

CITY OF LEXINGTON LEXINGTON RACQUET CENTER

100% Construction Drawings January 10, 2023

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C1.2

Sheet Number:

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EARTHWORK		
12" DEEP STRIPPING – PARKING LOT & BUILDING PAD	2,327	C.Y
*12" DEEP OVEREXCAVATE & REPLACE FOR PARKING LOT PER GEOTECH REPORT *FILL – BUILDING PAD	1,175 2,109	C.Y. C.Y

*VALUE NOT ADJUSTED FOR COMPACTION FACTOR. FILL VOLUME ACCOUNTS FOR REPLACING 12" STRIPPING MATERIAL. INCLUDES BUILDING & PARKING LOT.

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STRIPING TO BE COMPLETE BY OWNER	
89 PARKING STALLS 3 ADA STALLS <u>1</u> VAN ADA STALL 93 TOTAL STALLS	

EARTHMOVING:

- 1. PRIOR TO STARTIN AND PROPOSED BO PERFORM PROCTOR
- 2. THE TOP 12 INCHE 3. COMPACT RESULTIN PERCENTAGES (PE
 - A) UNDER STRU FILL AND CC
 - PERCENT.
 - B) UNDER PAVE STRUCTURAL
 - LEAST 95 P
 - C) UNDER LAW AT LEAST 9
- 4. MOISTEN OR AERA TO COMPACTION -ARE MUDDY, FROZEN, OR CONTAIN FROST/ICE.

<u>GRADING:</u>

CONCRETE PAVING:

- REINFORCEMENT PER DETAILS.

- 5. CONCRETE MIX DESIGN SHALL UTILIZE TYPE IP CEMENT.

- OWNER.
- COLOR, AND 4 INCHES WIDE.
- GREY/LIMESTONE.
- BROOM FINISH.

GUTTER.

	<u>Storm</u>
G EARTHWORK, THE CONTRACTOR SHALL PROVIDE SAMPLES OF BOTH ONSITE DRROW SOIL MATERIALS TO AN INDEPENDENT TESTING LABORATORY TO R TESTING	1. S J
TS OF TOPSOIL AND VEGETATION SHALL BE STRIPPED. NG SUBGRADE AND SOIL MATERIALS TO NOT LESS THAN THE FOLLOWING R ASTM D 698):	2. F L 4
JCTURES, BUILDING SLABS, AND STEPS, PROVIDE 12 INCHES OF STRUCTURAL OMPACT EACH LAYER OF BACKFILL OR FILL SOIL MATERIAL TO AT LEAST 95	3. R 4. C 5. E
EMENTS, DRIVING SURFACES, AND WALKWAYS, PROVIDE 12 INCHES OF _ FILL AND COMPACT EACH LAYER OF BACKFILL OR FILL SOIL MATERIAL TO AT ERCENT.	
N OR UNPAVED AREAS, COMPACT EACH LAYER OF BACKFRILL OR FILL SOIL TO	WATER
TE SUBGRADE AND EACH SUBSEQUENT FILL OR BACKFILL SOIL LAYER PRIOR O WITHIN -3% TO +3% OF OPTIMUM MOISTURE. DO NOT USE SOILS WHICH EN OR CONTAIN FROST/ICE	1. T S 2. V

5. FILL AND BACKFILL LIFTS SHALL BE PLACED IN LAYERS NOT MORE THAN 8 INCHES IN LOOSE DEPTH FOR MATERIALS COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIALS COMPACTED BY HAND-OPERATED EQUIPMENT. 6. REFER TO GEOTECHNICAL REPORT DATED JAN, 9, 2023 FOR ADDITIONAL SOIL REQUIREMENTS.

1. BEFORE FINISH GRADING, VERIFY SUBGRADES AND BACKFILLS HAVE BEEN INSPECTED AND TESTED BY AN INDEPENDENT TESTING LABORATORY. 2. IN DISTURBED AREAS WHICH WILL BE VEGETATED OR LANDSCAPED, SCARIFY SURFACE TO DEPTH OF 3 INCHES AND SPREAD TOPSOIL FROM STOCKPILE TO A DEPTH OF APPROXIMATELY 6 INCHES. 3. TOPSOIL SHALL BE GRADED TO PROVIDE UNIFORM, GENTLE CONTOURS TO THE FINISH GRADES

INDICATED ON THE DRAWINGS. FINE GRADE TO ELIMINATE UNEVEN AREAS AND LOW SPOTS. 4. CONTRACTOR SHALL COORDINATE WITH LANDSCAPING, AND LEAVE FINISH GRADE DOWN APPROXIMATELY 1 INCH IF SOD WILL BE INSTALLED.

1. ALL CONCRETE PARKING LOTS AND DRIVEWAYS SHALL BE 6 INCH THICK P.C. CONCRETE PAVEMENT, UNLESS OTHERWISE NOTED. ALL PARKING LOTS AND DRIVEWAYS SHALL HAVE REBAR

2. ALL SIDEWALKS SHALL BE 6 INCH THICK P.C. CONCRETE PAVEMENT, UNLESS OTHERWISE NOTED. ALL SIDEWALKS SHALL HAVE REBAR REINFORCEMENT PER DETAILS. 3. CONCRETE SHALL BE TYPE 47B-4000 PER THE 2017 VERSION OF THE NEBRASKA DEPARTMENT OF

TRANSPORTATION (NDOT) STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. 4. CONCRETE COMPRESSIVE STRENGTH SHALL BE AT LEAST 4000 PSI AT 28 DAYS.

6. CONCRETE SHALL BE CURED WITH SPRAY APPLIED WHITE WATERBORNE MEMBRANE-FORMING CURING COMPOUND PER ASTM C309, TYPE 2, CLASS B.

7. CURB RAMPS SHALL BE CONSTRUCTED PER THE DETAILS. DETECTBABLE WARNING PANELS SHALL BE "CAST-IN-PLACE" BY ADA SOLUTIONS (www.adatile.com), COLOR TO BE COORDINATED WITH

8. PAVEMENT MARKINGS SHALL BE "PERMANENT PAVEMENT MARKING, PAINT" PER SECTION 423 OF THE NDOT STANDARD SPECIFICATIONS (2017). GLASS BEADS ARE NOT REQUIRED. MATERIALS SHALL BE ON THE NDOT APPROVED PRODUCT LIST. PAVEMENT SHALL BE ALLOWED TO CURE 28 DAYS PRIOR TO APPLICATION OF PAINT MARKINGS. PAVEMENT MARKINGS SHALL BE WHITE IN

9. ALL JOINTS (EXPANSION, CONTRACTION, AND CONSTRUCTION) IN PARKING LOTS AND DRIVEWAYS SHALL BE CLEANED WITH COMPRESSED AIR, DRIED, AND SEALED WITH HOT APPLIED, BLACK, SINGLE-COMPONENT JOINT SEALANT PER ASTM 3405.

10. EXPANSION JOINTS IN SIDEWALKS/WALKWAYS SHALL BE SEALED WITH SINGLE-COMPONENT, SELF LEVELING, POLYURETHANE SEALANT PER ASTM D 5893, TYPE SL. COLOR SHALL BE

11. PARKING LOTS AND DRIVEWAYS SHALL HAVE BURLAP FINISH. SIDEWALKS SHALL HAVE LIGHT

12. REINFORCING STEEL SHALL BE GRADE 60.

13. COLD WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH NDOT STANDARD SPECIFICATIONS. 14. FIELD CONCRETE TESTING AND LABORATORY COMPRESSIVE STRENGTH TESTS SHALL BE CONDUCTED AT THE CONTRACTOR'S EXPENSE FOR EVERY 100 CUBIC YARDS PLACED, AND EVERY INDIVIDUAL PLACEMENT. RESULTS OF TESTS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW. 15. DURING PUNCH-LIST WALK-THROUGH, CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE (IN FULL PANELS) ANY CRACKED, DAMAGED, OR DEFECTIVE SECTIONS OF CONCRETE, AT NO ADDITIONAL COST TO THE OWNER. DEFECTIVE CONCRETE INCLUDES, BUT IS NOT LIMITED TO, POOR OR INCONSISTENT FINISHING AND LOCATIONS WHICH HAVE "BIRD BATHS". 16. SAND WILL NOT BE ALLOWED FOR FINE GRADING UNDERNEATH PAVEMENT, SIDEWALK, AND CURB &

I SEWER UTILITY:

STORM SEWER PIPING SHALL BE HDPE ADS N-12 DOUBLE WALL PIPE WITH WATER TIGHT

JOINTS. POLYVINYL CHLORIDE (PVC) PIPE SHALL BE SDR 35 AS DESCRIBED FOR SANITARY SEWER USAGE OR SCHEDULE 40 PVC. ALL ABOVE GROUND PIPING TO DOWN SPOUTS SHALL BE SCH. 40 PVC (WHITE)

REINFORCING STEEL FOR STRUCTURES SHALL BE GRADE 60

CONCRETE FOR STRUCTURES SHALL BE AS DESCRIBED FOR CONCRETE PAVING USAGE. BEDDING FOR STORM PIPE TYPES SHALL BE PER THE DETAILED DRAWINGS.

<u>RUTILITIES (PRIVATE):</u>

TAPPING TEE, GATE VALVE, VALVE BOX, AND FITTINGS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.

WATER MAIN AND SERVICE MATERIALS SHALL BE PVC C900 DR 18 AND TUBING SHALL EQUAL CTS, SDR 9 (200 PSI)

3. CONTRACTOR SHALL COORDINATE WATER TAP WITH THE CITY OF LEXINGTON WATER

DEPARTMENT. 4. WATER SERVICE SHALL HAVE A 5-FOOT MINIMUM BURY DEPTH FOR FROST PROTECTION.

5. COORDINATE WITH MECHANICAL FOR CONNECTION AT BUILDING. 6. PERMITS AND CITY COORDINATION ARE THE RESPONSIBILITY OF THE CONTRACTOR.

SANITARY SEWER UTILITY (PRIVATE):

1. SANITARY SEWER SERVICE SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 PIPE CONFORMING TO ASTM D 3034. PVC SEWER PIPE SHALL UTILIZE A SINGLE RUBBER GASKET JOINT CONFORMING TO ASTM F-477

2. ALL PIPE SHALL HAVE CLASS 'B' BEDDING PER THE DETAILED DRAWINGS.

3. COORDINATE WITH MECHANICAL FOR CONNECTION AT BUILDING. 4. PERMITS AND CITY COORDINATION ARE THE RESPONSIBILITY OF THE CONTRACTOR.

EROSION CONTROL NOTES:

1. THE OWNER WILL APPLY TO OBTAIN COVERAGE UNDER THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (NUMBER NER160000) FOR STORM WATER DISCHARGE

2. THE OWNER HAS PREPARED THE INITIAL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE PROJECT.

3. THE CONTRACTOR WILL SERVE AS THE OPERATOR AND ADMINISTRATOR THROUGHOUT THE DURATION OF CONSTRUCTION.

4. THE CONTRACTOR WILL BE RESPONSIBLE FOR CONDUCTING ALL SITE INSPECTIONS AS REQUIRED BY THE PERMIT.

5. THE CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING ANY AND ALL NECESSARY EROSION AND SEDIMENT CONTROL MEASURES., AND PERFORMING ALL NECESSARY WORK REQUIRED AS A RESULT OF REGULAR INSPECTIONS OF THE SITE, IN ACCORDANCE WITH THE PERMIT CONDITIONS.

6. THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN ALL RECORDS AND FOR UPDATING THE SWPPP THROUGHOUT THE DURATION OF THE PROJECT. 7. UPON PROJECT COMPLETION AND SITE STABILIZATION. THE CONTRACTOR SHALL FILE FOR A

NOTICE OF TERMINATION AND ALL SWPPP DOCUMENTATION SHALL BE TURNED OVER TO THE OWNER.

8. ANY FINES, PENALTIES, OR JUDGEMENTS LEVIED AGAINST THE OWNER AS A RESULT OF THE CONTRACTOR'S FAILURE TO COMPLY WITH THE TERMS OF THESE DRAWINGS, THE PERMIT, OR THE SWPPP, SHALL BE BORNE SOLELY BY THE CONTRACTOR. 9. ADJACENT STREETS SHALL BE MONITORED CONTINUOUSLY THROUGHOUT CONSTRUCTION AND ANY

SEDIMENT TRACK-OUT SHALL BE CLEANED UP BY THE CONTRACTOR. 10. PROTECT ANY AND ALL MATERIAL STOCKPILES.

11. UPON FINAL SITE STABILIZATION, ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE REMOVED AND HAULED OFFSITE BY THE CONTRACTOR FOR PROPER DISPOSAL

GRADATION FOR CLASS B BEDDING

TOTAL PERCENT RATAINED ON	MIN.	MAX.			
1 INCH SIEVE		0			
NO 4 SIEVE	5	39			
NO 10 SIEVE	69	100			
NO 200 SIEVE	94	100			

JUNCTION MANHOLE DETAIL NO SCALE

Kearney, NE (308) 234-6456 McCook, NE (308) 345-3710

DETAILS

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DETECTABLE WARNINGS	0.4"	
	TINED CURB RAMPS	0.2"	
Ħ	BROOMED RAMP WINGS & FLARES	0.2	
	MILLED CONCRETE		
↓↓	GRASS OR NON WALKING SURFACE	DOME SECT	<u> [] (</u>

DETECTABLE WARNING DETAILS

MAXIMUM PERCENT OF SLOPES ARE RELATIVE TO THE SLOPE OF THE ADJACENT

SURFACING" OR "CONCRETE BIKEWAY". THE WORK OF MODIFICATION OF NEW OR EXISTING CURB WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS OF WORK FOR WHICH DIRECT PAYMENT IS MADE.

CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE CURB RAMP,

THE SLOPE OF THE CURB RAMP. THE TINES SHALL PRODUCE GROOVES APPROXIMATELY 1/8" WIDE AND 3/16" DEEP ON 1/2" CENTERS. ALL FLARES

THE NORMAL GUTTER LINE PROFILE SHALL BE MAINTAINED THROUGH THE AREA

TYPE VII	5"	5'	6'		6'
	<u>SECT</u>	<u>10N</u>	<u>C-C</u>		
TYPICAL	RAM	P CR	OSS	SEC	TION

CURB RAMP	RISE	"L"	RAMP 1	RAMP 2
TYPE V	3"	VAR.	N/A	4'
TYPE VI	3"	5'	4'	4'
TYPE VII	5"	5'	6'	6'

DIA. OF PIPE PARALLEL TO ROADWAY "D"	d1	d2 (<u>Å</u>)	d3 (A)
12"	3.33'	2.00'	4.00'
15"	3.44'	2.12'	4.25'
18"	3.62'	2.29	4.58'
21"	3.82'	2.46'	4.92'
24"	3.92'	2.58'	5.17 '
27"	4.10'	2.75'	5.50'
30"	4.21'	2.87'	5.75
36"	4.50'	3.17'	6.33'
42"	4.80'	3.46'	6.92'
48"	5.08'	3.75 '	7.50'
54"	5.37'	4.04'	8.08'
60"	5.67'	4.33'	8.67'
66"	5.96'	4.62'	9.25'
d3 = 2(d2)			

<u>NOTES:</u> EQUIVALENT

- RESIDENCE LOT.

TYPE "ABOVE GRADE" PLAN

<u>NOTES:</u>

- 1. ACTUAL LAYOUT DETERMINED IN FIELD.
- 2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
- 3. CONTRACTOR TO DETERMINE ACTUAL SIZE REQUIRED TO MEET THE NEEDS FOR THE VOLUME OF CONCRETE TRUCK WASHOUT WATER ANTICIPATED PLUS RAINFALL.

1. STONE SIZE- USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE

2. LENGTH- AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE LOT WHERE A 30' MINIMUM LENGTH WOULD APPLY). 3. THICKNESS- NOT LESS THAN 6".

4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.

5. FILTER CLOTH- WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQUIRED ON A SINGLE FAMILY

6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTED ENTRANCE SHALL BE PIPED ACROSS THE ENTRANCE. 7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND ANDREPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

8. WASHING- WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS TO AN APPROVED SEDIMENT TRAPPING DEVICE. 9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH DRAIN.

> ROCK ENTRANCE ROAD DETAIL NO SCALE

SWPPP & PERMIT SIGN NO SCALE

<u>NOTES:</u>

- 1. THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.
- 2. DEPENDING ON THE OPENING OF THE INLET, THE CONCRETE BLOCK MAY HAVE TO BE PLACED VERTICAL.

APPLICABL	E CODES	AND BUIL	LDING DATA	CC
STATE OF NEBRA	SKA			1. AL ROO
Nebraska has adopt International Building	ed the following C g Code - 2018 Edi	Codes which are a ition	applicable to this project:	2. IN
(This code is not end National Electrical C	forced by any stat ode - 2017 Edition	e agency) n		3. IN
(This code will be er	nforced by the Net	oraska State Elec	trical Board)	ROO WITH
Title 153 State Fire I Ch. 1 - Nebraska S following applicable	Marshal state Fire Code Re regulations:	egulations Adopte	ed NFPA Fire Code Standards including the	4. FI MATI
NFPA 1 Fire	e Prevention Code	e - 2003		STEN HOR
NFPA 10 Poi NFPA 13 Ins	table Fire Extingu	lishers - 2002 ler Systems - 200	2	PRO
NFPA 54 Na NFPA 72 Na	tional Fuel Gas C	ode (As Amended Code - 2002	d) - 2002	
NFPA 80 Fire	e Doors and Wind & Ventilating Sys	lows - 1999 stems - 2002		
NFPA 101 Life NFPA 220 Typ	e Safety Code (LS pes of Building Co	6C) - 2012 Instruction - 2000		CC
(These regulations a	are enforced by the	e Nebraska State	Fire Marshal)	
<u>State of Nebraska A</u>	ccessibility Guide	<u>lines Title 156</u> - C	October 1, 1994 (NAG).	• • • •
ADA is applicable to any state or local go with Disabilities Act (These Regulations	this building under vernment service Accessibility Guid are enforced by th	er Title II as a Pub s. Therefore, a so elines for Building ne U.S. Justice Do	blic Entity. Title II of the ADA specifically refers to chool is considered a "Public Entity." Americans g and Facilities - 1991 (ADA) epartment)	
BUILDING DATA:				
Occupancy Groups:	Assembly (A	A-4) (IBC) bby (NEPA)		
Mixed Use:	No Mixed U	se, All one occup	ancy group	
Fire Separation Dist	ances: Nor	th Yard = 30+ Fe	et	
	Eas Sou	it Yard = 30+ Fee uth Yard = 30+ Fe	eet et	
Fire Resistance Rati	inas For Buildina I	Elements:	GL	
Primary Str	uctural Frame:		Hours 0	
Exterior Bea	aring Walls: ring Walls:		0	
Exterior Non	nbearing Walls an	d Partitions:	0 (IBC Table 602)	
Floor Const Roof Const	ruction and Secor	ndary Members: ndary Members:	0 (not applicable to this project) 0	
Building Height and	Number of Stories	5:		
OCCUPANCY: HEIGHT	Pronosed	A-4 .34-10"		
	Allowed	Non-Sprinkle Sprinklered	ered = 55' (IIB), 40' (VB) = 75' (IIB), 60' (VB)	
STORIES	Proposed Allowed	1 Non-Sprinkle	ered = 2 (IIB). 1 (VB)	
		Sprinklered 1 (NFPA)	= 3 (IIB), 2 (VB)	
Building Area Calcul	lations:			<u>S</u> Y
OCCUPANCY: TYPE OF CONSTR	UCTION:	A-4 IIB		
TABULAR AREA (T. NUMBER OF STOR	ABLE 506.2): RIES PROPOSED	9,500 (IIB) : 1		
FRONTAGE INCRE	ASE:	0.7500 31 125 SE		
ALLOWED AREA P	ER FLOOR (APF): [38,000 + (9	0,500 x .75)] = 45,125 SF	
Occupancy Load Fa Storage & Mechanic	ctor Sq. Ft./Occuj al rooms: 300	pant:) Gross		
Fire Protection Syste Fire Extinguishers p No Automatic Fire S	ems: rovided prinkler System p	rovided (Not requ	uired per NFPA 12.3.5.3)	
Exit Requirements:	•			
Corridor Dead-End	Maximum: 201 (IBC	feet (A-4, non-spr C, 1018.4)	inklered)	
Common Path of Tra	avel (Max): 75	feet - (IBĆ, 1014.3	3)	

Travel Distance (Max): When Two Exits Required:

Exit Illumination:

Emergency Lighting: Exit Signs:

30 feet from fixed seating (A-4) - (IBC 1028.8) 200 feet without Automatic Sprinkler System (LSC, 12.2.6.2) 250 feet with Automatic Sprinkler System (LSC, 12.2.6.2) Separation of not less than 1/3 the maximum diagonal dimension of the area served with building equipped throughout automatic sprinkler system (1/2 if non-sprinklered) Required in means if egress including exit discharge Required in corridors, windowless classrooms, lobbies, and assembly areas Required at exits and within path of egress travel such that exist signs are no more than 100 feet in viewing distance or within the listed viewing distance.

CODE PLAN NOTES

1. ALL WALLS OF FIRE-RESISTIVE CONSTRUCTION SHALL EXTEND FROM FINISHED FLOOR TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE. 2. INSTALL TAPE AND JOINT COMPOUND FOR ALL JOINTS IN ALL GWB WALLS AND CEILINGS. 3. INSTALL FIRE SEALANT/PENETRATION FIRESTOPPING SYSTEM TO ALL PENETRATIONS IN RATED WALLS AND

ROOF/FLOOR ASSEMBLIES. EACH CONSTRUCTION TRADE IS RESPONSIBLE FOR SEALING ALL PENETRATIONS/OPENINGS WITH THE APPROPRIATE SYSTEM AS PER PENETRATION FIRESTOPPING SPECIFICATIONS IN PROJECT MANUAL. 4. FILL IRREGULARITIES BETWEEN TOP OF WALL AND DECK ABOVE WITH FIRE SAFING INSULATION OR FIRESTOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF RESPECTIVE WALLS. 5. IDENTIFY ALL RATED WALLS IN ACCESSIBLE CONCEALED CEILING SPACES (PLENUMS). PROVIDE 1 INCH HIGH PAINTED STENCILED LETTERS ON EACH VISIBLE FACE OF WALL. REPEAT AT INTERVALS NOT EXCEEDING 30 FEET MEASURED HORIZONTALLY. LETTERING TO IDENTIFY WALL RATING, INCORPORATING THE SUGGESTED WORDING: "2-HR FIRE WALL -PROTECT ALL OPENINGS".

CODE PLAN LEGEND					
•••••	1 HR SMOKE BARRIER - SEE PLAN FOR WAL - EXTEND FROM FINIS - IBC 407.4 - NFPA 101 SEC. 18.3.				
	1 HR FIRE BARRIER (IBC) - EXT ASSEMBLY A. 1-Hour rated fire-resi construction with 3/4 -ho enclosures). Automatic- hold-open devices per IE shall be activated, by ac power failure. Aggregat and single openings sha where adjoining floor are Openings shall not be lir the wall where the openi 263 and has a minimum B. 3/4-Hour doors may				

y 3/4-Hour fire protective glass up to the maximum size tested. 1-Hour doors may have up to 100-square-inches of fire-protection rated glass or must be fire-resistance rated glazing if in excess of 100-square inches C. Duct and air transfer openings shall be protected by approved fire dampers. Fire dampers are not required at walls penetrated by ducted HVAC system (supply, return or exhaust air), having a required fire-resistance rating of 1 hour or less, are in areas of other than Group H and in buildings equipped throughout with an automatic sprinkler system. Duct system shall be constructed of sheet metal not less than No. 26 gauge thickness and shall be continuous from the air-handling appliance or equipment to the air outlet and inlet terminals. D. Seal around all through penetrations (ducts without fire and/or smoke dampers, pipes and conduit penetrations, etc) with an approved penetration firestop system installed as tested in accordance with ASTM E 814 or UL 1479. Fire and/or smoke dampers at duct penetrations shall be mounted and sealed in wall with factory fabricated sleeves and perimeter mounting angles. Seal top of wall to floor or roof deck with an approved fire-resistant joint system tested in accordance with ASTM E 1966 or UL 2079 (safing insulation with continuous sealant at joints as detailed and as specified in Division 07 Specification Section "Firestopping").

SYMBOL LEGEND

0 — ROOM OCCUPANT LOAD

0 COMBINED OCCUPANT LOAD AT A GIVEN DOOR (CAPACITY OF DOORS IS DETERMINED AS FOLLOWS: CLEAR OPENING WIDTH IN INCHES DIVIDED BY 0.2)

COMBINED OCCUPANT LOAD AT A GIVEN DOOR (SUM OF THESE EQUALS TOTAL OCCUPANT LOAD) TOTAL EXIT CAPACITY OF DOOR(S) (CAPACITY OF DOORS IS DETERMINED AS FOLLOWS: CLEAR OPENING WIDTH IN INCHES DIVIDED BY 0.2)

PLUMBING FIXTURE COUNT

PER 2021 UNIFORM PLUMBING CODE TABLE 422.1, MINIMUM PLUMBING FACILITIES:

ASSEMBLY (A-4) OCCUPANCY <u>PLUMBING FIXTURES REQUIRED:</u> 340 Occupants/2 = 170 Males + 170 Females Male Water Closets (2: 101-200) = 2 Male Urinals (2: 101-200) = 2 Female Water Closets (4: 101-200) = 4 Male Lavatories (1: 1-200) = 1 Female Lavatories (2: 101-200) = 2

2 Male Waterclosets + 4 Female Waterclosets = 2 Male Urinals = 1 Male Lavatories + 2 Female Lavatories =

Drinking Fountains (2: 251-500) = 2 Service Sink (1 required) PLUMBING FIXTURES PROVIDED: 2 Male WC + 4 Female WC =

2 Male Urinals = 4 Unisex LAVs at Washfountain = 2 Drinking Fountains = 1 Service Sink =

TYPES ISHED FLOOR TO BOTTOM OF ROOF ASSEMBLY ABOVE 3.7.1

XTEND RATING FROM FLOOR ASSEMBLY UP TO ROOF esistive vertical (floor to floor or roof deck) and/or horizontal (floor) hour rated doors (1-hour for penetrations through shaft and exit c-closing doors shall have smoke-detector-activated (S-D-A) magnetic IBC 715.4.8.3. All S-D-A automatic-closing doors and smoke dampers ctuation of any fire alarm device or sprinkler system, when required, and ate width of all openings shall not exceed 25% of the length of the wall hall not exceed 156 square feet. Openings not limited to 156 square feet areas are equipped throughout with an automatic sprinkler system. limited to 156 square feet or an aggregate width of 25% of the length of ening protective has been tested in accordance with ASTM E 119 or UL m fire-resistance rating not less than the fire-resistance rating of the wall.

