXISTING BLDG #1 & #2
B. PROPOSED

14,715 SQ.FT.
3,172 SQ.FT.
(21.6% INCREASE)

TOTAL = 17,887 SQ.FT.

#### 6. PARKING A. REQUIRED - 15 EMPLOYEES / 3 FIRE VEHICLES (APPARATUS)

MINIMUM SPACES REQUIRED

1 SPACE FOR EACH 2 EMPLOYEES
ON THE MAXIMUM SHIFT, PLUS 3
SPACES.
4 SPACES FOR EACH PIECE OF APPARATUS.

MAXIMUM SPACES ALLOWED

1 SPACE FOR EACH EMPLOYEE ON THE MAXIMUM SHIFT, PLUS 3
ADDITIONAL SPACES.

6 SPACES FOR EACH PIECE OF APPARATUS.

11 SPACES - EMPLOYEES18 SPACES - EMPLOYEES12 SPACES - APPARATUS18 SPACES - APPARATUS23 SPACES - MIN. REQUIRED36 SPACES - MAX. REQUIRED

B. PROVIDED 23 SPACES TOTAL W/ 4 HANDICAP SPACES
7. VUA 31,675 SQ.FT.

8. ILA NOT REQUIRED



LJB INC.
4010 Dupont Circle
Suite 478
Louisville, Ky 40207
(502) 899-9611
LJBinc.com



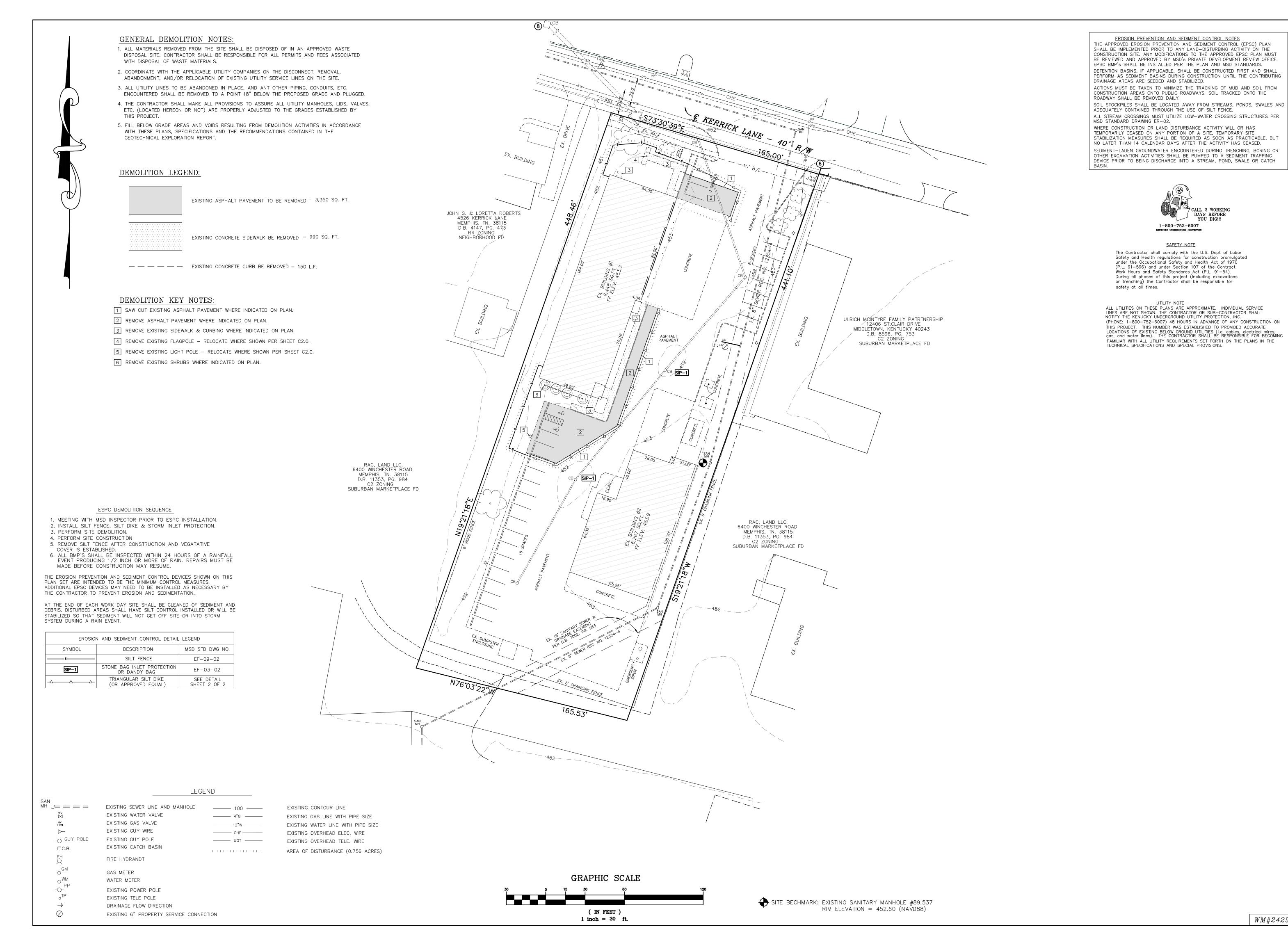
BENCHMARK: LOJIC MONUMENT - GREENWOOD2 ELEVATION = 455.90 (NAVD88)

SITE BECHMARK: EXISTING SANITARY MANHOLE #89,537 RIM ELEVATION = 452.60 (NAVD88)

REVISED

PROJECT NO.: 0119463A.00 Drawing name: PRP fire-cov.dwg 1/15/2021 WM#

WM#2429



**REVISIONS:** 

HAFER

DRWN BY: KAL/DLL

CHKD BY: EWH

DAYS BEFORE YOU DIG!!!

DRAWING NAME:

PRP FIRE.DWG



402

DATE: 1/15/2021

**KERRIC** 

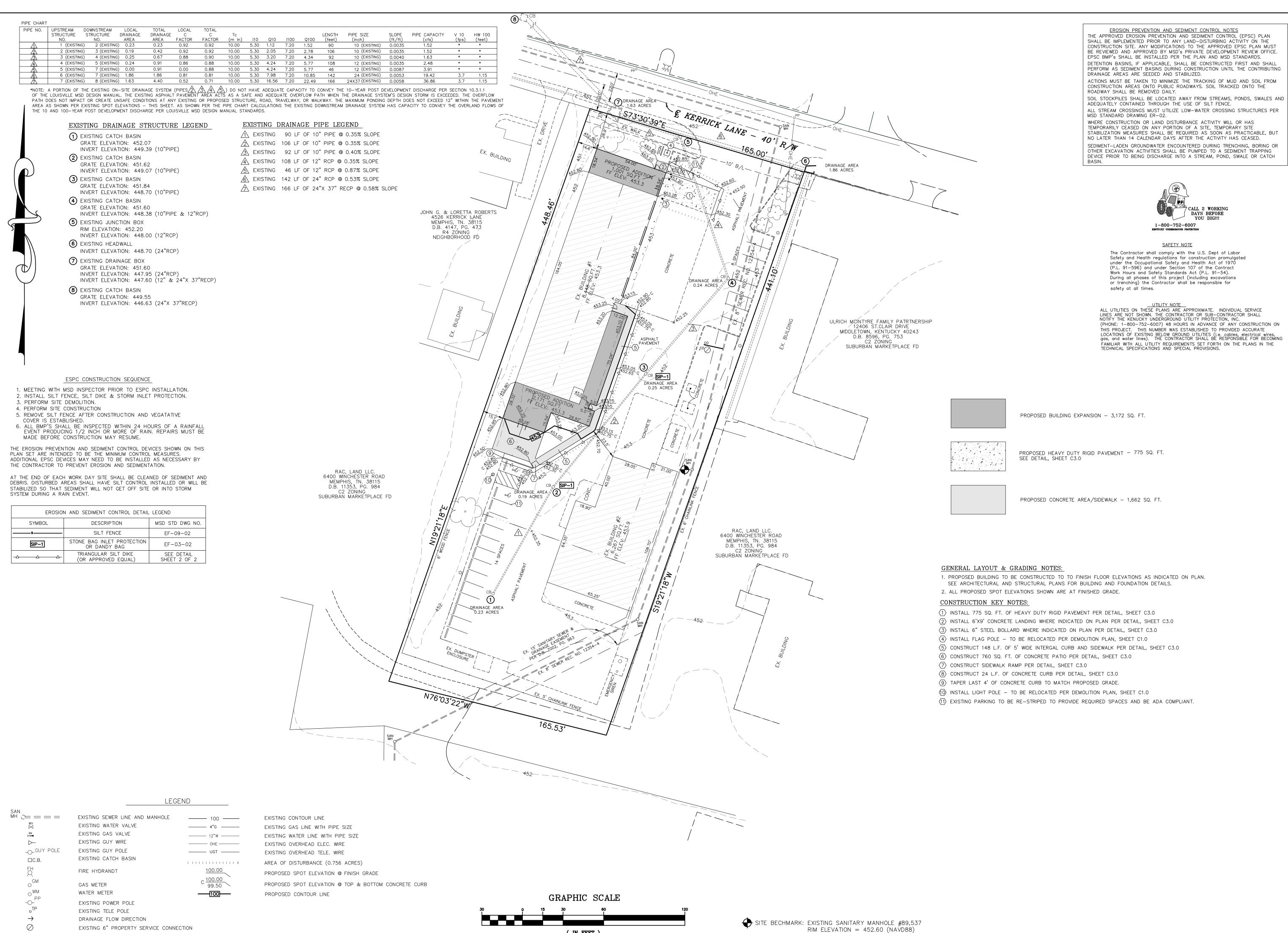
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PROJECT NO. 0119463A.00

×

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( IN FEET )
1 inch = 30 ft.

REVISIONS:

ERIC W. HAFER

28524

CENSED MALENGIANIA

DRWN BY: KAL/DLL

CHKD BY: EWH

DRAWING NAME:
PRP FIRE.DWG

10 Dupont Circle
 ite 478
 iisville, Ky 40207
 2) 899-9611

402

Suite 478

Louisville, Ky
(502) 899–96

LJBinc.com

DING, DRAINAGE, & EPSC PLAN

DATE: 1/15/2021 PROJECT NO.:

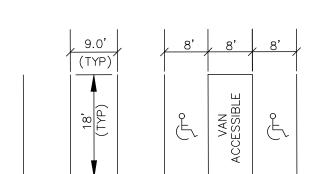
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PROJECT NO.: 0119463A.00

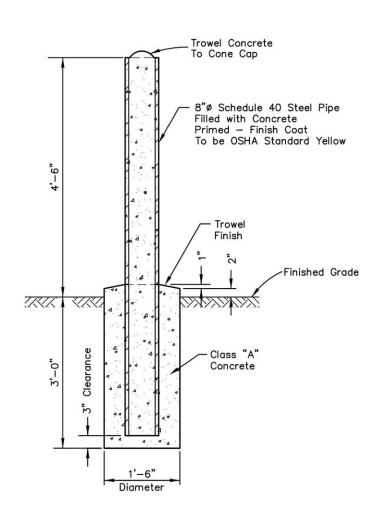
Sheet C2.

#### GENERAL NOTES

- All construction methods, materials and work activities shall be in accordance with the Kentucky Transportation Cabinet Department of Highways Standard Specifications and Supplement for Road and Bridge Construction latest edition unless otherwise specified. The current Kentucky Standard Drawings will also apply unless otherwise noted on the Plans.
- . The Contractor shall comply with all applicable Local, State and Federal codes, ordinances, regulations and requirements necessary to complete the work. This includes provisions for maintenance of traffic, construction and the Occupational
- Saftey and Health Act (OSHA). 3. All embankment backfill and subgrade materials shall be constructed and compacted to 95% of maximum density and plus 2 or minus 4 percent of the optimum moisture
- 4. A minimum twelve (12) inch depth of cover over all culvert pipes is required. A minimum six (6) inch enclosed Class A concrete encasement with a minimum
- projection into the pavement structure for any pipe with reduced cover is required. i. Asphalt tack coat shall be applied at the rate of 0.1 gallon per square yard immediately prior to the placement of the bituminous surface course.
- . Bituminous concrete pavement binder, base and surface shall be Class I construction as shown in the Plans in accordance with the Kentucky Department of Highways
- Specifications. 7. All cement concrete shall be a minimum of 4000 psi unless otherwise specified.
- 8. When matching existing bituminous pavements a two (2) inch depth sawcut a minimum of twelve (12) inches from the edge or to sound asphalt material and roadway rock base and the asphalt materials placed to form a watertight joint as
- directed by Metro Public Works. . All sidewalks to be constructed of Class A concrete as shown on the Plans, five (5) inch thickness and five (5) foot in width.
- ). Pavement radii shall be 25' (back of curbs), unless otherwise noted.
- l. For wingwall details not shown, refer to Kentucky State Highway Drawings. NDTE: (1) Fire Hydrants will be installed in accordance with
- the regulations of the Jefferson County Fire
- Safety Program.
  - (2) When sidewalk elevations deviate slightly from proposed construction plan elevations, it will be the responsibility of the Developer to pay for the adjustment to the utility cover or grates which have been previously set to the construction plan elevations for the sidewalk or remove sidewalk and
- reconstruct to proper elevations. 12. It is the responsibility of the contractor to call the UTILITIES PROTECTION CENTER at 1-800-752-6007 and have all existing utilities which may be encountered on the project field located both horizontally and vertically prior to the beginning of any construction.

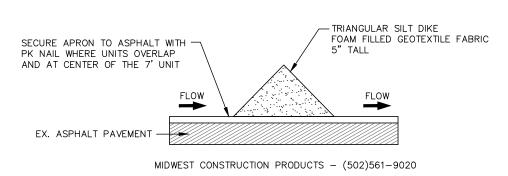


PROPOSED PARKING SPACE DIMENSIONS DETAIL NOT TO SCALE

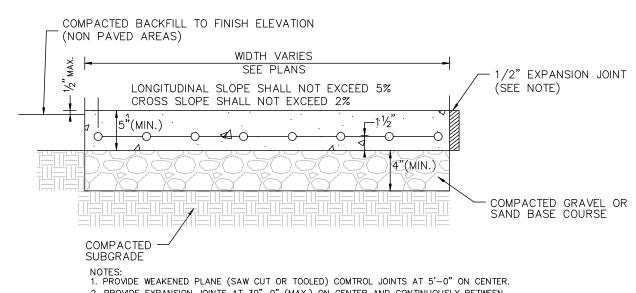


CONCRETE FILLED STEEL BOLLARD

NOT TO SCALE

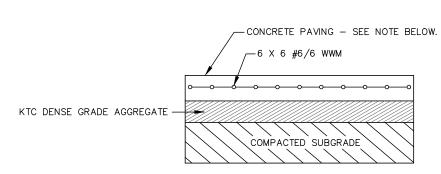


TRIANGULAR SILT DIKE (OR APPROVED EQUAL) NOT TO SCALE



2. PROVIDE EXPANSION JOINTS AT 30"-0" (MAX.) ON CENTER AND CONTINUOUSLY BETWEEN SIDEWALK AND WALLS OR OTHER STUCTURES. 3. ALL CONCRETE SHALL BE 4000 PSI (TYP.)

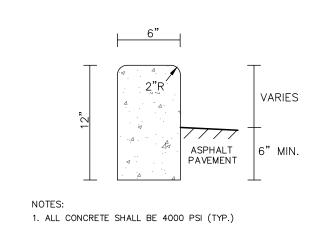
CONCRETE SIDEWALK/LANDING/PATIO SECTION NOT TO SCALE



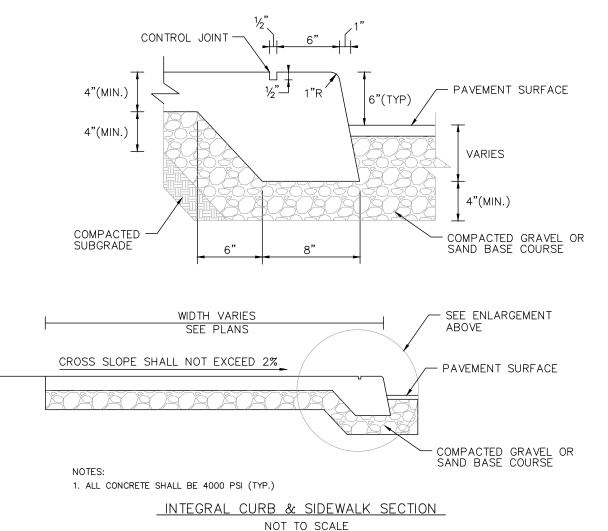
THICKNESS CONC. SLAB W/EXP. JOINTS TO BE PLACED 10' O.C. MAX. (EQUAL SPACES) \* CONC. PAVING SHALL MEET THE REQUIREMENTS OF THE KYTC SPECIFICATIONS LATEST EDITION. KTC DENSE GRADE AGGREGATE

> 1. DUMPSTER PAD 2. CONCRETE DRIVE THRU COMPACTED SUBGRADE PER SPECIFICATIONS

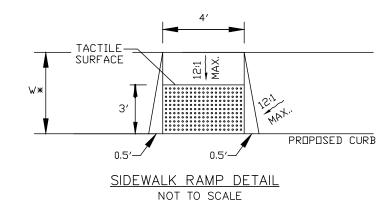
HEAVY DUTY RIGID PAVEMENT SECTION NOT TO SCALE



CONCRETE CURB DETAIL NOT TO SCALE



W\* = Width of Sidewalk Varies



PERMANENT SEEDING REQUIREMENTS Species Site Condition Maintenance Frequent mowing Kentucky Bluegrass desirable Creeping Red Frequent mowing Semi-shady Fescue desirable KY 31 Tall Steep - droughty Occasional mowing Fescue or wet soils on critical slopes Crownvetch Very steep, Do not mow rocky soils

ESTABLISHMENT

- On sloping areas, first install needed surface water system to protect new seedings.
If unfavorable soil conditions exist, add 4 to 6 inches of topsoil; use topsoiling BMP recommendations.

- Apply lime and fertilizer according to soil tests. Prepare the soil by disking or other methods to work in the

fertilizer and to form a loose seedbed for planting. Seed: use recommended rates and seeding dates. - Mulch; use mulching BMP recommendations. - Water as needed to keep the upper 3" to 4" moist.

If hydroseeded, use about four times the normal seed rate, and always include adequate fertilizer and mulch.

Mowing - Do not now newly seeded bluegrass or red fescue until it is four inches tall. Crownvetch must never be mowed. KY 31 tall fescue may be mowed for appearance, or only occasionally, according to the site and the owner's desires.

Fertilization – Annual fertilization is generally advisable at a rate of about 400 lbs. per acre (15–15–15) for grasses and 400 lbs. per acre (0-15-15) for legumes or use a soil test.

LAYING SOD

- Test soil for fertilizer and lime and make necessary applications before sodding.

- If surface is dominantly subsoil, place 4-6" topsoil over the

- Disk or loosen soil surface, then smooth and firm. - If dry, moisten just before sodding. - Use vigorous, freshly cut, weed and pest-free sod - one to

three years old. - Lay sod across the slope with snug, staggered joints. - Roll or tamp sod for solid root-soil contact. - Use netting and/or staples or pegs on steep slopes or waterway

- Water sod immediately and as needed during the first season. MAINTENANCE

- Allow grass to grow 4" before mowing, then cut as needed at 2" height. Irrigate during dry seasons. Control weeds and fertilize annually.

The site contractor shall be responsible for the installation and maintenance of all silt controls until the binder surface has been constructed for all raodways. After the binder surface has been installed, the owner or his representative shall be responsible for the installation and maintenance of all silt controls until final stabilization is accomplished.

Final stabilization shall consist of permanent seeding — Spread uniformly 4 to 6" thick over entire area. and/or sodding. Final stabilization shall be complete prior to any performance bond release.

TEMPORARY SEEDING REQUIREMENTS ANY DISTURBED AREAS LEFT UNCOVERED FOR 14 OR MORE DAYS SHALL ADHERE TO THE FOLLOWING TEMPORARY COVER SCHEDULE: Species Seeding Rate lbs-acre Annual Ryegrass Ky 31 Tall Fescue and

2/15 - 6/15 2/15 - 6/15 or 8/16 - 11/15 8/16 - 11/15 2/15 - 6/15 Rye (grain) Rye (grain) Spring Dats

75-100#

25-40#

Seeding Dates

1 1/2 - 2 ton

4 - 6 ton

200 gal.

1,400 - 1,600#

ESTABLISHMENT - Remove loose rock, roots, construction debris, etc., from soil Apply lime and fertilizer according to soil test for quick

plant growth. Disk or loosen upper 4" for seedbed. Seed correct grass species, check rates and dates. - Mulch, especially on slopes or during dry seasons.

- Water to speed germination and growth. May be hydroseeded, but if so, increase seed rate. MAINTENANCE

Dry, free of

weed seed

Air dry and

Dry, cut in

4-6" lengths

Water during droughty seasons. Do not mow small grain seedings. TYPICAL MULCH AND APPLICATION RATES 1000 sq.ft. Acre

straw, grass or hay straw Wood fiber cellulose

Small grain

Corn stalks Asphalt spray Refer to label 5 gal.

> APPLICATION GUIDELINES - If the site is subject to soil erosion, install temporary diversions or other water control measures above and within the area to be mulched.

Select the type of mulch and the rate according to the needs and site conditions. Application may be by hand, blower or other machines. If straw, spread uniformly so that 80-90 percent of ground is covered. Anchor mulch with asphalt or plastic spray, netting or pegs and twine.

TOPSOIL RECOMMENDATIONS

- The original surface soil is generally friable and higher in organic matter and nutrients. In this case, stripping the upper 8-10" and stockpiling for future spreading is the most economical method.

- When topsoil is hauled to the site, it should be checked for quality and plant growth potential. Soil texture (friability), acidity, organic matter and nutrient content are important

factors. It should be free of weed seeds. - Install silt fence around downhill side of topsoil stockpile.

- After final grading, loosen and roughen the surface to insure good bonding with topsoil.

- Remove large rocks, roots and other debris.

- Test topsoil and apply lime and fertilizer before seeding or

sodding

**REVISIONS:** 



DRWN BY: <u>*KAL/DLL*</u>

CHKD BY: EWH

PRP FIRE.DWG

DRAWING NAME:



Circle

402

LION

SHEE

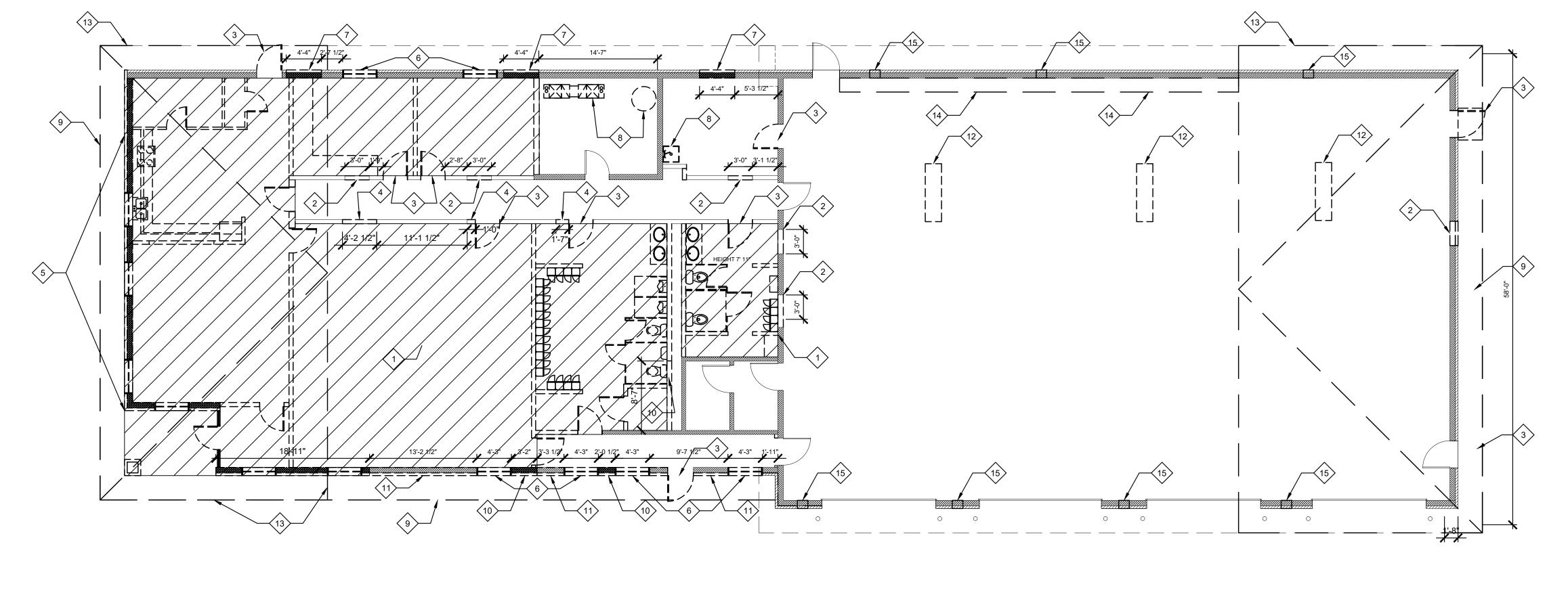
FIRE ARK RIDGE ANE KERRICK SURE .500

DATE: 1/15/2021 PROJECT NO.

0119463A.00

LE







**NOTE**: SEE MECH. ELEC. & PLUMBING SHEETS FOR ADDITIONAL DEMOLITION

**NOTE**: CONTRACTOR MAY DEMO MORE OF THE INTERIOR WALLS AND REPLACE WITH NEW IF NEEDED

#### PATCH AND REPAIR NOTES

PROMPTLY PATCH AND REPAIR HOLES AND DAMAGED SURFACES CAUSED TO ADJACENT CONSTRUCTION BY SELECTIVE DEMOLITION OPERATIONS.

WHERE REPAIRS TO EXISTING SURFACES ARE REQUIRED, PATCH TO PRODUCE SURFACES SUITABLE FOR NEW MATERIALS.

RESTORE EXPOSED FINISHES OF PATCHED AREAS AND EXTEND FINISH RESTORATION INTO ADJOINING CONSTRUCTION TO REMAIN IN A MANNER THAT ELIMINATES EVIDENCE OF PATCHING AND REFINISHING.

PATCH AND REPAIR FLOOR AND WALL SURFACES IN THE NEW SPACE WHERE DEMOLISHED WALLS OR PARTITIONS EXTEND ONE FINISHED AREA INTO ANOTHER. PROVIDE A FLUSH AND EVEN SURFACE OF UNIFORM COLOR AND

#### SELECTIVE DEMOLITION NOTES

REMOVE AND LEGALLY DISPOSE OF ITEMS EXCEPT THOSE INDICATED TO BE REINSTALLED SALVAGED, OR TO REMAIN THE OWNER'S PROPERTY.

REMOVE ITEMS INDICATED, CLEAN SURFACE, AND OTHERWISE REPAIR THEM FOR REUSE; STORE AND PROTECT AGAINST DAMAGE. REINSTALL ITEMS IN LOCATIONS INDICATED.

PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY THE ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTED DEMOLITION AND THEN CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS.

IDENTIFY AND ACCURATELY LOCATE CAPPED UTILITIES AND OTHER SUBSURFACE STRUCTURAL ELECTRICAL OR MECHANICAL CONDITIONS. DOCUMENT THESE UTILITIES ON RECORD DRAWINGS PROVIDED TO ARCHITECT UPON COMPLETION OF PROJECT.

PROTECT WALLS, CEILINGS, FLOORS, AND OTHER EXISTING FINISH WORK THAT ARE TO REMAIN AND ARE EXPOSED DURING SELECTIVE DEMOLITION OPERATIONS. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACE AND AREAS.

COVER AND PROTECT FURNITURE, FURNISHINGS, AND EQUIPMENT THAT HAVE NOT BEEN REMOVED.

BY SELECTIVE DEMOLITION OPERATIONS. RETURN AREAS TO CONDITION EXISTING BEFORE START OF NEW WORK.

DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED. DISPOSAL: PROMPTLY DISPOSE OF DEMOLISHED MATERIALS. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON SITE. TRANSPORT DEMOLISHED MATERIALS OFF OWNER'S PROPERTY AND LEGALLY DISPOSE OF THEM. SWEEP THE AREA OF WORK BROOM CLEAN ON COMPLETION OF SELECTIVE DEMOLITION OPERATION.

PROTECTION OF PEDESTRIANS SHALL BE PROVIDED DURING CONSTRUCTION, REMODELING, AND DEMOLITION ACTIVITIES AS REQUIRED BY STATE BUILDING CODE. SIGNS SHALL BE PROVIDED TO DIRECT PEDESTRIAN TRAFFIC DURING DEMOLITION. CONSTRUCTION AND REMODELING.

#### **SHEET NOTES:**

NOTE SYMBOL

ALL FINISHES/WALLS/DOOR ARE TO BE REMOVED INSIDE HATCHED AREA. ALL UTILITIES ARE TO BE CAPPED OFF PER CODE - PATCH TO MATCH SURROUNDINGS

REMOVE WALL THIS AREA AS SHOWN FOR NEW DOOR OPENING - SEE FLOOR PLANS AND DOOR FINISH SCHEDULE.

REMOVE EXISTING DOOR-PATCH OPENING TO MATCH SURROUNDINGS

REMOVE WALL THIS AREA FOR NEW OPENING FLOOR TO CEILING PATCH TO MATCH

REMOVE WALL, DOOR, & FINISHES THIS AREA FROM FLOOR TO CEILING - PATCH TO MATCH

REMOVE EXISTING WINDOW THIS AREA - PATCH TO MATCH SURROUNDINGS.

REMOVE WALL THIS AREA AS SHOWN FOR NEW WINDOW OPENING - SEE FLOOR PLANS AND WINDOW FINISH SCHEDULE.

EQUIPMENT ARE TO BE REMOVED . ALL UTILITIES ARE TO BE CAPPED OFF PER CODE - PATCH TO MATCH SURROUNDINGS

REMOVE EXISTING FASCIA AND SAVE FOR REUSE IF POSSIBLE & PREPARE FOR NEW WORK PER STRUCTURAL PLANS.

10 REMOVE WALL AND PATCH TO MATCH SURROUNDINGS

11 REMOVE BRICK VENEER AS SHOWN AND PATCH TO MATCH SURROUNDINGS

REMOVE SKY LIGHT AS SHOWN AND PATCH TO MATCH SURROUNDINGS WHERE NO NEW ROOF & CEILING IS NEEDED

13 REMOVE EXISTING ROOF AND PREPARE FOR NEW ADDITION.

14 REMOVE EXISTING SHELF AT FLOOR PATCH FLOOR AS REQD.

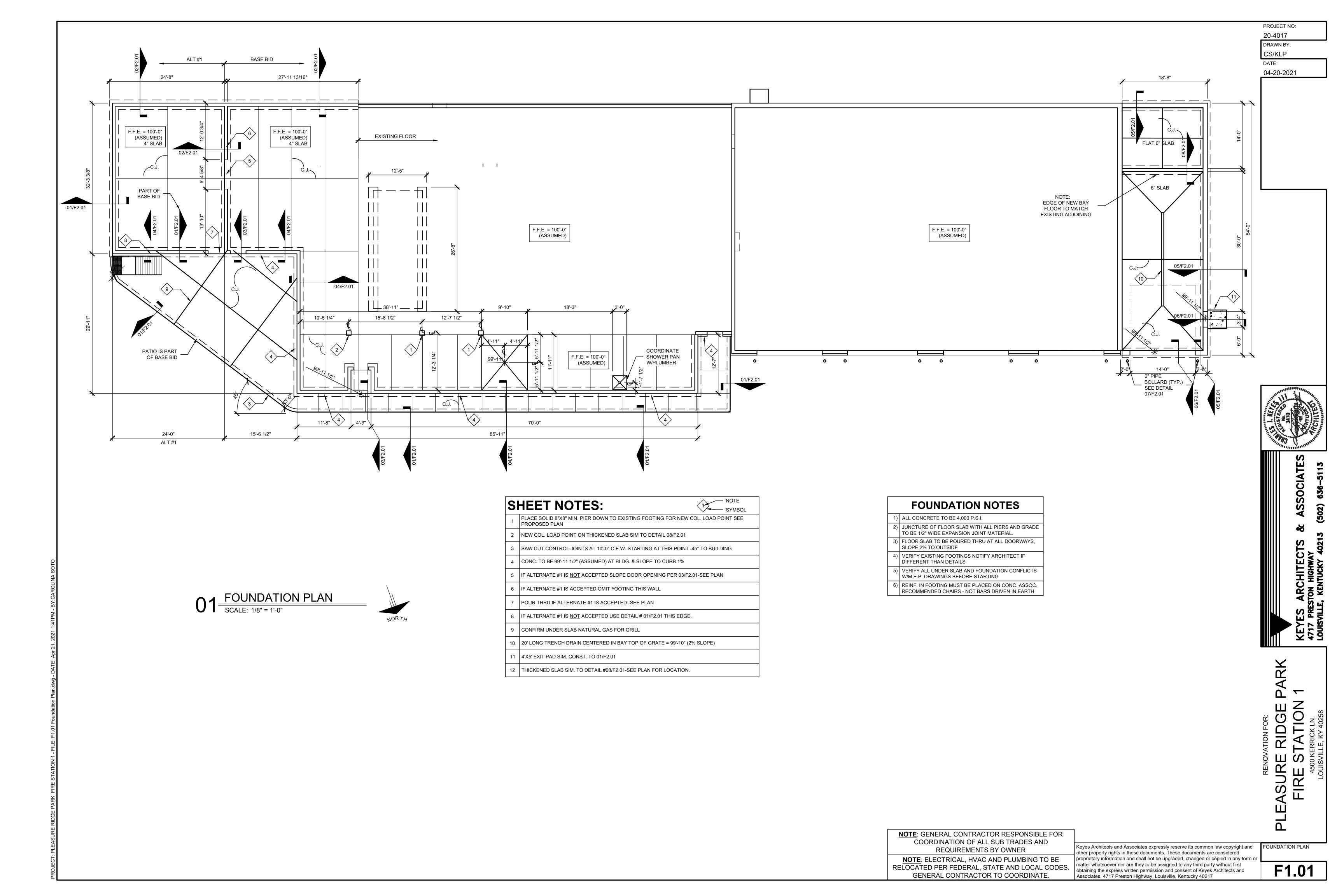
15 SHORE & DEMO FOR NEW LOUVERS & FANS. SEE MECH. DRAWINGS.

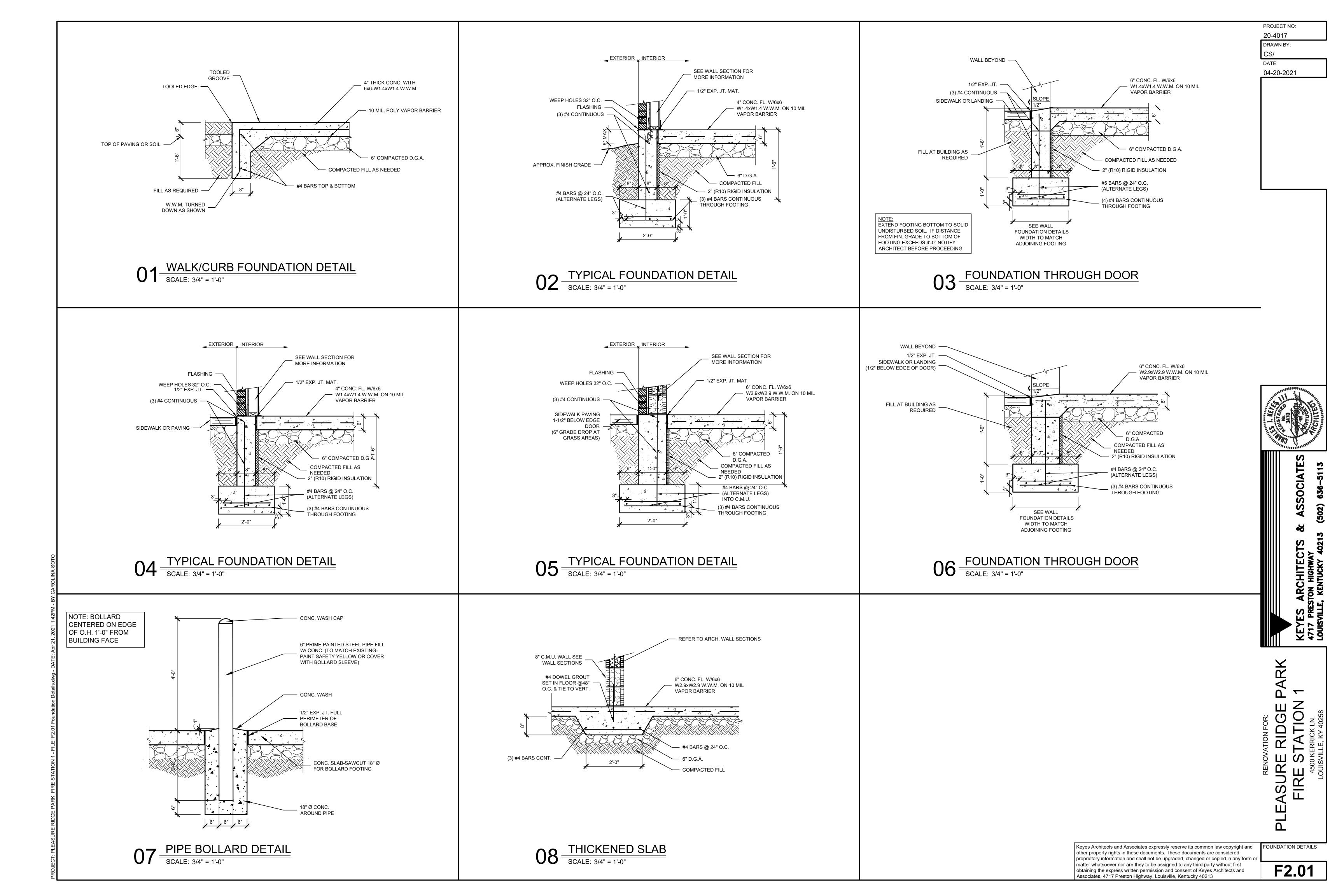
**NOTE**: ALL DIMENSIONS ARE TO FACE OF STUD **NOTE**: GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF ALL SUB TRADES AND

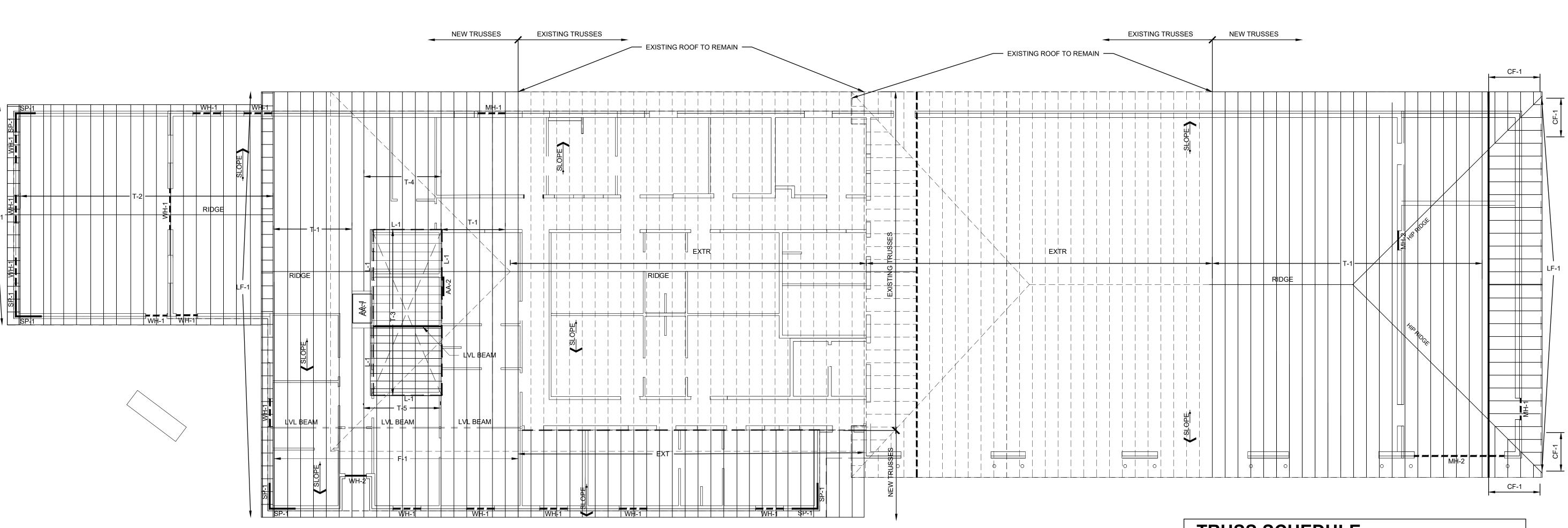
REQUIREMENTS BY OWNER **NOTE**: ELECTRICAL, HVAC AND PLUMBING TO BE RELOCATED PER FEDERAL, STATE AND LOCAL CODES. GENERAL CONTRACTOR TO COORDINATE.

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O1 ROOF FRAMING PLANS

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



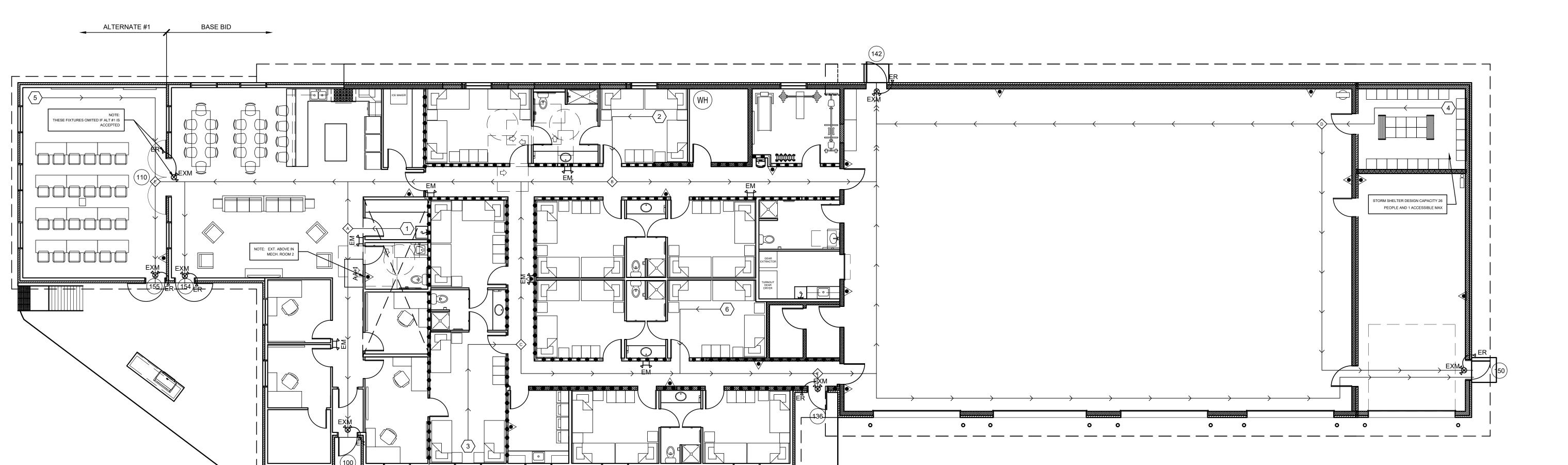
TRU	SS SCHEDULE
T-1	LARGE GABLE ROOF TRUSS @ 24" O.C.
T-2	SMALL GABLE TRUSS @ 24" O.C.
T-3	STICK FRAME 2x8 @ 24" O.C. WITH ROOM IN ATTIC AND 2X8 FLOOR JOIST AT MEZZ LEVEL.
T-4	SMALL GABLE TRUSS @24" O.C.
T-5	SMALL GABLE TRUSS @24" O.C.
T-6	SMALL GABLE TRUSS @24" O.C.
F-1	2x8 RAFTERS @24"o.c. WITH 2x6 CEILING JOIST
L-1	LOAD BEARING WALL
LF-1	LADDER FRAMING AS NEEDED TO CREATE GABLE ROOF
CF-1	CORNER TRUSS SET OR FRAMING @24" O.C.
SP-1	4X8 1/2" PLYWOOD SHEAR PANEL
AA-1	30"X60" 1/2" GYP. BD. ATTIC ACCESS - PLACE ATTIC ACCESS BETWEEN ROOF TRUSSES
AA-2	ATTIC ACCESS PANEL THROUGH THE WALL
EXTR	EXISTING TO REMAIN
EXT	EXTEND 2X6
WH-1	WOOD HEADER - 2x12
WH-2	WOOD HEADER - 2x8
MH-1	MASONRY HEADER - 8" U-SHAPE WITH #5 BAR
MH-2	MASONRY HEADER - 16" U-SHAPE WITH (2) #5 BAR (T&B)

NOTE: ALL TRUSSES SHALL BE DESIGNED BY A KENTUCKY LICENSED STRUCTURAL ENGINEER. TRUSS DESIGN SHALL MEET ALL REQUIREMENTS OF THE KENTUCKY BUILDING CODE. SHOP DRAWINGS SHALL BE STAMPED BY A KENTUCKY LICENSED ENGINEER.

NOTE: COORDINATE ROOF TRUSS LOCATIONS WITH SEPARATION WALLS

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**S1.01** 



O1 LIFE SAFETY PLAN

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

100 FT

250 FT



CODE ANAL	YSIS- FULLY SPRINKLED PER I	N.F.P.A.13 WET DRY SYSTEM.		T
CATEGORY	CODE REFERENCE	REQUIREMENT/DESIGNATION	PROVIDED	
CONSTRUCTION TYPE	TABLE 503 / 602		V-B	<u>NOTI</u>
OCCUPANCY GROUPS	304.10000		MIXED B,R-2,S-2.	
OCCUPANCY LOAD	TABLE 1004.1.1	ACTUAL TOTAL OCCUPANTS	14 OCCUPANTS	
	TABULAR	TOTAL OCCUPANTS	63 OCCUPANTS	
ALLOWABLE AREA	TABLE 506 SECTION 507	ONE STORY BUILDING PROVIDED SPRINKLED SYSTEM	11,219.76 S.F.	

COMMON PATH OF EGRESS TRAVEL

EXIT ACCESS TRAVEL DISTANCE

	FIRE SUPPR	ESSION					
TYPE	DESCRIPTION	MODEL#					
	FIRE EXTINGUISHER	BY MANUFACTURER					
NOTE: LOCATIONS TO BE VERIFIED BY FIRE MARSHAL.							

LIFE S	AFEI	Y PATHW	/AYS						
				TOT	ΓAL TRAVE	L DISTAN	NCE		
				DOOR NUMBER					
LOCATION	С	OMMON PATH	EXIT 100	EXIT 136	EXIT 142	EXIT 150	EXIT 154	EXIT 155	
1	А	7'-7-1/2"	32'-10"	-	108'-0"	-	-	49'-5"	
2	В	16'-2"	-	85'-2"	57'-10"	-	-	84'-7"	
3	С	23'-1"	94'-7"	54'-9"	98'-9"	-	-	-	
4	D	21'-0"	-	-	77'-9"	63'-4"	-	-	
5	E	30'-11"	-	123'-10"	-	-	15'-7"	20'-4"	
6	F	38'-3"	71'-6"	2'-1"	55'-7"	112'-5"			
ATHWAY KI	EY PLAN:		•						
<del></del>	: TRAVEL	: TRAVEL PATH W/ DIRECTION OF FLOW							
(#)	: TRAVEL	: TRAVEL PATH STARTING LOCATION, WHERE "#" = LOCATION COLUMN IN THIS TABLE.							
#	: СОММО	: COMMON PATH LOCATION, WHERE "#" = LOCATION COLUMN IN THIS TABLE.							
(#)	: EXIT DOOR LOCATION, WHERE "#" = DOOR IN THIS TABLE AND IN DOOR FINISH SCHEDULE.								

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EXIT CALCULATIONS

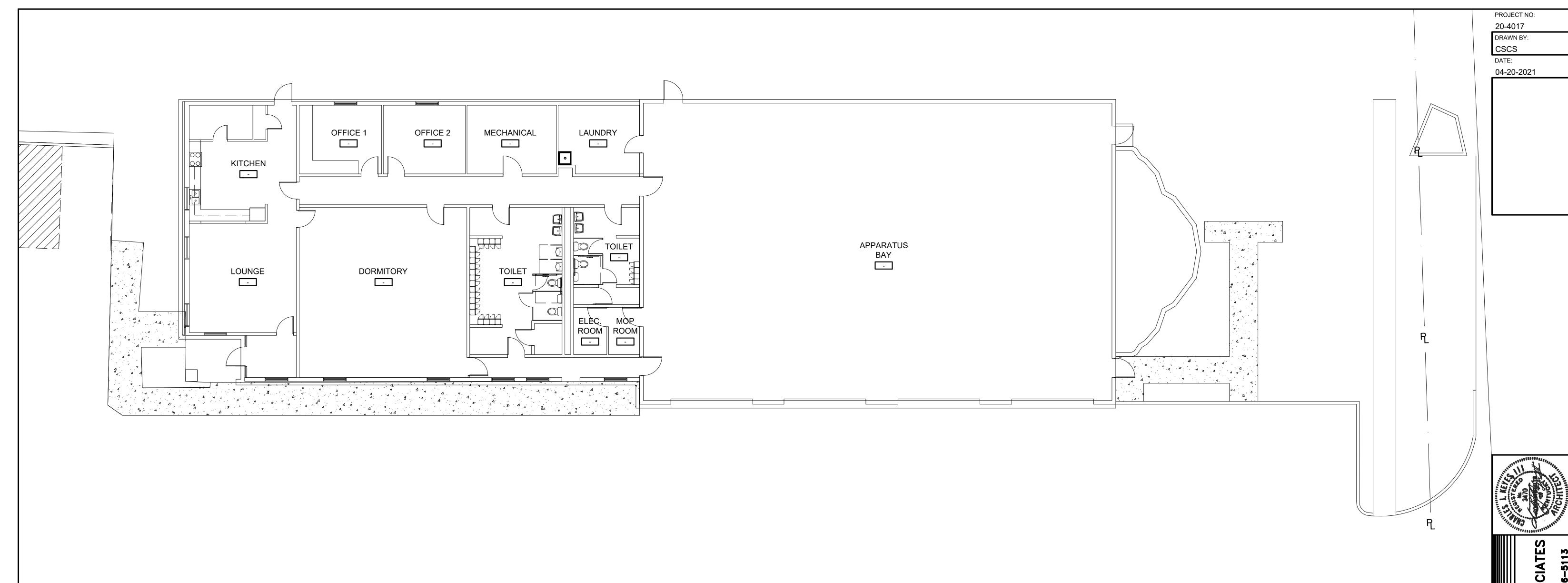
SEPARATED OCCUPANCIES

SECTION 1014.3

SECTION 1017

TABLE 1017.2

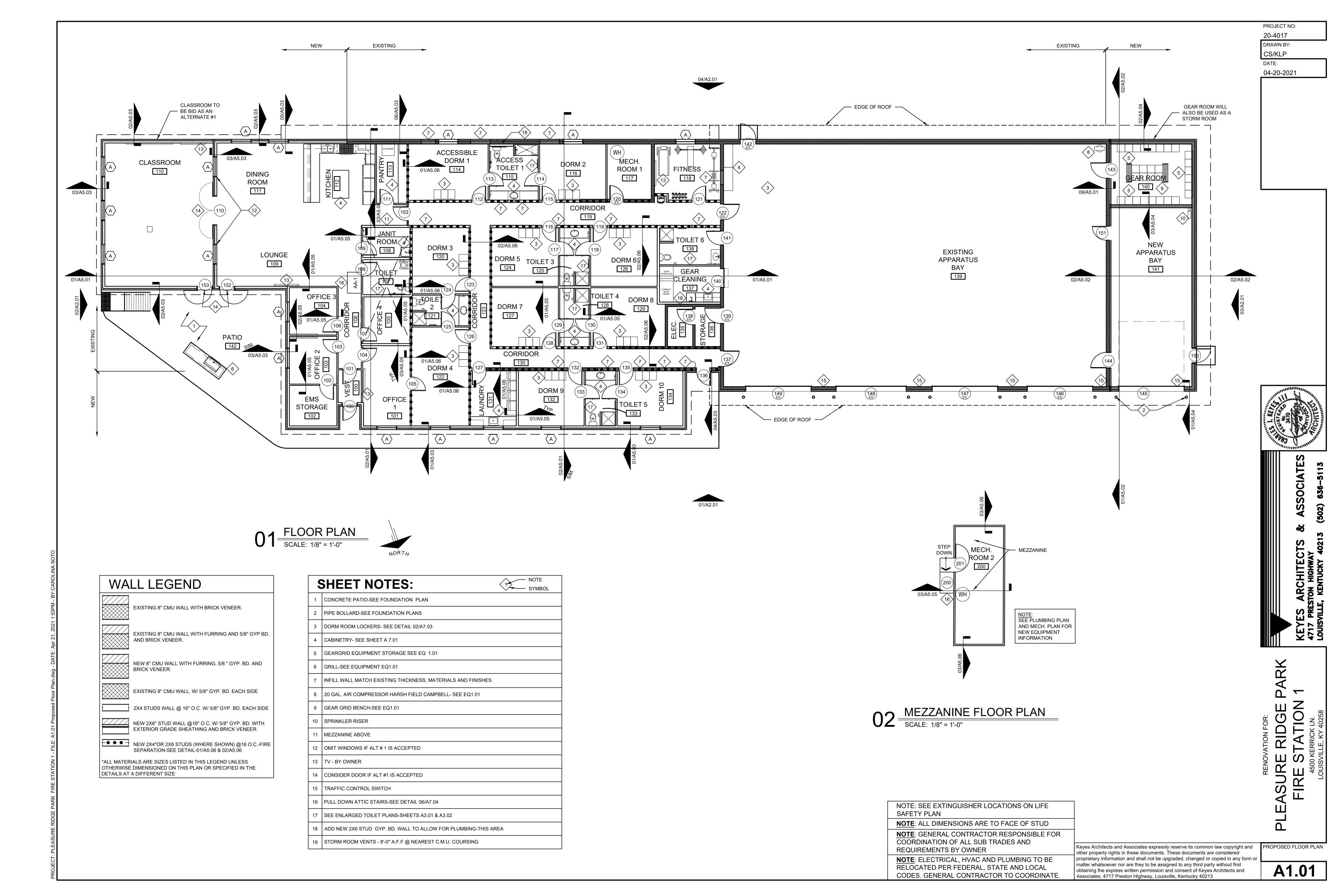
TABLE 508.4

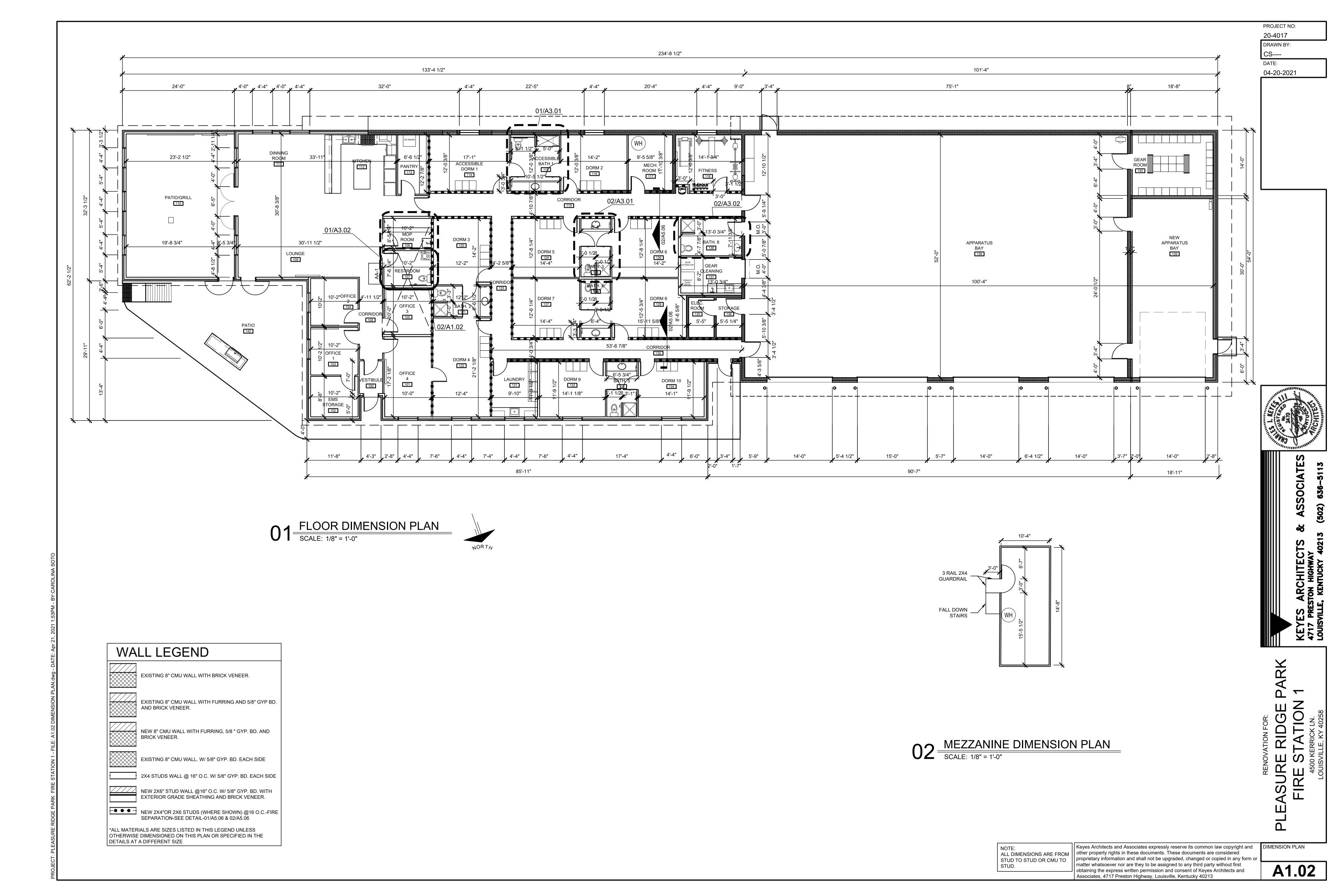


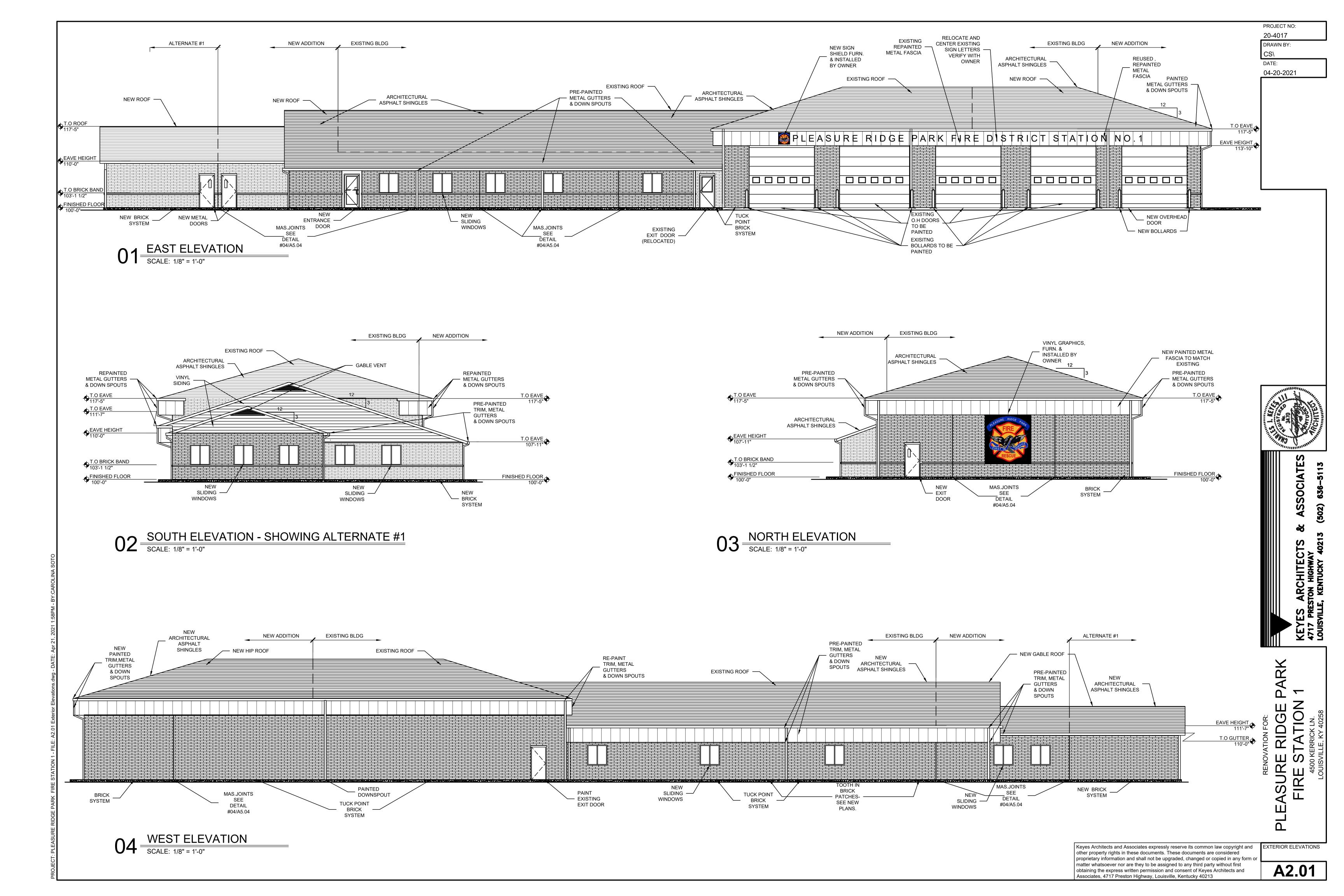
01 EXISTING FLOOR PLAN

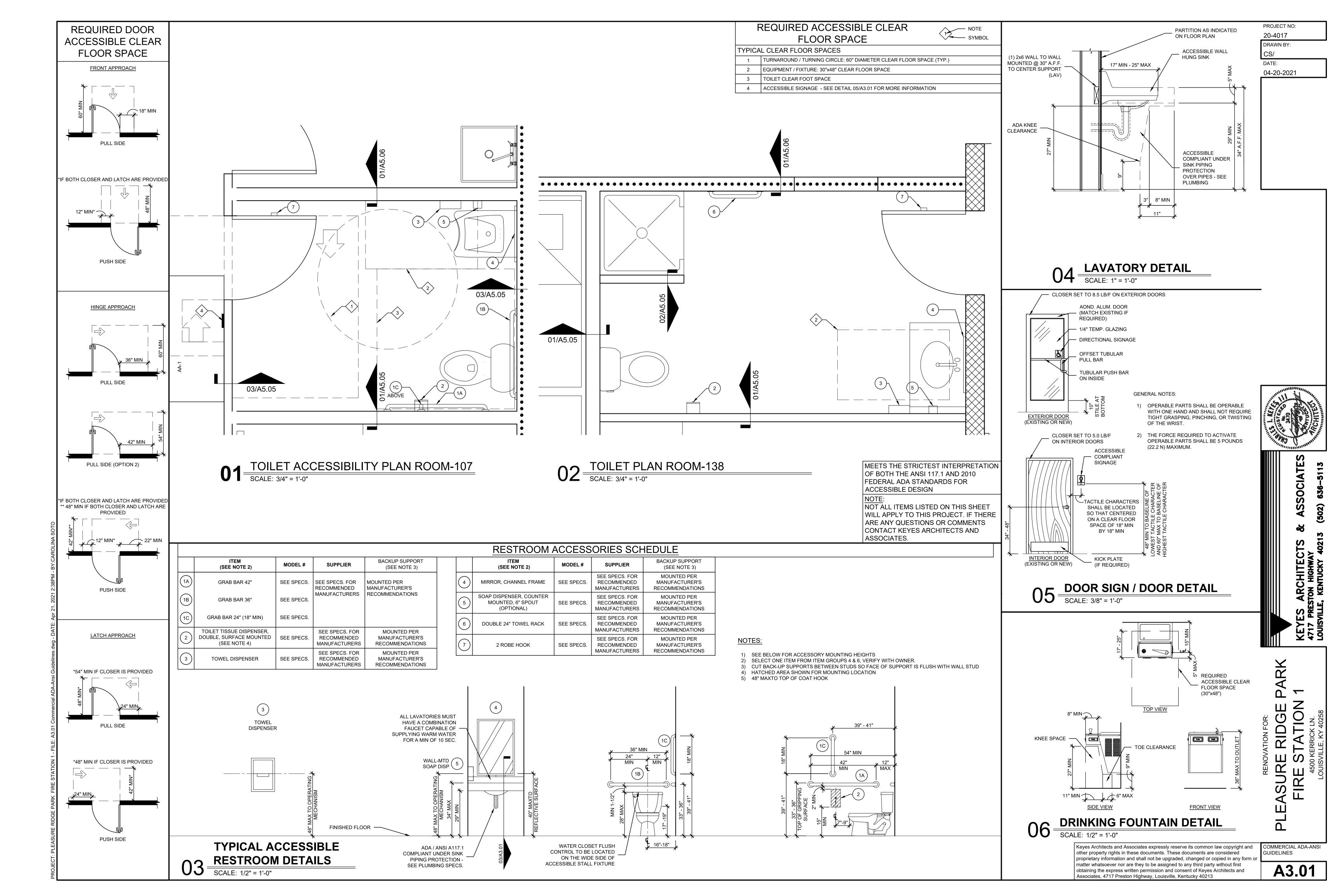
SCALE: 1/8" = 1'-0"

