SOUTH KING FIRE & RESCUE

FACILITY IMPROVEMENTS



RICE ARCHITECTURE & PLANNING fergus MILLER

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BREMERTON, WA 98337
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4794 REGISTERED ARCHITECT
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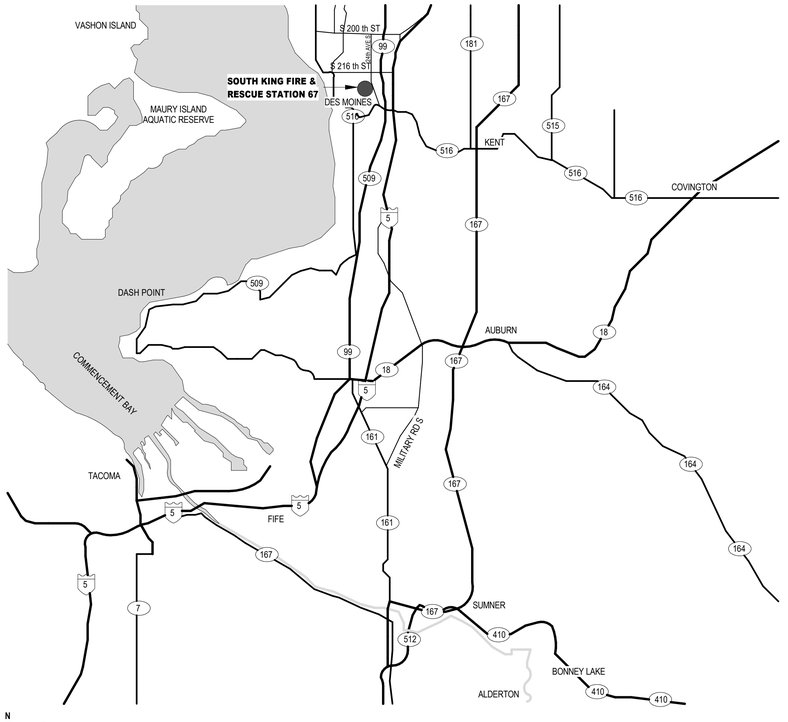
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2 PROJECT TEAM



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1 VICINITY MAP
NTS

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GENERAL INFORMATION

APPLICABLE CODES:
2015 INTERNATIONAL BUILDING CODE (IBC) (WA STATE AMENDMENTS)
2012 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
2015 WASHINGTON ADMINISTRATIVE CODE (WAC)
2009 ICC A117.1-2009

CHAPTER 3 - USE AND OCCUPANCY CLASSIFICATION
EXISTING USE: FIRE SERVICE STATION (NO CHANGE)

CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS

NO INCREASE IN STORIES OR BUILDING AREA IS PROPOSED
BUILDING AREA: 17,550 SF

CHAPTER 6 - TYPES OF CONSTRUCTION

CONSTRUCTION CLASSIFICATION: TYPE V B (NO CHANGE)

CHAPTER 9 - FIRE PROTECTION SYSTEMS

THE EXISTING BUILDING IS FULLY SPRINKLED. ALTERATIONS TO THE EXISTING SYSTEM SHALL BE SUBMITTED UNDER A SEPARATE COVER.

CHAPTER 10 - MEANS OF EGRESS

NO INCREASE TO THE OCCUPANT LOAD IS PROPOSED.

SOUTH KING FIRE & RESCUE
FACILITY IMPROVEMENTS
FIRE STATION 67
2238 S 223rd STREET
DES MOINES, WASHINGTON

PROJECT # 2015137

BID SET

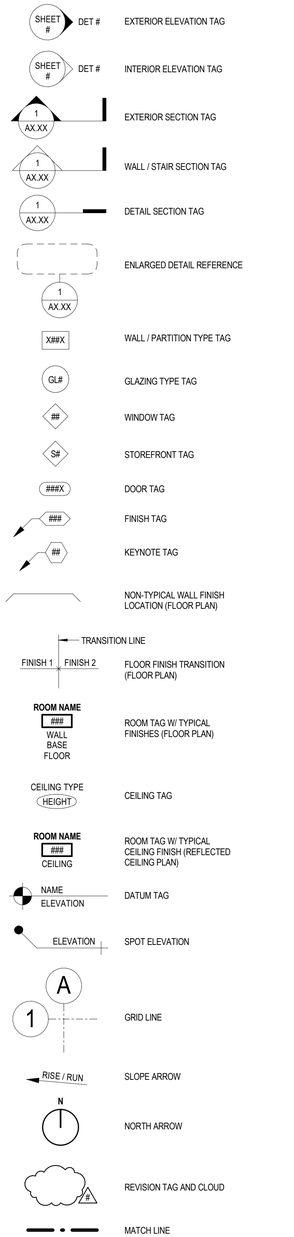
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COVER SHEET AND GENERAL PROJECT INFORMATION

SHEET:

A00.01



2 SYMBOL LEGEND

1 ABBREVIATION LIST

-- A --		**--F--**		**-- O --**		**-- T --**	
A	AMP	FRTW	FIRE RETARDANT TREATED	O/	OVER	T	TREAD,
A/V	AUDIO VISUAL		WOOD	OA	OVERALL		TILE
AB	ANCHOR BOLT	FRZ	FREEZER	OC	ON CENTER	T&B	TOP AND BOTTOM
ACC	ACCESSORIES	FS	FULL SIZE	OCC	OCCUPANTS,	T&G	TONGUE AND GROOVE
ACST	ACOUSTIC(AL)	FT	FOOT,		OCCUPANT LOAD,	TB	TOWEL BAR
ACT	ACOUSTIC CEILING TILE		FEET		OCCUPANCY	TEL	TELEPHONE
ADJ	ADJACENT,	FTG	FOOTING	OD	OUTSIDE DIAMETER	TEMP	TEMPORARY,
	ADJUST(ABLE)	FURN	FURNITURE	OFCI	OWNER FURNISHED &		TEMPERATURE
AFF	ABOVE FLOOR FINISH	FUT	FUTURE		CONTRACTOR INSTALLED	TER	TERRAZZO
ALT	ALTERNATE			OFOI	OWNER FURNISHED &	THK	THICK(NESS)
ALUM	ALUMINUM	**-- G --**			OWNER INSTALLED	TI	TENANT IMPROVEMENT
APPROX	APPROXIMATELY	G	GROUND	OFD	OVERFLOW DRAIN	TL	TOTAL LOAD
ARCH	ARCHITECT(URAL)	GA	GAUGE	OFF	OFFICE	TMPD	TEMPERED
AUTO	AUTOMATIC	GALV	GALVANIZED	OGL	OBSCURE GLASS	TO	TOP OF
		GAR	GARAGE	OHDR	OVERHEAD DOOR	TOB	TOP OF BEAM
-- B --		GB	GRAB BAR	OPH	OPPOSITE HAND	TOC	TOP OF CURB,
BD	BOARD	GC	GENERAL CONTRACTOR	OPNG	OPENING		TOP OF CONCRETE
BITUM	BITUMINOUS	GEN	GENERAL	OPP	OPPOSITE	TOF	TOP OF FOOTING,
BLDG	BUILDING	GFRG	GLASS REINFORCED PLASTER,	ORD	OVERFLOW ROOF DRAIN		TOP OF FLOOR,
BLKG	BLOCKING		GLASS FIBER REINFORCED	OZ	OUNCE		TOP OF FRAME
BM	BEAM		GYPSUM			TOS	TOP OF SLAB,
BO	BOTTOM OF	GI	GALVANIZED IRON				TOP OF STEEL
BR	BEDROOM	GL	GLASS	**-- P --**		TOW	TOP OF WALL
BTWN	BETWEEN	GLULAM	GLUE LAMINATED	P	PAINT(ED),	TPD	TOILET PAPER DISPENSER
BUR	BUILT UP ROOF(ING)	GR	GROSS		PANTRY	TR	TRANSITION STRIP
		GT	GROUT	PC	PORTLAND CEMENT	TV	TELEVISION
-- C --		GWB	GYPSUM WALL BOARD	PCC	PRECAST CONCRETE	TYP	TYPICAL
CAB	CABINET	GYP	GYPSUM	PED	PEDESTAL		
CALC	CALCULATION			PERF	PERFORATED	**-- U --**	
CB	CATCH BASIN,	**-- H --**		PERM	PERMANENT	UC	UNDERCOUNTER,
	CORNER BEAD	H	HIGH,	PERP	PERPENDICULAR		UNDERCABINET,
CEM	CEMENT		HEIGHT	PFP	PREPARED FOR PAINT		UNDERCUT
CFOI	CONTRACTOR FURNISHED &	HB	HOSE BIB	PIV	POST INDICATOR VALVE	UGND	UNDERGROUND
	OWNER INSTALLED	HC	HOLLOW CORE,	PL	PLATE,	UNFIN	UNFINISHED
CG	CORNER GUARD		HANDICAPPED		PROPERTY LINE	UNO	UNLESS NOTED OTHERWISE
CH	COAT HOOK	HDR	HEADER	PLAM	PLASTIC LAMINATE	UP	UTILITY POLE
CIP	CAST IN PLACE	HDW	HARDWARE	PLAS	PLASTER	UPS	UNINTERRUPTIBLE POWER SUPPLY
CJ	CONTROL JOINT,	HDWD	HARDWOOD	PLBG	PLUMBING	UPC	UNIFORM PLUMBING CODE
	CONSTRUCTION JOINT	HGR	HANGER	PLYWD	PLYWOOD	UTIL	UTILITY
CL	CENTERLINE	HM	HOLLOW METAL	PMTL	PAINTED METAL		
CLG	CEILING	HRL	HANDRAIL	PNT	POINT	**-- V --**	
CLKJ	CAULKED JOINT	HORIZ	HORIZONTAL	PP	POWER POLE	V	VOLT(AGE)
CLO	CLOSET	HR	HOURS	PR	PAIR	VCT	VINYL COMPOSITION TILE
CLR	CLEAR	HT	HEIGHT	PREFAB	PREFABRICATE	VEH	VEHICLE
CMU	CONCRETE MASONRY UNIT	HVAC	HEATING, VENTILATION,	PRELIM	PRELIMINARY	VEND	VENDING MACHINE
CO	CLEAN OUT		& AIR CONDITIONING	PRKG	PARKING	VERT	VERTICAL
COL	COLUMN	HWT	HOT WATER TANK	PROP	PROPERTY	VEST	VESTIBULE
CONC	CONCRETE			PS	PROJECTOR SCREEN	VIF	VERIFY IN FIELD
CONF	CONFERENCE	**-- I --**		PSF	POUNDS PER SQUARE FOOT	VNR	VENEER
CONN	CONNECT(ION)	IBC	INTERNATIONAL BUILDING	PSI	POUNDS PER SQUARE INCH	VTO	VENT TO OUTSIDE
CONSTR	CONSTRUCTION		CODE	PT	PRESERVATIVE TREATED,	VTR	VENT THROUGH ROOF
CONT	CONTINUE,	ID	INSIDE DIAMETER,		PRESSURE TREATED,		
	CONTINUOUS		INSIDE DIMENSION		POST TENSIONED	**-- W --**	
CONTR	CONTRACTOR	IFC	INTERNATIONAL FIRE CODE	PTD	PAPER TOWEL DISPENSER	W	WEST,
CORRD	CORDINATE	IIC	IMPACT INSULATION CLASS	PTDWRC	PAPER TOWEL DISPENSER		WIDE,
CORR	CORRIDOR	IMC	INTERNATIONAL		& WASTE RECEPTACLE		WASHING MACHINE
COV	COVE		MECHANICAL CODE	PTN	PARTITION	W/	WITH
CP	CEMENT PLASTER	IN	INCH(ES)	PVC	POLYVINYL CHLORIDE,	W/D	WASHER & DRYER
CPT	CARPET	INC	INCREASE		POLYVINYL CHLORIDE PIPE	W/O	WITHOUT
CRK	CORK	INCL	INCLUDE(D),	PVD	PROVIDE	WB	WALL BASE
CRL	CHAIR RAIL		INCLUDING	PVG	PAVING	WC	WATER CLOSET,
CS	CONCRETE SEALER	INFO	INFORMATION	PVR	PAVERS		WALL COVERING
CSMT	CASEMENT	INSTL	INSTALL(ATION)			WCO	WINDOW COVERING
CTR	CENTER	INSUL	INSULATION	**-- Q --**		WD	WOOD
		INT	INTERIOR	QTY	QUANTITY	WDW	WINDOW
-- D --				QTZ	QUARTZ	WF	WIDE FLANGE
D	DEEP,	**-- J --**				WH	WATER HEATER
	DRYER	JAN	JANITOR	**-- R --**		WIC	WALK-IN CLOSET
DBL	DOUBLE	JBOX	JUNCTION BOX	R	RISER,	WM	WIRE MOLD,
DEB	DRY ERASE BOARD	JT	JOINT		RANGE,		WATER METER,
DEMO	DEMOLISH,				RADIUS		WIRE MESH
	DEMOLISION	**-- K --**		R/S	ROD & SHELF	WO	WALK-OFF FLOORING
DEPT	DEPARTMENT	KD	KILN DRIED	RA	RETURN AIR	WP	WORK POINT,
DET	DETAIL	KIT	KITCHEN	RCF	RAISED COMPUTER FLOOR		WATERPROOFING,
DF	DRINKING FOUNTAIN	KW	KILOWATT	RCP	REFLECTED CEILING PLAN		WEATHER PROOF
DIA	DIAMETER			RD	ROOF DRAIN	WPM	WATERPROOF MEMBRANE
DIM	DIMENSION	**-- L --**		REBAR	REINFORCING BAR	WR	WATER REPELLENT,
DISP	DISPOSAL	L	LEFT,	REC	RECESSED		WATER RESISTANT
DL	DEAD LOAD		LINEN,	RECPT	RECEPTACLE	WRB	WATER RESISTANT BARRIER
DN	DOWN		LONG	REF	REFERENCE,	WRC	WAIST RECEPTACLE
DP	DECORATIVE PANEL	LAB	LABORATORY		REFRIGERATOR	WSCT	WAINSCOT
DR	DOOR,	LAM	LAMINATE(D)	REINF	REINFORCE(D),	WSEC	WASHINGTON STATE ENERGY CODE
	DINING ROOM,	LAU	LAUNDRY		REINFORCING	WSVIAQC	WASHINGTON STATE VENTILATION
	DRAIN	LAV	LAVATORY	RES	RESILIENT FLOORING		& INDOOR AIR QUALITY CODE
DS	DOWNSPOUT	LB(S)	POUND(S)	REQD	REQUIRED	WT	WEIGHT
DW	DISHWASHER	LDG	LANDING	REST	RESTROOM	WWF	WELDED WIRE FABRIC
DWG	DRAWING	LINO	LINOLEUM	RET	RETAINING		
DWR	DRAWER	LL	LIVE LOAD	REV	REVISED,		
		LOC	LOCATION		REVISION		
-- E --		LPT	LOW POINT	RH	ROBE HOOK		
(E)	EXISTING	LR	LIVING ROOM	RM	ROOM	**--ASSOCIATIONS--**	
EXIST		LRG	LARGE	RO	ROUGH OPENING	AISI	AMERICAN IRON AND STEEL INSTITUTE
E	EAST	LT	LIGHT	RP	RADIUS POINT	AMCA	AIR MOVING & CONDITIONING
EA	EACH	LTG	LIGHTING	RS	ROUGH SAWN		ASSOCIATION, INC.
EC	EDGE OF CURB	LVR	LOUVER	RT	RIGHT	ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
EE	EACH END			RVL	REVEAL	APA	AMERICAN PLYWOOD ASSOCIATION
EF	EACH FACE	**-- M --**				APWA	AMERICAN PUBLIC WORKS ASSOCIATION
EJ	EXPANSION JOINT	MAS	MIRROR & SHELF	**-- S --**		ARIB	ASPHALT ROOFING INDUSTRY BUREAU
EL	ELEVATION	MACH	MACHINE	S	SOUTH,	ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ELEC	ELECTRICAL	MAINT	MAINTENANCE		SINK	ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
ELEV	ELEVATOR,	MATL	MATERIAL	S/R	SHELF & ROD	AWI	AMERICAN WOODWORK INSTITUTE
	ELEVATION	MAX	MAXIMUM	SAN	SANITARY	AWS	AMERICAN WELDING SOCIETY
EMER	EMERGENCY	MB	MACHINE BOLT	SC	SOLID CORE	AWWA	AMERICAN WATER WORKS ASSOCIATION
ENCL	ENCLOSE(D),	MBR	MASTER BEDROOM	SCD	SEAT COVER DISPENSER	CRSI	CONCRETE REINFORCING STEEL INSTITUTE
	ENCLOSURE	MC	MEDICINE CABINET	SCHED	SCHEDULE	CS	COMMERCIAL STANDARD OF THE U.S. DEPARTMENT
EP	ELECTRICAL PANELBOARD	MDO	MEDIUM DENSITY OVERLAY	SD	SOAP DISH,		OF COMMERCE
EQ	EQUAL	MECH	MECHANIC(AL)		SOAP DISPENSER,	CSI	CONSTRUCTION SPECIFICATIONS INSTITUTE
EQUIP	EQUIPMENT	MED	MEDIUM		STORM DRAIN	FGMA	FLAT GLASS MARKETING ASSOCIATION
EST	ESTIMATE(D)	MEDS	MEDICINE,	SEAL	SEALER,	HUD	US DEPARTMENT OF HEALTH AND URBAN DEVELOPMENT
EW	EACH WAY		MEDICAL		SEALANT	ICC	INTERNATIONAL CODE COUNCIL
EWC	ELECTRIC WATER COOLER	MEMB	MEMBRANE	SECT	SECTION	IBC	INTERNATIONAL BUILDING CODE
EWH	ELECTRIC WATER HEATER	MEZZ	MEZZANINE	SEP	SEPARATION	IEEE	INSTITUTE OF ELECTRICAL & ELECTRONIC ENGINEERS
EXH	EXHAUST	MFR	MANUFACTURER	SF	SQUARE FEET	IPCEA	INSULATED POWER CABLE ENGINEER ASSOCIATION
EXP	EXPOSED,	MFRREC	MANUFACTURER'S	SG	SAFETY GLASS,	MLA	METAL LATH ASSOCIATION
	EXPANSION		RECOMMENDATION(S)		SAFETY GLAZING	NAAMM	NATIONAL ASSOCIATION OF ARCHITECTURAL METAL
EXT	EXTERIOR	MGR	MANAGER	SHR	SHOWER		MANUFACTURERS
		MH	MANHOLE	SHT	SHEET	NEMA	NATIONAL FIRE PROTECTION ASSOCIATION
-- F --		MIN	MINIMUM	SHTG	SHEATHING,	NWMA	NATIONAL WOODWORK MANUFACTURER'S ASSOCIATION
FA	FIRE ALARM	MIR	MIRROR		SHEETING	OSHA	OCCUPACTIONAL SAFETY AND HEALTH ADMINISTRATION
FAAP	FIRE ALARM ANNUNCIATOR PANEL	MISC	MISCELLANEOUS	SHLV	SHELVING	PS	PRODUCT STANDARD OF U.S. DEPARTMENT OF COMMERCE
FD	FLOOR DRAIN	MO	MASONRY OPENING,	SIM	SIMILAR	SDI	STEEL DECK INSTITUTE
FDC	FIRE DEPARTMENT CONNECTION		MONITOR	SM	SHEET METAL	SDI	STEEL DOOR INSTITUTE
FDMPR	FIRE DAMPER	MTD	MOUNTED	SND	SANITARY NAPKIN DISPENSER	SMACNA	SHEET METAL & AIR CONDITIONING CONTRACTORS
FDTN	FOUNDATION	MTL	METAL	SOG	SLAB ON GRADE		NATIONAL ASSOCIATION
FDV	FIRE DEPARTMENT VALVE	MULL	MULLION	SOL	SOLID SURFACE	SSPC	STEEL STRUCTURES PAINTING COUNCIL
FE	FIRE EXTINGUISHER	MULT	MULTIPLE	STO	STONE	TCA	TILE COUNCIL OF AMERICA
FEC	FIRE EXTINGUISHER CABINET	MW	MICROWAVE OVEN	SPECS	SPECIFICATION(S)	UL	UNDERWRITER'S LABORATORIES
FF	FACTORY FINISH,			SPKLR	SPRINKLER	WAC	WASHINGTON ADMINISTRATIVE CODE
	FINISH FACE	**-- N --**		SPKR	SPEAKER	WISHA	WASHINGTON INDUSTRIAL SAFETY AND HEALTH ACT
FH	FIRE HYDRANT	N	NORTH	SQ	SQUARE	WSDOH	WASHINGTON STATE DEPARTMENT OF HEALTH
FHC	FIRE HOSE CABINET	NA	NOT APPLICABLE	SQIN	SQUARE INCH	WSDSHS	WASHINGTON STATE DEPARTMENT OF SOCIAL AND
FHR	FIRE HOSE RACK, FIRE HOSE REEL	NC	NOISE CRITERIA,	SS	SERVICE SINK,		HEALTH SERVICES
FIN	FINISHED		NURSE CALL		SANITARY SEWER	WSEC	WASHINGTON STATE ENERGY CODE
FIN FLR	FINISHED FLOOR	NCAP	NURSE CALL ANNUNCIATOR	SST	STAINLESS STEEL	WSVIAQC	WASHINGTON STATE VENTILATION & INDOOR AIR QUALITY CODE
FIXT	FIXTURE		PANEL	ST	STREET,	WWPA	WESTERN WOOD PRODUCTS ASSOCIATION
FLASH	FLASHING	NCOMBL	NON-COMBUSTIBLE		STAIN		
FLR	FLOOR	NIC	NOT IN CONTRACT	STA	STATION		
FLUOR	FLUORESCENT	NO	NUMBER	STC	SOUND TRANSMISSION CLASS		
FMF	FLEXIBLE MEMBRANE FLASHING	NOM	NOMINAL	STD	STANDARD		
FOB	FACE OF BRICK	NT	NET	STIR	STIRRUP		
FOC	FACE OF CONCRETE	NTS	NOT TO SCALE	STL	STEEL		
FOF	FACE OF FINISH			STOR	STORAGE		
FOM	FACE OF MASONRY			STRUCT	STRUCTURAL		
FOS	FACE OF STUD			SU	SOILED UTILITY		
FPL	FIREPLACE			SUBFL	SUBFLOOR		
FRP	FIBER REINFORCED PLASTIC			SUSP	SUSPENDED		
				SW	SWITCH		
				SYM	SYMMETRICAL		