6 WCs total 2 URNLs total 3 LAVs total 2 DFs total

1 Service Sink 6 WCs total 2 URNLs total

4 LAVs total

2 DFs total

1 Service Sink

3 FIRE EXT. CABINET DETAIL (TYP) AC1.0 SCALE: 1 1/2" = 1'-0"

4 (TYP) GWB CONTROL JOINT ABOVE

SPACE AT FIRST LAYER AND CONTROL JOINT AT SECOND LAYER.

GWB/METAL STUD WALL;

5 (TYP) STUD FRAMING AT FRAME OPENING AC1.0 SCALE: 1 1/2" = 1'-0"

CONTROL JOINT LOCATIONS

SYMBOLS AND ABBREVIATIONS

ROOM		D DEMO
		DF DIAG
5	DOOR NUMBER	DIAM DIM DISP
Â	WINDOW TYPE	DIV DIV DR DS
Χ >	INTERIOR WALL ASSEMBLY	DET DWG
EW-# -	EXTERIOR WALL ASSEMBLY	EA EF EIFS EJ
A0.0 1	EXTERIOR ELEVATION	ELEC ELEV ENV
A0.0 1	INTERIOR ELEVATION	EPDM EQ EQUIP
	WALL AND DETAIL SECTION	EW EWC EXP EXG EXT
1 A0.0	BUILDING SECTION	FD FE
	DETAIL ENLARGEMENT	FEC FFE FF FIN FLR
xx — –	GRID SYSTEM	FND FP FRP FT
'P. FIN. FLOOR 0' - 0"	FLOOR ELEVATIONS	FTG FUR
∕ XX' - X "	SPOT ELEVATIONS	GA GALV GC GEN GFRG
ACP ADJ	ACOUSTICAL CEILING PANEL ADJACENT	GL GWB
AED AFF ALUM ALT ARCH	AUTOMATED EXTERNAL DEFIBRILLATOR ABOVE FINISHED FLOOR ALUMINUM ALTERNATE ARCHITECT(URAL)	HC HM HORIZ HSKP HT
AVG BLDG BLKG	AVERAGE BUILDING BLOCKING	INFO INSUL INT
BO BRG	BOTTOM BEARING	JAN JT
CIP CJ CL	CAST IN PLACE CONTROL JOINT CENTERLINE	KD KIT
CLNG CLR CMU COL COMB COMP	CEILING CLEAR(ANCE) CONCRETE MASONRY UNIT COLUMN COMBINATION COMPRESS(ED), (ION), (IBLE)	L LAB LAM LAV LIN
CONC CONST CONT CONTR	CONCRETE CONSTRUCTION CONTINUOUS OR CONTINUE CONTRACT(OR)	MAX MFR MIN

CORNER GUARD

CORRIDOR

CORR

MISC

MTL

DEMOLISH, DEMOLITION DRINKING FOUNTAIN DIAGONAL	NOM NRC NTS	NOMINAL NOISE REDUCTION COEFFICI NOT TO SCALE
DIAME LER DIMENSION DISPENSER DIVISION DOWN DOOR DOWN SPOUT DETAIL	OA OC OD OD OH OPH	OVERALL ON CENTER(S) OUTSIDE DIAMETER OVERFLOW ROOF DRAIN OVERHEAD OPPOSITE HAND
DRAWING EACH EACH FACE EXTERIOR INSULATION FINISH SYSTEM EXPANSION JOINT ELECTRIC(AL) ELEVATION ENVIRONMENTAL SERVICES ETHYLENE, PROPYLENE, DIENE, TERPOLYMER EQUIPMENT ESTIMATE EACH WAY ELECTRIC WATER COOLER	PED PERF PRE-FAB FRE-FIN PLAM PSF PSI PVC PVMT PLMB PLY WD QTY	PEDESTAL PERFORATE(D) PREFABRICATE(D) PRE FINISHED PROPERTY LINE PLASTIC LAMINATE POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH POLYVINYL CHLORIDE PAVEMENT PLUMBING PLYWOOD QUANTITY
EXPANSION EXISTING EXTERIOR	R RAD RCP	RISER RADIUS REINFORCED CONCRETE PIP
FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET FINISHED FLOOR ELEVATION FINISHED FLOOR ELEVATION FINISH(ED) FLOOR(ING) FOUNDATION FIRE PROTECTION FIBERGLASS REINFORCED PANEL FOOT FOOTING	RD REF REFR REV RFS RH RM RND RO RTU RV	ROOF DRAIN REFERENCE REFRIGERATOR REVISION(S), REVISED ROOM FINISH SCHEDULE RIGHT HAND ROOM ROUND ROUGH OPENING ROOF TOP UNIT REVERSE (SIDE)
FURRED (ING) GAGE, GAUGE GALVANIZED IRON GENERAL CONTRACTOR GENERAL GLASS FIBER REINFORCED GYPSUM GLASS, GLAZING GYPSUM WALL BOARD	SF SIM SPEC SQ SS STL STOR STRUCT SYM	SQUARE FEET SIMILAR SPECIFICATION(S) SQUARE STAINLESS STEEL STEEL STORAGE STRUCTURAL SYMMETRY(ICAL)
HANDICAPPED HOLLOW METAL HORIZONTAL HOUSE KEEPING / MAINTENANCE HEIGHT	T&G TEL	TONGUE & GROOVE TELEPHONE
INFORMATION INSULATE(ED), (ION) INTERIOR	TOM TOS TV TYP	TOP OF MASONRY TOP OF STEEL TELEVISION TYPICAL
JOINT		
KNOCKED DOWN KITCHEN	UC UNO	UNDER COUNTER UNLESS NOTED OTHERWISE
LENGTH, LONG LABORATORY LAMINATE(D) LAVATORY LINEAR	VERT VB V.I.F.	VERTICAL VAPOR BARRIER VERIFY IN FIELD
MAXIMUM MANUFACTURE(R) MINIMUM MISCELLANEOUS MOP SINK METAL	W W/O WB WC WD WWF	WIDTH, WIDE WITH WITHOUT WALL BASE WATER CLOSET WOOD WELDED WIRE FABRIC

DRAIN

NOT IN CONTRACT NOMINAL NOISE REDUCTION COEFFICIENT NOT TO SCALE

NIC

QUANTITY RISER RADIUS REINFORCED CONCRETE PIPE ROOF DRAIN REFERENCE REFRIGERATOR REVISION(S), REVISED ROOM FINISH SCHEDULE RIGHT HAND ROOM ROUND ROUGH OPENING ROOF TOP UNIT **REVERSE** (SIDE) SQUARE FEET SIMILAR SPECIFICATION(S) SQUARE STAINLESS STEEL STEEL STORAGE STRUCTURAL SYMMETRY(ICAL) TONGUE & GROOVE TELEPHONE TOP OF TOP OF MASONRY TOP OF STEEL TELEVISION TYPICAL UNDER COUNTER

1. GENERAL NOTES APPLY TO ALL SHEETS.

2. ALL INTERIOR DIMENSIONS ARE ACTUAL AND ARE TO FACE OF G.W.B., FACE OF CMU WALLS, FACE OF CONCRETE WALLS, FACE OF FRAMES, OR CENTERLINE OF COLUMNS, UNLESS NOTED OTHERWISE.

3. REFERENCE GENERAL WEATHER BARRIER DETAILS FOR ADDITIONAL INFORMATION NOT SHOWN ON WALL SECTIONS, EXTERIOR WALL DETAILS, DOOR DETAILS AND WINDOW DETAILS 4. SEAL ALL DISSIMILAR MATERIAL JOINTS WITH SEALANT AS SPECIFIED.

5. ALL INTERIOR WALLS ARE TYPE "A" INTERIOR WALL ASSEMBLIES, UNLESS NOTED OTHERWISE.

6. CONTRACTOR IS RESPONSIBLE FOR INSTALLING CONCRETE AND MASONRY CONTROL JOINTS (CJ) WHERE INDICATED AND AS SPECIFIED.

7. ALL WALLS SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE, UNLESS NOTED OTHERWISE.

8. SCRIBE GYPSUM BOARD OF WALL AND PARTITIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND ANY PARTITIONS. FILL IRREGULARITIES BETWEEN TOP OF WALL AND DECK ABOVE WITH FIRE SAFING INSULATION OR FIRE STOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF RESPECTIVE WALLS. 9. SEE CODE PLAN AND FLOOR PLAN SHEETS FOR LOCATION OF WALLS OF FIRE-RESISTIVE CONSTRUCTION. ALL WALLS OF FIRE-RESISTIVE

CONSTRUCTION SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE AND ACHIEVE PROPER FIRE-RESISTIVE RATING. 10. SEAL ALL PENETRATIONS THROUGH ALL WALLS. RATED WALLS SHALL BE SEALED WITH FIRE STOPPING MATERIAL AS REQUIRED TO ACHIEVE

THE RESPECTIVE FIRE-RESISTIVE RATING AND SMOKE STOPPAGE. SEE PROJECT MANUAL. 11. THE CONTRACTOR SHALL FURNISH AND INSTALL WOOD BLOCKING IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS: I.E. TOILET ACCESSORIES, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES, MARKER BOARDS, TACK BOARDS, ETC. 12. GYPSUM BOARD SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WHERE SHOWN ON DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS.

13. THE CONTRACTOR SHALL FURNISH AND INSTALL WALL BASE (TYP) AROUND ALL CASEWORK AND MILLWORK.

14. SEE FURNITURE, FIXTURE, AND EQUIPMENT FLOOR PLANS AND NOTES FOR OWNER AND CONTRACTOR PROVIDED FURNITURE, FIXTURE, AND EQUIPMENT.

15. THE OWNER SHALL BE RESPONSIBLE FOR PROVIDING THE CONTRACTOR WITH ROUGH-IN INFORMATION NECESSARY TO ACCOMMODATE THE INSTALLATION OF OWNER FURNISHED AND INSTALLED ITEMS. 16. THE CONTRACTOR SHALL INCLUDE ALL OWNER FURNISHED AND INSTALLED ITEMS IN THE CONSTRUCTION SCHEDULE, AND SHALL COORDINATE

WITH THE OWNER TO ACCOMMODATE THESE ITEMS. 17. THE OWNER SHALL BE RESPONSIBLE FOR ADHERING TO THE CONSTRUCTION SCHEDULE AS ESTABLISHED BY THE CONTRACTOR.

18. CONTRACTOR SHALL COORDINATE ALL MECHANICAL CHASE SIZES WITH THE MECHANICAL SUB-CONTRACTOR AND ELECTRICAL CHASE SIZES WITH THE ELECTRICAL SUB-CONTRACTOR. 19. CONTRACTOR SHALL COORDINATE WITH MECHANICAL AND ELECTRICAL SUB-CONTRACTORS SIZE AND LOCATION OF EQUIPMENT PADS. ALL

HOUSEKEEPING PADS TO BE 4" RAISED SLABS AS DETAILED, UNLESS NOTED OTHERWISE. 20. DIMENSIONS FOR DOOR AND WINDOW OPENINGS ARE SHOWN NOMINAL. ALLOW FOR 1/4"-INCH (10) SHIM AND SEALANT OF EXTERIOR FRAMES.

21. ARCHITECTURAL FINISH FLOOR ELEVATION 100'-0" EQUALS ACTUAL SITE REFERENCE ELEVATION OF FINISH FLOOR 2397.50 FEET. SEE CIVIL DRAWINGS. 22. EXTEND FURRING CHANNELS AND GYPSUM BOARD UP TO UNDERSIDE OF MTL. DECK ON ALL WALLS, UNLESS NOTED OTHERWISE.

23. SEAL ALL PENETRATIONS THROUGH ALL WALLS.

25. SEE WALL SECTIONS, ENLARGED PLANS AND STRUCTURAL FOR EXTERIOR AND INTERIOR WALL CONSTRUCTION NOT SHOWN ON THE FLOOR PLANS

26. ALL EXTERIOR DIMENSIONS ARE TO FACE OF PRECAST, FACE OF METAL WALL PANEL, CAST-IN-PLACE CONCRETE FOUNDATION WALLS, OR CENTERLINE OF COLUMNS.

27. ALL FIRE EXTINGUISHERS CABINETS (FE-1) TO BE MOUNTED WITH TOP OF CABINET AT 54" A.F.F. WITH BOTTLE CONTROLS NO HIGHER THAN 48". 28. PROVIDE CONTROL JOINTS IN GWB WALLS ABOVE ALL DOOR FRAMES. PROVIDE CONTROL JOINTS AT BOTH CORNERS ON BOTH SIDES OF THE DOOR FRAME FROM TOP OF DOOR TO CEILING. PROVIDE CONTROL JOINTS AT ALL PAINT COLOR CHANGES/TRANSITIONS THROUGHOUT, BOTH VERTICAL AND/OR HORIZONTAL. ALL CONTROL JOINTS MUST TERMINATE AT ONE OF THE FOLLOWING: FLOOR, DOOR/FRAME, CEILING, OR ADJACENT PERPENDICULAR WALL.

29. ARCHITECT TO SELECT ALL PRODUCT / MATERIAL COLORS FROM ALL AVAILABLE MANUFACTURER'S COLORS, UNLESS NOTED OTHERWISE. 30. ALL STRUCTURAL STOOPS TO HAVE 1/50 SLOPE (MAX.). SEE STRUCTURAL.

31. ALL DOOR AND WINDOW JAMBS IN MASONRY WALLS SHALL BE OFFSET 8" FROM ADJACENT PERPENDICULAR WALLS, UNLESS NOTED OTHERWISE. ALL DOOR AND WINDOW JAMBS IN METAL STUD WALLS SHALL BE OFFSET 4" FROM ADJACENT PERPENDICULAR WALLS, UNLESS NOTED OTHERWISE.

32. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT ALL DOORS CLEAR AT VARIOUS FLOOR FINISH THICKNESSES, TRANSITIONS, AND REDUCERS, AT ALL LOCATIONS; TRANSITION AND REDUCER TO BE PROVIDED AT ALL DISSIMILAR FLOORING TYPE TRANSITIONS, SEE ROOM FINISH GENERAL NOTES.

33. CONTRACTOR'S ARE REQUIRED TO SCHEDULE A "MEET ME LOCATE" FROM DIGGERS HOTLINE OF NEBRASKA (NEBRASKA ONE CALL) 1-800-331-5666 PRIOR TO BEGINNING ANY EXCAVATION OR WORK ON THE PROJECT SITE. ATTENDANCE IS REQUIRED BY CONSTRUCTION MANAGER/OWNER'S REPRESENTATIVE, PERTINENT CONTRACTORS, AND ALL UTILITY COMPANIES.

34. PROVIDE AND INSTALL <u>RECESSED</u> "KNOXBOX COMPANY" (800) 552-5669 KEY LOCK BOX MODEL 3224 w/ ALUMINUM FINISH AND 3240 LIFT OFF DOOR RECESSED MOUNTING KIT. COORDINATE WITH ARCHITECT AND LOCAL FIRE ADMINISTRATOR FOR AUTHORIZED SIGNATURE REQUIRED AND LOCATION. 35. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL SUB-CONTRACTORS FOR SIZE AND LOCATIONS OF PLYWOOD REQUIRED FOR WALL

MOUNTED EQUIPMENT; ALL PLYWOOD TO BE PAINTED (COLOR TO MATCH WALL FINISH); SEE DETAIL ON ELECTRICAL DRAWINGS 36. PROVIDE AND INSTALL FOAMED-IN-PLACE INSULATION AT ALL EXTERIOR WALL CREVICES, EXTERIOR HOLLOW METAL DOOR FRAMES, RIGID INSULATION OPEN JOINTS AND CRACKS AND JUNCTIONS OF DISSIMILAR EXTERIOR WALL AND ROOF CONSTRUCTION.

ROOF ASSEMBLIES1

CEILING ASSEMBLIES

CA-1

NOT USED

- PAINTED 5/8" GWB (IMPACT RESISTANT

WHERE INDICATED) CEILING ON 3 5/8"

METAL STUD FRAMING AT 16"o.c. OR

SUSPENDED AS SPECIFIED

CA-2

EXTERIOR WALL ASSEMBLIES

INTERIOR WALL ASSEMBLIES

1. ALL INTERIOR WALLS WILL EXTEND FROM FINISHED FLOOR TO BOTTOM OF ROOF/FLOOR STRUCTURE, UNLESS NOTED OTHERWISE. 2. ALL INTERIOR WALLS ARE TYPE A , UNLESS NOTED OTHERWISE.

3. AT PARTITIONS WITH ACOUSTIC BATT INSULATION, PROVIDE ACOUSTIC SEALANT AT TOP AND BOTTOM OF GWB, BOTH SIDES, AND AT BOTTOM STUD.

4. ALL DOOR AND OPENING INFILL TO BE WALL TYPE A UNLESS NOTED OTHERWISE; INFILL GWB TO BE FLUSH WITH BOTH SIDES OF EXISTING WALLS; FINISHES TO MATCH ADJACENT AREAS. 5. PROVIDE SLIP JOINTS AT ALL PARTITIONS EXTENDING TO PEMB ROOF (TYP.).

6. PROVIDE IMPACT-RESISTANT GYPSUM WALL BOARD AT ALL EXPOSED GWB WITHIN THE TENNIS COURT AREAS. 7. PROVIDE 5/8" GWB TILE BACKER BOARD FOR TILING FINISH IN NON-WET AREAS. PROVIDE 5/8" CEMENT

BOARD (AND WATERPROOFING) FOR TILING FINISH IN WET AREAS, SUCH AS SHOWERS AND TUBS.

4 3/4" AT A.1 AND A.1N

4" CONCRETE SLAB ON

FLOOR ASSEMBLIES

- 3/4" T+G PLYWOOD, FIRE RATED, SEE STRUCT. - LIGHT GAUGE FRAMING; SEE STRUCT. - (2) LAYERS 1/2" PAINTED GWB - 3" ACOUSTIC INSULATION FA-2 MEZZANINE

UL Des L524

KEY NOTE	ТҮРЕ	MANUFACTURER	MODEL	COMMENTS
	Standard			
A	36" GRAB BAR	BOBRICK	B-6806-36	CONTRACTOR PROVIDED AND INSTALLED
В	42" GRAB BAR	BOBRICK	B-6806-42	CONTRACTOR PROVIDED AND INSTALLED
С	18" GRAB BAR	BOBRICK	B-6806-18	CONTRACTOR PROVIDED AND INSTALLED
D	PAPER TOWEL DISPENSER	GEORGIA PACIFIC	59462	OWNER PROVIDED AND INSTALLED; CONTRACTOR TO PROVIDE BLOCKING AS REQUIRED; VERIFY PLACEMENT w/ OWNER
E	TOILET TISSUE DISPENSER	BOBRICK	B-2888	OWNER PROVIDED AND INSTALLED; CONTRACTOR TO PROVIDE BLOCKING AS REQUIRED; VERIFY PLACEMENT w/ OWNER
F	SANITARY NAPKIN DISPOSAL	BOBRICK	B-254	OWNER PROVIDED AND INSTALLED; CONTRACTOR TO PROVIDE BLOCKING AS REQUIRED; VERIFY PLACEMENT w/ OWNER
G	24" x 60" FRAMED MIRROR	BOBRICK	B-165-2460	CONTRACTOR PROVIDED AND INSTALLED
Н	48" x 36" FRAMED MIRROR	BOBRICK	B-165-4836	CONTRACTOR PROVIDED AND INSTALLED
J	BABY CHANGING TABLE	BOBRICK	KB200-05SS	OWNER PROVIDED AND INSTALLED; CONTRACTOR TO PROVIDE BLOCKING AS REQUIRED; VERIFY PLACEMENT w/ OWNER
К	VENDING MACHINE			OWNER PROVIDED AND INSTALLED
L	UTILITY SHELF w/ HOOKS	BOBRICK	B-239	CONTRACTOR PROVIDED AND INSTALLED
N	SOAP DISPENSER	BOBRICK	818615	OWNER PROVIDED AND INSTALLED

ACCESSORY/ EQUIPMENT SCHEDULE

IN WALL- HIDDEN COUNTERTOP SUPPORT BRACKETS AS REQ. BY MANUF.; PROVIDE WOOD BLOCKING (TYP) 4' - 0" _<u>/</u>___ RECEPTION 002 CG CG <u>↓</u>↓ _____ 1 A10.0 ∅ ⁶/_B * * CG | |CG 4 7/8"

N 3 WALL SECTION - FLOOR ACCESS HATCH A2.0 SCALE: 1 1/2" = 1'-0"

REFLECTED CEILING NOTES

1. A.F.F. = ABOVE FINISHED FLOOR.

- 2. GWB = GYPSUM WALLBOARD.
- 3. ACP = ACOUSTICAL CEILING PANEL.
- 4. ALL VERTICAL AND HORIZONTAL BULKHEAD SURFACES TO BE PAINTED TO MATCH ADJACENT WALLS UNLESS NOTED OTHERWISE.
- 5. ALL BULKHEADS TO BE PAINTED GWB (P-1) WITH LEVEL 4 "SMOOTH" FINISH (SEE DETAILS AND INTERIOR ELEVATIONS).
- 6. ALL ACP CEILINGS TO BE SUSPENDED "ACP-1" UNLESS NOTED OTHERWISE.

7. ALL DIMENSIONS ON REFLECTED CEILING PLANS ARE TO FACE OF GWB.

8. MECHANICAL AND ELECTRICAL FIXTURE SHOWN FOR COORDINATION ONLY SEE MECHANICAL AND ELECTRICAL DRAWINGS. ANY CONFLICTS TO BE VERIFIED WITH ARCHITECT PRIOR TO INSTALLATION.