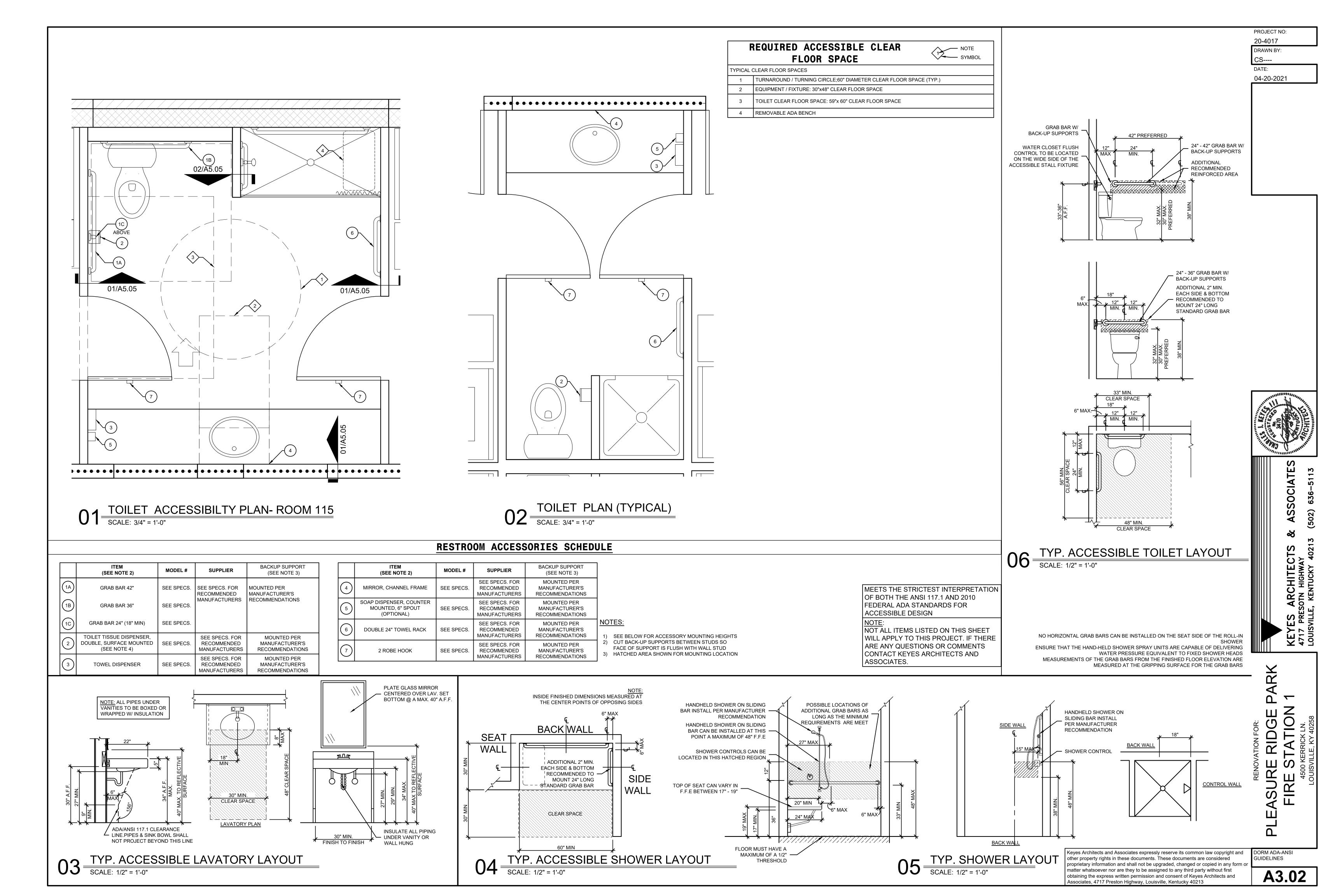
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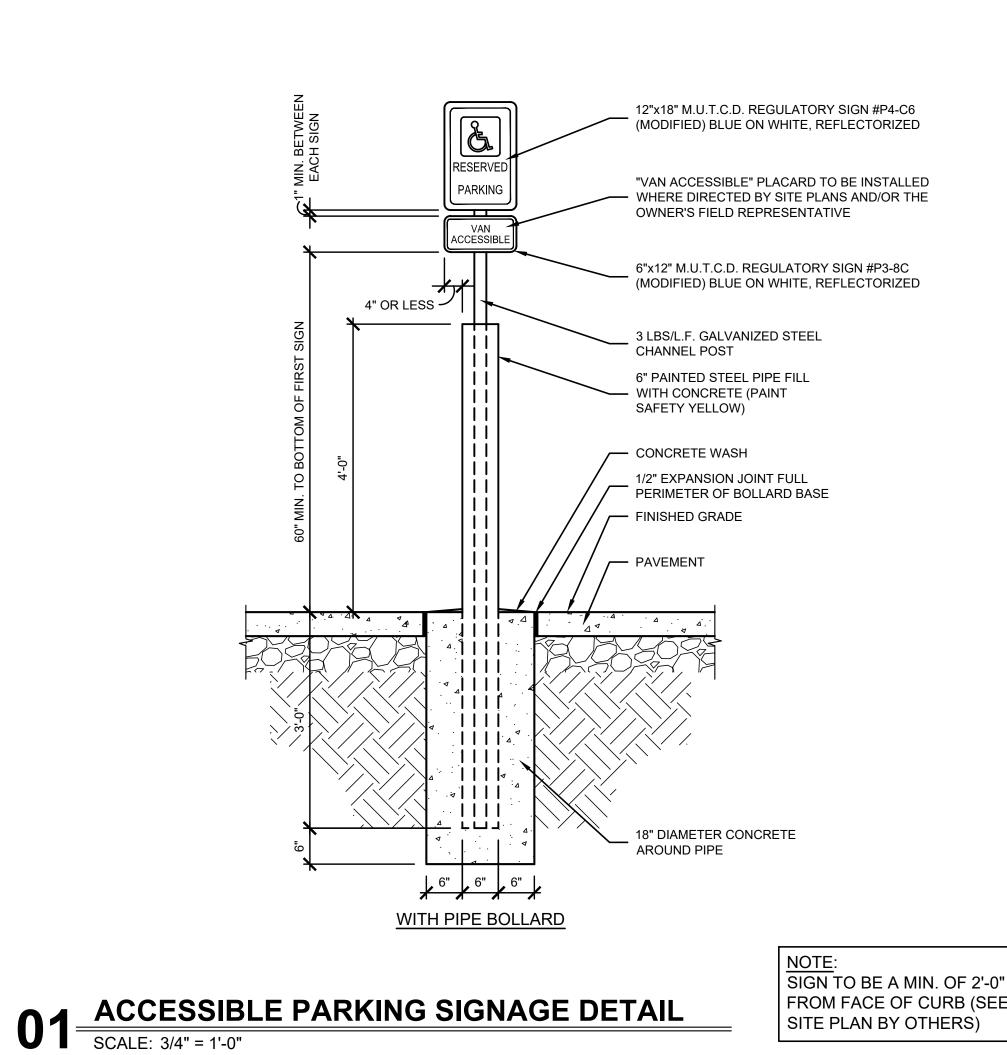






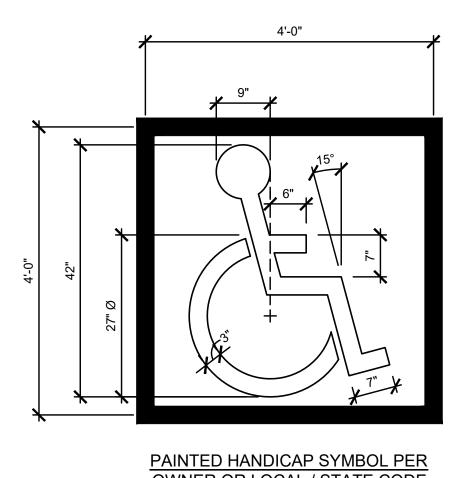






PROJECT NO: 20-4017 VARIES, SEE SITE PLAN 5'-0" MIN. LANDING AREA 5'-0" MIN. LANDING AREA DRAWN BY: CONCRETE 2'-0" SLAB, SEE SITE — PLAN DATE: 04-20-2021 8.33% MAX. \$LOP# CONCRETE SIDEWALK, SEE — SITE PLAN BUILD WALL OR GRADE IF ALT #1 PREFABRICATED TRUNCATED DOME IS NOT DETECTABLE WARNINGS, VERIFY WITH LOCAL ACCEPTED AND STATE CODES FOR REQUIREMENTS BEFORE PURCHASING, LOCATIONS WILL VARY, TYPE II RAMP WITH 1:12 MAX. SLOPE WITH HANDICAP COMPLIANT SLIP COORDINATE WITH SITE PLAN IF REQUIRED RESISTANT SURFACE → PATIO → 8.33% MAX. SLOPE 2% MAX. SLOPE VARIES, SEE SITE PLAN 5'-0" MIN. LANDING AREA 5'-0" MIN. LANDING AREA

**TYPE II ACCESSIBLE RAMP** 

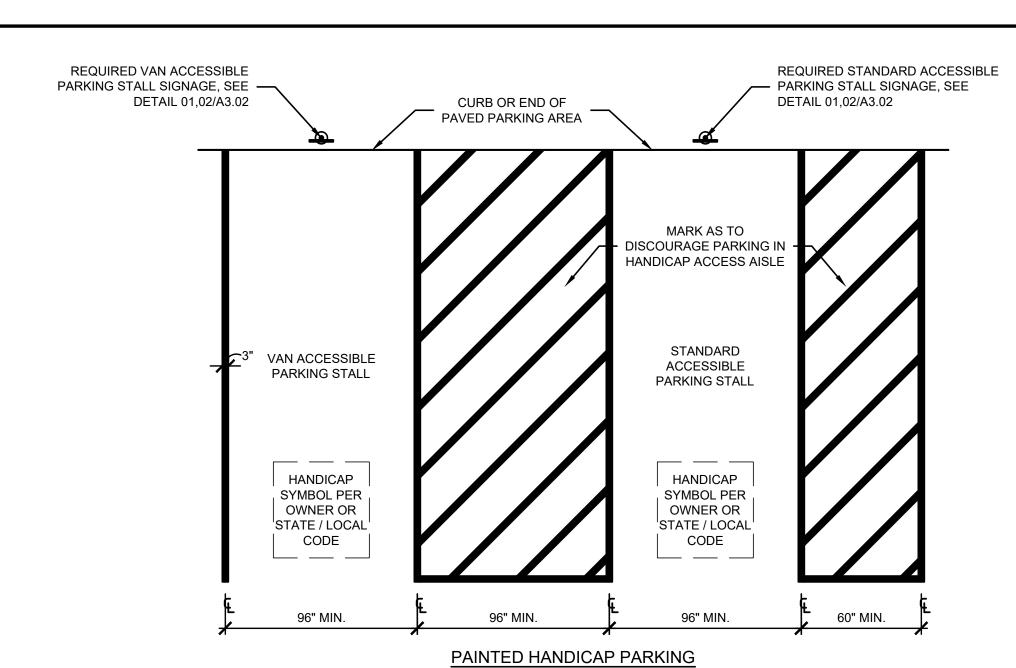


OWNER OR LOCAL / STATE CODE

NOTE:

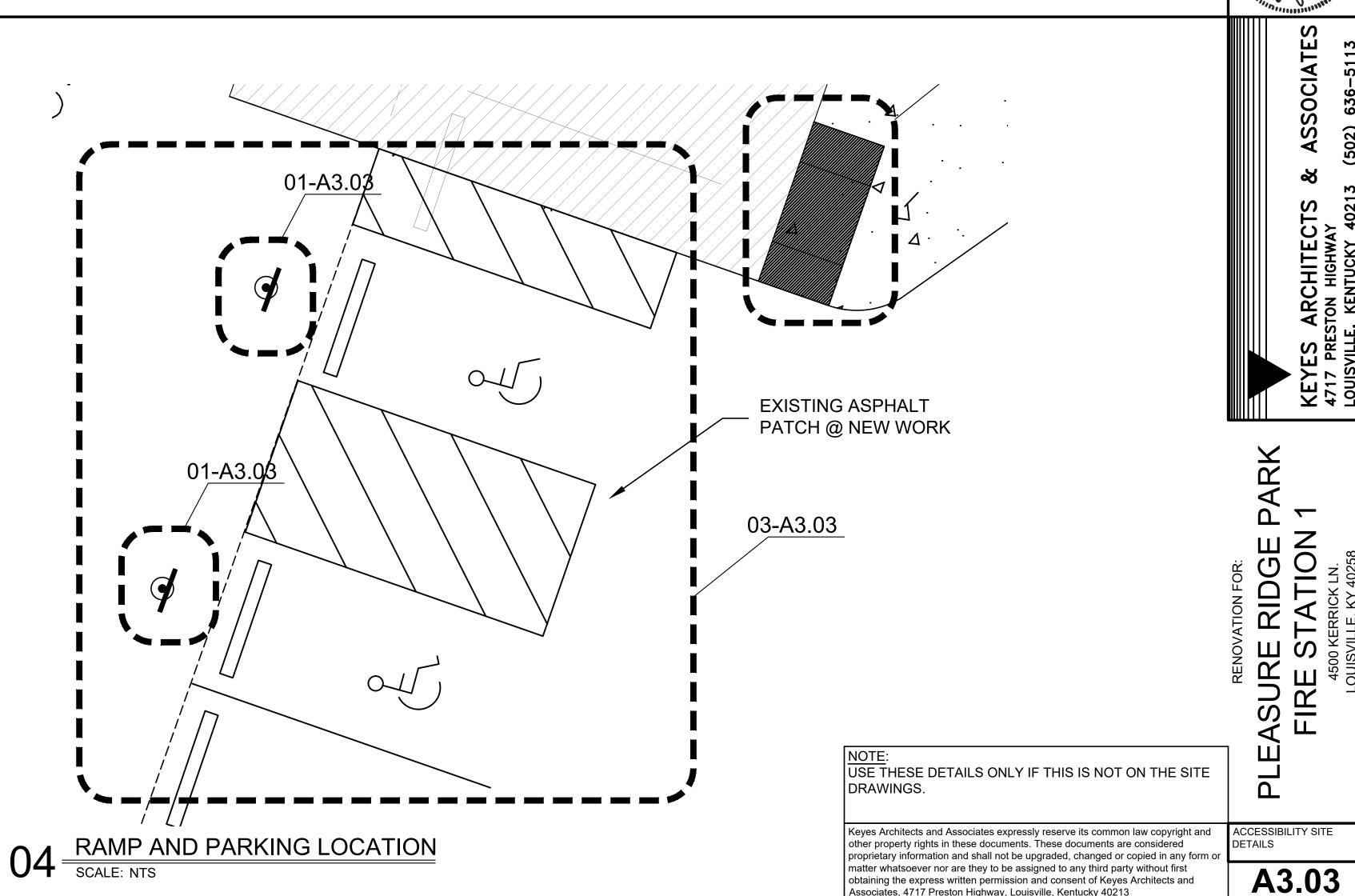
1. USE PAINT WHICH CONTRASTS WITH BACKGROUND

2. THIS SIGN TO BE FURNISHED AND INSTALLED BY G.C.



PARKING SPACES						
TOTAL NUMBER OF PARKING SPACES PROVIDED IN PARKING FACILITY	MINIMUM NUMBER OF REQUIRED ACCESSIBLE PARKING SPACES					
1 TO 25	1					
26 TO 50	2					
51 TO 75	3					
76 TO 100	4					
101 TO 150	5					
151 TO 200	6					
201 TO 300	7					
301 TO 400	8					
401 TO 500	9					
501 TO 1000	2 PERCENT OF TOTAL					
1001 AND OVER	20, PLUS 1 FOR EACH 100, OR FRACTION THEREOF, OVER 1000					

PAINTED ACCESSIBLE SYMBOL / PAINTED ACCESSIBLE PARKING O3 PAINTEI



BASE

4" VINYL

WALLS

WALL#1

**FLOOR** 

FLOOR #2

2) CLEAN AND SEAL BRICK PAINT

DOOR HARDWARE SCHEDULE

\*NRP = NON-REMOVABLE PIN

1 WEATHER STRIP SET

1 ELEC STRIKE - KEY FOB W/ KEY

1 PR. PUSH/PULLS

1 PR. PUSH/PULLS

3) 1 1/2 PR. HINGES (NRP)

1 MANUAL PUSH BUTTON

1 WEATHER STRIP SET

1 DEAD BOLT (THUMB INSIDE)

1 ELEC. STRIKE - KEY FOB W/ KEY OVERRIDE

1) 1 PR. PIVOTS

1 CLOSER

1 THRESHOLD

1 WALL STOP

OVERRIDE

1 PR. PIVOTS

1 CLOSER

1 THRESHOLD

1 WALL STOP

1 WALL STOP

4) 1 1/2 PR. HINGES

1 WALL STOP

5) 1-1/2 PR. HINGES

1 PRIVACY LOCKSET

PANELS ABOVE TRIM 3) ALTERNATE #1 WILL CHANGE THE EAST WALL IF ACCEPTED

CEILING MTL | CEILING HGT | REMARKS

8'-0" A.F.F.

CEILING #3

FINISH SCHEDULE KEY						
TYPE	DESCRIPTION- SEE SPECIFICATIONS					
FLOOR #1	GLUE DOWN PILE CARPET TILES					
FLOOR #2	VINYL PLANK					
FLOOR #3	PAINTED PLYWOOD					
FLOOR #4	SEALED CONCRETE FLOOR - SEE SPECIFICATIONS					
FLOOR #5	1/2" RUBBER FLOOR CONFETTI COLOR GRAY TILE					
FLOOR #6	PATCH & SEAL EXISTING. FLOOR TRANSITIONS AS REQUIRED					
FLOOR #7	BRUSHED CONCRETE					
FLOOR #8	CERAMIC TILE - SEE SPECIFICATION FOR MORE INFORMATION					
CEILING #1	2'X2' WHITE GRID W/ 2'X2' WHITE FISSURED TILE					
CEILING #2	2'X2' WHITE GRID W/ 2'x2' VINYL FACED TILE					
CEILING #3	PAINTED GYP.BD.					
WALL #1	WASHABLE EGG SHELL PAINT					
WALL #2	SEMI-GLOSS FINISH PAINT					

ROOM FINISH SCHEDULE

100

**ROOM NAME** 

VESTIBULE

							STIVIDO	
NUMBER	SIZE	FIRE	MATERIAL	FRAME	HARDWARE	KEYING	DETAILS	REMARKS
100	3'-0"x 7'-0"	N/A	ALUM / GLASS	ALUM	2	1	05-06-07/A6.01	-
101	3'-0"x 7'-0"	N/A	ALUM / GLASS	ALUM	1	1	07-08/A6.02	4
102	3'-0"x 7'-0"	N/A	S.C. WOOD	METAL	4	2	08-09/A6.01	-
103	3'-0"x 7'-0"	N/A	S.C. WOOD	METAL	4	2	08-09/A6.01	3,4
404	0.0	21/4	0.0.111000					0.4
104	3'-0"x 7'-0"	N/A	S.C. WOOD	METAL	4	2	08-09/A6.01	3,4
105	3'-0"x 7'-0"	45 MIN	S.C. WOOD	METAL	4	2	08-09/A6.01	4
106	3'-0"x 7'-0"	N/A	S.C. WOOD	METAL	4	2	08-09/A6.01	3,4
107	3'-0"x 7'-0"	N/A	S.C. WOOD	METAL	4	2	08-09/A6.01	3,4
108	3'-0"x 7'-0"	N/A	S.C. WOOD	METAL	5	-	08-09/A6.01	-
109	3'-0"x 7'-0"	N/A	S.C. WOOD	METAL	6	-	08-09/A6.01	-
110	PR. 3'-0" x 7'-0"	N/A	S.C. WOOD	METAL	7	1	05-06-07/A6.01	3,10
111	3'-0"x 7'-0"	N/A	S.C. WOOD	METAL	6	-	08-09/A6.01	-
112	3'-0"x 7'-0"	45 MIN.	S.C. WOOD	METAL	13	-	08-09/A6.01	-
113	3'-0"x 7'-0"	N/A	S.C. WOOD	METAL	5		08-09/A6.01	-
114	3'-0"x 7'-0"	N/A	S.C. WOOD	METAL	5	_	08-09/A6.01	-
115	3'-0"x 7'-0"	45 MIN.	S.C. WOOD	METAL	13	-	08-09/A6.01	-
116	3'-0"x 7'-0"	45 MIN	S.C. WOOD	METAL	13	-	08-09/A6.01	-
117	3'-0"x 7'-0"	N/A	S.C. WOOD	METAL	5	<u>-</u>	08-09/A6.01	-
118	3'-0"x 7'-0"	N/A	S.C. WOOD	METAL	5	_	08-09/A6.01	_
119	3'-0"x 7'-0"	45 MIN	S.C. WOOD	METAL	13	-	08-09/A6.01	_
EX 120	3'-0"x 7'-0"	45 MIN	S.C. WOOD	METAL	11	-	03-04/A6.01	1,12
121	3'-0"x 7'-0"	45 MIN	S.C. WOOD	METAL	11	<u>-</u>	08-09/A6.01	12
EX 122	3'-0"x 7'-0"	45 MIN	H.M.	METAL	8		01-02/A6.02	1
123	3'-0"x 7'-0"		S.C. WOOD	WOOD	13	-	01-02/A6.02 08-09/A6.01	
	3'-0"x 7'-0"	45 MIN				-		-
124		N/A	S.C. WOOD	WOOD	5	-	08-09/A6.01	-
125	3'-0"x 7'-0"	N/A	S.C. WOOD	WOOD	5	-	08-09/A6.01	-
126	3'-0"x 7'-0"	45 MIN	S.C. WOOD	WOOD	13	-	08-09/A6.01	-
127	3'-0"x 7'-0"	45 MIN	S.C. WOOD	WOOD	11	-	03-04/A6.01	11
128	3'-0"x 7'-0"	45 MIN	S.C. WOOD	WOOD	13	-	03-04/A6.01	11
129	3'-0"x 7'-0"	N/A	S.C. WOOD	WOOD	5	-	08,09/A6.01	-
130	3'-0"x 7'-0"	N/A	S.C. WOOD	WOOD	5	-	08,09/A6.01	-
131	3'-0"x 7'-0"	45 MIN	S.C. WOOD	WOOD	13	-	03-04/A6.01	11
132	3'-0"x 7'-0"	45 MIN	S.C. WOOD	WOOD	13	-	03-04/A6.01	11
133	3'-0"x 7'-0"	N/A	S.C. WOOD	WOOD	5	-	08-09/A6.01	-
134	3'-0"x 7'-0"	N/A	S.C. WOOD	WOOD	5	-	08-09/A6.01	-
135	3'-0"x 7'-0"	45 MIN	S.C. WOOD	WOOD	13	-	03-04/A6.01	11
136	3'-0"x 7'-0"	N/A	METAL/GLASS	METAL	9	1	05,06/A6.02 SIM	1, 3,4
EX 137	3'-0"x 7'-0"	45 MIN	H.M.	METAL	8	-	01-02/A6.02	1,12
EX 138	3'-0"x 7'-0"	N/A	H.M.	METAL	6	-	10,11/A6.01	1,12
EX 139	3'-0"x 7'-0"	N/A	H.M.	METAL	14	-	10,11/A6.02	1,12
140	4'-0"x 7'-0"	N/A	H.M.	METAL	10		12,13/A6.02	7
141	3'-0"x 7'-0"	N/A	H.M.	METAL	5	-	01-02/A6.02	-
EX 142	3'-0"x 7'-0"	N/A	H.M.	METAL	15	1	05-06/A6.02	1,12
143	3'-0"x 7'-0"	N/A	H.M.	METAL	12	-	06,07,08/A5.05	5,8
144	3'-0"x 7'-0"	N/A	H.M.	METAL	11	-	05-06/A6.02	3,11
145	14'-0"x12'-0"	N/A	STEEL	STEEL	10	-	09-10/A6.02	2
EX 146	14'-0"x12'-0"	N/A	STEEL	STEEL	N/A	-	-	1, 2
EX 147	14'-0"x12'-0"	N/A	STEEL	STEEL	N/A	-	-	1, 2
EX 148	14'-0"x12'-0"	N/A	STEEL	STEEL	N/A	-	-	1, 2
EX 149	14'-0"x12'-0"	N/A	STEEL	STEEL	N/A		-	1, 2
150	3'-0"x 7'-0"	N/A	H.M.	STEEL	9	-	05,06/A6.02	3,11
151	3'-0"x 7'-0"	N/A	H.M.	METAL	11	-	05,06/A6.02	3,11
152	3'-0"x 7'-0"	N/A	H.M.	METAL	15	1	01,02,07/A6.01	3,11
153	3'-0"x 7'-0"	N/A	H.M.	METAL	15	1	01,02,07/A6.01	3,11
200	23 1/2 "x51 1/4"	N/A	WOOD	WOOD	10	<u>'</u>	11/A6.02	6
201	3'-0"x 7'-0"	N/A	H.M	H.M	14	-	08,09/A6.01	-

DOOR SCHEDULE

3 CLASS 1 DEADBOLT W/ 1 THROW (THUMB TURN DOOR SCHEDULE REMARKS

DOOR TYPE 0000

WINDOW SCHEDULE

4'-0"x 4'-2"

LETTER | SIZE

SILL HEIGHT

3'-1 1/2 "

GLAZING

LOW-E

FRAME

VINYL

13) 1 1/2 PR HINGES 1 PRIVACY SET 1 CLOSER 1 WALL STOP 1 INTERCONNECTED LOCKSET (THUMB INSIDE) 1 DOOR SWEEP

1 WALL STOP

6) 1-1/2 PR. HINGES

1 WALL STOP

2 CLOSERS

7) 3 PR. HINGES (NRP)

1 DUMMY LEVER

1 THRESHOLD

1 THRESHOLD

1 WALL STOP

1 THRESHOLD

1 CLOSER

11) 1 WALL STOP

1 CLOSER

1 PASSAGE SET

1 PASSAGE SET

1 WALL STOP

1 CLOSER

1 PR. FLUSH BOLTS

8) 1 1/2 PR. HINGES (NRP)

9) 1 1/2 PR. HINGES (NRP)

1 WEATHERSTRIP SET

10) HARDWARE PER MANUFACTURE

12) 1 1/2 PR. (S) KNUCKLE HINGES

1 WEATHERSTRIP SET

1 PUSH BUTTON MANUAL

1 ELEC. STRIKE - KEY FOB W/ KEY OVERRIDE

1 MANUAL PUSH BUTTON

14) 1 1/2 HINGES 1 PASSAGE SET 1 WALL STOP

15) 1 1/2 PR. HINGES 1 INTERCONNECTED LOCKSET 1 CLOSER

1 WEATHERSTRIP SET 1 THRESHOLD 16) ALT #1 ONLY

3 PR. HINGES (180°) 1 MANUAL PUSH BUTTON 1 DUMMY LEVER 2 180° CLOSERS (WITH HOLD OPEN) DOOR KEYING LEGEND

1 = MASTER 2 = INDIVIDUAL SPACE 1) EXISTING DOOR TO BE PAINTED ALL

9) NOT USED

10) IF ALTERNATE #1 ACCEPTED, THIS CHANGES TO HARDWARE SET #16

11) 4" MASONRY HEAD

12) VERIFY HARDWARE SET - LISTED HINGES, CLOSER, THRESHOLD, CAN REMAIN IF IN WORKING ORDER

2) SECTIONAL OVERHEAD DOOR WITH (1) ROW OF FULL GLAZED PANELS (SEE

ELEVATIONS AND SPECIFICATIONS) 3) 6" x 24" TEMPERED VISION PANEL

4) DOOR TO HAVE EMPTY JUNCTION BOX FOR DOOR CONTROL SYSTEMS -COORDINATE WITH OWNER

5) DOOR TO BE SAFE ROOM DOOR PER SPECIFICATIONS

6) ATTIC LADDER, 350 WEIGHT CAPACITY, 8' TO 10' HEIGHT RANGE,ALL POWDER COATED STEEL STAIR SECTION. HEAVY DUTY WELDED HINGES. STRONG 3/4" MELAMINE FINISH FRAME, WEATHER STRIPPING TO REDUCE DRAFTS AND AIR

7) COILING OVERHEAD DOOR - PAINTED

8) 6" x 24" WIRE VISION PANEL

PROJECT NO: 20-4017

DRAWN BY: DATE:

04-20-2021

WINDOW TYPE SYMBOL

DETAILS

01-06/A6.03

1) SLIDING WINDOW W/ SCREEN

WINDOW SCHEDULE REMARKS

REMARKS



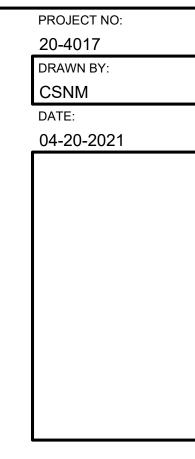
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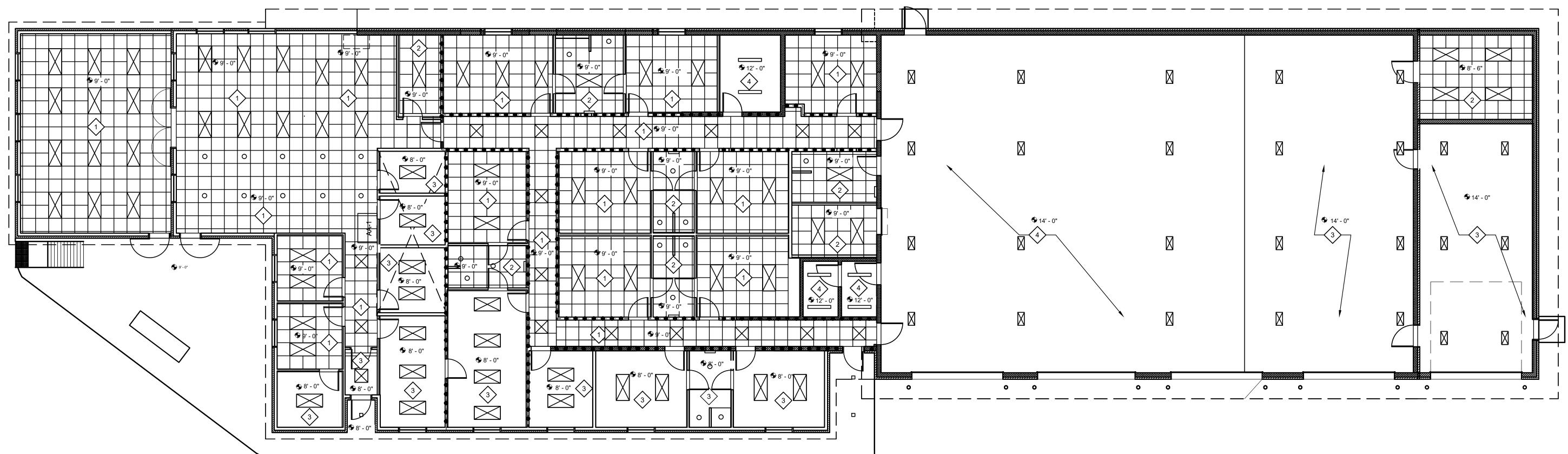
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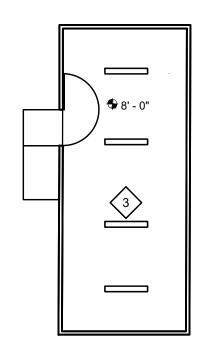


SHEET **NOTES:** 

NOTE SYMBOL 2'X2' WHITE GRID / WHITE FISSURED TILE 2'X2' WHITE GRID / WHITE VINYL FACED TILE PAINTED GYP. BOARD EXISTING GYP. BOARD TO BE PATCHED & PAINTED

NOTE:
THIS IS A LAYOUT TO SHOW INTENT, CONTRACTOR TO COORDINATE WITH M.E.L.P & SPRINKLER THEN MAKE MINOR ADJUSTMENTS

NOTE: SEE ELEC. PLANS FOR LIGHTING FIXTURES SPECS.

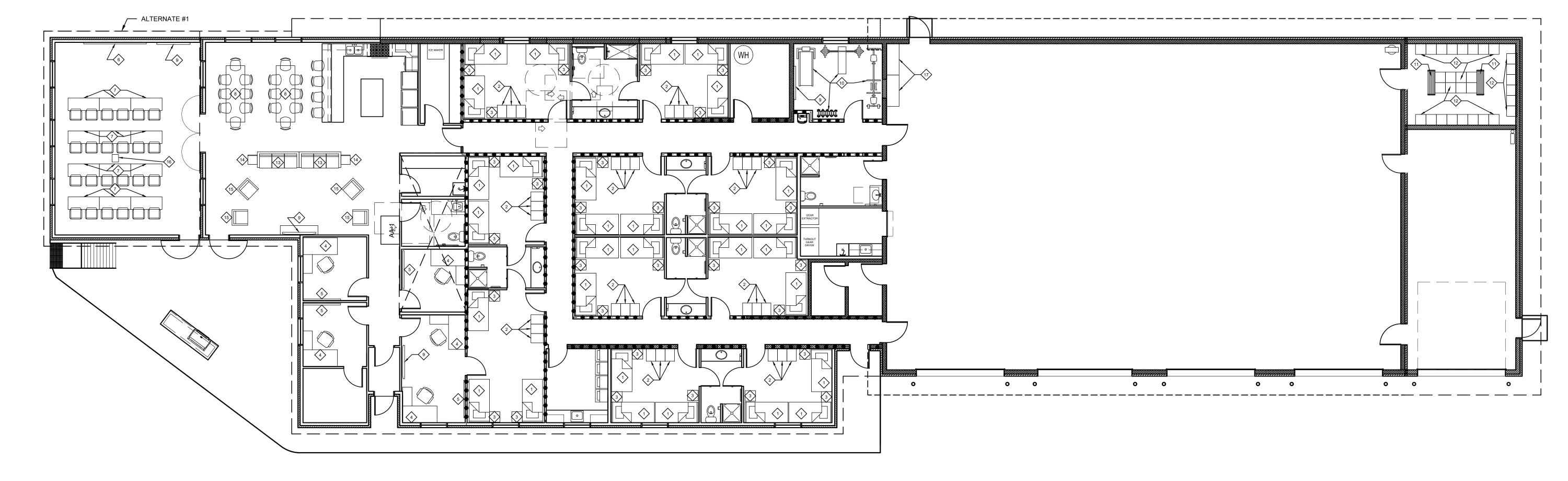


02 MEZZANINE PLAN

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

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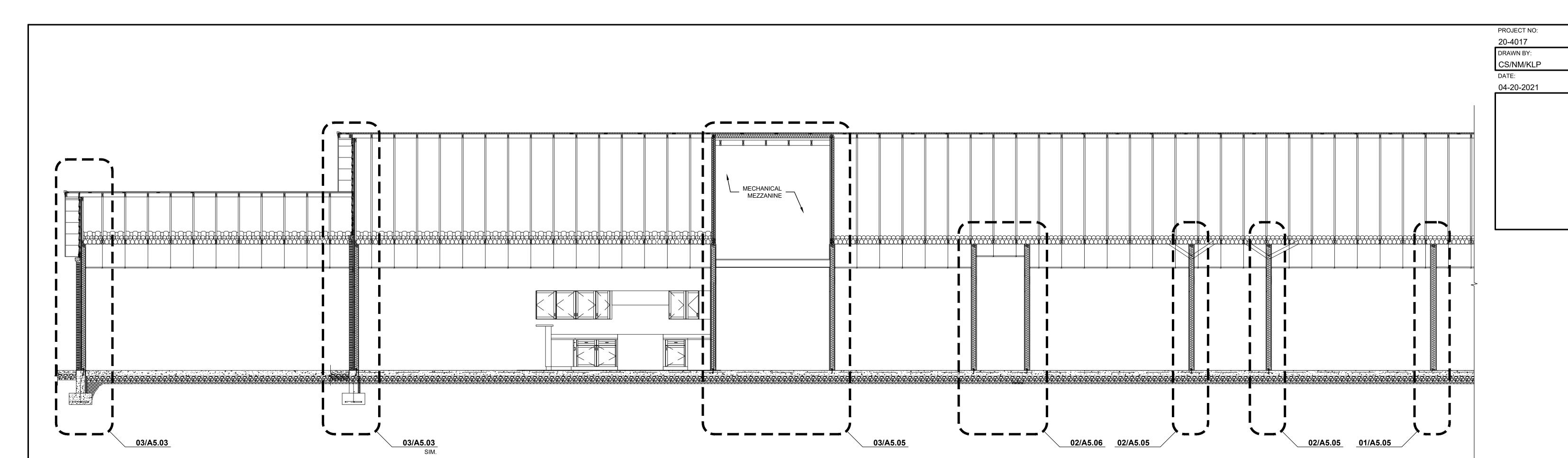


01 FURNITURE FLOOR PLAN
SCALE: 1/8" = 1'-0"



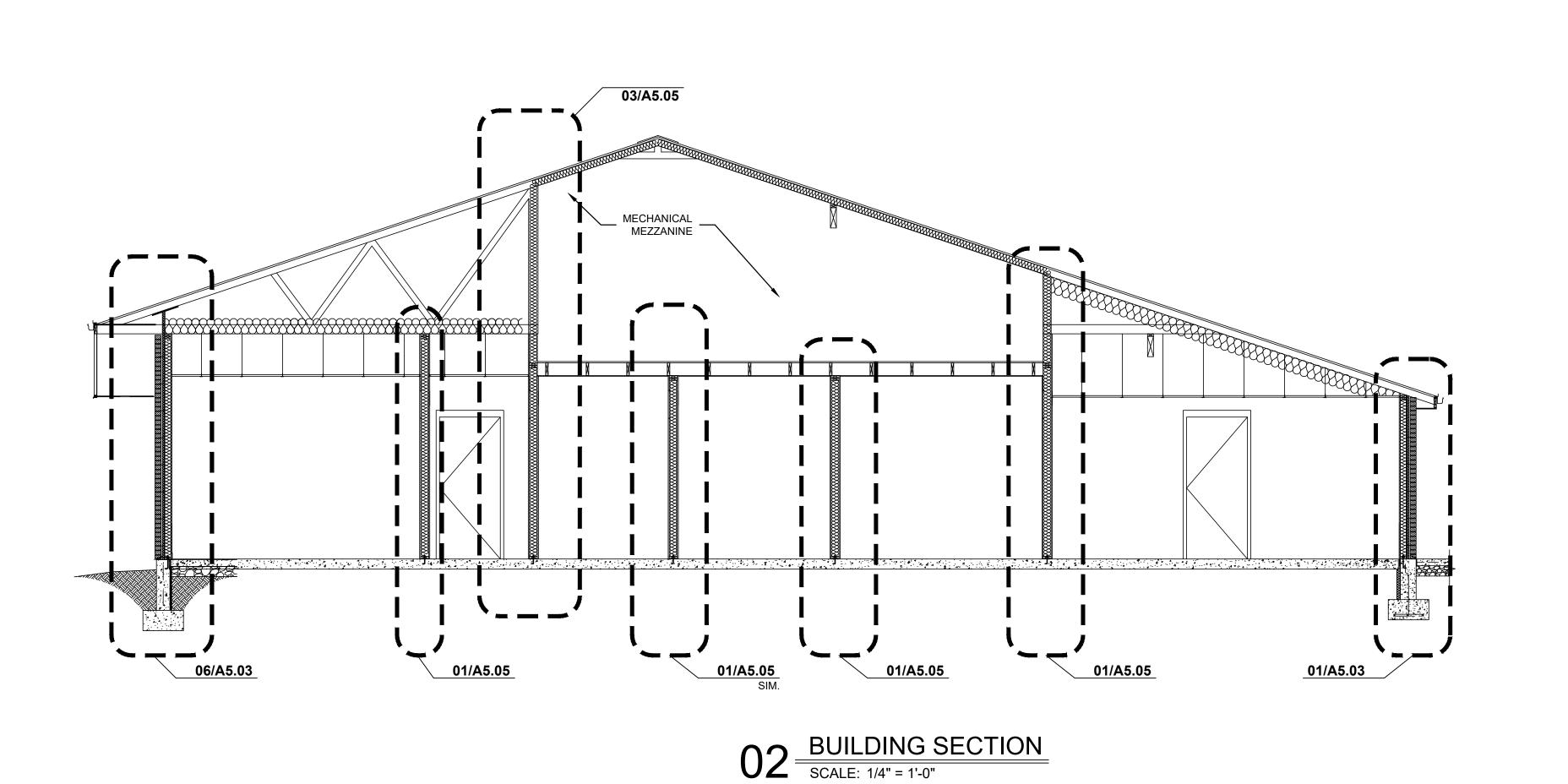
F	FURNITURE KEY:  NOTE SYMBOL
NOTI ALL	·
1	TWIN XL BED
2	WARDROBE LOCKERS- FURNISHED / INSTALLED BY G.C.
3	NIGHT STAND
4	DESK
5	WHITE BOARD (36" X 48") - FURNISHED / INSTALLED BY G.C.
6	WHITE BOARD ALTERNATE #1 - (120" X 48") - FURNISHED AND INSTALLED BY G.C.
7	DESK ALTERNATE #1
8	DINNING ROOM SET
9	TV
10	FITNESS EQUIPMENT
11	GEAR ROOM BENCH - FURNISHED AND INSTALLED BY G.C.
12	GEAR GRID-FURNISHED / INSTALLED BY G.C.
13	соисн
14	SIDE TABLE
15	CHAIR
16	PROJECTOR ABOVE ALTERNATE #1- FURNISHED AND INSTALLED BY OWNER
17	WORK BENCH-FURNISHED / INSTALLED BY G.C.

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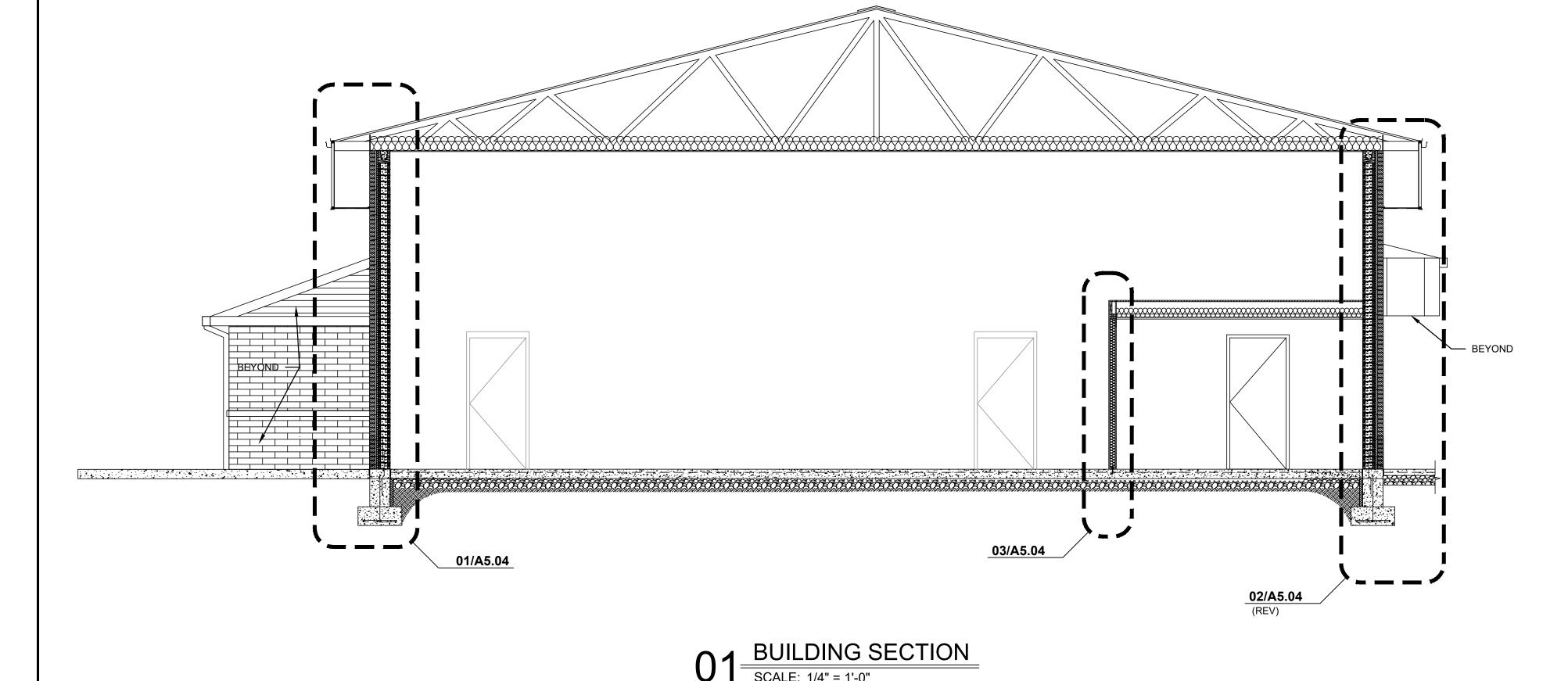
BUILDING SECTION

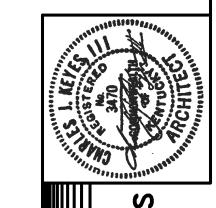
SCALE: 1/4" = 1'-0"



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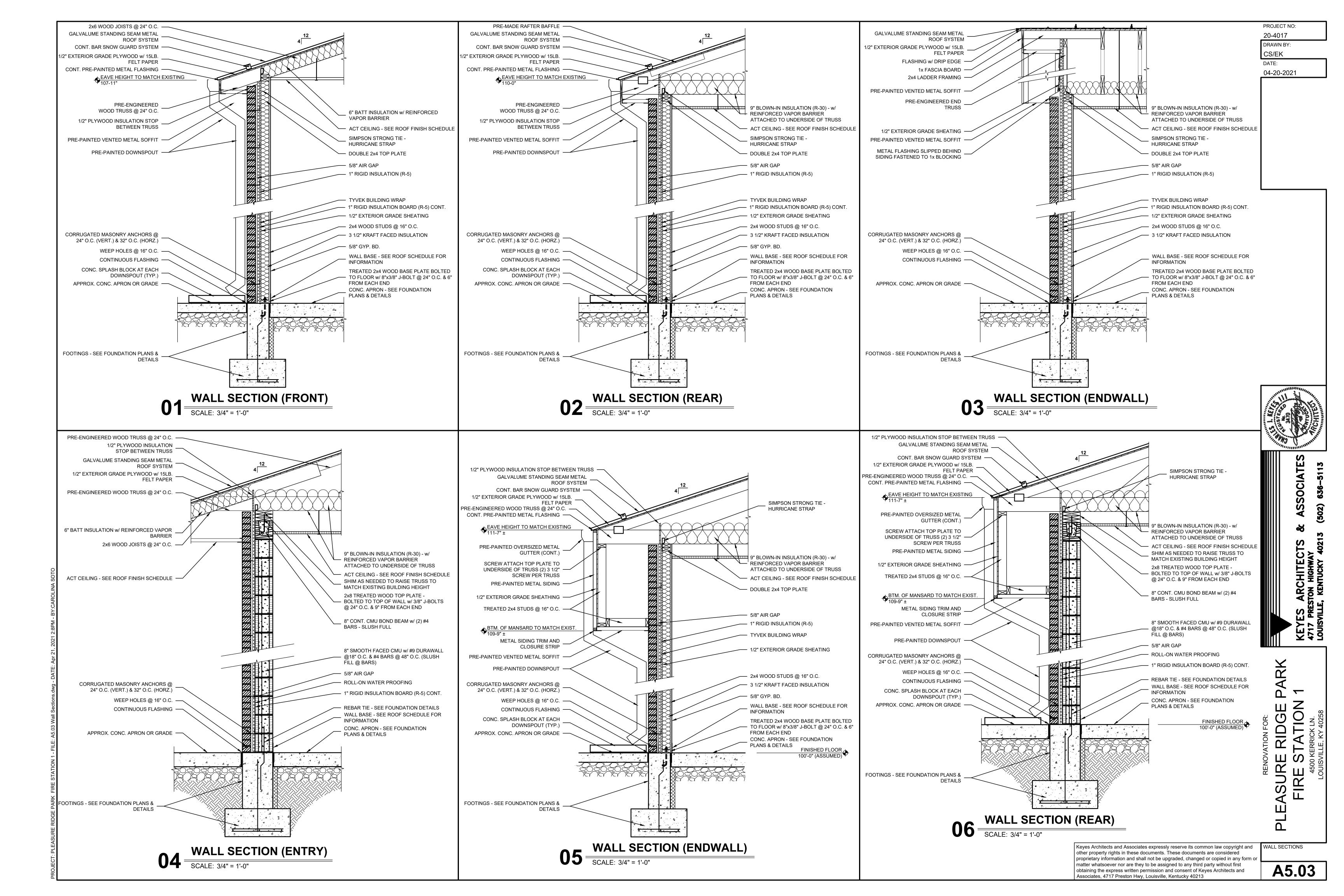


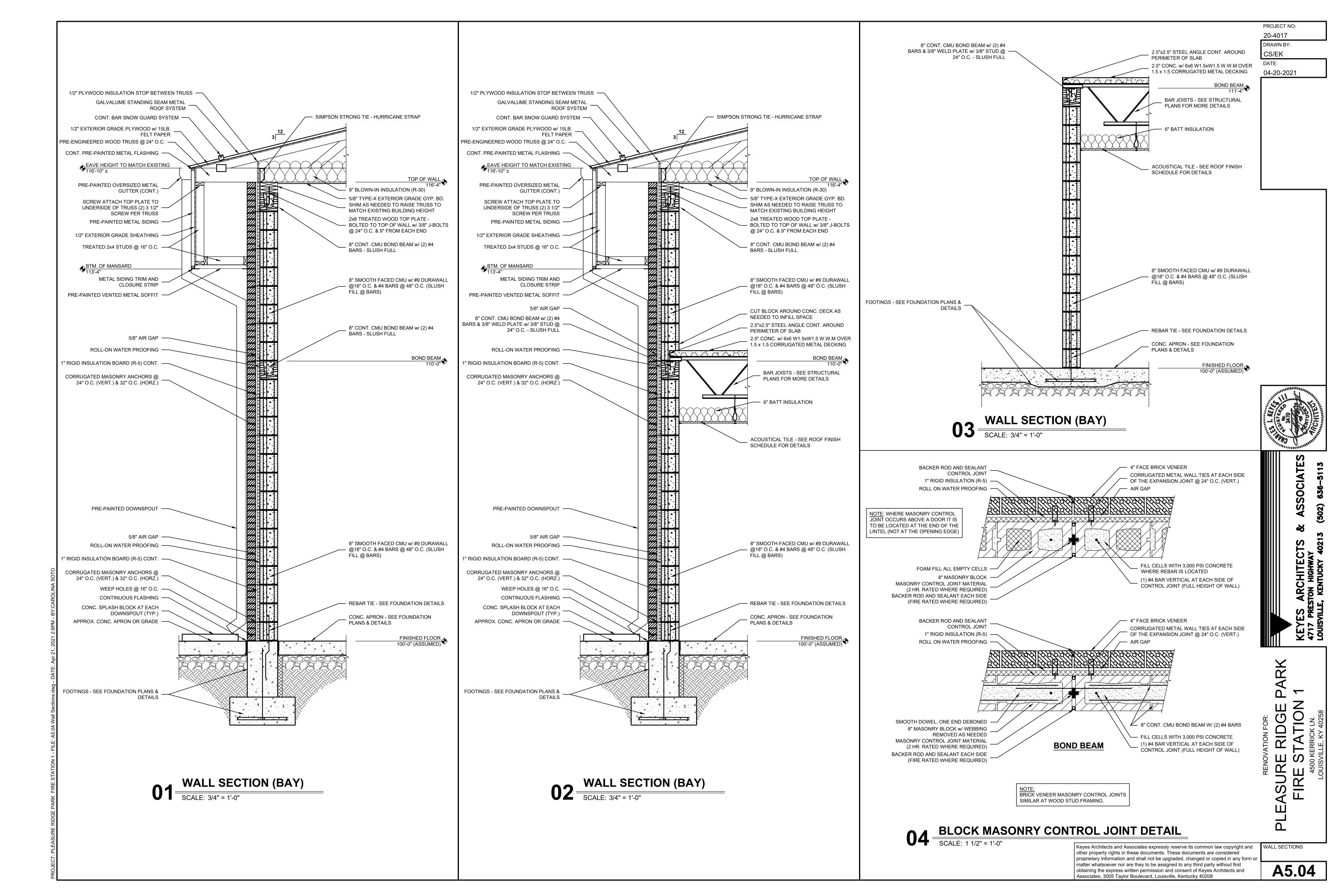


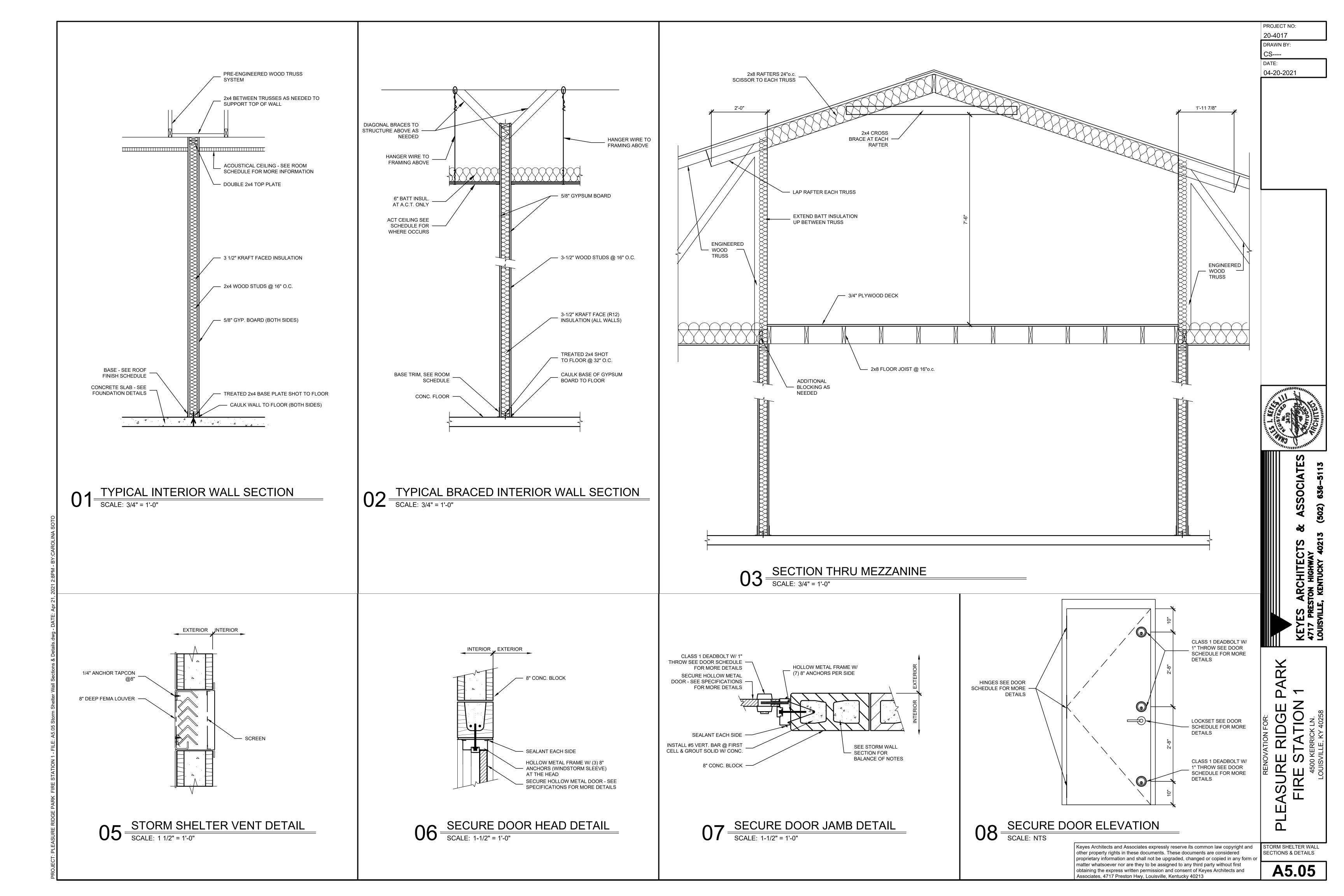
EXISTING WALL TO REMAIN 

NEW ROOF SYSTEM SEE FRAMING PLAN

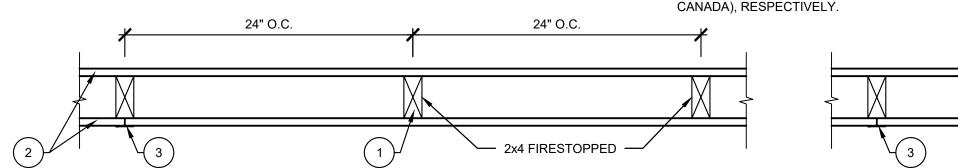
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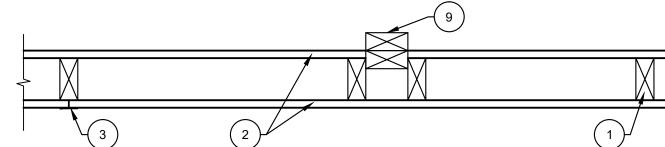






\* INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS





### U.L. RATED WALL DETAIL (DESIGN NO. U309)

1. Wood Studs — Nom 2 by 4 in., spaced 24 in. OC effectively firestopped

2. Gypsum Board\* — 5/8 in. thick, 4 ft wide, applied either horizontally or vertically, nailed to studs and bearing plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads spaced 7 in. OC. Finish Rating 27 Min. When used in widths other than 48 in., gypsum board to be installed horizontally.