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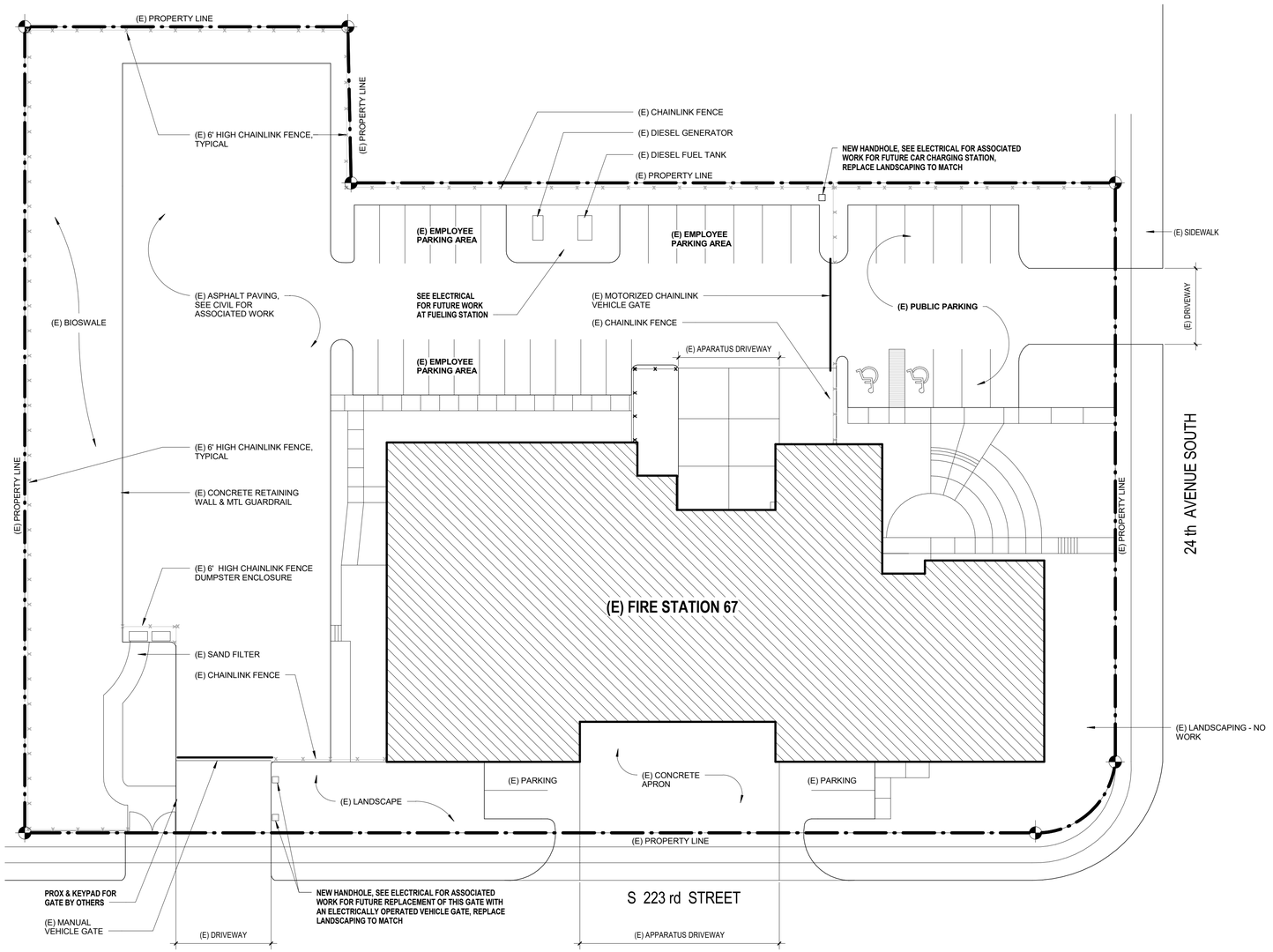
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ABBREVIATIONS AND SYMBOLS

SHEET:

A00.02



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1 SITE PLAN

1" = 20'-0"

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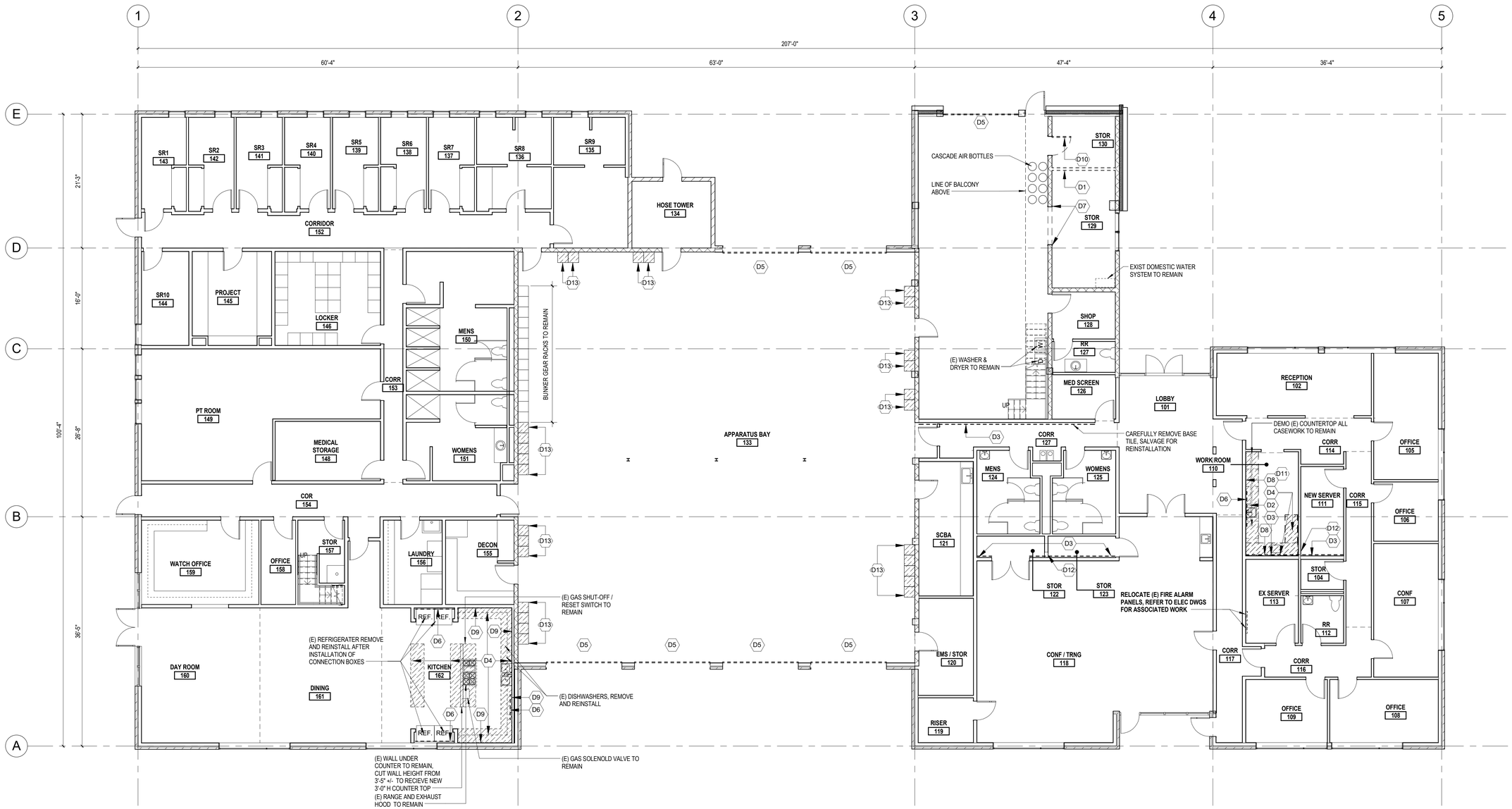
ARCHITECTURAL SITE PLAN