2 **CEILING DETAIL** A3.0 SCALE: 1 1/2" = 1'-0"

7 SECTION DETAIL - RAKE EDGE (TYP) A7.0 SCALE: 1 1/2" = 1'-0"

 $\overline{7}$ A7.0

EAVE HEIGHT 124' - 0" _ _ _ _ _ _ _ _ _ _ _

EW-1

EW-2

FLOOR PLAN - FIRST _____ 3 WALL SECTION - EAST (TYP) A7.0 SCALE: 1/2" = 1'-0"

2 WALL SECTION - VESTIBULE A7.1) SCALE: 1/2" = 1'-0"

5 **EW-1 TO EW-2 TRANSITION (TYP)** A7.1 SCALE: 1 1/2" = 1'-0"

3 SECTION DETAIL - RAKE WITH OVERHANG A7.1 SCALE: 1 1/2" = 1'-0"

4 SECTION DETAIL - EAVE WITH OVERHANG A7.1 SCALE: 1 1/2" = 1'-0"

6 INTERIOR VESTIBULE WALL TRANSITION A7.1 SCALE: 1 1/2" = 1'-0"

					DO	OR AND FRA		EDULE							
					DOOR					FRAME		GLA	ZING		REMARKS
				MAIN							DEPTH			FIRE	
DOOR NO.	TYPE	WIDTH	# LEAFS	LEAF	HEIGHT	TYPE	MAT'L	FINISH	MAT'L	FINISH		TYPE	THK	RATING	
001A	А	6' - 0"	2	3' - 0"	7' - 0"	HG	GHM	PT	HM	PT	5 3/4"	ITC	1"		
001B	А	6' - 0"	2	3' - 0"	7' - 0"	HG	GHM	PT	HM	PT	5 3/4"	ITC	1"		1
001C	В	6' - 0"	2	3' - 0"	7' - 0"	HG	HM	PT	HM	PT	8 1/4"	TC	1/4"		
001D	В	6' - 0"	2	3' - 0"	7' - 0"	HG	HM	PT	HM	PT	8 1/4"	TC	1/4"		
003A	С	3' - 0"	1		7' - 0"	FNV1	HM	PT	HM	PT	5 3/4"	ITC	1"		1
003B	F	10' - 0"			12' - 0"	OSID	MTL	PR	MTL	PR		ITC	1"		
003C	С	3' - 0"	1		7' - 0"	FNV1	HM	PT	HM	PT	5 3/4"	ITC	1"		
005A	С	3' - 0"	1		7' - 0"	FNV1	HM	PT	HM	PT	5 3/4"	ITC	1"		
005B	С	3' - 0"	1		7' - 0"	FNV1	HM	PT	HM	PT	5 3/4"	ITC	1"		
009A	D	6' - 0"	2	3' - 0"	7' - 0"	FNV5	HM	PT	HM	PT	8 1/4"	FRG	1/4"	45 MIN.	1
009B	E	5' - 0"	2	2' - 6"	7' - 0"	FNV5	HM	PT	HM	PT	5 3/4"	FRG	1/4"	45 MIN.	1

DOOR AND FRAME ABBREVIATIONS

<u>MATERIALS:</u> MTL = METAL AL = ALUMINUM HM = HOLLOW METAL GHM = GALVANIZED HOLLOW METAL <u>FINISHES:</u> PR = PREFINISHED AN = ANODIZED PT = PAINT

DOOR TYPES

F = FLUSH FG = FULL GLASS HG = HALF GLASS FNV1 = 6" x 36" VISION PANEL FNV5 = 6" x 30" VISION PANEL OSID = OVERHEAD SECTIONAL INSULATED DOOR

DOOR AND FRAME REMARKS

1. CARD READER

GLASS TYPES

ITC = INSULATED TEMPERED CLEAR (LOW-E) TC = TEMPERED CLEAR FRG = FIRE RATED GLAZING

DOOR AND WINDOW DETAILS

WINDOW TYPES

A TRANSLUCENT INSULATED FIBERGLASS SANDWICH PANEL

						ROOM FINISH	I SCHEDULE					
	ROOM				CASEWOR	٢						
ROOM NO.	ROOM NAME	FLOOR	BASE	BASE	TOP	UPPER	NORTH	EAST	SOUTH	WEST	CEILING	REMARKS
001	VESTIBULE	SC	WB-1				P-3	P-3	P-3	P-3	P-1	-
002	RECEPTION	SC	WB-1	PL-1	SS-1	PL-1	P-3	P-3	P-3 / P-4	P-3	EXP	1,6
003	TENNIS COURTS	SC	WB-2				P-2 / P-1	P-2	P-2 / P-1	P-2 / P-1	EXP	1,3,4,5
004	SPECTATOR VIEWING AREA	SC	WB-2				P-3		P-3 / FRP		EXP	1,5
005	TENNIS COURTS	SC	WB-2				P-2 / P-1	P-2 / P-1	P-2 / P-1	P-2	EXP	1,3,4,5
006	ALCOVE	SC	WB-1					P-3	FRP	P-3	P-1	1
007	WOMENS RR	SC	WB-1				P-3	P-3	P-3	P-3	P-1	1
008	MENS RR	SC	WB-1				P-3	P-3	P-3	P-3	P-1	1
009	STORAGE / MECH.	SC	WB-1				P-3	P-3	P-3	P-3	EXP, PAINT P-1	2
010	MEZZANINE										EXP	-

			MATERIALS	LIST	
KEY	DESCRIPTION	MANUFACTURER	PATTERN/STYLE	COLOR/NAME	
WALL BASE					
WB-1	VINYL BASE - 4"	TARKETT	TRADITIONAL COVE	20 CHARCOAL WG	
WB-2	VINYL BASE - 6"	TARKETT	TRADITIONAL COVE	20 CHARCOAL WG	
PAINT					
P-1	PAINT	SHERWIN WILLIAMS		PURE WHITE SW7005	FLAT F
P-2	PAINT	SHERWIN WILLIAMS		CUSTOM GREEN TO MATCH OWNER-PROVIDED COURT SURFACING. COORD. WITH OWNER	EGGSH
P-3	PAINT	SHERWIN WILLIAMS		REPOSE GRAY SW 7015	FIELD F FINISH
P-4	PAINT	SHERWIN WILLIAMS		CUSTOM, MATCH PANTONE 395U	EGGSF
PLASTIC LAM	IINATE				
PL-1	PLASTIC LAMINATE	WILSONART		COSMIC STRANDZ 4941K-18	LINEAR
SOLID SURFA	ACE				
SS-1	SOLID SURFACE	CORIAN		ARCTIC ICE	
MISCELLANE	OUS				
CG	CORNER GUARD - 96"	INPRO	1 1/2" SURFACE MOUNTED	STAINLESS STEEL	FIELD C WALL E
EXP	EXPOSED STRUCTURE / MEP ABOVE			PAINT AS NOTED	
FRP	FIBERGLASS REINFORCED PANEL	CRANE COMPOSITES	VARIETEX, SANDSTONE TEXTURE	COTTON WHITE (1130)	PROVIE FASTE
SC	SEALED CONCRETE				CLEAR

REMARKS
NISH ON CEILINGS, ALL OTHER APPLICATIONS TO BE EGGSHELL
IELL FINISH
PAINT - EGGSHELL FINISH; INTERIOR HM DOOR FRAMES - SEMI-GLOSS
IELL FINISH
ITY FINISH
CUT FOR HEIGHT TO FINISH AT CEILING OR BULKHEAD, INSTALL ABOVE BASE
DE AND INSTALL w/ REQUIRED TRIM TO FINISH EXPOSED EDGES AND NERS
CURING AND SEALING COMPOUND

ACCESSORY AND FIXTURE LAYOUT

ACCESSIBLE FIXTURES AND ACCESSORIES

1. SEE FINISH FLOOR PLANS AND ELEVATIONS FOR VARIOUS FINISH DESIGNATIONS AND NOTES.

2. ALL BULKHEADS AND CEILINGS TO BE PAINTED P-1 UNLESS NOTED OTHERWISE. REFER TO REFLECTED CEILING PLAN AND INTERIOR ELEVATIONS FOR VARIOUS PAINT DESIGNATIONS ON BULKHEADS.

3. ALL WALLS IN SCHEDULE TO BE PAINTED P-3 UNLESS NOTED OTHERWISE; VARIOUS FINISHES NOTED IN SCHEDULE, INTERIOR ELEVATIONS AND FINISH PLANS.

4. AT ALL DISSIMILAR FLOOR FINISHES PROVIDE VINYL REDUCER/TRANSITION AS REQUIRED TO ACCOMMODATE VARIOUS FLOOR FINISH THICKNESSES; PROVIDE UNDERLAYMENT AS REQUIRED TO PROVIDE FLUSH TRANSITIONS BETWEEN FLOORING MATERIALS; SEE SPECIFICATIONS FOR DETAILS.

5. "-" ON ROOM FINISH SCHEDULE REPRESENTS NO FINISH NEEDED.

6. ALL EXTERIOR HOLLOW METAL DOOR FRAMES ON EXTERIOR SIDE TO BE PAINTED TO MATCH EXTERIOR FINISHES, VERIFY w/ ARCHITECT; ALL INTERIOR SIDES OF EXTERIOR HOLLOW METAL DOOR FRAMES TO BE PAINTED P-3, VERIFY WITH ARCHITECT.

7. ALL INTERIOR HOLLOW METAL DOOR FRAMES TO BE PAINTED P-3; VERIFY w/ ARCHITECT.

8.REFER TO FLOOR FINISH PLANS FOR LOCATIONS OF FLOORING TRANSITIONS, DESIGNS AND INSTALLATION METHODS; VERIFY ALL INSTALLATION METODS AND LAYOUT PRIOR TO INSTALLATION. START FLOORING PATTERNS CENTERED WITHIN DESIGNATED ROOMS; SAMLL TILES ON EDGES NOT ACCEPTABLE. 9. REFER TO RCP FOR EXPOSED STRUCTURE PAINT DESIGNATIONS.

10. REFER TO RCP FOR CEILING ACCENT PAINT DESIGNATIONS.

11. ALL EXPOSED COLUMNS, BEAMS, TIE RODS, TRUSSES, AND ROOF DECK ARE TO BE PAINTED PER ARCHITECTS SPECIFICATIONS.

ROOM FINISH REMARKS

1. SEE INTERIOR ELEVATIONS AND FINISH FLOOR PLANS FOR VARIOUS FINISH DESIGNATIONS AND NOTES.

2. FRP @ 4'-0" A.F.F. ON BOTH WALLS SURROUNDING MOP SINK, PROVIDE AND INSTALL WITH WELDED SEAMS, ALL ASSOCIATED TIRM, AND SEALANT AS REQUIRED TO FINISH PANELS.

3. 3" ACCENT PAINT (P-1) STRIPE AT 3'-0" A.F.F.; SEE INTERIOR ELEVATIONS FOR EXTENTS AND DETAILS.

4. DRYWALL TO EXTEND 10'-0" A.F.F.; PAINT P-2 ON ALL EXPOSED EDGES.

5. SEE FINISH FLOOR PLAN FOR FLOORING TRANSITION LOCATIONS.

6. ALL EDGES AND SIDES OF RECEPTION DESK TO BE FINISHED; SEE ELEVATIONS AND CASEWORK DETAILS FOR EXTENTS AND DETAILS OF FINISHES.

Room Finish Schedule

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2 INT. ELEV. - RECEPTION DESK - EAST (FRONT) A9.2 SCALE: 3/8" = 1'-0"

4 INT. ELEV. - RECEPTION DESK - EAST (BACK) A9.2 SCALE: 3/8" = 1'-0"

6 A9.2 SCALE: 3/8" = 1'-0"

9 INT. ELEV. - MENS RR 008 - NORTH A9.2 SCALE: 3/8" = 1'-0"

11 A9.2 SCALE: 3/8" = 1'-0"

13 INT. ELEV - WOMENS RR 007 - NORTH A9.2 SCALE: 3/8" = 1'-0"

15 INT. ELEV. - WOMENS RR 007 - SOUTH A9.2 SCALE: 3/8" = 1'-0"

12 INT. ELEV. - MENS RR 008 - EAST A9.2 SCALE: 3/8" = 1'-0"

10 INT. ELEV. - MENS RR 008 - WEST A9.2 SCALE: 3/8" = 1'-0"

A10.0 SCALE: 1" = 1'-0"

3 RECEPTION DESK SECTION - ADA TRANSACTION TOP A10.0 SCALE: 1 1/2" = 1'-0"

CASEWORK GENERAL NOTES

CABINET SECTION

COUNTERTOP CONSTRUCTION DETAILS (TYP)

SOLID SURFACE (1/2")

VALANCE DETAIL

4 **RECEPTION DESK SECTION - TRANSACTION TOP** A10.0 SCALE: 1 1/2" = 1'-0"

COUNTERTOP SIDESPLASH DETAIL (TYP)

ADJACENT COUNTERTOP

ON THE BACKSPLASH

WALL

REQUIRED

STANDARD DETAIL FOR ALL COUNTERTOP MATERIALS 1. SIDESPASHES TO BE PROVIDED WHEN THE COUNTERTOP CONTAINS A SINK FIXTURE AND MEETS A WALL 2. SIDESPLASH TO BE FABRICATED WITH THE SAME MATERIAL AS THE 3. COUNTERTOP TO BE SCRIBED WITHIN 1/8" OF THE WALL; APPLY COLOR MATCHED SEALANT TO ALL EXPOSED SEAMS AGAINST THE 4. SIDESPLASH TO START JUST BEHIND THE EDGE PROFILE ON THE FRONT OF THE COUNTERTOP AND END JUST UNDER THE TOP PROFILE 5. FRONT RADIUS OF SIDESPLASH TO BE 1/2" RADIUS OR MATCH EDGE PROFILE OF COUNTERTOP IF LESS THAN 1/2" 6. WHEN SIDESPLASH NOT REQUIRED AND COUNTERTOP IS AGAINST ADJACENT WALL, 1/8" GAP OR LESS WITH COLOR MATCH SEALANT

START BELOW THE BACKSPLASH TOP PROFILE COPE SIDESPLASH TO LOWER BACKSPLASH COVE (IF RADIUSED) SEALANT SEAM TO COUNTERTOP (TYP) RADIUS EDGE OF SIDESPLASH - END AT BEGINNING OF COUNTERTOP PROFILE - NO MORE THAN 1/8" GAP AGAINST WALL;

FILL WITH SEALANT

DOUBLE ROUND-OVER

SINGLE ROUND-OVER

EDGE PROFILE

EDGE PROFILE

CABINETRY/CASEWORK OPEN END DETAIL (TYP)

STRUCTURAL ABBREVIATIONS

AB ACI AISC ASTM ADD ADD'L	ANCHOR BOLT AMERICAN CONCRETE INSTITUTE AMERICAN INSTITUTE OF STEEL CONSTRUCTION AMERICAN SOCIETY FOR TESTING AND MATERIALS ADDENDUM ADDITIONAL	MEP MAX MECH MFR MIN MISC MTL	MECHANICAL, ELECTRI PLUMBING MAXIMUM MECHANICAL MANUFACTURER MINIMUM MISCELLANEOUS METAL
ALT ARCH BP	ALTERNATE ARCHITECT BASE PLATE	NDS NIC NTS	NATIONAL DESIGN SPE NOT IN CONTRACT NOT TO SCALE
BLDG BRG BL	BUILDING BEARING BRICK LEDGE	OC OSHA	ON CENTER OCCUPATIONAL SAFET HEALTH ADMIN.
CIP CJ CMU CL	CAST IN PLACE CONSTRUCTION JOINT CONCRETE MASONRY UNIT CENTERLINE	OPNG OPP PCI	OPENING OPPOSITE PRECAST/PRESTRESSI
CLR CONC CONN CONST CONT	CLEAR CONCRETE CONNECTION CONSTRUCTION CONTINUOUS	PSI PSF PCF PL PLBG	CONCRETE INSTITUTE POUNDS PER SQUARE POUNDS PER SQUARE POUNDS PER CUBIC FO PLATE PLUMBING
DL DTL DIA	DEAD LOAD DETAIL DIAMETER	QTY	QUANTITY
DIAG DIM DWGS	DIAGONAL DIMENSIONS DRAWINGS	RAD REF REINF REQ'D	RADIUS REFERENCE REINFORCING REQUIRED
EA EOR ELE ELEC EQ EXT	EACH ENGINEER OF RECORD ELEVATION ELECTRICAL EQUAL EXTERIOR	REV SDE SJI SOG SCHED SIM	REVISION STEEL DECK INSTITUTE STEEL JOIST INSTITUTE SLAB ON GRADE SCHEDULE SIMILAR
FIN FNDN FT FV	FINISH FOUNDATION FEET FIELD VERIFY	SPA SPECS STD STRUCT	SPACING/SPACES SPECIFICATIONS STANDARD STRUCTURAL
GA GALV	GAGE GALVANIZED	TYP TOC TOS	TYPICAL TOP OF CURB TOP OF STEEL
Horz ht	HORIZONTAL HEIGHT		TOP OF WALL
IBC ICF	INTERNATIONAL BUILDING CODE INSULATED CONCRETE FORM	VERT	VERTICAL
IN INT		w/ w/o	WITH WITHOUT
K	KIPS	WP WWF	WORKPOINT WELDED WIRE FABRIC
L LL LLH LB LSH LSV LONG LT GA	ANGLE LIVE LOAD LONG LEG HORIZONTAL LONG LEG VERTICAL POUND LONG SIDE HORIZONTAL LONG SIDE VERTICAL LONGITUDINAL LIGHT GAGE		

STRUCTURAL NOTES

	GENERAL	GOVERNING CODE
, ELECTRICAL,	CONTRACT DOCUMENTS ARE INTENDED TO CONVEY THE STRUCTURAL DESIGN INTENT. THEY REPRESENT THE STRUCTURAL SYSTEMS MATERIALS USED TYPICAL DETAILS AND SPECIFIC	
RER	DETAILS OF THE COMPLETED STRUCTURE. DETAILS MAY NEED TO BE ADAPTED BY THE CONTRACTOR, SUBCONTRACTOR, OR SUPPLIER IN SOME LOCATIONS. ANY DIVERGENCE FROM	SOIL INVESTIGATION PERFORMED BY
DUS	THESE DRAWINGS SHALL BE APPROVED BY THE ARCHITECT AND EOR AND SHALL BE CONSISTENT WITH THE DESIGN INTENT SHOWN.	REPORT NUMBER
SIGN SPECIFICATION RACT F	 GENERAL CONTRACTORS RESPONSIBILITIES INCLUDE BUT ARE NOT LIMITED TO: a. DETERMINE CONSTRUCTION SEQUENCE AND PROCEDURES. 	ALLOWABLE SOIL BEARING PRESSURE: CONTINUOUS FOOTINGS
	 PROVIDE A SAFE JOBSITE FOR WORKERS, SUBCONTRACTORS, TESTING AND INSPECTION AGENCIES, AND DESIGN PROFESSIONALS. 	PAD FOOTINGS
N.	c. DESIGN AND INSTALLATION OF ALL SHORING AND TEMPORARY BRACING NECESSARY TO ENSURE THE SAFETY OF THE BUILDING, IT'S COMPONENTS AND OCCUPANTS.	CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER AF THE CONDITIONS COMPLY WITH THE SOILS REPORT. EXCAVATIO APPROVED TESTING LABORATORY PRIOR TO PLACING CONCRET
ESTRESSED	d. VERIFY AND COORDINATE DIMENSIONS AND ELEVATIONS SHOWN IN THE DRAWINGS. IF DISCREPANCIES EXIST, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO COMMENCING THAT PROCEDURE.	DESIGN LOADS:
SQUARE INCH SQUARE FOOT CUBIC FOOT	e. COORDINATE THE LOCATION AND LOADS OF MECHANICAL AND OWNER EQUIPMENT WITH	
	REPRESENTATIVE OF EQUIPMENT THAT MAY BE USED ON THIS PROJECT AND WHAT WAS USED AS THE BASIS FOR THE STRUCTURAL DESIGN, AND BIDDING PURPOSES. DEVIATIONS SHALL BE APPROVED BY THE ARCHITECT AND EOR.	MINIMUM LIVE LOAD MECH. UNITS SNOW:
	f. PROTECT FOUNDATIONS FROM FROST DURING CONSTRUCTION. REFER TO SOILS REPORT FOR FURTHER INFORMATION.	GROUND SNOW (Pg) FLAT ROOF SNOW (Pf)
	2. IF CONFLICTS EXIST IN THE CONSTRUCTION DOCUMENTS THE STRICTEST PROVISIONS SHALL GOVERN	SNOW EXPOSURE (Ce) THERMAL FACTOR (Ct) SNOW IMPORTANCE FACTOR (Ie).
NSTITUTE	 DETAILS SHOWN IN TYPICAL LOCATIONS SHALL APPLY TO ALL LOCATIONS WITH THE SAME OR SIMILAR CONDITIONS. 	UNBALANCED SNOW LOADS
DE	REINFORCED CONCRETE	FLOOR LIVE LOAD: MEZZANINE
CES	1. REFER TO DESIGN DATA.	WIND: ULTIMATE WIND SPEED
	2. ACI FIELD REFERENCE MANUAL, SF-13 SHALL BE FOLLOWED. AT LEAST ONE COPT SHALL BE AVAILABLE ON SITE DURING CONCRETING OPERATIONS.	ASD WIND SPEED EXPOSURE
i L	 PROVIDE CONTROL JOINTS IN SLAB ON GRADE AS INDICATED BY THE DRAWINGS. IF NO CONTROL JOINTS ARE SHOWN, PROVIDE CONTROL JOINTS NO FURTHER THAN 36 TIMES THE SLAB THICKNESS (4" THICK SLAB = 12'-0). CONTROL JOINTS SHALL PROVIDE A SQUARE SECTION WITH THE LENGTH NO GREATER THAN 1 1/2 TIMES THE WIDTH. 	NET UPLIFT ON JOIST
	4. UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS, ALL CIP AND CMU WALLS SHALL BE	SEISMIC IMPORTANCE FACTOR (Ie) SITE CLASS
ED OTHERWISE	AND SPACING.	S₅ S1 S _{DS}
	 REFER TO SCHEDULES FOR TYPICAL REINFORCING DETAILS. REBAR SHALL BE SPLICED TO PROVIDE A MINIMUM LAP AS FOLLOWS TOP BARS ARE 	S _{D1} SEISMIC DESIGN CATEGORY
E FABRIC	HORIZONTAL REINFORCING THAT IS PLACED WITH 12" OR MORE OF CONCRETE BELOW THE BAR.	MATERIAL PROPERTIES:
	BAR SIZE #3 #4 #5 #6 #7 #8 #9 #10 #11 TOP BAR 24" 32" 40" 48" 70" 80" 91" 102" 113"	CONCRETE: 28 DAY CONCRETE STRENGTHS (MINIMUM):
	TYP BAR 19" 25" 31" 37" 54" 62" 70" 79" 87" 7 PROVIDE CONCEPTE CONCEPTE CONCEPTE CONCEPTER CONCEP	FOOTINGS SLAB ON GRADE SUPPORTED SI ABS AND STOOPS.
	 a. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	WALLS
	b. EXPOSED TO EARTH OR WEATHER #6 BAR AND LARGER	WELDED BARS AND ANCHORS WELDED WIRE FABRIC
	c. INTERIOR EXPOSURE BEAMS & COLUMNS	STRUCTURAL STEEL: W SHAPES
	SLABS AND JOISTS	ROLLED SHAPES & PLATES TUBES PIPES
	 PROVIDE AN ADDITIONAL 2- #5 BARS AROUND ALL RECTANGULAR OPENINGS IN CIP WALLS AND 1- #5 BAR AROUND ALL RECTANGULAR OPENINGS IN CIP SLABS. ADDITIONAL BAR SHALL EXTEND 24" MINIMUM REYOND THE OPENING. 	WELDING ELECTRODES BOLTS ANCHOR RODS
	9. ALL REBAR, EXCLUDING DOWELS INTO FOUNDATION, TO BE PROPERLY CHAIRED AND SECURED	EXPANSION BOLTS
	PRIOR TO PLACING OF CONCRETE. WET SETTING OF REBAR IS NOT PERMITTED.	SCREW ANCHORS
	1. REFER TO DESIGN DATA.	SLEEVE ANCHORS
	 GALVANIZE ALL DECKING, UNLESS OTHERWISE INDICATED BY THE ARCHITECT. PROVIDE MANUFACTURER'S STANDARD RUST INHIBITIVE PAINT ON ALL OTHER ACCESSORIES. 	FASTENERS IN CONTACT W/ TREATED LUMBER
	3. ALL METAL DECK OPENINGS SHALL BE REINFORCED. FOR OPENINGS LESS THAN 8", REINFORCE WITH 2" x 20 GAGE x 2'-8" STRAP EACH SIDE OF OPENING WELDED TO TOP OF DECK. FOR	
	OPENINGS GREATER THAN 8", REFER TO METAL DECK ATTACHMENT SCHEDULE FOR DETAILS. STRUCTURAL LIGHT GAGE FRAMING	STRUCTURAL LIGHT GAGE FRAMING:
	1. REFER TO DESIGN DATA & LINTEL SCHEDULE.	STUDS JOISTS (UNPUNCHED)
	 ALL HORIZONTAL LOAD BEARING MEMBERS, SUCH AS BEAMS AND JOIST, SHALL BE CONSTRUCTED OUT OF UNPUNCHED MEMBERS. 	YIELD (33 & 43 MIL)
	 UNLESS NOTED OTHERWISE, METAL STUD BEARING WALLS SHALL HAVE WALL STUDS ALIGNED WITH JOIST OR RAFTER ABOVE. 	(54 MIL & ABOVE) GALVANIZING DEFL. CLIP
	4. LOAD BEARING WALLS SHALL BE SHEATHED WITH GYPSUM WALLBOARD OR OSB SHEATHING ON A MINIMUM OF ONE SIDE ATTACH SHEATHING TO STUDS w/ #10 SCREWS @ 6" OC AT PANEL	(33 & 43 MIL)
	EDGES AND 1'-0 OC IN THE FIELD MINIMUM. 5. ALL STUDS IN EXTERIOR WALLS SHALL BE SHEATHED WITH GYPSUM WALLBOARD OR OSB	(54 MIL & ABOVE)
	SHEATHING ON BOTH SIDES, UNLESS NOTED OTHERWISE. ATTACH SHEATHING TO STUDS w/ #10 SCREWS @ 6" OC AT PANEL EDGES AND 1'-0 OC IN THE FIELD MINIMUM.	LOAD BEARING & EXT WALLS
	 UNLESS NOTED OTHERWISE, NON-BEARING WALLS SHALL HAVE DEFLECTION TRACKS OR SLIP CONNECTIONS TO ALLOW 3/4" DEFLECTION OF STRUCTURE ABOVE. 	LINTELS, JOIST & PLATESA
	 UNLESS NOTED OTHERWISE, FLOOR OR ROOF SHEATHING SHALL BE ATTACHED TO FLOOR JOIST OR ROOF RAFTERS w/ #10 SCREWS @ 6" OC AT PANEL EDGES & 1'-0 OC IN THE FIELD MINIMUM. 	M/C (MAX) MICROLAM BEAMS
	8. CONTINUE ALL ADDITIONAL STUD FRAMING BELOW BEAMS OR GIRDERS TO THE FOUNDATION.	OSB FLOOR SHEATHING
	1. REFER TO DESIGN DATA.	OSB ROOF SHEATHING
	2. NAILING OF MEMBERS SHALL COMPLY WITH THE "FASTENING TABLE" CONTAINED IN IBC SECTION 2304.	FASTENERS
	 UNLESS NOTED OTHERWISE NAILS CONNECTING FRAMING MEMBERS SHALL BE .131" x 3 1/2 NAILS. NAILS CONNECTING SHEATHING TO FRAMING MEMBERS SHALL BE .131" x 2 1/2 NAILS. 	
	 ALL CONNECTORS, NAILS, BOLTS, OR OTHER FASTENERS, USED WITH ALL TREATED LUMBER AND PLYWOOD, SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL ALLOYS 304 OR 316. 	
	 GLUE FLOOR SHEATHING TO FRAMING AND TONGUE GROVE JOINTS WITH ADHESIVES MEETING APA SPECIFICATIONS AFG-01 AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. 	
	SPECIAL INSPECTION 1. SPECIAL INSPECTIONS TO BE PERFORMED BY A LICENSED STRUCTURAL ENGINEER OR	
	CERTIFIED SPECIAL INSPECTOR WHO HAS BEEN CERTIFIED IN THE MATERIAL BEING INSPECTED.	
	a. THE OWNER: SHALL HIRE A QUALIFIED SPECIAL INSPECTOR/TESTING AGENCY AS INDICATED	
	 b. THE GENERAL CONTRACTOR: SHALL COORDINATE THE REQUIRED SPECIAL INSPECTIONS WITH THE SPECIAL INSPECTOR AND SUB CONTRACTOR PERFORMING THE WORK. 	
	C. THE SPECIAL INSPECTOR: SHALL INSPECT THE REQUIRED WORK AND SUBMIT A REPORT TO THE ARCHITECT/STRUCTURAL ENGINEER, AND THE BUILDING OFFICIAL AS REQUIRED BY THE	
	BUILDING OFFICIAL. THE REPORT SHALL INDICATE: THE WORK WHICH WAS INSPECTED, THE WORK WHICH MET THE DESIGN SPECIFICATIONS, AND WORK WHICH DID NOT MEET THE DESIGN SPECIFICATIONS, REMEDIAL ACTION REQUIRED BY THE STRUCTURAL ENGINEER OF RECORD, AND REMEDIAL ACTION COMPLETED. ONCE THE INSPECTIONS ARE COMPLETE, A FINAL STATEMENT OF SPECIAL INSPECTION SHALL BE SUBMITTED INDICATING THAT THE CONSTRUCTION MET THE REQUIRED SPECIFICATIONS, OR ANY NON-COMPLIANCE WHICH FXISTS	
	3. SCOPE AND FREQUENCY OF INSPECTIONS SHALL BE AS PER SPECIFICATIONS OR AS MINIMUM PER REFERENCED STANDARDS	
	 THE FOLLOWING TABLE PROVIDES A GENERAL OVERVIEW OF THE REQUIRED INSPECTIONS. REFER TO REFERNCED CODE SECTIONS FOR SPECIFIC REQUIRMENTS. 	