When Steel Framing Members\* (Item 5, 5A, or 5B) are used, wallboard attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.

When Item 6, resilient channels are used, 5/8 in. thick, 4 ft wide applied vertically. Screw attached furring channels with 1 in. long, PAC INTERNATIONAL INC — Types RSIC-1, RSIC-1 (2.75). self-drilling, self-tapping Type S or S-12 steel screws spaced 8 in. OC, vertical joints located midway between studs.

ACADIA DRYWALL SUPPLIES LTD — Type X, 5/8 Type X, Type Blueglass Exterior Sheathing

AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1 CERTAINTEED GYPSUM INC — Type X, Types EGRG, GlasRoc, or Type C

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Types LGFC6A, LGFC2A, LGFC-C/A, LGCF-WD, LGLLX GEORGIA-PACIFIC GYPSUM L L C — Types 5, 6, 9, C, DAP, DD, DA, DAPC, DGG, DS, GPFS6, LS (finish rating 23 min), Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, TG-C, Type LWX, Veneer Plaster Base-Type LWX, Water Rated-Type LWX, Sheathing Type-LWX, Soffit-Type LWX, Type DGLW, Water Rated-Type DGLW, Sheathing Type- DGLW, Soffit-Type DGLW, Type LW2X, Veneer Plaster Base - Type LW2X, Water Rated - Type LW2X, PLITEQ INC — Type Genie Clip Sheathing - Type LW2X, Soffit - Type LW2X, Type DGL2W, Water Rated - Type DGL2W, Sheathing - Type DGL2W.

20 min), FSL, FSW-8. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C, PG-9, PG-11, PG-C, PGS-WRS.

PANEL REY S A — Types GREX, PRX, RHX, MDX, ETX

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1. THAI GYPSUM PRODUCTS PCL — Type X, Type C

2A. Gypsum Board \* — (As an alternate to Item 2, not shown) - Nominal 5/8 in. thick, 4 ft wide panels, applied vertically to studs and bearing plates on one side of the assembly with 1-5/8 in. long Type S screws spaced 12 in. OC at perimeter of panels and 8 in. OC in the field. Horizontal joints of vertically applied panels need not be backed by studs. Panel joints covered with paper tape and two layers of joint compound. Screwheads covered with two layers of joint compound. Batts and Blankets placed in stud cavity as described in Item 4E. Not evaluated for use with Steel Framing Members, Furring Channels or Fiber, Sprayed.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 530 (finish rating 23 min).

2B. Gypsum Board\* — (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last two screws 1 and 4 in. from edge of board or nailed to studs and bearing plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads spaced 7 in. OC. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.

GEORGIA-PACIFIC GYPSUM L L C — GreenGlass Type X (finish rating 23 min).

2C. Gypsum Board\* — (As an alternate to Item 2) - 5/8 in. thick, 4 ft. wide, paper surfaced applied vertically only and secured as described in Item 2.

GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board (finish rating 27 min). NATIONAL GYPSUM CO — SoundBreak XP Type X Gypsum Board

2D. Gypsum Board\* — (As an alternate to Items 2 through 2C) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 2.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES.

2E. Gypsum Board\* — (As an alternate to Item 2) - 5/8 in. thick, 4 ft. wide, paper surfaced applied vertically only and secured as

CERTAINTEED GYPSUM INC — Type SilentFX

2F. Gypsum Board\* — (As an alternate to 5/8 in. Type FSW in Item 2) - 2 layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal joints on the same side need not be staggered. Inner layer attached with fasteners, as described in item 2, spaced 24 in. OC. Outer layer attached per Item 2.

NATIONAL GYPSUM CO — Type FSW 2G. Gypsum Board\* — (As an alternate to Item 2) — 5/8 in, thick, 4 ft, wide, applied vertically with vertical joints centered over study and staggered one stud cavity on opposite sides of studs. Secured as described in Item 2.

CERTAINTEED GYPSUM INC — 5/8" Easi-Lite Type X THAI GYPSUM PRODUCTS PCL — 5/8" Easi-Lite Type X

2H. Wall and Partition Facings and Accessories\* — (As an alternate to Item 2) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 2.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527.

Joints and Nailheads — Wallboard joints covered with paper tape and joint compound. Nailheads covered with joint compound. Gypsum plaster not more than 1/8 in. thick may be applied over the wallboard in addition to the specified joint treatment.

Batts and Blankets\* — (Not Shown) — Optional glass fiber insulation.

CERTAINTEED CORP

JOHNS MANVILLE INTERNATIONAL INC **OWENS CORNING** 

4A. Fiber, Sprayed\* — As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft3, in accordance with the application instructions supplied with the product. When Item 5 is used, Fiber, Sprayed shall be 10D. Adhesive — (For use with Item 10A) - Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads INS735, INS745, INS765LD or INS770LD.

U S GREENFIBER L L C — INS735 & INS745 for use with wet or dry application. INS510LD, INS515LD, INS541LD, INS735, INS745, INS765LD, and INS770LD are to be used for dry application only.

4B. Fiber, Sprayed\* — As an alternate to Batts and Blankets (Item 4) and Item 4A - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.

NU-WOOL CO INC — Cellulose Insulation

4C. Batts and Blankets\* — Required for use with resilient channels, Item 6, 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 4 in. face of the studs with staples placed 24 in. OC.

THERMAFIBER INC — Type SAFB

4D. Glass Fiber Insulation — (As an alternate to Item 4C) — 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall, attached to the 4 in. face of the studs with staples placed 24 in. OC. See Batts and Blankets (BKNV or BZJZ) Catagories for names of Classified companies.

4E. Batts and Blankets\* — (Required for use with Wall and Partition Facings and Accessories, Item 2A) — Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers.

4F. Fiber, Sprayed\* — As an alternate to Batts and Blankets (Item 4) - Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft3.

INTERNATIONAL CELLULOSE CORP — Celbar-RL

Steel Framing Members (Optional, Not Shown)\* — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and

tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Wallboard attached to furring channels as described in

b. Steel Framing Members\* — used to attach furring channels (Item a) to studs (Item 1). Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 3-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.

5A. Steel Framing Members (Optional, Not Shown)\* — Furring channels and Steel Framing Members as described below:

Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

Steel Framing Members\* — Used to attach furring channels (Item a) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

NATIONAL GYPSUM CO — Types -eXP-C, FSK, FSK-C, FSW, FSW-3, FSW-5, FSW-6, FSM-C, FSW-6 (finish rating 5B. Steel Framing Members — (Optional, Not Shown)\* - Furring channels and resilient sound isolation clip as described below: Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured together with four self-tapping No. 8x1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Gypsum board attached to furring channels as described in Item 4. Side joint furring channels shall be attached to study with RESILMOUNT Sound Isolation Clips - Type A237R located approximately 2 in. from each end of length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge.

> Steel Framing Members\* — Resilient sound isolation clip used to attach furring channels (Item 5Ba) to studs. Clips spaced 24 in. OC., and secured to studs with No. 10 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

6. Furring Channel — Optional - Not Shown - For use on one side of the wall - Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, Items 4C or 4D is required.

Wall and Partition Facings and Accessories\* — (Optional, Not shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-510.

8. Cementitious Backer Units\* — (Optional Item Not Shown - For Use On Face Of 1 Hr With All Standard Items Required) — 7/16 n., 1/2 in., 5/8 in., 3/4 in. or 1 in. thick, min. 32 in. wide.- Applied vertically or horizontally with vertical joints centered over stude Fastened to studs and runners with cement board screws of adequate length to penetrate stud by a minimum of 3/8 in. for steel framing members, and a minimum of 3/4 in. for wood framing members spaced a max of 8 in. OC. When 4 ft. wide boards are used, horizontal joints need not be backed by framing.

NATIONAL GYPSUM CO — Type DuraBacker, PermaBase, DuraBacker Plus, or PermaBase Plus

9. Non-Bearing Wall Partition Intersection — (Optional) Two nominal 2 by 4 in. stud or nominal 2 by 6 in. stud nailed together with two 3in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

10. Mineral and Fiber Board\* — (Optional, Not shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with 2 in. long Type W steel screws, spaced 12 in. OC. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

HOMASOTE CO — Homasote Type 440-32

10A. Mineral and Fiber Board\* — (Optional, Not shown) — For use with Items 10B-10E) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with minimum 1-3/8 in. long ring shanked nails or 1-1/4 in. long Type W steel screws, spaced 12 in. OC along board edges and 24 in. OC in field of board along intermediate framing. Not evaluated or intended as a substitute for the required layer(s) of UL Classified

HOMASOTE CO — Homasote Type 440-32

10B. Glass Fiber Insulation — (For use with Item 10A) — 3-1/2 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) categories for names of Classified companies.

10C. Batts and Blankets\* — (As an alternate to Item 10B, For use with Item 10A), 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 3-1/2 in. face of the studs with staples placed 24 in. OC.

THERMAFIBER INC — Type SAFB

down the length of both vertical edges of Mineral and Fiber Board (Item 10A).

10E. Gypsum Board\* — (For use with Item 10A) - 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 10A) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 10A). Secured to outermost studs and bearing plates with 2 in. long Type S screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound. Finish Rating 30 Min.

AMERICAN GYPSUM CO — Type AG-C CERTAINTEED GYPSUM INC — Type FRPC, Type C CGC INC — Types C, IP-X2, IPC-AR CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC-C/A GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C NATIONAL GYPSUM CO — Types FSK-C, FSW-C PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C. PANEL REY S A — Type PRC THAI GYPSUM PRODUCTS PCL — Type C UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

\*Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

**EXISTING ROOF** SYSTEM TO REMAIN ADDITIONAL - BLOCKING AS NEEDED 2x6 JOIST @16"o.c. EXISTING GYP. BOARD W/JOIST HANGERS CEILING TO REMAIN 2x6 LEDGER (CONT) SCREWED (2) LAYERS OF 5/8" TO STUDS, BOTH SIDES TYPE 'X' GYP BOARD **NEW OR EXISTING CORRIDOR NEW OR EXISTING CORRIDOR** LAY-IN CEILING WALL TO MEET UL #U309 WALL TO MEET UL #U309 at 9'-0" A.F.F. FRICTION FIT 3-1/2" FRICTION FIT 3-1/2" BATT INSUL. BATT INSUL. CORRIDOR

RATED CORRIDOR SECTION

NOTE: ANY DIFFUSER AND PIPE PENETRATIONS THRU CORRIDOR WALLS OR CEILING TO BE FIRE SEALED. DUCT PENETRATIONS MUST HAVE FIRE DAMPER.

PROJECT NO:

20-4017

DRAWN BY:

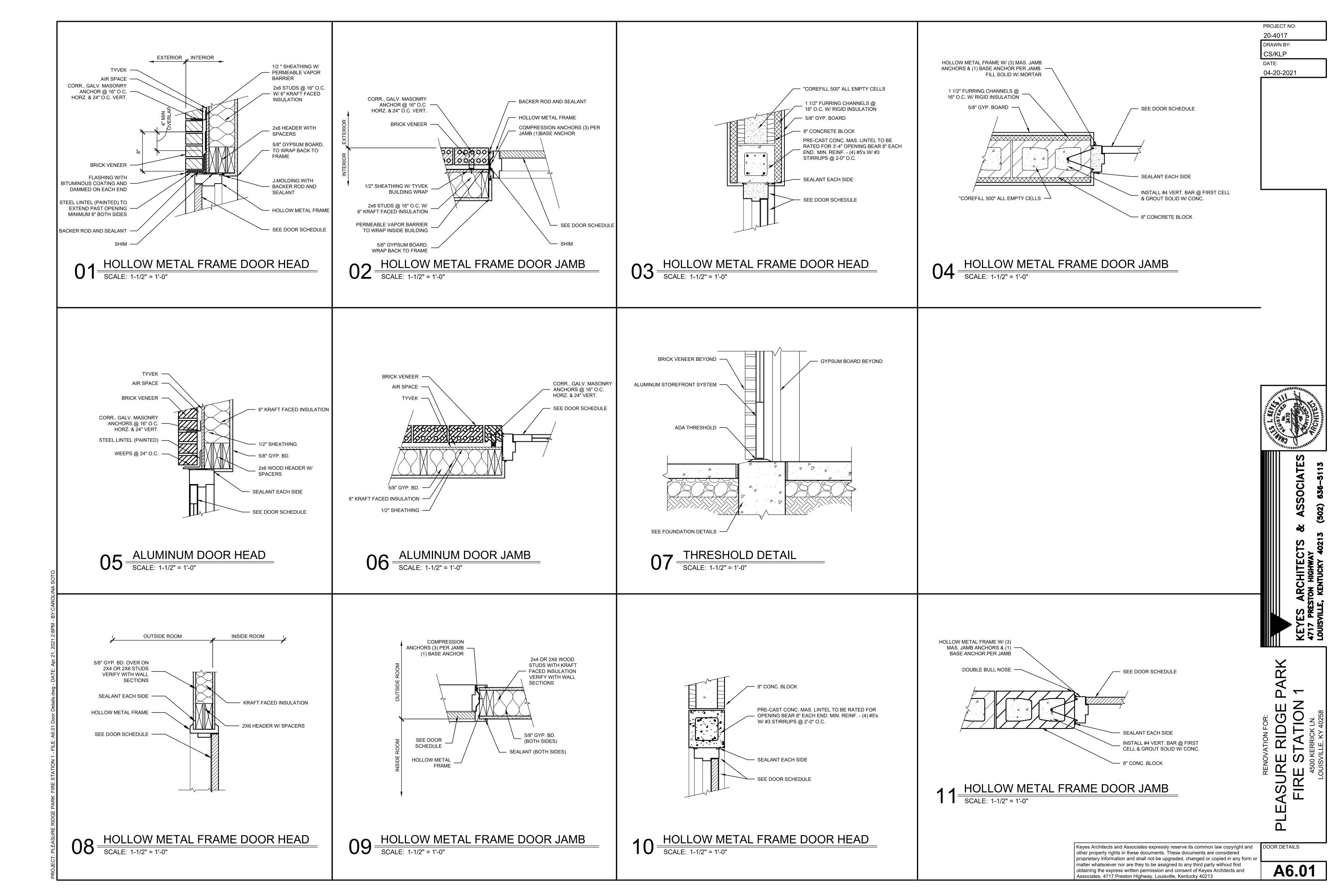
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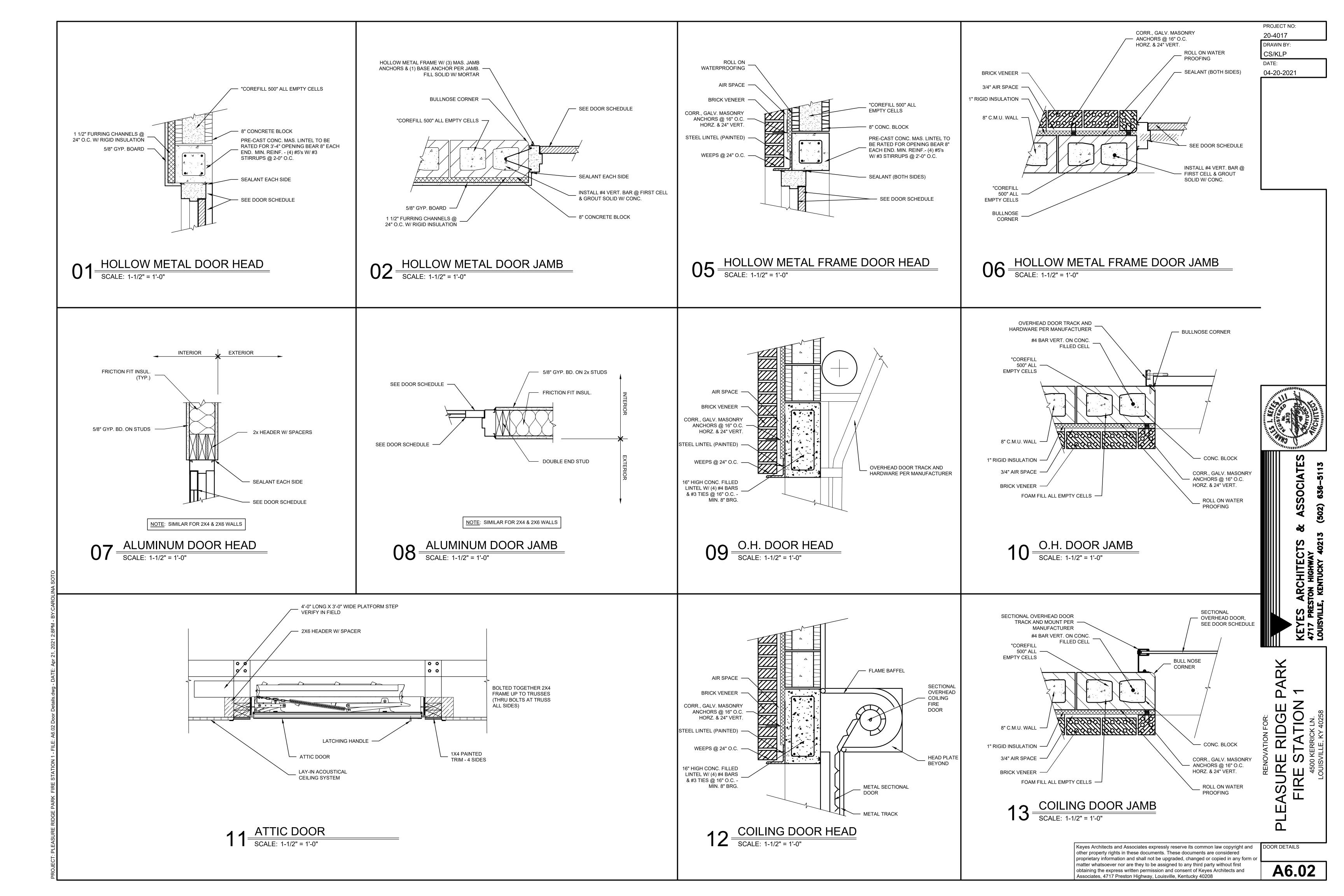
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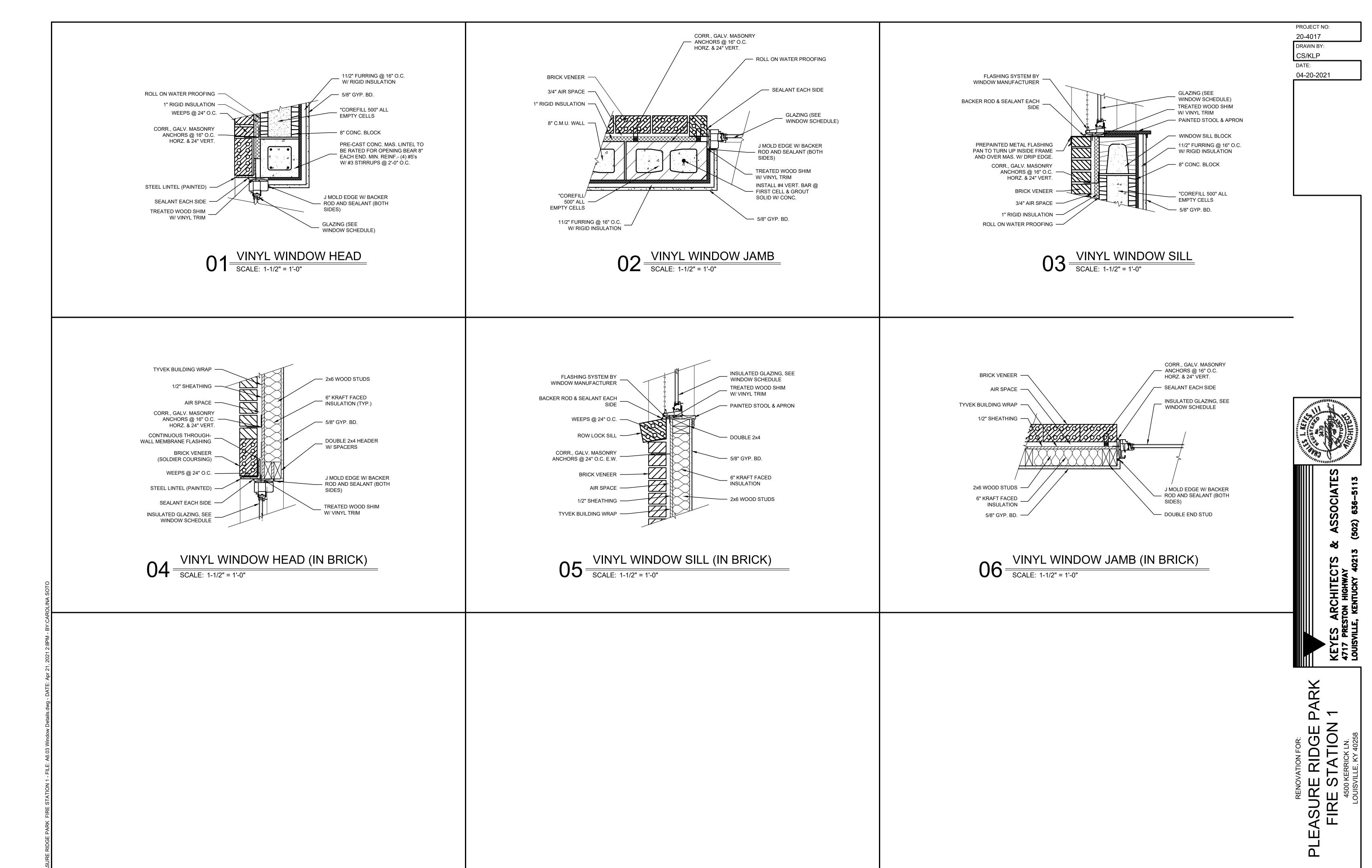
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FIRE RATED WALL

A5.06







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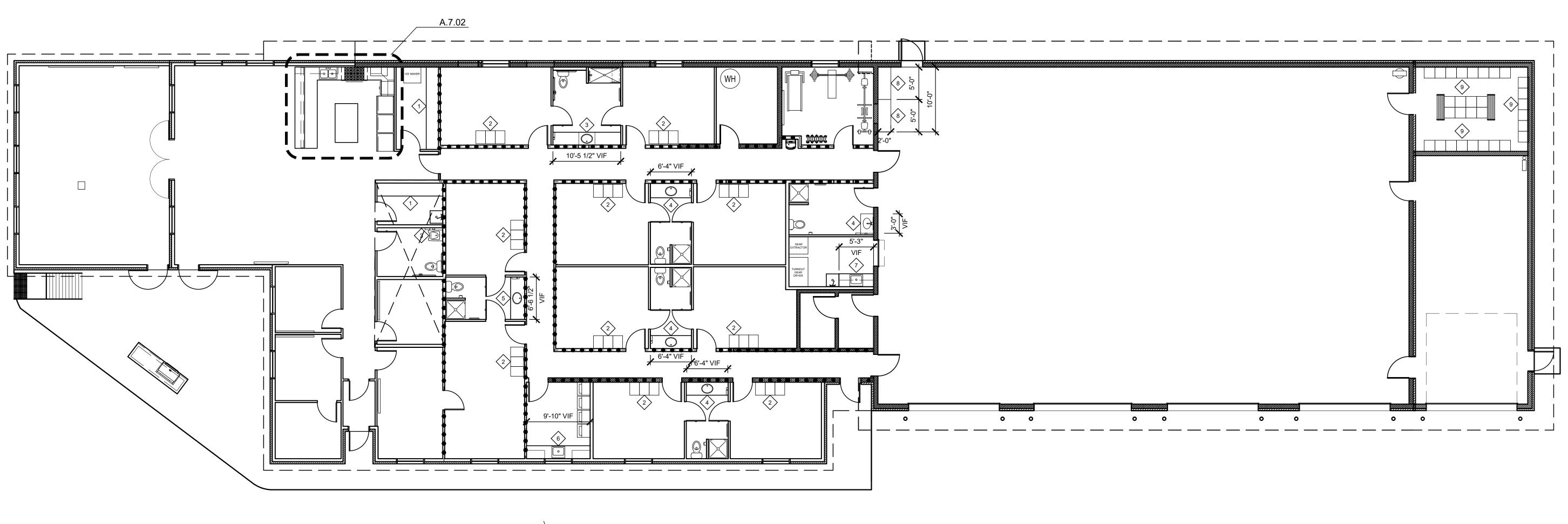
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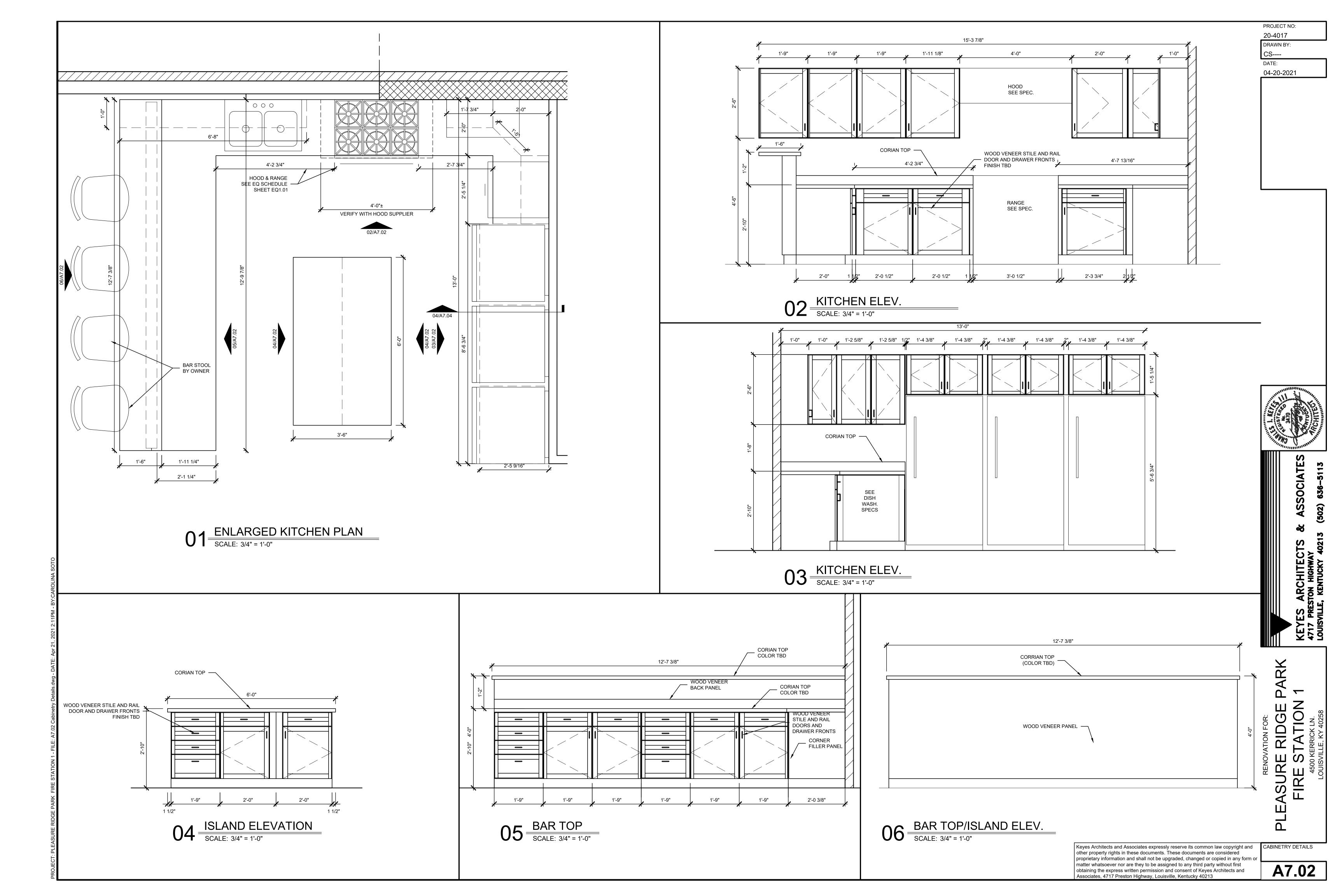


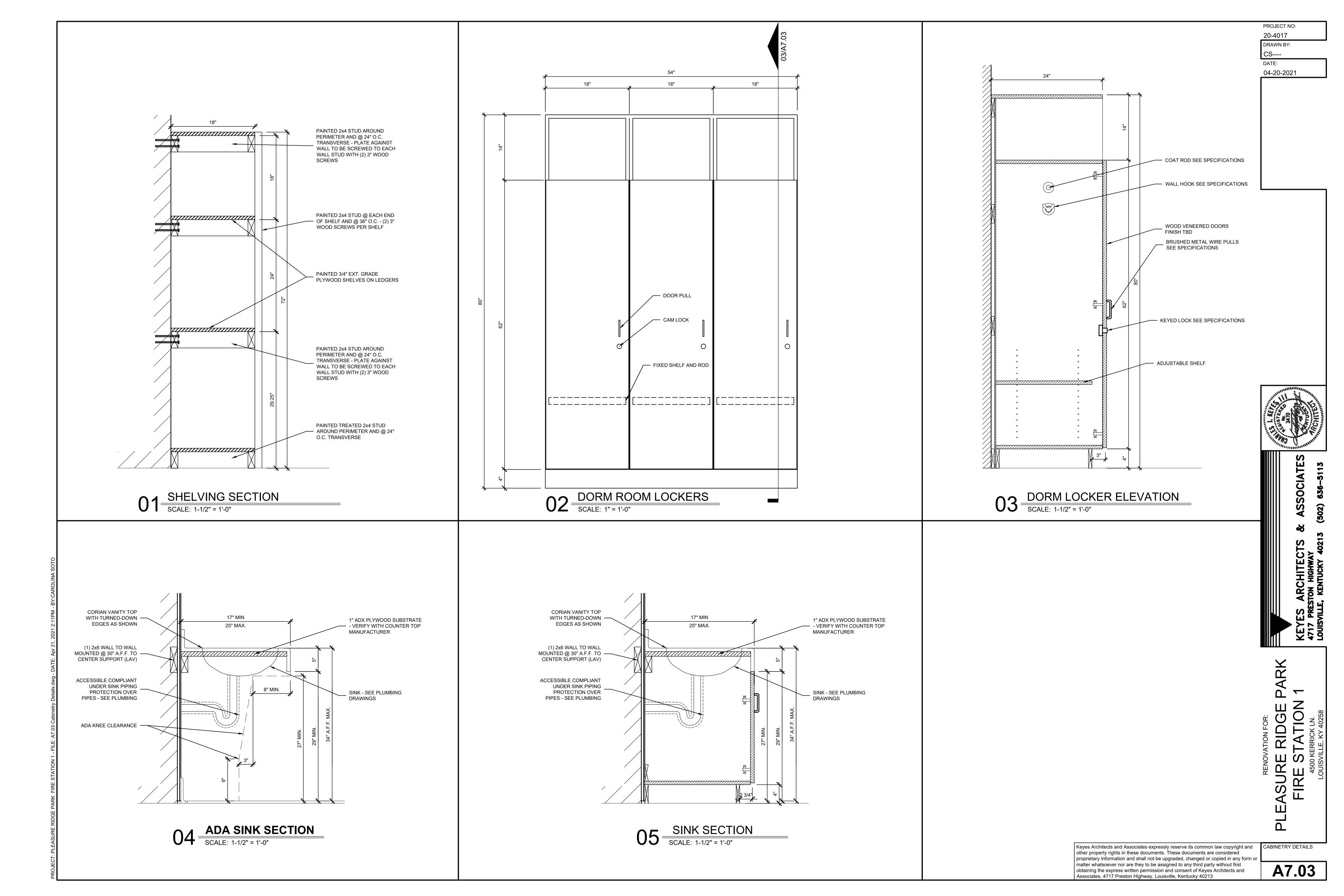
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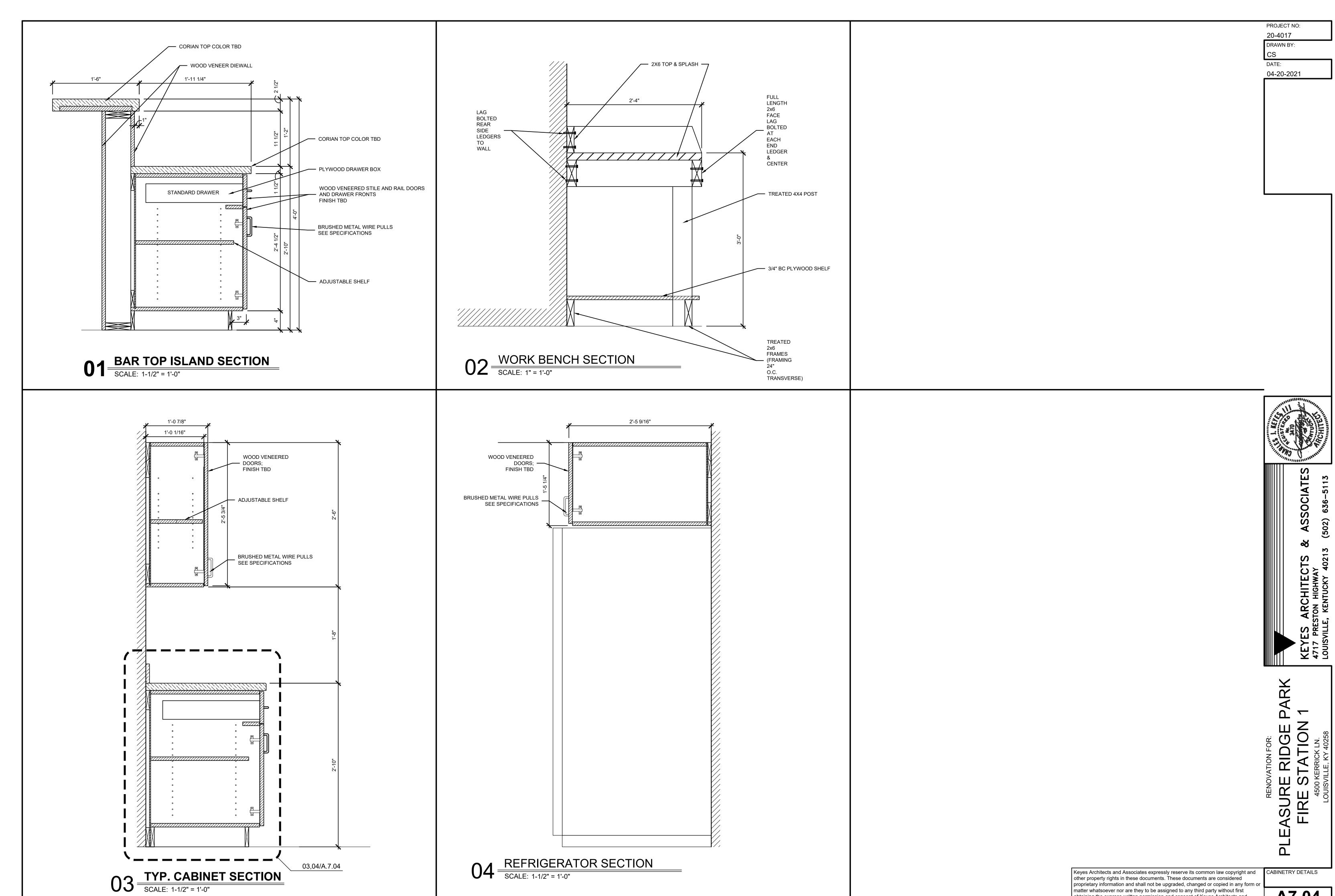




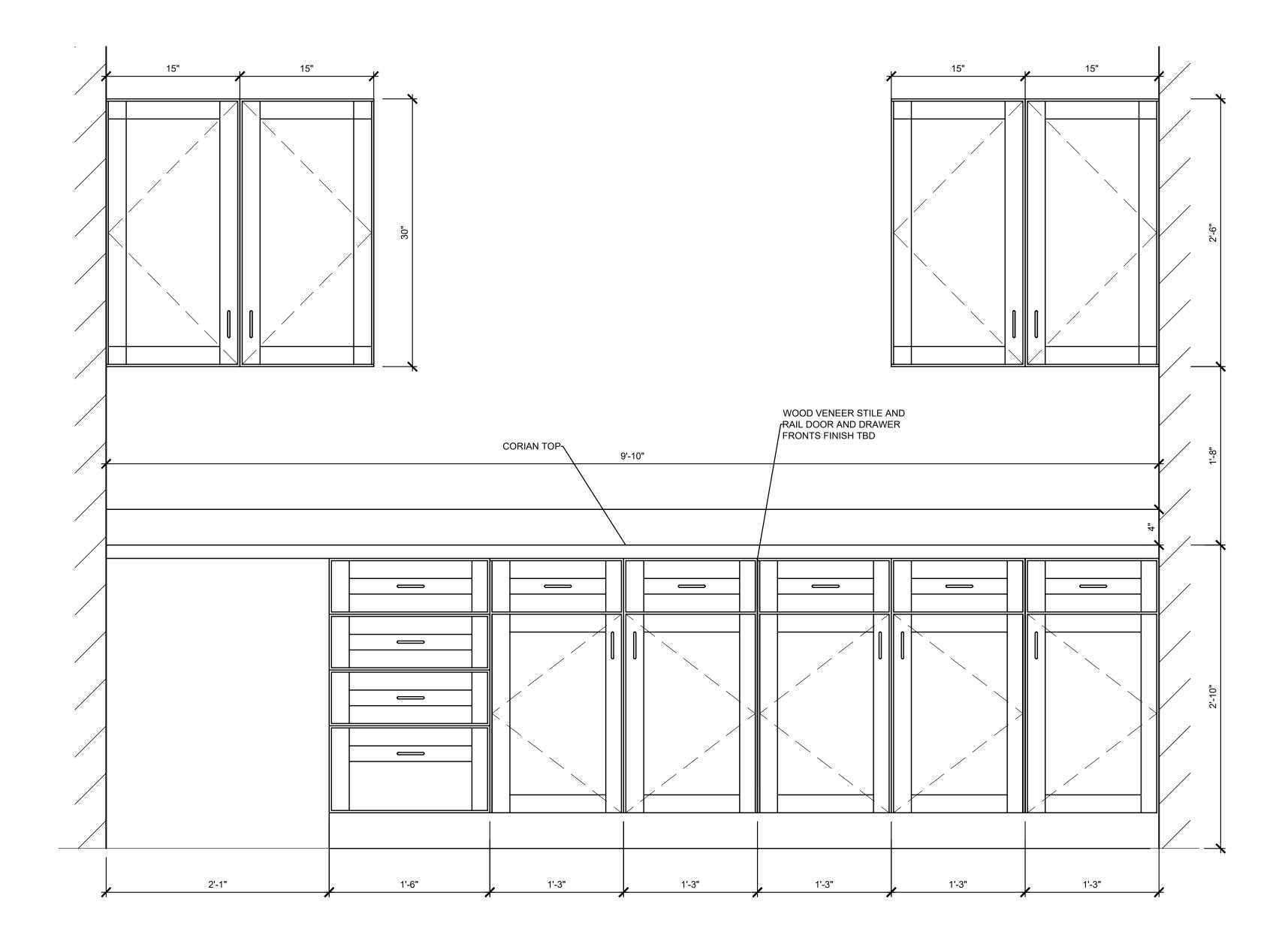
CASE V	CASE WORK SCHEDULE						
1	SHELVING, SEE 01/A7.03						
2	DORM LOCKERS SEE 02, 03/A7.03						
3	VANITY TOP SEE 04/A7.03 & SPECIFICATIONS						
4	VANITY TOP SEE 05/A7.03 & SPECIFICATIONS						
5	VANITY TOP SEE 05/A7.03 & SPECIFICATIONS						
6	CABINETS SEE 01/A7.05						
7	CABINETS SEE 02/A7.05						
8	WOOD WORK BENCH SEE 02/A7.04						
9	GEAR GRID- SEE SPECIFICATIONS						

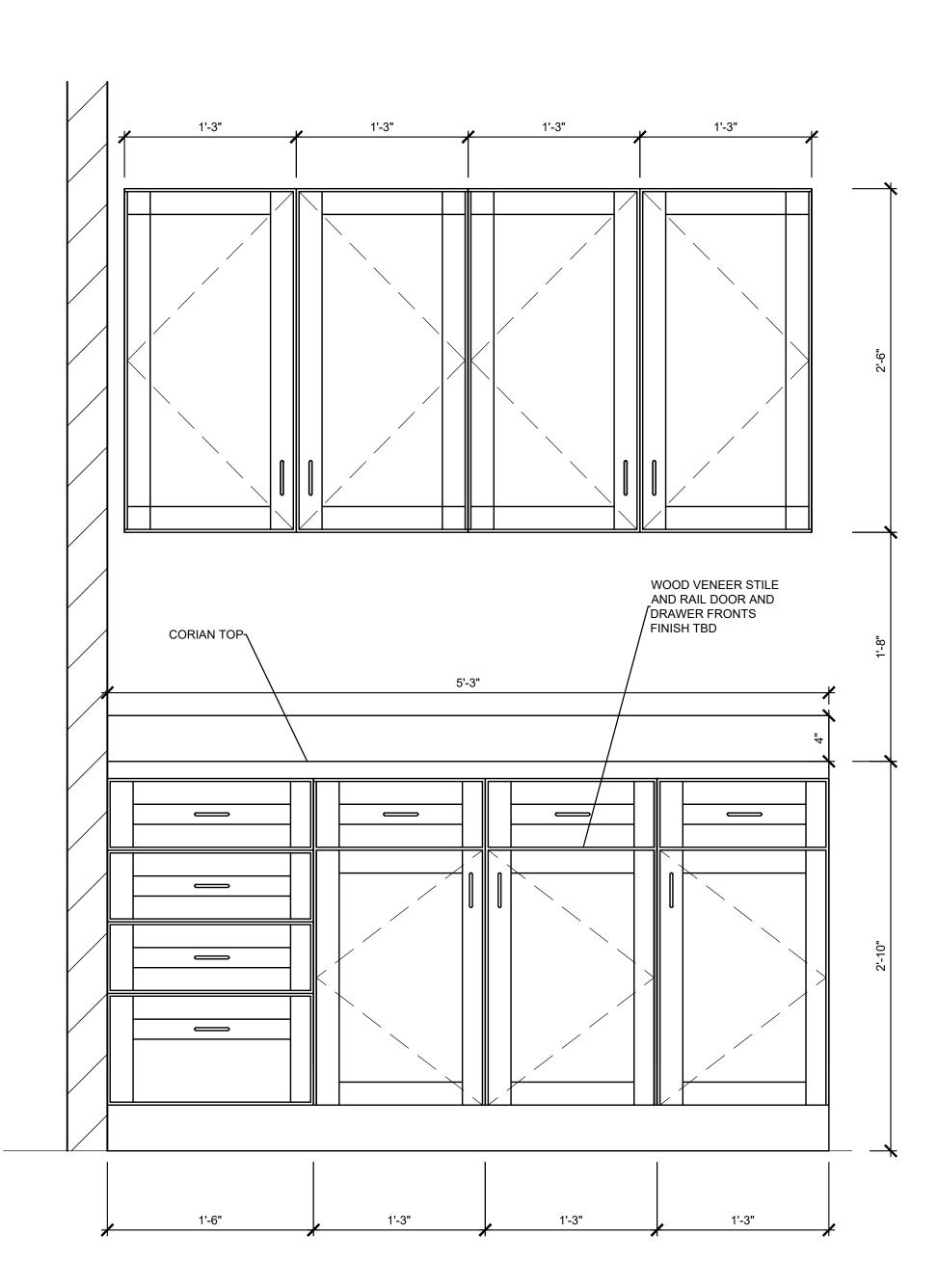






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02 GEAR CLEANING ELEVATION
SCALE: 1-1/2" = 1'-0"

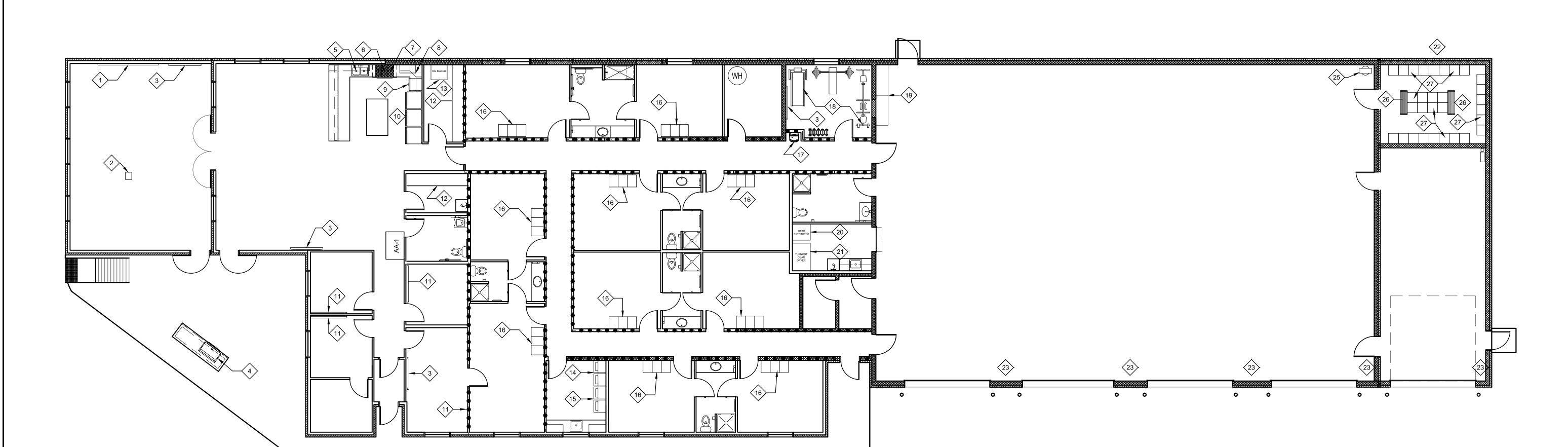
ASURE RIDGE PARK FIRE STATION 1

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A7.05

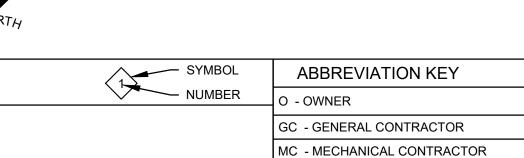
O1 LAUNDRY ELEVATION

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

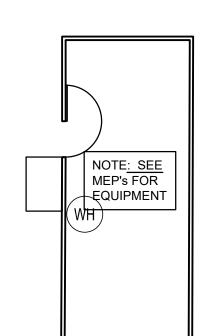


O1 EQUIPMENT PLAN

SCALE: 1/8" - 41 2"



FOI	IIPI	MENT SCHEDULE						SYMBOL	ABBREVIATION KEY
		TENT SOFIED SEE	T					NUMBER	O - OWNER
				RES	PONSIBI	LIIY			GC - GENERAL CONTRACTOR
ITEM			FURN BY	INST. BY					MC - MECHANICAL CONTRACTOR
NO.	QTY.	DESCRIPTION	FURN BT	INST. DT	MC	PC	EC	REMARK	PC - PLUMBING CONTRACTOR
1	1	WHITE BOARD - ALTERNATE #1	GC	GC	-	-	-	WALL MOUNT WHITE BOARD (120" X 48")	EC - ELECTRICAL CONTRACTOR
2	1	PROJECTOR - ALTERNATE #1	0	0	-	-	Х	OWNER TO INSTALL, ELEC. CONTRACTOR TO COORDINATE POWER	
3	4	TV	0	0	-	-	Х	ELECT. CONTRACTOR TO COORDINATE POWER	
4	1	GRILL	0	0	-	Х	-	WEBER SPIRIT S-315 NATURAL GAS GRILL	
5	1	GARBAGE DISPOSAL	GC	GC	-	Х	Х	INSINKERATOR BADGER 15SS MODEL	
6	1	COMMERCIAL RANGE	GC	GC	-	Х	-	LG CAFE SERIES MODEL CGY366P2MS1	
7	1	CAPTIVE - AIRE HOOD SYSTEM	GC	GC	Х	Х	Х	ACUREX MODEL XRRS	
8	1	MICROWAVE - COUNTER	GC	GC	-	-	Х	GE CAFE APPLIANCES MODEL CEB515P2NSS	
9	1	COMMERCIAL DISHWASHER	GC	GC	-	Х	Х	DISHSTAR HT JACKSON WAREWASHING SYSTEMS	
10	3	REFRIGERATORS TOP-FREEZER	0	GC	-	Х	Х	WHIRLPOOL MODEL WRT311FZDW	
11	4	WHITEBOARD	GC	GC	-	-	-	WALL MOUNT WHITE BOARD (36"X48")	
12	2	SHELVING	GC	GC	-	-	-	SEE DETAIL 01/A7.03	1
13	1	ICE MACHINE & ICE BIN	0	GC	Х	Х	Х	MAINTAIN, CLEAN AND RELOCATE EXISTING	7
14	2	WASHING MACHINE TOP LOAD	0	0	-	Х	Х	AMANA TOP-LOAD MODEL NTW4516FW	7
15	2	DRYER FRONT LOAD	0	0	-	Х	Х	AMANA ELECTRIC DRYER MODEL NED4655EW	
16	30	DORM LOCKERS	GC	GC	-	-	-	SEE- 02 & 03/A7.03	
17	1	BOTTLE FILLING STATION WITH SINGLE ADA COOLER	GC	GC	-	Х	Х	ELKAY MODEL LZS8WSLK	
18	-	FITNESS EQUIPMENT	0	0	-	-	х	OWNER TO INSTALL, ELEC. CONTRACTOR TO COORDINATE POWER (6 OUTLETS)	
19	2	WORK BENCH	GC	GC	-	-	-	NEW WORK BENCH 48" SEE 05/A7.04	7
20	1	EXTRACTOR WASHING MACHINE	GC	GC	Х	Х	Х	UNIMAC EXTRACTOR MODEL UWT065D40L	
21	2	COMMERCIAL DRYER	GC	GC	Х	Х	Х	UNIMAC COMMERCIAL GAS DRYER MODEL UT075NDN0NXA	
22	1	GENERATOR	GC	GC	Х	Х	Х	GENERAC- INDUSTRIAL POWER- MODEL SG100 9.0L 100 kW INDUSTRIAL PARK- IGNITED GENERATOR SET, TX301 SERIES TRANSFER SWITCH .	
23	5	POWER LINE DROP	GC	GC	-	-	Х	1 DROP TO BE INSTALLED IN EACH APPARATUS BAY	
24	-	AIR LINE DROP	GC	GC	Х	Х	Х	SEE MECHANICAL PLAN	
25	1	AIR COMPRESSOR	GC	GC	Х	х	Х	INGERSOLL RAND SINGLE -STAGE PORTABLE ELECTRIC AIR COMPRESSOR-2HP,20 GALLON, 5.5 CFM, GARAGE GATE MODEL #P1.5IU-A9	
26	2	GEAR ROOM BENCH	GC	GC	-	-	-	GEAR GRID FIRE BENCH SYSTEM	
27	30	GEAR GRID LOCKERS	GC	GC	-	-	-	WALL MOUNT GEAR LOCKERS 20" X 72"	



02 MEZZANINE PLAN

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

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HOOD I	NFORMATION														
				HOOD	DIMENSI	ONS (IN.)	11000			EXHAUS	Γ		VENTILATION INFO	RMATION	TOTAL
QTY.	MARK	MODEL	CONFIGURATION	LENGTH	WIDTH	HEIGHT	HOOD CONSTR.	CFM	INLET:	SOUND	COL	LAR	VENTILATION STYLE	FAN TYPE	WEIGHT
									SONES	DBA	DIA. (IN.)	S.P.	VENTILATION STILE	PANTIFE	(LBS.)
1	RH-1	XRRS	WALL	30			300 SERIES SS WHERE	500	3.7	46.86	8	0.56	EXTERNAL FAN - TOP DISCHARGE	INLINE	86

HOOD I	NFORMATION													
		HC	OOD AND				DISCO	ONNECTS	FOR APPLI	ANCE	LIGHTING DETAILS		USER	INTERFACE
QTY.	MARK	VOLT	PHASE	SREAKER OPERATING SIZE CURRENT		ELECTRIC				GAS	FIXTURE TYPE	QTY	TYPE	LOCATION
		VOLI	FHASE	(AMPS)	(AMPS)	RECPT.	VOLT	PHASE	MAX AMPS	VALVE SIZE (IN.)	BULB / LAMP INFO	יוע	ITPE	LOCATION
1	RH-1	115	1	15	1.7	5-15	115	1	15	3/4	115VAC 7WATT E26 LED 2200-2700K COLOR	2	FULL COLOR, LCD TOUCH SCREEN	HOOD MOUNTED

HOOD OPTIONS/ACCESSORIES LISTED TO UL SUBJECT 300A

SELF-CONTAINED FIRE SUPPRESSION SYSTEM

ELECTRONIC DETECTION

FULLY PLUG AND PLAY DESIGN

FIRE SUPPRESSION TANK AND CONTROL BOARD

NSF APPROVED SEALANT

AUTOMATIC RANGE DEACTIVATION AND PASSWORD PROTECTION

MANUAL PULL STATION

36 IN HIGH CEILING ENCLOSURES FRONT LEFT RIGHT - FIELD INSTALLED

∕-Ø8.0

12.5

LED LIGHT BULBS -FIRE SUPPRESSION NOZZLES — TEMPERATURE SENSORS -

MARK: RH-1

HOOD CONTROLS

12.0

MARK: RH-1

SECTION VIEW

15.0

30.0

**30.0** 

MARK: RH-1

FI EVATION VIEW

MARK: RH-1

PLAN VIEW

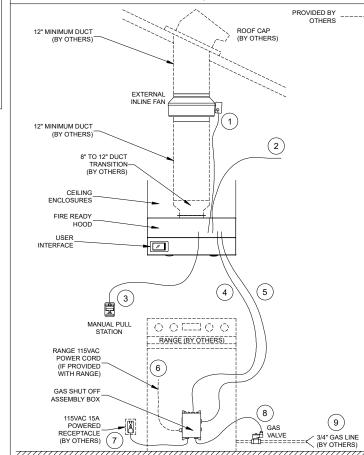
USER INTERFACE

FIRE SYSTEM PERMIT, STARTUP AND PUFF TEST

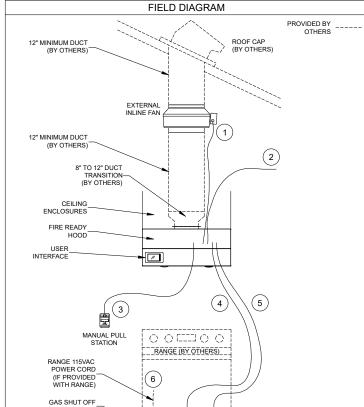
FIRE TEST KIT

NFPA 101 COMPLIANT

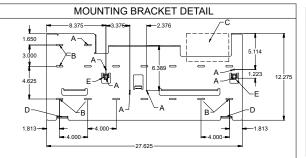




		CONNECTION LEGEND
ID	ITEM	ITEM DETAILS
1	EXTERNAL INLINE FAN	50FT PLUG AND PLAY CABLE WITH ORANGE LABEL PROVIDED. FIELD TO RUN BETWEEN HOOD AND FAN, AND CONNECT TO ORANGE HARNESSES.
2	HOOD POWER	FIELD TO PROVIDE 115VAC POWER FROM 15A BREAKER TO TERMINAL BLOCKS H1 AND N1 INSIDE HOOD (GROUND TO GROUNDING TERMINAL).
3	MANUAL PULL STATION	30 FT PLUG AND PLAY CABLE COILED UP AND ATTACHED TO HOOD. FIELD TO CONNECT TO MANUAL PULL STATION VIA QUICK CONNECTOR IN STATION J-BOX.
4	GAS/ELECTRIC DISCONNECT CABLE 1	10 FT PLUG AND PLAY CABLE COILED UP AND ATTACHED TO 9PIN CONNECTION AT HOOD. FIELD TO PLUG THIS INTO GAS/ELECTRIC SHUT OFF ASSEMBLY BOX.
5	GAS/ELECTRIC DISCONNECT CABLE 2	10 FT PLUG AND PLAY CABLE COILED UP AND ATTACHED TO 4PIN CONNECTION AT HOOD. FIELD TO PLUG THIS INTO GAS/ELECTRIC SHUT OFF ASSEMBLY BOX.
6	RANGE POWER CORD	PLUG RANGE POWER CORD (IF PROVIDED WITH RANGE) INTO GAS SHUT OFF ASSEMBLY BOX.
7	SHUT OFF ASSEMBLY BOX POWER	PLUG GAS SHUT OFF ASSEMBLY BOX POWER CORD INTO NEARBY 115VAC RECEPTACLE.
8	SHUT OFF ASSEMBLY VALVE POWER	GAS VALVE TO CONNECT TO QUICK CONNECTOR, CONNECTS 5FT GAS VALVE POWER CORD TO 1.5FT CABLE ON GAS VALVE.
9	GAS LINE	PIPE GAS LINE INTO GAS VALVE INLET, THEN OUT OF GAS VALVE OUTLET TO RANGE.



		CONNECTION LEGEND
ID	ITEM	ITEM DETAILS
1	EXTERNAL INLINE FAN	50FT PLUG AND PLAY CABLE WITH ORANGE LABEL PROVIDED. FIELD TO RUN BETWEEN HOOD AND FAN, AND CONNECT TO ORANGE HARNESSES.
2	HOOD POWER	FIELD TO PROVIDE 115VAC POWER FROM 15A BREAKER TO TERMINAL BLOCKS H1 AND N1 INSIDE HOOD (GROUND TO GROUNDING TERMINAL).
3	MANUAL PULL STATION	30 FT PLUG AND PLAY CABLE COILED UP AND ATTACHED TO HOOD. FIELD TO CONNECT TO MANUAL PULL STATION VIA QUICK CONNECTOR IN STATION J-BOX.
4	GAS/ELECTRIC DISCONNECT CABLE 1	10 FT PLUG AND PLAY CABLE COILED UP AND ATTACHED TO 9PIN CONNECTION AT HOOD. FIELD TO PLUG THIS INTO GAS/ELECTRIC SHUT OFF ASSEMBLY BOX.
5	GAS/ELECTRIC DISCONNECT CABLE 2	10 FT PLUG AND PLAY CABLE COILED UP AND ATTACHED TO 4PIN CONNECTION AT HOOD. FIELD TO PLUG THIS INTO GAS/ELECTRIC SHUT OFF ASSEMBLY BOX.
6	RANGE POWER CORD	PLUG RANGE POWER CORD (IF PROVIDED WITH RANGE) INTO GAS SHUT OFF ASSEMBLY BOX.
7	SHUT OFF ASSEMBLY BOX POWER	PLUG GAS SHUT OFF ASSEMBLY BOX POWER CORD INTO NEARBY 115VAC RECEPTACLE.
8	SHUT OFF ASSEMBLY VALVE POWER	GAS VALVE TO CONNECT TO QUICK CONNECTOR, CONNECTS 5FT GAS VALVE POWER CORD TO 1.5FT CABLE ON GAS VALVE.
9	GAS LINE	PIPE GAS LINE INTO GAS VALVE INLET, THEN OUT OF GAS VALVE OUTLET TO RANGE.



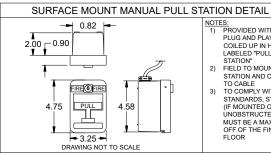
- MOUNTING BRACKET KEY

  A. CRITICAL MOUNTING POINTS (MUST BE SECURED TO STUDS OR DRY WALL HANGERS)

  B. UTILIZE ONE OF THESE TWO CRITICAL POINTS FOR SECURING TO STUD OR DRY WALL HANGERS (THREE TOTAL)
- LOCATION FOR FACTORY PROVIDED 4" H X 6" W X 3.5" D CONTROL J-BOX HOOD SUPPORT TABS HOOD LATCH CONNECTIONS

- | NOTES: 1) BEFORE MOUNTING, SITUATE MOUNTING BRACKET ON WALL, MAKING SURE CRITICAL MOUNTING POINTS ARE MET AND DISTANCE FROM BOTTOM OF BRACKET TO COOKING SURFACE IS BETWEEN 24 AND 30 INCHES.