SHEET:

A10.01

KEY NOTES - DEMO GROUND LEVEL PLAN

#	NOTE DESCRIPTION
D1	DEMO (E) WALL
D2	DEMO (E) COUNTER TOP AND DEMO (E) SINK
D3	REMOVE (E) GWB FOR SHEATHING INSTALLATION, REFERENCE STRUCTURAL DRAWINGS FOR ASSOCIATED WORK, REMOVE AND REINSTALL EXISTING OUTLET, LIGHT SWITCH, ETC
D4	DEMO (E) CASEWORK: PANTRY, COUNTERTOP, BASE CABINETS AND WALL CABINETS
D5	DEMO (E) OVERHEAD DOOR, TRACKS AND ASSOCIATED EQUIPMENT
D6	DEMO PORTION OF (E) GWB ABOVE (E) BASE CABINET FOR INSTALLATION OF COLD WATER PIPE AND CONNECTION BOX, REFERENCE PLUMBING DRAWINGS FOR ASSOCIATED WORK
D7	DEMO (E) DOOR FRAME, PREPARE OPENING TO RECEIVE INFILL
D8	DEMO (E) GWB THIS WALL AS REQUIRED FOR ASSOCIATED ELECTRICAL WORK, REFERENCE ELECTRICAL DRAWINGS, PATCH AND REPAIR TO RECEIVE NEW FINISH
D9	DEMO A PORTION OF (E) GWB THIS WALL AS REQUIRED FOR NEW PLUMBING TO REFRIGERATOR LOCATIONS, LIMIT DEMO TO 3'-0" AFF AND BELOW IF FEASIBLE. REFERENCE PLUMBING DRAWINGS FOR ASSOCIATED WORK
D10	DEMO (E) DOOR AND FRAME
D11	DEMO (E) RESILIENT TILE FLOORING, BASE, AND FLOOR TRANSITION STRIP
D12	REMOVE (E) INTERSECTING WALL AS REQD FOR REMOVAL OF GWB AND INSTALLATION OF NEW PLYWOOD SHEATHING
D13	REMOVE AND SALVAGE (E) BUNKER GEAR RACKS FOR REINSTALLATION



N

1 LEVEL 1 - DEMO PLAN

1/8" = 1'-0"

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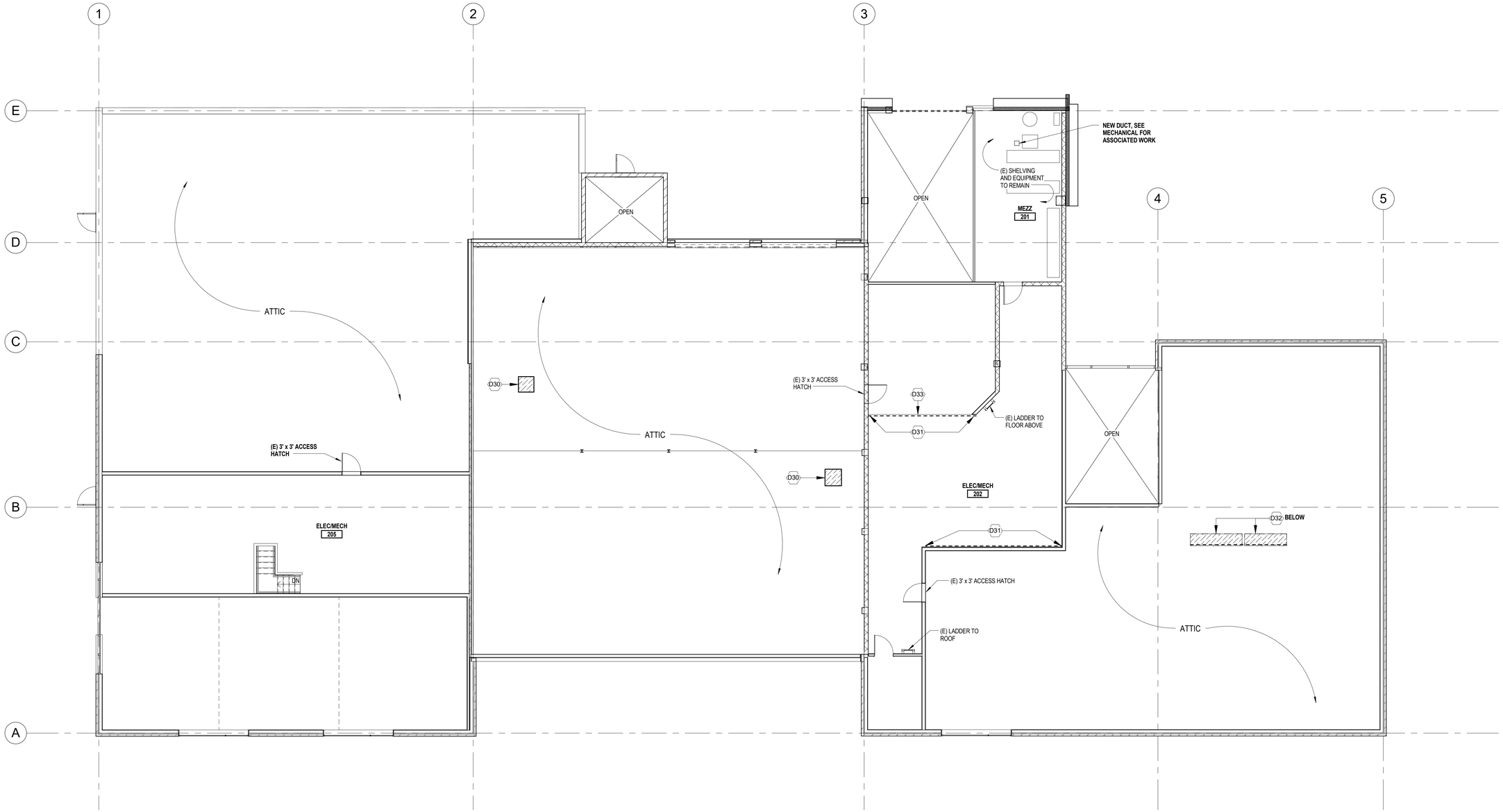
DEMO PLAN - GROUND LEVEL

SHEET:

A20.01

KEY NOTES - DEMO MEZZANINE PLAN

#	NOTE DESCRIPTION
D30	CUT OPENING IN EXISTING CEILING/DECK AND ROOF FOR INSTALLATION OF NEW MECHANICAL DUCT, SEE STRUCTURAL AND MECHANICAL DRAWINGS FOR ASSOCIATED WORK
D31	EXISTING SHEATHING TO REMAIN, REFERENCE STRUCTURAL DRAWINGS FOR ASSOCIATED WORK
D32	REMOVE (E) GWB CEILING FOR SHEATHING INSTALLATION, REFERENCE STRUCTURAL DRAWINGS FOR ASSOCIATED WORK
D33	REMOVE (E) ROOF INSULATION AND VAPOR BARRIER ABOVE WHERE NEW SHEAR WALL INTERESECTS ROOF AS REQD, REPLACE INSULATION AND INSTALL NEW VAPOR BARRIER PER MANUFACTURER'S RECOMMENDATIONS



N

1 LEVEL MEZZANINE - DEMO PLAN

1/8" = 1'-0"

RICE ARCHITECTURE & PLANNING fergus MILLER

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4794 REGISTERED ARCHITECT
DAVID A. FERGUS
STATE OF WASHINGTON

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 67
2238 S 223rd STREET
DES MOINES, WASHINGTON

PROJECT # 2015137

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DEMO PLAN - MEZZANINE

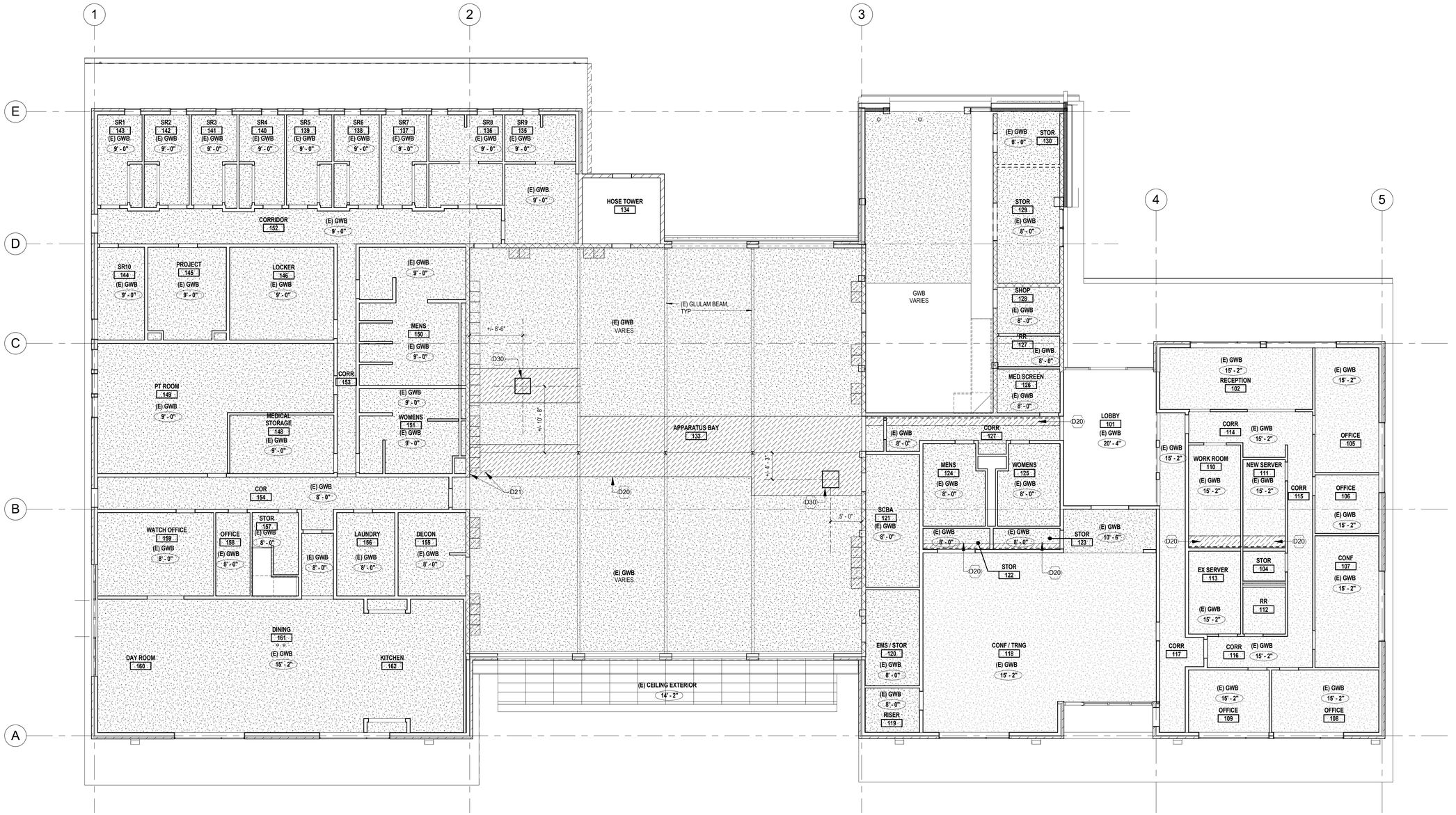
SHEET:

A20.02

KEY NOTES - DEMO REFLECTED CEILING PLAN	
#	NOTE DESCRIPTION
D20	DEMO A PORTION OF THE EXISTING CEILING FOR ACCESS FOR WORK REQUIRED BY SEISMIC UPGRADE, REFERENCE STRUCTURAL DRAWINGS FOR ASSOCIATED WORK
D21	DEMO A PORTION OF THE EXISTING CEILING AND GWB WALL AS REQUIRED FOR INSTALLATION OF NEW KICKER , REFERENCE STRUCTURAL DRAWINGS FOR ASSOCIATED WORK
D30	CUT OPENING IN EXISTING CEILING/DECK AND ROOF FOR INSTALLATION OF NEW MECHANICAL DUCT, SEE STRUCTURAL AND MECHANICAL DRAWINGS FOR ASSOCIATED WORK

RCP LEGEND

- EXISTING GWB CEILING TO REMAIN
- EXISTING SUSPENDED ACOUSTICAL TILE CEILING TO REMAIN
- **DEMO EXISTING CEILING**
- **NEW GWB CEILING, PATCH TO MATCH EXIST FINISH**
- **LIGHT FIXTURE**