MATERIAL (IBC2018)	REFERENCED STANDARD	APPLIES TO	NOTES
STEEL (1705.2)	AISC 360-16	WELDING HIGH-STRENGTH BOLTING STEEL FRAME DETAILS (BRACING, STIFFENING, MEMBER LOCATIONS, AND CONNECTIONS)	SHOP FABRICATION SEE 1704.2.5
CONCRETE (1705.3)	IBC TABLE ACI 318-14	REINFORCEMENT -MATERIAL, WELDING, AND PLACEMENT ANCHORAGES -CAST AND POST-INSTALLED DESIGN MIX AND IN-SITU STRENGTH PLACEMENT / ERECTION / CURING	EXCLUDES: SLAB ON GRADE, SIDEWALKS AND PAVING
SOILS (1705.6)	IBC TABLE	SITE PREPARATION, COMPACTED FILL	
FABRICATIONS (1705.10)	NA	OFF PREMISES FABRICATIONS	
WIND (1705.11)	NOT REQUIRED	NOT REQUIRED	
SEISMIC (1705.12)	NOT REQUIRED	NOT REQUIRED	

OWABLE SOIL BEARING PRESSURE: CONTINUOUS FOOTINGS PAD FOOTINGS	
E CONTRACTOR SHALL COMPLY WITH THE RECOMMENT NTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINE E CONDITIONS COMPLY WITH THE SOILS REPORT. EXC/ PROVED TESTING LABORATORY PRIOR TO PLACING CO	DATIONS OF THE REPORT. THE ER AFTER EXCAVATION TO DETERMINE IF AVATIONS SHALL BE TESTED BY AN NCRETE.
SIGN LOADS:	
LDING CATEGORY	
DF LIVE LOAD:	
MINIMUM LIVE LOAD MECH. UNITS	20 PSF REFER TO PLAN
JW: GROUND SNOW (Pg)	
FLAT ROOF SNOW (P₁) SNOW EXPOSURE (C _e)	
UNBALANCED SNOW LOADS SNOW DRIFTING	ASCE 7-10 SECTION 7.6
OR LIVE LOAD:	
MEZZANINE	
ID:	111 MDH
INTERNAL PRESSURE COEFFICIENT	0.18 15 DSE
SEISMIC IMPORTANCE FACTOR (I _e)	
SITE CLASS S _s	
S ₁ S _{DS}	0.037
S _{D1} SEISMIC DESIGN CATEGORY	0.059 A
TERIAL PROPERTIES:	
VCRETE:	- · · ·
28 DAY CONCRETE STRENGTHS (MINIMUM): FOOTINGS	<u>r_c w/c</u> 4000 PSI 0.48
SLAB ON GRADE	
WALLS.	4000 PSI 0.48
REINFORCING BARS	ASTM A615 GRADE 60 ASTM A706 GRADE 60
	A185 CSA G30.5
W SHAPES	ASTM A992
ROLLED SHAPES & PLATES TUBES	ASTM A36
PIPES	ASTM A53 TYPE E OR S F70XX
BOLTS	ASTM 64564 CRADE 65
EXPANSION BOLTS.	HILTI KWIK BOLT 3
ADHESIVE ANCHORS	OR APPROVED EQUIV. HILTI HIT-HY 200 (HY 270 MASONRY)
SCREW ANCHORS	OR APPROVED EQUIV. SIMPSON TITEN HD
SLEEVE ANCHORS	OR HILTI HUS-H
FASTENERS IN CONTACT W/ TREATED LUMBER	F2329 OR A153
TAL DECK:	ON AFFROVED EQUIV.
FORM DECK (STRUCT STOOPS)	1 1/2" TYPE "C" 20 GAGE, GALV
UCTURAL LIGHT GAGE FRAMING:	ASTM 4652
JOISTS (UNPUNCHED)	
YIELD	22 KG
(33 & 43 MIL)	
GALVANIZING DEFL. CLIP	G-60
(33 & 43 MIL)	3 1/2" 14 GA. FAST CLIP SLIDE CLIP (FCSC) MIN. 2157" PAF TO STRUCTURE
(54 MIL & ABOVE)	5 1/2" 12 GA. FAST CLIP SLIDE CLIP (FCSC) MIN. 4157" PAF TO STRUCTURE
RUCTURAL LUMBER:	
LOAD BEARING & EXT WALLS	STUD GRADE, #3 OR BETTER SPF
LINTELS, JOIST & PLATES	#2 OR BETTER HEM FIR OR SPF
LUMBER IN CONTACT W/ CONCRETE OR MASONRY	ACQ TREATED FOR GROUND CONTACT #2 OR BETTER SOUTHERN PINE
M/C (MAX) MICROLAM BEAMS	
	Fv = 285 PSI E = 2000 PSI
OSB FLOOR SHEATHING	
OSB ROOF SHEATHING OSB WALL SHEATHING	
FASTENERS	REFER TO GENERAL NOTES

DESIGN DATA

2018 INTERNATIONAL BUILDING CODE

.....MID-STATE ENGINEERING & TESTING200-101-2942 IN

<u>w/c</u> 0.48 0.50 0.48 0.48 3 GRADE 60 3 GRADE 60 5 CSA G30.5

STRUCTURAL NOTES & DESIGN DATA

Project Number: 2261 Date: January 5, 2022

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PIER AND PILASTER SCHEDULE

		CONTINUC	DUS FOOTING SCHEDULE			F	PAD FOOT	ING SCHEDULE
MARK	WIDTH	DEPTH	REINFORCING	MARK	WIDTH	LENGTH	DEPTH	REINFORCING
CF-1	1' - 0"	3' - 4"	2- #5 TOP & BOTTOM	F-1	3' - 0"	3' - 0"	3' - 4"	5- #5 EA WAY TOP & BOTTOM
CF-2	1' - 4"	3' - 4"	2- #5 TOP & BOTTOM	F-2	6' - 0"	6' - 0"	3' - 4"	6- #6 EA WAY TOP & BOTTOM

TYPICAL FOOTING DETAILS @ UNDERGROUND PLUMBING

ROOF AND FLOOR SHEATHING SCHEDULE

REFER TO PLAN

FACE OF STUD

GRI

800T125-54 TRACK ATTACH TO TOP

LIGHT GAGE JOIST REFER TO PLAN

BLOCKING @ 32" OC MATCH JOIST

/ FLOOR SHEATHING REFER TO SCHEDULE,

TOP OF SHEATHING REFER TO PLAN

TRACK w/ 1- #10 SCREW @ 16" OC

ATTACH TO BLOCK @ 6" OC

REFER TO PLAN

GRID

REFER TO PLAN

FACE OF STUD

18 3/4" = 1'-0"

19 3/4" = 1'-0"

Project Number: 2261 Date: January 5, 2022 Copyright © 2023

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GENERAL PLUMBING NOTES

- DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES.
- 4. COORDINATE EXACT LOCATION OF ALL FLOOR, WALL, AND ROOF PENETRATIONS AND WORK TO BE PERFORMED ABOVE THE FLOORS AND ROOF WITH GENERAL CONTRACTOR. SEAL ALL
- 5. UNLESS OTHERWISE NOTED, ROUTE PIPING AS HIGH AS POSSIBLE. UTILIZE JOIST SPACE AND OPEN WEBBING OF JOISTS TO AVOID CONFLICTS. COORDINATE EXACT ROUTING WITH STRUCTURE, LIGHTS, DUCTWORK, AND ALL OTHER TRADES. PROVIDE NECESSARY OFFSETS, TRANSITIONS, AND EXTENSIONS AS REQUIRED TO COMPLETE INSTALLATION AT NO ADDITIONAL
- 6. PLANS ARE SCHEMATIC IN NATURE. PIPE ROUTING IS SHOWN FOR CLARITY AND FOR GENERAL ROUTING INFORMATION. COORDINATE EXACT ROUTING WITH ALL OTHER TRADES. PROVIDE ALL
- ROUTED IN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF INSULATION.
- CLEANOUTS SHOWN. PROVIDE CLEANOUTS AS REQUIRED PER AUTHORITY HAVING JURISDICTION. COORDINATE CLEANOUT LOCATIONS WITH GENERAL CONTRACTOR.
- 11. SEE PLUMBING FIXTURE SCHEDULE SHEET M4.1FOR PLUMBING FIXTURE CONNECTION

do not scale drawings. verify all dimensions and clearances from architectural, structural, shop and other appropriate drawings or at site. Iay out and coordinate all work prior to installation to provide clearances required for operation, maintenance, and codes and verify non-interference with other work. do not fabricate prior to verification of clearance for all trades.

MEZZANINE 010
↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓

N 1 MEZZANINE - MECHANICAL M2.1 SCALE: 1/4" = 1'-0"

3 WASTE AND VENT RISER M2.1 SCALE: NTS

 2
 ENLARGED PLUMBING

 M2.1
 SCALE: 1/4" = 1'-0"

GENERAL PLUMBING NOTES

- DO NOT ROUTE PIPING ABOVE ELECTRICAL PANELS. MAINTAIN ALL CODE REQUIRED CLEARANCES.
- 2. MAINTAIN MINIMUM 10'-0" CLEARANCE TO WASTE VENTS FROM ALL FRESH AIR INTAKES.
- 3. MAINTAIN MANUFACTURER'S REQUIRED CLEARANCE AROUND ALL MECHANICAL EQUIPMENT TO ALLOW PROPER OPERATION AND FOR EASY MAINTENANCE AND FILTER ACCESS.
- 4. COORDINATE EXACT LOCATION OF ALL FLOOR, WALL, AND ROOF PENETRATIONS AND WORK TO BE PERFORMED ABOVE THE FLOORS AND ROOF WITH GENERAL CONTRACTOR. SEAL ALL PENETRATIONS OF EXTERIOR ENVELOPE WEATHER TIGHT.
- 5. UNLESS OTHERWISE NOTED, ROUTE PIPING AS HIGH AS POSSIBLE. UTILIZE JOIST SPACE AND OPEN WEBBING OF JOISTS TO AVOID CONFLICTS. COORDINATE EXACT ROUTING WITH STRUCTURE, LIGHTS, DUCTWORK, AND ALL OTHER TRADES. PROVIDE NECESSARY OFFSETS, TRANSITIONS, AND EXTENSIONS AS REQUIRED TO COMPLETE INSTALLATION AT NO ADDITIONAL COST TO OWNER.
- 6. PLANS ARE SCHEMATIC IN NATURE. PIPE ROUTING IS SHOWN FOR CLARITY AND FOR GENERAL ROUTING INFORMATION. COORDINATE EXACT ROUTING WITH ALL OTHER TRADES. PROVIDE ALL ADDITIONAL OFFSETS AS REQUIRED TO COMPLETE INSTALLATION. 7. INSTALL ALL VALVES ABOVE ACCESSIBLE CEILINGS OR IN ACCESSIBLE LOCATIONS. PROVIDE
- ACCESS PANELS WHERE REQUIRED.
- 8. DO NOT ROUTE WATER PIPING IN EXTERIOR WALLS UNLESS OTHERWISE NOTED. PIPING ROUTED IN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF INSULATION. 9. ALL PLUMBING SHALL BE IN ACCORDANCE WITH THE LOCAL PLUMBING CODE. NOT ALL
- CLEANOUTS SHOWN. PROVIDE CLEANOUTS AS REQUIRED PER AUTHORITY HAVING JURISDICTION. COORDINATE CLEANOUT LOCATIONS WITH GENERAL CONTRACTOR.
- 10. SEE WASTE AND VENT RISER DIAGRAMS ON SHEET M2.1 FOR COMPLETE PLUMBING SIZES AND CONFIGURATION.
- 11. SEE PLUMBING FIXTURE SCHEDULE SHEET M4.1FOR PLUMBING FIXTURE CONNECTION REQUIREMENTS.

KEYNOTES

M202 MEZZANINE ACCESS LADDER. DO NOT ROUTE PIPING IN THIS AREA. PROVIDE OFFSETS AS NECESSARY. REFER TO ARCHITECTURAL PLANS. M203 PROVIDE 0.5 GPM BALANCING VALVE IN HOT WATER RECIRCULATION LINE. LOCATE VALVE IN ACCESSIBLE LOCATION.