  CUT OUT SPACE IN WALL FOR FACTORY PROVIDED CONTROL J-BOX AND SECURE IN
- SECURE MOUNTING BRACKET TO WALL USING THE PROPER FIELD PROVIDED. FASTENERS USING CRITICAL MOUNTING POINTS SHOWN ABOVE



1.50 -

TES:

PROVIDED WITH 30FT
PLUG AND PLAY CABLE
COILED UP IN HOOD
LABELED "PULL
STATION"

**3** 

 $\Xi$ 

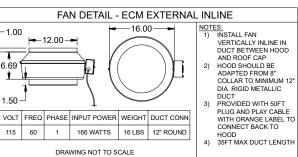
STATION

Ш

FIRE

PRP

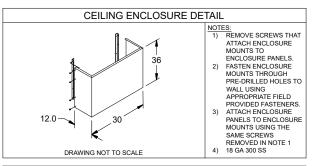
STATION"
) FIELD TO MOUNT
STATION AND CONNECT
TO CABLE
) TO COMPLY WITH ADA STANDARDS, STATION (IF MOUNTED ON AN UNOBSTRUCTED WALL)
MUST BE A MAX OF 48"
OFF OF THE FINISHED FLOOR

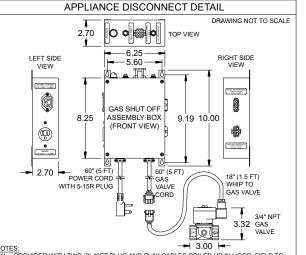












NOTES:

1) PROVIDED WITH TWO (2) 10FT PLUG AND PLAY CABLES COILED UP IN HOOD, FIELD TO

PROVIDED WITH TWO (2) 10FT PLUG AND PLAY CABLES COILED UP IN HOOD, FIELD TO CONNECT CABLES TO GAS SHUT OFF ASSEMBLY BOX

FIELD TO MOUNT GAS SHUT OFF ASSEMBLY AND RUN GAS PIPING

FIELD TO PLUG SFT CORD WITH 5-15R PLUG INTO 115VAC RECEPTACLE BEHIND RANGE FIELD TO PLUG RANGE POWER CORD (IF APPLICABLE) INTO GAS SHUT OFF ASSEMBLY BOX 115VAC RECEPTACLE LABELED "RANGE"

MECHANICAL DEMOLITION 01 FLOOR PLAN

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

# **DEMO TAGGED NOTES:**

1. EXISTING CO-RAY-VAC SYSTEM SHALL REMAIN INCLUDING PIPING,

BURNERS, EXHAUST FANS AND CONTROLS. PROVIDE A FULL

SERVICE AND CLEANING OF THE EXISTING SYSTEM. 2. COMPLETELY DEMOLISH EXISTING MAGLOCK VEHICLE EXHAUST EXTRACTION SYSTEM INCLUDING RAILING, DUCTWORK, FLEXIBLE DUCTWORK, FAN, SUPPORTS, AND TIMER SWITCH CONTROLS. PATCH WALL PENETRATIONS.

3. COMPLETELY DEMOLISH EXISTING SPLIT SYSTEMS, ASSOCIATED FURNACES, REFRIGERANT PIPING, GRILLES, REGISTERS, DIFFUSERS AND DUCTWORK SYSTEMS. COORDINATE DEMOLITION WITH ELECTRICAL CONTRACTOR. PATCH EXTERIOR WALL OUTSIDE AIR AND REFRIGERANT PIPING PENETRATIONS PER THE ARCHITECTURAL

4. DEMOLISH EXISTING ELECTRIC HEATERS COMPLETELY. COORDINATE DEMOLITION WITH ELECTRICAL CONTRACTOR.

5. COMPLETELY DEMOLISH EXISTING EXHAUST SYSTEMS. COORDINATE DEMOLITION OF ROOF MOUNTED EXHAUST SYSTEM WITH GENERAL CONTRACTOR.

6. DEMOLISH EXISTING ROOF MOUNTED EXHAUST FAN. COORDINATE EXISTING CURB SIDE WITH CURB TRANSITION ON NEW EXHAUST

7. DEMOLISH EXISTING ROOF MOUNTED EXHAUST FAN/GRAVITY HOOD. PROVIDE INSULATED ROOF CURB AND CAP EXISTING OPENING.



MECHANICAL DEMOLITION

02 ROOF PLAN

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

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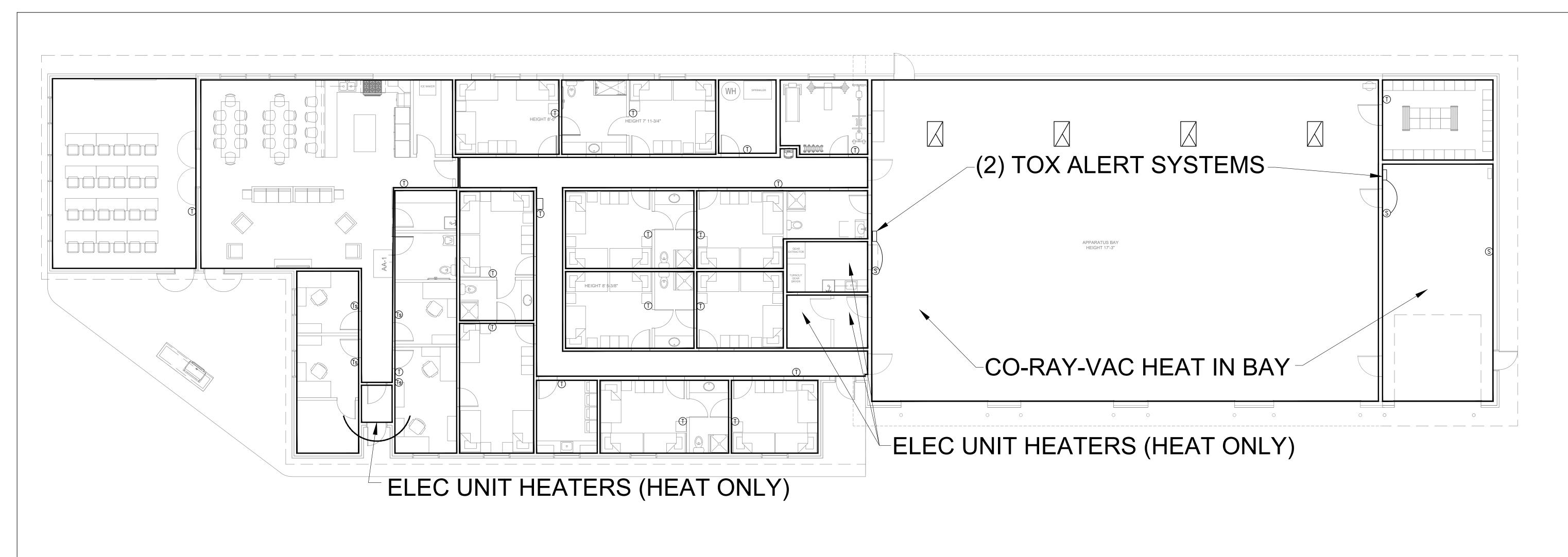
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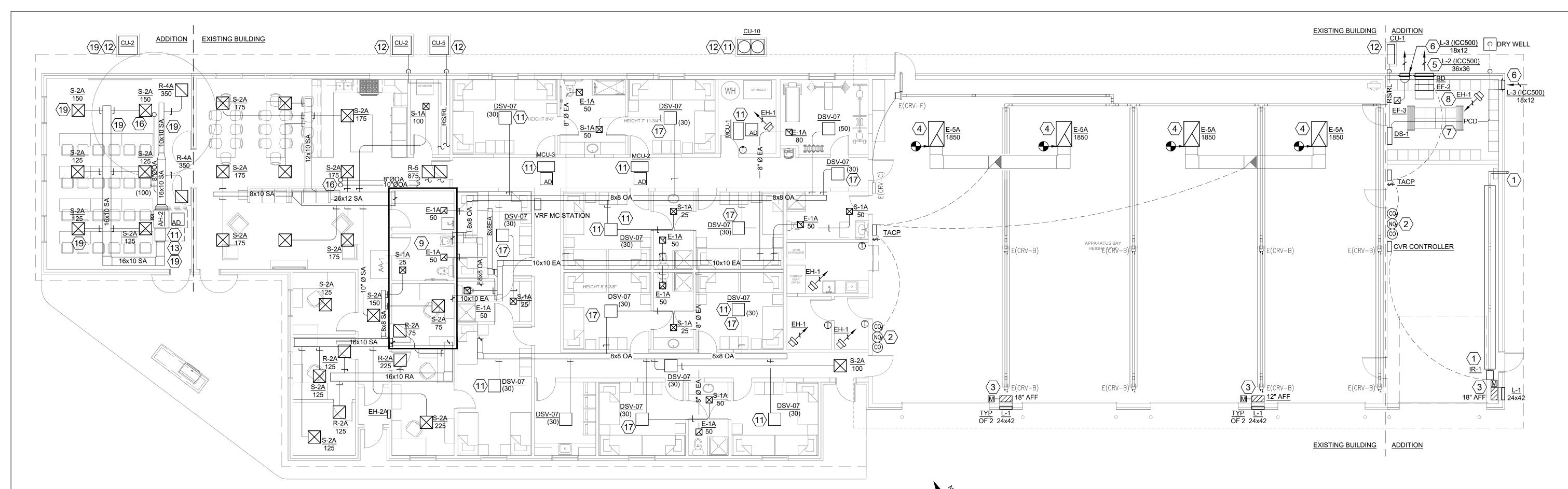
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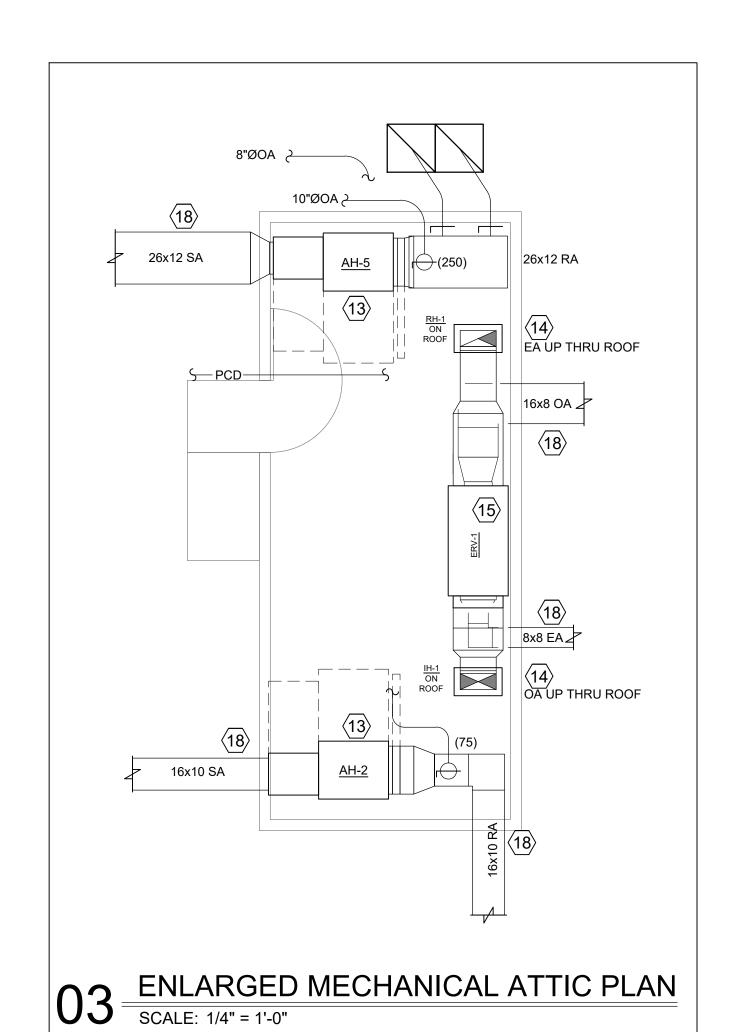
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MECHANICAL FLOOR PLAN SCALE: 1/8" = 1'-0"

\*\*NOTES APPLY TO MULTIPLE SHEETS.\*\*



CAP RATED FOR GAS FIRED APPLIANCES. INSTALL NEW TOX ALERT SYSTEM IN GARAGE AREA. PROVIDE 3 SENSOR TOX ALER SYSTEM AND FAN CONTROL GVU-3 BY TOX ALERT INTERNATIONAL. TYPICAL OF 2. SYSTEM SHALL ENABLE EXHAUST FAN AND OPEN MOTORIZED DAMPER ON INTAKE LOUVER UPON HIGH CONCENTRATION OF GASSES. REFER TO THE CONTROL SPECIFICATIONS FOR MORE INFORMATION. INSTALL SENSORS 60" AFF. 3. INSTALL LOUVER IN NEW WALL PENETRATION. WHERE (2) LOUVERS ARE INDICATED INSTALL LOUVERS ON TOP OF EACH OTHER. WITH A MAXIMUM OF 12" SEPARATING THE LOUVERS VERTICALLY. PROVIDE WITH MOTORIZED SHUT-OFF DAMPER AND PROVING SWITCH RATED FOR THE VOLTAGE OF THE ASSOCIATED EXHAUST FAN. DAMPER SHALL PROVE OPEN PRIOR TO FAN ENERGIZING. COORDINATE LINE VOLTAGE CIRCUITS WITH ELECTRICAL CONTRACTOR. COORDINATE INTERLOCK WITH TOX ALERT OUTPUT SIGNAL. 4. INSTALL NEW EXHAUST GRILL IN CEILING. CONNECT TO THE EXISTING EXHAUST DUCTWORK ABOVE 17'-3" CEILING. CONFIRM EXISTING CEILING OPENING SIZE PRIOR. MATCH EXISTING CELING SIZE. 5. INSTALL WALL PROP EXHAUST FAN, BACKDRAFT DAMPER, OSHA GUARD, AND ICC500 RATED LOUVER ABOVE TOP OF STORM SHELTER. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTION FOR ICC500 RATED LOUVER. 6. INSTALL LOUVERS SERVING THE STORM SHELTER BELOW TOP OF SHELTER. PROVIDE A BACKDRAFT DAMPER AT LOUVER CONNECTIONS. DUCT TO EQUIPMENT AS SHOWN. PROVIDE BACK DRAFT DAMPER IN DUCTWORK. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTION FOR ICC500 RATED LOUVER. 7. INSTALL UNIT INSIDE STORM SHELTER. PUMP CONDENSATE TO EXTERIOR OF STORM SHELTER AND DOWN WALL TO BELOW GRADE. CONTINUE BELOW GRADE TO DRY WELL LOCATED OUTSIDE. PROVIDE 24x24x24 DRYWELL FILLED WITH WITH #57 GRAVEL, WITH A 12" LAYER OF TOPSOIL COVER. FINISHED DRYWELL FLUSH WITH GRADE OR PAVEMENT/ASPHALT AS REQUIRED. COORDINATE FINISH WITH CIVIL CONTRACTOR. 8. INSTALL ELECTRIC HEATER INSIDE GEAR/STORM SHELTER. 9. SEE ENLARGED MECHANICAL ATTIC PLANS FOR CONTINUATION. 10. DRAIN 34" INSULATED CONDENSATE TO OPEN RECEPTACLE OR DRAIN IN LOCATION INDICATED. WHERE INDICATED COMBINE CONDENSATE LINES TO 1" INSULATED LINE. 11. REFER TO THE VARIABLE REFRIGERANT PIPING FLOOR PLANS FOR ADDITIONAL INSTALLATION INFORMATION. 12. INSTALL CONDENSING UNIT ON 4" TALL CONCRETE PAD. COORDINATE PAD WITH CONCRETE CONTRACTOR.

INSTALL NEW INDEPENDENT CO-RAY-VAC INFRA-RED SYSTEM IN NEW ADDITION

OVERHEAD DOOR IN ITS RAISED POSITION. PROVIDE WITH HIGH-EFFICIENCY HEAT

APPARATUS BAY. INSTALL MODULATING GAS BURNER AND REFLECTOR JUST UNDER THE

REFLECTOR TILTED 45° TOWARDS OPPOSITE END OF BAY. TUBE SHALL BE OF ALUMINIZED STEEL WITH STAINLESS STEEL COUPLINGS. PROVIDE INSULATED VENT TERMINATION AND

**TAGGED NOTES:** 

MANUFACTURER'S CONCENTRIC VENT. 14. OUTSIDE AIR AND EXHAUST AIR UP THRU ROOF TO NEW GRAVITY RELIEF HOOD. 15. INSTALL NEW ERV UNIT ON VIBRATION ISOLATION SUPPORTS AND FLEXIBLE DUCTWORK CONNECTIONS TO THE UNIT. 16. OUTSIDE AIR DUCT UP THRU ROOF. PROVIDE WITH A GOOSENECK FITTING TERMINATED A

13. INSTALL HORIZONTAL AIR HANDLING UNITS WITH SECONDARY DRAIN PAN AND

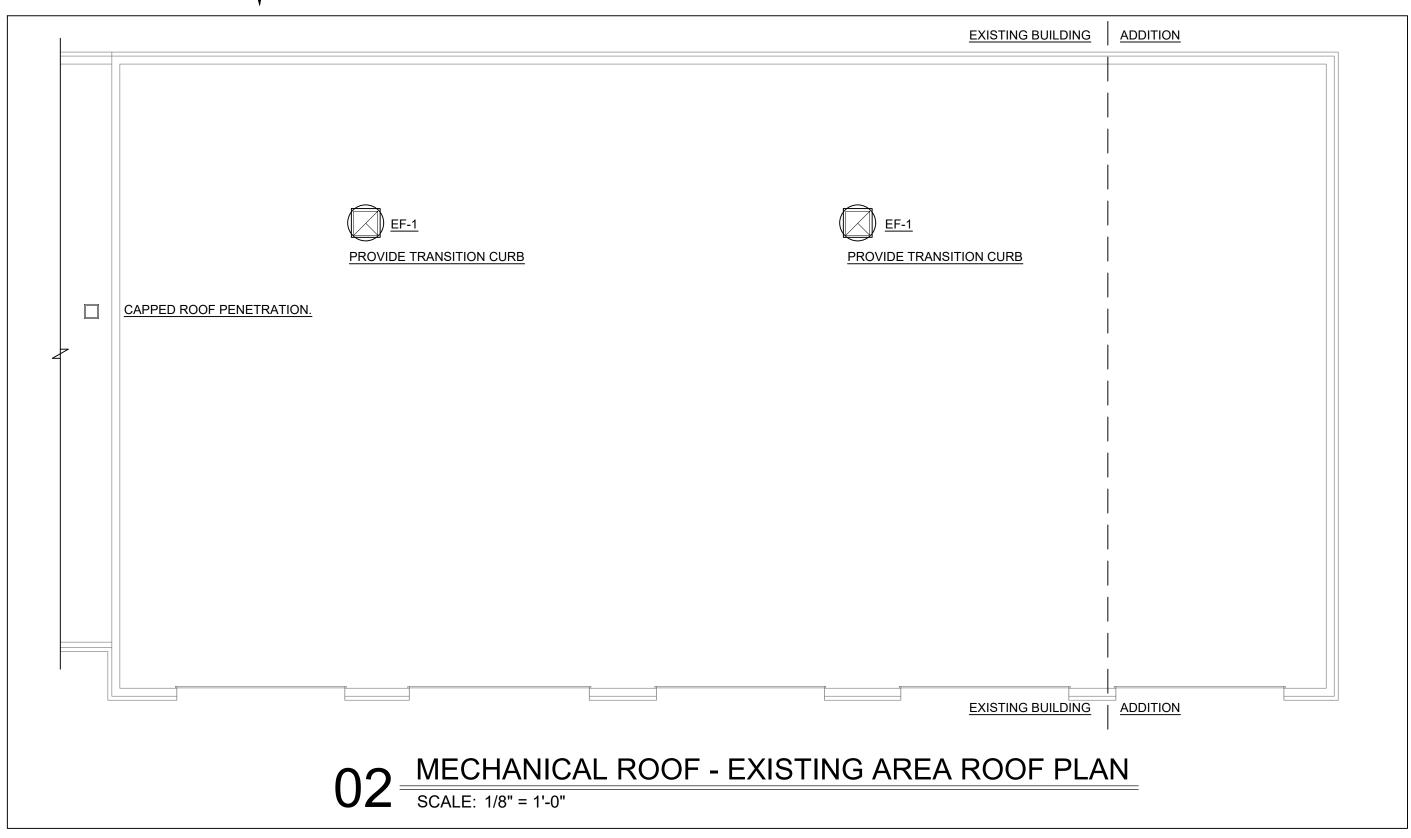
AND 2" FILTER RACKS. ROUTE GAS INTAKE AND FLU UP THRU ROOF WITH

MINIMUM OF 12" CLEAR TO THE ROOF. 17. OUTSIDE AIR INTAKE AND SUPPLY AIR OUTLET REQUIRED FOR CEILING CASSETTE UNITS. 18. SA, RA, EA, AND OA INDICATED CONTINUE IN ATTIC & ABOVE CEILING SPACE. REFER TO

CONDENSATE FLOAT CUT-OUT SWITCH. PROVIDE WITH VIBRATION ISOLATION SUPPORTS

FLOOR PLANS FOR CONTINUATION. 19. EQUIPMENT AND SHEETMETAL FOR CLASSROOM ADDITION SHALL BE PART OF CLASSROOM ALTERNATE. COORDINATE BID WITH GENERAL CONTRACTOR.

20. PROVIDE ACCESS DOOR IN CEILING WHERE UNITS ARE INSTALLED ABOVE GYP CEILING.



GRD RUNOUT					
DUCT SIZE	SYMBOL	DUCT SIZE			
6"ø	R-2	8 <b>"</b> ø			
8"ø	R-4 12"ø				
6"ø	R-5	14 <b>"</b> ø			
*30x48*					
	DUCT SIZE  6"ø  8"ø  6"ø	DUCT SIZE         SYMBOL           6"ø         R-2           8"ø         R-4           6"ø         R-5			

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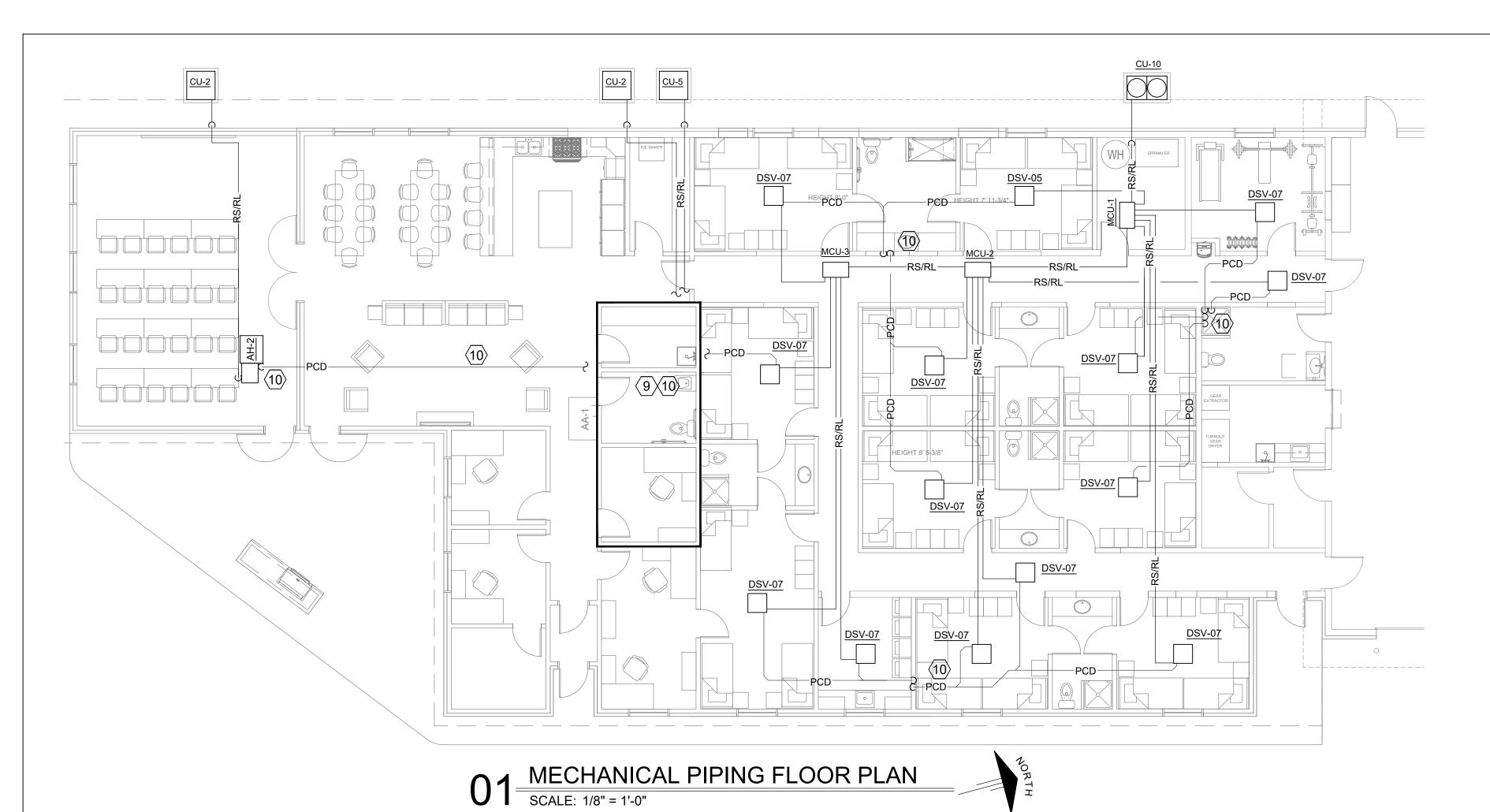
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04-20-2021

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STATION SURE IRE ST



# VRF MODE CONTROL UNIT MCU

001111101 01	111 10100
SYMBOL (OUTDOOR)	MCU-1,2,3
MANUFACTURER MODEL NUMBER	SAMSUNG MCU-S4N
ELECTRICAL V / Ø / Hz	208-230/1/60
MCA / MOP	2.0 / 15
REMARKS	ALL
REFRIGERANT	R-410A

### REMARKS:

- 1. PROVIDE FACTORY ENGINEERED REFRIGERANT PIPING SYSTEM WITH FACTORY FITTINGS AND MODE CONTROL UNITS.
- 2. PROVIDE WITH UL LISTING. 3. PROVIDE FACTORY START UP FOR
- EQUIPMENT. 4. MECHANICAL CONTRACTOR TO PROVIDE ELECTRICAL DISCONNECT. PROVIDE NEMA 3R DISCONNECT FOR OUTDOOR USE.
- 5. ACCEPTABLE MANUFACTURERS: SAMSUNG DIAKIN, LG, MITSUBISHI.
- 6. INSTALLING CONTRACTOR MUST HAVE COMPLETED MANUFACTURER'S CERTIFIED INSTALLATION CLASS WITHIN THE PAST 36 MONTHS.
- 7. PROVIDE WALL MOUNTED MASTER CONTROL STATION.

# VRF DSV UNIT SCHEDULE

MARK	DSV-07
MANUFACTURER MODEL NUMBER	SAMSUNG AM007
AREA SERVED	MULTIPLE
CONFITURATION	CEILING CASSETTE
FAN CFM / ESP	300 / 0.01"
ELECTRICAL V / Ø / Hz	208/1/60
MCA / MOP	0.24 / 15
FAN POWER	65 W
COOLING CAPACITY	7,500
COOLING EAT/DAT	75.9°F / 56.0°F 63.7°F / 55.4°F
HEATING CAPACITY	8,700
HEATING EAT/DAT	65.8°F / 92.0°F

### REMARKS:

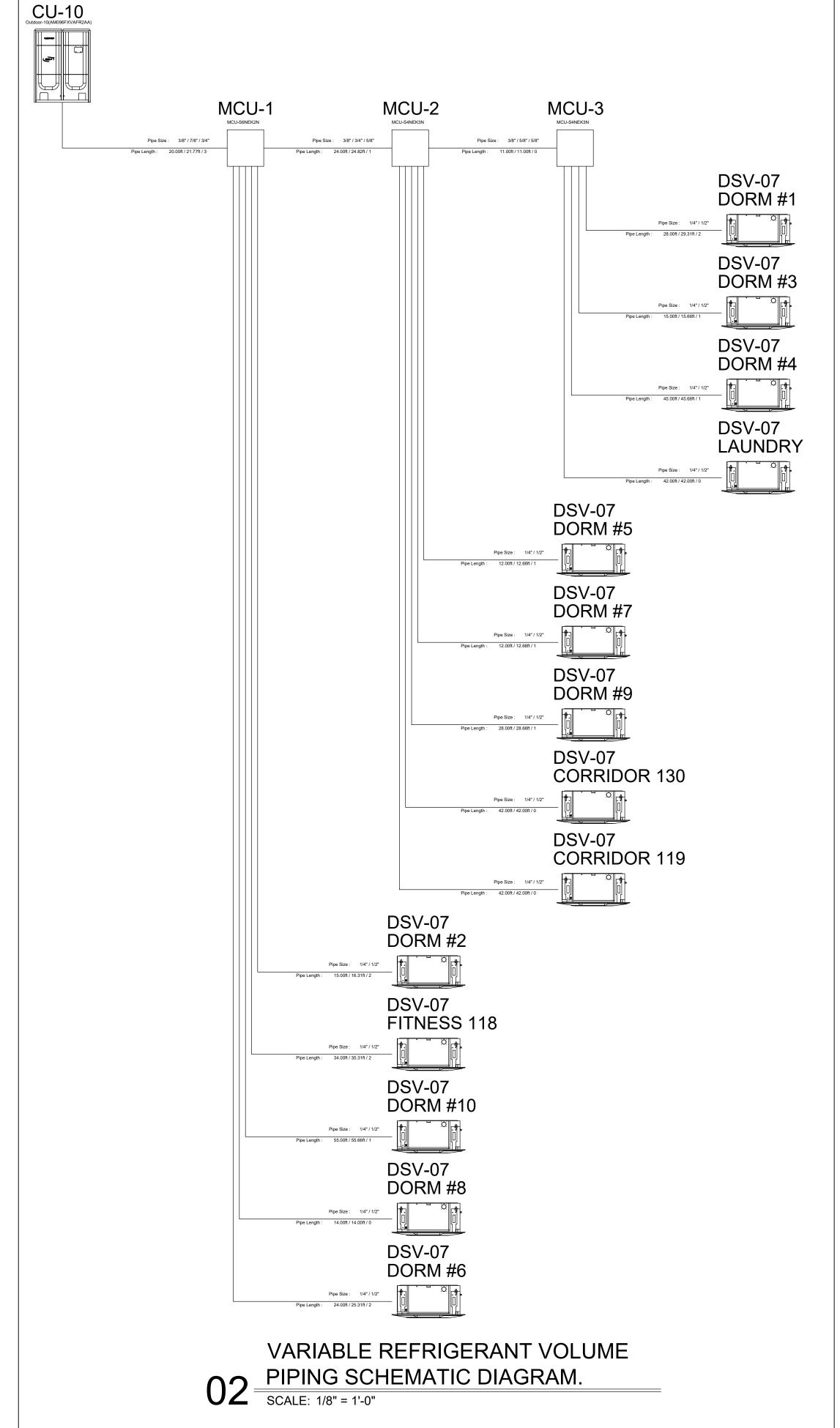
- 1. PROVIDE FACTORY ENGINEERED REFRIGERANT PIPING SYSTEM WITH FACTORY FITTINGS AND BRANCH SELECTOR BOXES.
- 2. PROVIDE WITH UL LISTING. 3. PROVIDE WITH PLASTER FRAME FOR INSTALLATION IN GYP OR PLASTER
- CEILING. 4. PROVIDE FACTORY START UP FOR EQUIPMENT.
- 5. INSTALLING CONTRACTOR MUST HAVE COMPLETED MANUFACTURER'S CERTIFIED INSTALLATION CLASS WITHIN THE PAST 36 MONTHS.
- 6. PROVIDE WITH INTEGRAL CONDENSATE PUMP AND DRAIN OVERFLOW SAFETY INTERLOCK SWITCH.
- 7. PROVIDE WALL MOUNTED THERMOSTAT AND SENSOR.
- 4. ACCEPTABLE MANUFACTURERS: SAMSUNG. DIAKIN LG, MITSUBISHI.

# VFR AIR-COOLED **CONDENSING UNIT**

CU-10
SAMSUNG AM096FX
12.7/28.6
96.0
108.0
R-410A
208-230/3/60
37.8 / 50
ALL

### **REMARKS:**

- 1. PROVIDE FACTORY ENGINEERED REFRIGERANT PIPING SYSTEM WITH FACTORY FITTINGS AND BRANCH SELECTOR BOXES.
- PROVIDE WITH UL LISTING. 3. PROVIDE FACTORY START UP FOR
- EQUIPMENT. 4. MECHANICAL CONTRACTOR TO PROVIDE ELECTRICAL DISCONNECT. PROVIDE NEMA
- 3R DISCONNECT FOR OUTDOOR USE. 5. INSTALLING CONTRACTOR MUST HAVE COMPLETED MANUFACTURER'S CERTIFIED INSTALLATION CLASS WITHIN THE PAST
- 36 MONTHS. 6. PROVIDE WALL MOUNTED THERMOSTAT AND SENSOR.
- 7. ACCEPTABLE MANUFACTURERS: SAMSUNG, DIAKIN LG, MITSUBISHI.



04-20-2021

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SCHEDULES, DETAILS, M1.03

EASURE RIDGE FIRE STATION

4500 KERRICK LN

LOI 1100 VALUE VILLE STATION

 $\bigcirc$ 

INFRA RED HEATER			
SYMBOL (OUTDOOR)	IR-1		
MANUFACTURER MODEL NUMBER	CO-RAY-VAC VANTAGE CT3-80		
TYPE	INFRARED GAS FIRED HORIZONTAL DISCHARGE		
INPUT (MBH)	80.0		
HEATING OUTPUT (MBH)	64.0		
MAX LENGTH OF TUBE	20'-0"		
HEAT DEFLECTOR ANGLE	45°		
ELECTRICAL V / Ø / Hz	120/1/60		
MCA	4.8 A		
REMARKS	ALL		

- PROVIDE WITH MODULATING GAS CONTROL VALVE.
- PROVIDE WITH HORIZONTAL VENT KIT AND SLEEVE SEE DETAIL.
- 4. PROVIDE THERMOSTAT AND CO-RAY-VAC CONTROLLER.5. PROVIDE WITH ALUMINIZED STEEL TUBING AND STAINLESS STEEL
- 6. APPROVED MANUFACTURERS: CO-RAY-VAC

## **EXHAUST FAN**

		<u> </u>		
SYMBOL	EF-1	EF-2	EF-3	
MANUF. & MODEL	TWIN CITY 240D BCRD	TWIN CITY WPD-E14-B105	TWIN CITY T100	
TYPE	CENTRIFUGAL DOWNBLAST	WALL PROPELLER 25° BLADE ANGLE	CEILING EXHAUST	
SERVICE	EXISTING BUILDING TOX ALERT SYSTEM	ADDITION TOX ALERT SYSTEM	EXISTING IT, MOP, AND SHOWER RMS	
CFM / TSP	3800 / 0.75"	1500 / 0.25"	100 / 0.25"	
SUM OF GRILLES	3700	1450	75	
DRIVE / FAN RPM	BELT / 650	DIRECT / 1750	DIRECT / 950	
FAN HP	1 HP	1/4 HP	87 WATTS	
ELECTRICAL	120 / 1 / 60	120 / 1 / 60	120 / 1 / 60	
MAX SONES	13.1	15.9	4.1	
REMARKS	1, 3–5	2-7	2-5	

- PROVIDE WITH GRAVITY BACKDRAFT DAMPER AND ROOF CURB TRANSITION. PROVIDE WITH GRAVITY BACKDRAFT DAMPER.
- THE FAN SHALL BE UL LISTED.
- PROVIDE WITH A FACTORY MOUNTED AND WIRED VARIABLE MOTOR SPEED CONTROLLER.
- PROVIDE WITH NEMA 3R DISCONNECT. PROVIDE WITH FACTORY OSHA COMPLIMENT SCREEN AND ENCLOSURE.
- BACKDRAFT DAMPER, DISCHARGE, SINGLE POINT ELECTRICAL CONNECTION, AND
- 7. PROVIDE WITH ELECTRCIAL INTERLOCK TO ASSOICATED INTAKE LOUVER. 8. APPROVED MANUFACTURER'S: TWIN CITY FAN, GREENHECK, COOK

LOUVER						
SYMBOL	L-1	L-2	L-3			
MANUF. & MODEL	RUSKIN ELF35DX	RUSKIN XP500WD	RUSKIN ELF35DX			
TYPE	EXTRUDED ALUMINUM FIXED BLADE	ICC 500 RATED FIXED BLADE	EXTRUDED ALUMINUM FIXED BLADE			
SERVICE	TOX ALERT INTAKE	TOX ALERT EXHAUST	STORM ROOM INTAKE/EXHAUST			
DEPTH	6"	6"	6"			
CFM	1,850	1,500	75			
APD	0.05" WC	0.05" WC	0.05" WC			
SIZE	24x42	36x36	18x12			
FREE AREA	3.36 SF	2.2 SF	0.17 SF			
FINISH	BAKED ENAMEL	BAKED ENAMEL	BAKED ENAMEL			
COLOR	BY ARCHITECT	BY ARCHITECT	BY ARCHITECT			
BIRDSCREEN AND DRAINABLE BLADE	YES	YES	YES			

- 1. FREE AREA IS MINIMUM ACCEPTABLE. ALTERNATE MANUFACTURER'S SHALL BEAT OR
- 2. ALL LOUVERS SHALL BE EXTRUDED ALUMINUM AND COATED WITH FACTORY BAKED ENAMEL. CUSTOM PAINT AS SELECTED BY ARCHITECT.
- 3. PROVIDE FLANGED LOUVER FOR INSTALLATION IN EXTERIOR WALL.
- 4. INSTALL STORM ROOM LOUVERS PER MANUFACTURER'S STORM INSTRUCTIONS TO MEET ICC 500 RATING.
- 5. APPROVED MANUFACTURER'S ARROW, GREENHECK, RUSKIN.

ELECTRIC HEATERS				
SYMBOL	EH-1	EH-2		
MANUF. & MODEL	MARKEL 5100	MARKEL 305		
TYPE	CEILING HUNG FAN FORCED	RECESSED FAN FORCED		
SERVICE	HEAT ONLY	VESTIBULE		
HEATER	3.3 kW	2.25 kW		
ELECTRICAL	208 / 1 / 60	208 / 1 / 60		
AMP DRAW	15.9 AMPS	10.5 AMPS		
REMARKS	ALL	ALL		

- PROVIDE WITH THERMAL OVERLOAD PROTECTION
- PROVIDE WITH VIBRATION ISOLATION HANGING KIT. 3. THE HEATER SHALL BE UL LISTED.
- 4. PROVIDE WITH FACTORY THERMOSTAT. MOUNT PER PLANS.

GRAVITY INTAKE/RELIEF HOOD			
RK	IH-1	RH-1	
NUFACTURER DEL NUMBER	GREENHECK FGI	GREENHECK FGR	
A SERVED	DORMATORIES	DORMATORIES	

MANUFACTURER MODEL NUMBER	GREENHECK FGI	GREENHECK FGR	
AREA SERVED	DORMATORIES	DORMATORIES	
THROAT SIZE	8x18	8x18	
BIRDSCREEN	YES	YES	
BACK DRAFT DAMPER	YES	YES	

YES 14x24

YES 14x24

INSULATED ROOF CURB

1. APPROVED MANUFACTURER'S: GREENHECK, COOK. CREATIVE METALS, TWIN CITY

# SPLIT HEAT PUMP WITH GAS BACKUP HEAT

O/ (O D/ (OI (OI TIL/ (I				
MARK	AH-2	AH- 5		
MANUFACTURER MODEL NUMBER	TRANE S9X2B040U3	TRANE S9X2B080U5		
AREA SERVED	CLASSROOM	VARIOUS		
CONFIGURATION	HEAT PUMP — GAS HORIZONTAL INSTALLATION	HEAT PUMP — GAS VERTICAL INSTALLATION		
INDOOR UNIT WEIGHT	200 LBS	200 LBS		
FAN CFM / ESP	800 / 0.7"	2,000 / 0.7"		
ELECTRICAL V / Ø / Hz	120/1/60	120/1/60		
MCA / MOP	8.8 / 15	14.1 / 15		
BACKUP HEAT / STAGES	NAT. GAS — 2	NAT. GAS - 2		
HEAT INPUT/OUTPUT	26.0 / 25.2 40.0 / 38.8	52.0 / 50.4 80.0 / 77.6		
GAS PRESSURE	7"1-41"4 W OW C	7"-14" WC		
SYMBOL (OUTDOOR)	CU-2	CU-5		
MANUFACTURER MODEL NUMBER	TRANE 4TWR7024	TRANE 4TWX8060		
SEER / STAGES	17.0 – 2.0	18.0 - 2.0		
COOLING (MBH)	24.0	60.0		
HEATING (MBH)	24.0	60.0		
REFRIGERANT	R-410A	R-410A		
ELECTRICAL V / Ø / Hz	208/1/60	208/1/60		
MCA / MOP	15 / 25	41 / 60		
REMARKS	ALL	ALL		

- 1. PROVIDE WITH SIGHT GLASS, EXPANSION DEVICE, LINE DRIER, SIZE LINES AND PROVIDE INTERMEDIATE TRAPS PER MANUFACTURER'S RECOMMENDATIONS.
- 2. PROVIDE WITH LOW AMBIENT KIT, CRANKCASE HEATER, AND HAILGUARD.
- PROVIDE WITH UL LISTING.
- ALL HORIZONTAL UNITS SHALL HAVE A SECONDARY DRAIN PAN THAT COVERS THE ENTIRE UNIT. PROVIDE CONDENSATE FLOAT SWITCH TO SHUT DOWN UNIT IN THE SECONDARY DRAIN PAN. PAINT BOTTOM OF DRAIN PAN COLOR SELECTED BY THE ARCHITECT.
- 5. PROVIDE WITH CONDENSATE PUMPS.
- 6. PROVIDE AVERAGING THERMOSTATIC CONTROL FOR ANY SPACE SERVED BY MULTIPLE TEMPERATURE SENSORS. THERMOSTAT CONTROLLER SHALL BE CAPABLE OF AVERAGING TEMPERATURE SENSORS, INDEPENDENT TEMPERATURE SENSING, AND VENTILATION (FAN ONLY) CONTROLS FOR UNITS AS INDICATED ON THE FLOOR PLANS. BASIS OF DESIGN IS HONEYWELL VISION PRO 8000.
- 7. PROVIDE WITH CONDENSATE PUMP, SECONDARY STAINLESS STEEL DRAIN PAN, FILTER RACK SIZED FOR A MAXIMUM OF 500 FPM, AND FLOAT CUT-OFF SWITCH. TYPICAL OF ALL.
- 8. ACCEPTABLE MANUFACTURERS: TRANE, GOODMAN, CARRIER, JCI-YORK. CONTRACTOR SHALL VERIFY THERMOSTATIC CONTROLLER WILL WORK WITH ALTERNATE MANUFACTURER'S

# GRILLES, REGISTERS, AND DIFFUSERS

SYMBOL	MANUFACTURER MODEL	MATERIAL AND TYPE	CFM RANGE	INLET DUCT SIZE	FACE SIZE	NECK SIZE	REMARKS
S-1	TITUS OMNI-AA	EXTRUDED ALUMINUM PLAQUE FACE DIFFUSER	0-100	6"ø	12x12	6 <b>"</b> ø	1,2,3,5,8
S-2	TITUS OMNI-AA	EXTRUDED ALUMINUM PLAQUE FACE DIFFUSER	101-225	8"ø	24x24	8 <b>"</b> ø	1,2,3,5,8
R-2	TITUS 50F	EXTRUDED ALUMINUM 1/2" X 1/2" EGGCRATE	101-225	20X20	24x24	8"ø	1,2,3,8
R-4	TITUS 50F	EXTRUDED ALUMINUM 1/2" X 1/2" EGGCRATE	376-600	20X20	24x24	12"ø	1,2,3,8
R-5	TITUS 50F	EXTRUDED ALUMINUM 1/2" X 1/2" EGGCRATE	601-1000	20X20	24x24	14"ø	1,2,3,8
E-1	TITUS 50F	EXTRUDED ALUMINUM 1/2" X 1/2" EGGCRATE	0-100	20X20	24x24	6"ø	1,2,3,8
E-5	TITUS 50F	EXTRUDED ALUMINUM 1/2" X 1/2" EGGCRATE	1850	30x48	26x38	24x36	1,2,3,8

- 1. CEILING T-BAR MOUNTED IN 24"x24" ALUMINUM PANEL. GRILLES REGISTERS AND DIFFUSERS WITH AN 'A' DESIGNATION SHALL REQUIRED A PLASTER FRAME TO LAY GRILLE IN GYPSUM BOARD CEILING.
- 2. INLET TRANSITION BOX ROUND TO RECTANGULAR.
- 3. PROVIDE WHITE IN COLOR.
- 4. PROVIDE WITH FILTER FACE AND HINGED DOOR FOR ACCESS. PROVIDE WITH 4 SETS OF OF 20"x20" FILTERS FOR EACH GRILLE.
- 5. PROVIDE WITH MOLDED INSULATION BLANKET
- 6. GRILLE SHALL BE PROVIDED WITH 1" BORDER TO BE SURFACE OR DUCT MOUNTED. PROVIDE FACE ADJUSTABLE
- BUTTERFLY BALANCING DAMPER WITH GRILLE. 7. PROVIDE FACTORY MADE DISTRIBUTION PLENUM.
- 8. ACCEPTABLE MANUFACTURERS: TITUS, PRICE, TUTTLE AND BAILEY, METALAIRE, ANEMOSTAT.

# **ENERGY RECOVERY** VENTILATOR

ERV-1
GREENHECK ECV-10L-VG-PM
DORMATORIES
CROSSFLOW HX
500 / 0.5" / 0.5
500 / 0.5" / 0.5
208/1/60 22.1 / 25.0
2.1 KW
75.0°F / 72.0°F
95.0°F / 8.0°F
80.3°F / 54.9°F
61.8 / 68.4

### **REMARKS:**

- 1. PROVIDE WITH FACTORY DISCONNECT BACKDRAFT DAMPERS, SINGLE POINT CONNECTION, MODULATING FAN CONTROL, AND FROST CONTROL.
- 2. PROVIDE WITH UL LISTING.
- 3. PROVIDE WITH VIBRATION ISOLATION AND 2" MERV-8 FILTERS
- 4. ACCEPTABLE MANUFACTURERS: GREENHECK, CARRIER, JCI-YORK.

# **DUCTLESS MINI-SPLIT**

DS-1
SAMSUNG AR09ABT
STORM SHELTER
DX COOLING
300 / 0.01"
208/1/60
NL
CU-1
SAMSUNG AR09ABT
24.5 / 12.5
9.0
11.0
R-410A
208/1/60
12.0 / 20
ALL

### REMARKS:

- 1. PROVIDE WITH SIGHT GLASS, EXPANSION DEVICE, LINE DRIER, SIZE LINES AND PROVIDE INTERMEDIATE TRAPS PER
- MANUFACTURER'S RECOMMENDATIONS. 2. PROVIDE WITH LOW AMBIENT KIT AND
- CRANKCASE HEATER
- 3. PROVIDE WITH UL LISTING. 4. ACCEPTABLE MANUFACTURERS: TRANE, GOODMAN CARRIER, JCI-YORK
- 5. PROVIDE WITH CONDENSATE PUMP THAT FITS INSIDE INDOOR UNIT HOUSING.

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### HVAC SYSTEM GENERAL NOTES

- A. IN GENERAL THE DRAWINGS FOR THE HEATING AND COOLING SYSTEM SHALL BE CONSIDERED DIAGRAMMATIC. DESIGN AND INSTALLATION OF THE HEATING AND COOLING SYSTEM SHALL BE IN ACCORDANCE WITH THE "GUIDE" OF THE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING
- B. ALL WORK SHALL COMPLY WITH THE INTERNATIONAL MECHANICAL CODE, ASHRAE. SMACNA. OSHA. AND LOCAL CODE REGULATIONS. THE CONTRACTOR SHALL PERFORM ALL WORK IN CONFORMITY WITH THESE REQUIREMENTS.
- C. INSTALLATION OF ALL MATERIALS AND EQUIPMENT SHALL CONFORM TO THE PRACTICE OF GOOD WORKMANSHIP AND IN ACCORDANCE WITH APPLICABLE REQUIREMENTS.
- D. THE HEATING AND COOLING CONTRACTOR SHALL CORRECT ANY DEFECTS, OMISSIONS AND ERRORS UPON REQUEST BY THE OWNER AND THE FINAL RESPONSIBILITY FOR CORRECT INSTALLATION AND PROPER FUNCTIONING OF THE HEATING AND COOLING SYSTEM SHALL REST WITH THE HEATING AND COOLING CONTRACTOR.
- THE HEATING AND COOLING CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTIONS AND APPROVAL OF HEATING AND COOLING SYSTEM, INSTALLATION OF EQUIPMENT FOR FINAL ACCEPTANCE OF THE COMPLETE HEATING AND COOLING SYSTEM INSTALLATION BY STATE AND LOCAL INSPECTORS.
- F. PROVIDE FLEXIBLE DUCT CONNECTIONS TO ALL HVAC UNITS.
- G. VERIFY OPENING DIMENSIONS FOR ALL DUCTWORK ROUTED IN TRUSS/JOIST BAY OR THROUGH TRUSS/JOIST OPENINGS. COORDINATE DUCT SIZES AND LAYOUT PRIOR TO FABRICATION
- H. ALL ROOF CURBS FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY GENERAL CONTRACTOR.
- I. PROVIDE ALL THERMOSTATS FOR HVAC SYSTEMS. MECHANICAL CONTRACTOR TO INSTALL THERMOSTAT AND WIRING. ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT AND ROUGH-IN BOXES FOR THERMOSTAT INSTALLATION COORDINATE LOCATIONS WITH ELECTRICAL CONTRACTOR.

### SHEET METAL GENERAL NOTES:

ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED PER SMACNA STANDARDS. PROVIDE AND INSTALL HANGERS PER SMACNA RECOMMENDED PRACTICES.

3" - 12" ROUND DUCT - 26 GAUGE MINIMUM.

14" - 18" ROUND DUCT - 24 GAUGE MINIMUM.

3" - 12" RECTANGULAR DUCT WIDTH - 26 GAUGE MINIMUM.

14" - 30" RECTANGULAR DUCT WIDTH - 24 GAUGE MINIMUM.

PROVIDE CROSS BREAKS ON ALL DUCTS 12" WIDE OR LARGER. DUCTS SHALL BE HUNG BY 18 GAUGE STRAPS, NO LESS THAN ONE SET OF HANGERS PER SECTION.

PROVIDE FLEXIBLE CANVAS DUCT CONNECTIONS AT THE INLET AND OUTLET OF EACH PIECE OF EQUIPMENT. DURO-DYNE, VENTFABRICS INC, U.S. RUBBER OR APPROVED EQUAL, 20 OZ. NEOPRENE COATED GLASS FABRIC.

PROVIDE A COMMERCIAL HIGH EFFICIENCY ANGLED BOOT TAKE-OFF AT EACH SUPPLY, RETURN, AND EXHAUST GRILLE / DIFFUSER TAKE-OFF. HIGH EFFICIENCY TAKE-OFF BOOT SHALL BE CFM CONTROLS, MODEL CHEABT OR EQUAL. 26 GAUGE BODY, 20 GAUGE BLADE, 2" STAND OFF BRACKET, LOCKING QUANDRANT, DIE CAST METAL SLIDE PIN, AND NYLON BUSHINGS.

ALL CONCEALED SUPPLY DUCTWORK SHALL BE WRAPPED WITH OWENS/CORNING ALL SERVICE FIBERGLASS DUCT WRAP, "FACED DUCT WRAP - TYPE 75", 2" THICK FIBERGLASS DUCT WRAP, FACTORY LAMINATED TO A REINFORCED FOIL KRAFT VAPOR BARRIER. INSTALL PER THE MANUFACTURER'S RECOMMENDATIONS.

PROVIDE TURNING VANES IN ALL 90 DEGREE ELBOWS.

FLEXIBLE DUCTWORK IS ALLOWED FOR USE ON CONCEALED DUCTWORK. THE MAXIMUM LENGTH SHALL BE SIX FEET. FLEXIBLE DUCTWORK SHALL BE THERMAFLEX G-KM OR EQUAL.

SEAL ALL JOINTS WITH HARDCAST "IRONGRIP 601". APPLY PER THE MANUFACTURER'S RECOMMENDATIONS.

PROVIDE AN AIR BALANCE MATCHING DESIGN SETTINGS. BALANCE ALL ROOF TOP UNITS, EXHAUST FANS, AND EACH GRD TO WITHIN 10% OF DESIGN.

MECHANICAL SPECIFICATIONS:

DIVISION 23 - HVAC MATERIALS AND METHODS

### DUCT WORK

- 1) FLEX DUCT MAY BE USED FOR FINAL CONNECTION TO DIFFUSERS ROOM. FLEX DUCT RUNS SHALL NOT EXCEED 5 LINEAL FEET. USE THERMAFLEX "G-KM" INSULATED FLEX DUCT OR EQUAL.
- 2) ALL SUPPLY, RETURN, EXHAUST, AND OUTSIDE AIR DUCTWORK SHALL BE INSULATED.
- 3) DUCT INSULATION SHALL BE ELASTOMERIC OR 2 1/2" FIBERGLASS BLANKET WITH FOIL VAPOR BARRIER. USE OWENS/CORNING ALL SERVICE FIBERGLASS DUCT WRAP, "FACED DUCT WRAP — TYPE 75", 2" THICK FIBERGLASS DUCT WRAP, FACTORY LAMINATED TO A REINFORCED FOIL KRAFT VAPOR BARRIER. INSTALL PER THE MANUFACTURER'S RECOMMENDATIONS, UTILIZE R-6.5 (R-8 WHERE SPECIFIED) SEAL JOINTS AND SEAMS TO MAINTAIN VAPOR BARRIER. INSULATE SUPPLY AND RETURN AIR DUCTS WITH R6 INSULATION. UTILIZE R8 DUCT INSULATION ON ALL OUTSIDE AIR DUCTWORK. EXPOSED DUCTWORK THAT REQUIRES INSULATION SHALL BE INSULATED WITH JOHNS-MANVILLE 800 SERIES DUCT BOARD INSULATION AND SHALL BE PAINTED CUSTOM COLOR SELECTED BY ARCHITECT
- 4) ALL EXPOSED DUCTWORK SHALL BE PAINTED BY CUSTOM COLOR SELECTED BY THE ARCHITECT.
- PROVIDE FLEXIBLE CONNECTIONS BETWEEN DUCTWORK AND FURNACE OR FAN.
- 6) ALL BRANCH CONNECTIONS AND TRANSVERSE JOINTS SHALL BE SEALED WITH HARD CAST LIQUID SEALANT OR EQUAL. DUCT TAPE SHALL NOT BE PERMITTED.
- 7) INTERNAL DUCT LINER MAY ONLY BE USED FOR SOUND CONTROL. INCREASE DUCT SIZE AND AIR VOLUME AS REQUIRED.
- 8) ALL DUCT SHALL BE CONCEALED IN WALLS OR CEILING UNLESS SHOWN EXPOSED.
- 9) ALL DUCT SHALL BE SUPPORTED BY UNI-STRUT AND ALL-THREAD ROD. 10) ALL SYSTEMS IN FINISHED AREAS SHALL HAVE DUCTED SUPPLY & RETURN.
- 11) EXPOSED DOUBLE WALL DUCTWORK:
- 11)1) PROVIDE INSULATED DOUBLE-WALL SUPPLY AIR DUCTWORK IN EXPOSED AREAS.
- 11)2) OUTER DUCTWORK SHALL BE CONSTRUCTED OF 'PAINT GRIP' STEEL
- 11)3) INNER SHELL SHALL BE GALVANIZED STEEL.
- 11)4) ALL FITTINGS SHALL BE MADE BY THE SAME MANUFACTURER.
- 12) 11)5) PROVIDE A FIBERGLAS LINER FOR INNER SHELL MATCHING INSULATION SPECIFICATIONS ABOVE. NO INSULATION SHALL BE EXPOSED TO THE AIR STREAM.

#### EQUIPMENT

- 1) AHU AND AH UNIT MANUFACTURERS SHALL BE TRANE. PERFORMANCE FOR ALTERNATE MANUFACTURER'S SHALL BE VERIFIED PRIOR TO SUBMITTING FOR REVIEW.
- UNIT EFFICIENCY SHALL BE APPROXIMATELY 95% UNLESS NOTED OTHERWISE.
- 3) AHU SEER RATING SHALL BE 15 OR GREATER. DX SPLIT UNITS SHALL HAVE A SEER RATING OF 17 OR HIGHER.
- 4) HVAC CONTRACTOR SHALL PROVIDE ANY MOTOR STARTERS THAT ARE REQUIRED. STARTERS WILL BE INSTALLED BY ELECTRICAL CONTRACTOR.
- 5) ANY FURNACE, ROOFTOP UNIT OR AIR HANDLER, OR AC UNIT RATED AT 2,000 CFM OR GREATER SHALL HAVE A DUCT SMOKE DETECTOR, REMOTE TEST SWITCH AND AUDIO/VISUAL ALARM AS
- 6) VARIABLE REFRIGERANT FLOW/VOLUME SYSTEM SHALL BE DESIGNED BY THE MANUFACTURER'S ENGINEER AND INSTALLED BY A CONTRACTOR THAT HAS COMPLETED THE MANUFACTURER'S INSTALLATION TRAINING IN THE PAST 36 MONTHS. PROVIDE A COMPLETE SYSTEM DESIGNED FOR HEAT RECOVERY BY UTILIZING BRANCH SELECTION OR OTHER MEANS. SYSTEM SHALL HAVE STANDALONE THERMOSTATIC CONTROL WITH PROGRAMMABLE THERMOSTATS. PROVED RIGID COPPER LINES FOR ALL LINES BETWEEN THE OUTDOOR CONDENSER AND THE INDOOR DISTRIBUTION SYSTEM (BRANCH SELECTOR BOXES).

- 1) REFRIGERANT PIPING SHALL BE ACR HARD COPPER. INSULATE ALL LINES WITH 1" ARMAFLEX, SEALED TO MAINTAIN VAPOR BARRIER. INSULATION MUST BE OUTDOOR RATED.
- 2) CONDENSATE PIPING SHALL BE COPPER. PROVIDE A FULL SIZE, CAPPED TRAP, SAFETY T SWITCH AND DRAIN AT EACH AIR-HANDLING UNIT COOLING COIL/CONDENSING FURNACE. INSULATE PIPING WITH 1/2" THICK INSULATION.

### DRAIN PANS

1) DRAIN PANS SHALL BE SECURELY SUPPORTED USING THREADED ROD AND UNI-STRUT OR PLACE ON DECKING USED TO SUPPORT UNIT. DRAIN PANS WILL NOT BE ACCEPTED IF HOLES EXIST OTHER THAN DRAIN PIPE OUTLET. EACH DRAIN PAN SHALL HAVE AN AUXILIARY FLOAT SWITCH CONNECTED FOR UNIT SHUT DOWN.

### THERMOSTATS AND CONTROLS

- THERMOSTATS IN FINISHED AREAS SHALL BE 7 DAY PROGRAMMABLE WITH OCCUPIED OVERRIDE.
- THERMOSTATS INSTALLED IN RETURN AIR DUCTWORK SHALL BE AVERAGED WITH ASSOCIATED ROOM THERMOSTATS AND CONTROLLED BY THE WALL PLATE IN THE MRI CONTROL ROOM.
- 3) WHERE SHOWN ON DRAWINGS, PROVIDE UNIT-MOUNTED OR REMOTE MOUNTED THERMOSTATS ON ELECTRIC HEATERS. WHERE MULTIPLE THERMOSTATS ARE SHOWN IN ONE ZONE, OFFSET TEMPERATURE SETTINGS IN INCREMENTS OF TWO °F TO PROVIDE STAGED HEATING CONTROL.
- 4) TOX ALERT EXHAUST FAN CONTROL. PROVIDE GVU-3 AND (1) REMOTE GVU-CO CARBON MONOXIDE SENSOR (1) REMOTE GVU-NO2 NITROGEN DIOXIDE, AND (1) REMOTE GVU-CO2 CARBON DIOXIDE SENSOR PER SYSTEM. INSTALL SENSORS IN COMMON LOCATION NEAR TOX ALERT CONTROL PANEL (TACP). PROVIDE CONTROL PANEL WITH POWER INDICATOR, HIGH GAS ALARM INDICATOR FOR EACH SENSOR, FAN 'ON' INDICATOR, AUDIBLE AND VISUAL ALARM AND HORN SILENCE SWITCH, USER ADJUSTABLE MINIMUM FAN RUN TIME, AND UL LISTING. IN CASE OF POWER FAILURE THE SYSTEM SHALL DEFAULT TO FAN ON STATUS. TOX ALERT SYSTEM SHALL BE INSTALLED BY CERTIFIED CONTRACTOR. INSTALL WITH MANUAL FAN OVERRIDE SWITCH.
- OCCUPANT CONTROL PROVIDE "AUTO ON" SWITCH WIRED IN PARALLEL WITH TOX ALERT SYSTEM FOR OCCUPANT CONTROL OF FAN SYSTEM. OCCUPANT CONTROL SWITCH SHALL ACTIVATE LOUVERS AND FANS, BUT NOT INTERRUPT AUTOMATIC OPERATION OF TOX ALERT SYSTEM. TOX ALERT SYSTEM SHALL OVERRIDE OCCUPANT CONTROL SWITCH IN THE EVENT OF HIGH CONCENTRATIONS DETECTED IN THE SHOP SPACE.
- 6) LOUVER MOTORIZED DAMPER. INSTALL LOUVER MOTORIZED DAMPER AND POSITION PROVING SWITCH IN SERIES WITH TOX ALERT SYSTEM AND SERVICE BAY EXHAUST FAN. LOUVER IS TO PROVE OPEN PRIOR TO FAN ENERGIZING.