1 LEVEL 1 - REFLECTED CEILING DEMO PLAN
1/8" = 1'-0"

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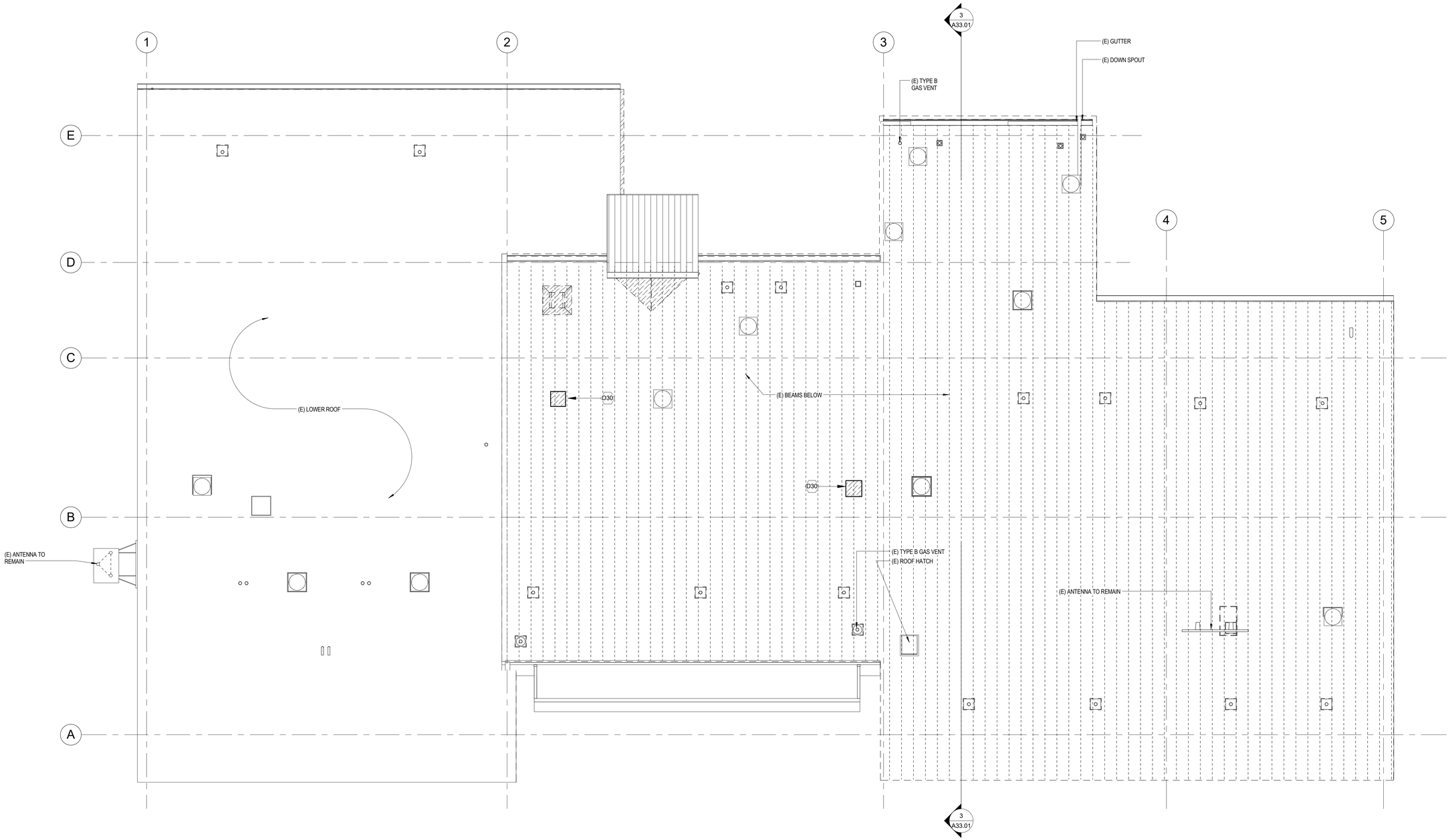
REVISION SCHEDULE

REFLECTED CEILING PLAN - DEMO

SHEET:

A20.03

KEY NOTES - DEMO ROOF	
#	NOTE DESCRIPTION
D30	CUT OPENING IN EXISTING CEILING/DECK AND ROOF FOR INSTALLATION OF NEW MECHANICAL DUCT, SEE STRUCTURAL AND MECHANICAL DRAWINGS FOR ASSOCIATED WORK



N 1 LEVEL ROOF PLAN -FACILITY IMPROVEMENT DEMO
1/8" = 1'-0"

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REVISION SCHEDULE

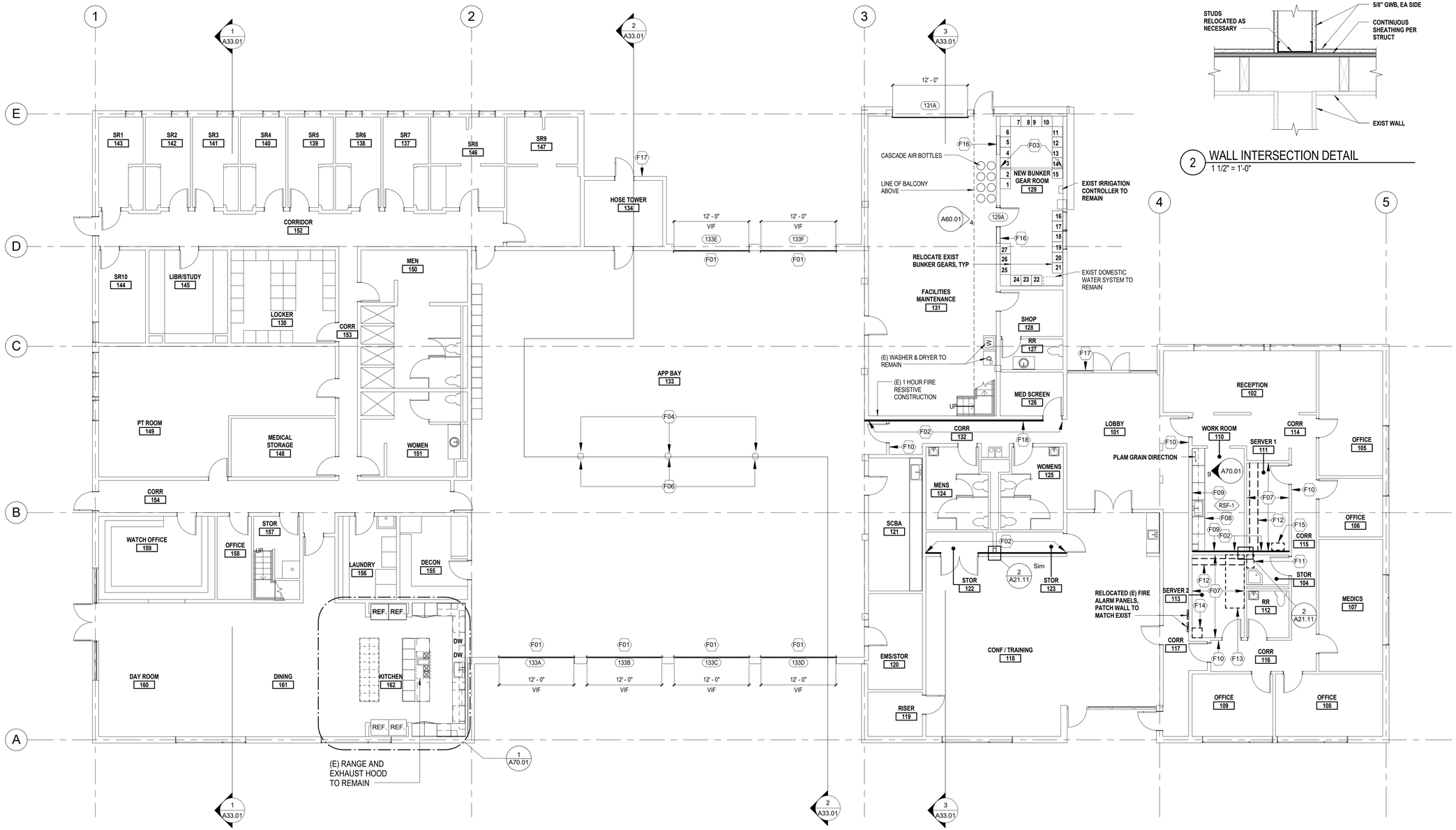
DEMO PLAN - ROOF

SHEET:

A20.05

KEY NOTES - FLOOR PLAN

#	NOTE DESCRIPTION
F01	NEW OVERHEAD DOOR SYSTEM AND OPERATOR FURNISHED AND INSTALLED BY OWNER
F02	INSTALL NEW 5/8" TYPE X GWB OVER NEW STRUCTURAL SHEATHING, REPLACE WALL BASE, PAINT WALL TO MATCH EXISTING, SEE WALL INTERSECTION DETAIL WHERE APPLICABLE
F03	FILL OPENING AT WALL; PATCH AND GRIND EXISTING FLOOR AND WALL SURFACE SMOOTH, PAINT WALL TO MATCH ADJACENT WALL
F04	10" DIA CONCRETE ENCASEMENT TO 5'-0" AFF, PAINTED SAFETY YELLOW, REFERENCE STRUCTURAL DRAWINGS FOR ASSOCIATED WORK
F05	INSTALL NEW SIMULATED STONE COUNTERTOP AND BACKSPLASH, AND PLASTIC LAMINATE CLAD CASEWORK. NO BACKSPLASH AT ISLAND CASEWORK
F06	PROVIDE SURFACE MOUNTED ELECTRICAL OUTLETS, REFERENCE ELECTRICAL DRAWINGS
F07	PATCH WALL AND SEAL JOINT BETWEEN WALL AND CEILING.
F08	INSTALL NEW SIMULATED STONE COUNTER TOP, AND NEW SINK, REFERENCE PLUMBING DRAWINGS FOR ASSOCIATED WORK
F09	PATCH PORTIONS OF WALL WITH 5/8" TYPE X GWB, PATCH AND PAINT VISIBLE AREAS TO MATCH ADJACENT WALL
F10	PATCH AND PAINT EXISTING WALLS AFTER THE INSTALLATION OF NEW ACCESS CONTROL SYSTEM IS COMPLETE (BY OTHERS); COORDINATE WITH THE INSTALLER
F11	NEW TROUGH BOX ABOVE. FIRE SEAL ALL NEW PENETRATIONS. REFERENCE ELECTRICAL DRAWINGS FOR ASSOCIATED WORK
F12	NEW OVERHEAD CABLE TRAY, BY OWNER
F13	NEW WORK BENCH AND WALL HUNG CABINETS BY OWNER
F14	NEW ALERTING SYSTEM, REFERENCE ELECTRICAL DRAWINGS FOR ASSOCIATED WORK
F15	NEW UPS BY OWNER
F16	INFILL EXIST DOOR OPENING WITH PT WOOD STUDS AT 16" O.C. WITH 5/8" PLYWOOD EACH SIDE, BACKER ROD AND SEALANT AT PERIMETER, PAINT TO MATCH ADJACENT WALL, SEE JAMB DETAILS FOR STUD WIDTH. SEE DETAIL 7 / A60.01, SIMILAR, FOR JOINT AND SEALANT AROUND PERIMETER
F17	SURFACE MOUNTED ACCESS CONTROL SYSTEM BY OTHERS. PATCH AND PAINT ANY DISTURBANCES TO WALL AND CEILINGS RELATED TO THIS INSTALLATION, INCLUDING CONDUIT RUNS.
F18	PREP AND REINSTALL EXISTING SALVAGED TILE BASE



N

1 LEVEL 1 - FLOOR PLAN
1/8" = 1'-0"

2 WALL INTERSECTION DETAIL
1 1/2" = 1'-0"

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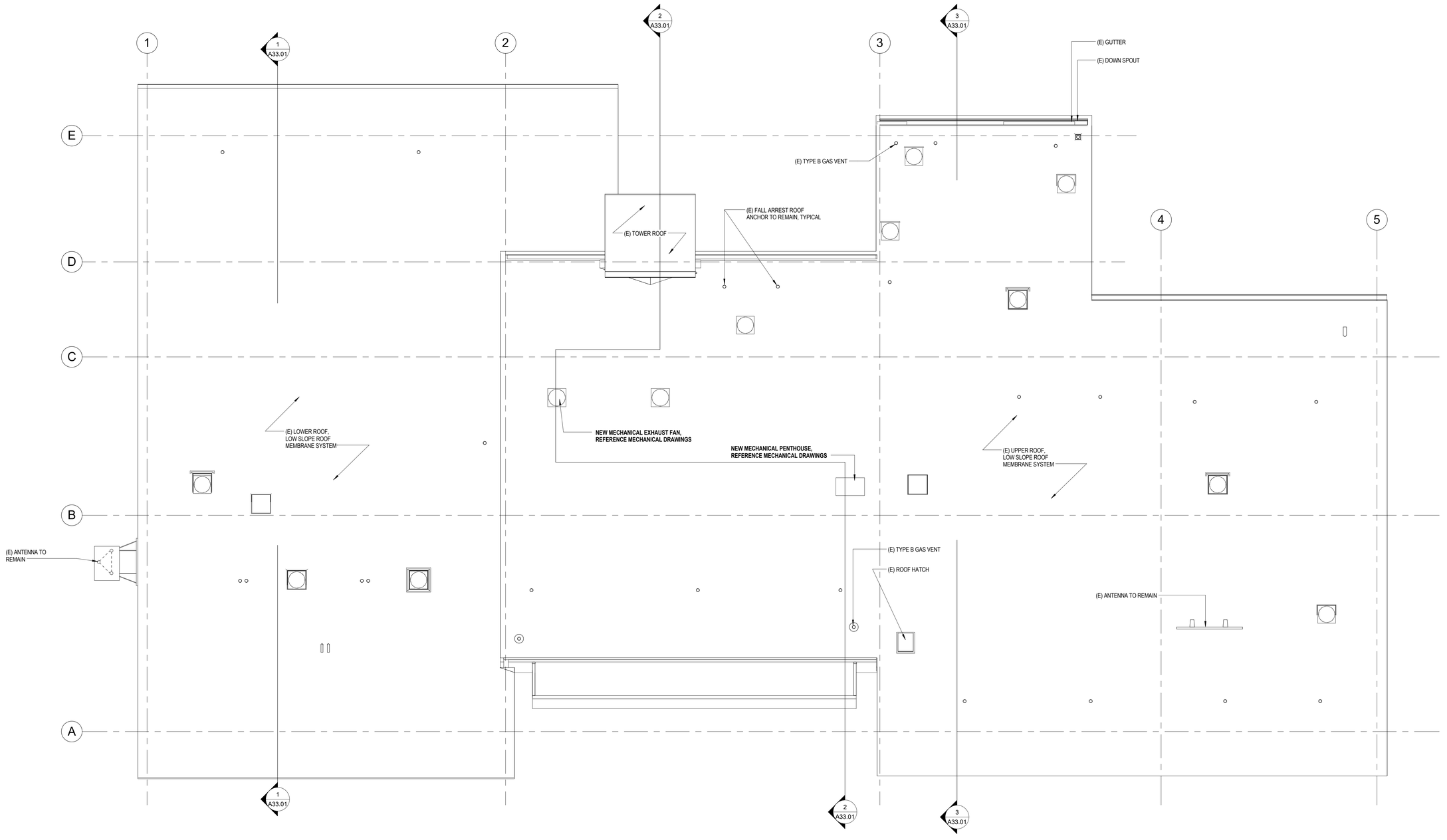
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REVISION SCHEDULE

FLOOR PLAN

SHEET:

A21.11



N

1 LEVEL ROOF PLAN -FACILITY IMPROVEMENT

1/8" = 1'-0"

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REVISION SCHEDULE

ROOF PLAN

SHEET:

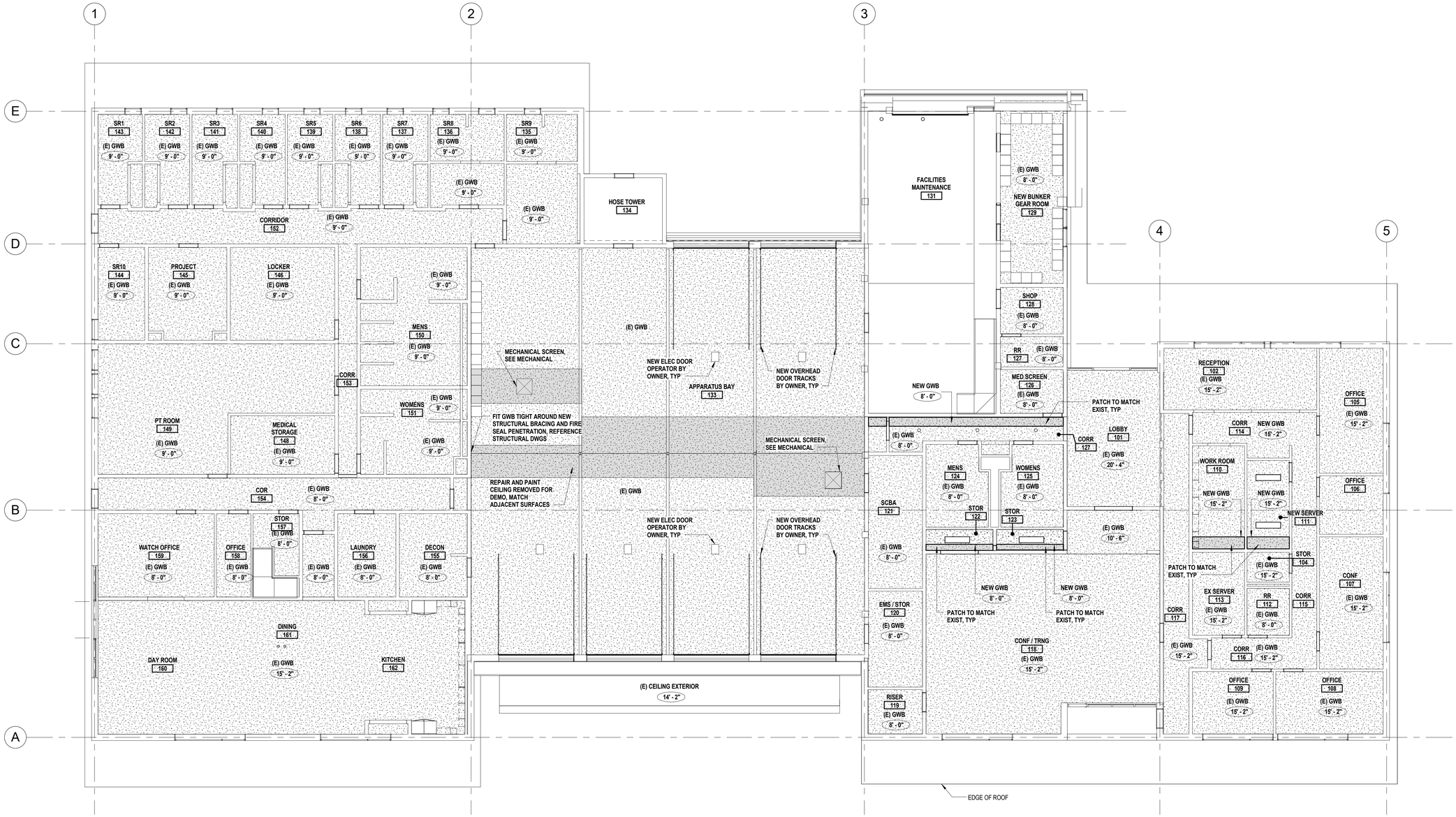
A21.13

GENERAL NOTES - RCP

- ARCHITECTURAL RCP PROVIDED FOR COORDINATION PURPOSES ONLY. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR DETAILED SCOPE OF SYSTEMS. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- REINSTALL ALL LIGHT FIXTURES AND CEILING MOUNTED EQUIPMENT AT EXISTING LOCATION IF REMOVED DURING DEMOLITION.

RCP LEGEND

- EXISTING GWB CEILING TO REMAIN
- EXISTING SUSPENDED ACOUSTICAL TILE CEILING TO REMAIN
- **DEMO EXISTING CEILING**
- **NEW GWB CEILING, PATCH TO MATCH EXIST FINISH**
- **LIGHT FIXTURE**



N

1 LEVEL 1 - REFLECTED CEILING PLAN

1/8" = 1'-0"

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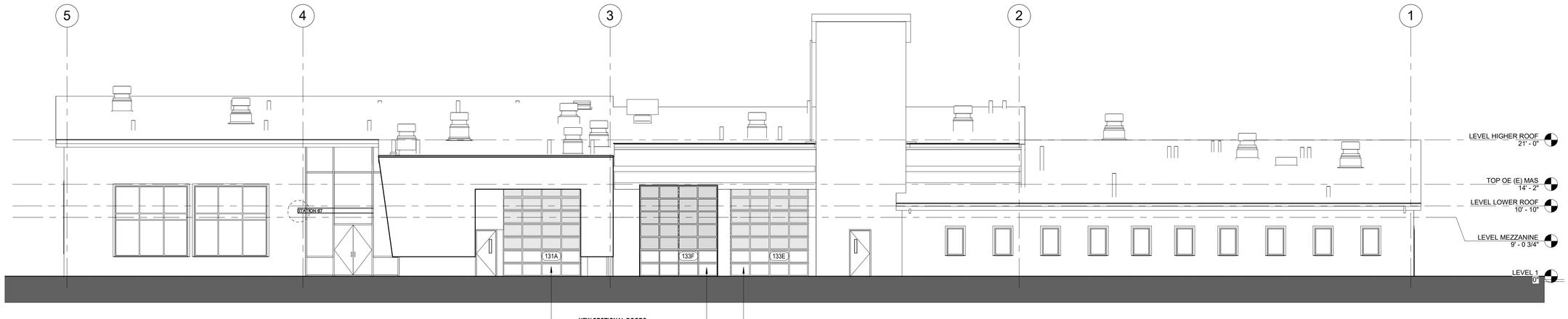
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REVISION SCHEDULE

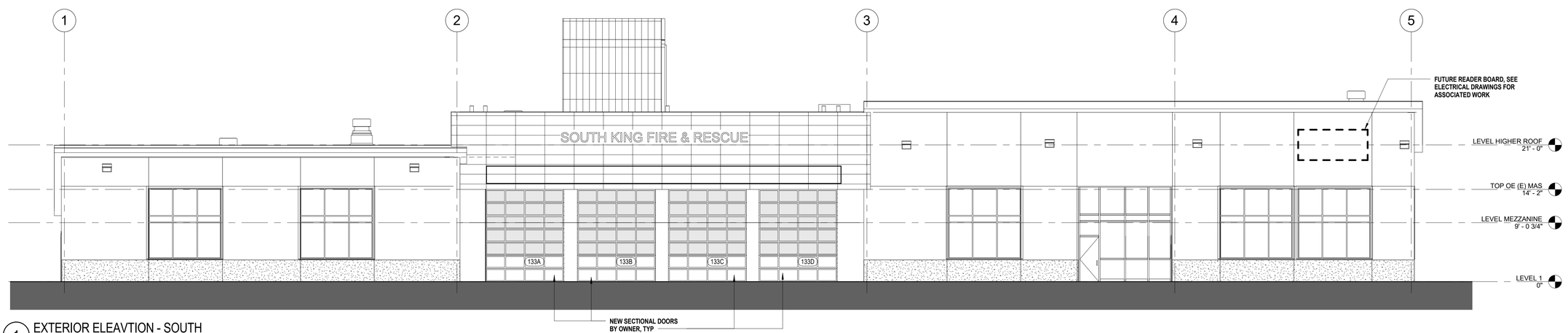
REFLECTED CEILING PLAN

SHEET:

A22.01



2 EXTERIOR ELEVATION - NORTH
1/8" = 1'-0"



1 EXTERIOR ELEAVTION - SOUTH
1/8" = 1'-0"

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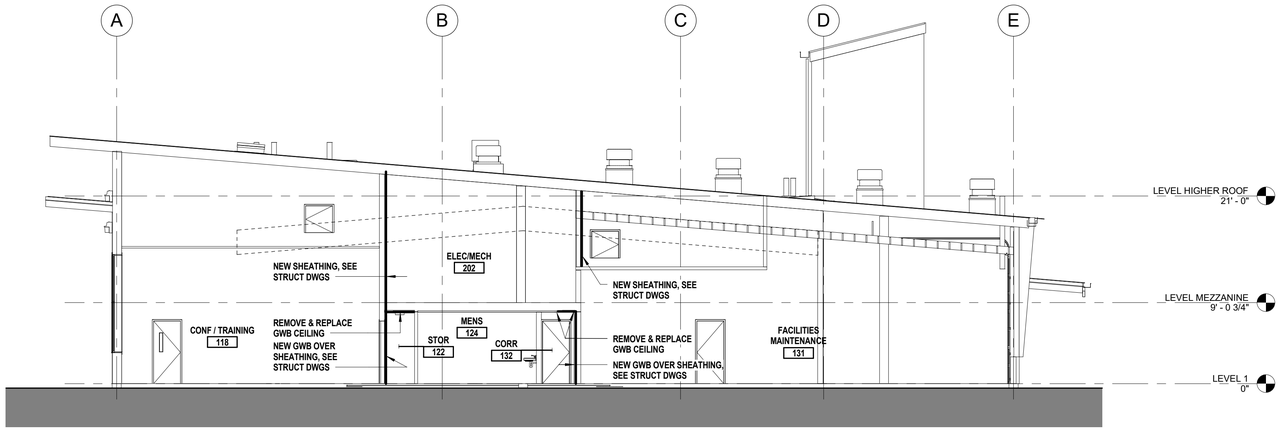
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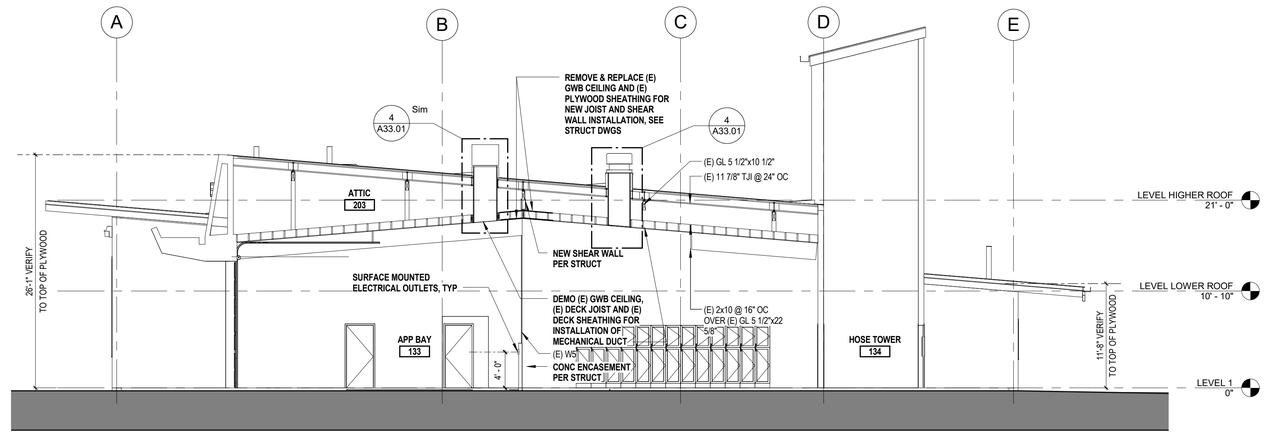
EXTERIOR ELEVATIONS

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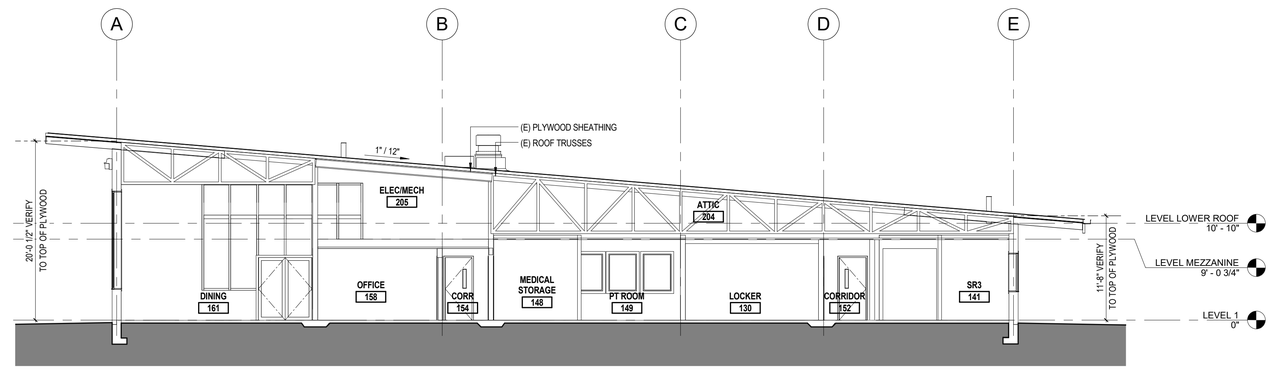
A31.01



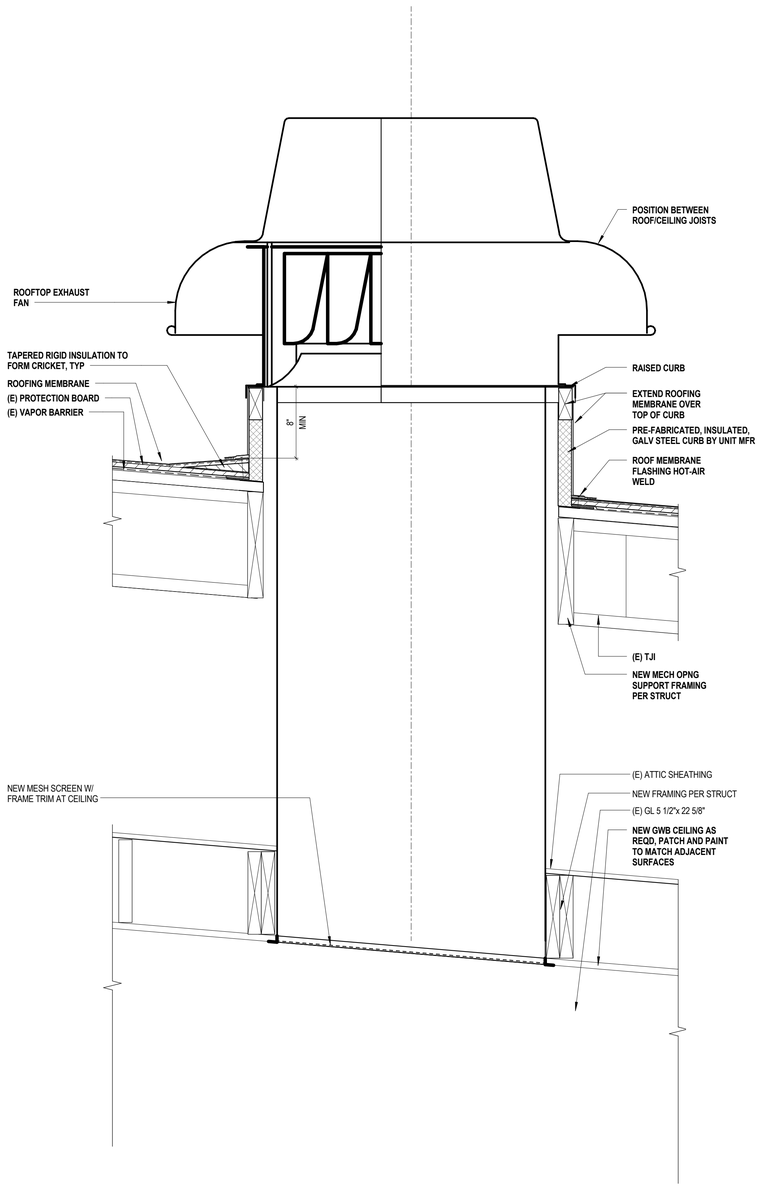
3 CROSS SECTION - MEZZANINE
1/8" = 1'-0"