10 LOUVER DETAIL M3.1 SCALE: NTS

8 INLINE EXHAUST FAN DETAIL M3.1 SCALE: NTS

9 SIDEWALL PROP FAN DETAIL M3.1 SCALE: NTS

4 WATER SOFTENER DETAIL M3.1 SCALE: NTS

-

NICKEL BRONZE SCORIATED ROUND TOP

CLEANOUT COVER-

____LABEL CLEANOUT PLUG AS 'SANITARY'

-FLOOR

/---CLEANOUT PLUG

5 ELECTRIC WATER HEATER DETAIL M3.1 SCALE: NTS

STINUCL DECOMPTION TYPICAL PIPING TYPICAL PIPING +1 + PIPE TEE / PIPE ELBOW	SYMBOL	DESCRIPT		SYMBOL	DESCRIPTION
1+1 PIPE TEE / PIPE ELBOW →II→ UNION +0 →ELBOW DN / ELBOW UP →→ STRAINER -C-∞ ISOLATION VALVE (BALL OR BUTTERFLY) →> CHECK VALVE (ARROW INDICATES FLOW) →C-∞ BALANCING VALVE →S →S AUTOMATIC CONTROL VALVE TWO-WAYTHREE-WAY →C-∞ GATE VALVE →S → PRESSURE REGULATING VALVE (PRV) → GATE VALVE →S → PRESSURE REGULATING VALVE (PRV) → GATE VALVE →S → PRESSURE GAUGE	OTWIDOL	DECORA	TYPICA		
→→→ ELBOW DN / ELBOW UP →→ STRAINER →→→ SOLATION VALVE (BALL OR BUTTERFLY) →→ CHECK VALVE (ARROW INDICATES FLOW) →→→ BALANCING VALVE (BALL OR BUTTERFLY) →→ CHECK VALVE (ARROW INDICATES FLOW) →→→ BALANCING VALVE →→ PRESSURE REGULATING VALVE (PRV) →→→ GATE VALVE → PRESSURE REGULATING VALVE (PRV) →→→ GATE VALVE ↓ PRESSURE GAUGE ▼±+** PRESSURE COULTING VALVE (PRV) → →→→ GATE VALVE ↓ PRESSURE COULSTING VALVE (PRV) →→→ GATE VALVE ↓ PRESSURE COULSTING VALVE (PRV) →→ GATE VALVE ↓ PRESSURE COULSTING VALVE (PRV) →→ RESSURE COLSET GATE VALVE ↓ ↓ WATER CLOSET (SEE SPECIFICATIONS FOR TYPE) ↓ ↓ COOF DRAIN - SIZE TYPE ↓ LLAYATORY (SEE SPECIFICATIONS FOR TYPE) ↓ ⊕ ♥ MOOP DRAIN - SIZE TYPE ↓ ↓ LLCTRUC WATER COOLER (SEE SPECIFICATIONS FOR TYPE) ↓ ⊕ ₩ WALL HYDRANT (NON-FREEZE) ↓ ↓ MOOP SINK (SEE SPECIFICATIONS	++++ +++	PIPE TEE / PIPE ELBOW			UNION
	-+0 -+0	ELBOW DN / ELBOW UP		- / -	STRAINER
→→→∞ BALANCING VALVE →k→→k→ AUTOMATIC CONTROL VALVE TWO-WAY/THREE-WAY →→ GATE VALVE →k→ PRESSURE REGULATINO VALVE (PRV) →∞→ GLOBE VALVE ↓ PRESSURE REGULATINO VALVE (PRV) →∞→ GLOBE VALVE ↓ PRESSURE CAUGE ⊥ ⊥ PRESSURE TREMPERATURE TEST PORT ↓ ↓ Wor WATER CLOSET (SEE SPECIFICATIONS FOR TYPE) → GAS COCK Wr URINAL (SEE SPECIFICATIONS FOR TYPE) ⊕ 2 £ FL UAVATORY (SEE SPECIFICATIONS FOR TYPE) ⊕ 2 £ SINK (SEE SPECIFICATIONS FOR TYPE) ⊕ 2 £ POOP DRAIN - SIZE TYPE SINK (SEE SPECIFICATIONS FOR TYPE) ⊕ 2 £ OVERFLOW DRAIN - SIZE TYPE EWC ELECTRIC WATER COOLER (SEE SPECIFICATIONS FOR TYPE) + ± HOSE BIBB MS MOP SINK (SEE SPECIFICATIONS FOR TYPE) + ± HOSE BIBB MS MOP SINK (SEE SPECIFICATIONS FOR TYPE) + ± HOSE BIBB MS MOP SINK (SEE SPECIFICATIONS FOR TYPE) + ± HOSE BIBB MS MOP SINK (SEE SPECIFICATIONS FOR TYPE) + ± HOSE BIBB MS MOP SINK (SEE SPECIFICATIONS FOR TYPE) + ± HOSE BIBB <	—6— -0>	ISOLATION VALVE (BALL OR BUTTE	RFLY)		CHECK VALVE (ARROW INDICATES FLOW)
> GATE VALVE -& PRESSURE REGULATING VALVE (PRV) > GLOBE VALVE - PRESSURE GAUGE		BALANCING VALVE		-\$	AUTOMATIC CONTROL VALVE TWO-WAY/THREE-WAY
Image: Solution of the second seco	\rightarrow	GATE VALVE		-&-	PRESSURE REGULATING VALVE (PRV)
LET* IV J INERMOMETER TYPICAL PLUMBING TYPICAL PLUMBING Watter CLOSET (SEE SPECIFICATIONS FOR TYPE) Imexan (See SPECIFICATIONS FOR TYPE) L LAVATORY (SEE SPECIFICATIONS FOR TYPE) Imexan (See SPECIFICATIONS FOR TYPE) Imexan (See SPECIFICATIONS FOR TYPE) L LAVATORY (SEE SPECIFICATIONS FOR TYPE) Imexan (See SPECIFICATIONS FOR TYPE) Imexan (See SPECIFICATIONS FOR TYPE) EWC ELECTRIC WATER COOLER (SEE SPECIFICATIONS FOR TYPE) Imexan (See SPECIFICATIONS FOR TYPE) Imexan (See SPECIFICATIONS FOR TYPE) IM MOP SINK (SEE SPECIFICATIONS FOR TYPE) Imexan (See SPECIFICATIONS FOR TYPE) Imexan (See SPECIFICATIONS FOR TYPE) IM MOP SINK (SEE SPECIFICATIONS FOR TYPE) Imexan (See SPECIFICATIONS FOR TYPE) Imexan (See SPECIFICATIONS FOR TYPE) IM DUCTILE IRON Imexan (See SPECIFICATIONS FOR TYPE) Imexan (See SPECIFICATIONS FOR TYPE) Imexan (See SPECIFICATIONS FOR TYPE) IM DUCTILE IRON Imexan (See SPECIFICATIONS FOR TYPE) Imexan (See SPECIFICATIONS FOR TYPE) Imexan (See SPECIFICATIONS FOR TYPE) Image: Side See SPECIFICATIONS FOR TYPE) Image: See SPECIFICATIONS FOR TYPE) Image: See Specifications (See SPECIFICATIONS FOR TYPE) Image: See Specifications (See SPECIFICATIONS (See SPE	->>>-	GLOBE VALVE	0.07	<u> </u>	PRESSURE GAUGE
WC WATER CLOSET (SEE SPECIFICATIONS FOR TYPE) Image: Constraint of the second sec	P.T.T	PRESSURE/TEMPERATURE TEST P	ORI		
WATER CLOSET (SEE SPECIFICATIONS FOR TYPE) GAS COCK UR URINAL (SEE SPECIFICATIONS FOR TYPE) © 2 * 2* 2* FLOOR DRAIN - SIZE TYPE L LAVATORY (SEE SPECIFICATIONS FOR TYPE) © 2 * 2* 2* ROOF DRAIN - SIZE TYPE SINK (SEE SPECIFICATIONS FOR TYPE) © 2 * 2* 2* ROOF RAIN - SIZE TYPE SINK (SEE SPECIFICATIONS FOR TYPE) ** *** With MATER COOLER (SEE SPECIFICATIONS FOR TYPE) Bill MOP SINK (SEE SPECIFICATIONS FOR TYPE) *** *** With MATER COOLER (SEE SPECIFICATIONS FOR TYPE) Image: Sind State Specifications for type (SEE SPECIFICATIONS FOR TYPE) *** *** With MATER COOLER (SEE SPECIFICATIONS FOR TYPE) Image: Sind State Specifications for type (SEE SPECIFICATIONS FOR TYPE) *** *** With MATER COOLER (SEE SPECIFICATIONS FOR TYPE) Image: Sind State Specifications for type (SEE Specifications for type) *** *** With MATER COOLER (SEE SPECIFICATIONS FOR TYPE) Image: Sind State Specifications for type (SEE Specifications for type) *** *** With MATER COOLER (SEE Specifications for type) Image: Sind State Specifications for type (SEE Specifications for type) *** *** With State Specifications for type) Image: Sind State Specifications for type (SEE Specifications for type) *** *** **** With Specifications for type) Image: Sind State Specifications					
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Find (pice of control of itom o	<u> </u>		/PE)	© 2" OD 1	
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Instruction Instruction D DUCTILE IRON CAST IRON IE PVC POLY VINYL CHLORIDE FL FLOW LINE AIR VENT IE Image: Supervise of the control	MS	MOP SINK (SEE SPECIFICATIONS F	OR TYPE)	++ WH	WALL HYDRANT (NON-FREEZE)
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Image: 100 mean sector of the sector of t	6x6 R-1	SIDEWALL SUPPLY	NECKSIZE (IN), TAG	S	SENSOR
Sidewall Return or exhaust Register or grille NECKSIZE (IN), TAG AIRFLOW (CFM) HUMIDISTAT	U 100	REGISTER OR GRILLE	AIRFLOW (CFM)	T	THERMOSTAT
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SUPPLY AIR REGISTER NECKSIZE (IN), TAG AIRFLOW (CFM) OCCUPANCY SENSOR SUPPLY AIR, OUTSIDE AIR OR MIXED AIR DUCT END OR RISER UP/RISER DN MOTORIZED CONTROL DAMPER WITH ACTUATOR VD VOLUME DAMPER DUCT END OR RISER UP/RISER DN VOLUME DAMPER WITH SLEEVE AND ACCESS DOOR VD VOLUME DAMPER WITH SLEEVE AND ACCESS DOOR VID RETURN AIR, EXHAUST AIR OR RELIEF AIR DUCT END OR RISER UP/RISER DN Image: With Sleeve AND ACCESS DOOR 12/8 RECTANGULAR DUCTWORK (WIDTH/DEPTH)(IN) (FIRST NUMBER IS SIDE SHOWN) Image: With Sleeve AND ACCESS DOOR 12/9 ROUND DUCTWORK (DIAMETER)(IN) (SPIRAL DUCT IN EXPOSED AREAS) Image: With Sleeve AND ACCESS DOOR	0 100	REGISTER OR GRILLE	AIRFLOW (CFM)		CARBON DIOXIDE SENSOR
Image: Construct of the construction of the constructio	6 Ø D-1			<u>600</u>	
SUPPLY AIR, OUTSIDE AIR OR MIXED AIR DUCT END OR RISER UP/RISER DN Image: BackDraft i Damper Image: Display air of the second of the		REGISTER		<u> </u>	
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12/8 (FIRST NUMBER IS SIDE SHOWN) TURNING VANES 12/9 ROUND DUCTWORK (DIAMETER)(IN) (SPIRAL DUCT IN EXPOSED AREAS) Image: Constraint of the second seco		RECTANGULAR DUCTWORK (WIDT	H/DEPTH)(IN)		FIRE/SMOKE DAMPER WITH SI FEVE AND ACCESS DOO
ROUND DUCTWORK (DIAMETER)(IN) (SPIRAL DUCT IN EXPOSED AREAS)	<u></u> + 12/8	(FIRST NUMBER IS SIDE SHOWN)		(r.)	TURNING VANES
	§ 12"Ø §	ROUND DUCTWORK (DIAMETER)(IN (SPIRAL DUCT IN EXPOSED AREAS	N)		
		DESCRIPTION	ABBV.		
DESCRIPTION ABBV.	Domestic C	old Soft Water	SCW		
DESCRIPTION ABBV. Domestic Cold Soft Water SCW	Domestic C	old Water	CW		
DESCRIPTIONABBV.Domestic Cold Soft WaterSCWDomestic Cold WaterCW	Domestic H	ot Water	HW		
DESCRIPTIONABBV.Domestic Cold Soft WaterSCWDomestic Cold WaterCWDomestic Hot WaterHW	Domestic H	ot Water Recirc	HWC		
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		PLUM	IBING SPECIALTIES SCHEDULE (1) (2)						PLUMBING FIX	TURE SCHEDULE (1) (2)		
SYMBOL DESCRIPTION SYMBOL DESCRIPTION TYPICAL PIPING +⊥+ + PIPE TEE / PIPE ELBOW UNION +∞ +∞ ELBOW DN / ELBOW UP -√+ STRAINER & ISOLATION VALVE (BALL OR BUTTERFLY) CHECK VALVE (ARROW INDICATES FLOW)	REMARKS: 1. SEE SPECIFICATIONS FOR ADDITIO 2. PICTURES OF FIXTURES MAY NOT I	ONAL REQUIREMENTS INCLUDING INDICATE ACTUAL FIXTURE SPEC	S STOPS, FITTINGS AND ALL OTHER SPECIALTIES. CIFIED. PICTURES ARE GRAPHICAL IN NATURE. SEE DESCRIPTION FOR A	ACTUAL FIXTURE AND MODEL.		REMARKS: 1. SEE SPECIFICATIONS FOR ADDITIONAL REG 2. PICTURES OF FIXTURES MAY NOT INDICATE	QUIREMENTS INCLUDING STOPS, FITT ACTUAL FIXTURE SPECIFIED. PICTU	NGS AND ALL OTHER RES ARE GRAPHICAL	SPECIALTIES. IN NATURE. SEE DESCRIPTION FOR	ACTUAL FIXTURE AND MODEL.		
→>+-∞+ BALANCING VALVE →+ AUTOMATIC CONTROL VALVE TWO-WAY/THREE-WAY →++ GATE VALVE →+ PRESSURE REGULATING VALVE (PRV) →++ GLOBE VALVE ✓ PRESSURE GAUGE →++ GLOBE VALVE ↓+ FRESSURE GAUGE	TAG MODEL	(TURE (2) IMAGE	DESCRIPTION	CONNECTIONS CW HW V W	REMARKS	TAG MODEL	JRE (2) IMAGE	FAUCET-	VALVE-ACCESSORY (2) IMAGE	DESCRIPTION	CONNECT	IONS V W RE
TYPICAL PLUMBING WC WATER CLOSET (SEE SPECIFICATIONS FOR TYPE) Image: Content of the second seco	FD-1 J.R. SMITH:2005		FLOOR DRAIN WITH CAST IRON BODY, FLASHING COLLAR, 6" ROUND ADJUSTABLE NICKEL BRONZE GRATE. PROVIDE WITH JR SMITH TRAP GUARD, MODEL 2692, OR EQUAL.	1-1/2" 2'	SEE PLANS FOR WASTE AND VENT SIZE REQUIREMENTS.	WC-1 KOHLER:K-96057 HIGHCLIFF		SLOAN:REGAL 111-1.6		DESCRIPTION: ELONGATED, SIPHON JET BOWL, FLOOR MOUNTED, FLOOR OUTLET WATER CLOSET WITH MANUAL FLUSHOMETER. ADA COMPLIANT: YES COLOR: WHITE FLUSHOMETER: TOP SPUD. 1.6 GALLONS PER FLUSH. FLUSHOMETER FINISH: POLISHED CHROME. FLUSHOMETER OPERATION: MANUAL. SEAT: WHITE, ELONGATED, OPEN FRONT WITHOUT COVER, SEAT WITH CHECK HINGE. RIM HEIGHT: 17"	1-1/4" -	2" 4"
PVC POLY VINYL CHLORIDE FL FL/E FL/E Image: Arrow of the state	FS-1 J.R. SMITH:3101		FLOOR SINK WITH SEDIMENT BUCKET, ACID RESISTANT COATED CAST IRON BODY, FLASHING COLLAR, AND REMOVABLE 8-1/2" SQUARE NICKEL BRONZE TOP. PROVIDE THE FOLLOWING FEATURES: 1. 3/4 GRATE 2. HINGED GRATE 3. JR SMITH TRAP SEAL, MODEL 2692, OR EQUAL. FLOOR SINK WITH SEDIMENT BUCKET, ACID RESISTANT COATED CAST IRON BODY, FLASHING COLLAR, AND REMOVABLE 16-1/2" SQUARE NICKEL BRONZE TOP. PROVIDE THE FOLLOWING FEATURES:	T 2" 4' T	SEE PLANS FOR WASTE AND VENT SIZES.	WC-2 KOHLER:K-96053 WELLCOMME		SLOAN:REGAL 111-1.6		DESCRIPTION: ELONGATED, SIPHON JET BOWL, FLOOR MOUNTED, FLOOR OUTLET WATER CLOSET WITH MANUAL FLUSHOMETER. ADA COMPLIANT: NOT REQUIRED COLOR: WHITE FLUSHOMETER: TOP SPUD. 1.6 GALLONS PER FLUSH. FLUSHOMETER FINISH: POLISHED CHROME. FLUSHOMETER OPERATION: MANUAL. SEAT: WHITE, ELONGATED, OPEN FRONT WITHOUT COVER, SEAT WITH CHECK HINGE. RIM HEIGHT: 15"	1-1/4" -	2" 4"
Image: Provide the state of the state o	FS-2 J.R. SMITH:3201		 HIGHLE BRONZE FOR: PROVIDE THE FOLLOWING FEATORES. 1. FULL GRATE 2. HINGED GRATE 3. JR SMITH TRAP SEAL, MODEL 2692, OR EQUAL. HOSE BIBB WITH BRONZE BODY, RENEWABLE COMPOSITION DISC, 3/4" NPS THREADED OR SOLDER JOINT INLET. PROVIDE GARDEN LOOP STATE OF A DECEMPONENT IN DECEMPONENT IN DECEMPONENT.	2" 4'	, VENT SIZES.	WF-1 BRADLEY:MF2944		-:-		DESCRIPTION: BARRIER FREE, FLOOR-MOUNTED, FOUR STATION WASH FOUNTAIN. ADA COMPLIANT: YES NUMBER OF STATIONS: SEMI-CIRCULAR ACCOMMODATING UP TO FOUR USERS AT A TIME. BOWL MATERIAL: BRADLEY TERREON. FIXTURE COLOR: SILVER MIST. DIMENSIONS: 46" x 26". MOUNTING: FLOOR. FAUCETS: INFRARED CONTROL - SENSOR-ACTUATED WITH THERMOSTATIC MIXING VALVE AND CHECK STOPS.	3/4" 3/4" 1	-1/2" 2"
Domestic Cold Water CW Domestic Hot Water HW Domestic Hot Water Recirc HWC Sanitary W Sanitary Above Grade W Vent V	HB-1 WOODFORD:26C		IN OUTLET AND INTEGRAL, NON REMOVABLE, DRAINABLE, HOSE CONNECTION WITH ANTI-SIPHON VACUUM BREAKER. PROVIDE WITH MODEL SL-24, VANDAL RESISTANT STEM LOCK. FINISH: CHROME OPERATION: WHEEL-HANDLE	3/4"		UR-1 KOHLER:4991-ET "BARDON"		SLOAN:REGAL 186-0.5		DESCRIPTION: WASHDOWN, WALL HANGING, WALL OUTLET WITH MANUAL URINAL FLUSHOMETER. ADA COMPLIANT: YES COLOR: WHITE FLUSHOMETER: TOP SPUD. 0.5 GALLONS PER FLUSH. FLUSHOMETER FINISH: POLISHED CHROME. FLUSHOMETER OPERATION: MANUAL. RIM HEIGHT: 17"	3/4" - 1	-1/2" 2"
SERVICEDUCTWORKAPPLICATIONINSULATION TYPEINSULATION THICKNESSMINIMUM R-VALUEVAPOR RETARDERREMARKSEXHAUST AIRALLFROM FAN TO LOUVERMINERAL FIBER BLANKET2-3/16"R-6YES-REMARKS: 1PIPING INSUL ATION SCHEDUILE	WH-1 WOODFORD:67C		AUTOMATIC DRAINING, ANTI-BACKFLOW TYPE, KEY OPERATION, 3/4" NPS THREADED OR SOLDER JOINT INLET, AND GARDEN HOSE THREADS ON OUTLET. INCLUDE OPERATING KEY FOR EACH HYDRANT. TYPE: SURFACE MOUNT FINISH: CHROME PLATED OPERATION: KEY, 3/8" OPERATING ROD	3/4"		UR-2 KOHLER:4991-ET "BARDON"		SLOAN:REGAL 186-0.5		DESCRIPTION: WASHDOWN, WALL HANGING, WALL OUTLET WITH MANUAL URINAL FLUSHOMETER. ADA COMPLIANT: NOT REQUIRED COLOR: WHITE FLUSHOMETER: TOP SPUD. 0.5 GALLONS PER FLUSH. FLUSHOMETER FINISH: POLISHED CHROME.	3/4" - 1	-1/2" 2"
SERVICE PIPING SIZES INSULATION TYPE INSULATION TYPE INSULATION TYPE RETARDER REMARKS		WATER HA	MMER ARRESTOR SCHEDULE							RIM HEIGHT: 24"		
DOMESTIC COLD WATER (CW & SCW)ALLMINERAL FIBER1/2"YES.DOMESTIC HOT WATER (WITH RECIRC.)1/2" TO 2"MINERAL FIBER1"NO.SANITARY WASTEALLNONEPLUMBING VENTS (24" BELOW ROOF)ALLMINERAL FIBER1/2"YES.REMARKS: 11	TAG MODEL WHA-B WATTS: LF15M2-BS	IMAGE	DESCRIPTION: LEAD FREE, ASME A112.26.1M, ASSE 1010, OR PDI-WH 201, BELLOWS OR PISTON TYPE WATER HAMMER ARRESTOR WITH PRESSURIZED CUSHIONING CHAMBER. SIZES ARE BASED ON WATER-SUPPLY FIXTURE UNITS, ASME A112.26.1M SIZES A THROUGH F AND PDI-WH 201 SIZES A THROUGH F. DEVICE IS RATED TO BE INSTALLED IN INACCESSIBLI LOCATION.	E FIXTURE UNITS		MS-1 WILLIAMS:SB-900 "SERVICEPTOR"		KOHLER:K-837T60- 4A "TRITON BOWE"		FLOOR MOUNTED MOP SINK WITH WALL MOUNTED FAUCET. ADA COMPLIANT: NOT REQUIRED FIXTURE DIMENSIONS: 24" x 24" X 12" HIGH FIXTURE CONSTRUCTION: TERRAZZO.[[MOLDED STONE] [FIBERGLASS]]. RIM GUARD: STAINLESS STEEL. FAUCET: ROUGH CHROME, WIDESPREAD BAST BRASS WITH SUPPLIES 8" ON CENTER. FAUCET MOUNTING: WALL CENTERED ON FIXTURE. FAUCET HANDLE: DUAL LEVER. FAUCET SPOUT: INTEGRAL VACUUM BREAKER, PAIL HOOK, AND HOSE THREAD OUTLET. WALL BRACE: ASSEMBLY WITH WALL BRACKET AND SUPPORT TO FAUCET SPOUT. HOSE HOLDER: E.L. MUSTEE & SONS 65.700; HEAVY DUTY 5/8" DIA. 31" RUBBER HOSE AND SPRING LOADED MOLDED RUBBER HOSE HOLDER ON STAINLESS STEEL WALL PLATE. MOP HANGER: E.L. MUSTEE & SONS 65.600; THREE SPRING-LOADED RUBBER MOP HOLDER ATTACHED TO STAINLESS STEEL WALL PLATE. WALL GUARD: E.L. MUSTEE & SONS 67.2424; 12" HIGH, 20 GAUGE, #304 STAINLESS STEEL WALL GUARD.	S 3/4" 3/4" 1	-1/2" 3"
	WHA-C WATTS: LF15M2-CS		DESCRIPTION: LEAD FREE, ASME A112.26.1M, ASSE 1010, OR PDI-WH 201, BELLOWS OR PISTON TYPE WATER HAMMER ARRESTOR WITH PRESSURIZED CUSHIONING CHAMBER. SIZES ARE BASED ON WATER-SUPPLY FIXTURE UNITS, ASME A112.26.1M SIZES A THROUGH F AND PDI-WH 201 SIZES A THROUGH F. DEVICE IS RATED TO BE INSTALLED IN INACCESSIBLI LOCATION.	33-60 E		EWC-1 ELKAY:EZSTL8WSSK		-:-		DESCRIPTION: BARRIER FREE, WALL MOUNTED, NON-FILTERED, HI/LO ELECTRIC WATER COOLER WITH BOTTLE FILLING STATION ADA COMPLIANT: YES. NUMBER OF BUBBLERS: TWO + BOTTLE FILLER. FIXTURE UNIT CAPACITY: 8 GPH BOTTLE FILLER: SENSOR ACTIVATED, 1.1 GPM LAMINAR FLOW WITH NO TOUCH ACTIVATION FIXTURE CABINET MATERIAL: STAINLESS STEEL. THERMOSTAT: ADJUSTABLE SET AT 50°F. ELECTRICAL: 120V, 3 WIRE CORD AND PLUG. HEIGHT: INSTALL WITH THE BOTTOM SIDE AT THE FRONT FO THE UNIT AT 27" FOR ADA COMPLIANCE. ACCESSORIES: SAFETY BUBBLER AND IN WALL CARRIER.	l. 1/2" - 1	-1/4" 1-1/4"

	MECHANIC	CAL SYMBOLS					PLU	MBING SPECIALTIES SCHEDULE (1) (2)							PLUMBING FIX	(TURE SCHEDULE (1) (2)		
SYMBOL +⊥+ PIPE TEE / PIPE +0 +0 ELBOW DN / ELE -5 -5 ISOLATION VAL	ELBOW BOW UP					REMARKS: 1. SEE SPECIFICATIONS FOR 2. PICTURES OF FIXTURES M	ADDITIONAL REQUIREMENTS INCLUDIN AY NOT INDICATE ACTUAL FIXTURE SPI	NG STOPS, FITTINGS AND ALL OTHER SPECIALTIES. ECIFIED. PICTURES ARE GRAPHICAL IN NATURE. SEE DESCRIPTION FOR AC	CTUAL FIXTURE AND MODEL.		REMARKS: 1. SEE SPE 2. Picture	CIFICATIONS FOR ADDITIONAL REC S OF FIXTURES MAY NOT INDICATE	QUIREMENTS INCLUDING STOPS, FIT E ACTUAL FIXTURE SPECIFIED. PICT	TINGS AND ALL OTH URES ARE GRAPHIC	ER SPECIALTIES. AL IN NATURE. SEE DESCRIPTION FO	OR ACTUAL FIXTURE AND MODEL.		
→→→→ BALANCING VAL →→→→ BALANCING VAL →→→→ GATE VALVE →→→→ GLOBE VALVE		- ペー・ ペー・ AUTOMATIC CC - ペー・ ペー・ AUTOMATIC CC - ペー・ PRESSURE RE の の の の の の の の の の の の の	ONTROL VALVE TWO-WAY/T GULATING VALVE (PRV) UGE	, THREE-WAY		TAGMODEL	FIXTURE (2) IMAGE	DESCRIPTION	CONNECTIONS CW HW V W	REMARKS	TAG	FIXTU	URE (2) IMAGE	FAUCE	T-VALVE-ACCESSORY (2) IMAGE	DESCRIPTION	CON CW HW	NECTIONS N V W
WC WATER CLOSET UR URINAL (SEE SP L LAVATORY (SEE S SINK (SEE SPEC EWC ELECTRIC WATE MS MOP SINK (SEE DI DUCTILE IRON	IPERATURE TEST PORT (SEE SPECIFICATIONS FOR TYPE) PECIFICATIONS FOR TYPE) E SPECIFICATIONS FOR TYPE) CIFICATIONS FOR TYPE) ER COOLER (SEE SPECIFICATIONS FOR T SPECIFICATIONS FOR TYPE)	Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second state Image: Product of the second st	R SIZE TYPE SIZE TYPE AIN - SIZE TYPE T (NON-FREEZE) H ROOF			FD-1 J.R. SMITH:2005		FLOOR DRAIN WITH CAST IRON BODY, FLASHING COLLAR, 6" ROUND ADJUSTABLE NICKEL BRONZE GRATE. PROVIDE WITH JR SMITH TRAP GUARD, MODEL 2692, OR EQUAL.	1-1/2" 2"	"	WC-1 K	OHLER:K-96057 HIGHCLIFF		SLOAN:REGAL 111-1.6		DESCRIPTION: ELONGATED, SIPHON JET BOWL, FLOOR MOUNTED, FLOOR OUTLET WATER CLOSET WITH MANUAL FLUSHOMETER. ADA COMPLIANT: YES COLOR: WHITE FLUSHOMETER: TOP SPUD. 1.6 GALLONS PER FLUSH. FLUSHOMETER FINISH: POLISHED CHROME. FLUSHOMETER OPERATION: MANUAL. SEAT: WHITE, ELONGATED, OPEN FRONT WITHOUT COVER, SEAT WITH CHECK HINGE. PIM HEIGHT: 17"	1-1/4" -	2" 4"
CI CAST IRON PVC POLY VINYL CHI diana Control Contr	LORIDE PLY PLY PLY PRILLE PLY	I.E. INVERT ELEVAT F.L. FLOW LINE HVAC Image: Sensor Image: Total Sensor Image: Total Sensor Image: Head	TION DE SENSOR ENSOR DNTROL DAMPER WITH ACT AMPER ER WITH SLEEVE AND ACCESS	TUATOR		FS-1 J.R. SMITH:3101		FLOOR SINK WITH SEDIMENT BUCKET, ACID RESISTANT COATED CAST IRON BODY, FLASHING COLLAR, AND REMOVABLE 8-1/2" SQUARE NICKEL BRONZE TOP. PROVIDE THE FOLLOWING FEATURES: 1. 3/4 GRATE 2. HINGED GRATE 3. JR SMITH TRAP SEAL, MODEL 2692, OR EQUAL.	2" 4'	SEE PLANS FOR WASTE AND VENT SIZES. " SEE PLANS FOR	WC-2 K	OHLER:K-96053 WELLCOMME		SLOAN:REGAL 111-1.6		DESCRIPTION: ELONGATED, SIPHON JET BOWL, FLOOR MOUNTED, FLOOR OUTLET WATER CLOSET WITH MANUAL FLUSHOMETER. ADA COMPLIANT: NOT REQUIRED COLOR: WHITE FLUSHOMETER: TOP SPUD. 1.6 GALLONS PER FLUSH. FLUSHOMETER FINISH: POLISHED CHROME. FLUSHOMETER OPERATION: MANUAL. SEAT: WHITE, ELONGATED, OPEN FRONT WITHOUT COVER, SEAT WITH CHECK HINGE. RIM HEIGHT: 15"	1-1/4" -	2" 4"
Image: Constraint of the second se	ABBREVIATIONS ABBREVIATIONS ION ABBV.		R WITH SLEEVE AND ACCE AMPER WITH SLEEVE AND A S	ESS DOOR ACCESS DOOR		FS-2 J.R. SMITH:3201		IRON BODY, FLASHING COLLAR, AND REMOVABLE 16-1/2" SQUARE NICKEL BRONZE TOP. PROVIDE THE FOLLOWING FEATURES: 1. FULL GRATE 2. HINGED GRATE 3. JR SMITH TRAP SEAL, MODEL 2692, OR EQUAL. HOSE BIBB WITH BRONZE BODY, RENEWABLE COMPOSITION DISC, 3/4" NPS THREADED OR SOLDER JOINT INLET. PROVIDE GARDEN HOSE THREADS ON OUTLIET AND INTEGRAL NON REMOVABLE	2" 4'	WASTE AND VENT SIZES.	WF-1 B	RADLEY:MF2944				DESCRIPTION: BARRIER FREE, FLOOR-MOUNTED, FOUR STATION WASH FOUNTAIN. ADA COMPLIANT: YES NUMBER OF STATIONS: SEMI-CIRCULAR ACCOMMODATING UP TO FOUR USERS AT A TIME. BOWL MATERIAL: BRADLEY TERREON. FIXTURE COLOR: SILVER MIST. DIMENSIONS: 46" x 26". MOUNTING: FLOOR. FAUCETS: INFRARED CONTROL - SENSOR-ACTUATED WITH THERMOSTATIC MIXING VALVE AND CHECK STOPS.	3/4" 3/4'	" 1-1/2" 2"
Domestic Cold Water Domestic Hot Water Domestic Hot Water Recirc Sanitary Sanitary Above Grade Vent	HWC HWC W W V DUCTWORK IN	ISULATION SCHE	DULE			HB-1 WOODFORD:26C		DRAINABLE, HOSE CONNECTION WITH ANTI-SIPHON VACUUM BREAKER. PROVIDE WITH MODEL SL-24, VANDAL RESISTANT STEM LOCK. FINISH: CHROME OPERATION: WHEEL-HANDLE WALL HYDRANT WITH THE FOLLOWING FEATURES: NON-FREEZE.	3/4"		UR-1 K	OHLER:4991-ET "BARDON"		SLOAN:REGAL 186-0.5		DESCRIPTION: WASHDOWN, WALL HANGING, WALL OUTLET WITH MANUAL URINAL FLUSHOMETER. ADA COMPLIANT: YES COLOR: WHITE FLUSHOMETER: TOP SPUD. 0.5 GALLONS PER FLUSH. FLUSHOMETER FINISH: POLISHED CHROME. FLUSHOMETER OPERATION: MANUAL. RIM HEIGHT: 17"	3/4" -	1-1/2" 2"
SERVICEDUCTWORKEXHAUST AIRALLREMARKS: 1	APPLICATION FROM FAN TO LOUVER	INSULATION TYPE	INSULATION M THICKNESS R 2-3/16"	VINIMUM VAPOR R-VALUE RETARD R-6 YES	REMARKS	WH-1 WOODFORD:67C		AUTOMATIC DRAINING, ANTI-BACKFLOW TYPE, KEY OPERATION, 3/4" NPS THREADED OR SOLDER JOINT INLET, AND GARDEN HOSE THREADS ON OUTLET. INCLUDE OPERATING KEY FOR EACH HYDRANT. TYPE: SURFACE MOUNT FINISH: CHROME PLATED OPERATION: KEY, 3/8" OPERATING ROD	3/4"		UR-2 K	OHLER:4991-ET "BARDON"		SLOAN:REGAL 186-0.5		DESCRIPTION: WASHDOWN, WALL HANGING, WALL OUTLET WITH MANUAL URINAL FLUSHOMETER. ADA COMPLIANT: NOT REQUIRED COLOR: WHITE FLUSHOMETER: TOP SPUD. 0.5 GALLONS PER FLUSH.	3/4" -	1-1/2" 2"
SERVICE	PIPING INSUL	ATION SCHEDUL	E INSULATION		REMARKS		WATER H	AMMER ARRESTOR SCHEDULE								FLUSHOMETER FINISH: POLISHED CHROME. FLUSHOMETER OPERATION: MANUAL. RIM HEIGHT: 24"		
DOMESTIC COLD WATER (CW & SCW) DOMESTIC HOT WATER (WITH RECIRC.) SANITARY WASTE PLUMBING VENTS (24" BELOW ROOF) REMARKS: 1	ALL 1/2" TO 2" ALL ALL	MINERAL FIBER MINERAL FIBER NONE MINERAL FIBER	1/2" 1" - 1/2"	YES NO - YES		TAG MODEL WHA-B WATTS: LF15M2	FIXTURE IMAGE BS	DESCRIPTION: LEAD FREE, ASME A112.26.1M, ASSE 1010, OR PDI-WH 201, BELLOWS OR PISTON TYPE WATER HAMMER ARRESTOR WITH PRESSURIZED CUSHIONING CHAMBER. SIZES ARE BASED ON WATER-SUPPLY FIXTURE UNITS, ASME A112.26.1M SIZES A THROUGH F AND PDI-WH 201 SIZES A THROUGH F. DEVICE IS RATED TO BE INSTALLED IN INACCESSIBLE LOCATION.	FIXTURE UNITS 12-32		MS-1 ^V	/ILLIAMS:SB-900 SERVICEPTOR"		KOHLER:K-837T6 4A "TRITON BOWE"	0-	FLOOR MOUNTED MOP SINK WITH WALL MOUNTED FAUCET. ADA COMPLIANT: NOT REQUIRED FIXTURE DIMENSIONS: 24" x 24" X 12" HIGH FIXTURE CONSTRUCTION: TERRAZZO.[[MOLDED STONE] [FIBERGLASS]]. RIM GUARD: STAINLESS STEEL. FAUCET: ROUGH CHROME, WIDESPREAD BAST BRASS WITH SUPPLIES 8" ON CENTER. FAUCET MOUNTING: WALL CENTERED ON FIXTURE. FAUCET HANDLE: DUAL LEVER. FAUCET SPOUT: INTEGRAL VACUUM BREAKER, PAIL HOOK, AND HOSE THREAD OUTLET. WALL BRACE: ASSEMBLY WITH WALL BRACKET AND SUPPORT TO FAUCET SPOUT. HOSE HOLDER: E.L. MUSTEE & SONS 65.700; HEAVY DUTY 5/8" DIA. 31" RUBBER HOSE AND SPRING LOADED MOLDED RUBBER HOSE HOLDER ON STAINLESS STEEL WALL PLATE. MOP HANGER: E.L. MUSTEE & SONS 65.600; THREE SPRING-LOADED RUBBER MOP HOLDER ATTACHED TO STAINLESS STEEL WALL PLATE. WALL GUARD: E.L. MUSTEE & SONS 67.2424; 12" HIGH, 20 GAUGE, #304 STAINLESS STEEL WALL GUARD.	3/4" 3/4'	" 1-1/2" 3"
						WHA-C WATTS: LF15M2	cs	DESCRIPTION: LEAD FREE, ASME A112.26.1M, ASSE 1010, OR PDI-WH 201, BELLOWS OR PISTON TYPE WATER HAMMER ARRESTOR WITH PRESSURIZED CUSHIONING CHAMBER. SIZES ARE BASED ON WATER-SUPPLY FIXTURE UNITS, ASME A112.26.1M SIZES A THROUGH F AND PDI-WH 201 SIZES A THROUGH F. DEVICE IS RATED TO BE INSTALLED IN INACCESSIBLE LOCATION.	33-60		EWC-1 E	LKAY:EZSTL8WSSK		-:-		DESCRIPTION: BARRIER FREE, WALL MOUNTED, NON-FILTERED, HI/LO ELECTRIC WATER COOLER WITH BOTTLE FILLING STATION ADA COMPLIANT: YES. NUMBER OF BUBBLERS: TWO + BOTTLE FILLER. FIXTURE UNIT CAPACITY: 8 GPH BOTTLE FILLER: SENSOR ACTIVATED, 1.1 GPM LAMINAR FLOW WITH NO TOUCH ACTIVATION FIXTURE CABINET MATERIAL: STAINLESS STEEL. THERMOSTAT: ADJUSTABLE SET AT 50°F. ELECTRICAL: 120V, 3 WIRE CORD AND PLUG. HEIGHT: INSTALL WITH THE BOTTOM SIDE AT THE FRONT FO THE UNIT AT 27" FOR ADA COMPLIANCE.	N. 1/2" -	1-1/4" 1-1/4"