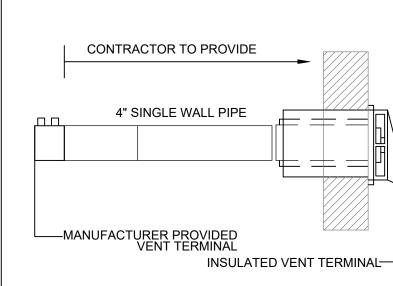
### TESTING

5) PROVIDE AIR BALANCE TESTING AND ADJUSTMENT TO PROVIDE FLOW RATES AS DESIGNED. PROVIDE ONE (1) ADDITIONAL VISIT TO BALANCE ACCORDING TO OCCUPANCY LOADS.

### HVAC SCOPE OF WORK

THE DRAWINGS SHALL BE PROPERLY COORDINATED WITH THOSE OF OTHER TRADES TO PREVENT CONFLICTS. MAINTAIN A SEPARATE SET OF PRINTS SHOWING ALL CHANGES AND VARIATIONS THAT ARE MADE DURING CONSTRUCTION.

#### INFRA-RED HEATER CONTRACTOR PROVIDED HORIZONTAL VENTING CONFIGURATION COMBUSTIBLE OR NON-COMBUSTIBLE WALL

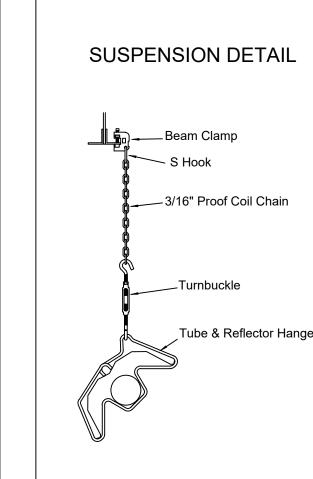


a) Refer to Installation, Operation and Service Manual for proper design. b) In combustible or noncombustble walls, use insulated vent terminal. Follow vent manufacturer's instructions for proper installation.

c) 4" (10 cm) O.D. vent pipe, maximum 45 ft.(13.7m) in length may be used as shown above with an approved vent cap. NOTE: Condensate may develop when long vent pipes are used. It is recommended that the pipe length should be less

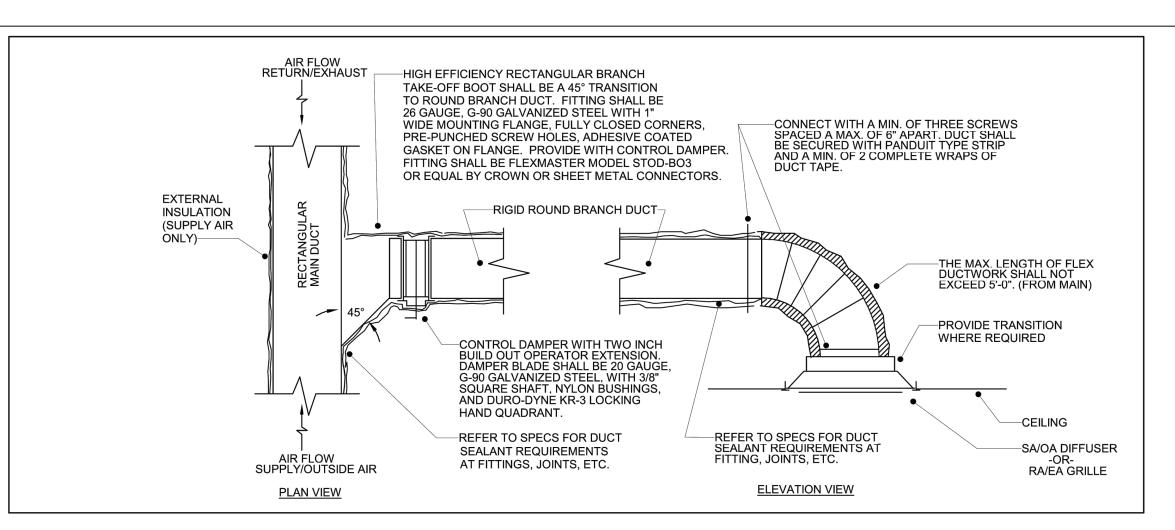
d) When heater extension packages are used they directly effect maximum vent length. Refer to Installation, Operation and Service Manual for requirements. e) Vent terminal must be installed at a height sufficient to prevent blockage by snow. Building materials must be protected from degradation by vent gases.

#### **▲** CAUTION **GAS CONNECTION** Hold gas nipple securely with pipe wrench when attaching the flex gas Shut-Off Valve — included w/ connector) Failure to follow these instructions will result in property damage. — Vinyl Coated Flex Gas Connector (P/N 91412204) Gas pipe work must be installed and tested in accordance with United States ANSI Z 223.1/NFPA 54 latest addition and Canada-CSA-B149.1 a) Install the flex gas connector as shown. The flex gas connector accommodates expansion of the heating system and allows for easy installation and service of the burner. b) Shut-Off Valve must be parallel to burner inlet. The 2" (5cm) displacement shown is for the cold condition. This displacement may reduce when the



# CO-RAY-VAC INSTALLATION DETAILS

SCALE: NO SCALE



### TYPICAL DUCT TAKEOFF DETAIL SCALE: NO SCALE

PROJECT NO: 20-4017 DRAWN BY:

MGD DATE: 04-20-2021



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SPECIFICATIONS AND

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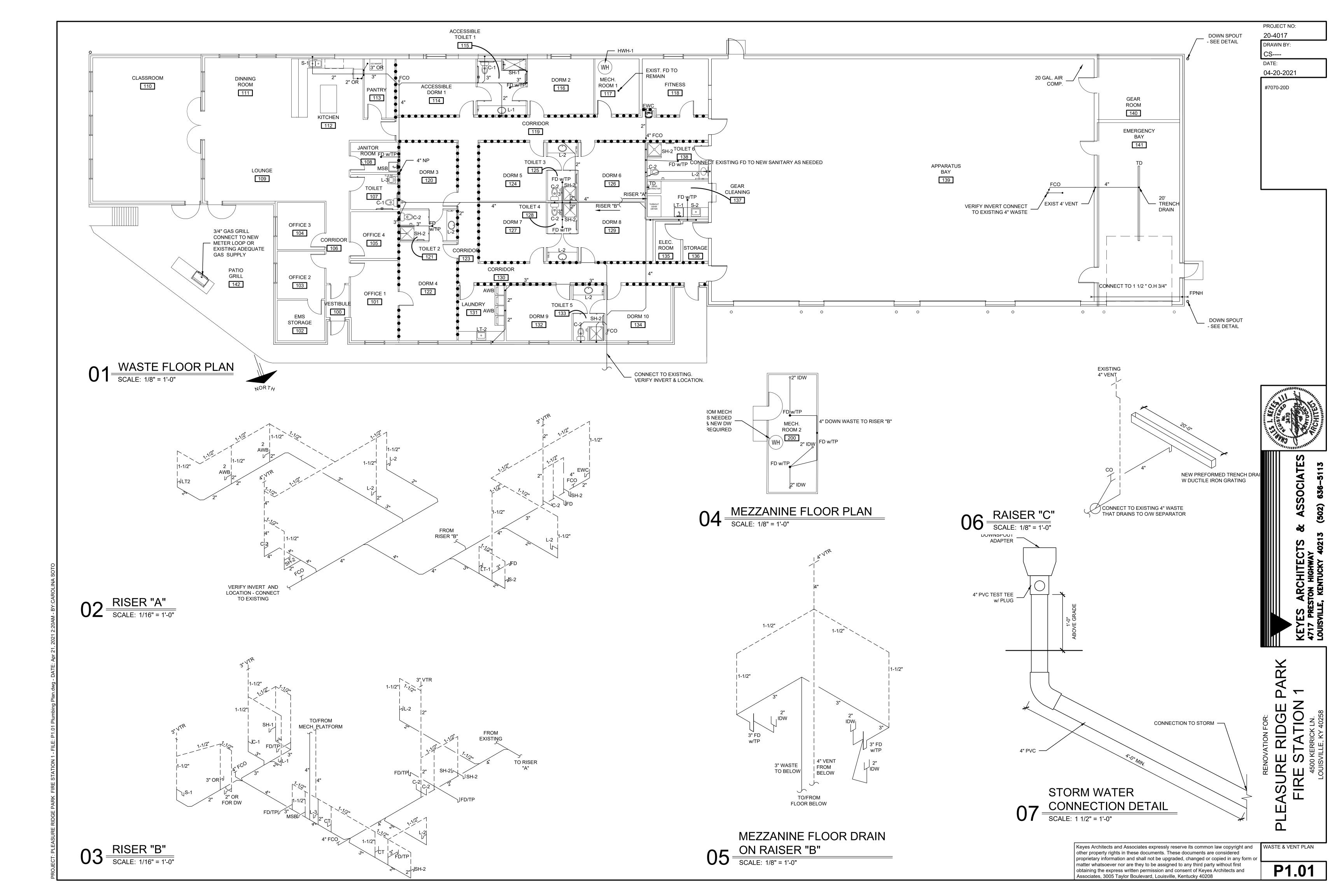
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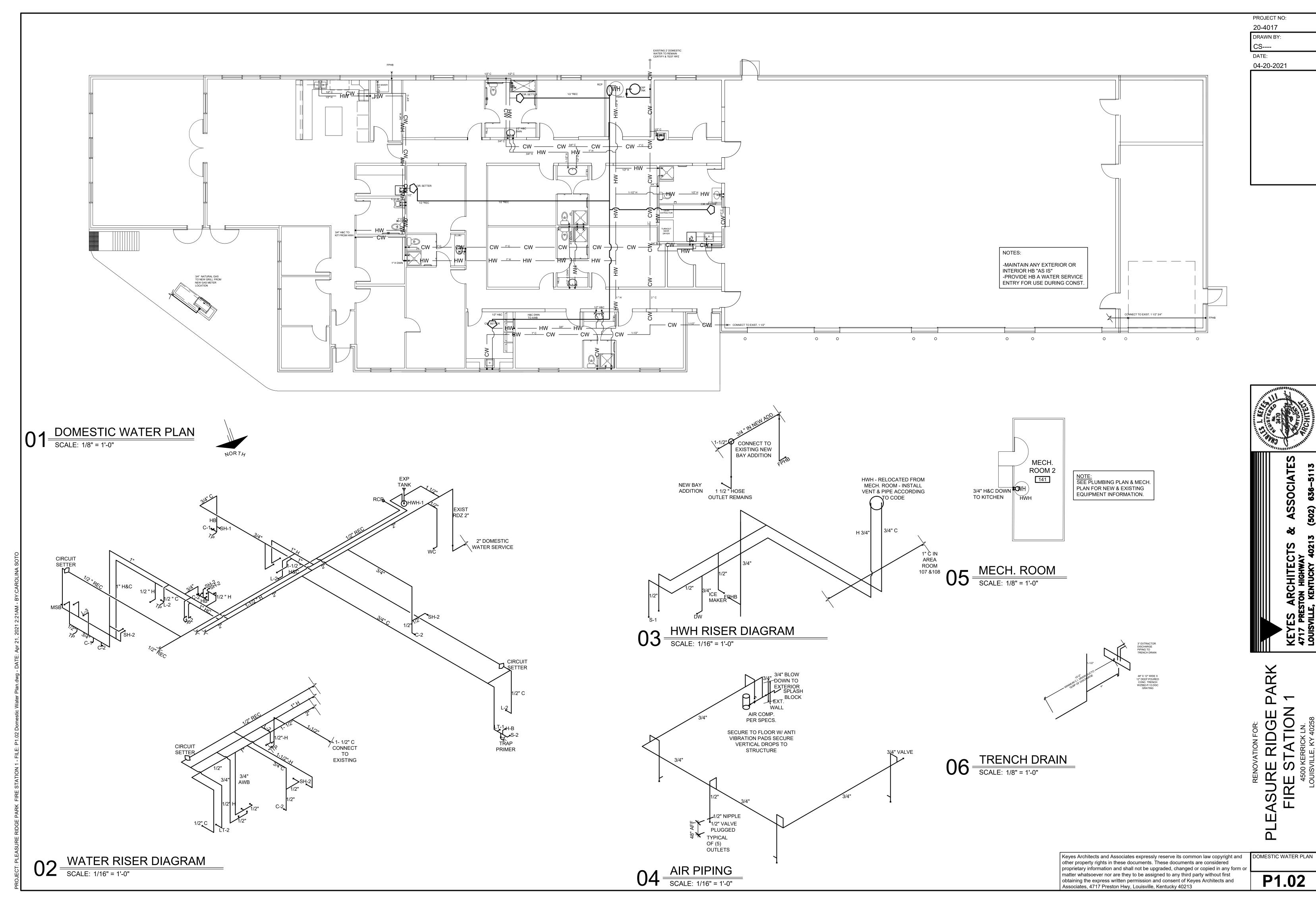
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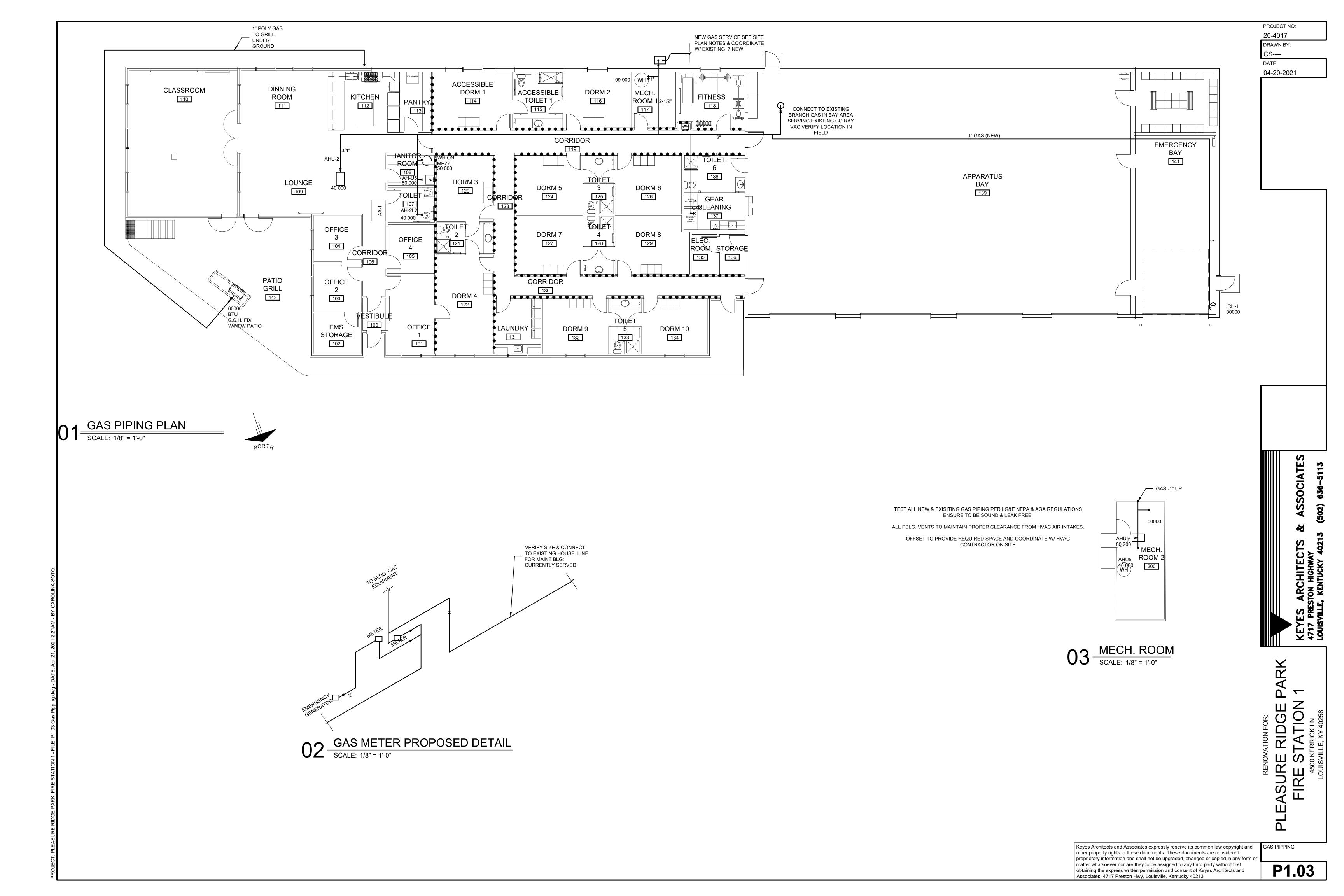
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#### PLAN NOTES FOR PLUMBING

ALL WORK FOR THE PROJECT SHALL BE ACCORDING OSHA REGULATIONS, AND ANY LAWS, RULES, CODES AND REGULATIONS THAT MAY BE IN EFFECT AT THE TIME OF

CONSTRUCTION. NOTIFY OWNER/OWNER'S AGENT OF ANY DISRUPTION OF UTILITIES THAT MAY BE REQUIRED

FOR CONNECTIONS OR ALTERATION OF UTLITIES FOR THE PROJECT. BEAR IN MIND THERE IS CURRENTLY UNDER SLAB EXISTING PIPING THAT MAY BE ENCOUNTERED DURING PLUMBING INSTALLATION. ENSURE THAT PIPING IS OUT OF SERVICE, REMOVED, ABANDONED, AND IS CAPPED AND/OR SEALED IN A SAFE MANNER. IF ROCK MAY BE ENCOUNTERED DURING EXCAVATIONS. NOTIFY OWNER/OWNER'S AGENT

FOR DIRECTIONS, PRIOR TO PROCEEDING ANY FURTHER WITH CONSTRUCTION. MAINTAIN MINIMUM OF 6" COMPACTED GRANULAR FILL MATERIAL BENEATH ANY PIPING AND EXCAVATED TRENCH BOTTOM. MINIMUM 12" CLEARANCE ON LATERAL SIDES OF UTILITY IN TRENCH. MAINTAIN DEWATERING AS NEEDED FOR ALL TRENCHES. DO NOT BACKFILL WITH FROZEN MATERIALS.

MAINTAIN PROPER CLEARANCE AND SEGREGATIONS, PER CODES AND REGULATIONS, FROM ALL ADJACENT UTILITIES.

PERSONNEL ON PROJECT SHALL BE LICENSED, PER ALL REGULATIONS AND JURISDICTIONS, TO ALLOW FOR PERFORMANCE OF THEIR RESPECTIVE TRADE.

DRAWINGS ARE DIAGRAMMATIC IN NATURE, AND MAY NOT INDICATE ALL BENDS OR FITTINGS REQUIRED FOR ACTUAL FIELD INSTALLATION. BUT ALL THESE ITEMS SHALL BE INCLUDED AND CONSIDERED IN PRICING.

ALL EQUIPMENT AND PLUMBING FIXTURES SHALL BE PROVIDED TO FIT ACTUAL SPACE **ALLOCATED FOR SAME.** 

CO-ORDINATE ALL PROJECT INSTALLATIONS WITH OTHER TRADES AND RESPECT THEIR SYSTEM INSTALLATIONS. OWNER MAY BE PROVIDING SOME NEW OR RELOCATED EQUIPMENT IN PROJECT SCOPE, CONSIDER THIS IN CONSTRUCTION AND VERIFY NEEDS FOR

SUBMITTALS MAY BE ELECTRONIC, FOR PROPOSED PLUMBING AND FIXTURES SHALL AND BE PROVIDED FOR REVIEW AND COMMENT. AN APPROVED COPY OF SAME SHALL BE MADE AVAILABLE ON SITE, FOR REFERENCE BY OTHER CONTRACTORS AND TRADES, AS NEEDED. PLAN COPIES SHALL BE SUBMITTED TO LOCAL REGULATORY AGENCIES FOR PLUMBING REVIEW AND/OR APPROVALS BY GENERAL CONTRACTOR OR PLUMBING CONTRACTOR. ALONG WITH APPLICABLE FEES FOR THIS REVIEW. THIS SUBMITTAL PROCESS REQUIRES A TOTALLY COMPLETED " PLAN APPLICATION FORM " , WITH ALL BLANKS CONTAINING THE PROPER INFORMATION.

ALL WORK SHALL BE TESTED AND INSPECTED, PER CODES AND INDUSTRY STANDARDS, PRIOR TO COVERING, INSULATING OR CONCEALING SAME.

IF THERE MAY BE ANY CHANGES IN PROJECT DOCUMENTS, THERE SHALL BE NOTATIONS OF SAME ON PROJECT DRAWINGS MAINTAINED ON SITE, TO ALLOW FOR "RECORD DRAWINGS" INDICATING THESE CHANGES. PRESENT THESE "RECORD DRAWINGS" TO THE OWNER. AT THE COMPLETION OF ALL PLUMBING INSPECTIONS ON THE PROJECT, FOR OWNER'S RETENTION AND FUTURE REFERENCE.

PLUMBING FIXTURES ARE NOT BRAND SPECIFIC, YET SHALL SUIT SERVICABILITY AND FUNCTIONALITY, AS REQUIRED.

PROVIDE ALL FIXTURES WITH HOT WATER ON THE LEFT AND COLD WATER ON THE RIGHT. PROVIDE BRAIDED SUPPLY LINES , FEMALE IRON PIPE CHROME ANGLE STOPS AND CHROME BRASS NIPPLES, UNDERCOUNTER TEMPERING VALVES, PVC TUBULAR P TRAP AND FLEXIBLE STOP AND PROTECTOR KITS FOR PLUMBING FIXTURES, AS REQUIRED.

WARRANTY PERIOD SHALL BE ONE YEAR FROM DATE OF FINAL PLUMBING INSPECTION, FOR LABOR AND MATERIALS PROVIDED WITHIN THE PLUMBING CONTRACT. STANDARD MANUFACTURER'S WARRANTIES SHALL APPLY.

BACKFLOW PREVENTION DEVICES, NEW OR EXISTING, SHALL BE CERTIFIED AND TESTED WITH ADEQUATE SIZE AND CODE APPROVED DRAIN FOR DEVICE DISCHARGE. PAPERWORK FOR DEVICE CERTIFICATION SHALL BE SUBMITTED TO GOVERNING AGENCIES AS REQUIRED.

PLUMBING SCOPE AND DESIGN FOR THIS PROJECT, SHALL EXCLUDE ANY IRRIGATION, FIRE PROTECTION OR SPRINKLER SYSTEMS AND/OR COMPONENTS.

THIS IS A RENOVATION TO AN EXISTING FIRE SERVICE BUILDING. CONSTRUCTION PERSONNEL SHALL BE MINDFUL OF ADJACENT BUSINESSES AND TENANTS DURING CONSTRUCTION, AT ALL TIMES, WITH CONDUCT IN ACCORDANCE WITH THIS ASPECT OF THE PROJECT. THERE SHALL BE THE NEED TO BE AWARE OF ALL EMERGENCY PERSONEL.

THAT MAY BE ON THE PROJECT SITE AT ANY TIME. CONTRACTOR REQUIRING SAME SHALL PROCURE AND PROVIDE ANY AND ALL LOU. METRO PERMITS FOR SIDEWALK OR STREET CLOSURES, PARKING METER CLOSURES OR DUMPSTER PLACEMENT. COORDINATE THESE CLOSURES OR DISRUPTION ITEMS, AS

NEEDED, WITH GENERAL CONTRACTOR PRIOR TO PERFORMANCE. PENETRATION OF ANY FIRE RATED STRUCTURE OR WALL SHALL BE MAINTAINED TO ORIGINAL RATING UPON COMPLETION, BY THE CONTRACTOR PERFORMING THE PENETRATION. THIS SHALL INCLUDE. BUT IS NOT LIMITED TO SLEEVES- SMOKE CAULK-

FIRE CAULK AND ANY OTHER REQUIRED PROTECTIONS. ENSURE THAT THERE WILL BE NO OVERSIZE OPENINGS CUT OR DRILLED FOR PIPING PENETRATIONS, SO AS TO ALLOW FOR PROPER FIRE CAULK. SMOKE CAULK OR OTHER PROTECTION. ROOF PENETRATIONS SHALL BE MADE WATERTIGHT BY THE INSTALLING ROOFING

CONTRACTOR. PLUMBING CONTRACTOR SHALL PROVIDE CODE APPROVED FLASHINGS TO ROOFER, FOR ROOFING CONTRACTOR'S INSTALLATION OF SAME. FLUSHING MECHANISM FOR ADA TOILETS SHALL BE ON THE " WIDE " SIDE OF TOILET

SPACE.

THERE SHALL BE NO CUTTING OR ALTERING OF STRUCTURAL MEMBERS FOR PIPING, WITHOUT WRITTEN AUTHORIZATION OF ARCHITECT OR OWNER'S REPRESENTATIVE. ANY EXTERIOR BLK. STEEL GAS PIPING SHALL BE PAINTED BY PAINTING CONTRACTOR-

ONE PRIME AND TWO FINISH COATS- COLOR TO BE SELECTED BY ARCHITECT. RELOCATION OF EXISTING GAS METER, NEW GAS PIPING AND NEW GAS METER FOR THE NEW EMERGENCY GENERATOR SHALL BE COORDINATED WITH LOU. GAS & ELECTRIC PERSONNEL, AS THERE MAY BE THE NEED FOR A NEW GAS SERVICE OR ALTERATIONS TO THE EXISTING GAS SERVICE. CONSIDER GAS LOAD OF ADJACENT BUILDING WHEN

PROVIDING CONNECTION TO THE NEW GAS METER. SUPPORT FOR PIPING SHALL BE MATERIALS COMPATIBLE WITH THE TYPE OF PIPING BEING

INSTALLED, PER MANUFACTURER'S RECOMMENDATIONS. GAS LOAD IS AS FOLLOWS, TO BEST OF OUR KNOWLEDGE:

**EMERGENCY GENERATOR WITH SEPERATE METER** 1,175,000 BTU

CO-RAY VAC (NEW) 80,000 BTU CO- RAY VAC (EXISTING) 320,000 BTU 249,900 **WATER HEATING** RANGE (NEW) 60,000 GRILLE (NEW) 60,000 80,000 AHU-2 ( NEW TWO UNITS @ 40,000 EA.) 80.000 AHU-5 (NEW) MAINTENANCE BUILDING (EXISTING) 200,000 (FIELD VERIFY) TOTAL BTU LOAD OF NEW GAS SERVICE (TWO METERS) 2,304,900 BTU

CONTACT L G & E MS. KIMBERLY ROSEBERRY 502 364 - 8737

SANITARY SEWER TO EXISTING SANITARY SEWER.

VERIFY CONDITION, LOCATION AND INVERT OF EXISTING SANITARY SEWER PRIOR TO NEW CONSTRUCTION. NOTIFY OWNER/OWNER'S AGENT OF ANY UNANTICIPATED PROBLEM DISCOVERED. NEW WASTE SYSTEMS SHALL CONNNECT TO EXISTING SANITARY SYSTEM. PROVIDE FULL SIZE 4" CLEANOUT TO GRADE, AT THAT POINT OF CONNECTION OF NEW ANY FEES FOR METERS, TAPS OR SERVICES, SHALL BE PROVIDED IN PLUMBING PROPOSAL AS A "LINE ITEM", TO ALLOW FOR OWNER'S DECISION AS TO MAKING THESE ITEMS A PART OF THE PLUMBING CONTRACT, OR PAYING DIRECTLY TO THE UTILITY PROVIDER.

MATERIALS OF EXISTING SANITARY SEWER SHALL MEET ALL CODES, IN THE EVENT THE SEWER IS WITHIN THE FOOT PRINT OF THE NEW WORK OR EXISTING STRUCTURE. PROTECT ALL UTILITIES THAT ARE TO REMAIN IN SERVICE.

NOTIFY "BEFORE YOU DIG" 811 AGENCY, FOR LOCAL UTILITY SITE LOCATIONS, PRIOR TO ANY CONSTRUCTION, PER STATE LAW. IF THERE MAY BE UTILITIES THIS AGENCY DOES NOT LOCATE, PLBG. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES DISRUPTION OF SERVICE COSTS AND/OR REPAIRS TO ORIGINAL CONDITION, OF UTILITIES **ENCOUNTERED.** 

FURNISH AND INSTALL DOMESTIC WATER SERVICE IN BUILDING, CONNECTING TO EXISITNG DOMESTIC WATER SERVICE .AT EXISITING RPZ. AS INDICATED ON PLANS.

CONFIRM EXISTING WATER DELIVERY PRESSURE SHALL BE ADEQUATE FOR PROVIDING NEEDED VOLUME FOR NEW PLUMBING. IF FOUND TO BE DEFICIENT, ADVISE OWNER/ARCHITECT THAT THERE IS A NEED FOR A DOMESTIC WATER BOOSTER PUMP SYSTEM AND COMPONENTS. PROVIDE PRICING FOR SAME IF REQUIRED AT TIME OF DISCUSSIONS.

ALL EXCAVATIONS BENEATH AREAS OF CONCRETE OR PAVEMENT, SHALL BE BACKFILLED TO SUB GRADE, COMPACTED AS NEEDED, TO PREVENT FUTURE SETTLEMENT, AND TO **ALLOW FOR NEW OR RESTORED FINISHES.** 

THESE FINISHES AND SEEDING OR SOD SHALL BE PERFORMED BY OTHERS.

PLUMBING CONTRACTOR SHALL SCRIBE CUT, BREAK AND REMOVE CONCRETE OR PAVEMENT FOR ALL NEW PLUMBING, AS NEEDED.

PROVIDE NATURAL GAS PIPING OF THE PROPER SIZE AND CONFIGURATION TO SUIT BTU GAS LOAD AND DELIVERY PRESSURE, FOR THE APPLIANCES AND EQUIPMENT, AS NEEDED. ALL NEW AND EXISTING GAS PIPING TO BE PRESSURE TESTED PER REGULATIONS AND REQUIREMENTS, TO ENSURE SOUNDNESS AND THAT GAS PIPING SYSTEM IS LEAK FREE.

CONNECT ANY NEW APPLIANCES OR KITCHEN EQUIPMENT THAT MAY BE OWNER PROVIDED, TO NATURAL GAS, WASTE AND WATER. STANDARD GAS DELIVERY PRESSURE SHALL BE 7" - 11" WATER COLUMN. CONSULT GAS

EQUIPMENT SPECIFICATIONS AND LOCAL UTILITY, FOR ANY ADDITIONAL INFORMATION OR REQUIREMENTS. SANITARY WASTE AND VENT SYSTEMS SHALL MEET ALL CODES. PVC SCH 40 DWV

SOLVENT WELD PIPE AND COMPATIBLE FITTINGS IS THE BASIS OF DESIGN. TO MEET CODE, CAST IRON NO-HUB PIPE AND FITTINGS SHALL BE UTILIZED FOR ALL ABOVE GRADE WASTE AND VENT SYSTEMS PIPING LOCATED IN PLENUM RATED SPACE. HOT, COLD AND HOT WATER RE-CIRCULATING WATER PIPING MATERIALS MAY BE THE

FOLLOWING, ALL TO BE INSTALLED PER CODE AND MANUFACTURER'S RECOMMENDATIONS : TYPE "L" COPPER ABOVE GRADE -IF WATER PIPING IS BENEATH FLOOR OR PAVEMENT THAT PIPING SHALL BE TYPE "K" COPPER WITH BRAZED OR SILVER SOLDER JOINTS. JOINTS SHALL BE KEPT AT A MINIMUM, . CPVC SCH 80 PIPE AND FITTINGS - PEX PIPE AND FITTINGS MAY BE UTILIZED FOR ABOVE FLOOR WATER PIPING

1/2 " PEX TO BE UTILZED AS FIXTURE BRANCH ONLY ) - 1" & 3/4" SUPPLY PEX PIPE AND FITTINGS ARE TO BE UP-SIZED ONE PIPE SIZE - UPONOR PIPE AND FITTINGS MAY BE UTILIZED FOR WATER DISTRIBUTION.

ANY SOLDER OR VALVES UTILIZED IN PLUMBING ON THE PROJECT, SHALL CONFORM TO THE REQUIRED LEAD CONTENT PER CODES AND REGULATIONS.

BALL VALVES SHALL BE PROVIDED ON BRANCH WATER PIPING TO ALLOW FOR MAINTENANCE AND UNIT ISOLATION AS NEEDED.

PROVIDE 1" BRASS VALVE TAGS ATTACHED WITH BRASS BEADED CHAIN TO DOMESTIC WATER VALVES IN SYSTEM AND PROVIDE VALVE CHART AS TO LOCATION OF SAME, UPON **COMPLETION OF PROJECT** 

PROVIDE INSTRUCTION FOR OWNER'S PERSONNEL, FOR PLUMBING SYSTEMS MAINTENANCE, UPON COMPLETION OF PROJECT. PROVIDE CERTIFICATE OR CORPORATE LETTER, OF FINAL INSPECTION OF PLUMBING ON

PROJECT. PROVIDE "OPERATION AND MAINTENANCE MANUAL" TO ARCHITECT FOR OWNER, UPON COMPLETION OF PROJECT. THIS SHALL CONTAIN LITERATURE OF INSTALLED PLUMBING ITEMS, BASED UPON APPROVED FIXTURE SUBMITTALS, FOR OWNER'S FUTURE

MAINTENANCE AND REFERENCE. PROPERLY SIZED WATER HAMMER ARRESTORS SHALL BE INSTALLED ON ALL "QUICK -**CLOSING " DEVICES.** 

ALL FITTINGS SHALL BE COMPATIBLE WITH SELECTED WATER PIPING. ALL WATER PIPING INSTALLED. SHALL BE INSULATED AFTER TESTING AND INSPECTION.

WITH 1/2" FLEXIBLE WALL FOAM PIPE INSULATION, MAXIMUM FLAME SPREAD OF 25. SUPPORT AND HANGERS FOR ANY AND ALL PIPING SYSTEMS SHALL BE PER CODE AND PER MANUFACTURER'S RECOMMENDATIONS.

NATURAL GAS HOUSE LINE PIPING 2" AND SMALLER SHALL BE SCH. 40 BLK. THREAD AND COUPLE PIPE AND STD. 125 # BLACK MALLEABLE FITTINGS. ANY PIPING SYSTEMS UNIONS SHALL NOT BE CONCEALED AND SHALL BE 150 # GROUND

JOINT RATED FITTINGS. NATURAL GAS PIPING 2 1/2" AND LARGER SHALL BE WELDED, WITH TUBE TURN WELD

FITTINGS. NIPPLES SHALL BE SCH 40 BLK. NO "ALL-THREAD" NIPPLES SHALL BE ALLOWED. FINAL CONNECTIONS TO GAS EQUIPMENT SHALL BE PROVIDED AND SHALL HAVE AN AGA

APPROVED GAS VALVE, UNION AND AN ADEQUATE DRIP LEG CONFIGURATION, WITHIN THAT CONNECTION. ALL FLEXIBLE GAS CONNECTIONS SHALL BE PROPER LENGTH FOR MAINTENANCE AND

SHALL BE AGA APPROVED ITEMS. ANY GAS EQUIPMENT RESTRAINT CABLE KITS, FIRE SUPPRESSION SOLENOID VALVE AND/OR GAS QUICK DISCONNECT CONNECTORS SHALL BE PROVIDED BY OTHERS, FOR INSTALLATION BY THE PLBG. CONTRACTOR.

ALL VALVES IN NATURAL GAS SYSTEM SHALL BE AGA APPROVED AND COMPATIBLE WITH PROPOSED SERVICE AND ALL GAS CODES, RULES AND REGULATIONS.

PROVIDE DIELECTRIC CONNECTIONS, AT ALL DISSIMILAR METALS, IN PIPING SYSTEMS. ALL PLUMBING PIPING TO BE CONCEALED WHERE POSSIBLE, UNLESS OTHERWISE NOTED. PIPING SYSTEMS SHALL NOT BE INSTALLED WHERE THERE MAY BE THE POSSIBILTY OF FREEZING. ANY PIPING TO BE INSTALLED ON HEATED SIDE OF INSULATION.

DEMOLITION OF EXISTING PLUMBING AND FIXTURES, SHALL BE AS NEEDED FOR NEW PLUMBING CONSTRUCTION. CAP ANY UNUSED PIPING IN A SAFE AND CONCEALED MANNER. ANY REMOVED PLUMBING PIPING OR ITEMS, SHALL BE LEGALLY AND PROPERLY DISPOSED OFF-SITE.

SPOILS OR REMOVED MATERIALS SHALL BE PLACED IN DUMPSTER ON SITE PROVIDED FOR PLUMBING CONTRACTORS USE, BY GENERAL CONTRACTOR.

COORDINATE ANY UTILITY INTERRUPTION FOR TIE-INS, WITH ON-SITE PERSONNEL IN CHARGE. MINIMIZE DOWN TIME FOR THIS PROCEDURE. ALL FLOOR DRAINS, OPEN RECEPTACLES AND ANY DRAIN THAT COULD POSSIBLY HAVE

TRAP EVAPORATION, SHALL BE FITTED WITH PROPER TRAP PRIMER DEVICE . PROVIDE ACCESS TO TRAP PRIMER WITH RATED ACCESS PANEL, AS REQUIRED. BLOCKING FOR ANY SUPPORT OF PLUMBING OR FIXTURES, SHALL BE BY THE GENERAL

CONTRACTOR. WITH COORDINATION WITH PLUMBING CONTRACTOR. ALL PIPING IN SYSTEMS SHALL BE INSTALLED PLUMB, TRUE AND STRAIGHT, WITH PROPER SLOPE.

ACCESS PANELS ,OF RATING OF STRUCTURE, SHALL BE PROVIDED AS REQUIRED, FOR ACCESS TO CLEANOUTS OR VALVES OR AS NEEDED FOR MAINTENANCE. COORDINATE WITH GENERAL CONTRACTOR, ANY NEED FOR ADDITIONAL CHASES OR

SOFFITTS, REQUIRED FOR PLUMBING INSTALLATIONS.

CONSERVATION OF WATER AND ENERGY CODES SHALL BE CONSIDERED WHEN SELECTING PLUMBING EQUIPMENT AND FIXTURES. THREADS OF CLEANOUT PLUGS TO BE TREATED WITH A NON- HARDENING THREAD

SEALANT, TO ALLOW FOR REMOVAL AND REPLACEMENT, AFTER PERFORMANCE OF MAINTENANCE. EXISTING BAY AREA TRENCH DRAINS AND NEW ADDED TRENCH DRAIN WASTES CONNECT

TO AN EXISTING OIL WATER SEPARATOR. CONFIRM THAT THE SEPARATOR IS UP TO DATE

WITH LOCAL MSD REGULATIONS AND PROVIDE SERVICING AND ALTERATIONS OF DEVICE, AS NEEDED TO COMPLY WITH REGULATIONS.

COMPRESSED AIR PIPING IN BAY AREA FOR VEHICLES SHALL BE SCH 40 BLK PIPE AND NIPPLES WITH BALL VALVES AT OUTLETS AND CONNECTION TO A INGERSOLL-RAND MODEL P1.5U-A9 RECIPROCATING AIR COMPRESSOR- 2 HP - 115 VOLT SINGLE PHASE - 5.2 ACFM- 135 PSI- 20 GALLON VERTICAL TANK OR EQUAL. IF NEEDED, REMOVE HANDLE AND WHEELS FOR A STATIONARY INSTALLTION ON SITE.

INSTALL AIR OUTLETS PER DETAIL WHERE INDICATED ON DRAWINGS. PROVIDE UNION AND BALL VALVE AT AIR COMPRESSOR CONNECTION TO COMPRESSED AIR

MAIN. THIS IS NOT A BREATHING AIR SYSTEM. ENSURE THAT COORDINATION OCCURSON SITE, SO AS TO NOT ALLOW PLUMBING VENTS. INSTALLED. TO CONFLICT WITH AIR INTAKES OF HVAC SYSTEM(S). PROVIDE OFFSETS AS REQUIRED TO PROVIDE PROPER CLEARANCES.

FIXTURES FOR THE PROJECT SHALL NOT BE ANY SPECIFIC BRAND, BUT SERVICABILTY OF SAME SHALL BE CONSIDERED. ACCEPTABLE BRANDS ARE AS FOLLOWS. SUBJECT TO APPROVALS: KOHLER - MANSFIELD - AMERICAN STANDARD - PRO FLO- DAYTON- ELKAY-SMITH- ZURN- PLASTIC ODDITIES - SIOUX CHIEF - STATE - BRADFORD WHITE - WILKINS -PRIME RITE - OATEY -DELTA - SPEED FLEX - EASTMAN - BELL & GOSSETT - AQUASTAT -**GRUNDFOS** -

ALL PLUMBING FIXTURES SHALL HAVE STOPS - BRAIDED SUPPLIES- TUBULAR P-TRAPS -STOP AND SUPPLY PROTECTOR KIT - TEMPERING VALVES - AS REQUIRED TO MEET CODES.

C-1 ADA TANK TYPE, FLOOR SET, WHITE CLOSET COMBINATION - FLUSH MECHANISM ON THE "WIDE SIDE " OF SPACE - WHITE OPEN FRONT SEAT LESS COVER - CLOSET BOLT AND **NUT SET - WAX RING** 

C-2 WHITE. TANK TYPE. FLOOR SET ELONGATED REGULAR HEIGHT CLOSET COMBINATION - FITTED WITH SAME ACCY AS C-2

L-1 20" X 17" WHITE CHINA DROP- IN LAVATORY BOWL - 4" CENTER ADA SINGLE LEVER CHROME FAUCET - GRID DRAIN

L-2 20" X 17" WHITE CHINA DROP-IN LAVATORY BOWL- 8"CENTER CHROME LAVATORY FAUCET WITH POP- UP DRAIN ASSBLY.

L-3 ADA 19" X 17" CHINA WALL HUNG LAVATORY WITH 4" CENTERSET ADA FTG- GRID DRAIN- STOPS- SUPPLIES- PVC P-TRAP- STOP AND TRAP PROTECTOR KIT- FLOOR SET LAVATORY CARRIER

TV ALL LAVATORIES AND SINKS TO BE FITTED WITH UNDER COUNTER TEMP. VALVE **EQUAL TO LEONARD 170A- LF-BP** 

SH-1 CHROME SINGLE LEVER ADA PRESSURE BALANCE ANTI SCALD SHOWER VALVE - 60" HOSE WITH HAND HELD SHOWER HEAD AND SLIDE BAR - SHOWER DRAIN - FACTORY GRAB BARS - 60 " ACRYLIC ONE PIECE SHOWER UNIT WITH 3/4" DAM - SHOWER SEAT LOCATED. AS DIRECTED BY ARCHITECT.

SH-2 CHROME SINGLE LEVER PRESSURE BALANCE ANTI-SCALD SHOWER VALVE -SHOWER HEAD, ARM & ESCUTCHEON - SHOWER DRAIN - 36" ACRYLIC ONE PIECE SHOWER UNIT (SHOWER DOOR AND INSTALLATION BY OTHERS, IF REQUIRED)

FD 3" OR 4" PVC FLOOR DRAIN BODY WITH ADJUSTABLE METAL TOP

WCO RATED LINE SIZE TEE WITH TAPPED OPENING - RECESSED NUT BRASS PLUG -ACCESS PANEL, RATED FOR STRUCTURE, AS REQUIRED

WCO (NON-RATED WALL) LINE SIZE TEE WITH TAPPED OPENING - RECESSED NUT BRASS PLUG- STAINLESS STEEL 6" COVER - STLS STEEL BOLT LENGTH AS REQUIRED

FCO 3" OR 4" PVC FLOOR CLEANOUT BODY WITH ADJUSTABLE METAL TOP

OR 3" OPEN RECEPTACLE WITH 3" x 4 " INCREASER INSTALLED ABOVE FINISH FLOOR

TP PRIME RITE OR EQUAL TRAP PRIMER - USE DISTRIBUTION UNIT FOR MULTIPLE DRAINS IN SAME PROXIMITY- PROVIDE FOR ANY FLOOR DRAIN, INDIRECT WASTE OR OPEN RECEPTACLE THAT MAY BE SUSCEPTIBLE TO EVAPORATION OF THE TRAP SEAL

MSB 24" X 24" FIAT OR MUSTEE FLOOR SET MOP BASIN - ROUGH CHROME WALL MOUNT FAUCET WITH INTEGRALCHECKS AND VAC BRKER AND PAIL HOOK - 3" DRAIN AND OUTLET

S-1 33" X 22" STAINLESS STEEL ADA KITCHEN SINK - BASKET STRAINERS - HIGH RISE CHROME SINGLE LEVER KITCHEN SINK FAUCET W/ PULL OUT SPRAY - PROVIDE OPENING IN SINK FOR CHROME, DECK MOUNTED AIR GAP - 1 1/2" PVC P TRAP - PVC DISHWASHER 3/4" WYE FITTING - CONNECT OWNER SUPPLIED UNDERCOUNTER DISHWASHER TO WASTE AT SINK AND PROVIDE VALVE AND SUPPLY TUBING FOR HOT WATER TO DISHWASHER.

S-2 25" X 22" X 8" DEEP STLS STEEL SINK WITH BASKET STRAINER-ADA HIGH RISE SPOUT LEVER HANDLE DECK MOUNT SINK FAUCET WITH SPRAY ASSEMBLY- PVC TUBULAR P - TRAP - STOPS AND SUPPLIES -

LT-1 FIAT OR MUSTEE UTILITY SINK ON LEGS WITH FAUCET- PVC TUBULAR P-TRAP- STOPS AND SUPPLIES

LT-2 SAME AS LT-1 YET SHALL BE DROP IN UNIT FOR COUNTER INSTALLATION

100 GAL 199,000 BTU HIGH EFFICIENCY WATER HEATER WITH CONCENTRIC VENT KIT- A O SMITH PMC 10 THERMAL EXPANSION TANK AS NEEDED - T & P RELIEF VALVE. WITH PROPER DISCHARGE - CONCENTRIC VENT AND MAKE UP AIR PER CODE

EXISITING 50 GAL GAS WTR HTR (ONE YR OLD) TO BE REMOVED, PROTECTED AND RE-INSTALLED ON MEZZANINE TO SERVE S-1 AND DISHWASHER ONLY. PROVIDE VENTING TO CODE AS REQUIRED - CODE APPROVED DRAIN PAN WITH 1" DRAIN TO PROPER POINT OF DISCHARGE TO MEET CODE. SERVICE WTR HTR AS NEEDED FOR LIKE NEW OPERATION IN NEW FACILITIES.

RCP 1/6 HP HOT WATER ALL BRONZE RECIRCULATION PUMP WITH FLANGES AND PROGRAMMABLE CONTROLLER AND AQUASTAT. INSTALL ON HOT WATER DIST. SYSTEM ALONG WITH BELL & GOSSETT CICUIT SETTER VALVE FOR BALANCE OF RE-CIRCULATION **SYSTEM - ALL TO MEET CODE** 

RPZ 2" VERTICAL REDUCED PRESSURE PRINCIPLE ZONE BACK FLOW PREVENTOR WITH AIR GAP FITTING AND BRONZE STRAINER - CERTIFY AND TEST EXISITING DEVICE AS NEEDED.

AWB EASTMAN METAL AUTOMATIC WASHER DRAIN BOX WITH HOSE BIBBS AND WATER HAMMER ARRESTORS

IDW 2" INDIRECT WASTE WITH 2" X 4" PVC INCREASER

TD 16 FT LENGTH Z 886 6" WIDE PREFORMED TRENCH DRAIN WITH CLASS "C" DUCTILE IRON GRATING- TWO END CAPS - ONE BOTTOM OUTLET - REBAR AND INSTALLATION AS REQUIRED. ( NEW BAY AREA ADDITION)

FPHB 12" WALL - Z 1300 FREEZELESS WALL HYDRANT WITH INTEGRAL VAC BRKR- WALL **BOX - LOOSE KEY** 

EWC ELKAY LZS8WSLK ADA SINGLE ELECTRIC WATER COOLER WITH BOTTLE FILLING STATION - PVC TUBULAR P TRAP- STOP. BRASS NIPPLE AND SUPPLY TUBE

EXTRACTOR FURNISH AND INSTALL TWO 3/4" HOT HOSE BIBBS AND TWO 3/4" COLD HOSE BIBBS WITH VACCUM BREAKER - ONE 3" OUTLET METAL GRATED POURED CONCRTE TRENCH DRAIN WITH Z 882-P-12-DGC DUCTILE IRON GRATE . THE 3" DRAIN FOR THE TRENCH DRAIN AT THE EXTRACTOR SHALL PROVIDE A 3" CAST IRON P-TRAP AND A MINIMUM OF 10 LINEAL FEET OF 3" CAST IRON PIPE AND FITTINGS AT THE DRAIN IN THE GROUND, PRIOR TO CONNECTING TO THE 4" PVC WASTE. (EXTRACTOR SHALL REQUIRE NO STEAM CONNECTION OR PROVISIONS)

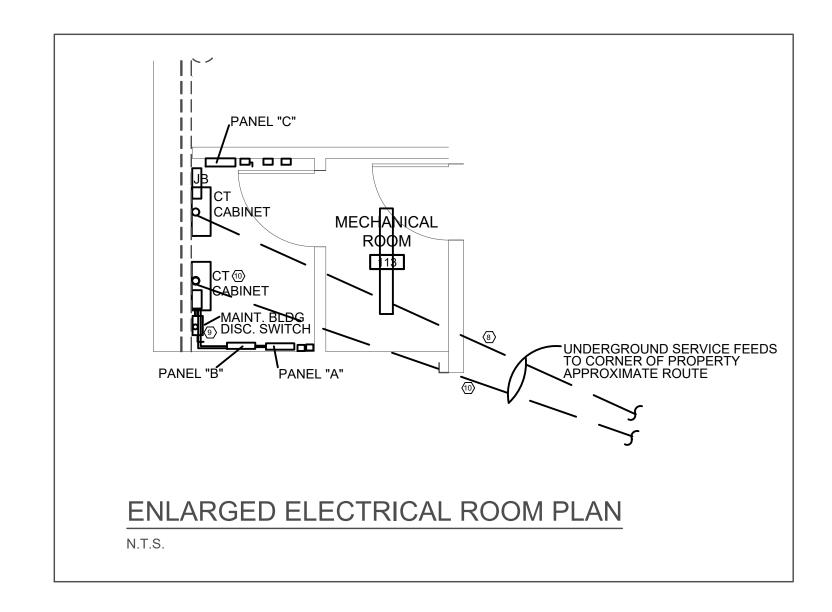
PROJECT NO:

20-4017 DRAWN BY:

DATE: 04-20-2021

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ssociates, 4717 Preston Hwy, Louisville, Kentucky 40213



### DEMOLITION SYMBOL LEGEND

- ◆ DATA/TELEPHONE OUTLET AC GFI ABOVE COUNTER GROUND FAULT RECEPTACLE
- MOTOR SYMBOL
- DUPLEX RECEPTACLE EMERGENCY LIGHT

- SECURITY CAMERA
- FIRE ALARM PULL STATION
- WALL PACK LIGHT
- TTB TELEPHONE TERMNAL BOARD

### GENERAL ELECTRICAL DEMOLITION NOTES:

I. ALL ELECTRICAL DEMOLITION SHALL FOLLOW APPLICABLE GUIDELINES PER THE NATIONAL ELECTRICAL CODE. 3. CONTRACTOR SHALL VISIT THE SITE TO VERIFY ALL EXISTING CONDITIONS. IT SHOULD BE UNDERSTOOD THAT ONLY THE PRIMARY ITEMS ARE SHOWN ON THE DEMOTION PLAN. THE EXISTING WIRING AND CONDUIT RUNS ARE NOT SHOWN BUT PROVISIONS SHALL BE MADE IN THE CONTRACTORS BID TO COVER REMOVAL OR REWORK AS REQUIRED ACCORDING TO THE DEMOLITION AND NEW WORK PLANS. 4. CONTRACTOR SHALL PROPERLY DISPOSE OF ALL MATERIALS. COORDINATE WITH THE GENERAL CONTRACTOR FOR ON SITE DUMPSTER.

5. WHERE AN EXISTING SYSTEM NOT INDICATED ON THE PLAN IS AFFECTED BY DEMOLITION OF THE DEVICES AND COMPONENTS SHOWN, CONTRACTOR SHALL MAKE PROVISIONS TO PRESERVE THESE EXISTING SYSTEMS AND DISCUSS THE DETERMINATION OF THE SYSTEM WITH THE PROJECT ARCHITECT AND OR ENGINEER PRIOR TO DEMOLITION. 6. WHERE DEMOLITION OF AN EXISTING ELECTRICAL DEVICE MAY AFFECT THE EXISTING OR NEW FINISHES IN AN ADJACENT AREA ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR FOR PATCHING AND REPAIRING THE EXISTING SURFACE AS REQUIRED TO MATCH THE NEW FINISHES.

# O1 DEMOLITION PLAN SCALE: 1/8" = 1'-0"

### ○ ELECTRICAL DEMOLITION SHEET NOTES

1. PRESERVE EXSITING OVERHEAD DOOR MOTOR AND ALL ASSOCIATED CONTROLS AND EQUIPMENT. THESE ARE TO BE RE-FED AD RE-USED IN THE NEW WORK PLAN. 2. PRESERVE EXISTING RECEPTACLES FEEDING POWER DROP REEL AND REEL. THESE ARE TO BE RE-FED IN NEW WORK PLAN. 3. PRESERVE EXISTING RECEPTACLES FEEDING CO-RAY VAC MOTORS AND ALL ASSOCIATED CORAY VAC EQUIPMENT. THESE ARE TO BE RE-FED IN THE NEW WORK PLAN. 4. CO-RAY VAC SYSTEM TO BE PRESERVED AND RE-FED IN NEW WORK PLAN. FIELD VERIFY POWER FEED FOR INTERCEPTION IN NEW WORK PLAN. REMOVE EXISTING WALL PACKS AND PRESERVE CONDUIT AND WIRING BACK TO EXISTING CONTACTOR IN ELECTRICAL ROOM. THESE J-BOXES
AND CIRCUITS ARE TO BE RE-USED FOR NEW LIGHTING GOING IN THE SAME LOCATIONS.
 EXISTING POWER FEEDS TO PARKING LOT POLE LIGHTS TO BE PRESERVED INCLUDING UNDERGROUND CONDUITS AND CONTACTOR SERVING
THE EXISTING PARKING LOT POLE LIGHTS. 7. PRESERVE EXISTING BUILDING MOUNTED EXTERIOR LIGHTING CONTACATOR. CONDUITS AND WIRING FEEDS TO BUILDING MOUNTED EXTERIOR LIGHTING TO BE RE-USED IN NEW WORK PLAN. REFER TO NEW LIGHTING PLAN.

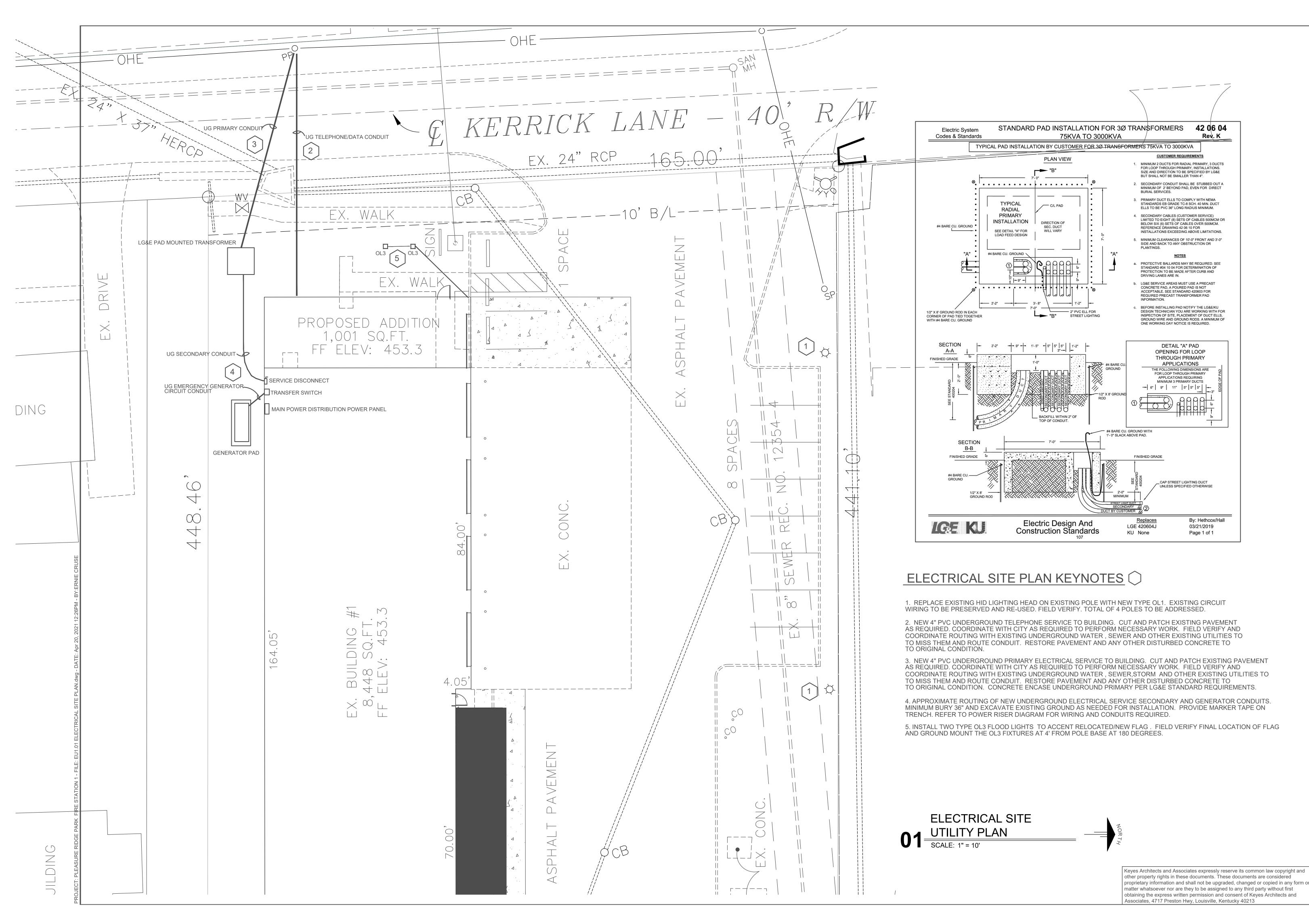
8. EXISTING 3 PHASE DELTA SERVICE AND ALL ASSOCIATED EQUIPMENT AND WIRING TO BE REMOVED COMPLETE. EXISTING UNDERGROUND CONDUITS ARE TO REMAIN AND BE CUT OFF AND CAPPED AT FLOOR LEVEL. WEATHER HEAD AND SERVICE DROP CONDUIT AT NORTH CORNER OF PROPERTY TO BE REMOVED AND CUT DOWN TO GRADE. REMOVED AND CUT DOWN TO GRADE.

9. DISCONNECT AND UNDERGROUND CONDUIT TO BE RE-USED IN NEW WORK PLAN. PRESERVE EXISTING POWER FEED TO MAINTENANCE BUILDING DURING DEMOLITION AND DO NOT INTERRUPT SERVICE TO MAINTENANCE BUILDING DURING DEMOLITION. THE INTENT IS TO RE-USE THE EXISTING UNDERGROUND FEED TO MAINTENANCE BUILDING AND RE-FEED IT FROM THE NEW ELECTRICAL SERVICE. EXISTING SERVICE IS REMAIN UNTIL A PLANNED COORDINATED TRANSFER TO THE NEW ELECTRICAL SERVICE CAN BE ARRANGED TO MINIMIZE THE MAINTENANCE BUILDING DOWN TIME. COORDINATE WITH OWNER TO ARRANGE SERVICE TRANSFER AFTER THE NEW ELECTRICAL SERVICE IS UP AND RUNNING COMPLETE.