2 CROSS SECTION - BETWEEN GRID 2 AND GRID 3
1/8" = 1'-0"



1 CROSS SECTION - BETWEEN GRID 1 & GRID 2
1/8" = 1'-0"



4 SECTION DETAIL - MECH CURB
1 1/2" = 1'-0"

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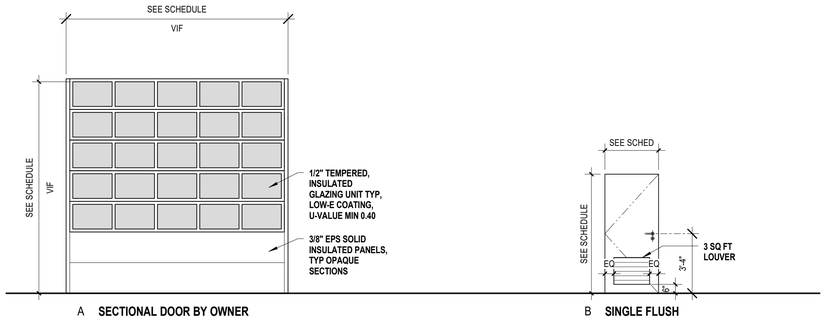
BUILDING SECTIONS AND DETAIL

SHEET:

A33.01

DOOR SCHEDULE

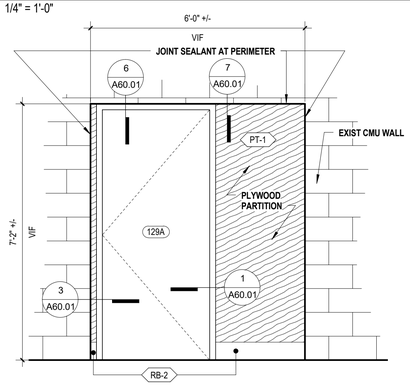
DOOR #	ROOM NUMBER	ROOM NAME	DOOR INFORMATION TYPE	MATERIAL	FINISH	GLAZING	HEIGHT	WIDTH	THICKNESS	FRAME INFORMATION TYPE	MATERIAL	FINISH	FIRE RATING	HARDWARE GROUP	POWER REQUIRED	COMMENTS
129A	129	NEW BUNKER GEAR ROOM	B	HM	PAINT	NA	7' - 0"	3' - 0"	1 3/4"	1	MTL	PAINT	NA	1	No	MATCH EXIST OPENING HEIGHT, VIF
131A	131	FACILITIES MAINTENANCE	A	ALUM/GLAZING	ANODIZED	TEMPERED, INSULATED GLAZING	14' - 2"	12' - 0"	1 3/4"	EXISTING	EXISTING	EXISTING	NA	NA	Yes	BY OWNER, EXISTING OPENING
133A	133	APP BAY	A	ALUM/GLAZING	ANODIZED	TEMPERED, INSULATED GLAZING	14' - 2"	12' - 0"	1 3/4"	EXISTING	EXISTING	EXISTING	NA	NA	Yes	BY OWNER, EXISTING OPENING
133B	133	APP BAY	A	ALUM/GLAZING	ANODIZED	TEMPERED, INSULATED GLAZING	14' - 2"	12' - 0"	1 3/4"	EXISTING	EXISTING	EXISTING	NA	NA	Yes	BY OWNER, EXISTING OPENING
133C	133	APP BAY	A	ALUM/GLAZING	ANODIZED	TEMPERED, INSULATED GLAZING	14' - 2"	12' - 0"	1 3/4"	EXISTING	EXISTING	EXISTING	NA	NA	Yes	BY OWNER, EXISTING OPENING
133D	133	APP BAY	A	ALUM/GLAZING	ANODIZED	TEMPERED, INSULATED GLAZING	14' - 2"	12' - 0"	1 3/4"	EXISTING	EXISTING	EXISTING	NA	NA	Yes	BY OWNER, EXISTING OPENING
133E	133	APP BAY	A	ALUM/GLAZING	ANODIZED	TEMPERED, INSULATED GLAZING	14' - 2"	12' - 0"	1 3/4"	EXISTING	EXISTING	EXISTING	NA	NA	Yes	BY OWNER, EXISTING OPENING
133F	133	APP BAY	A	ALUM/GLAZING	ANODIZED	TEMPERED, INSULATED GLAZING	14' - 2"	12' - 0"	1 3/4"	EXISTING	EXISTING	EXISTING	NA	NA	Yes	BY OWNER, EXISTING OPENING



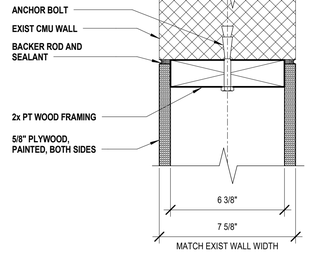
A **SECTIONAL DOOR BY OWNER**

B **SINGLE FLUSH**

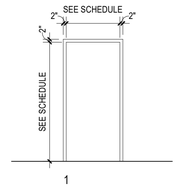
5 DOOR TYPES
1/4" = 1'-0"



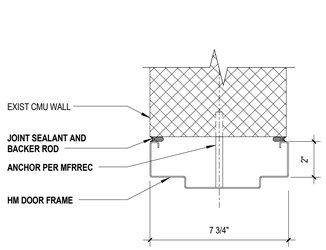
4 INTERIOR ELEVATION - PLYWOOD INFILL
1/2" = 1'-0"



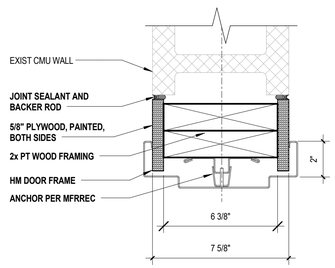
7 DETAIL - TYPICAL PLYWOOD PARTITION INFILL
3" = 1'-0"



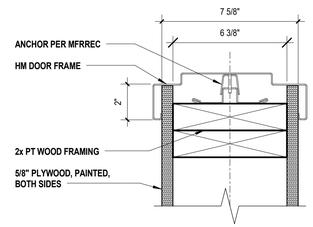
2 DOOR FRAME TYPES
1/4" = 1'-0"



6 INTERIOR DOOR HEAD DETAIL
3" = 1'-0"



3 INTERIOR DOOR JAMB DETAIL
3" = 1'-0"



1 INTERIOR DOOR JAMB DETAIL
3" = 1'-0"

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REVISION SCHEDULE

DOOR SCHEDULE AND DETAILS

SHEET:

A60.01

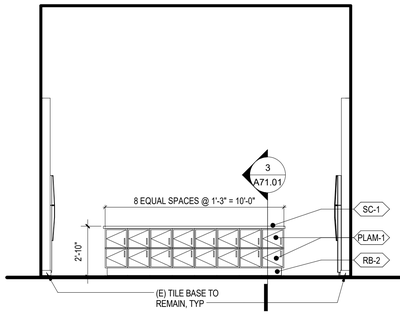
KEY NOTES - ENLARGED KITCHEN PLAN

#	NOTE DESCRIPTION
F05	INSTALL NEW SIMULATED STONE COUNTERTOP AND BACKSPLASH, AND PLASTIC LAMINATE CLAD CASEWORK. NO BACKSPLASH AT ISLAND CASEWORK
F09	PATCH PORTIONS OF WALL WITH 5/8" TYPE X GWB, PATCH AND PAINT VISIBLE AREAS TO MATCH ADJACENT WALL

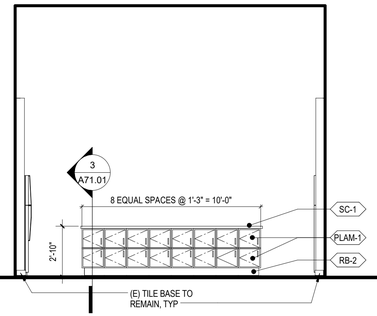
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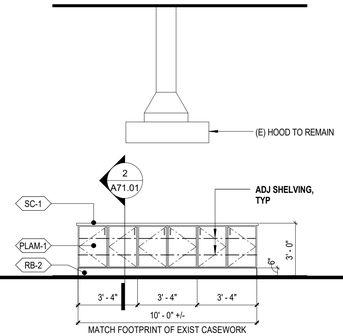
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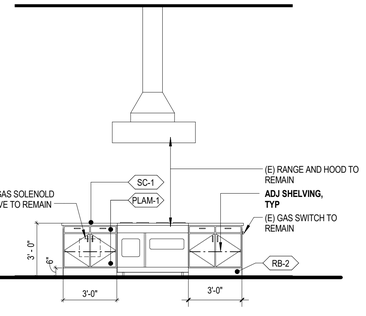
8 ELEVATION - FOOD STORAGE
1/4" = 1'-0"



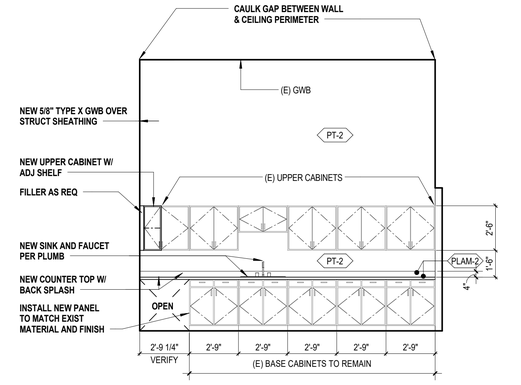
7 DINING - EAST ELEVATION
1/4" = 1'-0"



6 ISLAND - EAST ELEVATION
1/4" = 1'-0"



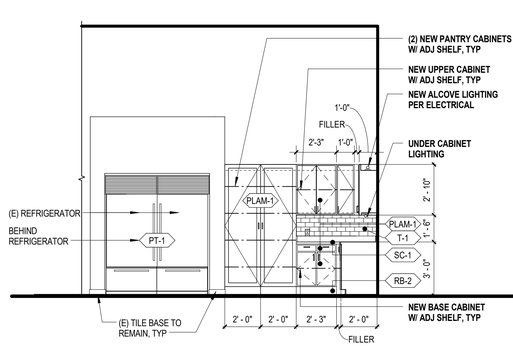
5 ISLAND WEST ELEVATION
1/4" = 1'-0"



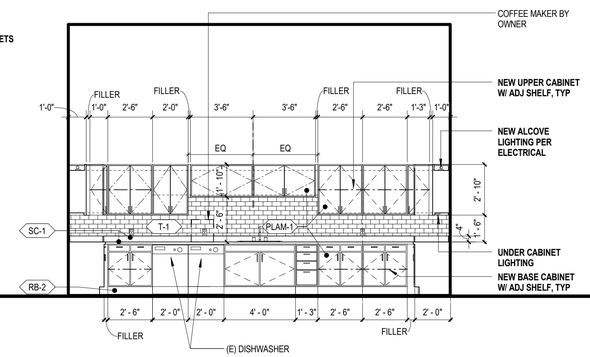
9 WORK ROOM - WEST ELEVATION
1/4" = 1'-0"

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

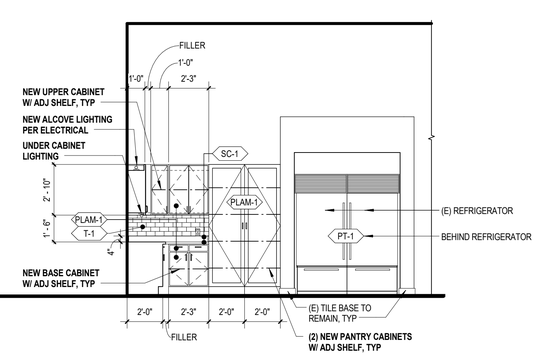
FIRE STATION 67
2238 S 223rd STREET
DES MOINES, WASHINGTON



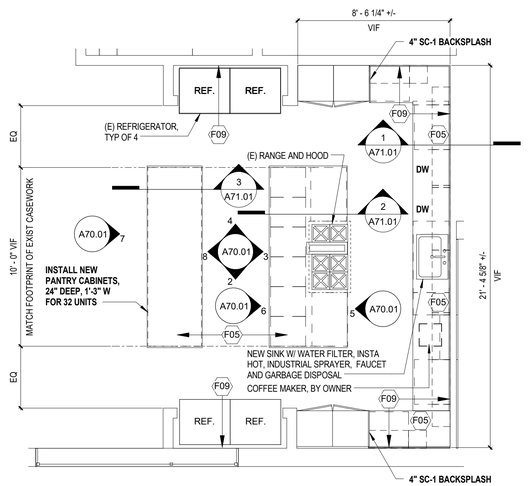
4 KITCHEN - NORTH ELEVATION
1/4" = 1'-0"



3 KITCHEN - EAST ELEVATION
1/4" = 1'-0"



2 KITCHEN - SOUTH ELEVATION
1/4" = 1'-0"



1 ENLARGED KITCHEN PLAN
1/4" = 1'-0"

PROJECT # 2015137

BID SET

ISSUED: NOVEMBER 22, 2016

REVISION SCHEDULE

INTERIOR ELEVATIONS

SHEET:

A70.01

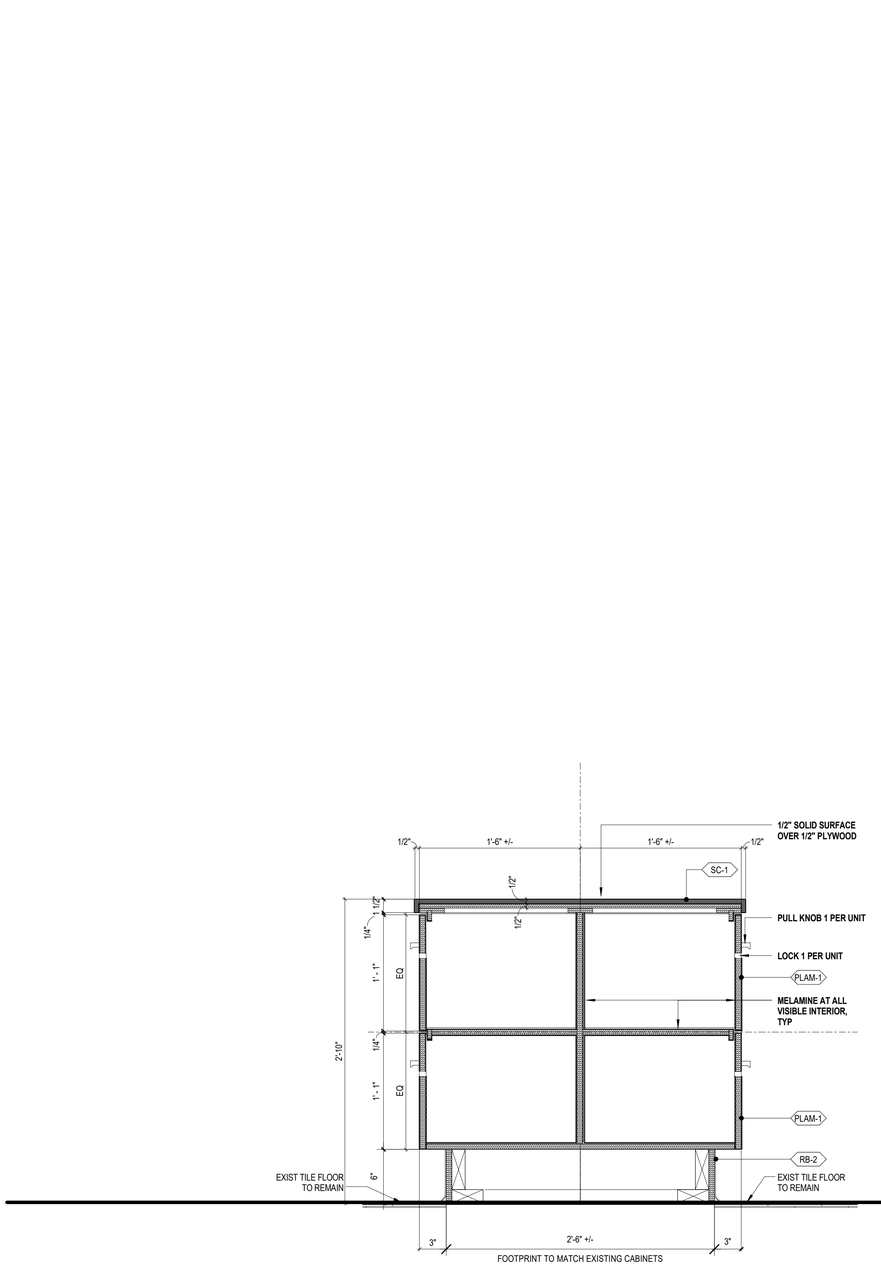
FINISH SCHEDULE

ROOM INFORMATION		FINISH INFORMATION, TYP. U.N.O.							
		WALL							
NUMBER	NAME	NORTH	EAST	SOUTH	WEST	BASE	FLOOR	CEILING	COMMENTS
110	WORK ROOM	PT-2	PT-2	PT-2	PT-2	RB-1	RSF-1	-	
111	SERVER 1	PT-2	PT-2	PT-2	PT-2	RB-1	-	PT-1	
113	SERVER 2	PT-2	PT-2	PT-2	PT-2	RB-1	-	PT-1	
122	STOR			PT-1		RB-1	-	PT-1	
123	STOR			PT-1		RB-1	-	PT-1	
129	NEW BUNKER GEAR ROOM					RB-1	-	PT-1	BASE: SEE DRAWINGS; PT-1 WALL PAINT LOCATIONS: SEE DRAWINGS
132	CORR	PT-1				-	-	PT-1	BASE: SEE DRAWINGS
133	APP BAY					-	-	PT-1	PT-1 WALL PAINT LOCATIONS: SEE DRAWINGS; SEE DRAWINGS FOR CEILING PAINT LOCATION
162	KITCHEN					EXIST / RB-2	-	-	PT-1 WALL PAINT LOCATIONS: SEE DRAWINGS

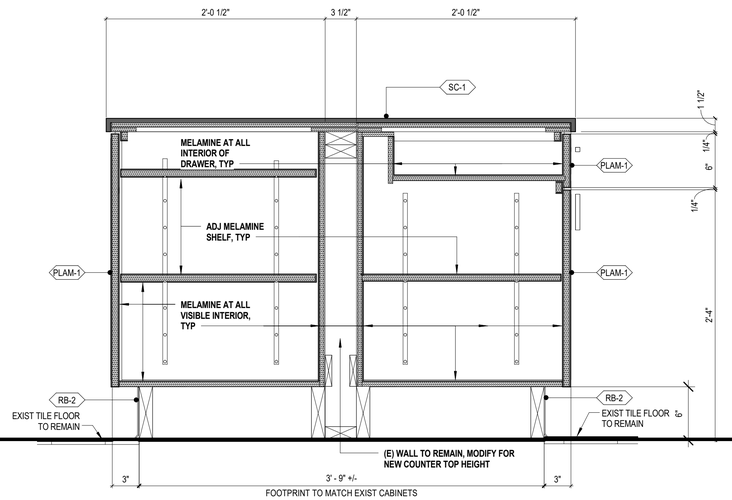
FINISH LEGEND

TAG	MATERIAL	NOTES
FLOOR		
RB-1	4" RUBBER BASE	TYPICAL WALL
RB-2	6" RUBBER BASE	TYPICAL BASE CABINET
RSF-1	RESILIENT SHEET FLOORING	-
WALL		
PT-1	PAINT	SEE SPECIFICATION
PT-2	PAINT	SEE SPECIFICATION
T-1	TILE	BACK SPLASH
CASEWORK		
PLAM-1	PLASTIC LAMINATE	TYPICAL BASE CABINET AND UPPER CABINET EXTERIOR FINISH
PLAM-2	PLASTIC LAMINATE	COUNTERTOP
SC-1	SOLID SURFACE COUNTER TOP	TYPICAL KITCHEN COUNTER TOP AND BACK SPLASH

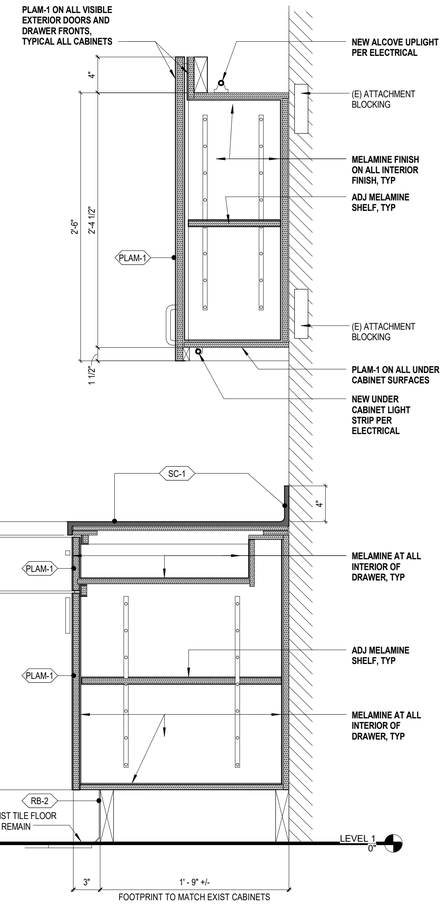
NOTE: SEE SPECIFICATIONS FOR COLORS, MANUFACTURER, AND PRODUCT INFORMATION.



3 FOOD STORAGE - SECTION
1 1/2" = 1'-0"



2 DETAIL - ISLAND SECTION
1 1/2" = 1'-0"



1 TYP SECTION - KITCHEN CABINETS
1 1/2" = 1'-0"

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DAVID A. FERGUS
STATE OF WASHINGTON

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 67
2238 S 223rd STREET
DES MOINES, WASHINGTON

PROJECT # 2015137

BID SET

ISSUED: NOVEMBER 22, 2016

REVISION SCHEDULE

INTERIOR DETAILS AND FINISH INFORMATION

SHEET:

A71.01

ABBREVIATIONS

&	AND
@	AT
AB	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
ADJ	ADJACENT, ADJUSTABLE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
ALT	ALTERNATE
ANCH	ANCHOR
APA	AMERICAN PLYWOOD ASSOCIATION
APPROX	APPROXIMATE
AR	ANCHOR ROD
ARCH	ARCHITECT, ARCHITECTURAL
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
B/	BOTTOM OF
BAL	BALANCE
BC	BOTTOM CHORD
BF	BRACED FRAME
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BOF	BOTTOM OF FOOTING
BOT	BOTTOM
BP, B PL	BASE PLATE
BRG	BEARING
BTWN	BETWEEN
BU	BUILT-UP
C	CAMBER, CHANNEL
CA	CONCRETE (EXPANSION) ANCHOR
CANTIL	CANTILEVER
CAP	CAPACITY
CC	CENTER-TO-CENTER
CDF	CONTROL DENSITY FILL
CG	CENTER OF GRAVITY
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT, CONSTRUCTION JOINT

CJP, CP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUE, CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CRSI	CONCRETE REINFORCED STEEL INSTITUTE
CTR	CENTER, CENTERED
CU YD	CUBIC YARD
d	PENNYWEIGHT (NAILS)
DB	DIVIDER BEAM, DROPPED BEAM
D-B	DESIGN-BUILD
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DEG, °	DEGREE
DEMO	DEMOLISH, DEMOLITION
DET	DETAIL
DF	DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DIAPH	DIAPHRAGM
DICA	DRILLED-IN CONCRETE ANCHOR
DIM	DIMENSION
DIST	DISTANCE
DL	DEAD LOAD
DN	DOWN
DO	DITTO
DP	DEEP
DS	DRAG STRUT
DWG	DRAWING
DWL	DOWEL
(E) EXIST	EXISTING
EA	EACH, EPOXY (ADHESIVE) ANCHOR
EE	EACH END
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR

EMBED	EMBEDMENT
ENGR	ENGINEER
EQ	EARTHQUAKE, EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
ETC	ET CETERA
E-W	EAST-WEST
EW	EACH WAY
EXP	EXPANSION
EXT	EXTERIOR
EXT GR	EXTERIOR GRADE
FD	FLOOR DRAIN
FDN	FOUNDATION
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
FF	FAIR FACE, FINISH FLOOR
FIN	FINISH
FLR	FLOOR
FLG	FLANGE
FS	FAR SIDE
FT, '	FEET
FTG	FOOTING
GA	GAGE, GAUGE
GALV	GALVANIZED
GB, GR BM	GRADE BEAM
GEN	GENERAL
GL, GLU LAM	GLUE LAMINATED WOOD
GLB	GLUE LAMINATED BEAM
GRD	GIRDER
GRND	GROUND
HDR	HEADER
HGR	HANGER
HK	HOOK
HD	HOLD DOWN
HORIZ	HORIZONTAL
HPT	HIGH POINT
HSB	HIGH STRENGTH BOLT
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER

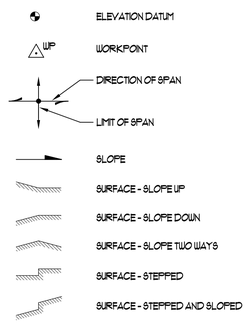
IF	INSIDE FACE
IN, "	INCH
INCL	INCLUDE
INFO	INFORMATION
INT	INTERIOR
IJ	ISOLATION JOINT
JST	JOIST
JT	JOINT
K	KIP (1,000 LB)
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
L	LENGTH, ANGLE
LB, #	POUND
LEV	LEVEL
LF	LINEAL FOOT
LL	LIVE LOAD
LLBB	LONG LEGS BACK TO BACK
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION LOCATE
LONGIT	LONGITUDINAL
LPT	LOW POINT
LSH	LONG SLOTTED HOLE
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MECH	MECHANICAL
MF	MOMENT FRAME
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MPH	MILES PER HOUR
MTL	METAL
NF	NEAR FACE
NIC	NOT IN CONTRACT
NLG	NAILING
NOM	NOMINAL
NO, #	NUMBER
N-S	NORTH-SOUTH
NS	NEAR SIDE
NTS	NOT TO SCALE

OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
OSH	OVERSIZED HOLE
OWJ	OPEN WEB JOIST
PA	POWDER ACTUATED
PCC	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOOT
PEN	PENETRATION
PERP	PERPENDICULAR
PL	PLATE, PROPERTY LINE
PLCS	PLACES
PLF	POUNDS PER LINEAR FOOT
PLWD	PLYWOOD
PNL	PANEL
PP, PJP	PARTIAL JOINT PENETRATION
PRCST	PRECAST
PREFAB	PREFABRICATED
PS	PRESTRESSED CONCRETE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	POINT, PRESSURE TREATED
P-T	POST-TENSIONED
PVC	POLYVINYL CHLORIDE
R, RAD	RADIUS
RD	ROOF DRAIN
REBAR	REINFORCING STEEL BARS
REF	REFERENCE
REINF	REINFORCING
REM	REMAINDER
REQD	REQUIRED
RTN	RETURN
SCHED	SCHEDULE
SECT	SECTION
SHT	SHEET
SHTHG	SHEATHING
SIM	SIMILAR
SJI	STEEL JOIST INSTITUTE
SOG	SLAB ON GRADE
SPC	SPACE, SPACED, SPACING

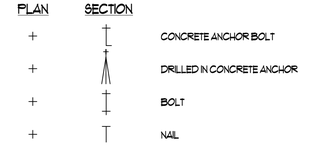
SPEC	SPECIFICATION
SQ	SQUARE
SST	STAINLESS STEEL
SSH	SHORT SLOTTED HOLE
STAG	STAGGER, STAGGERED
STD	STANDARD
STIF	STIFFENER
STIR	STIRRUP
STL	STEEL
STRUCT	STRUCTURAL
SPRT	SUPPORT
SW	SHEAR WALL
SWS	SHEAR WALL SCHEDULE
SYMM	SYMMETRICAL, SYMMETRY
T/	TOP OF
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TC	TOP CHORD
TBD	TO BE DETERMINED
TEMP	TEMPERATURE
THK	THICK, THICKNESS
THP	TENDON HIGH POINT
THRU	THROUGH
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOS	TOP OF STEEL
TOW	TOP OF WALL
TR	THREADED ROD
TRANS	TRANSVERSE
TYP	TYPICAL
TWS	THREADED WELDED STUD
UBC	UNIFORM BUILDING CODE
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W	WIDTH, WIDE FLANGE
W/	WITH
WD	WOOD
WHS	WELDED HEADED STUD
WJ	WOOD I-JOIST
W/O	WITHOUT
WP	WORK POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC

SYMBOLS

GENERAL SYMBOLS



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11/18/16

SOUTH KING FIRE & RESCUE
FACILITY IMPROVEMENTS
FIRE STATION 67
2238 223rd STREET
DES MOINES, WASHINGTON

PROJECT # 262016.018

BID SET

ISSUED: NOVEMBER 22, 2016

REVISION SCHEDULE

ABBREVIATIONS AND SYMBOLS

SHEET:

S00.01

GENERAL STRUCTURAL NOTES

GENERAL

ALL TYPICAL DETAILS AND NOTES SHOWN ON THESE DRAWINGS ARE PART OF THE CONSTRUCTION CONTRACT AND SHALL BE PROVIDED BY THE CONTRACTOR. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS, BUT SHALL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS.