				FAN	SCHED	ULE							
REMARKS: 1. DIRECT DRIVE, 2. DIRECT DRIVE, 3. PROVIDE WITH MOTOR, AND BE H 4. EXHAUST FAN 5. BULIDING RELI 6. PROVIDE WITH 7. PROVIDE WITH WITH A WIRE GUA 8. ACCEPTABLE N	INLINE, CENTRIFUGAL SIDEWALL, PROPELLE DISCONNECT, UNIT MO IARDWIRED TO THE PO TO BE CONTROLLED B EF FAN, TO BE CONTR MOTORIZED BACKDRA CONSTANT PRESSURI RD ENCLOSURE. MANUFACTURERS: ACI	EXHAUST FAN. ER EXHAUST FAN. DUNTED SPEED CO DWER SUPPLY FOR Y A TIMECLOCK BY OLLED BY BUILDING AFT DAMPER, DISCO E, INTEGRAL TRANS	NTROL, AND MOTORIZE THE EXHAUST FAN. Y ELECTRICAL CONTRAG G PRESSURE. DNNECT, AND OSHA GU SDUCER CONTROL WITH OOK, AND TWIN CITY.	ED BACKDRAF CTOR. SEE E IARD. I ROOM STAT	FT DAMPER. TH LECTRICAL DR	E BACKDRA AWINGS. F/ LDING PRES	IFT DAMPER	R SHALL OPE CONTINUOUS E MAINTAINE	ERATE AT SLY DURIN ED AT +0.0	THE SAME IG OCCUP 5" (ADJ.). /	VOLTAGE IED HOUR ALL COMF	E AS THE EXHAU S. PONENTS TO BE	ST FAN
		GENERAL				FA	N			MOTOR		ELECTRICAL	
	MANUFACTURER	MODEL	SERVES	TVDE	AIRFLOW	E.S.P.	MAX	IMUM	НР	RDM	TVDE	VOLTAGE /	REMARKS
I LAN IAU	(8)	WODEL	JERVES	1115	(CFM)	(in-wg)	RPM	SONES	111			PHASE	
				-				1		1		1	
EF-1	GREENHECK	SQ-99-VG	SEE PLANS	(1)	600 CFM	0.50	1488	11.1	0.25	1725	EC	120 V / 1	(3) (4)
RFL-1	GREENHECK	AER-30-VG	BLDG RELIEF	(2)	8000 CFM	0.50	1089	28	3	1225	EC	480 V / 3	(5) (6) (7)
RLF-2	GREENHECK	AER-30-VG	BLDG RELIEF	(2)	8000 CFM	0.50	1089	28	3	1225	EC	480 V / 3	(5) (6) (7)

	ELE	ECTRIC L	JNIT HE	ATER S	CHEDU	E	
REMARKS: 1. RADIANT CEILIN 2. PROVIDE WITH L 3. PROVIDE WITH F 4. CEILING / WALL 5. PROVIDE WITH L 6. PROVIDE WITH II 7. ACCEPTABLE M	G PANEL. JNIVERSAL HANGING C RECESSED MOUNTING HUNG ELECTRIC UNIT JNIVERSAL WALL/CEILI NTEGRAL THERMOSTA ANUFACTURERS: BERI	CLIP WITH HOLES FRAME FOR 24" HEATER. ING BRACKET. IT. KO, MARKEL, MA	S FOR SUPPOR x 48" PANEL. ARLEY, AND QM	IT CHAINS. Mark.			
					FI ECTRICAI	HEA	
	GE	NERAL					TING
PI AN TAG			SERVES	CONFIG	VOLTAGE /	CAPACITY	TING ELECTRIC HEAT

		MODEL	eedvee	CONFIC	VOLTAGE /	CAPACITY	ELECTRIC HEAT
PLANTAG	MANUFACTURER	MODEL	JERVEJ	CONFIG.	PHASE	(BTU/h)	CAPACITY (kW)
EH-1	QMARK	CP75	SEE PLANS	(1)	277 V / 1	2,560	750 W
EH-2	QMARK	CP75	SEE PLANS	(1)	277 V / 1	2,560	750 W
EH-3	QMARK	CP75	SEE PLANS	(1)	277 V / 1	2,560	750 W
EH-4	QMARK	CP75	SEE PLANS	(1)	277 V / 1	2,560	750 W
EH-5	QMARK	CP75	SEE PLANS	(1)	277 V / 1	2,560	750 W
EUH-1	QMARK	MUH0371	SEE PLANS	(4)	277 V / 1	11,815	3,000 W

LOUVER SCHEDULE

REMARKS: 1. DUAL DRAINABLE LOUVER WITH 6" STATIONARY, 35°, EXTRUDED ALUMINUM BLADES WITH 0.081" WALL THICKNESS. 2. PROVIDE WITH CUSTOM KYNAR FINISH. COLOR TO MATCH BUILDING EXTERIOR. 3. PROVIDE WITH INTERNAL BIRD SCREEN. 4. PROVIDE WITH EXTENDED SILL. 5. ACCEPTABLE MANUFACTURERS: GREENHECK, RUSKIN, AND COOK.

		GENERAL		PHYSIC	AL SIZE			AIRFLOW			
ΡΙ ΔΝ				FACE	SIZE	RPWP	MIN. FREE	MAX	AIRELOW		RE
TAG	(5)	MODEL	SERVES	н	w	(FT/MIN)	AREA (ft²)	VELOCITY (FPM)	(CFM)	(IN WG)	
EL-1	GREENHECK	ESD-635	EXHAUST	18"	18"	1,250	0.8	762	600	0.08"	(1) (
EL-2	GREENHECK	ESD-635	RELIEF	54"	84"	1,250	18.9	848	16,000	0.1"	(1) (

DIFFUSER REGISTER AND GRILLE SCHEDULE

REMARKS: 1. VERIFY ALL FRAMES, FINISHES, AND ACCESSORIES WITH CEILING CONSTRUCTION PRIOR TO FURNISHING MATERIAL. 2. NOISE CRITERIA (NC) SHALL BE LESS THAN 25 ON DIFFUSERS, REGISTERS AND GRILLES LOCATED IN OCCUPIED SPACES. 3. ACCEPTABLE MANUFACTURERS: KRUEGER, NAILOR, PRICE, AND TITUS.

PLAN TAG	MANUFACTURER (3)	MODEL	FUNCTION	DESCRIPTION	DEFLECTION	AIR P.D. (IN WG)	MATERIAL	FINISH	NECK SIZE	FACE SIZE	R
G-1	KRUEGER	580H	EXHAUST	RECT SINGLE DEFLECTION GRILLE	SINGLE 3/4"	0.10"	ALUMINUM	WHITE	SEE PLANS	NECK SIZE + 1-3/4"	

REMARKS (2) (2) (2) (3) (5) (6)		F 1 2 5	REMARKS: I. SIMPLEX / AQU, 2. PROVIDE WITH REGENERATION V 3. ACCEPTABLE N PLAN TAG	A-SENSOR / DELAY CO FULLY INTEGRATED P ALVE. MANUFACTURERS: CU MANUFACTURER (3)	ONFIGURATION. PROGRAMMABLE ELECT LLIGAN AND WATTS	WATER	SOFTEN	IER SCH	EDULE	ND CORROSION	RESISTANT P	DSITIVE MOT	OR-DRIVEN
REMARKS (2) (2) (2) (3) (5) (6)		-	PLAN TAG	MANUFACTURER (3)	MODEL								
(2) (2) (2) (3) (3) (5) (6)		-	PLAN TAG	MANUFACTURER (3)	MODEL								
(2) (2) (3) (3) (5) (6)		-				SERVES	RESIN QUANTITY	DIMENSION (D x W x H)	S FLOW	VRATE (GPM) DUS PEAK	PRESSU CONTINUO	RE DROP (PS	
(2) (3) (3) (5) (6)			VVS-1	CULLIGAN	CTM-90 DC	OM. WATER	3	50" x 20" x 7	4" 57 GPN	A 75 GPM	15	25	(1) (2)
(5) (6)				D	OMESTIC W	ATER P	UMP SC	HEDULE	•				
	4. ACCEPTABLE	MANUFACTURERS: B	&G, GRUNDFOS, A GENER	ND TACO.			PUMP - FLOV	N	M	DTOR	ELEC	TRICAL	
	PLAN TAG	MANUFACTURER (4)	MODEL	SERVES	б ТҮРЕ	GPN	I HEAI TOTAL	D (FT) SHUTOFF	HP RPM	TYPE	VOLTAG	GE / PHASE	REMARKS
	HWCP-1	TACO	0013-IFC	HW CIRC	C IN-LINE	0.5	30 FT	34 FT	0.17 3300	O.D.P.	12)V/1	(1) (2) (3)
REMARKS						ELEC	TRIC WA	TER HE	ATER S	CHEDUL	E		
(1) (2) (3) (4) (1) (2) (3) (4)				REMARKS: 1. ELECTRIC W 2. PROVIDE WI 3. ELECTRICAI AND WITH ELE 4. DUAL, NONS 5. ACCEPTABL	ATER HEATER WITH IN TH PRESSURE / TEMPER DISCONNECT BY ELEC CTRICAL CONTRACTOR SIMULTANEOUS ELECTR E MANUFACTURERS: A	TEGRAL GLASS RATURE RELIEF CTRICAL CONTR RIC HEATING EL I.O. SMITH, STAT	-Lined Tank. Valve. Actor. See El Ements. Te industries,	LECTRICAL DRA	WINGS. COORI ACTURING, ANE	DINATE ELECTRI) PVI.	CAL REQUIRE	MENTS WITH	SUPPLIED UNI
					GENERAL	L		TAN	iK	DOMESTIC HOT WATER	ELECTRICAL	ELECTRIC HEAT	
REMARKS				PLAN TAG	MANUFACTURER (5)	MODEL	SERVES	STORAGE D CAPACITY	DIMENSIONS (DIA. Ø x H)	RECOVERY (GPH @ 100 F RISE)	VOLTAGE / PHASE	CAPACITY (kW)	REMARKS
(1) (2)				EWH-1	A.O. SMITH	DEL-10	DOM. HW	10	18"Ø x 19"	16 GPH	277 V / 1	4.0 kW	(1) (2) (3) (4)
<u>((</u>	REMARKS 1) (2) (3) (4) 1) (2) (3) (4) 1) (2) (3) (4) REMARKS (1) (2)	3. THE PUMP SHA 4. ACCEPTABLE PLAN TAG HWCP-1 REMARKS 1) (2) (3) (4) 1) (2) (3) (4) (1) (2)	3. THE PUMP SHALL CYCLE THROUGH 4. ACCEPTABLE MANUFACTURERS: Bit PLAN TAG MANUFACTURER (4) HWCP-1 TACO	3. THE PUMP SHALL CYCLE THROUGH THE USE OF AN A 4. ACCEPTABLE MANUFACTURERS: B&G, GRUNDFOS, A GENER PLAN TAG MANUFACTURER MODEL HWCP-1 TACO 1) (2) (3) (4) 1) (2) (3) (4) (1) (2)	3. THE PUMP SHALL CYCLE THROUGH THE USE OF AN AQUASTAT. 4. ACCEPTABLE MANUFACTURERS: B&G, GRUNDFOS, AND TACO. GENERAL PLAN TAG MANUFACTURER MODEL SERVES HWCP-1 TACO 0013-IFC HWCP-1 TACO 2. PROVIDE WI S. ELECTRICAL ADD WITH ELE ADD WITH ELE 4. DUAL, NONS S. ACCEPTABL Image: Second Seco	3. THE PUMP SHALL CYCLE THROUGH THE USE OF AN AQUASTAT. 4. ACCEPTABLE MANUFACTURERS: B&G, GRUNDFOS, AND TACO. GENERAL PLAN TAG MANUFACTURER MANUFACTURER MODEL SERVES TYPE HWCP-1 TACO HWCP-1 TACO 0013-IFC HWCRC ILLCTRIC WATER HEATER WITH IN 2. PROVIDE WITH PRESSURE / TEMPE 3. ELECTRICAL DISCONNECT BY ELECTRICAL CONTRACTOR 4. DUSCONNECT BY ELECTRICAL CONTRACTOR 5. ACCEPTABLE MANUFACTURERS: A GENERA PLAN TAG MANUFACTURER (5) (1) (2) EWH-1 A.O. SMITH	3. THE PUMP SHALL CYCLE THROUGH THE USE OF AN AQUASTAT. 4. ACCEPTABLE MANUFACTURERS: B&G, GRUNDFOS, AND TACO. GENERAL PLAN TAG MANUFACTURER MODEL SERVES TYPE HWCP-1 TACO 0013-IFC HWCR-1 TACO 0013-IFC HWCR-1 TACO 0013-IFC HWCR-1 TACO 0013-IFC HWCR-1 TACO 0013-IFC NOW TH PLECTRICAL CONTRACTURER RELIEF 1. ELECTRICAL DISCONNECT BY ELECTRICAL CONTRACTOR ADUAL, NONSIMULTANEOUS ELECTRICAL CONTRACTOR 4. DUAL, NONSIMULTANEOUS ELECTRICAL CONTRACTOR ADUAL, NONSIMULTANEOUS ELECTRICAL CONTRACTOR 4. DUAL, NONSIMULTANEOUS ELECTRICAL CONTRACTOR (1) (2) EWH-1 A.O. SMITH, STAT	3. THE PUMP SHALL CYCLE THROUGH THE USE OF AN AQUASTAT. 4. ACCEPTABLE MANUFACTURERS: B&G, GRUNDFOS, AND TACO. GENERAL PUMP - FLOI GENERAL PUMP - FLOI GENERAL PUMP - FLOI PLAN TAG MANUFACTURER MODEL SERVES TYPE PUMP - FLOI HEA PUMP - FLOI PLAN TAG PUMP - TACO O013-IFC HW CIRC INVECTOR HEA ELECTRIC WAR REMARKS: 1 (2) (3) (4) 1 (2) (3) (4) ILECTRICAL DISCONNECT BY ELECTRICAL CONTRACTOR. 2. POVIDE WITH PRESSURE / TEMPERATURE RELIEVALUE A COLOPTABLE MANUFACTURER: A.O. SMITH, STATE INDUSTRIES, ILECTRICAL DISCONNECT BY ELECTRICAL CONTRACTOR. A COLPTABLE MANUFACTURER: A.O. SMITH, STATE INDUSTRIES, ILEM	S. THE PUMP SHALL CYCLE THROUGH THE USE OF AN AQUASTAT. 4. ACCEPTABLE MANUFACTURERS: B&G, GRUNDFOS, AND TACO. GENERAL PUMP - FLOW HAD (FT) PLAN TAG MANUFACTURERS: B&G, GRUNDFOS, AND TACO. HWCP-1 TACO MANUFACTURER HW CIRC HWCP-1 TACO MANUFACTURER HW CIRC HWCP-1 TACO MARKS ELECTRIC WATER HEATER WITH INTEGRAL GLASS-LINED TANK. 12(2)(3)(4) 2. PROVIDE WITH PRESSURE / TEMPERATURE RELIEF VALVE. 3. ELECTRIC WATER HEATER WITH INTEGRAL GLASS-LINED TANK. 2. PROVIDE WITH PRESSURE / TEMPERATURE RELIEF VALVE. 3. ELECTRIC WATER HEATER WITH INTEGRAL GLASS-LINED TANK. 2. PROVIDE WITH PRESSURE / TEMPERATURE RELIEF VALVE. 3. ELECTRIC ROLL ON TRACTOR. 3. ELECTRICAL CONTRACTOR. 4. DUAL, NONSIMULTANEOUS ELECTRICAL CONTRACTOR. 5. ACCEPTABLE MANUFACTURERS: A.O. SMITH, STATE INDUSTRIES, RHEEM MANUF GENERAL TAN GENERAL TAN GENERAL TAN GENERAL TAN GENERAL <td>3. THE PUMP SHALL CYCLE THROUGH THE USE OF AN AQUASTAT. 4. ACCEPTABLE MANUFACTURERS: B&G, GRUNDFOS, AND TACO.</td> <td>S. THE PUMP SHALL CYCLE THROUGH THE USE OF AN AQUASTAT. PUMP - FLOW MOTOR 4. ACCEPTABLE MANUFACTURERS: B&G, GRUNDOS, AND TACO. GENERAL PUMP - FLOW MOTOR PLAN TAG MANUFACTURER MODEL SERVES TYPE GPM HEAD (FT) HP RPM TYPE HWCP-1 TACO 0013/FC HW CIRC IN-LINE 0.5 30 FT 34 FT 0.17 3300 O.D.P. REMARKS 11(2)(3)(4) TACO 0013/FC HW CIRC IN-LINE 0.5 30 FT 34 FT 0.17 3300 O.D.P. REMARKS 11(2)(3)(4) ILCCIRIC WATER HEATER WITH INTEGRAL GLAS-LINED TANK. ILCCIRIC WATER HEATER SCHEDUL NOTOR SECTRICAL DISCONNECTOR SELECTRICAL DATANTOR. 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MECHANICAL SPECIFICATIONS

SECTION 220100 - GENERAL REQUIREMENTS FOR PLUMBING

- A. RELATED DOCUMENTS
- 1. Drawings and general provisions of the Contract, including General and Supplementary Conditions appl to this Section.
- 2. Division 22 and 23 Conditions apply to this Section.

B. SUMMARY

- 1. This Section includes general mechanical requirements and shall apply to all phases of the work specified indicated on the drawings or required to provide for complete installation of plumbing systems.
- 2. Refer to Section 230100 for General Requirements for Mechanical
- 3. Refer to Section 230500 for Basic Mechanical Materials and Methods

SECTION 220720 - PIPE INSULATION FOR PLUMBING

- A. MINERAL-FIBER INSULATION: Glass fibers bonded with a thermosetting resin. Preformed Pipe Insulation Comply with ASTM C 547, Type 1, with factory-applied, all-purpose, vapor-retarder jacket. Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less. Apply insulation to pipes buy securing each layer of preformed pipe insulation to pipe with wire, tape, or bands without deforming insulation materials.
- B. VAPOR RETARDER: On piping systems operating below ambient space temperature, seal joints and seams with vapor-retarder mastic. Seal penetrations in insulation at hangers, supports, anchors, and other
- projections with vapor-retarder mastic Mastics. C. INSULATION APPLICATION SCHEDULE, see Piping Insulation Schedule on Sheet M4.1.

SECTION 221116 - WATER DISTRIBUTION PIPING

- A. DOMESTIC WATER PIPING: Above ground; hard copper tube, ASTM B 88, Type L; copper, 95-5 solderjoint fittings; and soldered joints. B. VALVES: Provide ball isolation valves close to main on each branch and riser serving plumbing fixtures or
- equipment, and where indicated . Provide ball valve for throttling where indicated. Provide supply stops at each plumbing fixture. Provide calibrated or automatic balancing valves as indicated.
- C. TESTING: Test water distribution piping according to authority having jurisdiction. Clean and disinfect water distribution piping. Fill water piping. Check components to determine that they are not air bound and that piping is full of water.

SECTION 221316 - DRAINAGE AND VENT PIPING

- A. ABOVEGROUND, SANITARY WASTE AND VENT AND STORM PIPING: CISPI 301, ASTM A888, Hubless, cast-iron soil pipe; hubless, cast-iron, soil-pipe fittings and hubless, cast-iron, Neoprene sleeve coupling with stainless steel clamps. PVC Plastic Pipe (ASTM D 2665, solid wall, Schedule 40), PVC Socked Fittings (ASTM D 2665, made to ASTM D 3311 drain, waste, and vent pipe patterns), and solvent cemented joints. Do not install PVC piping in return air plenum.
- B. UNDERGROUND, SANITARY WASTE, AND VENT AND STORM PIPING: ASTM A74. Hub-and-spigot, cast-iron soil pipe, Service class; hub-and-spigot, cast-iron, soil-pipe fittings, lead & oakum or compression joints. PVC Plastic Pipe (ASTM D 2665, solid wall, Schedule 40), PVC Socket Fittings (ASTM D 2665, made to ASTM D 3311 drain, waste, and vent pipe patterns), and solvent welded joints.
- C. PIPING INSTALLATION: Make changes in direction for drainage and vent piping using appropriate branches, bends, and long-sweep bends. Do not make change in direction of flow greater than 90 degrees. Lay buried building drain piping beginning at low point of each system. Install true to grades and alignment indicated, with unbroken continuity of invert. Place hub ends of piping upstream. Install required gaskets according to manufacturer's written instructions.
- D. SLOPE: Install drainage and vent piping at the following minimum slopes, unless otherwise indicated: 1. Sanitary Piping: 2 percent downward in direction of flow for piping 3-inch NPS and smaller; 1 percent downward in direction of flow for piping 4-inch NPS and larger.
- 2. Vent Piping: 1 percent down toward vertical fixture vent or toward vent stack.

E. TESTING: Test drainage and vent piping according to procedures of authorities having jurisdiction

SECTION 221319 - PLUMBING SPECIALTIES

- A. WATER PRESSURE REGULATORS: water regulators, rated for initial working pressure of 150 psig minimum, of size, flow rate, and inlet for 80 psig outlet pressure. Install on building service piping.
- B. WALL CLEANOUTS (WCO): Cast iron or PVC body adaptable to pipe with cast bronze, brass or PVC cleanout plug; stainless steel cover, vandal proof screws. Install as shown and as required by code.
- C. CLEANOUTS (CO): PVC, Cast iron or brass, threads complying with ANSI B2.1, countersunk head. Engrave heads to identify system.
- D. FLOOR CLEANOUTS (FCO): Cast iron body and frame with cleanout plug and adjustable round nickel bronze top. Provide to match floor system:

1. Exposed finish type, standard mill finish. 2. Exposed flush type, standard non-slip scored or abrasive finish.

E. VENT FLASHING (VTR): 24" square minimum. Non-plasticized, chlorinated, polyethylene, concealed, waterproof membrane, 0.40" thick, solvent weldable or Lead sheet, 2-1/2" lb/sf, concealed.

224000 PLUMBING FIXTURES

- A. Installation: Install handles for accessible water closets and urinals with handle mounted on wide side of compartment. Install individual stop valve in each water supply to fixture. Install water-supply stop valves in accessible locations. Install traps on fixture outlets. Omit traps on fixtures having integral traps and on indirect wastes. Vent all fixtures as required by local code. Seal joints between fixtures and walls, floors, and counters using sanitary-type, 1-part, mildew-resistant, silicone sealant. Match sealant color to fixture color. Install hot and cold water supply, waste and vent piping of sizes indicated, but not smaller than required by authorities having jurisdiction
- B. See Plumbing Fixture Schedule on sheet M4.1 for plumbing fixture specifications.