10. EXISTING 120/240 VOLT SINGLE PHASE SERVICE IS TO BE REMOVED COMPLETE AFTER TRANSFER OF POWER FEEDING THE MAINTENANCE BUILDING HAS BEEN TRANSFERRED TO THE NEW ELECTRICAL SERVICE. AFTER TRANSFER REMOVE ALL ASSOCIATED EQUIPMENT. EXISTING UNDERGROUND CONDUITS ARE TO REMAIN AND BE CUT OFF AND CAPPED AT FLOOR LEVEL. WEATHER HEAD AND SERVICE EROP CONDUIT AT NORTH CORNER OF PROPERTY TO REMOVED AND CUT DOWN TO GRADE.

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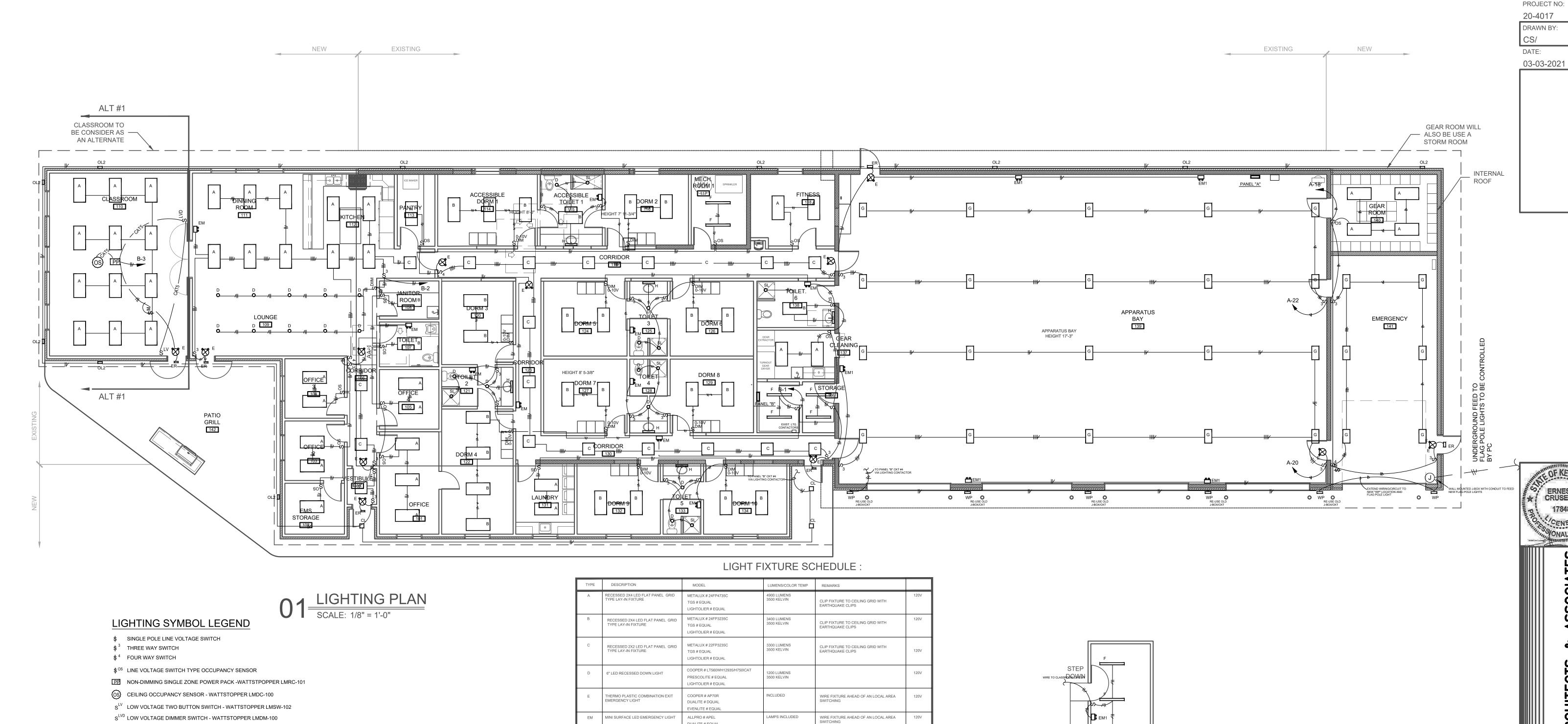
Associates, 3005 Taylor Boulevard, Louisville, Kentucky 40208



PROJECT NO: 20-4017 DRAWN BY:

03-03-2021

ESTON HIGHWAY
LE, KENTUCKY 40213



- CAT 5 CABLE RUN WITH RJ45 PRE-TERMINATED CONNECTORS
- 3- #12 IN 3/4" CONDUIT OR MC CABLE UNLESS NOTED OTHERWISE CIRCUIT HOMERUN TO ELECTRICAL PANEL WITH 3-#12 IN 3/4 EMT/MC UNLESS OTHERWISE INDICATED
- \$ DIM LINE VOLTAGE DIMMER FORWARD PHASE TYPE
- \$ DIM UNE VOLTAGE DIMMER 0-10 VOLT TYPE

# GENERAL LIGHTING NOTES

- 1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
- 2. WIRE ALL EMERGENCY LIGHTING FIXTURES AHEAD OF LOCAL AREA SWITCHING.
- 3. COORDINATE EXACT FIXTURE PLACEMENT WITH OTHER EQUIPMENT IN THE CEILING SPACE.
- 4. MINIMUM WIRE SIZE SHALL BE #12 COPPER. MAXIMUM 3 CIRCUITS PER HOME RUN EACH SHALL HAVE SEPARATE NEUTRAL.
- 5. CONTRACTOR MAY USE MC CABLE ABOVE ACCESSIBLE CEILINGS. ALL EXPOSED CONDUIT SHALL BE IN EMT CONDUIT OR PVC UNDERGROUND.

	<u> </u>					
A	A RECESSED 2X4 LED FLAT PANEL GRID TYPE LAY-IN FIXTURE  METALUX # 24FP4735C TGS # EQUAL LIGHTOLIER # EQUAL		4900 LUMENS 3500 KELVIN	CLIP FIXTURE TO CEILING GRID WITH EARTHQUAKE CLIPS	120V	
В	RECESSED 2X4 LED FLAT PANEL GRID TYPE LAY-IN FIXTURE	METALUX # 24FP3235C TGS # EQUAL LIGHTOLIER # EQUAL	3400 LUMENS 3500 KELVIN	CLIP FIXTURE TO CEILING GRID WITH EARTHQUAKE CLIPS	120V	
С	RECESSED 2X2 LED FLAT PANEL GRID TYPE LAY-IN FIXTURE	METALUX # 22FP3235C TGS # EQUAL LIGHTOLIER # EQUAL	3300 LUMENS 3500 KELVIN			
D	6" LED RECESSED DOWN LIGHT	COOPER # LT560WH12935/H750ICAT PRESCOLITE # EQUAL LIGHTOLIER # EQUAL				
Е	THERMO PLASTIC COMBINATION EXIT EMERGENCY LIGHT	COOPER # AP70R DUALITE # DQUAL EVENLITE # EQUAL	INCLUDED	WIRE FIXTURE AHEAD OF AN LOCAL AREA SWITCHING	120V	
EM	MINI SURFACE LED EMERGENCY LIGHT	ALLPRO # APEL DUALITE # EQUAL EVENLITE # EQUAL	LAMPS INCLUDED	WIRE FIXTURE AHEAD OF AN LOCAL AREA SWITCHING	120V	
EM1	2 HEADED SURFACE LED EMERGENCY LIGHT	SURELITES # SEL50 DUALITE # EQUAL EVENLITE # EQUAL	LAMPS INCLUDED	WIRE FIXTURE AHEAD OF AN LOCAL AREA SWITCHING	120V	
ER	LINE VOLTAGE EXTERIOR WET LOCATION EGRESS LIGHT	COOPER # SELW25BZ DUALITE # DQUAL EVENLITE # EQUAL	LAMPS INCLUDED  WIRE FIXTURE AHEAD OF AN LOCAL AREA SWITCHING MOUNT FIXTURE ON WALL ABOVE EXTERIOR EGRESS DOOR		120V	
F	SURFACE LOW PROFILE LED STRIP LIGHT	METALUX # 4ST2L4040R ECO LITE # EQUAL LIGHTOLIER # EQUAL	4400LUMENS 4000 KELVIN	SURFACE MOUNT TO CEILING J-BOX	120V	
G	CHAIN CABLE SUSPENDED LED HIGHBAY WITH LENS	COOPER# OHB-244SE-W-UNV-L740-CD-C3 CREE # EQUAL EVEREADY # EQUAL	24000 LUMENS 4000 KELVIN	PROVIDE CEILING J-BOX FED FROM ATTIC SPACE ABOVE AND CABLE SUSPEND FIXTURE 12 INCHES BELOW CEILING. WIRE CORD TO J-BOX	120V	
Н	SURFACE WALL MOUNTED LED DECORATIVE VANITY LIGHT WITH MATTE SILVER FINISH	BROWNLEE # 5176-36-BN-H25-35K  OXYGEN # EQUAL LIGHTOLIER # EQUAL	2500 LUMENS 3500 KELVIN	MOUNT ON WALL ABOVE MIRROR	120V	
WP	LARGE LOW PROFILE LED WALL PACK WITH FULL CUT OFF	PIL#070449 BEGA #EQUAL	10500 LUMENS 4000 KELVIN	MOUNT ABOVE AND IN BETWEEN GARAGE DOOR AT EXISTING BOX LOCATIONS WHERE APPLICABLE	120V	
CL	J-BOX MOUNTED SURFACE CEILING SQUARE WITH CAST GUARD AND MOLDED GLASS DIFFUSER	PIL#071700 BEGA #EQUAL	2300 LUMENS 4000 KELVIN	MOUNT TO RECESSED J-BOX -PROVIDE BLOCKING BACKING TO SUPPORT FIXTWURE	120V	
SL	6" RECESSED LED SHOWER LIGHT	EATON # H750ICT/LT560WH6935 PROGRESS # EQUAL LIGHTOLIER # EQUAL	1200 LUMENS 3500 KELVIN		120V	
OL1	RETROFIT LED SHOEBOX STYLE AREA LIGHT WITH UNIVERSAL MOUNTING ARM IN BRONZE FINISH	COOPER # PRV-XL-C100-D-T4-SA-BZ CREE # EQUAL HUBBLE # EQUAL	31000 LUMENS 4000 KELVIN	MOUNT HEAD TO EXISTING POLE- RE-USE EXISTING CIRCUIT	UNV	
OL2	SMALL LOW PROFILE LED WALL PACK WITH FULL CUT OFF	PIL#070441 BEGA #EQUAL	3600 LUMENS 4000 KELVIN	VERIFY FINAL MOUNTING ELEVATION WITH ARCHITECT - DO NOT ROUGH-IN UNTIL VERIFIED WITH ARCHITECT	120V	
OL3	JUNCTION BOX/GROUND MOUNTED FLOOD LIGHT	PIL#070475 BEGA #EQUAL	1389 LUMENS 4000 KELVIN	PROVIDE SURFACE FS BOX TO MOUNT FIXTURE TO- SUPPORT BOX PER NEC TO GROUND MOUNTED CONDUITS	120V	

ROOM 2 141 NOTE: SEE PLUMBING PLAN AND MECH. PLAN FOR NEW EQUIPMENT INFORMATION

02 MEZZANINE FLOOR PLAN

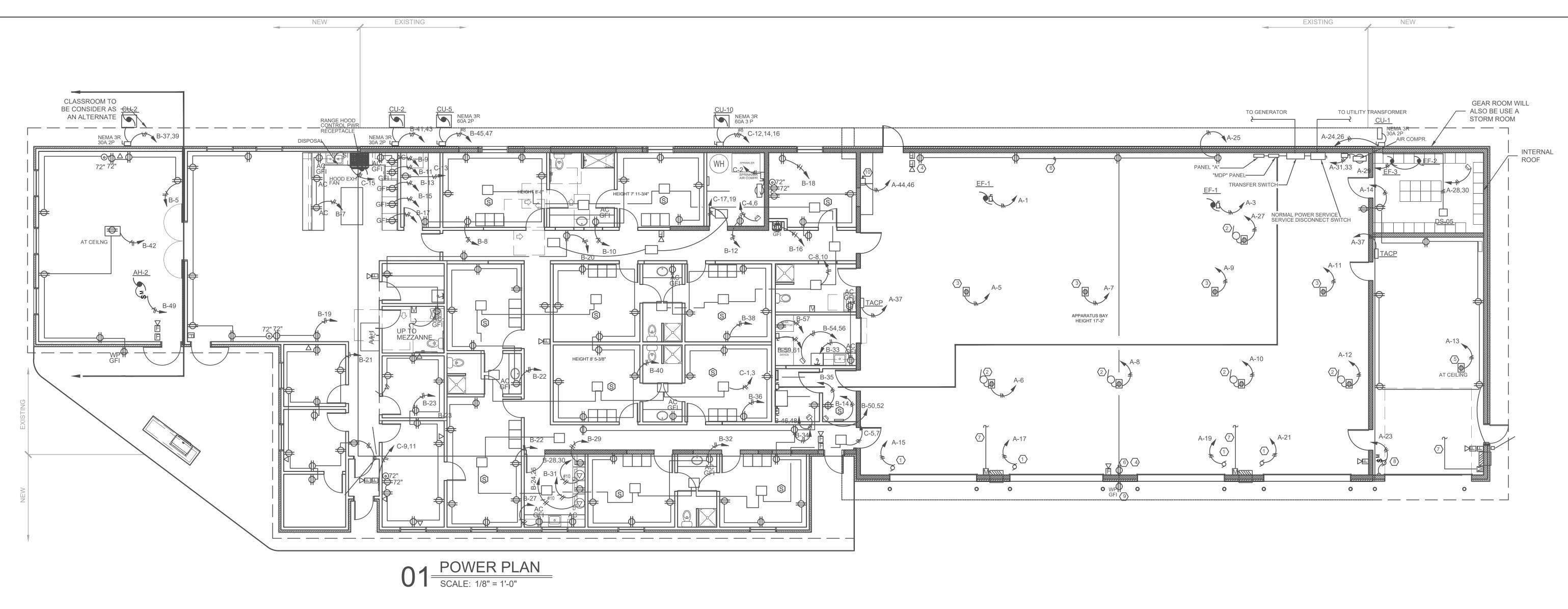
SCALE: 1/8" = 1'-0"

NOTE: ALL DIMENSIONS ARE TO FACE OF STUD
NOTE: GENERAL CONTRACTOR RESPONSIBLE FOR
COORDINATION OF ALL SUB TRADES AND
REQUIREMENTS BY OWNER

NOTE: ELECTRICAL, HVAC AND PLUMBING TO BE RELOCATED PER FEDERAL, STATE AND LOCAL CODES. GENERAL CONTRACTOR TO COORDINATE.

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ASSOCIAT



### SYMBOL LEGEND

DUPLEX RECEPTACLE 15" A.F.F.

EXISTING OUTLET LOCATION TO BE RE-USED & REPLACED

SINGLE GANG DATA OUTLET WITH CONDUIT STUB TO ACCESSIBLE POINT 15" AFF

ROUGH-IN FOR CATV OUTLET

QUAD RECEPTACLE 15" A.F.F.

208 VOLT SINGLE PHASE 30 AMP DRYER RECEPTACLE-FOR THE PURPOSES OF BIDDING ASSUME NEMA 6-30R RECEPTACLE ( VERIFY WITH EQUIPMENT)

MOTOR SYMBOL

AC ABOVE COUNTER

GFI GROUND FAULT TYPE RECEPTACLE

WP WEATHER PROOF IN USE COVER J-BOX WITH POWER EXTENSION TO LOAD

EMT/MC RUN WITH 3-#12 IN 3/4" EMT UNLESS NOTED OTHERWISE

CIRCUIT HOMERUN WITH 3-#12 IN 3/4" EMT UNLESS NOTED OTHERWISE \*ATT CIRCUIT HOMERUN WITH 3-#12 IN 3/4" EMT TO ARC FAULT BREAKER

E.F. EXHAUST FAN

□ DISCONNECT SWITCH

MOTOR DISCONNECT FRACTIONAL HORSEPOWER

CEILING SMOKE DETECTOR - 120 VOLT ION/PHOTO TYPE

FIRE ALARM MANUAL PULL STATION

FIRE ALARM MAIN CONTROL PANEL

FIRE ALARM AUDIO VISUAL HORN

FIRE ALARM VISUAL ONLY ALARM

### **GENERAL POWER NOTES**

ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.

MINIMUM WIRE SIZE SHALL BE #12 COPPER. COORDINATE WITH EQUIPMENT ACTUAL

WIRE SIZES BASED ON EQUIPMENT NAME PLATE RATINGS.

. ALL EXPOSED CONDUIT BELOW 10' SHALL BE EMT TYPE. MC CABLE ALLOWED ABOVE CEILINGS AND IN STRUCTURAL AREA OF CEILINGS. SCHEDULE 40 PVC FOR U.G. CONDUIT.

. COORDINATE WITH MECHANICAL CONTRACTOR FOR REQUIRED CONTROL WIRING ASSOCIATED WITH HVAC EQUIPMENT.

PROVIDE PANELBOARD CIRCUIT DIRECTORIES WHICH MATCH FIELD WIRING/CIRCUITING

FOR EACH POWER DISTRIBUTION PANEL.

CONTRACTOR IS ENCOURAGED TO VISIT THE SITE PRIOR TO BIDDING TO VERIFY ALL EXISTING CONDITIONS AND REQUIREMENTS ASSOCIATED WITH ACCOMPLISHING STATED SCOPE OF WORK.

VERIFY ALL POWER AND WIRING REQUIREMENTS WITH ACTUAL EQUIPMENT SUPPLIED TO ENSURE THAT PROPER OVER-CURRENT PROTECTION AND WIRING IS PROVIDED. THE DRAWING POWER REQUIREMENTS ARE FOR BIDDING PURPOSES ONLY.

# O POWER SHEET NOTES

1. RECONNECT EXISTING OH DOOR MOTOR AND ALL ASSOCIATED EQUIPMENT TO NEW CIRCUIT INDICATED...

2. PROVIDE REPLACEMENT RECEPTACLE FOR EXISTING PULL DOWN POWER DEVICE. RE-CIRCUIT NEW HOME RUN TO NEW PANEL.

3. PROVIDE NEW RECEPTACLE FOR EXISTING CO-RAY VAC BLOWER MOTOR AND CIRCUIT TO NEW PANEL.

4. PROVIDE NEW SURFACE RECEPTACLE IN FS BOX IN LOCATION OF EXISTING RECEPTACLE.

5. PROVIDE NEW RETRACTABLE POWERED RECEPTACLE TO MATCH EXISTING IN ADJACENT GARAGE.

6. PROVIDE NEW SURFACE CONDUIT RACEWAY TO SERVE NEW RECEPTACLES IN INDICATED LOCATIONS.

7. PROVIDE INTERLOCK WIRING AND 120 VOLT CIRCUIT # A-35 TO SERVE NEW MOTORIZED DAMPERS. CONNECT WITH EXHAUST MOTOR AND CONTROL PER MECHANICAL CONTRACTORS DIRECTION.

8. PROVIDE POWER CONNECTION TO NEW OH DOOR MOTOR AND WIRE CONTROL COMPONENTS SUPPLIED WITH DOOR.

9. PROVIDE NEW SURFACE RECEPTACLE IN FS BOX AS INDICATED. DRILL THROUGH EXTERIOR WALL AS REQUIRED. 10. RE-FEED EXISTING CORAYVAC DISCONNECT. FIELD VERIFY OVERCURRENT PROTECTION SIZE AND WIRING.

UNI<u>#H-1</u>

SEE PLUMBING PLAN

AND MECH. PLAN FOR

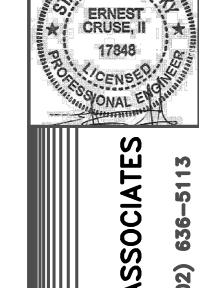
NEW EQUIPMENT INFORMATION

**NOTE**: ALL DIMENSIONS ARE TO FACE OF STUD **NOTE**: GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF ALL SUB TRADES AND

**NOTE**: ELECTRICAL, HVAC AND PLUMBING TO BE RELOCATED PER FEDERAL, STATE AND LOCAL CODES. GENERAL CONTRACTOR TO COORDINATE.

REQUIREMENTS BY OWNER

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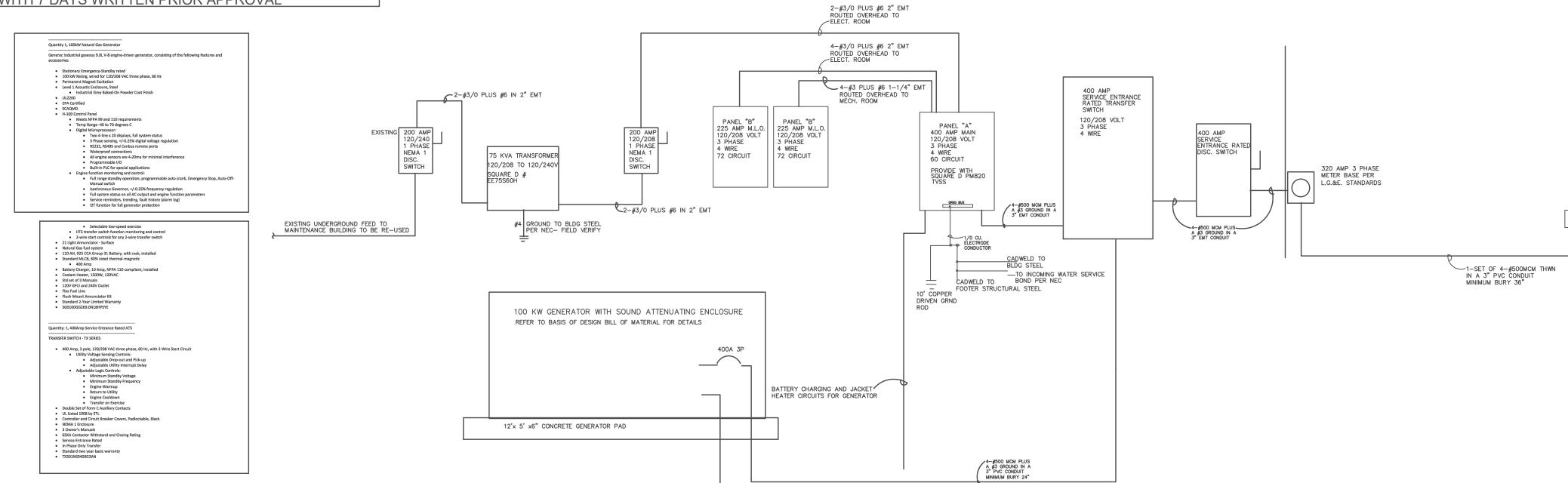


PROJECT NO: 20-4017

03-03-2021

DATE:

EVAPAR IS THE BASIS OF DESIGN MANUFACTURER ALTERNATES MANUFACTURERS WILL BE CONSIDERED WITH 7 DAYS WRITTEN PRIOR APPROVAL



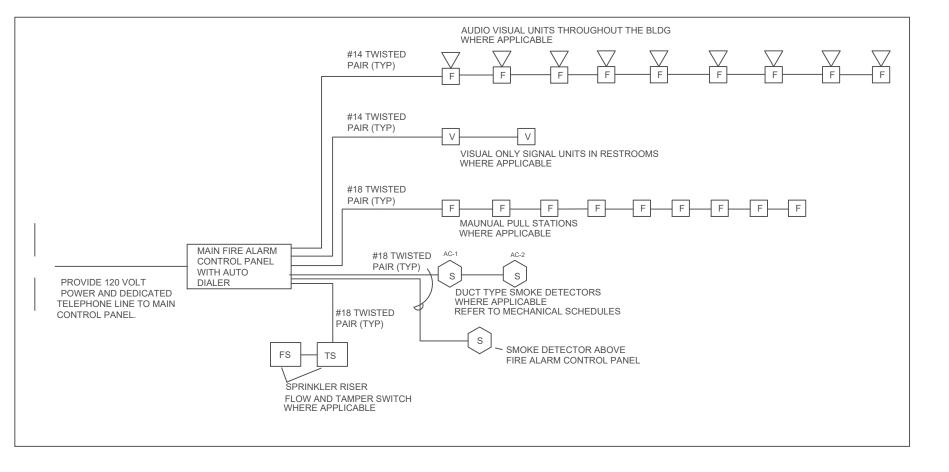
POWER RISER DIAGRAM

NOT TO SCALE

A 120/208V	3 PH 4W	400	ABUS	40		MAIN	18KAIC
LOAD DESCRIPTION	FEEDER	CB/ POLF	CIRC. NO.	CIRC. NO.	CB/ POLF	FEEDER	LOAD DESCRIPTION
GARAGE EF-1	#12	20 1P	1	_	200 2F	3/0	MAINT. BLDG FEED
GARAGE EF-1	#12	20 1P	3	4		3/0	
GARAGE CORAY VAC MTR	#12	20 1P	5	6	20 1P	#12	GARAGE CEILING RECPT
GARAGE CORAY VAC MTR	#12	20 1P	7	8	20 1P	#12	GARAGE CEILING RECPT
GARAGE CORAY VAC MTR	#12	20 1P	9	10	20 1P	#12	GARAGE CEILING RECPT
GARAGE CORAY VAC MTR	#12	20 1P	11	12	20 1P	#12	GARAGE CEILING RECPT
AMB BAY CORAYVAC MTR	#12	20 1P	13	14	20 1P	#12	AMB. BAY RECEPT CKT
EXIST OHD MTR	#12	20 1P	15	16	20 1P	#12	SPARE
EXIST OHD MTR	#12	20 1P	17	18	20 1P	#12	AMBULANCE BAY LTS
EXIST OHD MTR	#12	20 1P	19	20	20 1P	#12	GARAGE LTS
EXIST OHD MTR	#12	20 1P	21	22	20 1P	#12	GARAGE LTS
AMB. BAY OHD MTR	#12	20 1P	23	24	20 2P	#12	GEAR RM COND. UNIT
GARAGE RECEPT CKT	#12	20 1P	25	26		#12	
GARAGE CEILING RECPT	#12	20 1P	27	28	20 2P	#12	GEAR RM ELECT. HTR
GEAR RM EXHAUST	#12	20 1P	29	30		#12	
AIR COMPRESSOR	#12	20 2P	31	32	20 1P	#12	GEN BATTERY CHARGER
	#12		33	34	20 1P	#12	GENERATOR JACKET HTR
MOTORIZED DAMPER CKT	#12	20 1P	35	36			
TACP PANELS CONTROL	#12	20 1P	37	38	225 3F	3/0	PANEL "B" FEED
SPARE		20 1P	39	40		3/0	
SPARE		20 1P	41	42		3/0	
SPARE		20 1P	43	44	20 2P	#12	EXISTING CORAYVAC PWR
SPARE		20 1P	45	46		#12	
			47	48	100 3P	#3	PANEL "B" FEED
			49	50		#3	
			51	52	0	#3	
			53	54			
			55	56			
			57	58			
			59	60			

C 120/208V	3 PH 4W	100	ABUS	10	OA	M.L.O.	18KAIC
LOAD DESCRIPTION	FEEDER	CB/ POLF	CIRC. NO.	CIRC. NO.	CB/ POLF	FEEDER	LOAD DESCRIPTION
CEILING CASSETTES A/C	#12	20 2P	1	2	20 1P	#12	SPRNKLER AIR COMPR
	#12		3	4	20 2P	#12	ELECT HTR MECH RM
CEILING CASSETTES A/C	#12	20 2P	5	6		#12	
	#12		7	8	20 2P	#12	CEILING CASSETTES A/C
ELECT HTR ENTRY	#12	15 2P	9	10		#12	
	#12		11	12	40 3P	#8	CONDENSING UNIT 10
PANTRY ICE MAKER	#12	20 1P	13	14		#8	
DISPOSAL	#12	20 1P	15	16		#8	
MCU-1,2,3	#12	20 2P	17	18	20 2P	#12	ERV UNIT MEZZANINE
	#12		19	20		#12	
		20 1P	21	22			
		20 1P	23	24			
		20 1P	25	26			
		20 1P	27	28			
		20 1P	29	30			

B 120/208V	3 PH 4W		ABUS			M.L.O.	18KAIC
LOAD DESCRIPTION	FEEDER	CB/ POLF	CIRC. NO.	CIRC. NO.	CB/ POLF	FEEDER	LOAD DESCRIPTION
LTG DORMS	#12	20 1P	1	2	20 1P	#12	LTG KITCH/OFFICES
LTG MEZZ/CLASSROOM	#12	20 1P	3	4	20 1P	#12	BLDG EXTERIOR LTG
CLASSROOM RECEPTS	#12	20 1P	5	6	20 1P	#12	PARKING LOT LIGHTS
KITCHEN RECEPT	#12	20 1P	7	8	20 1P	#12	DORM #1 RECEPTS
KITCHEN RECEPT	#12	20 1P	9	10	20 1P	#12	DORM #2 & RR REC
KITCHEN RECEPT	#12	20 1P	11	12	20 1P	#12	MECH AND FITNESS RMS
KITCHEN RECEPT	#12	20 1P	13	14	20 1P	#12	FACP
KITCHEN RECEPT	#12	20 1P	15	16	20 1P	#12	ELECT WATER COOLER
KITCHEN RECEPT	#12	20 1P	17	18	20 1P	#12	FITNESS RECEPT
LOUNGE RECEPTS	#12	20 1P	19	20	20 1P	#12	HALL & RR RECPTS
OFFICE RECEPTS	#12	20 1P	21	22	20 1P	#12	DORM #3 & RR REC
OFFICE #1 RECEPTS	#12	20 1P	23	24	30 2P	#10	DRYER
DORM #4 RECEPTS	#12	20 1P	25	26		#10	
LAUNDRY RECEPTS	#12	20 1P	27	28	30 2P	#10	DRYER
WASHER	#12	20 1P	29	30		#10	
WASHER	#12	20 1P	31	32	20 1P	#12	DORM #9 & RR REC
RR RECEPTS	#12	20 1P	33	34	20 1P	#12	DORM #10 & HALL REC
TELECOM RECEPT	#12	20 1P	35	36	20 1P	#12	DORM #8 & RR REC
COND UNIT #2A	#12	20 2P	37	38	20 1P	#12	DORM #6 & RR REC
	#12		39	40	20 1P	#12	DORM #7 & 5 REC
COND UNIT #2B	#12	20 2P	41	42	20 1P	#12	CLASSROOM 110
	#12		43	44			SPARE
COND UNIT #5	#8	45 2P	45	46	20 2P	#12	ELECT HTR ELECT RM
	#8		47	48		#12	
AHU-#2	#12	15 1P	49	50	20 2P	#12	ELECT HTR TELECOM
AHU-#1	#12	15 1P	51	52		#12	
AHU-#5	#12	15 1P	53	54	20 2P	#12	ELECT HTR GEAR RM
SPARE	"	20 1P	55	56		#12	
EXTRACTOR	#12	20 1P	57	58		#12	
GAS DRYER	#12	15 2P	59	60		#12	
	#12		61	62			
		20 1P	63	64			
SPARE		20 1P	65	66			
SPARE		20 1P	67	68			
SPARE		20 1P	69	70			
SPARE			71	72			



# PARTIAL FIRE ALARM RISER

N.T.S.

1. RISER IS DIAGRAMMATIC ONLY AND IS NOT NECESSARILY REPRESENTATIVE OF ALL COMPONENTS REQUIRED. VERIFY WITH PLANS.

2. FIRE ALARM SYSTEM SUPPLIER SHALL PROVIDE ALL REQUIRED SYSTEMS DRAWINGS FOR STATE APPROVALS.

3. FIRE ALARM SYSTEM SUPPLIER SHALL CERTIFY SYSTEM UPON COMPLETION OF INSTALLATION.

4. ALL FIRE ALARM SYSTEMS WIRING SHALL BE IN CONDUIT IN NON-ACCESSIBLE AREAS.

5. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH SYSTEM SUPPLIER FOR ALL WIRING REQUIREMENTS.

**NOTE**: ALL DIMENSIONS ARE TO FACE OF STUD

UTILITY PAD MOUNTED TRANSFORMER INSTALL PER UTILITY STANDARDS

PROTECT CONDUIT WITH CONCRETE ENCASEMENT UP POLE. VERIFY REQRUIREMENTS WITH L.G.&E.

1-4" PVC TO UTILITY U.G. CONCRETE ENCASED COORDINATE WITH L.G.&E. REQUIREMENTS

**NOTE**: GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF ALL SUB TRADES AND

REQUIREMENTS BY OWNER NOTE: ELECTRICAL, HVAC AND PLUMBING TO BE

RELOCATED PER FEDERAL, STATE AND LOCAL CODES. GENERAL CONTRACTOR TO COORDINATE.

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ES

SOCIAT

PROJECT NO: 20-4017 DRAWN BY:

03-03-2021

DATE:

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, and Mechanical

A. Furnish all materials, labor and equipment necessary to construct a complete and functional electrical system a further described in these specifications and on design drawings.

B. Work under this section shall include final electrical connections to all equipment furnished under other sections of these specifications.

C. Contractor shall furnish and install all miscellaneous equipment, material and labor which, though not specifically called for in this specification, is necessary for a complete and satisfactory operating installation. Contractor shall leave his work in operating condition.

D. This section (Electrical General Requirements) applies equally to electrical, heating, ventilating, air conditioning, and

1.3 MATERIALS, EQUIPMENT AND WORKMANSHIP

A. Materials and equipment used throughout shall be new and the best of their respective kinds. No substitutions, other than those specified, shall be used unless approved by the Architect and Engineer. All work shall be executed with speed and consistent with safety and good workmanship. Substitutions of equal equipment will be acceptable only if approved in writing by Architect and Engineer 10-days prior to bid.

B. All materials shall bear the UL label where such standards has been established and listed by Underwriters Laboratories,

C. Competent workmen shall be employed on all phases of the work. Poor workmanship will be rejected and will constitute cause for removal of the individual performing the work.

D. All material, equipment and locations of same shall at least conform with the standards of the Underwriters Laboratories, Inc. whenever applicable.

E. Should any dispute arise as to the quality or fitness of materials, equipment or workmanship, the decision rests strictly

1.4 REFERENCES

A. Utilize the following abbreviations and definitions for discernment within the Drawings and Specifications

 a. NECNational Electrical Code. b. OSHA Occupational Safety and Health Act

ANSI American National Standards Institute NFPA National Fire Protection Association

ASA American Standards Association.
IEEEInstitute of Electrical and Electronics Engineers.

. UL Underwriters Laboratories, Inc. ICEAInsulated Cable Engineers Association ASTM American Society of Testing Materials

1.5 PERMITS, CODES AND INSPECTIONS A. Electrical Contractor shall obtain and pay for all permits and inspections required for electrical installation

B. All work shall be in accordance with the latest edition of the National Electrical Code (NEC), National Fire Protection Association (NFPA), Occupational Safety and Health Administration (OSHA) and local utility company requirements.

C. Electrical Contractor shall furnish final inspection certification to the Owner upon completion of work. Certificate shall

D. Where apparent contradictions are discovered between local codes, NEC, specifications and drawings, most stringent or safest requirement will prevail. Beyond this, order of compliance shall be:

 Local Codes/Inspector National Electrical Code 3. Specifications and Drawings

A. DO NOT SCALE DRAWINGS. Scale of drawings is approximate. Exact locations, distances, levels and other conditions shall be governed by field conditions

B. For purpose of clearness and legibility, the drawings are essentially diagrammatic. Although size and location of the equipment is drawn to scale wherever possible

C. The drawings and specifications are intended to cover all work enumerated under the respective headings. The Sub-Contractors shall not take advantage of conflict or error between drawings and specifications, but shall request a clarification of such before making his proposal should this condition exist.

D. Contractors shall obtain a set of the Architectural drawings and specifications, and consult with the Architect and General Contractor as to the general construction of the building and the order and time of placement of all electrical E. The drawings accompanying these specifications determine the general design of the equipment. Exact disposition of

the equipment is subject to the requirements and construction of the manufacturer's standard, but the space occupied and general design shall correspond to that shown on the plans

F. Submit a complete list within fifteen (15) calendar days after award of contract, for all materials to be used. Note any deviations from specifications or proposed "equipments" and include Manufacturer's name, catalog number and

1.7 SUBMITTALS

A. Electrical Contractor shall refer to electrical submittal registry which is located at the end of this section. Sections identified within the registry indicate an overview of the products to be submitted. The Contractor shall reference each identified section for the specific items to be included in the submittal.

B. Electrical Contractor shall provide submittals for review and approval on equipment and material listed in the individual technical sections of Division 16.

C. Submittals shall clearly indicate electrical characteristics, physical dimensions and pertinent data which indicate that item

meets all requirements specified on drawings and in technical specifications. D. Each Sub-Contractor shall submit to the General Contractor for review within thirty (30) days after the date of the

contract, seven (7) sets of complete catalogue data and/or shop drawings for each item of material or piece of equipment. Catalog data shall include name of the manufacturer, catalog numbers, trade names, performance data descriptive material (sufficient to identify each item), and specify performance of the products. Shop drawings shall include specified catalogue data and shall show equipment in detail, arrangement and disposition for this particular

E. The Architect and/or Engineer checking and reviewing of the Contractor's and Sub-Contractor's drawings and/or equipment details does not relieve the Contractor or Sub-Contractors from responsibility for errors, omissions or equipment furnished in accordance with such checked or reviewed drawings. Where such errors or omissions are later discovered, they shall be made good by the respective Sub-Contractor irrespective of any review by the Architect or

1.8 SITE EXAMINATION A. Each Contractor shall, before submitting a proposal, visit and examine the site to satisfy themselves as to materials and scope of the construction, alterations and remodeling, any difficulty attending the performance of the work, storage of material, access to any and all areas, etc.

B. The submission of a proposal will be construed as evidence that such an examination has been made. Claims made subsequent to the time of submission of the proposal for labor, equipment and material required for difficulties encountered, which could have been foreseen had an examination been made, will not be recognized.

A. Contractors must have five (5) years minimum experience, has a satisfactory work resume with comparable projects listed, has a sound financial basis, and is technically competent.

B. Equipment Manufacturers must have five (5) years of successful experience, be technically competent, and be industrial 3.5 EQUIPMENT CONNECTIONS financially stable.

C. Owner reserves the right to review and determine if the Contractors and Manufacturers meet the above categories to

his satisfaction. The Owner has the authority to reject any equipment and bids if the above standards are not met.

A. Electrical Contractor shall provide a complete temporary power system for use during construction by all trades.

B. Temporary service shall be sized to handle construction equipment and temporary lighting during construction. Electrical contractor shall coordinate connection point for electrical service with General Contractor.

C. Electrical Contractor shall install a temporary lighting system for use during construction to maintain twenty (20) foot

candles indoors during working hours and five (5) foot candles outdoors around equipment storage at night. D. Temporary power system shall include all circuit breakers necessary, including ground fault interrupting breakers where required by codes. System shall also include an adequate number of receptacles, meeting OSHA requirements, for use

E. Individual trades shall furnish any extension cords and special lighting required for their work.

A. Electrical Contractor shall be responsible for providing complete, permanent and operating electrical service to the facility at the voltage, ampacity and manner indicated on the drawings.

B. Electrical Contractor shall be responsible for coordinating local utility requirements for primary ducts, transformer pads, service poles, metering, etc., in order to determine any requirements beyond work shown on drawings.

C. Electrical Contractor shall be responsible for coordinating with local utility planned routing of primary ductwork, service transformer pad, service pole locations and secondary service connection requirements prior to beginning any work.

D. Electrical Contractor shall provide Duke Energy plan showing routing of primary ductwork between point of origin and transformer pad. Plan shall provide call and bearings of duct line and be certified by Licensed Land Surveyor. Plan shall be submitted to Duke Energy and Owner in a timely fashion to prevent delay of permanent service connection.

1.11 DEBRIS, CUTTING AND PATCHING

A. Electrical Contractor shall be responsible for removing any dirt, boxes, paper or other debris present as a result of

B. Work areas shall be maintained in a clean and orderly condition at all times.

C. Electrical Contractor shall be responsible for all cutting and patching required for his work. All work shall be by

D. No more cutting shall be done than is absolutely necessary. Cutting of a structural member or exposed surface of concrete will not be permitted without written approval of the Architect and Structural Engineer.

E. Conduit openings in floor slabs shall be cut with core drill. Edges of trenches or openings in slabs shall be scribe

F. Each Sub-Contractor will be required to notify other trades in due time where he will require openings or chases in

new masonry. Each Sub-Contractor shall also set all concrete inserts and sleeves for his work in new construction.

Failing to do this, he shall cut openings for his work and patch as required at his own expense. G. All cutting and patching shall be done in a neat and workmanlike manner by men skilled in the various trades and with written permission from the Architect.

A. The Electrical Contractor shall warranty all material and labor for a period of one (1) year from the date of Owner's

acceptance except where warranties for longer terms are specified herein, such longer term to apply. B. The Electrical Contractor shall replace defective parts or equipment promptly without any cost to the Owner and done

A. Deliver, store, protect, and handle products to the project site properly identified with manufacturers identification, model number, types, grades, compliance labels, and other information needed for identification.

B. Protect products from weather, construction traffic, dirt, water chemicals, and mechanical damage by storing in original packaging.

A. Maintain an accurate set of "as built" drawings and record any deviations from contract drawings. Submit two (2) sets of drawings (marked to show all deviations) upon completion of work to General Contractor.

thereon. Special emphasis is placed on recording the exact location of all underground utilities by offset distances t

PART 2 PRODUCTS

A. Il materials and equipment installed shall be new and free of defects and shall be the product of a reputable

B. As-built drawings shall show all changes, additions, deletions, and deviations from contract drawings noted pl

B. Applicable equipment and materials shall be listed by Underwriters Laboratories and Manufactured in accordance with ASME, NEMA, ANSI and IEEE standards, and as approved by local authorities having jurisdiction as mentioned in

C. If products and materials are specified or indicated on the Drawings for a specific item or system, use those products or materials. If products and materials are not listed in either of the above, use first class products and materials, subject to approval of Shop Drawings where Shop Drawings are required or as approved in writing where

A. Provide all necessary miscellaneous steel as required for mounting, hanging or otherwise supporting panelboards, wall—mounted transformers, light fixtures, conduit, etc. installed by Electrical Contractor.

B. Supports shall be suitably fastened to structural members as approved by Architect and Structural Engineer.

A. Provide typewritten circuit directories in panels with clear plastic protection shields and mounted in card holders. Indicate circuit number, devices or equipment being serviced. Final directories shall reflect final installation, reflecting all revisions made during construction and shall reflect final "as—built" conditions.

B. Label all panels, starters, and switchboards with panel designation in one-half inch (1/2") letters and voltage in one-quarter inch (1/4") letters. Use engraved lamacoid plates with black background and white letters. Fasten plate

A. Verify final locations for rough\_ins with field measurements and with the shop drawing requirements of the actual equipment to be connected.

Follow manufacturers instructions for installing, connecting, and adjusting all equipment. Provide a copy of such instructions at the equipment during any work on the equipment. Provide all special supports, connections, wiring,

B. General: Unless otherwise indicated, hook up all equipment requiring electrical services, whether such equipment is furnished under this Section or furnished by others. Comply with the following requirements:

Work specified under this Section may be affected by work and materials specified under other Sections of these Specifications. The Contractor shall be responsible for coordination of work described under this Section with the other Sections. Verify all dimensions by field measurements.

3. Arrange for chases, slots, and openings in other building components during progress of construction, to allow for Coordinate the installation of required supporting devices and sleeves to be set in poured\_in\_place concrete and other structural components, as they are constructed. Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the

6. Coordinate connection of electrical systems with exterior underground and overhead utilities and services. Comply with requirements of governing regulations, franchised service companies, and controlling agencies. Provide required connection for each service. 7. Install systems, materials, and equipment to conform with approved submittal data, including coordination drawings,

to greatest extent possible. Conform to arrangements indicated by the Contract Documents, recognizing that portions of the Work are shown only in diagrammatic form. Where coordination requirements conflict with individual system requirements, refer conflict to the Engineer/Owner. 8. Install systems, materials, and equipment level and plumb, parallel and perpendicular to other building systems and components, where installed exposed in finished spaces.

9. Install electrical equipment to facilitate servicing, maintenance, and repair or replacement of equipmen

components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference

with other installations. 3.3 WORKMANSHIP, COOPERATION AND COORDINATION

A. All work under this section shall be completed by Workmen skilled in their respective trades. B. Workmen shall be thoroughly trained and familiar with Manufacturer's recommended methods of installation.

Any installation which does not present an appearance of the best trade practices shall be repaired, removed or replaced as directed by Owners Representative.

D. Electrical Contractor shall cooperate with other trades to obtain most practical arrangement of work.

E. Electrical Contractor shall coordinate installation with other trades to minimize interferences. "First to install" will not

A. Clean all equipment, panels, disconnects, light fixtures, device outlets and plates, raceway systems and other electrical components after construction completion and prior to Owner's acceptance.

Test complete electrical system and all components to assure proper operation. Furnish to Architect/Engineer any test results required to prove proper system operation.

A. Electrical Contractor shall connect all power wiring to any equipment furnished by Others, unless indicated otherwise.

B. Mechanical Contractor shall install all relays and control interlocks required for his equipment. Mechanical Contractor shall also furnish any magnetic starters required for his equipment to Electrical Contractor for installation by Electrical

C. Electrical Contractor shall furnish all materials (i.e. disconnect switches, junction boxes, receptacles, cords, plugs, etc.) 3.3 INSTALLATION and labor necessary to complete final connections to all equipment.

D. Electrical Contractor shall be responsible for making final connection to all Owner furnished equipment indicated on plans. Contractor shall check list from Owner with drawings and inform Owner of any discrepancies. E. Electrical Contractor shall obtain shop drawings and/or cut sheets for all equipment supplied by others which requires

electrical connections prior to rough—in. Electrical Contractor shall confirm that electrical services provided for equipment on drawings are correct for equipment to be installed. Inform Engineer of any discrepancies. Any work installed which does not match the requirements of the equipment to be installed shall be removed at the expense of F. Before connecting any piece of equipment, check the name plate data against the information shown on the Drawings and call to the attention of the Engineer any discrepancies thereto. Any equipment installed which does not meet the requirements of the equipment to be installed shall be removed at the expense of the Contractor.

3.6 ELECTRICAL FOR HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT A. The Mechanical Contractor shall furnish and install all air conditioning equipment, air handling units, exhaust fans, etc. The Mechanical Contractor shall provide starters for all HVAC equipment requiring starters, unless otherwise indicated. The Electrical Contractor shall mount and connect all starters and shall furnish all branch circuit winng, motor disconnects, labor and final electrical connections as required for proper operation. Mechanical Contractor shall furnish and install all controls and control wiring, unless otherwise indicated on drawings.

A. All painting of electrical system shall be by others.

END OF SECTION

B. Contractor shall be responsible for all touch-up painting. Touch-up painting shall be per manufacturers

SECTION 16B - GROUNDING AND BONDING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division—1 General Requirements and Specification Sections, apply to the work specified in this Section.

A. This Section includes grounding of electrical systems and equipment. Grounding requirements specified in this Section

1.3 SUBMITTALS

may be supplemented by special requirements of systems described in other Sections.

B. Division-16 Electrical General Requirements section applies to the work specified in this section.

A. Product Data: For the following:

Ground bus, pre-drilled. B. Qualification Data: For firms and persons specified in "Quality Assurance" Article. C. Field Test Reports: Submit written test reports to include the following:

2. Test results that comply with requirements

3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use. Comply with UL 467.

PART 2 - PRODUCTS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following

Grounding Conductors, Cables, Connectors, and Rods:

 a. Apache Grounding/Erico Inc. b. Chance/Hubbell.

c. Copperweld Corp.

d. Erico Inc.; Electrical Products Group.

Superior Grounding Systems, Inc.

Thomas & Betts, Electrical.

f. 0-Z/Gedney Co.; a business of the EGS Electrical Group.

g. Raco, Inc.; Division of Hubbell h. Salisbury: W. H. Salisbury & Co.

2.2 GROUNDING CONDUCTORS A. For insulated conductors, comply with Division 16 Section "Conductors and Cables."

B. Material: Copper C. Equipment Grounding Conductors: Insulated with green—colored insulation.

D. Isolated Ground Conductors: Insulated with green-colored insulation with yellow stripe. On feeders with isolated ground, use colored tape, alternating bands of green and yellow tape to provide a minimum of three bands of green

. Grounding Electrode Conductors: Stranded cable. Underground Conductors: Bare, tinned, stranded, unless otherwise indicated.

B. Bolted Connectors: Bolted-pressure-type connectors, or compression type.

 Solid Conductors: ASTM B 3. 2. Assembly of Stranded Conductors: ASTM B 8.

masonry, crushed stone, and similar materials.

G. Bare Copper Conductors: Comply with the following:

3. Tinned Conductors: ASTM B 33. H. Copper Bonding Conductors: As follows:

1. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG copper conductor, 1/4 inch (6.4 mm) in diameter

3. Bonding Jumper: Bare copper tape, braided bare copper conductors, terminated with copper ferrules; 1-5/8 inches (42 mm) wide and 1/16 inch (1.5 mm) thick.

4. Tinned Bonding Jumper: Tinned-copper tape, braided copper conductors, terminated with copper ferrules; 1-5/8 inches (42 mm) wide and 1/16 inch (1.5 mm) thick. Grounding Bus: Bare, annealed copper bars of rectangular 1/4" cross section, with insulators, pre-drilled.

A. Comply with IEEE 837 and UL 467; listed for use for specific types, sizes, and combinations of conductors and

C. Welded Connectors: Exothermic-welded type, in kit form, and selected per manufacturer's written instructions

A. Use only copper conductors for both insulated and bare grounding conductors in direct contact with earth, concrete, END OF SECTION

B. In raceways, use insulated equipment grounding conductors. C. Exothermic-Welded Connections: Use for connections to structural steel and for underground connections, except those at test wells. Equipment Grounding Conductor Terminations: Use bolted pressure clamps.

E. Grounding Bus: Install in Data Center Rooms, in rooms housing service equipment, and elsewhere as indicated. 1. Use insulated spacer; space 1 inch (25.4 mm) from wall and support from wall 6 inches (150 mm) above finished floor, unless otherwise indicated.

3.2 EQUIPMENT GROUNDING CONDUCTORS Comply with NFPA 70, Article 250, for types, sizes, and quantities of equipment grounding conductors, unless specific types, larger sizes, or more conductors than required by NFPA 70 are indicated.

height above the floor.

B. Install equipment grounding conductors in all feeders and circuits. C. Install insulated equipment grounding conductor with circuit conductors for the following items, in addition to those

2. Lighting circuits. Receptacle circuits.

1. Feeders and branch circuits.

4. Single-phase motor and appliance branch circuits.

5. Three-phase motor and appliance branch circuits.

6. Flexible raceway runs. 7. Armored and metal-clad cable runs. D. Computer Outlet Circuits: Install insulated equipment grounding conductor in branch-circuit runs from computer-are power panels or power-distribution units.

Signal and Communication Systems: For telephone, alarm, voice and data, and other communication systems, provide No. 4 AWG minimum insulated grounding conductor in raceway from grounding electrode system to each service location, terminal cabinet, wiring closet, and central equipment location. 1. Service and Central Equipment Locations and Wiring Closets: Terminate grounding conductor on

1/4-by-2-by-12-inch (6.4-by-50-by-300-mm) grounding bus. 2. Terminal Cabinets: Terminate grounding conductor on cabinet grounding terminal. 3. Cable Tray: Provide an insulated #10 awg grounding conductor along the full length of the cable tray. Bond at all

A. Bond interior metal piping systems and metal air ducts to equipment grounding conductors of associated pumps,

fans, blowers, electric heaters, and air cleaners. Use braided-type bonding straps A. General: Make connections so galvanic action or electrolysis possibility is minimized. Select connectors, connection

hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible. 1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer to order of galvanic series. 2. Make connections with clean, bare metal at points of contact.

3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps. 4. Make aluminum-to-galvanized steel connections with tin-plated copper jumpers and mechanical clamps. 5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to 2.2 SLEEVES FOR RACEWAYS

B. Exothermic-Welded Connections: Comply with manufacturer's written instructions. Welds that are puffed up or that

show convex surfaces indicating improper cleaning are not acceptable. C. Equipment Grounding Conductor Terminations: For No. 8 AWG and larger, use pressure—type grounding lugs. No. 10 AWG and smaller grounding conductors may be terminated with winged pressure-type connectors.

D. Noncontact Metal Raceway Terminations: If metallic raceways terminate at metal housings without mechanical and electrical connection to housing, terminate each conduit with a grounding bushing. Connect grounding bushings with a bare grounding conductor to grounding bus or terminal in housing. Bond electrically noncontinuous conduits at

entrances and exits with grounding bushings and bare grounding conductors, unless otherwise indicated. E. Compression—Type Connections: Use hydraulic compression tools to provide correct circumferential pressure for compression connectors. Use tools and dies recommended by connector manufacturer. Provide embossing die code or other standard method to make a visible indication that a connector has been adequately compressed on

. Moisture Protection: If insulated grounding conductors are connected to ground rods or grounding buses, insulate entire area of connection and seal against moisture penetration of insulation and cable.

A. Testing: Perform the following field quality-control testing:

1. After installing grounding system but before permanent electrical circuitry has been energized, test for compliance

2. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, and at ground test wells. Measure ground resistance not less than two fu days after the last trace of precipitation, and without the soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance Perform tests, by the fall-of-potential method according to IEEE 81. Electrical service ground and generator

3. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Architect promptly and include recommendations to reduce ground resistance.

SECTION 16C - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

A. This Section includes the following:

. Building wires and cables rated 600 V and less 2. Connectors, splices, and terminations rated 600 V and less. 3. Sleeves and sleeve seals for cables

1.2 SUBMITTALS A. Product Data: For each type of product indicated.

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

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

B. Comply with NFPA 70. PART 2 - PRODUCTS

2.2 CONNECTORS AND SPLICES

B. Field quality-control test reports.

2.1 CONDUCTORS AND CABLES

A. Copper Conductors: Comply with NEMA WC 70.

B. Conductor Insulation: Comply with NEMA WC 70 for Types THHN—THWN.

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following: 1. AFC Cable Systems, Inc. 2. Hubbell Power Systems, Inc. 0-Z/Gedney; EGS Electrical Group LLC

3M; Electrical Products Division.

5. Tyco Electronics Corp. 3. Description: Factory—fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

A. Feeders: Copper Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larg B. Branch Circuits: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger

3.2 CONDUCTOR INSULATION APPLICATIONS AND WIRING METHODS Exposed Feeders: Type THHN-THWN, single conductors in raceway.

Feeders Concealed in Ceilings, Walls, Partitions, and Crawlspaces: Type THHN-THWN, single conductors in raceway.

Exposed Branch Circuits: Type THHN-THWN, single conductors in raceway.

D. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN—THWN, single conductors in raceway.

Class 1 Control Circuits: Type THHN—THWN, in raceway.

3.3 INSTALLATION OF CONDUCTORS AND CABLES A. Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated.

B. Use manufacturer—approved pulling compound or lubricant where necessary; compound used must not deteriorate

conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure D. Identify and color-code conductors and cables according to Division 26 Section "Identification for Electrical Systems."

Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical

strength and insulation ratings than unspliced conductors. F. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches (150 mm) of slack

SECTION 16D - RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

1.1 RELATED DOCUMENTS A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

PART 1 - GENERAL

2. At doors, route the bus up to the top of the door frame, across the top of the doorway, and down to the specified 1.2 SUMMARY

A. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.

. EMT: Electrical metallic tubing. B. EPDM: Ethylene-propylene-diene terpolymer rubber C. FMC: Flexible metal conduit.

D. IMC: Intermediate metal conduit. E. LFMC: Liquidtiaht flexible metal condui F. LFNC: Liquidtight flexible nonmetallic conduit G. NBR: Acrylonitrile—butadiene rubber.

H. RNC: Rigid nonmetallic conduit. 1.4 SUBMITTALS A. Product Data: For each type of raceway, surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures,

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

agency acceptable to authorities having jurisdiction, and marked for intended use. PART 2 - PRODUCTS

. AFC Cable Systems, Inc.

Wheatland Tube Company.

2.1 METAL CONDUIT AND TUBING A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

5. Allied Tube & Conduit; a Tyco International Ltd. Co. 4. Anamet Electrical, Inc.; Anaconda Metal Hose 5. Electri-Flex Co. Maverick Tube Corporation

REQUIREMENTS BY OWNER

O—Z Gedney; a unit of General Signal.

B. Rigid Steel Conduit: ANSI C80.1. C. IMC: ANSI C80.6. D. EMT: ANSI C80.3. LFMC: Flexible steel conduit with PVC jacket. F. Fittings for Conduit (Including all Types and Flexible and Liquidtight), EMT, and Cable: NEMA FB 1; listed for type and

size raceway with which used, and for application and environment in which installed.

Fittings for EMT: Steel set-screw or compression type.

to lubricate and protect threaded raceway joints from corrosion and enhance their conductivity.

A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends. B. Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.

C. Sleeves for Rectangular Openings: Galvanized sheet steel with minimum 0.052— or 0.138—inch thickness as indicated and of length to suit application.

G. Joint Compound for Rigid Steel Conduit or IMC: Listed for use in cable connector assemblies, and compounded for use

**NOTE**: ALL DIMENSIONS ARE TO FACE OF STUD **NOTE**: GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF ALL SUB TRADES AND

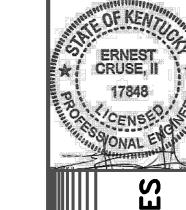
**NOTE**: ELECTRICAL, HVAC AND PLUMBING TO BE

CODES. GENERAL CONTRACTOR TO COORDINATE

RELOCATED PER FEDERAL, STATE AND LOCAL

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PROJECT NO: 20-4017 **DRAWN BY** 

03-03-2021

DATE:

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A. Deliver in sections or lengths that can be moved past obstructions in delivery path.

B. Store indoors in clean dry space with uniform temperature to prevent condensation. Protect from exposure to dirt, umes, water, corrosive substances, and physical damage. C. If stored in greas subjected to weather, cover switchboards to provide protection from weather, dirt, dust, corrosive

#### substances, and physical damage. Remove loose packing and flammable materials from inside switchboards: install electric heating (250 W per section) to prevent condensation D. Handle switchboards according to NEMA PB 2.1 and NECA 400.

### A. Installation Pathway: Remove and replace access fencing, doors, lift—out panels, and structures to provide pathway

B. Environmental Limitations: Rate equipment for continuous operation under the following conditions, unless otherwise

1. Ambient Temperature: Not exceeding 104 deg F (40 deg C). 2. Altitude: Not exceeding 6600 feet (2000 m).

C. Service Conditions: NEMA PB 2, usual service conditions, as follows 1. Ambient temperatures within limits specified.

2. Altitude not exceeding 6600 feet (2000 m).

A. Coordinate layout and installation of switchboards and components with other construction including conduit, piping, equipment, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment B. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and

A. Manufacturer warrants equipment to be free from defects in materials and workmanship for 1-year from date of Owner's acceptance.

### 1.12 MAINTENANCE SERVICES

A. Furnish complete service and maintenance for switchboards for 1-year from date of substantial completion.

### 1.13 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70. B. Furnish products listed and classified by Underwriters Laboratories, Inc., as suitable for purpose specified and shown.

### PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified. 2.02 MANUFACTURED UNITS

A. Manufacturers: 1. Eaton Corporation; Cutler-Hammer Products.

Sauare D. 3. Siemens Energy & Automation, Inc.

4. General Electric Co.; Electrical Distribution & Protection Div.

B. Front-Connected, Front-Accessible Switchboard: Panel-mounted main device, panel-mounted branches, and sections

C. Front- and Side-Accessible Switchboard: Fixed, individually mounted main device; panel-mounted branches; and

sections rear aligned. D. Nominal System Voltage: As indicated on drawings

E. Main-Bus Continuous: As indicated on drawings. F. Enclosure: Steel, NEMA 250. Type 1 or 3R as indicated on drawings.

G. Enclosure Finish for Outdoor Units: Factory-applied finish in manufacturer's standard color, undersurfaces treated with

H. Enclosure Finish for Indoor Units: Factory-applied finish in manufacturer's standard gray finish over a rust-inhibiting

primer on treated metal surface. I. Barriers: Between adjacent switchboard sections. J. Space Heaters: Factory-installed electric space heaters of sufficient wattage in each vertical section to maintain

enclosure temperature above expected dew point. 1. Space—Heater Control: Thermostats to maintain temperature of each section above expected dew point

2. Space-Heater Power Source: Transformer, factory installed in switchboard. K. Utility Metering Compartment: Fabricated compartment and section complying with utility company's requirements. separate vertical section is required for utility metering, match and align with basic switchboard.

. Bus Transition and Incoming Pull Sections: Matched and aligned with basic switchboard. M. Hinged Front Panels: Allow access to circuit breaker, metering, accessory, and blank compartments.

N. Pull Box on Top of Switchboard: Adequate ventilation to maintain temperature in pull box within same limits as switchboard. Set back from front to clear circuit—breaker removal mechanism.

3. Removable covers shall form top, front, and sides. Top covers at rear shall be easily removable for drilling and 4. Bottom shall be insulating, fire-resistive material with separate holes for cable drops into switchboard.

5. Cable supports shall be arranged to facilitate cabling and adequate to support cables indicated, including those for

O. Buses and Connections: Three phase, four wire, unless otherwise indicated. 1. Phase- and Neutral-Bus Material: Hard-drawn copper of 98 percent conductivity with feeder circuit-breaker line

2. Phase— and Neutral—Bus Material: Tin—plated, high—strength, electrical—grade aluminum alloy with copper— or tin-plated, aluminum circuit-breaker line connections.

3. Phase— and Neutral-Bus Material: Hard-drawn copper of 98 percent conductivity or tin-plated, high-strength, electrical-grade aluminum alloy

a. If bus is aluminum, use copper- or tin-plated aluminum for circuit-breaker line connections. b. If bus is copper, use copper for feeder circuit-breaker line connections

4. Load Terminals: Insulated, rigidly braced, silver—plated, copper runback bus extensions equipped with pressure connectors for outgoing circuit conductors. Provide load terminals for future circuit—breaker positions at full ampere

5. Ground Bus: 1/4-by-2-inch- (6-by-50-mm-) minimum-size, hard-drawn copper of 98 percent conductivity, equipped with pressure connectors for feeder and branch-circuit ground conductors. For busway feeders, extend insulated equipment grounding cable to busway ground connection and support cable at intervals in vertical run. 6. Contact Surfaces of Buses: Silver plated.

7. Main Phase Buses, Neutral Buses, and Equipment Ground Buses: Uniform capacity for entire length of switchboard's main and distribution sections. Provide for future extensions from both ends. 8. Isolation Barrier Access Provisions: Permit checking of bus-bolt tightness. 9. Neutral Buses: 50 percent of the ampacity of phase buses, unless otherwise indicated, equipped with pressure

connectors for outgoing circuit neutral cables. Bus extensions for busway feeder neutral bus are braced.

10. Neutral Buses: 100 percent of the ampacity of phase buses, unless otherwise indicated, equipped with pressure connectors for outgoing circuit neutral cables. Bus extensions for busway feeder neutral bus are braced. P. Future Devices: Equip compartments with mounting brackets, supports, bus connections, and appurtenances at full rating of circuit-breaker compartment.

2.03 OVERCURRENT PROTECTIVE DEVICES

A. Molded-Case Circuit Breaker: NEMA AB 3, with interrupting capacity to meet available fault currents. Thermal—Magnetic Circuit Breakers: Inverse time—current element for low—level overloads, and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger. 2. Adjustable Instantaneous—Trip Circuit Breakers: Magnetic trip element with front—mounted, field—adjustable trip setting.

3. Electronic trip-unit circuit breakers shall have RMS sensing, field-replaceable rating plug, and the following

field-adjustable settings: a. Instantaneous trip.

b. Long- and short-time pickup levels.

c. Long- and short-time time adjustments d. Ground-fault pickup level, time delay, and 12t response.

4. Current-Limiting Circuit Breakers: Frame sizes 400 A and smaller; let-through ratings less than NEMA FU 1, RK-5. 5. Integrally Fused Circuit Breakers: Thermal-magnetic trip element with integral limiter-style fuse listed for use with circuit breaker; trip activation on fuse opening or on opening of fuse compartment door.

6. GFCI Circuit Breakers: Single- and two-pole configurations with 5-mA trip sensitivity. Molded-Case Circuit-Breaker Features and Accessories: Standard frame sizes, trip ratings, and number of poles.

 Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor material. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HACR for heating, air—conditioning, and refrigerating equipment.

 Ground—Fault Protection: Integrally mounted relay and trip unit with adjustable pickup and time—delay settings, push—to—test feature, and ground—fault indicator. 4. Communication Capability: Circuit—breaker—mounted communication module with functions and features compatible with power monitoring and control system, specified in Division 16 Section "Electrical Power Monitoring and Control." 5. Shunt Trip: 120–V trip coil energized from separate circuit, set to trip at [55] [75] percent of rated voltage.

A. Single and combination types to match corresponding wiring devices. 7. Auxiliary Contacts: One SPDT switch with "a" and "b" contacts; "a" contacts mimic circuit-breaker contacts, "b' contacts operate in reverse of circuit—breaker contacts. 8. Key Interlock Kit: Externally mounted to prohibit circuit-breaker operation; key shall be removable only when circuit

9. Zone-Selective Interlocking: Integral with electronic trip unit; for interlocking ground-fault protection function.

C. Fuses are specified in Division 16 Section "Fuses."

6. Undervoltage Trip: Set to operate at 35 to 75 percent of rated voltage without intentional time delay.

A. Instrument Transformers: NEMA El 21.1, IEEE C57.13, and the following:

1. Potential Transformers: Secondary voltage rating of 120 V and NEMA accuracy class of 0.3 with burdens of W, X, 2. Current Transformers: Ratios shall be as indicated with accuracy class and burden suitable for connected relays,

3. Control-Power Transformers: Dry type, mounted in separate compartments for units larger than 3 kV. 4. Current Transformers for Neutral and Ground-Fault Current Sensing: Connect secondaries to ground overcurrent relays to provide selective tripping of main and tie circuit breaker. Coordinate with feeder circuit-breaker ground-fault protection.

A. Control Circuits: 120 V, supplied through secondary disconnecting devices from control-power transformer. B. Electrically Interlocked Main and Tie Circuit Breakers: Two control-power transformers in separate compartments, with interlocking relays, connected to the primary side of each control-power transformer at the line side of the associated main circuit breaker. 120-V secondaries connected through automatic transfer relays to ensure a

C. Control-Power Fuses: Primary and secondary fuses for current-limiting and overload protection of transformer and

fuses for protection of control circuits. D. Control Wiring: Factory installed, with bundling, lacing, and protection included. Provide flexible conductors for No. 8 AWG and smaller, for conductors across hinges, and for conductors for interconnections between shipping units.

2.06 IDENTIFICATION

A. Mimic Bus: Continuously integrated mimic bus factory applied to front of switchboard. Arrange in single-line diagram format, using symbols and letter designations consistent with final mimic—bus diagram. Coordinate mimic—bus segments with devices in switchboard sections to which they are applied. Produce a concise visual presentation of principal switchboard components and connections.

B. Presentation Media: Painted graphics in color contrasting with background color to represent bus and components, complete with lettered designations

### PART 3 - EXECUTION

A. Examine elements and surfaces to receive switchboards for compliance with installation tolerances and other conditions B. Proceed with installation only after unsatisfactory conditions have been corrected.

A. Install switchboards and accessories according to NEMA PB 2.1 and NECA 40. B. Install and anchor switchboards level on concrete bases, 4-inch (100-mm) nominal thickness. Concrete base is

specified in Division 16 Section "Basic Electrical Materials and Methods," and concrete materials and installation 1. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on

18—inch (450—mm) centers around full perimeter of base. 2. For switchboards, install epoxy-coated anchor bolts that extend through concrete base and anchor into structural

3. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished

4. Install anchor bolts to elevations required for proper attachment to switchboards. C. Comply with mounting and anchoring requirements specified in Division 16 Section "Seismic Controls for Electrical

D. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from switchboard units and components. E. Operating Instructions: Frame and mount the printed basic operating instructions for switchboards, including control and key interlocking sequences and emergency procedures. Fabricate frame of finished wood or metal and cover instructions with clear acrylic plastic. Mount on front of switchboards.

F. Install overcurrent protective devices, transient voltage suppression devices, and instrumentation 1. Set field-adjustable switches and circuit-breaker trip ranges.

3.03 IDENTIFICATION

mounted with corrosion-resistant screws

G. Install spare-fuse cabinet.

A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs as specified in Division 16 Section "Electrical Identification. B. Switchboard Nameplates: Label each switchboard compartment with engraved metal or laminated-plastic nameplate

3.04 FIELD QUALITY CONTROL

new units and retest.

END OF SECTION

A. Prepare for acceptance tests as follows: 1. Test insulation resistance for each switchboard bus, component, connecting supply, feeder, and control circuit. 2. Test continuity of each circuit.

B. Perform the following field tests and inspections and prepare test reports: . Perform each electrical test and visual and mechanical inspection stated in NETA ATS. Sections 7.1. 7.5. 7.6. 7.9. 7.10, 7.11, and 7.14 as appropriate. Certify compliance with test parameters.

A. Engage a factory—authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain switchboards, overcurrent protective devices, instrumentation, and accessories. Refer to Division 1 Section "Closeout Procedures and Demonstration and Training."

2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with

PART 1 - GENERAL 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01

Specification Sections, apply to this Section.

A. This Section includes the following: Receptacles, receptacles with integral GFCI, and associated device plates 2. Snap switches.

 Wall—switch and ceiling occupancy sensors. 4. poke-through assemblies

1.3 SUBMITTALS

Product Data: For each type of product indicated. Shop Drawings: List of legends and description of materials and process used for premarking wall plates C. Operation and Maintenance Data: For wiring devices to include in all manufacturers' packing label warnings and instruction manuals that include labeling conditions.

A. Source Limitations: Obtain each type of wiring device and associated wall plate through one source from a single

manufacturer. Insofar as they are available, obtain all wiring devices and associated wall plates from a single manufacturer and one source. B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
 C. Comply with NFPA 70.

2.1 MANUFACTURERS

Receptacles for Owner-Furnished Equipment: Match plug configurations

A. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles: 1. Cooper Wiring Devices; a division of Cooper Industries, Inc. (Cooper)

Pass & Seymour/Legrand; Wiring Devices & Accessories (Pass & Seymour).

A. Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 configuration 5-20R, and UL 498 1. Products: Subject to compliance with requirements, provide one of the following: a. Cooper; 5351 (single), 5352 (duplex).

b. Hubbell; HBL5351 (single), CR5352 (duplex) c. Pass & Seymour; 5381 (single), 5352 (duplex)

2. Hubbell Incorporated; Wiring Device—Kellems (Hubbell).

2.3 GFCI RECEPTACLES

A. General Description: Straight blade, feed—through type. Comply with NEMA WD 1, NEMA WD 6, UL 498, and UL 943, Class A, and include indicator light that is lighted when device is tripped.

B. Duplex GFCI Convenience Receptacles, 125 V, 20 A: Products: Subject to compliance with requirements, provide one of the following

b. Pass & Seymour; 2084. c. Hubbell; GFR8300.

A. Comply with NEMA WD 1 and UL 2 B. Switches, 120/277 V, 20 A:

. Products: Subject to compliance with requirements, provide one of the following: a. Cooper; 2221 (single pole), 2222 (two pole), 2223 (three way), 2224 (four way). b. Hubbell; CS1221 (single pole), CS1222 (two pole), CS1223 (three way), CS1224 (four way). c. Pass & Seymour; 20AC1 (single pole), 20AC2 (two pole), 20AC3 (three way), 20AC4 (four way).

locations.

2.6 SAFETY SWITCHES

1. Plate-Securing Screws: Metal with head color to match plate finish. 2. Material for Finished Spaces: : Smooth, high-impact thermoplastic. 3. Material for Unfinished Spaces: Galvanized steel. 4. Material for Damp Locations: Cast aluminum with spring-loaded lift cover, and listed and labeled for use in "wet

A. Characteristics 1. Enclosure — Heavy Duty, NEMA Type 1, 12 or 3R, as indicated on drawings, fabricated from code gauge steel.

Finish in gray enamel applied by baking process after steel has been thoroughly degreased. NEMA 3R switches shall

2. Provide provisions for three (3) padlocks when handle is in the "OFF" position.

3. Switchblades to open in a forward position for visible indication that the switch is de-energized.

4. Rejection type fuses of the size and voltage characteristics as indicated.

B. Approved Manufacturers: Square D, Siemens and General Electric.

2.7 MOTOR RATED SWITCHES

A. Switches provided to serve as motor disconnects for furnace motors shall be single pole, 120 VAC, togale switch type manual switch with heater elements. Switch shall be provided with heater elements providing Class 20 protection. Provide Allen Bradley 600-TAX4 with type W heater elements or equal. Contractor shall size and submit heater elements based upon furnace full load amps.

have 3R rating clearly displayed. Altered NEMA 12 switches will not be accepted as substitute for 3R rating

2.8 FINISHES

Color: Wiring device catalog numbers in Section Text do not designate device color. 1. Wiring Devices and associated coverplates Connected to Normal Power System: WHITE or As selected by Owner or Architect, unless otherwise indicated or required by NFPA 70 or device listing. Device plate color shall match device

2. Wiring Devices and associated coverplates Connected to Emergency Power System shall be red.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with NECA 1, including the mounting heights listed in that standard, unless otherwise noted B. Coordination with Other Trades

1. Install device boxes in brick or block walls so that the cover plate does not cross a joint unless the joint is troweled flush with the face of the wall. 2. Install wiring devices after all wall preparation, including painting, is complete.

C. Conductors: 1. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire. 2. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without piatails.

1. Replace all devices that have been in temporary use during construction or that show signs that they were

installed before building finishing operations were complete 2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.

3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment 4. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length. 5. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for

6. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes, allowing metal—to—metal contact.

E. Contractor shall coordinate exact location of poke-through with Architect and furniture supplier F. Receptacle Orientation:

1. Install ground pin of vertically mounted receptacles down, and on horizontally mounted receptacles to the right. G. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

3.2 FIELD QUALITY CONTROL

A. Tests for Convenience Receptacles: 1. Line Voltage: Acceptable range is 105 to 132 V.

2. Ground Impedance: Values of up to 2 ohms are acceptable. 3. GFCI Trip: Test for tripping values specified in UL 1436 and UL 943. 4. Using the test plug, verify that the device and its outlet box are securely mounted

END OF SECTION

SECTION 16L - LIGHTING

A. This Section includes the following:

1.1 SUMMARY

PART 1 — GENERAL

 Interior lighting fixtures, lamps, and ballasts Exit signs.

1.2 SUBMITTALS

A. Product Data: For each type of lighting fixture, arranged in order of fixture designation. Include data on features, B. Shop Drawings: Show details of nonstandard or custom lighting fixtures. Indicate dimensions, weights, methods of field

1.3 QUALITY ASSURANCE

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

PART 2 - PRODUCTS

2.1 MANUFACTURERS A. In Interior Lighting Fixture Schedule where titles below are column or row headings that introduce lists, the following requirements apply to product selection:

2.2 LIGHTING FIXTURES AND COMPONENTS, GENERAL REQUIREMENTS

A. Recessed Fixtures: Comply with NEMA LE 4 for ceiling compatibility for recessed fixtures.

B. Fluorescent Fixtures: Comply with UL 1598. Where LER is specified, test according to NEMA LE 5 and NEMA LE 5A as

1. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified

applicable.
. Sheet Metal Components: Steel, unless otherwise indicated. Form and support to prevent warping and sagging. D. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position. Reflecting surfaces shall have minimum reflectance as follows, unless otherwise indicated:

. Specular Surfaces: 83 percent. 5. Diffusing Specular Surfaces: 75 percent. 4. Laminated Silver Metallized Film: 90 percent.

White Surfaces: 85 percent.

A. Internally Lighted Signs: Comply with UL 924; for sign colors, visibility, luminance, and lettering size, comply with authorities having jurisdiction.

1. Lamps for AC Operation: LEDs, 70,000 hours minimum rated lamp life.

A. Approved Manufacturers Osram Sylvania.
 Philips.

. General Electric. B. T8 Rapid-Start low-mercury Fluorescent Lamps: Rated 32 W maximum, nominal length 48 inches. 2800 initial lumens (minimum), CRI 82 (minimum), color temperature 3500 K, and average rated life 20,000 hours, unless otherwise

2.6 LIGHTING FIXTURE SUPPORT COMPONENTS

A. Single—Stem Hangers: 1/2—inch steel tubing with swivel ball fittings and ceiling canopy. Finish same as fixture. B. Twin-Stem Hangers: Two, 1/2-inch steel tubes with single canopy designed to mount a single fixture. Finish same as

C. Wires: ASTM A 641/A 641M, Class 3, soft temper, zinc-coated steel, 12 gage.

D. Rod Hangers: 3/16-inch minimum diameter, cadmium-plated, threaded steel rod

PART 3 - EXECUTION 3.1 INSTALLATION

A. All equipment, wiring and installation shall be in accordance with the National Electrical Code. applicable local codes. and accepted industry standard of care and practice, and shall be thermally protected where necessary and shall not void any UL listings or labels. This shall include the integration of lighting equipment and controls. B. Install light fixtures and equipment at locations and heights as indicated, in accordance with fixture manufacturer's written

instructions and recommendations, applicable requirements of NEC, NECA's "Standard of Installation", NEMA standards, and with recognized industry practices to ensure that light fixtures fulfill requirements. 2. Set light fixtures level, plumb and square with ceiling and walls.
2. Seture all fixtures to structural support members of building. Provide all steel supports necessary for lighting fixtures in addition to those specified under general building construction.

addition to those specified under general building construction.

E. Support light fixtures independent of ceiling framing.

F. Support surface mounted light fixtures greater than 2 feet in length at a point in addition to the outlet box fixture stud.

G. Exposed Grid Ceilings: Support surface—mounted light fixtures on grid ceiling directly from building structure.

H. Fasten light fixtures securely to indicated structural supports; and ensure that pendant fixtures are plumb and level.

Provide individually mounted pendant fixtures longer than 2 feet with twin stem hangers. Provide stem hanger with ball alianers and provisions for minimum one inch vertical adjustment. Mount continuous rows of fixtures with an additional stem hanger greater than number of light fixtures in the row.

Fluorescent light fixtures installed in lay—in ceilings shall be supported by additional wire support at two corners attached

to ceiling grid, and anchored to structural member. This additional wire support shall be the responsibility of the Electrical Contractor and is not considered part of general grid support.

J. Install recessed light fixtures using accessories and firestopping materials to meet regulatory requirements for fire rating.

K. Install clips to secure recessed grid—supported light fixtures in place.

L. Install wall—mounted light fixtures at height as scheduled.

M. Install accessories furnished with each light fixture.

N. Connect recessed fixtures with flexible metallic conduit of approximately 6—feet in length to an accessible junction box above ceiling.

O. Make wiring connections to branch circuit using building wire with insulation suitable for temperature conditions within light

P. Install surface-mounted exit signs plumb and adjust to align with building lines and with each other. Secure to prevent Q. Air—Handling Lighting Fixtures: Install with dampers closed and ready for adjustment. R. Light fixture whips shall be supported from the building structure. Do not clip to lay-in ceiling support wires.

 A. Inspect each installed fixture for damage. Replace damaged fixtures and components.
 B. Operate each light fixture after installation and connection. Inspect for proper connection and operation.
 C. Reballast light fixtures having failed ballasts at Substantial Completion. ). Relamp light fixtures and exit signs having failed lamps or which are observed to be noticeably dimmed, as judged by

Architect or Engineer, at Substantial Completion. E. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery and retransfer to normal.

A. All light fixtures and accessories shall be thoroughly cleaned after being installed. All fingerprints, dirt, tar, smudges,

3.2 FIELD QUALITY CONTROL

drywall mud and dust, etc. shall be removed by the Contractor from the light fixture bodies and lens/louver material prior to final acceptance. All reflectors shall be free of paint other than factory - applied, if any. All optical reflectors, cones and lenses shall be cleaned only according to manufacturers' instructions. END OF SECTION

**NOTE**: ALL DIMENSIONS ARE TO FACE OF STUD **NOTE**: GENERAL CONTRACTOR RESPONSIBLE FOR

CODES. GENERAL CONTRACTOR TO COORDINATE

COORDINATION OF ALL SUB TRADES AND

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PROJECT NO: 20-4017 **DRAWN BY** 

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#### 01000 GENERAL

- A. THESE DRAWINGS AND SPECIFICATIONS ARE FOR GENERAL GUIDANCE, WITH THE UNDERSTANDING THAT THE OWNER WILL NEGOTIATE DIRECTLY WITH A CONTRACTOR FOR PROPER EXECUTION OF WORK TO ASSURE COMPLETENESS AND CODE COMPLIANCE.
- B. ALL CONTRACTORS ARE TO GUARANTEE THEIR WORK FOR A MINIMUM OF ONE YEAR FROM DATE OF ACCEPTANCE AND TURNOVER OF A COMPLETED PROJECT. LONGER GUARANTEES ARE REQUIRED WHERE SPECIFIED ELSEWHERE IN THESE DOCUMENTS.
- C. CONTRACTOR TO VERIFY THE INFORMATION CONTAINED IN THESE PLANS IN FIELD (V.I.F.) AND IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
- D. THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THESE CONTRACT DOCUMENTS AND SHALL AT ONCE REPORT AND DISCOVERED ITEMS TO THE OWNER AND ARCHITECT ANY ERRORS, INCONSISTENCY, OR OMISSIONS THAT CANNOT BE RESOLVED BY STANDARD INDUSTRY PRACTICES. DO NOT PROCEED WITH WORK UNTIL CLARIFICATIONS HAVE BEEN MADE BY THE ARCHITECT AND NOTIFICATION HAS BEEN GIVEN TO PROCEED
- E. WHERE DRAWINGS DO NOT SPECIFICALLY SHOW HOW WORK IS TO BE EXECUTED, THE SUBCONTRACTOR RESPONSIBLE FOR THE WORK WILL BE RESPONSIBLE FOR FIGURING OUT AND BIDDING AN ACCEPTABLE INDUSTRY STANDARD METHOD OF COMPLETING THE WORK.
- F. WHERE PLANS AND SPECIFICATIONS CONFLICT, SPECIFICATIONS SHALL SUPERSEDE PLANS. WHERE PLANS AND DETAILS CONFLICT, THE MORE DETAILED (LARGER SCALED) ITEM WILL • TAKE PRECEDENCE. IF IT IS UNCLEAR AS TO THE INTENT OF THE WORK DUE TO THE. CONFLICT, NOTIFY THE ARCHITECT IMMEDIATELY BEFORE PROCEEDING.
- G.CONTRACTORS ARE NOT TO SCALE THE PLANS FOR MISSING OR UNCLEAR INFORMATION. WHERE PLANS ARE UNCLEAR, VERIFY WITH ARCHITECT BEFORE PROCEEDING.
- H. CONTRACTOR'S BIDS ARE TO BE COMPLETE AND TO INCLUDE ALL MATERIAL, LABOR, AND FACILITIES REQUIRED TO COMPLETE THE WORK SHOWN ON DRAWINGS AND SPECIFIED .
- I. ALL SUBCONTRACTOR QUESTIONS CONCERNING BIDDING, THE DRAWINGS, OR SITE VISITS ulletSHALL BE DIRECTED TO THE GENERAL CONTRACTOR
- J. ALL SUBCONTRACTORS SHALL OBTAIN ANY SPECIFIC PERMITS AND CODE REVIEW FOR THEIR TRADE. GENERAL CONTRACTOR WILL OBTAIN OVERALL CONSTRUCTION PERMIT.
- K. THE OWNERS MAY HAVE OTHER CONTRACTORS, WORKERS AND SUPPLIERS ENGAGED ON THIS PROJECT. VERIFY EXACT LIMITS OF RESPONSIBILITY DURING BIDDING AND COORDINATE WITH ALL WORK BEING CONDUCTED UNDER OTHER CONTRACTS.
- L. PAYMENT OF MONTHLY DRAWS FOR WORK COMPLETED TO DATE IS BASED UPON RECEIPT OF LIEN RELEASES AND SITE INSPECTIONS. ITEMS LISTED AS COMPLETE ON THE DRAW BUT . NOT COMPLETED TO THE OWNER'S AND ARCHITECT'S SATISFACTION, MUST BE COMPLETED OR REMOVED FROM THE DRAW BEFORE PAYMENT WILL BE MADE. ALL OUTSTANDING INVOICES FOR THIS PROJECT FROM ALL SUBCONTRACTORS AND SUPPLIERS WILL BE PAID \* AND A LIEN RELEASE ISSUED FROM THE GENERAL CONTRACTOR IN CHARGE BEFORE PAYMENT WILL BE MADE.
- M.FINAL PAYMENT OF ALL PORTIONS OF THIS PROJECT IS BASED UPON RECEIPT OF LIEN . RELEASES, WARRANTIES AND MAINTENANCE/OPERATIONS MANUALS FOR ALL ITEMS
- N. FOR ALL SECTIONS IN THESE DOCUMENTS WHERE MULTIPLE COLORS, FINISHES, AND/OR MATERIAL CHOICES OCCUR AND WHERE THE OWNER CAN ONLY MAKE THESE CHOICES AFTER THE CONTRACT HAS BEEN AWARDED, THIS CONTRACT IS TO INCLUDE THE MOST RESTRICTIVE AND/OR EXPENSIVE OF THE CHOICES GIVEN SO THE OWNER CAN MAKE A CHOICE AT A LATER TIME WITHOUT CHANGE ORDERS. SHOULD THE OWNER MAKE A CHOICE THAT IS LESS EXPENSIVE THAN WHAT WERE BID, THEN THE OWNER IS TO BE CREDITED . BACK THE DIFFERENCE BETWEEN WHAT WAS SPECIFIED AND WHAT WAS SELECTED.
- O. VALUE ENGINEERED ITEMS AND/OR APPROVED EQUALS ARE TO BE SUBMITTED AS PART OF ' THE BID PACKAGE FOR APPROVAL BY THE OWNER AND ARCHITECT. DUE TO LIMITED BIDDING TIME, OWNER AND ARCHITECT CANNOT/WILL NOT REVIEW PRODUCTS DURING . BIDDING FOR EQUALITY OR EQUIVALENCY TO THESE DOCUMENTS. OWNER AND ARCHITECT WILL APPROVE THESE ITEMS AS PART OF THE BID REVIEW AND MAY ASK FOR PROOF OF PRODUCT EQUALITY. PRODUCT SPECIFICATION AND CLARIFICATION. RESUBMITAL OF \* ORIGINAL ITEMS, OR OTHER REQUIREMENTS AS A CONDITION OF ACCEPTANCE OF ANY AND ALL BIDS. ITEMS NOT LISTED ON BID FORMS AND SUBMITTED AS PART OF BID PACKAGE ARE ASSUMED TO BE AS SPECIFIED IN THESE DOCUMENTS AND ANY ITEM NOT MEETING THESE DOCUMENTS CAN BE ASKED TO BE REPLACED OR A CHANGE ORDER APPLIED TO THE PROJECT IN THE AMOUNT OF THE DIFFERENCE OF THE ORIGINAL ITEM SPECIFIED AT THE . OWNER'S AND ARCHITECT'S DISCRETION.
- P. THE FIRE STATION WILL BE EMPTIED BY THE FIRE DEPARTMENT FOR SOLE US BY THE \* CONTRACTORS. HOWEVER THE REAR MAINTENANCE BUILDING WILL BE CONTINUOUS OPERATION. CONTRACTORS TO MAINTAIN FIRE TRUCK ACCESS AND EMPLOYEE PARKING AT . ALL TIMES. DURING BIDDING, CONTRACTOR USE AREAS WILL BE DETERMINED.

### 01001 TAX EXEMPT PROJECT

- A. THIS PROJECT IS BEING BID TO A TAX EXEMPT ORGANIZATION, HERE FORWARD KNOWN AS THE "CLIENT", WITH FEDERAL AND/OR STATE APPROVED TAX EXEMPT STATUS. THE FOLLOWING SHALL APPLY TO THE ENTIRETY OF THIS PROJECT, UNLESS OTHERWISE STATED .
- 1. ALL LABOR AND MATERIALS NECESSARY TO COMPLETE THIS PROJECT ARE TO BE . INCLUDED AS PART OF THIS BID PACKAGE
- 2. THE TAX EXEMPTION STATUS OF THE CLIENT WILL ONLY APPLY TO MATERIAL PURCHASES MADE THROUGH A WHOLESALER OR RETAILER FOR THE USE ON THIS PROJECT. MATERIALS DIRECTLY PURCHASED BY THE GENERAL CONTRACTOR OR SUBS THROUGH THEIR OFFICES FOR USE ON THIS PROJECT WILL NOT QUALIFY FOR EXEMPTION.
- 3. THE AWARDED GENERAL CONTRACTOR AND THEIR SUBS WILL BE RESPONSIBLE FOR SETTING UP THE CLIENT'S TAX EXEMPT INFORMATION WITH ALL MATERIAL SUPPLIERS.
- 4. ALL MATERIALS ARE TO BE INVOICED TO THE CLIENT, CARE OF THE GENERAL CONTRACTOR OR SUBS
- 5. GENERAL CONTRACTOR OR SUBS TO BE RESPONSIBLE FOR THE SHIPPING, HANDLING, STORAGE AND INSTALLATION OF ALL MATERIALS FOR THE DURATION OF THE PROJECT, UNTIL THE FINAL PROJECT IS TURNED OVER TO THE CLIENT.
- 6. ANY DELIVERIES MADE TO ANYWHERE OTHER THAN TO THE PROJECT SITE, TO THE . GENERAL CONTRACTOR OR THE SUB-CONTRACTOR RESPONSIBLE FOR THE MATERIALS. WILL BE RETURNED TO THE SHIPPER AT THE GENERAL CONTRACTOR'S EXPENSE.
- 7. ALL MATERIAL INVOICES ARE TO BE ROUTED THROUGH THE GENERAL CONTRACTOR AND ANY INVOICES SENT DIRECTLY TO THE CLIENT WILL BE RETURNED TO THE ISSUER. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY LATE FEES OR PENALTIES THAT SHOULD BE INCURRED AS A RESULT OF THESE RETURNED INVOICES.

- 8. AS PART OF THEIR MONTHLY PAY APPLICATION / MONTHLY DRAW, THE GENERAL CONTRACTOR WILL SUBMIT MATERIALS INVOICES TO BE PAID ALONG WITH THEIR DRAW.
- ISSUED AS PART OF THIS MONTHLY DRAW SHALL BE A LIST OF HOW MUCH MONEY IS TO BE PAID TO THE GENERAL CONTRACTOR AS WELL AS A LIST OF ALL INVOICES TO BE PAID, INCLUDING NAME OF THE PAYEE, ANY PURCHASE ORDER #S AND THE AMOUNT TO BE PAID. A SINGLE CHECK WILL BE ISSUED TO SUPPLIERS WITH MULTIPLE PO SUBMITTED AS A PART OF THIS DRAW.
- A CHANGE ORDER WILL ALSO BE ISSUED REDUCING THE AMOUNT OF THE GENERAL CONTRACTOR'S PROJECT COST BY THE DOLLAR AMOUNT OF THE MATERIAL INVOICES BEING PAID AS PART OF THE CURRENT DRAW.
- 9. MONTHLY DRAWS WILL BE APPROVED BY THE CLIENT AND ALL ISSUED MATERIAL SUPPLIER CHECKS WILL BE GIVEN TO THE CARE OF THE GENERAL CONTRACTOR.
- IT WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE SURE PAYMENT IS DELIVERED TO THE MATERIAL SUPPLIERS IN AN EXPEDIENT AND TIMELY MANNER.
- ANY LATE FEES OR PENALTIES THAT OCCUR AS A RESULT TO DELIVER THESE CHECKS, WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR, UNLESS THESE FEES CAN BE DOCUMENTED AS NOT BEING INCURRED AS A FAULT OF GENERAL CONTRACTOR OR

#### 01500 DEMOLITIONS

- A. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION WORK UNLESS OTHERWISE NOTED. SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR ALL DEMOLITION THAT PERTAINS TO THEIR TRADE AND NOT COVERED BY THE GENERAL CONTRACTOR. ALL \* DEMOLITION SHALL CONFORM TO O.S.H.A., STATE AND LOCAL PERMIT AND SAFETY CODES.
- B. VERIFY STRUCTURAL INTEGRITY BEFORE & DURING CONSTRUCTION. PROVIDE TEMPORARY SUPPORT AS REQUIRED.
- C. CONTRACTORS SHALL PROVIDE FOR DUST/DEBRIS CONTROL, CLEANUP AND PROTECTION OF OTHER PERSONNEL AND VISITORS AS NEEDED. DUST CONTROL TO INCLUDE BUT IS NOT \* LIMITED TO CREATING A TEMPORARY STRUCTURE BETWEEN ANY SPACES TO REMAIN OCCUPIED AND WORK SPACE, COVERING DOORS/VENTS/WINDOWS AS NEEDED TO PREVENT. THE PASSAGE OF DUST, AND CLEANING UP ANY ACCUMULATION OF DUST.
- D. THE SITE IS TO BE LEFT "BROOM" CLEAN AND SECURE FROM INTRUDERS AT THE END OF EACH DAY.
- E. CONTRACTOR TO PROPERLY REMOVE AND PROPERLY DISPOSE OF ALL DEBRIS AND DEMOLISHED ITEMS EXCEPT ITEMS SPECIFICALLY LISTED TO BE DELIVERED TO OWNER.
- F. ALL ITEMS OR UTILITIES "CAPPED" AFTER DEMOLITION SHALL BE IN A NEAT MANNER, PAINT TO MATCH ADJOINING OR CONCEAL BEHIND FINISHED AREA. ALL "CAPPED" ITEMS TO MEET APPLICABLE CODES AND INDUSTRY STANDARD PRACTICES.
- G.REMOVE AND PROPERLY DISPOSE OF ALL UNUSED (OR NO LONGER USED) BRACKETS, SUPPORTS, MISC. ITEMS, AND EQUIPMENT FROM THE PROJECT AREAS. THIS INCLUDES ALL ELECTRICAL, HVAC AND PLUMBING ITEMS. AS DIRECTED HEREIN, TURN OVER SPECIFIC ITEMS TO OWNER AND DISPOSE OF ALL OTHERS

### 02000 SITE-WORK/FOUNDATIONS

- A. PERFORM ALL EXCAVATIONS, BACKFILLING AND GRADING, AS WELL AS PAVING, REQUIRED TO COMPLETE WORK SHOWN. CONTRACTORS SHALL TAKE THIS DATA AND SUBMIT IN THEIR BID ANY CHANGES NECESSARY FOR COMPLETION OF THE PROJECT. PROVIDE POSITIVE DRAINAGE THROUGHOUT THE SITE FROM THE PARKING AREAS AND AWAY FROM THE . BUILDING.
- B. PROTECT AGAINST DAMAGE TO ANY LAWNS, SHRUBS, TREES, ROADS, WALKS, SIGNS, UNDERGROUND TANKS, ETC., AND OTHER WORK THAT IS TO REMAIN IN PLACE.
- C. MATERIALS TO BE EXCAVATED ARE ASSUMED TO BE EARTH OR OTHER MATERIALS THAT CAN BE REMOVED BY POWER SHOVEL OR OTHER NORMAL EXCAVATING EQUIPMENT, BUT NOT . REQUIRING THE USE OF EXPLOSIVES OR DRILLS. IF OTHER CONDITIONS ARE ENCOUNTERED WITHIN THE LIMITS OF THE EXCAVATION, NOTIFY ARCHITECT IMMEDIATELY.
- D. ALL BUILDING AND COLUMN FOOTINGS SHALL BEAR DIRECTLY ON UNDISTURBED SOIL, UNLESS SPECIFICALLY DESIGNED OTHERWISE HEREIN TO BEAR ON OTHER SUBSURFACE.
- E. ASSUMED BEARING CAPACITY AS INDICATED BY GEO-TECHNICAL REPORT WILL BE GIVEN TO BIDDING GENERAL CONTRACTORS, IF THIS BEARING CAPACITY IS NOT ENCOUNTERED AT THE DEPTH SHOWN ON DRAWINGS, THE SITE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR, ARCHITECT, ENGINEER, AND OTHER PARTIES WILL THEN ESTABLISH AN ADDITIONAL VOLUME OF EXCAVATION.
- F. BUILDING SLAB AREAS, DRIVES, WALKS AND PARKING AREAS THAT REQUIRE UNDERCUTTING OR FILL ARE TO BE BACKFILLED WITH LEAN CLAY OR GRANULAR FILL, UNIFORMLY . COMPACTED TO AT LEAST 95% STANDARD PROCTOR (ASTM D698). PERIODIC FIELD DENSITY • TESTING TO BE PERFORMED DURING CONSTRUCTION IF REQUIRED AND PAID FOR BY THE OWNER.
- G.GENERAL CONTRACTOR TO INCLUDE ADDITIONAL COST BREAKOUT IN THEIR INITIAL BID FOR EITHER THE TRENCH EXCAVATION OR MASS EXCAVATION OF ROCK IF IT IS DETERMINED TO BE NECESSARY. BIDS ARE TO INCLUDE ALL MARKUP, OVERHEAD, DISPOSAL, LEGALLY REMOVED FROM THIS SITE.
- H. FURNISH AND INSTALL ALL SITE ITEMS AS SHOWN ON THE DRAWINGS OR LIST HEREIN
- I. FURNISH AND INSTALL SOD WITHIN 3' OF ALL CONCRETE WALKS AND BUILDING AREAS. SEED AND STRAW ALL OTHER DISTURBED EARTH AREAS.
- . CONTRACTOR TO INCLUDE ALL EROSION CONTROL MEASURES NECESSARY. EROSION . CONTROL MEASURES ARE TO FOLLOW THOSE POLICIES, STANDARDS AND PRACTICES AS SET FORTH BY THE CIVIL PLAN AND/OR ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL MEASURES AND MAINTAINING ALL DOCUMENTATION AS REQUIRED. ANY PENALTIES • OCCURRED AS A RESULT OF FAILURE TO MAINTAIN THESE CONTROLS SHALL BE THE. RESPONSIBILITY OF THE CONTRACTOR AND THE OWNER SHALL BARE NO RESPONSIBILITY FOR THESE PENALTIES UNLESS THERE IS DOCUMENTED PROOF THAT THESE PENALTIES WERE AS A RESULT OF NEGLECT FROM THE OWNER OR HIS REPRESENTATIVES.
- K. IF A LANDSCAPING PLAN HAS NOT BEEN PROVIDED AS PART OF THESE DOCUMENTS AND A COST DETERMINATION CANNOT BE MADE, AN ALLOWANCE OF \$3,000.00 IS TO BE INCLUDED IN THE BID TO FURNISH AND INSTALL LANDSCAPING AS TO BE DETERMINED BY THE OWNER. •
- L. ALL EXISTING EXCAVATED MATERIAL THAT CANNOT BE USED AS FILL WILL BE REMOVED AND LEGALLY DISPOSED. THE MATERIAL WILL BE SPREAD, COMPACTED, SMOOTHED AND DISCED. THE EXCAVATED MATERIAL WILL THEN BE SEED AND STRAW AS INDICATED ABOVE.

#### M. FOUNDATION EXCAVATION

- 1. FOLLOW OSHA AND LOCAL REQUIREMENTS FOR DETERMINING THE ANGLE OF REPOSE. NO , ANGLE OF REPOSE CAN BE ASSUMED WHEN SOIL IS UNDER ADVERSE MOISTURE CONDITIONS. USE FORMS WHERE CONCRETE SURFACES ARE SHOWN VERTICAL OR STEEPER THAN THE ANGLE OF REPOSE.
- 2. CUT EARTH NEATLY FOR GRADE BEAMS AND FOOTINGS, EXCAVATE BY HAND IF NECESSARY, TO REMOVE ALL LOOSE MATERIAL AND DISTURBED EARTH
- 3. REPLACE DISTURBED EARTH AND OVER-EXCAVATED LOCATIONS WITH FILL CONCRETE.
- 4. KEEP EXCAVATIONS CONSTANTLY SHORED AND DEWATERED.
- 5. POUR FOOTINGS ONLY AFTER EXCAVATIONS HAVE BEEN INDIVIDUALLY INSPECTED AND APPROVED.
- AFTER INSPECTION AND APPROVAL, PLACE CONCRETE PROMPTLY BEFORE ANY CHANGE IN EXCAVATION CONDITIONS OCCUR.
- N. TRENCHING AND BACKFILLING FOR DRAIN PIPES
- 1. COMMENCE FROM LOW POINT SO EXCAVATION AND PIPE CAN BE KEPT DRAINED AT ALL .
- 2. WIDTH TO BE SUFFICIENT TO MAKE JOINTS AND COMPACT BACKFILL UNDER PIPE
- 3. FINAL EXCAVATION TO BE DONE BY HAND SO PIPE RESTS CONTINUOUSLY ON SOLID EARTH EXCEPT WHERE BACKFILLED WITH CEMENT STABILIZED SAND.
- 4. AFTER PLACING PIPE. IMMEDIATELY PLACE SOME BACKFILL TO HOLD THE PIPE: COMPACT SUFFICIENT BACKFILL UNDER THE PIPE TO HOLD IT SECURELY AGAINST ANY POSSIBLE ' MOVEMENT: DO NOT COVER UNTIL INSPECTED.

#### 02741 ASPHALT PAVING

- A. PAVING TO BE AS SPECIFIED ON THE SITE PLANS AND SITE DETAILS
- B. ALL NEW PAVING HEIGHTS TO BE ADJUSTED AS REQUIRED IN ORDER TO MATCH THE EXISTING PAVEMENT HEIGHT.
- C. ALL PAVING SHALL CONFORM TO STATE HIGHWAY SPECIFICATIONS FOR MATERIAL AND INSTALLATION.
- D. IF PAVING IS ANTICIPATED IN WINTER, THE SURFACE COAT MAY HAVE TO WAIT UNTIL SPRING. COST OF PAVING TO BE COMPLETED MAY BE HELD BY THE OWNER (IF NECESSARY) UNTIL FINAL COMPLETION.

#### 03000 CONCRETE

- A. CONCRETE TO BE DIMENSIONS SHOWN ON DRAWINGS AND REINFORCED AS DETAILED
- B. CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
- C. CONTRACTOR TO TAKE (3) CORE SAMPLES OF EVERY TRUCK. SAMPLES TO BE LABELED, DATED AND STORED ON SITE IN THE SAME ENVIRONMENT AS THE CONCRETE PLACED. OWNER, ARCHITECT OR CONSTRUCTION MANAGER MAY CALL FOR TESTING OF THESE SAMPLES AT ANY TIME. OWNER WILL PAY FOR TESTING AS NEEDED.
- D. INTERIOR FLOOR SLABS ARE TO RECEIVE SMOOTH TROWEL FINISH.
- E. EXTERIOR CONCRETE DRIVES, WALKS AND STOOPS ARE TO BE LIGHT BROOM FINISHED IN THE DIRECTION OF WATER FLOW, UNLESS NOTED OTHERWISE.
- F. EXPOSED INTERIOR CONCRETE FLOORS AS LISTED PER THE ROOM FINISH SCHEDULE:
- 1. ARE TO RECEIVE A CURE AND SEAL, EVAPORATION REDUCER DURING THE FINISHING PROCESS OF THE SLAB TO HELP REDUCE SURFACE CRACKING. PRODUCT TO BE MASTERKURE ER 50 OR APPROVED EQUAL APPLIED PER MANUFACTURER'S RECOMMENDATIONS. SEE ROOM FINISH SCHEDULE FOR ROOMS THAT ARE TO HAVE , EXPOSED FLOOR SLABS.
- 2. ARE TO RECEIVE "INTRASEAL HARDENER AND SEALER" AS MANUFACTURED BY COMSPEC OR APPROVED EQUAL. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. APPLY PRODUCT PER MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.
- G.UNLESS SPECIFIED ABOVE, ALL CONCRETE SLABS ARE TO RECEIVE A CURE AND SEAL . PRODUCT APPLIED PER MANUFACTURER'S RECOMMENDATIONS THAT WILL WORK WITH THE FINISHED FLOOR. THE SELECTED PRODUCT WILL NEED TO BE CERTIFIED TO WORK WITH THE FLOOR FINISH BEING APPLIED IN THAT AREA, SEE ROOM FINISH SCHEDULE FOR FLOOR • FINISHES.
- H. ALL CONCRETE FLOORS LISTED IN THE ROOM FINISH SCHEDULE, ARE TO RECEIVE A CLASS 'A' VAPOR RETARDER / BARRIER AS SPECIFIED UNDER THE LATEST ASTM E 1745. A CLASS 'A' • VAPOR RETARDER WILL BE INSTALLED UNDER THE CONCRETE, HAVE A MINIMUM OF 0.03 PERMEABILITY, 5LB PUNCTURE RESISTANCE, AND 45.0 LB./IN TENSILE STRENGTH RETARDER TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
- MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE LATEST REQUIREMENTS OF ACI 318-83.
- J. ALL EXPOSED 90-DEGREE EDGES OF VERTICAL AND HORIZONTAL CORNERS OF CONCRETE SHALL HAVE TOOLED EDGES. UNLESS INDICATED OTHERWISE
- EQUIVALENT REINFORCING IN 4" SLABS ON GRADE, BUT ELEVATED SLABS OR SLABS THICKER THAN 4" MUST HAVE WIRE REINFORCING AS SHOWN.

K. REINFORCING STEEL SHALL BE A615-83 GRADE 60. CONTRACTOR MAY USE FIBERMESH

- L. WELDING OF OR TO REINFORCING BARS WITHOUT PRIOR APPROVAL OF ENGINEER IS PROHIBITED EXCEPT WHERE SPECIFIED ON THE DRAWINGS.
- M. ALL REINFORCING BARS ARE TO BE SUPPORTED IN THE FORM AND SPACED WITH WIRE BARS SUPPORTS MEETING THE REQUIREMENTS OF THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315-LATEST EDITION).
- N. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, MUST FOLLOW THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315-LATEST EDITION).
- O.CONCRETE WALKS SHALL HAVE MOLDED EXPANSION JOINT MATERIAL AS SHOWN. FINAL JOINT LAYOUT TO BE APPROVED BY OWNER.
- P. CONTROL JOINTS (C.J.) SHALL BE SAW-CUT A MINIMUM OF 1/4 OF SLAB THICKNESS AND WITH A MAXIMUM SPACING AS SHOWN ON THE DRAWINGS
- Q.ISOLATION JOINTS (I.J.) IF REQUIRED SHALL RECEIVE 1/2" THICK EXPANSION JOINT FILLER EXTENDING FROM BOTTOM OF SLAB TO 1/2" BELOW TOP OF SLAB AND THE TOP 1/2" FILLED WITH POLYURETHANE JOINT SEALANT, UNLESS OTHERWISE NOTED.

- S. CONSTRUCTION JOINTS (CONST. J.), IF REQUIRED, SHALL BE FORMED USING "KEY-LOC JOIN" SYSTEM" MANUFACTURED BY FORM-A-KEY.
- T. ALL DIMENSIONS AND GRADES SHALL BE VERIFIED IN THE FIELD (V.I.F.) BY THE CONTRACTOR AND ANY DISCREPANCIES OR INTERFERENCES SHALL BE REPORTED TO THE ARCHITECT BEFORE PROCEEDING WITH AFFECTED WORK.
- U. WHERE SHOWN, ALL JUNCTIONS OF WALLS, PIERS AND FLOORS TO HAVE 1/2" WIDE EXPANSION JOINTS, FILLED WITH ELASTIC EXPANSION JOINT MATERIAL
- V. EXPOSED PIERS AND FOUNDATION WALLS TO HAVE RUBBED FINISH. ANY HONEYCOMBING THAT OCCURS THAT IS LESS THAN 4" IN DIAMETER IS TO BE FILLED AND FINISHED WITH A NON-EXPANDING GROUT. CONTACT THE ARCHITECT IMMEDIATELY FOR ANY HONEYCOMBING THAT IS 4" OR GREATER IN DIAMETER, FOR REVIEW OF THE CONCRETE AND RESOLUTION OF THE ISSUE.
- W. CONCRETE CONTRACTOR TO PLACE ALL EXTERIOR EQUIPMENT PADS UNLESS OTHERWISE DIRECTED DURING BIDDING. COORDINATE FINAL SIZE, DETAILS AND LOCATIONS WITH THE APPLICABLE SUB-TRADES

#### 04000 MASONRY

- A. MORTAR TO BE TYPE "M OR S" COMPLYING WITH ASTM C-90-97. MORTAR IS TO RECEIVE A WATER REPELLENT ADDITIVE AS APPROVED BY THE BLOCK / VENEER MANUFACTURER
- B. PROVIDE 3/8" THICK MORTAR JOINTS BETWEEN UNITS WITH FULL MORTAR COVERAGE ON THE VERTICAL AND HORIZONTAL FACE SHELLS ONLY, EXCEPT FOR THIS FIRST BED COURSE SHALL BE LAID IN A FULL MORTAR BED.
- C. CONCRETE BRICK TO BE SMOOTH FACED LIGHT WEIGHT 4" HIGH BY 16" WIDE CONCRETE MASONRY UNITS (C.M.U.) IN 4", 8" AND 12" THICKNESSES. UNITS ARE TO BE MADE WITH A FINE PARTICULATE MIX THAT INCLUDES AN INTEGRAL WATER REPELLENT, AND INTEGRAL THROUGH BODY COLORING. PRODUCT TO BE QUIK-BRIK, MAXBRIC BY LEE BRICK & BLOCK OR APPROVED EQUAL.
- D. PROVIDE MANUFACTURED SMOOTH FACE CORNER BLOCK, TOOTHED IN AT FRONT CORNERS AS REQUIRED, FULL EXPOSED CORNERS
- E. BRICK MATERIALS ALLOWANCE TO BE \$500.00 PER 1000, DELIVERED. COLOR AND STYLE TO BE SELECTED BY OWNER.
- F. ALL CONCRETE MASONRY UNITS TO HAVE GALVANIZED #9 WIRE REINFORCING, HOHMANN & BARNARD'S LOX ALL TRUSS-MESH, AT EVERY SECOND COURSE
- G. ALL SELF-SUPPORTING AND LOAD BEARING CONCRETE MASONRY WALLS TO HAVE VERTICAL REINFORCED CELLS AT 4'-0" ON CENTER AND 16" FROM EACH END. VERTICAL REINFORCING TO BE (1) CONTINUOUS #4 BAR CENTERED IN CELL. CELL TO BE SLUSH FULL
- H. UNLESS OTHERWISE NOTED ON THESE PLANS, ALL SELF-SUPPORTING OR LOAD BEARING CONCRETE MASONRY WALLS ARE TO HAVE A 8" HIGH BOND BEAM AT THE TOP COARSE AND ALL WALLS OVER 15' TALL ARE TO HAVE AN INTERMEDIATE 8" HIGH BOND BEAM AT 10'-0" ON CENTER. BOND BEAM TO HAVE (2) #5 BARS CONTINUOUS AND SLUSH FULL.
- IN VENEER WALLS, FURNISH AND INSTALL GALVANIZED, CORRUGATED MASONRY ANCHORS AT 16" ON CENTER HORIZONTALLY, 24" ON CENTER VERTICALLY AND ON EACH SIDE OF MASONRY CONTROL JOINT AT 24" ON CENTER VERTICAL.
- J. IN ALL VENEER WALLS, PROVIDE WEEP HOLES AT 24" ON CENTER AND CONTINUOUS 8" HIGH MEMBRANE FLASHING ALONG BOTTOM ROW. AT OR ABOVE GRADE.
- K. MASONRY SUBCONTRACTOR TO BE RESPONSIBLE FOR WATER-TIGHTNESS OF HIS WORK.

L. WORKMANSHIP. INCLUDING JOINT REINFORCEMENT AND COLD WEATHER INSTALLATION

- SHALL COMPLY WITH NATIONAL MASONRY ASSOCIATIONS APPLICABLE RECOMMENDATIONS. M.MASONRY CONTRACTOR TO BRUSH CLEAN FINAL SURFACES AND PREPARE FACES FOR
- N. PROVIDE CONTROL JOINTS AS INDICATED ON ELEVATIONS, WITH BACKER ROD AND PAINTABLE ELASTOMERIC CAULK

### 05000 METALS

PAINT AS CALLED OUT.

- A. PROVIDE STRUCTURAL AND MISCELLANEOUS METAL ITEMS AS SHOWN ON DRAWINGS, AND AS REQUIRED TO COMPLETE THE PROJECT.
- B. FURNISH SHOP DRAWINGS TO SATISFY LOCAL CODE REQUIREMENTS. FABRICATE MATERIALS AND INSTALL ALL METAL WORK AS NEEDED. THIS SHALL INCLUDE STRUCTURAL STEEL AND MISCELLANEOUS STEEL ITEMS.
- C. TAKE FIELD MEASUREMENTS PRIOR TO FABRICATION. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF ALL SUCH MEASUREMENTS AND THE PRECISE FITTING AND ASSEMBLY OF THE FINISHED PRODUCTS.
- D. USE MATERIALS OF SIZE AND THICKNESS INDICATED OR, IF NOT INDICATED, AS REQUIRED TO DEVELOP THE MAXIMUM LOADS IN THE MEMBER. WELD CORNERS AND SEAMS CONTINUOUSLY, COMPLYING WITH AWS RECOMMENDATIONS. PROVIDE FOR ANCHORAGE OF TYPE SHOWN, COORDINATED WITH SUPPORTING STRUCTURE. FABRICATE AND SPACE ANCHORING DEVICES TO PROVIDE ADEQUATE SUPPORT FOR INTENDED USE.
- E. CLEAN AND SHOP PAINT MISCELLANEOUS METAL WORK, EXCEPT MEMBERS OR PORTIONS OF MEMBERS TO BE EMBEDDED IN CONCRETE OR MASONRY, SURFACES AND EDGES TO BE FIELD WELDED UNLESS OTHERWISE INDICATED.
- F. FURNISH BENT OR OTHERWISE CUSTOM FABRICATED, PLATES, ANCHORS, HANGERS DOWELS AND OTHER MISCELLANEOUS STEEL SHAPES AS REQUIRED.
- G.PROVIDE LOOSE BEARING AND LEVELING PLATES FOR STEEL ITEMS BEARING ON MASONRY, CONCRETE CONSTRUCTION, OR OTHER PORTIONS OF THE STRUCTURE AS INDICATED.

H. PROVIDE MISCELLANEOUS STEEL ELEMENTS, FRAMING AND SUPPORTS THAT ARE NOT A

- PART OF STRUCTURAL STEEL FRAMEWORK, AS REQUIRED TO COMPLETE WORK. . PROVIDE ANCHORAGE DEVICES AND FASTENERS WHERE NECESSARY FOR SECURING MISCELLANEOUS METAL FABRICATIONS TO IN-PLACE CONSTRUCTION; INCLUDING,
- THREADED FASTENERS FOR CONCRETE AND MASONRY INSERTS, TOGGLE BOLTS, THROUGH-BOLTS, LAG BOLTS, WOOD SCREWS AND OTHER CONNECTORS AS REQUIRED. J. PROVIDE A-325 BOLTS AS SHOWN ON THE PLANS OR AS REQUIRED TO DEVELOP THE
- K. PERFORM CUTTING, DRILLING AND FITTING REQUIRED FOR INSTALLATION OF MISCELLANEOUS METAL FABRICATIONS.

MAXIMUM CAPACITY OF THE CONNECTION SHOWN.

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SPECIFICATIONS

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- L. FIELD WELDING SHALL COMPLY WITH AWS CODE FOR PROCEDURES OF MANUAL SHIELDED METAL-ARC WELDING, APPEARANCE AND QUALITY OF WELDS MADE, AND METHODS USED IN CORRECTING WELDING WORK.
- M. SET LOOSE LEVELING AND BEARING PLATES ON WEDGES, OR OTHER ADJUSTABLE DEVICES AFTER THE BEARING MEMBERS HAVE BEEN POSITIONED AND PLUMBED, TIGHTEN ANCHOR BOLTS. DO NOT REMOVE WEDGES OR SHIMS, BUT IF PROTRUDING, CUT-OFF FLUSH WITH THE EDGE OF THE BEARING PLATE BEFORE PACKING WITH GROUT. USE METALLIC , NON-SHRINK GROUT IN CONCEALED LOCATIONS WHERE NOT EXPOSED TO MOISTURE; USE NON-METALLIC NON-SHRINK GROUT IN EXPOSED LOCATIONS, UNLESS OTHERWISE INDICATED. PACK GROUT SOLIDLY BETWEEN BEARING SURFACES AND PLATES TO ENSURE THAT NO VOIDS REMAIN.
- N. TOUCH-UP PAINTING IMMEDIATELY AFTER ERECTION, CLEAN FIELD WELDS, BOLTED CONNECTIONS, AND ABRADED AREAS OF SHOP PAINT, AND PAINT EXPOSED AREAS WITH . SAME MATERIAL USED FOR SHOP PAINTING. APPLY BY BRUSH OR SPRAY TO PROVIDE A MINIMUM DRY FILM THICKNESS OF 2.0 MILS.
- O. MISCELLANEOUS ITEMS:
- 1. STEEL PLATES, SHAPES AND BARS: ASTM A-36
- 2. COLD FORMED STEEL TUBING USE ASTM A-500
- 3. HOT-ROLLED STEEL TUBING USE ASTM A- 501
- 4. HOT-ROLLED STRUCTURAL STEEL SHEET USE ASTM A-570. CLASS 1 OR GRADE REQUIRED FOR DESIGN LOADING.
- 5. COLD-ROLLED STRUCTURAL STEEL SHEET USE ASTM A-611. CLASS 1 OR GRADE REQUIRED FOR DESIGN LOADING.
- 6. NON-SHRINK METALLIC GROUT TO BE PRE-MIXED, FACTORY-PACKAGED, NON- STAINING NON-CORROSIVE, NON-GASEOUS GROUT COMPLYING WITH CE CRD-C588. PROVIDE GROUT SPECIFICALLY RECOMMENDED BY MANUFACTURER FOR INTERIOR AND EXTERIOR APPLICATIONS.
- 7. ZINC-COATED FASTENERS FOR EXTERIOR USE OR WHERE BUILT INTO EXTERIOR WALLS. SELECT FASTENERS FOR THE TYPE, GRADE AND CLASS REQUIRED

#### 06000 CARPENTRY

- A. ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY OR TO BE EXPOSED ON THE EXTERIOR TO BE PRESSURE TREATED AGAINST DECAY AND INSECTS
- B. CARPENTER SHALL FURNISH ALL NECESSARY BLOCKING AND GROUNDS FOR ALL TOPS CABINETRY ITEMS, HANDRAILS, CASEWORK AND OTHER MISCELLANEOUS ITEMS AS NEEDED.
- C. PROVIDE SMALL AREAS OF WOOD FRAMING WHERE SHOWN FOR SHELVES OR EQUIPMENT BY OWNER.
- D. CARPENTER TO FURNISH & INSTALL ALL MOLDINGS, TRIM WORK AND FINISH HARDWARE (AT WINDOWS, DOORS, HANDRAILS, AND PLATFORM AREAS). ALSO, SHELVING, BRACKETS, RODS AND HANGERS AS SHOWN. EXPOSED WOOD TRIM AND MOLDINGS TO BE PAINT GRADE . SPRUCE OR FIR, (FINGER JOINTS ALLOWED).
- E. FURNISH AND INSTALL ALL ROUGH & FINISH CARPENTRY INCLUDING ROUGH HARDWARE, FORM WORK INDICATED AND REQUIRED TO COMPLETE THE PROJECT
- F. WOOD FRAMING IS TO FOLLOW GOOD PRACTICE AND CODE REQUIREMENTS FOR FIRE BLOCKING AND WOOD BLOCKING. VERIFY FIRE BLOCKING REQUIREMENTS WITH THE BUILDING INSPECTOR BEFORE COMPLETING THE FRAME WORK.
- G.PROVIDE BRIDGING AT ALL EXTERIOR WALLS AND INTERIOR LOAD BEARING WALLS, AT MIDPOINT OF WALLS FOR WALLS UP TO 9'-4" HIGH, AT 1/3 POINTS FOR WALLS 9' - 12' HIGH, AND AT 1/4 POINTS FOR WALLS UP TO 13'-4" HIGH. THE BRIDGING SHALL BE 2X6 OR 2X4 AS \_ APPROPRIATE, MATCHING THE STUDS USED IN THE REMAINDER OF THE WALL
- H. FRAMING CONTRACTOR IS RESPONSIBLE FOR BRACING REQUIRED TO RESIST SEISMIC. WIND, AND LIVE LOADS SPECIFIED AND REQUIRED BY I.B.C. PROVIDE LET-IN AND G.W.B. BRACING AS NOTED ON SHEET SET.
- REMOVE ALL WOOD INCLUDING FORM LUMBER, SCRAP LUMBER, SHAVINGS, AND SAWDUST IN CONTACT WITH THE GROUND. LEAVE NO WOOD BURIED IN ANY FILL.
- J. ALL LUMBER AND PLYWOOD SHALL BE GRADED AND MARKED IN ACCORDANCE WITH THE . LATEST GRADING RULES OF THE MANUFACTURER'S ASSOCIATION HAVING JURISDICTION. PLYWOOD DECKING SHALL BE TONGUE AND GROOVE OR TO BE BLOCKED AT ALL JOINTS, AND TO BE GLUED TO ALL SUPPORTING MEMBERS
- K. ALL MATERIALS SHALL BE DELIVERED AND STORED TO INSURE PROPER PROTECTION FROM DAMAGE. ALL MATERIAL SHALL BE WELL SEASONED.
- .. FRAMING LUMBER TO BE STRESS GRADED LUMBER (1250 F. MINIMUM) #2 YELLOW PINE OR APPROVED EQUAL OF OTHER SPECIES OF THE FOLLOWING MINIMUM UNIT STRENGTHS IN #'S PER SQ. IN: FB = 1,200; H = 105; C (PERPENDICULAR) = 390; (COMPRESSION PARALLEL TO GRAIN) C= 900; AND E = 1,760,000.
- M.STUDS & PLATES TO BE FURNISH AND INSTALL AS SPECIFIED, DETAILED AND REQUIRED. MATERIALS SHALL BE STRAIGHT AND WITHOUT DEFECTS THAT WILL IMPAIR THE STRENGTH ' OR ALIGNMENT. DOUBLE STUDS AT OPENINGS, TRIPLE AT CORNERS.
- N. DOUBLE TOP PLATES TO HAVE (2) 16D THROUGH AT EACH STUD THROUGH PLATE. SECURE UPPER MEMBER OF TOP PLATE WITH (2) 10D AT EACH END AND 16D AT 16" O.C. STAGGERED. DOUBLE MEMBERS SECURED WITH 16D AT 12" O.C. STAGGERED

### O.EXTERIOR O.S.B. SHEATHING TO BE NAILED TO STUDS AT 12" O.C. STAGGERED.

- P. INSTALL ALL JOISTS WITH CROWN UP. DOUBLE JOUSTS AT OPENINGS, UNLESS NOTED TO BE GREATER. DOUBLE MEMBERS SECURED WITH 16 D AT 6" ON CENTER, STAGGERED. LAPS OVER SUPPORTS SECURED WITH A MINIMUM OF (4) 10D, (3) 20D THROUGH HEADER INTO • JOISTS ENDS. BLOCK SOLIDLY AT PLYWOOD JOINTS.
- Q.HEADER BEAMS FOR OPENINGS IN WOOD FRAMED WALLS ARE TO BE DOUBLE MEMBERS WITH 1/2" PLYWOOD BETWEEN AS FOLLOWS: (2) 2 X 4'S FOR OPENINGS 30" WIDE OR SMALLER, (2) 2 X 6'S FROM 30" UP TO 48" WIDE, (2) 2 X 8'S FROM 48" UP TO 72" WIDE, AND (2) 2 X 10'S FROM 72" UP TO 96" WIDE. FRAMING FOR OPENINGS WIDER THAN 96" MUST BE COORDINATED WITH THE ARCHITECTS.
- R. ON EXTERIOR FRAMING USE GALVANIZED, ELECTROPLATED 16D NAILS. INTERIOR NAILS ARE TO BE COMMON COATED 16D NAILS UNLESS OTHERWISE NOTES.