	SECTION 230100 - GENERAL REQUIREMENTS FOR MECHANICAL
bly	A. WARRANTIES - All materials, workmanship and equipment shall be warranted against defects or against injury from proper and usual wear for a period of one year after the date of substantial completion. Any item that becomes defective within the warranty period shall be repaired or replaced, at no additional cost to the Owner. Warranty shall include repair of faulty workmanship.
	B. DEFINITIONS ABBREVIATIONS - The following shall apply throughout the contract documents:
5.	FurnishSupply and deliver to site ready for installationIndicatedNoted, scheduled or specifiedProvideFurnish, install and connect complete and ready for final useADAAmericans with Disabilities ActANSIAmerican National Standards InstituteASMEAmerican Society of Mechanical EngineersASHRAEAmerican Society of Heating, Refrigeration and Air Conditioning EngineersNECNational Electric Code (NFPA 70)NEMANational Electrical Manufacturers AssociationNFPANational Fire Protection AssociationSMACNASheet Metal and Air Conditioning Contractors National AssociationULUnderwriters Laboratories Inc.
n: I	C. CODES AND STANDARDS - All work shall be performed by competent craftsmen skilled in the trade involved and shall be done in a manner consistent with normal industry standards. All work shall conform to the currently adopted edition of the National Electric Code (NEC), Local Building Code, Local Plumbing Code, Local Mechanical Code, Local Fire Code, and all other applicable state and local codes or standards. Where there is a conflict between the code and the contract documents, the code shall have precedence only then it is more stringent than the contract documents.
	D. PERMITS - Contractor shall become familiar and comply with all requirements regarding permits, fees, licenses, etc. All permits, licenses, inspections and arrangements required for the work shall be obtained by Contractor's effort and expense. All utilities shall be installed in accordance with the local rules and regulations and all charges shall be paid by the Contractor.
	E. SUBMITTALS - Shop drawings shall be submitted to Architect/Engineer for all items of mechanical equipment including the following:
r	Diffusers, Registers, Grilles Sheet Metal Accessories HVAC equipment Plumbing Fixtures Plumbing Specialties
er	 Shop drawings include fabrication and installation drawings, diagrams, schedules and other data specifically prepared for the project. Include dimensions and notations showing compliance with specified standards.
	 Architect/Engineer will review or take appropriate action for submittals. Review is only to determine general conformance with design shown in contract documents. Review of submittals shall not relieve contractor of responsibility for deviation from requirements of the contract documents or from errors or omissions within submittals.
ket ed	F. MATERIALS - All materials and equipment used in the construction of the project shall be new unused and undamaged unless otherwise specified. Materials and equipment shall be of latest design standards of manufacturer specified. Verify installation details and requirements for materials and equipment furnished by others and installed under this contract.
n Ide	G. DEMONSTRATION AND TRAINING - Instruct Owner's personnel to adjust, operate, and maintain mechanical systems. Schedule training with Owner with at least seven days' advance notice.
5. t	H. STARTING AND ADJUSTING - Start and test all equipment and operating components to confirm proper operation. Test and adjust all systems to achieve designed capacity and performance. All equipment and systems discrepancies shall be corrected prior to final acceptance.
	SECTION 230500 - BASIC MECHANICAL MATERIALS AND METHODS
	A. PIPING INSTALLATION: Install piping at required slope. Install components with pressure rating equal to or greater than system operating pressure. Install piping in concealed locations, except in equipment rooms and service areas. Install piping free of sags and bends. Install piping at right angles or parallel to building walls. Install piping tight to slabs, beams, joists, columns, walls, and other building elements. Locate groups of pipes parallel to each other, spaced to permit valve servicing. Install fittings for changes in direction and branch connections. Install pipe escutcheons for exposed pipe penetrations walls and ceilings. Install sleeves for pipes passing through concrete and masonry walls, and concrete floor and roof slabs. Provide dielectric fitting where two different types of pipe materials are joined. Comply with MSS-69 for pipe hanger selection and application.
	B. EQUIPMENT INSTALLATION: Install equipment per manufacturer's recommendations Install equipment as high as possible. Install equipment level and plumb, parallel and perpendicular to building. Install mechanical equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with minimum interference to other installations. Install equipment giving right of way to piping installed at required slope.
ive	C. LABELING AND IDENTIFYING
·· -	Diving Dravida nine markers an each system where nine is synapped to view and shave removable sailings

Piping: Provide pipe markers on each system where pipe is exposed to view and above removable ceilings. Include pipe description of system and arrows showing normal direction of flow. Equipment: Install engraved plastic-laminate sign or equipment marker on or near each major item of

D. CUTTING AND PATCHING: Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces necessary for mechanical installations. Perform cutting by skilled mechanics of trades involved. Repair cut surfaces to match adjacent surfaces.

SECTION 230593 - TESTING, ADJUSTING, AND BALANCING

mechanical equipment.

position.

- A. Examine air-handling equipment to ensure clean filters have been installed, bearings are greased, belts are aligned and tight, and equipment with functioning controls is ready for operation. Check dampers for proper
- B. Perform testing and balancing procedures on each system according to the procedures contained in NEBB's "Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems" and this Section.
- C. Adjust fans to deliver total design airflow within the maximum allowable rpm listed by the fan manufacturer. Provide new fan sheaves as required. Measure fan airflow, static pressure, rpm and amp draw.
- D. Adjust volume dampers for to achieve design airflow within 10% of specified values. Adjust diffusers, registers and grilles. Adjust minimum and maximum outside airflow.
- E. Prepare report listing date, project information, equipment data and measured airflow results. Report shall include drawing indicating locations of air outlets and final measured airflow of each outlet. Submit four copies of report to engineer for review.

SECTION 230700 - DUCT INSULATION

- A. MINERAL-FIBER BLANKET THERMAL INSULATION: Glass fibers bonded with a thermosetting resin. Comply with ASTM C 553, Type II, with all-service jacket manufactured from kraft paper, reinforcing scrim, aluminum foil, and vinyl film. Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less. Apply insulation materials, accessories, and finishes according to the manufacturer's written instructions with the least number of joints practical. Seal joints and seams with vapor-retarder mastic on cold air ducts. Seal penetrations in insulation at hangers, supports, anchors, and other projections with vapor-retarder mastic.
- B. APPLICATION SCHEDULE See Duct Insulation Schedule on Sheet M4.1.

SECTION 233113 - METAL DUCTS AND ACCESSORIES

- A. GENERAL: Drawings indicate general arrangement of ducts, fittings, and accessories. Minor modifications to route, size and shape of duct may be made to meet structural and other interference. Changes which could affect system performance shall be reviewed by Architect/Engineer prior to fabrication or installation of duct. Coordinate layout with suspended ceiling, fire- and smoke-control dampers, lighting layouts, and similar finished work.
- B. DUCT FABRICATION: Sizes shown on plans are inside clear dimensions. Ductwork utilizing duct liner shall be increased in size to accommodate the duct liner thickness.
- C. MATERIAL: Construct all rectangular and round ducts from galvanized sheet steel: Lock-forming quality; ASTM A 653/A 653M, G90 coating designation; mill-phosphatized finish for surfaces of ducts exposed to
- D. QUALITY ASSURANCE: Fabricate and install duct per SMACNA's "HVAC Duct Construction Standards--Metal and Flexible" and applicable codes. Comply with requirements for metal thickness, reinforcing types and intervals, tie-rod applications, and joint types and intervals. Comply with NFPA 90A, "Installation of Air Conditioning and Ventilating Systems," unless otherwise indicated.
- E. PRESSURE CLASS: Unless otherwise noted construct all ducts to 2.0" WG positive or 2.0" WG negative pressure class.
- F. DUCT SEALING: UL classified, non-combustible, flame spread 25 or less, smoke developed rating of 540 or less, resistant to water, pressure rupture rating of 16" WG minimum, suitable for use alone or with tape, application an operational temperature ranges appropriate for usage. Seal all duct per SMACNA class 'C' duct seal requirements.
- G. TURNING VANES: Fabricate of 1-1/2" wide, curved blades 3/4" on center. Provide turning vanes in all mitered elbows and duct turns.
- H. DUCT ACCESS DOORS: Install insulated duct access doors with hinges and latches for access to inlet side of coils, equipment, control dampers, fire dampers, and smoke dampers.
- I. VOLUME DAMPERS: Fabricate single blade dampers for duct sizes 9 ½: high x 30" width maximum. Fabricate multi-blade dampers of opposed blade pattern using minimum 16 gauge steel with maximum blade sizes 6" x 48" for larger ducts. Provide end bearings with end seals for pressure class required except in round duct 12" in diameter and smaller. Provide locking indicating quadrant regulators on all volume dampers. Mark ends of damper shanks for open/closed indication. Insulated ducts to have elevated dial indicators. Motorized dampers to have 115 volt operators. Provide manual volume dampers at branch takeoffs and as shown. Provide motorized dampers as indicated.
- J. FLEXIBLE CONNECTORS: Flame-retarded or noncombustible fabrics, coatings, and adhesives complying with UL 181, Class 1. Neoprene double-coated woven glass fibber fabric in accordance with NFPA 90A, suitable for temperatures and pressures of application, approximately 6" wide, crimped into metal edge strip. Provide flexible connections to motor driven equipment.
- K. FLEXIBLE DUCTS: Factory-fabricated, insulated, round duct, with an outer jacket enclosing 1-1/2-inchthick, glass-fiber insulation around a continuous inner liner, steel-wire helix encapsulated in polyethylene inner liner. Comply with UL 181, Class 1. Final connections to air outlets and terminal units may be made with flexible duct. Install flexible ducts with metal collars or sleeves with draw bands. Length of flexible duct shall not exceed 36" path shall not exceed 45°.

ELECTRICAL SYMBOLS DESCRIPTION DESCRIPTION SYMBOL LIGHTING 3 - WAY SWITCH LUMINAIRE LUMINAIRE CONNECTED TO EMERGENCY CIRCUIT OR BATTERY 4 - WAY SWITCH WALL BOX DIMMER SWITCH STRIP LUMINAIRE CEILING MOUNTED MOTION SENSOR/SWITC WALL MOUNTED LUMINAIRE NUMBER OR LETTER WALL MOUNTED MOTION SENSOR/SWITCH DENOTES TYPE, SEI WALL MOUNTED LUMINAIRE WALL MOUNTED MOTION SENSOR/SWITCH WITH 0-10V DIMMING CORRESPONDING LOW VOLTAGE LIGHTING CONTROL SWITCH TRACK LUMINAIRE EMERGENCY BATTERY PACK WALL MOUNTED PHOTOCEL CEILING MOUNTED EXIT LIGHT WITH DIRECTIONAL ARROW CEILING MOUNTED PHOTOCELL SCHEDULE WALL OR END MOUNTED EXIT LIGHT WITH DIRECTIONAL ARROY FIRE ALARM FIRE ALARM SMOKE [ARM HORN & STROBE COMBIN FIRE ALARM MINI-HORN & STROBE COMBINATION FIRE ALARM HEAT DETECTOR DUCT MOUNTED SMOKE DETECT CEILING FIRE ALARM STROBE POWER EILING MOUNTED DOUBLE DUPLEX RECEP "G" DENOTES GFCI TYPE FLOOR BOX - COMBINATION POWER & DATA "⊳" DENOTES ISOLATED GROUND TY POKE-THRU - COMBINATION POWER & DATA "H" DENOTES HOSPITAL GRADE TYPE FLOOR MOUNTED DUPLEX RECEPTACLE "TR" DENOTES TAMPER RESISTANT TYP MOTOR ("#" DENOTES HORSEPOWER RATING) "U" DENOTES UNIVERSAL SERIAL BUS (USB) TYPE DISCONNECT SWITCH DOUBLE SHADING DENOTES RED DEVICE THERMAL ELEMENT SWITCH SINGLE SHADING DENOTES SPLIT WIRED DEVICE SWITCH & FUSE HORIZONTAL MOUNTED DUPLEX RECEPTACLE SWITCH & FUSTAT CEILING MOUNTED DUPLEX RECEPTACLE MAGNETIC MOTOR STARTER OUBLE DUPLEX RECEPTACLI COMBINATION MAGNETIC STAR COMMUNICATION WALL PHONE OUTLET NTERCOM CEILING SPEAKE WALL COMMUNICATIONS DATA OUTLE INTERCOM WALL SPEAKER CEILING COMMUNICATIONS DATA OUTLE SOUND REINFORCEMENT WALL SPEAKER CEILING WIRELESS ACCESS POINT OU SOUND REINFORCEMENT CEILING SPEAK SECURITY SURVEILLANCE CAMERA (# IN WALL MOUNTED SECURITY MOTION DETECTOR SECURITY CARD READER WALL MOUNTED REQUEST TO EXIT MOTION SENSOR ELECTRIC STRIKE DOOR POSITION SWITCH ELECTRONIC LATCH RETRACTION MAGNETIC LOCK INTRUSION KEYPAD INTERCOM STATION WANDER GUARD GENERAL VALL MOUNTED JUNCTION BO DISTRIBUTION PANEL SWITCHBOARD OR MOTOR CONTROL CENTER JUNCTION BOX CABINET, ENCLOSURE, OR CONTROL PANEL, TYPE INDICATED ON PLANS CONDUIT SEAL BRANCH CIRCUIT - EXPOSED CIRCUIT DOWN BRANCH CIRCUIT CONCEALED IN CEILING OR WALL CIRCUIT UP BRANCH CIRCUIT CONCEALED IN FLOOR CONDUIT STUB-OU BRANCH CIRCUIT - CLASS TWO WIRING CIRCUIT BREAK HOMERUN TO PANEL (QUANTITY OF ARROWS INDICATES QUANTITY OF CIRCUITS) SPECIAL PURPOSE HOMERUN AS INDICATED PUSH BUTTON BUZZER CONDUIT / CONDUIT SLEEVE (SIZE INDICATED ON PLANS SUBSCRIPT "WP" APPLIED TO ANY SYMBOL INDICATES WEATHERPROOF THERMOSTAT NEMA TYPE 3R OR EQUIVALENT WIRE GUARD SUBSCRIPT "RT" APPLIED TO ANY SYMBOL INDICATES WEATHERPROOF SUBSCRIPT "E" ADDED TO ANY SYMBOL INDICATES EXISTING NEMA TYPE 3R OR EQUIVALENT SUBSCRIPT "R" ADDED TO ANY SYMBOL INDICATES RELOCATED WHERE (TYP) IS USED ON PLANS INDICATES A TYPICAL NOTE OR CONDITION SUBSCRIPT "DL" ADDED TO ANY SYMBOL INDICATES DAMP LOCATION SUBSCRIPT "PD" ADDED TO ANY FLOOR OUTLET INDICATES PEDESTAL

ſ <u>∕</u>	Interior Lighting Compliance Certificate
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SUBSCRIPT "K" ADDED TO ANY SYMBOL INDICATES KEY OPERATED

SUBSCRIPT "P" ADDED TO ANY SYMBOL INDICATES PILOT L

Project Information Energy Code: 2018 IECC

MOUNTED

CLASS, GROUP & DIVISION AS NOTED

SUBSCRIPT "EP" APPLIED TO ANY SYMBOL INDICATES EXPLOSION PROOF

Project Type: New Construction

Allowed Interior Lighting Power

Proposed Interior Lighting Power

	AREA CATEGORY SPORTS ARENA	FLOOR AREA (FT2) 31039 SF	ALLOWED WATTS/FT2 0.87 W/ft ²	ALLOWED WA 27004 W	TTS ACTUAL WA 26694 W	ATTS P. V V
FIX	TURE ID	DESCRIPTION	# OF FIXTURES	FIXTURE WATT.	TOTAL WATTS	EXEMF
1	PERFORMANCE	INDIRECT LIGHTING SYSTEM	60	433 W	25980 W	
2	4' LED STRIPLIGI	ΗT	5	41 W	205 W	
3	1x4 TROFFER, DI	RYWALL	12	27 W	324 W	
4	4" ROUND DOWN	ILIGHT	4	18 W	70 W	
5	EXTERIOR WALL	PACK, PHOTOCELL	6	15 W	90 W	
6	2' UNDER CABIN	ET LIGHT	2	13 W	25 W	
Total F	Proposed Watts				26694 W	

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

ENERGY CODE COMPLIANCE					
CODE	2018 INTERNATIONAL ENERGY CONSERVATION CODE				
ComCHECK	YES	(1)			
COMMISSIONING	NO				

REMARKS:

1. ComCHECK COMPLIANCE REPORT CAN BE FOUND ON THIS SHEET.

	LUMINAIRE SCHEDULE							
				LIG	HT SOURCE			
MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	SPEC.	ССТ	TYPE	l	
1	PERFORMANCE INDIRECT LIGHTING SYSTEM	SPI	LRU12239-L433W	54,904 LM	4000K	LED		
2	4' LED STRIPLIGHT	LITHONIA	ZL1D L48 5000LM FST MVOLT 40K 80CRI WH	5,000 LM	4000K	LED		
3	1x4 TROFFER, DRYWALL	LITHONIA	EPANL 1X4 3000LM 80CRI 40K MIN10 ZT MVOLT DGA14	3,000 LM	4000K	LED		
4	4" ROUND DOWNLIGHT	LITHONIA	LDN4 40/15 L04 AR LD MVOLT GZ10	1,500 LM	4000K	LED		
5	EXTERIOR WALL PACK, PHOTOCELL	LITHONIA	WDGE1 LED P2 40K 80CRI VW MVOLT PE DBLXD	2,000 LM	4000K	LED		
6	2' UNDER CABINET LIGHT	AIREY-THOMPSON	13L H 40K 24 2 3	1562 LM	4000K	LED		
X1	SINGLE FACE EXIT SIGN	LITHONIA	LV S W 1 R 120/277	FURN. W/ LUMINAIRE	FURN. W/ LUMINAIRE	LED		

GENERAL REQUIREMENTS:

A. CONTRACTOR SHALL VERIFY CATALOG NUMBERS AND INSTALLATION REQUIREMENTS PRIOR TO ORDERING. NOTIFY ENGINEER OF ANY CONFLICTS WITH PROPOSED INSTALLATION.

B. CONTRACTOR SHALL COORDINATE CEILING TRIM OPTIONS FOR LUMINAIRES INSTALLED IN GRID-TYPE SUSPENDED CEILINGS. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

C. UNLESS NOTED OTHERWISE REFER TO PLANS FOR SUSPENSION LENGTHS REQUIRED FOR ALL SUSPENDED LUMINAIRES.

LUMINAIRE SCHEDULE NOTES:

1. LUMINAIRE SHALL BE CONSIDERED EQUAL AS MANUFACTURED BY: ACUITY BRANDS, COOPER, CURRENT, SIGNIFY, CREE LIGHTING.

2. LUMINAIRE SHALL BE CONSIDERED EQUAL AS MANUFACTURED BY: GOTHAM, PORTFOLIO, PRESCOLITE, PATHWAY LIGHTING.

3. REFER TO PLANS FOR MOUNTING REQUIREMENTS SUCH AS WALL MOUNT, END MOUNT, CEILING MOUNT AND PROVIDE LUMINAIRES ACCORDINGLY. PROVIDE DIRECTIONAL CHEVRON ARROWS AS INDICATED ON PLANS.

RELAY PANEL 'RP'								
RELAY	LOAD DESCRIPTION	PANEL	CIRCUIT	VOLTAGE	NOTES			
RP-1	COURT 1	Н	4	277 V				
RP-2	COURT 1	Н	6	277 V				
RP-3	COURT 2	Н	5	277 V				
RP-4	COURT 2	Н	7	277 V				
RP-5	SPECTATOR VIEWING	Н	8	277 V				
RP-6	SPECTATOR VIEWING	Н	10	277 V				
RP-7	COURT 3	Н	9	277 V				
RP-8	COURT 3	Н	13	277 V				
RP-9	COURT 4	Н	11	277 V				
RP-10	COURT 4	Н	15	277 V				
RP-11	SPARE			277 V				
RP-12	SPARE			277 V				
RP-13	SPACE			277 V				
RP-14	SPACE			277 V				
RP-15	COURT 2 EGRESS	INV	1	277 V	UL924, NOTE 2			
RP-16	COURT 4 EGRESS	INV	1	277 V	UL924, NOTE 2			

RELAY PANEL SCHEDULE NOTES:

1. PROVIDE PROVIDE NLIGHT ARP RELAY PANEL WITH RELAYS SHOWN. PROVIDE WITH INTEGRAL ASTRONOMICAL TIMECLOCK. PROGRAM RELAYS TO BE CONTROLLED BY BUTTON STATIONS INDICATED.

2. PROVIDE UL924 EMERGENCY RELAY. PROVIDE VOLTAGE BARRIER SEPARATING NORMAL FROM EMERGENCY RELAYS.

MECHANICAL CONNECTION SCHEDULE								
PLAN TAG	VOLTAGE	PHASE	DISCONNECT	CIRCUIT	WIRE AND CONDUIT	REMARKS		
WS-1	120 V	1	CORD/PLUG	L-13	2#12,#12G.,1/2"C.			
EWH-1	277 V	1	TOGGLE	H-30	2#12,#12G.,1/2"C.			
EF-1	120 V	1	INTEGRAL	L-10	2#12,#12G.,1/2"C.			
EUH-1	277 V	1	TOGGLE	H-22	2#12,#12G.,1/2"C.			
HWCP-1	120 V	1	TOGGLE	L-11	2#12,#12G.,1/2"C.			
ARU	480 V	3	30/3/NF/3R	H-32,34,36	3#10,#10G.,3/4"C.			
ACCU	480 V	3	100/3/NF/3R	MDP-4	3#2,#8G.,1-1/2"C.			
EH-1	277 V	1	TOGGLE	H-21	2#12,#12G.,1/2"C.			
EH-2	277 V	1	TOGGLE	H-23	2#12,#12G.,1/2"C.			
EH-3	277 V	1	TOGGLE	H-24	2#12,#12G.,1/2"C.			
EH-4	277 V	1	TOGGLE	H-26	2#12,#12G.,1/2"C.			
EH-5	277 V	1	TOGGLE	H-28	2#12,#12G.,1/2"C.			
ARU CONTROL PANEL	120 V	1		L-8	2#12,#12G.,1/2"C.			
ARU EH	480 V	3	600/3/NF/3R	MDP-1	2 SETS [3#350 KCMIL,1#1G.,3"C.]			
RFL-1	480 V	3	INTEGRAL	H-25,27,29	3#10,#10G.,3/4"C.			
RLF-2	480 V	3	INTEGRAL	H-31,33,35	3#10,#10G.,3/4"C.			

DRY-TYPE TRANSFORMER SCHEDULE							
VOLTAGE				TAGE		GROUNDING	
MARK	TRANSFORMER TYPE	kVA	PRIMARY	SECONDARY	MOUNTING	ELECTRODE	REMARKS
TL	GENERAL PURPOSE	45 KVA	480 V	208Y/120V	FLOOR	#6-1/2"C.	

Hanna 100/000		LIGHTING PANEL SCHEDULE LIGHTING PANEL SCHE			LIGHTING PANEL SC		LIGHTING PANEL SCHEDULE			BUTION P
Phase: 3 Wire: 4 Rating: 22000	Panel: L Rating: 150 A Mounting: SURFACE Type: MCB W/FEE Integral SPD: Yes	ED THRU LUGS AND GN	Voltage: 120/208 Phase: 3 Wire: 4 D.BAR A.I.C. Rating: 22000	Panel: H Rating: 200 A Mounting: SURFACE Type: MLO W/GN Integral SPD: Yes	D. BAR	Voltage: 480/277 Phase: 3 Wire: 4 A.I.C. Rating: 22000	Panel: MDP Remarks: MAIN CKT. BKR. W/ BAR Options: INTEGRAL SPD	Rating: 80 SND. Volts: 48 Phases: 3 Wires: 4		
OPT Circuit Description	Circuit Description	OPT R P CKT	CKT P R OPT Circuit Description 2 1 20 BEC - DATA	Circuit Description	OPT R P CKT	CKT P R OPT Circuit Description 2 1 20 OVERHEAD DOOR	CKT NAMEPLATE DESIGNATI	ON R/		
G REC - VENDING	REC - JAN /STOR 009	20 1 1	4 1 20 G BEC - FWC			4 1 20 COURT 1 LIGHTING	1 ARU EH	600		
G REC - VENDING	REC - JAN /STOR 009	20 1 5	6 1 20 BEC - SOUTH WEST		20 1 5	6 1 20 COURT 1 LIGHTING				
WEST TIME CLOCK	REC - SOUTH EAST	20 1 7	8 1 20 ARU CONTROL PANEL	COURT 2 LIGHTING	20 1 7	8 1 20 COURT 4 LIGHTING	2 H	200		
EAST TIME CLOCK	REC - MEZZ.	20 1 9	10 1 20 EF-1	SPECTATOR LIGHTING	20 1 9	10 1 20 COURT 4 LIGHTING	3 TI	70		
G SPARE	HWCP-1	20 1 11	12 1 20 G REC - WASH BASIN	SPECTATOR LIGHTING	20 1 11	12 1 20 LTG -				
SPARE	REC - WATER SOFTENER	20 1 13	14 1 20 SPARE	COURT 3 LIGHTING	20 1 13	14 1 20 SPARE	4 ACCU	100		
SPARE	SPARE	20 1 15	16 1 20 SPARE	COURT 3 LIGHTING	20 1 15	16 1 20 SPARE	5 SPARE	10(
SPACE	SPARE	20 1 17	18 1 20 SPARE	SPARE	20 1 17	18 1 20 SPARE				
SPACE	SPARE	20 1 19	20 1 20 SPARE	SPARE	20 1 19	20 1 20 SPARE	6 SPACE	100		
SPACE	SPARE	20 1 21	22 1 20 SPARE	EH-1	20 1 21	22 1 20 EUH-1		20(
SPACE	SPARE	20 1 23	24 1 20 SPARE	EH-2	20 1 23	24 1 20 EH-3		200		
SPACE	SPARE	20 1 25	26 1 20 SPARE		25	26 1 20 EH-4	Notes:			
SPACE	SPACE	1 27	28 1 SPACE	RFL-1	20 3 27	28 1 20 EH-5	1. THE CURRENT LIMITING PLU	IN THE CIRCUIT BF		
SPACE	SPACE	1 29	30 1 SPACE		29	30 1 20 EWH-1		SERVICE CONDUC		
	SPACE	1 31	32 1 SPACE		31	32				
	SPACE	1 33	34 1 SPACE	RLF-2	20 3 33	34 3 20 ARU		JELOWING INFORMA		
	SPACE	1 35	36 1 SPACE		35	36				
	SPACE	1 37	38 1 SPACE	SPACE	1 37	38 1 SPACE	D. ALL FROGRAMMED BREA	TO THESE SETTING		
	SPACE	1 39	40 1 SPACE	SPACE	1 39	40 1 SPACE	IPROPERTY"			
	SPACE	1 41	42 1 SPACE	SPACE	1 41	42 1 SPACE	3 PROVIDE AN ARC ENERGY R	-DUCING MAINTENA		
	Options:			Options:			SIZE 1200 AMPS AND LARGER.			
	G – GFCI type circuit breaker.			G – GFCI type circuit breaker.						
	L – Locking handle type circuit b	oreaker.		L – Locking handle type circuit	breaker.					
	Notes:			Notes:						
	SPACE	SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE Options: G – GFCI type circuit breaker. L – Locking handle type circuit breaker. SPACE	SPACE 1 29 SPACE 1 31 SPACE 1 33 SPACE 1 33 SPACE 1 33 SPACE 1 35 SPACE 1 37 SPACE 1 39 SPACE 1 41 Options: G - GFCI type circuit breaker. L L L - Locking handle type circuit breaker. Notes: Notes:	SPACE 1 29 30 1 SPACE SPACE 1 31 32 1 SPACE SPACE 1 31 32 1 SPACE SPACE 1 33 34 1 SPACE SPACE 1 35 36 1 SPACE SPACE 1 37 38 1 SPACE SPACE 1 37 38 1 SPACE SPACE 1 39 40 1 SPACE SPACE 1 41 42 1 SPACE SPACE 1 41 42 1 SPACE Options: 1 41 42 1 <td< td=""><td> SPACE 1 29 30 1 SPACE SPACE - 1 31 32 1 SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE</td><td> SPACE - 1 29 30 1 - SPACE 29 31 SPACE - 1 31 32 1 - SPACE 20 3 33 1 SPACE - 1 35 36 1 - - SPACE 20 3 33 33 3 34 1 - - SPACE 20 3 33 3 34 1 - - SPACE - - 1 37 38 1 - - SPACE - - 1 39 3 34 1 - - SPACE - - 1 39 3 34 1 - - SPACE SPACE SPACE - - 1 39 34 1 - - SPACE - - 1 41</td><td>- SPACE - - 1 1 29 30 1 20 30 1 2</td><td>- SPACE 1 29 30 1 SPACE SPACE 20 3 3 3 30 1 20 EWH-1 NEXT COICAL SIZE ADOVE THE PARAMETER PROFILE ADOVE THE PARAMETER PARAMETE</td></td<>	SPACE 1 29 30 1 SPACE SPACE - 1 31 32 1 SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	SPACE - 1 29 30 1 - SPACE 29 31 SPACE - 1 31 32 1 - SPACE 20 3 33 1 SPACE - 1 35 36 1 - - SPACE 20 3 33 33 3 34 1 - - SPACE 20 3 33 3 34 1 - - SPACE - - 1 37 38 1 - - SPACE - - 1 39 3 34 1 - - SPACE - - 1 39 3 34 1 - - SPACE SPACE SPACE - - 1 39 34 1 - - SPACE - - 1 41	- SPACE - - 1 1 29 30 1 20 30 1 2	- SPACE 1 29 30 1 SPACE SPACE 20 3 3 3 30 1 20 EWH-1 NEXT COICAL SIZE ADOVE THE PARAMETER PROFILE ADOVE THE PARAMETER PARAMETE		