#### 06175 PRE-ENGINEERED WOOD TRUSSES AND PRE-ENGINEERED JOISTS

- A. TRUSSES OR PRE-ENGINEERED JOISTS ARE TO BE OF PROFILE SHOWN ON BUILDING SECTIONS AND DETAILS.
- B. NUMBER OF PANELS POINTS, MEMBER SIZING, GRADE, AND SPECIES AS DESIGNED BY THE . TRUSS MANUFACTURER
- C. THE DESIGN IS TO BE THE RESPONSIBILITY OF THE MANUFACTURER, WHO IS RESPONSIBLE FOR MEETING ALL REQUIREMENTS OF THE FEDERAL, STATE AND LOCAL CODES. THIS . INCLUDES THE TRUSS GIRDERS REQUIRED AT SPANS AS SHOWN ON SHEET SET.
- D. PROPER INSTALLATION AND ANCHORING OF ALL MEMBERS AND ANCHORING OF THE TRUSSES FOR ADEQUATE STRENGTH ARE THE RESPONSIBILITY OF THE FRAMING
- E. DESIGN OF ALL TRUSSES AND JOISTS ARE TO BE BASED ON MAXIMUM DEFLECTION OF L/360.
- F. BEARING WEB MEMBERS OF FLOOR TRUSSES ARE TO BE DESIGNED TO CARRY THE AXIAL LOAD OF THE STUD WALL ABOVE.
- G. THE MANUFACTURER IS TO PROVIDE SHOP DRAWINGS AND STRUCTURAL CALCULATIONS STAMPED BY A STATE REGISTERED STRUCTURAL ENGINEER OF THE STATE WORK TO BE • C. ALL PENETRATIONS ARE TO BE TAPED AROUND ENTIRE PERIMETER. PERFORMED IN. BEFORE FABRICATING THE TRUSSES.
- H. DESIGN OF TRUSSES AND HANDLING AND ERECTION OF TRUSSES, INCLUDING TEMPORARY AND PERMANENT BRACING, IS TO FOLLOW THE LATEST EDITION OF THE SPECIFICATIONS OF THE TRUSS PLATE INSTITUTE. REFER TO SECTION 1000 ITEM B OF THESE SPECIFICATIONS WITH REGARDS TO INCONSISTENCIES.
- I. DESIGN IS TO INCLUDE SIZING AND SPACING OF BRACING MEMBERS.
- TRUSSES ARE TO BE DESIGNED TO THE FOLLOWING MINIMUM LOADS.
- (NOTE: GREATER SNOW LOADS REQUIRED AT VALLEYS, ROOF LEVEL CHANGES, ETC. THESE VALUES ARE MERELY GUIDELINES AND THE FEDERAL, STATE, AND/OR LOCAL CODE REQUIREMENTS SUPERSEDE THESE LOADS.)

#### **ROOF TRUSSES**

- WIND LOAD 15 PSF
- SNOW LOAD 20 PSF PLUS SNOW LOAD BUILD-UP AT VALLEYS AND ROOF LEVEL CHANGES

PER I.B.C. PLUS ROOF TOP EQUIPMENT AS DIRECTED BY THE CONTRACTOR.

- TOP CHORD D.L. 10 PSF
- BOTTOM CHORD D.L. 5 PSF
- 12 PSF (9 IN EXCESS OF D.L.)

#### 06410 WOOD CASEWORK

- A. FURNISH AND INSTALL A COMPLETE SYSTEM FOR CABINETS AND CASEWORK FOLLOWING THE STANDARDS SET FORTH BY AWI AND MILLWORK BEST PRACTICES.
- B. CABINETS TO BE OAK VENEER FINISHED 3/4" MDF BOARD WITH OVERLAY DOORS AND FULLY ADJUSTABLE PLYWOOD SHELVES.
- C. HEAVY DUTY DRAWER BOXES SHALL UTILIZE 3/4" BIRCH PLYWOOD FOR SIDES, FRONT, AND BACK WITH BOX JOINTS. DRAWER BOTTOM SHALL BE 1/2" PLYWOOD AND SHALL BE FASTENED TO DRAWER BOX SO AS TO ACCOMMODATE HEAVY DUTY DRAWER SLIDES.
- D.MDF AND PLYWOOD TO BE LAMINATED WITH WHITE VERTICAL GRADE HIGH PRESSURE DECORATIVE PLASTIC LAMINATE (HPL); EDGES SHALL BE EDGED WITH WHITE PVC.
- E. TOPS TO BE SQUARE EDGE, PLASTIC LAMINATE COVERED WITH 4" SPLASH AT ALL WALLS, SCRIBE FIT. COLORS TO BE SELECTED BY OWNER FROM STANDARD LINES.

- 1. HINGES: HEAVY DUTY, 5-KNUCKLE INSTITUTIONAL HINGE IN FINISH SELECTED BY OWNER.
- 2. PULLS: WIRE TYPE IN FINISH SELECTED BY OWNER.
- 3. DRAWER SLIDES: ALFIT 4000 SERIES, ACCURIDE 3600 OR EQUAL HEAVY DUTY SLIDES CAPABLE OF HOLDING UP TO 200LBS.
- G.PROVIDE ELEVATIONS AND SHOP DRAWINGS FOR REVIEW BY OWNER.
- H. CABINETS TO BE BY "MERILLAT" OR APPROVED EQUAL

### 07000 MOISTURE PROTECTION

- ROLL GLASS FIBER INSULATION TO BE THICKNESS AND TYPE SHOWN ON DRAWINGS FOR SPECIFIC USES, TO BE "FIBERGLASS" OR "CELOTEX".
- 2. INSTALL REINFORCED VAPOR RETARDER ON BOTTOM OF JOISTS OR TRUSSES TO BE INSULATED. SEE SPEC 07260.
- 3. AT ALL EAVE VENTS, VERTICALLY INSTALL A 2X6 INSULATION DAM BETWEEN ALL TRUSSES, ON TOP OF THE WALL BEARING PLATES.
- 4. AT ALL EAVE VENTS, INSTALL A 24" WIDE BY 48" LONG RAFTER BAFFLE, MADE OF . EXTRUDED POLYSTYRENE FOAM. PRODUCT TO BE BY OWENS CORNING OR APPROVED EQUAL.
- 5. RIGID BELOW GRADE INSULATION AT FOUNDATION AND BASEMENT WALLS TO BE EXTRUDED, EXPANDED POLYSTYRENE 2" THICK (R-VALUE: 5), UNLESS OTHERWISE NOTED ON THE PLANS.
- 6. EXTERIOR CONCRETE MASONRY UNITS TO RECEIVE "CORE-FILL 500" FOAMED IN PLACE SYSTEM OR APPROVED EQUAL.

### B. CAULKING:

- 1. USE SHERWIN WILLIAMS 950A SILICONIZED ACRYLIC LATEX CAULK, GE SILICONE II OR APPROVED EQUAL. COLOR TO MATCH SURROUNDING AREA BEING CAULKED. CAULK ALL. EXTERIOR JOINTS AND BOTH SIDES OF ALL DOOR AND WINDOW FRAMES.
- 2. ALL EQUIPMENT, MECHANICAL, PLUMBING AND ELECTRICAL CONTRACTORS SHALL SUPPLY ALL FLASHINGS AND CURBS FOR ROOF OR WALL PENETRATIONS TO THE BUILDING ERECTOR. BUILDING ERECTOR SHALL INSTALL AND FLASH ALL BUILDING PENETRATIONS AS PART OF THEIR BID PROJECT.
- 3. WHERE CALLED OUT ON THE DRAWINGS, FIRE CAULK TO MEET ALL ASTM REQUIREMENTS FOR FIRE AND SMOKE BARRIER. PRODUCT TO BE 3M FIRE BARRIER SEALANT CP 25WB+ OR APPROVED EQUAL.

C. ALL EXTERIOR MASONRY TO RECEIVE STAIN OR SEALER AND PAINT AS PER FINISHES IN SECTION 9,000.

#### 07210 - ROOF INSULATION BAFFLES AND VENTS

- A.ROOF INSULATION BAFFLES ARE TO BE ONE-PIECE FRICTION FIT VENT AND BAFFLE EXTRUDED FROM POLYSTYRENE FOAM (EPS) WITH LIGHTWEIGHT WATERPROOF AIR CHANNEL. UNIT TO FIT 24" JOIST SPACING AND TO BE 36" IN LENGTH.
- B. UNIT TO BE DUROVENT BAFFLE OR APPROVED EQUAL

#### 07250 WEATHER BARRIER - VAPOR BARRIER

- A.BUILDING VAPOR BARRIER TO BE COMMERCIAL GRADE WEATHER BARRIER TYVEK COMMERCIALWRAP BY DUPONT OR APPROVED EQUAL
- B. ALL JOINTS ARE TO BE LAPPED MINIMUM 3" AND TAPED AS SPECIFIED BY MANUFACTURER
- D. TAPE TO BE 3" WIDE TYVEK TAPE FOR COMMERCIAL APPLICATIONS BY DUPONT OF APPROVED EQUAL.
- E. BARRIER TO BE ANCHORED IN WOOD WITH 1" PLASTIC CAPS FASTENERS WITH MIN 5/8" PENETRATION.
- F. BARRIER TO BE ANCHORED IN METAL WITH 1-5/8" RUST RESISTANT SCREW WITH 2" PLASTIC

#### 07260 REINFORCED VAPOR RETARDER

- A. REINFORCED VAPOR RETARDERS FOR SUSPENDED INSULATION APPLICATIONS ARE TO BE GRIFFOLYN TYPE-65 BY REEF INDUSTRIES OR APPROVED EQUAL.
- B. RETARDER TO BE INSTALLED ON THE UNDERSIDE OF ALL ROOF TRUSSES OR FLOOR JOISTS WHERE EXPOSED TO THE ELEMENTS ABOVE AND CONDITIONED BELOW.
- C. RETARDER ONLY REQUIRED WHEN INSULATION IS NOT SUSPENDED BY GYPSUM BOARD OR OTHER APPROVED VAPOR RETARDER.
- D. ALL JOINTS ARE TO BE LAPPED MINIMUM 3" AND TAPED AS SPECIFIED BY MANUFACTURER
- E. ALL PENETRATIONS ARE TO BE TAPED AROUND ENTIRE PERIMETER.
- F. TAPE TO BE 3" WIDE GRIFFOLYN FAB TAPE FOR COMMERCIAL APPLICATIONS BY DUPONT OR APPROVED EQUAL.
- G.BARRIER TO BE ANCHORED IN WOOD WITH 1" PLASTIC CAPS FASTENERS WITH MIN 5/8" PENETRATION.
- H. BARRIER TO BE ANCHORED IN METAL WITH 1-5/8" RUST RESISTANT SCREW WITH 2" PLASTIC
- I. IT IS THE RESPONSIBILITY OF THE G.C. TO ENSURE THAT ALL JOINTS AND PENETRATIONS HAVE BEEN TAPED, ALL PUNCTURES HAVE BEEN PATCHED AND THAT THE SYSTEM HAS BEEN INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS, BEFORE INSTALLATION OF ADJOINING FINISHED CEILING SYSTEM.

### 07311 ASPHALT SHINGLES

- A. SHINGLED ROOFING SHALL MEET OR EXCEED REQUIREMENTS OF ASTM-D3018-82 TYPE I (LATEST REVISION).
- B. SHINGLES TO HAVE A CLASS 'A' LABELS AND BE WARRANTED FOR A 30-YEAR MINIMUM.
- C. SHINGLES SHALL BE SELECTED FROM MANUFACTURER'S STANDARD LINE. MATCH EXISTING WHEN IT OCCURS.
- D. ALL TRIM AND ACCESSORIES THAT WILL BE EXPOSED SHALL SHOW FACTORY PAINT AND SHALL MATCH SELECTED TRIM COLOR.
- E. PROVIDE ASPHALT SATURATED ROOF FELT COMPLYING WITH ASTM-D2226 TYPE I, (LATEST REVISION), APPROXIMATELY 15 POUNDS PER SQUARE.
- F. ALL RIDGE CAPS SHALL BE PRE-PAINTED ALUMINUM CONT. VENTED CAPS WITH SOLID ENDS
- G.CONTRACTORS MAY INSTALL SHINGLES WITH NAILS OR STAPLES THAT PENETRATE 3/4 INCH INTO DECK.
- H. PROVIDE METAL DRIP EDGE ALONG ALL EDGES, TO BE MINIMUM .024" PRE-PAINTED ALUMINUM WITH ROOF DECK FLANGE, 1-1/2" FASCIA FLANGE AND 3/8" DRIP EDGE FLASHING SHALL BE .024" PRE-PAINTED ALUMINUM.
- . I. ALL SHINGLES AND ACCESSORIES SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

### 07460 VINYL SIDING - HORIZONTAL

- A. VINYL SIDING TO BE MADE OF EXTRUDED POLYVINYL CHLORIDE, WITH ELONGATED NAILING SLOTS ON FLANGES TO ALLOW MOVEMENTS, IN DOUBLE 4" CLAPBOARD DESIGN WITH . WOODGRAIN FINISH.
- B. COLOR TO BE SELECTED BY OWNER FROM MANUFACTURER'S STANDARD COLOR CHAIN.
- C. PRODUCT TO BE FASTENED BY A GALVANIZED OR OTHER CORROSION-RESISTANT NAIL, AS RECOMMENDED BY MANUFACTURER OF SIDING PRODUCTS.
- D. PRODUCT TO BE MAINSTREET DOUBLE 4" CLAPBOARD BY CERTAINTEED, TRADITIONAL LAP SIDING BY GEORGIA-PACIFIC, OR APPROVED EQUAL

### 08000 DOORS AND WINDOWS

- A.DOORS. FRAMES. WINDOWS AND GLAZING TO BE AS SHOWN ON DRAWINGS. FINISH HARDWARE TO COMPLY WITH BUILDING CODE.
- B. EGRESS DOORS SHALL BE ABLE TO BE OPENED FROM INSIDE WITHOUT A KEY OR SPECIAL KNOWLEDGE.

- C. ALL EXTERIOR OUTWARD SWINGING HINGED DOORS ARE TO HAVE NON-REMOVABLE PIN (NRP) HINGES, UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.
- D. ALL GLAZING TO COMPLY WITH SAFETY GLAZING LAWS. INSTALLER TO VERIFY REQUIREMENTS BEFORE ORDERING AND INSTALLING ALL GLAZING
- E. HOLLOW METAL FRAMES SHALL BE STANDARD PROFILE, 16GA. SHOP PRIMED. THREE (3) ANCHORS EACH SIDE, ONE (1) AT HEAD. USE WRAP AROUND FRAMES AT GYPSUM BOARD PARTITIONS.
- F. HOLLOW METAL DOORS SHALL BE FLUSH, 18 GA., 1 3/4" THICK, EXTERIOR DOORS TO BE INSULATED WITH RIGID BOARD INSULATION. HEAD OF DOORS TO BE SOLID AND FLUSH. DOORS TO BE SHOP PRIMED.
- G.FINISH HARDWARE SHALL BE MEDIUM GRADE COMMERCIAL PRODUCTS BY STANLEY SCHLAGE, VON DUPRIN, YALE OR AN APPROVED EQUAL. FINISH TO BE SELECTED BY OWNER. U.L. RATED AND HANDICAPPED ACCESSIBLE HARDWARE AS REQUIRED. SEE DOOR SCHEDULE.

#### 08310 ATTIC ACCESS DOOR

- A. FURNISH AND INSTALL ATTIC ACCESS DOOR AND STAIRS AS SHOWN ON DRAWINGS.
- B. ACCESS DOOR TO BE HEAVY DUTY ALUMINUM CONSTRUCTION, RATED FOR A MINIMUM OF 350LBS AND A 9'-0" CEILING HEIGHT.
- C.UNIT TO BE AMERICAN STAIRWAY INC. MODEL #800 (VERIFY DURING CONSTRUCTION) OR
- D. FLUSH MOUNT AND TRIM WITH CEILING GRID AND PROVIDE ADDITIONAL WORK TO CREATE TOP LANDING AS CALLED FOR.

#### 08380 SECTIONAL OVERHEAD DOOR SYSTEM

- A. SECTIONAL OVERHEAD DOORS (UPWARD ACTING) TO BE BY CRAWFORD, OVERHEAD DOOR, OR APPROVED EQUAL. INSTALL DOOR PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
- B. DOOR TO HAVE AN ELECTRONIC OPERATED WITH CHAIN HOIST BACKUP.
- C. OPERATOR TO BE MEDIUM DUTY, COMMERCIAL GRADE, 3/4 H.P MOTOR, UNLESS OTHERWISE NOTED ON THE PLANS. SEE DOOR SCHEDULE FOR FINAL SIZES.
- D. PROVIDE (1) WIRED 3-BUTTON (OPEN, CLOSE AND STOP) CONTROLLER STATION FOR EACH
- DOOR TO BE LOCATED BY OWNER. E. PANELS TO BE INSULATED SECTION, 2" COMPRESSED FIBERGLASS BLANKET, 24 GA
- F. TRACKS TO BE 2" GALVANIZED STEEL WITH STANDARD HARDWARE
- G. VERIFY LIFT CLEARANCE BEFORE ORDERING
- H. PROVIDE NEOPRENE OR VINYL WEATHER STRIPPING ON ENTIRE PERIMETER

GALVANIZED FRONT AND BACK PANELS. USE STANDARD STILES AND RAILS.

- DOOR TO HAVE AN ELECTRICALLY CONTROLLED PHOTO EYE THAT STOPS AND REVERS THE DOOR IF AN OBSTRUCTION IS SENSED. THE PHOTO EYE IS TO BE LOCATED NEAR THE GROUND AS REQUIRED PER BUILDING CODE.
- J. ALL DOORS AND ACCESSORIES NOT GALVANIZED SHALL BE FACTORY PRIMED. INTERIOR AND EXTERIOR DOOR PAINT SHALL BE SELECTED LATER.

## 08410 ALUMINUM STOREFRONT SYSTEM

- A. EXTERIOR FRAME ARE TO BE THERMALLY BROKEN ALUMINUM FRAMES.
- B. FRAMES TO BE BLACK, BRONZE, WHITE OR CLEAR ANODIZED (AS SELECTED BY OWNER).
- C. ALUMINUM STOREFRONT SYSTEM TO BE "KAWNEER 451T" OR APPROVED EQUAL
- D. GLAZING CONTRACTOR SHALL BE RESPONSIBLE TO SECURELY ANCHOR UNITS TO FRAMING OR MASONRY AS NEEDED TO TRANSFER LOADS TO THE BUILDING.
- E. ALL GLAZING TO CONFORM TO SECTION 08800 GLAZING.

### 08520 SLIDING / GLIDING VINYL WINDOW

- A. OVERALL PRODUCT FRAME DEPTH TO BE A MINIMUM 3-1/4"
- B.INTERIOR AND EXTERIOR SURFACES ARE TO BE EXTRUDED RIGID UPVC, WITH SASHE HAVING A FOAM INSULATION.
- C. MEMBERS ARE TO HAVE MITERED AND HEAT FUSED FULLY WELDED CORNERS.
- D. SILL TO BE FITTED WITH WEEPS.
- E. FRAME TO HAVE A SETBACK NAIL FIN APPROPRIATE FOR WALL DEPTH

WHERE SHOWN ON ELEVATIONS, WINDOWS

- F. GLAZING TO BE DUAL PANE LOW-E COATED INSULATED GLASS PER SECTION "08800 GLAZING" BELOW.
- G.UNLESS SPECIFIED OTHERWISE ELSEWHERE INTERIOR AND EXTERIOR FINISH TO BE WHITE
- H. UNITS ARE TO INCLUDE FACTORY INSTALLED LOCKS AND INSECT SCREEN IN A FINISH TO MATCH WINDOW.
- GRILLS-BETWEEN-THE-GLASS, IN A FINISH TO MATCH WINDOW. . WINDOW TO BE PELLA 250 SERIES SLIDING WINDOW, SIERRA PACIFIC 8000 SERIES HORIZONTAL SLIDER, JELD-WEN V-2500 SERIES SLIDING WINDOW, OR APPROVED EQUAL.

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TO

SPECIFICATIONS

04-20-2021

#### 09000 FINISHES

- A. ALL FINISHES SHALL BE AS CALLED FOR AND SPECIFIED ON DRAWINGS
- B. INSPECTION OF FINISHED SURFACES FOR BLEMISHES AND DEFECT AT THE END OF THE . PROJECT SHALL FOLLOW THE GENERALLY ACCEPTED STANDARD - PDCA (P1-09) INDUSTRY STANDARDS FOR REVIEWING FINISHED SURFACES. "VIEWING AND INSPECTION OF FINISHED SURFACES SHALL BE AT A DISTANCE OF THIRTY-NINE (39) INCHES FROM THE SURFACE \* UNDER FINISHED LIGHTING OR NATURAL LIGHTING WITHOUT THE USE OF ANY OPTIC . MAGNIFICATIONS OR ENHANCED LIGHTING. ANY BLEMISHES OR DEFECTS DETECTED AT THIS RANGE SHALL BE REMOVED OR REPAIRED AND PATCHED TO MATCH THE SURROUNDING."
- C. EXISTING SURFACES SHALL BE PATCHED TO LIKE NEW AS CLOSELY AS POSSIBLE. VERIFY WITH ARCHITECT

#### D. GYPSUM BOARD:

- 1. ALL GYPSUM BOARD TO BE 5/8" THICK AND INSTALLED PER U.S. GYPSUM ASSOCIATION STANDARDS AND BEST INDUSTRY PRACTICES.
- 2. USE MOLD / MOISTURE-RESISTANT GYPSUM BOARD ("GREEN" BOARD OR EQUAL) IN ALL TOILET ROOMS AND WITHIN 4'-0" OF ALL PLUMBING FIXTURES SUCH AS SINKS, DRINKING FOUNTAINS, WASHING MACHINES OR ANY OTHER EQUIPMENT NOT LISTED HERE IN .
- 3. WHERE INDICATED ON PLANS ALL FIRE RATED ASSEMBLIES ARE TO USE 5/8" TYPE 'X' GYPSUM BOARD, INSTALLED PER DETAILS AND BEST INDUSTRY PRACTICES.
- 4. FURNISH AND INSTALL METAL OR PLASTIC CORNER BEAD AT ALL OUTSIDE CORNERS AND "J" MOLD AT ALL EXPOSED EDGES.
- 5. CONTROL JOINTS: ALL WALLS ARE TO FOLLOW THE LATEST ASTM C840-08 AND GA-216 AS IT PERTAINS TO CONTROL JOINT PLACEMENT. UNLESS SHOWN ON THE PLANS DIFFERENTLY, ALL WALLS AND CEILINGS GREATER THAN (30) LINEAR FEET IN ANY . DIRECTION ARE TO HAVE A CONTROL JOINT EVERY 30'-0" O.C. ALL CONTROL JOINTS ARE TO RECEIVE A METAL OR PLASTIC CONTROL JOINT STRIP, INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- E. CERAMIC FLOOR TILE TO BE 12"X12"X5/16" THIN SET TILE BY STONEPEAK OR APPROVED EQUAL, WITH CAP TILE ALONG EDGES AND BASE. INSTALL WITH C-CURE GROUT, 100% EPOXY ADDITIVE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS. TILE AND GROUT COLORS TO BE SELECTED BY OWNER FROM STANDARD . ARCHITECTURAL LINE (MAXIMUM TWO TILE COLORS).
- F. VINYL PLANK FLOORING IS TO BE NOMINAL 0.125" THICK VINYL WITH A MINIMUM 0.02" WEAR LAYER. TILE TO BE 48" IN LENGTH, 6" TO 9" IN WIDTH, AND SHALL BE LAID IN A STRAIGHT . PATTERN. OWNER TO SELECT FINAL PRODUCT FROM A STANDARD LIST OF MANUFACTURER'S PRODUCT IN A MINIMUM OF (2) COLORS. PRODUCT TO BE I.D. FREEDOM BY TARKETT, CLASSICS V5000 BY J+J FLOORING OR APPROVED EQUAL. PRODUCT TO BE ' GLUED DOWN USING A STANDARD ADHESIVE RECOMMENDED BY MANUFACTURER.
- G.CARPET TILES TO BE OWNER SELECTED. INCLUDE \$24.00 SQ YARD INSTALLED ALLOWANCE. CARPET BASE TO BE 4" HIGH, MATCHING ROOM CARPET WITH VINYL TOP EDGE. ONE . COLOR/STYLE TO BE SELECTED FROM FURNISHED SAMPLES.
- H. VINYL BASE TO BE 4" HIGH COVED, 1/8" THICK BY TARKETT, ROPPE, OR APPROVED EQUAL. SINGLE COLOR AS SELECTED BY OWNER FROM STANDARD ARCHITECTURAL LINE. INSTALLED PER MANUFACTURER'S INSTRUCTIONS
- I. FLOOR TRANSITIONS SHALL BE VINYL AS RECOMMENDED FOR THE SPECIFIC MATERIAL TRANSITIONS. MATERIAL SHALL BE BY TARKETT, ROPPE OR APPROVED EQUAL SELECTED FROM FULL ARCHITECTURAL COLOR LINES.
- K. RUBBER GYM FLOORING TO BE 48" WIDE ROLL 3/8" THICK SMOOTH MATTE FINISH RUBBER ROLLS FLOORING. PRODUCT TO MEETING THE FOLLOWING STANDARDS: ASTM D2047 FOR , STATIC COEFFICIENT OF FRICTION, ASTM F970 FOR STATIC LOAD LIMIT, ASTM D3389 COATED FABRICS ABRASION RESISTANCE AND ASTM D2859 FOR IGNITION CHARACTERISTICS. PRODUCT TO BE RESILIENT ATHLETIC FLOORING BY JOHNSONITE OR APPROVED EQUAL.

### L. COATING SCHEDULE:

1. SURFACES NOT TO BE PAINTED ARE FLOOR COVERINGS, ITEMS WITH FACTORY APPLIED FINAL FINISH, CONCEALED DUCTS, PIPES AND CONDUIT, ACOUSTICAL CEILING TILES. ITEMS WITH PRE-FINISHED SURFACES. ALUMINUM WINDOWS AND DOOR FRAMES, AND ALL ITEMS CALLED NOT TO BE PAINTED ON PLANS.- MAXIMUM OF THREE COLORS MAY BE \* SELECTED FOR EACH PAINT/TRIM TYPE.

### 2. SURFACES TO BE PAINTED:

NOTE: CONSULT WITH OWNER FOR FINAL COLORS AND FINISHES.

### a) EXPOSED INTERIOR DRYWALL GYP. BD.

1ST COAT: LATEX WALL PRIMER. 2ND COAT: LATEX EGGSHELL OR ALKYD BASED ENAMEL AS CALLED FOR. 3RD COAT: LATEX EGGSHELL OR ALKYD BASED ENAMEL AS CALLED FOR.

### b) INTERIOR GYP. BD. CEILINGS:

1ST COAT: LATEX WALL PRIMER 2ND COAT: ALKYD FLAT CEILING PAINT

### c) INTERIOR WOOD OR MASONITE (PAINTED):

1ST COAT: WALL AND WOOD PRIMER 2ND COAT: SEMI-GLOSS ALKYD ENAMEL 3RD COAT: SEMI-GLOSS ALKYD ENAMEL

### d) INTERIOR WOOD (STAINED):

1ST COAT: INTERIOR WOOD STAIN 2ND COAT: GLOSS POLYURETHANE (SAND BETWEEN COATS) 3RD COAT: GLOSS POLYURETHANE

### e) INTERIOR METAL:

1ST COAT: METAL PRIMER 2ND COAT: SEMI-GLOSS ALKYD 3RD COAT: SEMI-GLOSS ALKYD

#### f) EXTERIOR METAL:

1ST COAT: METAL PRIMER 2ND COAT: SEMI-GLOSS ALKYD ENAMEL 3RD COAT: SEMI-GLOSS ALKYD ENAMEL

#### g) PAINTED MASONRY

1ST COAT: ROLL ON BLOCK SEALER

2ND COAT:ALKYD BASED ENAMEL AS CALLED FOR 3RD COAT: ALKYD BASED ENAMEL AS CALLED FOR

#### h) ASPHALT STRIPING:

INSTALL 4" WIDE BRIGHT WHITE STRIPES AT ALL SHOWN PARKING SPACES. INSTALL 4" WIDE SAFETY YELLOW STRIPES AT HANDICAPPED PARKING AND LOADING

DIRECTIONAL ARROWS WHERE SHOWN, TO BE SAFETY YELLOW. ALL STRIPING AND MARKING TO BE STRAIGHT, PERPENDICULAR AND UNIFORM.

i) SURFACES PREVIOUSLY PAINTED MAY NOT NEED THE PRIMER OR BLOCK-SEALER LISTED ABOVE. HOWEVER CONTRACTORS ARE STILL RESPONSIBLE FOR FULL

#### 09511 ACOUSTICAL CEILING TILES

COVERAGE FINISHES.

- A. CEILING GRIDS TO BE STANDARD 2'X2' BY DONN, ARMSTRONG, OR APPROVED EQUAL
- B. CEILING TILES TO BE 2'X2" VINYL FACED SQUARE EDGE, OR STANDARD FISSURED REGULAR PANELS BY ARMSTRONG, U.S.G., OR APPROVED EQUAL.
- C. GRID AND PANELS ARE TO BE WHITE UNLESS OTHERWISE NOTED ON THE FINISH SCHEDULE. •

#### 10000 SPECIALTIES

- D. STORAGE SHELVING, WHERE SHOWN ON DRAWINGS SHALL BE PLASTIC COATED WIRE . SYSTEMS BY CLOSETMAID, SCHULTE, K&V, OR APPROVED EQUAL. EACH LOCATION SHALL HAVE A FULLY ADJUSTABLE TRACK SYSTEM WITH A MINIMUM OF SIX SHELVES. FINAL STYLES OF THE SUPPLIED SHELVES TO BE SELECTED (SOME AREAS MAY RECEIVE ONLY A ROD AND SHELF).
- E. FIRE EXTINGUISHER CABINETS TO BE SIZED FOR A 10LB EXTINGUISHER, SEMI-RECESSED, WITH CLEAR ACRYLIC VERTICAL DUO VIEW AND STANDARD "FIRE EXTINGUISHER" LABELING. SUPPLY (17) CABINETS AS PART OF BASE BID AND PLACE AS REQUIRED BY CODE AND BY . THE FIRE INSPECTOR.
- F. TOILET ACCESSORIES: THE FOLLOWING LIST OF NEW ITEMS SHALL BE FURNISHED AND \* INSTALLED, ONE SET IN EACH RESTROOM PROVIDED: (NOTE: LISTED IS TOTAL NUMBER OF • UNITS REQUIRED AND TO BE EVENLY DISTRIBUTED.)
- (7) FIXED STANDARD MIRROR(S) 48"X36" BOBRICK B-165 B 4836
- (2) 18" VERTICAL GRAB BAR(S) BOBRICK B-6806X18
- (2) 36" HORIZONTAL GRAB BAR(S) BOBRICK B-6806X36
- (2) 42" HORIZONTAL GRAB BAR(S) BOBRICK B-6806X42 (7) TOILET PAPER HOLDER(S) - BOBRICK B-2888
- (7) PAPER TOWEL DISPENSER(S) BOBRICK B-262
- (7) WALL MOUNTED SOAP DISPENSER(S) BOBRICK B-60 (6) SET(S) STAINLESS STEEL SHOWER CURTAIN HOOKS - BOBRICK B-204-1
- (6) HEAVY DUTY SHOWER CURTAIN ROD(S) WITH CONCEALED MOUNTING BOBRICK B-207
- (7) SURFACE MOUNTED ROBE HOOK(S) BOBRICK B-7671 (6) SURFACE MOUNTED STAINLESS STEEL SHELVE(S) - BOBRICK B-683X
- (6) SURFACE MOUNTED TOWEL SHELF WITH TOWEL BAR BOBRICK B-7676X24

### **10281 TUB AND SHOWER ENCLOSURE**

- A. TUB AND SHOWER ENCLOSURE(S) TO BE ONE PIECE ALL FIBERGLASS TUB AND WALL PANEL SYSTEM BY STERLING (A KOHLER COMPANY) OR APPROVED EQUALS.
- B. UNLESS NOTED OTHERWISE ON THE PLANS, ALL UNITS ARE TO BE ACCESSIBLE AND MUST MEET THE MOST CURRENT OF ALL FEDERAL, STATE AND LOCAL ACCESSIBILITY CODES. THIS INCLUDES THE MOST RESTRICTIVE REQUIREMENTS OF ADAAG, ANSI 117.1 AND LOCAL \* CODES.
- C.UNIT TO BE COMPLETE WITH ALL COMPONENTS NEEDED TO MAKE A WORKING SYSTEM. THIS IS TO INCLUDE ALL REQUIRED HARDWARE SUCH AS BUT NOT LIMITED TO GRAB BARS, CURTAIN RODS, CURTAIN HOOKS, ACCESSIBLE SHOWER HEAD AND WAND ANY OTHER ITEMS LISTED IN SECTION 10000 ABOVE.
- D. UNIT TO HAVE INTEGRAL ACCESSIBLE SEAT UNLESS OTHERWISE SPECIFIED BY OWNER. IF A NON-INTEGRAL SEAT IS NOT INCLUDED, A WALL MOUNTED OR FLOOR MOUNTED UNIT IS TO . BE SUPPLIED THAT FITS THIS ENCLOSURE.
- E. BEFORE ORDERING ENCLOSURE, VERIFY WITH PLANS AND EXISTING SITE CONDITIONS, ALL OPENING AND PENETRATION REQUIREMENTS.
- UNIT TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.

### **10503 TURNOUT GEAR LOCKERS**

- A. GEAR LOCKERS UNITS ARE TO BE A MINIMUM 21.25" WIDE, 20" DEEP AND 74.5" HIGH.
- B. UNITS ARE TO BE 1.25" O.D. X 16GA COLD-FORMED STEEL AND HAVE ALL WELDED JOINTS.
- C. SEPARATIONS BETWEEN UNITS AND ALL SHELVES TO BE 0.25"DIA WIRE IN 3" SQUARE GRID PATTERN, WELDED JOINTS AND WELDED TO THE FRAME.
- D. PROVIDE (2) WIRE GRID SHELVES ARE TO BE SUPPLIED, (1) UPPER AND (1) LOWER.
- E. PROVIDE (3) 0.192"DIA APPAREL HOOKS.
- F. UNITS TO HAVE A FULL HEIGHT DOOR OF SAME CONSTRUCTION, ALL WELDED JOINTS AND WIRE GRID FRONT. PROVIDE A SINGLE PIN WELDED STYLE HINGE WITH BRASS PIVOT BUSHING, WELDED TO GEAR UNIT FRAME.
- PROVIDE A SELF-LATCHING LATCH WITH PADLOCK HASP.

- H. UNIT TO BE FACTOR FINISHED IN COLOR SELECTED BY OWNER. ALL COMPONENTS EXCEPT ASSEMBLY AND MOUNTING HARDWARE, AND STAINLESS STEEL COMPONENTS ARE TO BE FINISHED.
- I. WHERE UNITS ARE TO BE FREE STANDING PROVIDE FABRICATED STEEL STRUCTURAL SUPPORT. STRUCTURE TO BE MADE FROM 4"X3/16" SQUARE METAL TUBE WITH (1) TOP RAIL & (1) BOTTOM RAIL WHERE UNITS ARE TO BE ATTACHED, AND (1) COLUMN EVERY (3) . LOCKERS OR AS RECOMMENDED BY MANUFACTURER. COLUMNS TO HAVE A 6"X3/16" SQUARE BASE PLATE WITH A MINIMUM OF (4) 5"X3/8" ANCHOR BOLTS INTO CONCRETE SLAB. ENTIRE STRUCTURE TO BE WELDED AND SHOP FINISHED IN COLOR SELECTED BY OWNER.
- J. GEAR LOCKERS ARE TO BE BY GEARGRID OR APPROVED EQUAL. TEL:888-643-6694

#### 11000 EQUIPMENT

- A. GENERAL CONTRACTOR TO INSTALL ALL EQUIPMENT SO LISTED ON DRAWINGS, VERIFY AND COORDINATE REQUIREMENTS WITH SUPPLIERS DURING BIDDING.
- B. OWNER TO SUPPLY AND INSTALL ALL EQUIPMENT NOT REQUIRED OR LISTED HEREIN. SEE EQUIPMENT SCHEDULES.

#### 12000 FURNISHINGS

A. OWNER TO FURNISH AND INSTALL ALL FURNISHINGS NOT REQUIRED OR LISTED HEREIN

#### 13000 SPECIAL CONSTRUCTION - NOT USED 14000 CONVEYING SYSTEMS - NOT USED

#### SPECIAL NOTE:

- A. FINAL DETAILED LAYOUT OF STEEL STRUCTURES, PLUMBING, MECHANICAL, FIRE SUPPRESSION AND ELECTRICAL SYSTEMS ARE BY SEPARATE ENGINEERS OR INSTALLERS, IT . IS THE RESPONSIBILITY OF THE OWNER AND GENERAL CONTRACTOR TO COORDINATE ALL WORK WITH AFFECTED OTHER TRADES TO ASSURE COMPLETENESS AND CODE COMPLIANCE.
- B. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND THE MECHANICAL, ELECTRICAL, AND PLUMBING CONTRACTORS TO ENSURE THAT ALL PARTS OF THEIR WORK IS TO BE ACCESSIBLE AS PER FEDERAL ADAAG GUIDELINES AND ALL STATE / LOCAL GUIDELINES. THIS INCLUDES BUT IS NOT LIMITED TO ELECTRICAL CONTROLS SUCH AS THERMOSTATS OR LIGHTING CONTROLS, LIGHT SWITCHES, OUTLET PLUGS, HAND DRYERS, AND FAUCET CONTROLS. IF THERE ARE CONCERNS ABOUT HOW TO DETERMINE REACH RANGES, EQUIPMENT CLEARANCE OR OTHER ACCESSIBILITY ITEMS, CONTACT THE ARCHITECT IMMEDIATELY BEFORE WORK BEGINS FOR GUIDANCE

#### 15000 PLUMBING - FOR BALANCE OF NOTES SEE PLUMBING PLANS

- A. THIS PROJECT REQUIRES NEW WASTE AND POTABLE WATER SYSTEMS, CONTRACTORS TO TIE SANITARY LINES INTO NEW/EXISTING SEPTIC SYSTEM BY OWNER OR OWNER'S . REPRESENTATIVE. VERIFY LOCATION AND EXISTING CONDITIONS BEFORE STARTING WORK. . S. SEE MECHANICAL PLANS FOR BALANCE OF NOTES.
- B. SUBCONTRACTOR'S BID TO BE COMPLETE, INCLUDE ALL MATERIAL, LABOR AND FACILITIES REQUIRED TO COMPLETE THE WORK SHOWN ON DRAWINGS AND SPECIFIED HEREIN TO CREATE A COMPLETE WORKING SYSTEM. WHERE DRAWINGS DO NOT SPECIFICALLY SHOW HOW WORK IS TO BE EXECUTED THE SUBCONTRACTORS RESPONSIBLE FOR THE WORK WILL FIGURE AND BID ACCEPTABLE METHOD OF COMPLETING THE WORK
- C.INCLUDED IN BID TO BE ALL PLUMBING SITE-WORK REQUIRED TO COMPLETE THE JOB, INCLUDING TAP-IN FEES AND PERMITS.
- D. ALL PLUMBING SYSTEMS TO BE COMPLETE INCLUDING, BUT NOT LIMITED TO THE BACKFLOW, PREVENTERS, WASTE, VENT, COLD WATER, HOT WATER FIXTURES AND FITTINGS.
- E. ALL WORK, MATERIAL, FIXTURES, DESIGN AND PRODUCTS SHALL CONFORM TO THE LATEST EDITION OF THE FEDERAL, STATE AND LOCAL PLUMBING CODES. INCLUDE ALL ITEMS REQUIRED BY CODE WHETHER SHOWN OR NOT
- F. SYSTEMS TO BE SIZED FOR ALL FIXTURES AND EQUIPMENT AS SHOWN ON PLANS.
- G. HANDICAPPED FIXTURES TO BE USED WHERE SHOWN ON PLANS
- H. DESIGN SUBMITTAL DRAWINGS, RISER DIAGRAM, AND OBTAINING AGENCY APPROVALS ARE RESPONSIBILITY OF THE SUBCONTRACTOR.
- I. PLUMBING CONTRACTOR SHALL VISIT SITE, REVIEW ALL DRAWINGS AND CONFIRM LOCATION AND ADEQUACY OF SEWER, GAS AND WATER CONNECTIONS WITH OWNER AND LOCAL ' GOVERNING AUTHORITIES DURING BIDDING.
- J. PLUMBING CONTRACTOR TO INCLUDE EXTENSION OF NATURAL GAS SYSTEM, PIPING, FITTING AND HOOK UPS.
- K. PLUMBING CONTRACTOR TO REVIEW H.V.A.C. SHEETS FOR GAS PIPING REQUIREMENTS OF HEATING EQUIPMENT. SIZE WORK FOR THESE LOADS PLUS EXISTING LOADS AS REQUIRED AND SHOWN ON PLANS.
- L. ALL CONDENSATE PIPING FOR THE H.V.A.C. SYSTEMS IS BY PLUMBING CONTRACTOR.
- M.PLUMBING CONTRACTOR SHALL COORDINATE THE INSTALLATION AS NEEDED TO AVOID CONFLICT OR INTERFERENCE OF ALL OTHER TRADES.
- N. PLUMBER TO INSTALL DOMESTIC WATER SUPPRESSION SYSTEM IN ALL MECHANICAL AND . STORAGE ROOMS AS REQUIRED TO MEET STATE BUILDING CODE AND N.F.P.A. STANDARDS.
- O. WHERE PLANS AND SPECIFICATIONS CONFLICT, PLANS WILL SUPERSEDE SPECS.

### 15100 H.V.A.C. - FOR BALANCE OF NOTES SEE MECHANICAL PLANS

P. SEE PLANS FOR PLUMBING FIXTURE SCHEDULE

- A. ALL CONDENSATE AND GAS PIPING BY PLUMBING CONTRACTOR.
- B. SUBCONTRACTOR'S BID TO BE COMPLETE, INCLUDE ALL MATERIAL, LABOR AND FACILITIES REQUIRED TO COMPLETE THE WORK SHOWN ON DRAWINGS AND SPECIFIED HEREIN TO CREATE A COMPLETE WORKING SYSTEM. WHERE DRAWINGS DO NOT SPECIFICALLY SHOW HOW WORK IS TO BE EXECUTED THE SUBCONTRACTORS RESPONSIBLE FOR THE WORK WILL FIGURE AND BID ACCEPTABLE METHOD OF COMPLETING THE WORK.

- C. FURNISH COMBUSTION AIR PER SECTION M-610, LATEST B.O.C.A. CODE.
- D. FURNISH HEAT DETECTORS IN RETURN DUCTS FOR EACH UNIT IF REQUIRED PER N.F.P.A.
- E. ALL WIRING ASSOCIATED WITH THE INSTALLATION SHALL CONFORM TO THE NATIONAL ELECTRIC CODE. ALL CONTROL WIRING TO BE IN EMT INSIDE; STEEL CONDUIT OUTSIDE.
- F. WHERE APPLICABLE, MATERIALS USED IN THIS SYSTEM SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25; A MAXIMUM SMOKE DEVELOPED RATING 50.
- G. ALL SYSTEMS TO CONFORM TO N.F.P.A. 88B, 90A, 90B, 91 AND 101.
- H. TOILET EXHAUSTS QUANTITIES TO CONFORM TO STATE BUILDING CODE. FURNISH AND INSTALL ROOF MOUNTED EXHAUST FANS AND OTHER SYSTEMS.
- I. THESE PLANS HAVE BEEN REVIEWED ONLY FOR GENERAL COMPLIANCE WITH THE BUILDING CODES. IT SHALL BE THE HEATING CONTRACTOR'S RESPONSIBILITY AND A CONDITION OF HIS CONTRACT WITH THE GENERAL CONTRACTOR TO PROPERLY INSTALL ALL SYSTEMS IN ACCORDANCE WITH THE CODES AND FOR PROPER COMFORT AND WORK ABILITY.
- J. CONTRACTOR TO GATHER AND VERIFY FIELD INFORMATION REQUIRED TO DESIGN AND COMPLETE CONSTRUCTION WORK. NOTIFY OWNER OF ITEMS THAT ARE DIFFERENT FROM THAT SHOWN ON DRAWINGS. CHECK SPACE ABOVE CEILINGS BEFORE FABRICATION TO BE SURE DUCTS CAN BE INSTALLED. COORDINATE AND SCHEDULE ALL WORK SO DUCTWORK AND MAIN SYSTEMS ARE INSTALLED IN TIGHT SPACES WITH A MINIMUM OF DIFFICULTY.
- K. FURNISH FULL PARTS AND LABOR WARRANTY FOR ONE YEAR STARTING AT DATE OF ACCEPTANCE OF SYSTEM BY OWNER. COMPRESSORS TO BE WARRANTED FOR FIVE YEARS.
- L. BID IS TO BE BASED ON EQUIPMENT SPECIFIED. SHOW ADDS OR DEDUCTS ON BID IF ALTERNATE EQUIPMENT IS PROPOSED.
- M.DUCT SIZES ARE AIR PASSAGE SIZE. ALL INTERIOR DUCTS TO HAVE 1 1/2" FOIL FACED WRAP. SEAL ALL DUCT JOINTS BEFORE WRAPPING. ALL JOINTS MUST BE SEALED. CEILING LAYOUT WILL BE FIELD ADJUSTED TO FINAL ROOM DIMENSIONS.
- N. ALL TAKEOFFS TO DIFFUSERS TO HAVE SCOOP AND DAMPER. ALL ELBOWS TO HAVE TURNING VANES. MAXIMUM LENGTH OF FLEX DUCT IS 7'. SECURE FLEX DUCT WITH NYLON STRAPS. DUCT TAPE IS NOT ACCEPTABLE. DIFFUSERS TO BE SYMMETRICAL WITH CEILING AND LIGHT LAYOUT.
- O.REFRIGERATION LINES TO BE INSULATED ACR COPPER WITH SILFOS JOINTS PROTECTED BY A NITROGEN PURGE DURING BRAZING. INSTALL SUCTION LINE FILTER DRIER ON COMPRESSOR AND A SIGHT GLASS WITH MOISTURE INDICATOR AT EVAPORATOR.
- P. H.V.A.C. CONTRACTOR TO FURNISH FLASHINGS & CURBS FOR ALL ROOF AND WALL PENETRATIONS TO BUILDING ERECTOR.
- Q.H.V.A.C. CONTRACTOR TO FURNISH DIMENSIONS AND SLEEVES OR ACTUAL ITEMS TO BE INSTALLED IN WALLS TO THE APPROPRIATE TRADES FOR INSTALLATION. IF H.V.A.C. ITEMS OR SLEEVES ARE NOT FURNISHED, APPROPRIATE TRADES WILL PERFORM THE WORK LATER & BACK CHARGE H.V.A.C. CONTRACTOR.

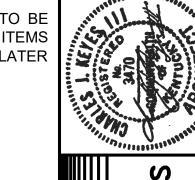
### R. INSTALL UNDER FLOOR LINES AS SHOWN.

### **15200 AIR COMPRESSOR**

- A. AIR COMPRESSOR TO BE 3 PHASE ELECTRIC, VERTICAL TANK MOUNTED 5HP, 60 GALLON STATIONARY AIR COMPRESSOR. UNIT TO BE BY INGERSOLL RAND OR APPROVED EQUAL.
- B. ELECTRICAL CONTRACTOR TO BE RESPONSIBLE FOR ALL ELECTRICAL WIRING AND DISCONNECTS. SEE ELECTRICAL PLANS FOR MORE DETAILS.
- C. PLUMBING CONTRACTOR TO BE RESPONSIBLE FOR ALL AIR PIPING AND CONNECTORS AS LISTED HEREIN OR AS NEEDED TO MAKE A COMPLETE WORKING SYSTEM.
- 1. PIPING TO BE 1" THREADED STEEL BLACK PIPE. ALL JOINTS TO BE TAPED, TIGHTENED AND TESTED TO PREVENT ANY LEAKAGE. ALL VERTICAL PIPING THAT IS TO BE INSTALLED ADJACENT TO WALL IS TO HAVE A (2) SCREW WALL MOUNTING BRACKET INSTALLED AT 36" ON CENTER
- 2. AT COMPRESSOR, INSTALL A MINIMUM 6" DRIP LEG WITH BALL VALVE DRAIN TO CATCH AND ALLOW DRAINAGE OF ALL MOISTURE CONDENSATE. ABOVE CEILING PIPES TO HAVE A GRADUAL SLOPE BACK TO COMPRESSOR DRIP LEG
- 3. BALL VALVE TO BE 1" BRASS FITTING WITH SCREW HOLES TO MOUNT UNIT TO ADJOINING SURFACE WITH A MINIMUM (2) SCREWS. SCREWS ARE TO BE APPROPRIATE FOR CONNECTING TO SURFACE.
- 4. PIPING TO START AT AIR COMPRESSOR AND TERMINATE WITH A BALL VALVE AT LOCATION INDICATED ON PLANS. PROVIDE TEMPORARY PLUG AT OPEN END OF BALL VALVE, OWNER RESPONSIBLE FOR ALL WORK FROM PLUG TO THEIR EQUIPMENT.

### **15330 AUTOMATIC SUPPRESSION SYSTEM**

- A. CONTRACTOR TO FURNISH AND INSTALL A COMPLETE COMBINATION DRY AND WET PIPE SPRINKLER SYSTEM PER N.F.P.A. 13 AND FACTORY MUTUAL REQUIREMENTS. SYSTEM TO BE DESIGN TO GIVE FULL COVERAGE AS REQUIRED BY N.F.P.A. REQUIREMENTS FOR THE SPECIFIC USE AREAS OF THIS BUILDING. DRY PORTION IS FOR ALL UNTEMPERED AREAS OF
- B. BID TO BE COMPLETE TO PROVIDE ALL WORK REQUIRED. INCLUDE DEDICATED FIRE SUPPRESSION LINE TO THE STREET, NEW TAP AND P.I.V. OR VAULT. RISER, COMPRESSOR AND ALARM TO BE LOCATED AS SHOWN. COORDINATE FINAL LOCATIONS, POWER, COMMUNICATIONS AND SERVICE WITH ALL OTHER TRADES.
- C. COORDINATE P.I.V. AND FIRE DEPARTMENT CONNECTION, LOCATION AND PIPE THREADS WITH LOCAL FIRE DEPARTMENT. SPRINKLER LINES TO BE INSTALLED SO AS NOT TO INTERFERE WITH FUTURE CRANE, PIPING SYSTEMS, MECHANICAL SYSTEMS AND ELECTRICAL SYSTEMS OR FIXTURES.
- D. PROVIDE SHOP DRAWINGS FOR APPROVAL BEFORE ORDERING MATERIALS. DESIGN STAMPED DRAWINGS AND OBTAINING AGENCY APPROVALS OF SYSTEM TO BE RESPONSIBILITY OF SPRINKLER SUBCONTRACTOR.



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SPECIFICATIONS

- A. SYSTEM TO BE A GAS-FIRED, FULLY-VENTED, LOW-INTENSITY, RADIANT HEATING SYSTEM BY CO-RAY-VAC OR APPROVED EQUAL.
- B. ALTERNATE MANUFACTURERS SHALL HAVE A MINIMUM OF 10 YEARS OF SIMILAR SERVICE. UNIT SHALL MEET OR EXCEED THE STANDARDS AS PUT FORTH BY THE RECOMMENDED SYSTEM AND MANUFACTURER. IF AN ALTERNATE MANUFACTURER IS ACCEPTED, THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE DESIGN, PERFORMANCE AND EXPENSE OF THE UNIT. ADDITIONALLY THE CONTRACTOR WILL ASSUME ALL RESPONSIBILITY TO COVER ALL EXTRA WORK AS NECESSITATED BY OTHER TRADES AS A RESULT OF THIS SUBSTITUTION. THE OWNER, ARCHITECT AND ENGINEER RESERVE THE RIGHT TO REQUIRE THE CONTACTOR TO REMOVE AND REPLACE ANY MATERIAL OR EQUIPMENT THAT DOES NOT MEET THESE SPECIFICATIONS.
- C. SYSTEM TO INCLUDE BURNER UNITS, VACUUM PUMPS, HEAT EXCHANGERS, REFLECTORS, AND CONTROLS.
- D. BID LAYOUT AS SHOWN ON PLANS. PROVIDE SHOP DRAWINGS SHOWING COMPLETE DETAILS OF INSTALLATION OF UNIT, INCLUDING LAYOUT, SUSPENSION, CONNECTIONS, VACUUM PUMPS, BURNERS, HEAT EXCHANGERS, AND CONTROLS ARE TO BE SUBMITTED PRIOR TO ORDERING UNITS.
- E. UNIT TO FOLLOW ALL FEDERAL, STATE AND LOCAL CODES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THESE CODES AND MAKE SURE THE UNIT ADHERES TO THEM.
- F. UNIT TO HAVE AT LEAST A 5 YEAR WARRANT ON ALL MATERIALS, 25 YEAR WARRANTY ON CAST IRON VACUUM PUMP AND CONTROLS AND 5 YEARS ON ALL OTHER COMPONENTS. FROM DATE OF FINAL ACCEPTANCE OF UNIT.
- G. UNIT TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
- H. PROVIDE TRAINING BY MANUFACTURER'S TECHNICAL REPRESENTATIVE TO INSTRUCT OPERATING PERSONNEL IN THE OPERATIONS AND MAINTENANCE OF UNIT.

#### 16000 ELECTRICAL - FOR BALANCE OF NOTES SEE ELECTRICAL PLANS

- A. PROVIDE COMPLETE SUPERVISED FIRE ALARM SYSTEM AS SHOWN ON THE PLANS.
- B. SUBCONTRACTOR'S BID TO BE COMPLETE, INCLUDE ALL MATERIAL, LABOR AND FACILITIES REQUIRED TO COMPLETE THE WORK SHOWN ON DRAWINGS, SPECIFIED HEREIN AND AS REQUIRED BY FEDERAL, STATE AND LOCAL CODES TO CREATE A COMPLETE WORKING SYSTEM. WHERE DRAWINGS DO NOT SPECIFICALLY SHOW HOW WORK IS TO BE EXECUTED THE SUBCONTRACTORS RESPONSIBLE FOR THE WORK WILL FIGURE AND BID ACCEPTABLE METHOD OF COMPLETING THE WORK TO PROVIDE PROPER DESIGN AND WORK ABILITY. PROVIDE A COMPLETE ELECTRICAL SYSTEM AS INDICATED ON THE DRAWINGS AND DESCRIBED HEREIN. FURNISH "AS BUILT" DRAWINGS ON COMPLETION.
- C. ELECTRICAL WORK SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE AS WELL AS STATE AND LOCAL GOVERNING CODES.
- D. PAY FOR PERMITS AND INSPECTIONS AND PROVIDE A CERTIFICATE OF INSPECTION.
- E. SYSTEMS WILL HAVE A SINGLE METER. PROVIDE REQUIRED SUBPANELS AND EQUIPMENT GROUNDING SYSTEMS. THE CONDUIT SYSTEM SHALL FORM A CONTINUOUS PATH FOR GROUND AND SHALL BE SAFELY GROUNDED AT THE DISTRIBUTION PANEL. PROVIDE GROUNDING CONDUCTORS WHERE INDICATED AS SPECIFIED.
- F. MATERIALS SHALL BE NEW WITH MANUFACTURER'S NAME PRINTED THEREON AND UNDERWRITER'S LABORATORY LISTED. THE SELECTION OF MATERIALS AND EQUIPMENT TO BE PROVIDED UNDER THIS CONTRACT SHALL BE IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND DRAWINGS. THIS CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR APPROVAL THREE COPIES OF EQUIPMENT AS FOLLOWS: MAIN SWITCHBOARD AND DISCONNECT SWITCHES AND LIGHTING FIXTURES.
- G.IDENTIFY DISCONNECT SWITCHES WITH PERMANENT NAMEPLATES WITH 1/4" MINIMUM HEIGHT LETTERS.
- H. ELECTRICAL CONTRACTOR TO COORDINATE ALL LAYOUTS, EQUIPMENT AND WORK WITH OTHER TRADES AS WILL BE REQUIRED FOR SMOOTH OPERATION AND A COMPLETE JOB. ANY CUTTING AND PATCHING OF WALLS OR FLOORS SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO REPAIR.
- I. THE ELECTRICAL SERVICE AT THE SITE SHALL BE VERIFIED BY THIS CONTRACTOR PRIOR TO BIDDING JOB. THIS CONTRACTOR SHALL PROVIDE CONDUIT, CABLE, CONCRETE, CONNECTIONS AND OTHER EQUIPMENT REQUIRED. THIS CONTRACTOR SHALL VERIFY UTILITY REQUIREMENTS AND CHARGES PRIOR TO BIDDING AND INCLUDE SUCH IN BID.
- J. PROVIDE STRUCTURAL FRAMEWORK AND HANGING RODS WITH BRACES AND ACCESSORIES WHERE REQUIRED TO HOLD EQUIPMENT IN FINAL POSITION.
- K. PROVIDE FIXTURES AS LISTED ON DRAWINGS. PROVIDE NECESSARY MOUNTING HARDWARE FOR A COMPLETE INSTALLATION. PROVIDE LAMPS, BALLASTS AND SPECIAL CONTROLS.
- L. TELEPHONE, NETWORKING AND TELEVISION CABLING SERVICE WILL BE CONTRACTED BY THE OWNER. PROVIDE A 4'X4'X3/4" EQUIPMENT BOARD COMPLETE WITH A GROUNDING MEANS WITH LUG AND A DUPLEX RECEPTACLE. INSTALL EMPTY BOX WITH BLANK COVER PLATE AND 1/2" CONDUIT WITH PULL WIRE TO 9" ABOVE CEILING, WHERE SHOWN ON PLANS.
- M.ELECTRICAL CONTRACTOR TO PROVIDE TEMPORARY SERVICE AS REQUIRED FOR THIS PROJECT. ALSO, COORDINATE AND PROVIDE FOR SWITCH OVER OF POWER FOR NEW BUILDING, SITE AND CANOPIES.
- N. THIS CONTRACTOR SHALL GUARANTEE WORK INSTALLED UNDER THE CONTRACT TO BE FREE FROM THE DEFECTIVE WORKMANSHIP AND MATERIALS. USUAL WEAR EXPECTED, AND SHOULD ANY DEFECTS DEVELOP WITHIN A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF THE BUILDING BY THE OWNER, THIS CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DEFECTIVE ITEMS AND DAMAGE RESULTING FROM FAILURE OF THESE ITEMS AT NO EXPENSE WHATSOEVER TO THE OWNER.

### **END OF SPECIFICATIONS**

PROJECT NO:

20-4017

DRAWN BY:

DATE: 04-20-2021

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