LECTRICAL				ACCEPTABLE
)AD	VOLTS	FINISH	MOUNTING	MANUFACTURERS
3 W	277 V	WHITE	SUSPENDED	
1 W	277 V	WHITE	SURFACE/CEILING	NOTE 1
7 W	277 V	WHITE	RECESSED	NOTE 1
8 W	277 V	CLEAR	RECESSED	NOTE 2
5 W	277 V	BLACK	WALL	NOTE 1
3 W	277 V	ALUMINUM	SURFACE	NOTE 1
W	277 V	WHITE	NOTE 3	NOTE 1

	INVERTER SCHEDULE						
	Inverter: INV Location: STORAGE / MECH. 009	Vo F	ltage: 277 Panel: H				
OB#	DESCRIPTION	LOAD	VOLTAGE	NOTES			
1	LTG - EGRESS	1158 W	277 V				
		1158 W					
Notes PROV QUAN PROV SCHE ON AC CAPA MINIM PROV	Notes: PROVIDE FAST-TRANSFER, PURE SINE WAVE EMERGENCY LIGHTING INVERTER WITH QUANTITY OF OUTPUT BREAKERS INDICATED BY EVENLITE, DUAL LITE, OR ISOLITE. PROVIDE WITH ADEQUATE CAPACITY TO ACCOMMODATE LED LOADS INDICATED IN SCHEDULE FOR 90 MINUTE OPERATION. MANUFACTURER TO DETERMINE CAPACITY BASED ON ACTUAL PRODUCT DATA SUBMITTED DURING SHOP DRAWINGS AND OVERLOAD CAPACITY OF INVERTER. PROVIDE WITH SELF-TEST / SELF-DIAGNOSTICS OPTION AND MINIMUM 2 YEAR WARRANTY. FOR INVERTERS WITH MULTIPLE OUTPUT BREAKERS, PROVIDE INVERTER WITH SURGE SUPPRESSION						

1. ROUGH-IN REQUIREMENTS AND LOCATIONS SIMILAR FOR DOUBLE DOORS.

- 2. NOT ALL DEVICES ROUGHED IN AT ALL DOORS, SEE PLANS FOR SPECIFIC DOOR ROUGH-IN REQUIREMENTS.
- 3. COORDINATE ACCESS CONTROL ROUGH-IN REQUIREMENTS WITH ARCHITECTURAL DOOR SCHEDULES AND SECURITY CONTRACTOR.
- 4. 'M' DENOTES MULLION MOUNTED DEVICE. PROVIDE CONDUIT PATHWAY DOWN TO DOOR FRAME MULLION IN LIEU OF WALL.
- 5. MAINTAIN A MINIMUM OF 12" PHYSICAL SEPARATION WHERE CARD READERS ARE SHOWN ON BACK-TO-BACK WALLS.

7 ACCESS CONTROL ROUGH-IN DETAIL E3.0 SCALE: NOT TO SCALE

E3.0 SCALE: NOT TO SCALE

3. ALL CLAMPS AND FITTINGS SHALL BE UL LISTED FOR THE APPLICATION.

MAIN SERVICE GROUNDING DETAIL E3.0 SCALE: NOT TO SCALE

6 ELECTRICAL RISER DIAGRAM E3.0 SCALE: NOT TO SCALE

ELECTRICAL SPECIFICATIONS

<u>SECTION 260100 - GENERAL ELECTRICAL REQUIREMENTS</u> A. WARRANTIES - All materials, workmanship and equipment shall be warranted against defects or against injury from proper and usual wear for a period of one year after the date of substantial completion. Any item

- that becomes defective within the warranty period shall be repaired or replaced, at no additional cost to the Owner. Warranty shall include repair of faulty workmanship.B. DEFINITIONS ABBREVIATIONS The following shall apply throughout the contract documents:
- Furnish Supply and deliver to site ready for installation
- Indicated Noted, scheduled or specified
- Provide Furnish, install and connect complete and ready for final use
- NEC National Electric Code (NFPA 70)
- NEMA National Electrical Manufacturers Association
- NFPA National Fire Protection Association
- UL Underwriters Laboratories Inc.
- C. CODES AND STANDARDS All work shall be performed by competent craftsmen skilled in the trade involved and shall be done in a manner consistent with normal industry standards. All work shall conform to the currently adopted edition of the National Electric Code (NEC), Local Building Code, and all other applicable state and local codes or standards. Where there is a conflict between the code and the contract documents, the code shall have precedence only then it is more stringent than the contract documents.
- D. PERMITS Contractor shall become familiar and comply with all requirements regarding permits, fees, licenses, etc. All permits, licenses, inspections and arrangements required for the work shall be obtained by Contractor's effort and expense. All utilities shall be installed in accordance with the local rules and regulations and all charges shall be paid by the Contractor.
- E. SUBMITTALS Shop drawings shall be submitted to Architect/Engineer for the following items of electrical equipment:
- Wiring devices Enclosed controllers, switches, and circuit breakers
- Panelboards and Transformer

omissions within submittals.

- Lighting fixtures
- Lighting Controls
- Fire alarm
- Shop drawings include fabrication and installation drawings, diagrams, schedules and other data specifically prepared for the project. Include dimensions and notations showing compliance with specified standards. Unless otherwise noted, submit a PDF copy of shop drawings for review.
 Architect/Engineer will review or take appropriate action for submittals. Review is only to determine general conformance with design shown in contract documents. Review of submittals shall not relieve contractor of responsibility for deviation from requirements of the contract documents or from errors or
- A. MATERIALS All materials and equipment used in the construction of the project shall be new unused and undamaged unless otherwise specified. Materials and equipment shall be of latest design standards of manufacturer specified. Verify installation details and requirements for materials and equipment furnished by others and installed under this contract.
- B. DEMONSTRATION AND TRAINING Instruct Owner's personnel to adjust, operate, and maintain electrical systems. Schedule training with Owner with at least seven days' advance notice.
- C. STARTING AND ADJUSTING Start and test all equipment and operating components to confirm proper operation. Test and adjust all systems to achieve designed capacity and performance. All equipment and
- systems discrepancies shall be corrected prior to final acceptance.D. TEMPORARY POWER AND LIGHTING Provide temporary electric power from local utility with metering and payment of use charges.
- Provide receptacle outlets adequate for connection of power tools and construction equipment.
 Provide temporary lighting with local switching that provides adequate illumination for construction operations and traffic conditions.

SECTION 260500 - BASIC ELECTRICAL MATERIALS AND METHODS

- A. QUALITY ASSURANCE Electrical Components, Devices, and Accessories shall be 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. COORDINATION Coordinate chases, slots, inserts, sleeves, and openings with general construction work and arrange in building structure during progress of construction to facilitate the electrical installations that follow. Sequence, coordinate, and integrate installing electrical materials and equipment for efficient flow of the work. Coordinate installing large equipment requiring positioning before closing in the building.
 1. Coordinate installation and connection of exterior underground and everband utilities and convices.
- Coordinate installation and connection of exterior underground and overhead utilities and services, including provision for electricity-metering components. Comply with requirements of authorities having jurisdiction and of utility company providing electrical power and other services.
- C. CONDUCTORS All conductors shall be installed in raceways. Conductors for pilot and control circuits shall be #14. All other conductors shall be #12 or larger.
- Conductors, No. 10 AWG and Smaller: Solid or stranded copper.
 Conductors, Larger Than No. 10 AWG: Stranded copper.
- Insulation: Thermoplastic, rated at 75 deg C minimum.
 Wire Connectors and Splices: Units of size, ampacity rating, material, type, and class suitable for service indicated.
- D. RACEWAYS Minimum raceway size shall be ½". Raceway types and applications shall be as follows:
- Electrical metallic tubing (EMT): ANSI C80.3, zinc-coated steel, with set-screw or compression fittings. EMT shall be used for all other applications not listed below.
 Liquid tight flexible metal conduit (LFMC): Zinc-coated steel with sunlight-resistant and mineral-oilmetator to the the set of the set
- resistant plastic jacket. LFMC shall be used for connections to vibrating equipment or in wet or damp locations.
 Rigid non-metallic conduit (RNC): NEMA TC 2, Schedule 40 PVC, with NEMA TC3 fittings. RNC shall
- Regist non-interalic conduct (RRC): Network To 2, Schedule 401 VC, with Network To 3 intings. RRC shall be used for all underground applications.
 Raceway Fittings: Specifically designed for the raceway type with which used.
- 5. MC cable may be used for branch circuit wiring where cancealed from view. MC cable is not allowed exposed or for homeruns.
- E. JUNCTION AND DEVICE BOXES Minimum box size shall be 4" square with extension or plaster ring as required. Box types and applications shall be as follows
- Sheet metal boxes: NEMA OS 1 galvanized steel. Sheet metal boxes shall be used for all surface mounted applications and flush mounting in gypsum or plaster walls.
 Masonry boxes: square cornered suitable for flush mounting in masonry construction.
- Cast metal boxes: NEMA FB 1, Type FD, cast box with gasketed cover. Cast metal boxes shall be used for exterior surface mounted applications.
 F. ELECTRICAL IDENTIFICATION - All conductors shall be color coded throughout the installation. Color
- Coding shall be as prescribed by ANSI A13.1 and NFPA 70.
 Provide underground warning tape for all buried conductors tape shall be permanent, bright-colored,
- continuous-printed, vinyl tape not less than 6 inches wide by 4 mils thick with embedded continuous metallic strip and shall be compounded for permanent direct-burial service.
 Provide engraved-plastic labels for all disconnect switches, switchboards, panelboards, transformers, and control devices. Labels shall be melamine plastic laminate engraving stock with 3/8" engraved lettering and shall be punched or drilled for mechanical fasteners.h
- 3. FIRESTOPPING Apply firestopping to cable and raceway penetrations of fire-rated floor and wall assemblies to achieve fire-resistance rating of the assembly.
- G. CUTTING AND PATCHING Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces required to permit electrical installations. Perform cutting by skilled mechanics of trades involved.
 1. Repair and refinish disturbed finish materials and other surfaces to match adjacent undisturbed surfaces. Install new fireproofing where existing firestopping has been disturbed. Repair and refinish materials and other surfaces involved.

SECTION 262200 - DRY TYPE TRANSFORMERS

- A. GENERAL-PURPOSE DISTRIBUTION AND POWER TRANSFORMERS Transformers shall comply with NEMA ST 20 and list and label as complying with UL 1561. Transformers shall be in an indoor ventilated type enclosure.
- 1. Transformers 15 kVA or smaller shall have an insulation class of 185 or 220 deg C. Transformers larger than 15 kVA shall have an insulation class of 220 deg C.
- Transformer rated temperature rise shall be 115 deg C maximum rise above 40 deg C.
 Transformer windings shall be copper [aluminum] and consist of one coil per phase in primary and
- secondary. Winding connections shall be suitable for 75 deg C conductors.
 4. Make transformer grounding connections to grounding electrodes and bonding connections to metallic piping as indicated on the drawings and to comply with NFPA 70.
- Transformers shall be manufactured by Acme, Cutler-Hammer, General Electric, Siemens, or Square D.

SECTION 262416 - PANELBOARDS

- A. GENERAL Panelboard cabinets shall be NEMA PB 1, type 1 zinc coated steel with manufacturer's standard enamel finish over corrosion-resistant treatment or primer coat. Each panelboard shall be furnished with a directory card indicating the load served by each branch circuit.
- Panelboard bus material shall be hard-drawn copper, 98 percent conductivity or Tin-plated aluminum.
 Provide each panelboard with an equipment ground bus adequate for feeder and branch-circuit
- equipment ground conductors. Bus shall be bonded to box. 3. Where future devices (spaces) are scheduled provide mounting brackets, bus connections, and
- necessary appurtenances required for future installation of devices. 4. Each panelboard shall be fully rated to interrupt symmetrical short-circuit current available at terminals.
- See schedules for required interrupting current (A.I.C.). 5. Panelboards shall be mounted with top of trim at 74" above finished floor, unless otherwise indicated.
- Panelboards shall be mounted plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish.
 Panelboards shall be manufactured by Cutler-Hammer, General Electric, Siemens, or Square D.
- B. LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS
- 1. Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.
- Doors: Front mounted with concealed hinges; secured with flush latch with tumbler lock; keyed alike.
 DISTRIBUTION PANELBOARDS
- 1. Overcurrent Protective Devices: Bolt-on circuit breakers.
- Doors: Front mounted secured with vault-type latch with tumbler lock; keyed alike.
 OVERCURRENT PROTECTIVE DEVICES Thermal-magnetic circuit breakers with 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 Å and larger. Circuit breaker lugs shall be mechanical style, suitable for number, size, trip ratings, and material of conductors.
 1. Each overcurrent protective device shall have an application listing appropriate for the application.

SECTION 262726 - WIRING DEVICES

- A. GENERAL Devices shall be installed plumb and secure. Unless otherwise indicated, flush mount wiring devices with long dimension vertical, and grounding terminal of receptacles on bottom.
- Unless otherwise indicated wiring devices shall be mounted at the following heights, measured from finished floor to centerline of device.
- Wall switches and wall box dimmers = 44"
- Receptacles = 18h"

Group adjacent devices under single multi-gang wall plates. Wiring devices shall be specification grade as manufactured by Pass and Seymour, Leviton, Hubbell, or General Electric.

- 4. Provide tamper resistant devices were indicated on drawings.
- B. RECEPTACLES Duplex receptacles shall be specification grade tamper resistant c20 ampere, 120 volt.
 1. Ground fault interrupting (GFI) receptacles shall be feed-through type arranged to protect connected downstream receptacles on same circuit.
 2. Receptacles serving owner furnished equipment shall have configuration to match that of equipment
- C. SWITCHES Snap switches shall be specification grade, quiet type, single pole, two pole, or three-way to suit connections.
- D. DEVICE COLOR Color shall be gray unless otherwise indicated or required by code.E. WALL PLATES Plates shall be type 302 satin finish stainless steel in single and combination types to
- match corresponding wiring devices.h
 Weatherproof plates in damp locations: Heavy cast aluminum; hinged, gasketed, equal to Pass & Seymour #4511 for horizontal mount or #4512 for vertical mount. These covers shall be installed outdoors in a location protected from the weather such as roofed open porches, canopies, eves, and the like or in other damp locations where the receptacle will not be subject to beating rain or water run-off. These covers may also be used at roof mounted mechanical equipment for use with portable tools that
- Weatherproof plates in wet locations: Self closingmetallic cover, lockable weatherproof enclosure, the integrity of which is not affected when the attachment plug cap is inserted. Equal to Intermatic WP1010HMC.

SECTION 264313 - SURGE PROTECTIVE DEVICES (SPD'S)

would be normally connected to the outlet when attended.

A. GENERAL - Provide SPD at service entrance equipment (primary protection) and where indicated on plans and schedules (secondary protection).

- 1. UL 1449 3rd Edition type 1 (installed downstream of service breaker) or type 2 listed for SPD, UL 1283
- listed for EMI/RFI filtering.
- 20kA nominal discharge (In) tested.
 10 modes of protection (L-N, L-G, N-G).
- Short circuit current rating (SCCR) matching or exceeding the connected equipment short circuit current rating.
 Peak surge current rating of 200kA per phase for service entrance equipment SPD, 100kA for all other
- SPD's. 6. Voltage protection rating (VPR) not to exceed 700V for 208Y/120V systems, 1200V for 480Y/277V
- systems. 7. Voltage rating shall match connected equipment.
- LED indicators of MOV status, form C contacts for remote monitoring, and six-digit event counter set to totalize transient surges.
- SPD's shall be manufactured by switchboard and panelboard manufacturer or the following: Advanced Protection Technologies, Inc., LEA International, or Liebert.

SECTION 265100 - LIGHTING

- A. LUMINAIRE AND FIXTURE COMPONENTS All metal parts and components shall be free from burrs, sharp corners, and edges. All fixtures shall be shipped pre-wired and ready for mounting.
 1. Doors, frames, and other internal access mechanisms shall be smooth operating, free from light
- leakage under operating conditions, and arranged to permit relamping without use of tools.
- B. EMERGENCY LIGHTING UNITS Unit shall be a self-contained units with sealed, maintenance-free, leadacid type with minimum 5-year nominal life and fully automatic, solid-state type charger with sealed transfer relay.
- Relay shall automatically turn lamp(s) on when supply circuit voltage drops to 80 percent of nominal voltage or below. Lamp automatically disconnects from battery when voltage approaches deepdischarge level. When normal voltage is restored, relay disconnects lamps, and battery is automatically recharged and floated on charger.

C. LED LIGHT SOURCE REQUIREMENTS:

- Rated life (L70): Minimum 50,000 hours as defined by IES LM80 and TM21.
 Color Rendering Index (CRI): 80 CRI minimum.
- 3. Each luminaire type shall be binned within a three-step MacAdam Ellipse to ensure color consistency among luminaires.

D. LED DRIVER REQUIREMENTS:

- 0-10V Dimming.
 Total Harmonic Distortion Rating: Less than 20 percent.
- Ambient Temperature Rating: -40° to + 55° C.
 Power Factor (100% output): >0.95
- E. WARRANTY Include labor allowance required for replacement on-site at no extra cost to Owner within 1year construction warranty. Transfer remainder of the manufacturer's warranty, including ballast manufacturer's labor stipend to owner after 1-year construction warranty.
- Ballast and Drivers: 5-year replacement warranty.
 LED system Warranty: 5-year replacement warranty.
- F. FINISHES Luminaire finishes shall be manufacturer's standard, unless otherwise indicated. Painted finishes shall be applied over corrosion-resistant treatment or primer, free of defects. Metallic finishes shall be corrosion resistant.
- G. INSTALLATION Luminaires shall be set level, plumb, and square with ceiling and walls, and secured according to manufacturer's written instructions and approved submittal materials.
- 1. Luminaires in or on grid-type suspended ceilings shall be supported with support clips and a minimum of four ceiling support system rods or wires for each fixture, located not more than 6 inches from fixture corners.
- Luminaires of Sizes Less Than Ceiling Grid shall be arranged as indicated on reflected ceiling plans or center in acoustical panel, and supported independently with at least two 3/4-inch metal channels spanning and secured to ceiling tees.

SECTION 265200 - LIGHTING CONTROL

- A. OCCUPANCY SENSORS Sensor adapts or "learns" patterns of use specific to controlled space to reduce false switching.
- 1. Ceiling Sensors: Dual technology with infrared and microphonic or ultrasonic 32 kHz or 40 kHz sensors integrated into one housing. 360 degree field of view with a minimum coverage of 20 foot radius at 9' mounting height, with sensor centered in coverage area. Sensor shall mount tight to ceiling surface and shall have a white finish. Provide associated power packs for sensor power and load switching relays.
- Sensorswitch CM PDT 10 or equivalent by Hubbell or Wattstopper.
 Wall Box Sensors: Passive dual technology with 180 degree adjustable field of view capable of sensing small motion to20' when mounted at 4'. Pushbutton on sensor face provides manual on/manual off load control, load may be manually turned on or off at any time. Mount in wall box with decorator style faceplate. Integral switch in sensor housing shall be rated for 800W ballast or incandescent load at
- 120V, 1200W ballast load at 277V, and 1/4 hp motor load at 120V. Sensorswitch WSX PDT or equivalent by Hubbell or Wattstopper.3. Adjust occupancy sensors tailored to actual use conditions of controlled space. Make adjustments

B. RELAY PANELS

- 1. See drawings and schedule for specifications.
- C. LIGHTING CONTROL See plans, schedules, and details for requirements of network type lighting control.

before and after Owner has occupied space.

- D. COLOR See Section 262726 Wiring Devices.
- E. WARRANTY Manufacturer and Installer agree to repair or replace devices that fail in materials or workmanship within two years from date of substantial completion.
 F. MANUFACTURERS

Lighting control system shall be

- Lighting control system shall be manufactured by SensorSwitch nLight, Wattstopper, Encelium.
 G. SOFTWARE
- 1. Install lighting control software on Owner's computer. Provide programming of system to Owner's scheduling requirements.

SECTION 268100 - FIRE ALARM

- GENERAL Provide a standalone fire alarm system to monitor and alarm mechanical equipment over 2000CFM per NFPA and local AHJ requirements.
- SUBMISSIONS TO AUTHORITIES HAVING JURISDICTION Submit to authorities having jurisdiction. Include copies of annotated Contract Drawings as needed to depict component locations to facilitate review. Resubmit if required to make clarifications or revisions to obtain approval. On receipt of comments from authorities having jurisdiction, submit them to Engineer for review.
- G. SMOKE DETECTORS Smoke detectors shall be photoelectric type with integral LED indicating light and adjustable sensitivity settings.
- Duct smoke detector shall be ionization type with sampling tube sized as recommended by the manufacturer for the specific duct size, air velocity, and installation conditions where applied.
 Provide fan shutdown relay(s) rated to interrupt fan motor-control circuit where required.
- H. NOTIFICATION APPLIANCES Devices shall be combination type with factory-integrated audible and visible devices in a single-mounting assembly.
- Audible alarm device shall be electric-vibrating-polarized type horn with provision for housing the operating mechanism behind a grille. Horns produce a sound-pressure level of 90 dB, measured 10 feet from the horn.
 Visible alarm devices shall be xenon strobe lights listed under UL 1971 with clear or nominal white polycarbonate lens. The word "FIRE" shall be engraved in minimum 1-inch high letters on the lens. Unit
- candela output shall meet the strobe layout. 3. Notification devices shall be mounted at 82" A.F.F. or 6" below finished ceiling whichever is lower.
- WIRE wiring shall be as follows unless otherwise recommended by the manufacturer or required by the authority having jurisdiction:
 Non-Power-Limited Circuits: Solid-copper conductors with 600-V rated, 75 deg C, color-coded insulation.

Low-Voltage Circuits: No. 16 AWG, minimum.

Line-Voltage Circuits: No. 12 AWG, minimum.

Power-Limited Circuits: NFPA 70, Types FPL, FPLR, or FPLP, as recommended by manufacturer. 1. Fire alarm wiring shall be installed in conduit in exposed structured areas.

- J. MANUFACTURERS Subject to compliance with requirements, provide products by one of the following: Cerberus Pyrotronics, Edwards Systems Technology, Notifier, Simplex, Fire-Lite, FireGuard, and Siemens.
- K. FIELD SERVICE AND TESTING Engage a factory-authorized service representative to inspect fieldassembled components and connections and to supervise pretesting, testing, and adjustment of the system. Report results in writing. Test the system according to procedures outlined in NFPA 72. Correct deficiencies indicated by tests and completely retest work affected by such deficiencies.
- Occupancy Adjustments: When requested within one year of date of Substantial Completion, provide on-site assistance in adjusting sound levels, controls, and sensitivities to suit actual occupied conditions. Provide up to two requested visits to Project site for this purpose.