CODES

THE EXISTING STRUCTURE DOES NOT CONFORM TO PRESENT EARTHQUAKE CODE REQUIREMENTS FOR NEW BUILDINGS. THE STRENGTHENING WORK SHOWN IS A VOLUNTARY SEISMIC UPGRADE TO SEISMICALLY REINFORCE THE EXISTING BUILDING IN ACCORDANCE WITH THE INTERNATIONAL EXISTING BUILDING CODE (IEBC), AS ALLOWED BY SECTION 101.4.7 OF THE INTERNATIONAL BUILDING CODE (IBC), 2015 EDITION, AND IS WITHIN THE CURRENT PRACTICE FOR THE RENOVATION OF EXISTING BUILDINGS OF THIS AGE AND TYPE OF CONSTRUCTION.

STANDARDS: REFERENCE TO ASTM AND OTHER STANDARDS SHALL MEAN THE LATEST EDITION IN EFFECT ON THE BID DATE, UNLESS NOTED IN THESE DOCUMENTS OR DESIGNATED BY THE GOVERNING CODE.

CRITERIA

EARTHQUAKE DESIGN DATA:

EXISTING SEISMIC-FORCE-RESISTING SYSTEM: PLYWOOD SHEATHED SHEAR WALLS AND DIAPHRAGMS

ANALYSIS PROCEDURE: LINEAR STATIC PROCEDURE (LSP)

PSEUDO SEISMIC BASE SHEAR: VBSE-IE (N-S) = 748 KIPS
(ASCE 41-13 SECTION 7.4.1.3.1) VBSE-2E (N-S) = 1501 KIPS

SEISMIC RESPONSE COEFFICIENT: CI C2 CM SA-IE = 0.76
(ASCE 41 SECTION 7.4.1.3.1) CI C2 CM SA-2E = 1.52

SITE CLASS = D (ASCE 41-13 SECTION 2.4.1.6.2)

SS-IE	= 0.49 (ASCE 41-13 SECTION 2.4.1.4)
S1-IE	= 0.18 (ASCE 41-13 SECTION 2.4.1.4)
SXS-IE	= 0.63 (ASCE 41-13 SECTION 2.4.1.6)
SX1-IE	= 0.38 (ASCE 41-13 SECTION 2.4.1.6)
SS-2E	= 0.99 (ASCE 41-13 SECTION 2.4.1.3)
S1-2E	= 0.38 (ASCE 41-13 SECTION 2.4.1.3)
SXS-2E	= 1.09 (ASCE 41-13 SECTION 2.4.1.6)
SX1-2E	= 0.62 (ASCE 41-13 SECTION 2.4.1.6)

LEVEL OF SEISMICITY = HIGH (ASCE 41-13 SECTION 2.5)

ASCE 41-13 PERFORMANCE OBJECTIVE FOR
STRENGTHENED AND NEW STRUCTURAL ELEMENTS = IMMEDIATE OCCUPANCY AT BSE-IE

GEOTECHNICAL

ALLOWABLE SOIL PRESSURE LATERAL EARTH PRESURE AND SOIL PROFILE TYPE ARE ASSUMED AND THEREFORE MUST BE VERIFIED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER OR INSPECTOR. IF SOILS ARE FOUND TO BE OTHER THAN ASSUMED OR FOUND TO BE EXPANSIVE, NOTIFY THE ARCHITECT OR STRUCTURAL ENGINEER FOR POSSIBLE REDESIGN.

FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED EARTH OR CONTROLLED, COMPACTED STRUCTURAL FILL AT LEAST 18" BELOW LOWEST ADJACENT EXTERIOR FINISHED GRADE. FOOTING DEPTHS AND ELEVATIONS SHOWN ON DRAWINGS ARE MINIMUM AND FOR GUIDANCE ONLY. CONTRACTOR SHALL ESTABLISH ACTUAL ELEVATIONS IN FIELD. BACKFILL BEHIND ALL WALLS WITH FREE DRAINING, GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE IN AN APPROVED MANNER.

SOIL PROFILE TYPE	SITE CLASS "D"
ALLOWABLE VERTICAL DESIGN PRESSURE	2500 PSF
LATERAL EARTH PRESSURE, LEVEL BACKFILL:	
UNRESTRAINED (ACTIVE)	35 PCF
RESTRAINED (AT-REST)	55 PCF

SUBMITTALS

SHOP DRAWINGS: SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION OR CONSTRUCTION OF THESE ITEMS:

STRUCTURAL STEEL

CONTRACTOR SHALL REVIEW AND STAMP SUBMITTALS PRIOR TO SUBMISSION. DIMENSIONS AND QUANTITIES ARE CONTRACTOR'S RESPONSIBILITY AND WILL NOT BE REVIEWED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS PLACED PRIOR TO RECEIPT OF REVIEWED SHOP DRAWINGS. CONTRACTOR SHALL ALLOW A MINIMUM OF 10 WORKING DAYS FOR REVIEW.

SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

DEFERRED SUBMITTALS: DRAWINGS AND CALCULATIONS FOR BIDDER-DESIGNED COMPONENTS, SEALED BY THE WASHINGTON STATE REGISTERED PROFESSIONAL STRUCTURAL ENGINEER RESPONSIBLE FOR THE DESIGN, SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. DEFERRED SUBMITTALS INCLUDE:

SEISMIC BRACING AND ANCHORAGE OF MECHANICAL EQUIPMENT PER NOTES BELOW

SUBMITTALS OF BIDDER-DESIGNED COMPONENTS SHALL INCLUDE LOCATIONS, MAGNITUDES, AND DIRECTIONS OF ALL FORCES TRANSFERRED TO THE STRUCTURE. CALCULATIONS SUBMITTED FOR BIDDER-DESIGNED COMPONENTS ARE FOR INFORMATION ONLY AND WILL NOT BE REVIEWED.

SEISMIC BRACING AND ANCHORAGE OF MECHANICAL UNITS AND OTHER MECHANICAL AND ELECTRICAL FIXTURES NOT SPECIFICALLY SHOWN ON THE PROJECT DRAWINGS SHALL BE DESIGNED BY A REGISTERED STRUCTURAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED. THE MECHANICAL AND ELECTRICAL CONTRACTORS MUST RETAIN THE SERVICES OF A STRUCTURAL ENGINEER AND IS RESPONSIBLE FOR ALL COSTS RELATED TO THE PURCHASE AND INSTALLATION OF SEISMIC BRACING AND ANCHORAGE OF THEIR SYSTEMS.

SPECIAL INSPECTION: PER IBC SECTION 1704, SHALL BE PERFORMED BY AN AGENCY APPROVED BY THE BUILDING OFFICIAL AND AS OUTLINED IN THE STRUCTURAL INSPECTION SCHEDULE, SHEET S-003.

STRUCTURAL OBSERVATION: SHALL BE PERFORMED PER IBC SECTION 1704.

EXISTING CONDITIONS: CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED. EXISTING CONDITIONS SHOWN ON DRAWINGS ARE BASED EITHER ON SITE OBSERVATIONS, ORIGINAL DRAWINGS, OR WERE ASSUMED BASED ON EXPECTED CONDITIONS. IF EXISTING CONDITIONS DO NOT CLOSELY MATCH CONDITIONS SHOWN ON DRAWINGS, OR IF EXISTING MATERIALS ARE OF QUESTIONABLE OR SUBSTANDARD QUALITY, NOTIFY ENGINEER PRIOR TO COMMENCING ANY WORK.

CONTRACTOR-INITIATED CHANGES: SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT FOR APPROVAL AT LEAST 10 WORKING DAYS PRIOR TO FABRICATION AND CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS OR SUBMITTALS ONLY WILL NOT SATISFY THIS REQUIREMENT.

CONTRACTOR RESPONSIBILITIES: DRAWINGS REPRESENT DESIGN OF STRUCTURE IN COMPLETED FORM. CONTRACTOR SHALL BE RESPONSIBLE FOR METHODS, SEQUENCES, AND SAFETY PRECAUTIONS REQUIRED TO PERFORM WORK.

CONTRACTOR SHALL DESIGN AND PROVIDE TEMPORARY SHORING AND BRACING OF ALL STRUCTURAL MEMBERS, EXISTING CONSTRUCTION, AND SOIL EXCAVATION AS REQUIRED. SHORING AND BRACING SHALL NOT BE REMOVED UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS, AND MATERIALS HAVE ACHIEVED DESIGN STRENGTH.

DISCREPANCIES: IN CASE OF DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS, REFERENCE STANDARDS, OR GOVERNING CODE, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN. CONTRACTOR SHALL NOTIFY THE ENGINEER OF DISCREPANCIES AND OBTAIN DIRECTION PRIOR TO PROCEEDING. NOTES ON INDIVIDUAL NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE DRAWINGS.

SPECIFICATIONS: REFER TO SPECIFICATIONS FOR INFORMATION IN ADDITION TO THESE NOTES AND DRAWINGS.

ARCHITECTURAL: REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS, SLOPES, DEPRESSIONS, NON-BEARING WALLS, FASCIA, ELEVATORS, STAIRS, CURBS, DRAINS, RAILINGS, WATERPROOFING, FINISHES, ETC.

RENOVATION

CONTRACTOR SHALL CHECK FOR DRY ROT AT ALL EXTERIOR WALLS, EXISTING TOILET ROOM FLOORS AND WALLS, AREAS SHOWING WATER STAINS, AND ALL WOOD MEMBERS IN BASEMENT AND CRAWL SPACES. ALL ROT SHALL BE REMOVED AND DAMAGED MEMBERS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE ENGINEER

DEMOLITION: CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. EXISTING REINFORCING SHALL BE SAVED WHERE POSSIBLE AND AS NOTED ON DRAWINGS. SAW-CUTTING, IF AND WHERE USED, SHALL NOT CUT EXISTING REINFORCING THAT IS TO BE SAVED. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. CONSTRUCTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING FLOOR SYSTEMS SHALL BE LIMITED TO 40 PSF.

1. ALL NEW OPENINGS THROUGH EXISTING CONCRETE OR MASONRY WALLS, SLABS, AND BEAMS SHALL BE ACCOMPLISHED BY SAWCUTTING WHEREVER POSSIBLE. ALL NEW OPENINGS SHALL BE SAWCUT NEAT AND CLEAN; NO OVERCUTTING AT OPENING CORNERS SHALL BE ALLOWED, UNLESS NOTED OTHERWISE. AS REQUIRED, CORE DRILL CORNERS AND CHIP, GRIND, OR CUT THE CORNERS TO PROVIDE REQUIRED DIMENSIONS
2. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND LOCATION OF MEMBERS PRIOR TO CUTTING ANY OPENINGS.
3. SMALL ROUND OPENINGS SHALL BE ACCOMPLISHED BY CORE DRILLING.

CONCRETE

REFERENCE STANDARDS: CONCRETE SHALL CONFORM TO ALL REQUIREMENTS OF THE FOLLOWING DOCUMENTS, EXCEPT AS MODIFIED BELOW:

ACI 308	"STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE"
ACI 318	"BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
ACI 304	"GUIDE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE"
ACI 311	"GUIDE FOR CONCRETE INSPECTION"
ACI SP-15 *	"FIELD REFERENCE MANUAL"

* A COPY SHALL BE KEPT IN THE CONTRACTOR'S FIELD OFFICE AT ALL TIMES.

MATERIALS:

CEMENT	ASTM C150, C595
* AGGREGATES	ASTM C33
ADMIXTURES	ASTM C260, C494, C101
** FLY ASH	ASTM C618, CLASS F OR C

* AGGREGATES THAT EXHIBIT DELETERIOUS ACTIVITY WHEN EVALUATED IN ACCORDANCE WITH ASTM C33 APPENDIX XI SHALL NOT BE USED. SAND EQUIVALENT FOR FINE AGGREGATE SHALL NOT EXCEED 75.

** MAXIMUM LOSS ON IGNITION SHALL BE 1%.

CONCRETE SHALL BE PROPORTIONED TO ACHIEVE A WORKABLE MIX THAT CAN BE PLACED WITHOUT SEGREGATION OR EXCESS FREE SURFACE WATER. MIX DESIGNS SHALL BE SUBMITTED (TO THE ARCHITECT) FOR REVIEW BY ENGINEER PRIOR TO USE. COMPLY WITH IBC SECTION 1904. MIXES SHALL MEET OR EXCEED THE FOLLOWING CRITERIA:

TYPE OF CONSTRUCTION	SPECIFIED COMPRESSIVE STRENGTH (f'c)	TEST AGE	MAXIMUM WATER / CEMENT RATIO	EXPOSURE CLASS (ACI 318-14 TABLES 19.3.1.1 & 19.3.2.1)
CONCRETE EXPOSED TO WEATHER	4,500 PSI	28 DAYS	0.5	F1, S0, P0, C1
CONCRETE EXPOSED TO EARTH	4,000 PSI	28 DAYS	0.4**	F0, S0, P0, C1
ALL OTHER CONCRETE (UNLESS SPECIFIED BELOW)	4,000 PSI	28 DAYS	**	F0, S0, P0, C0

** WATER-CEMENTITIOUS MATERIAL RATIO FOR INTERIOR SLABS SHALL BE 0.4 UNLESS OTHERWISE NOTED.

ADMIXTURES: ALL CONCRETE, INCLUDING SLABS ON GRADE, SHALL HAVE A WATER-REDUCING ADMIXTURE COMPLYING WITH ASTM C494 ADDED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. CALCIUM CHLORIDE OR OTHER CHLORIDE ADMIXTURES SHALL NOT BE USED.

ALL HORIZONTAL SURFACES EXPOSED TO WEATHER SHALL CONTAIN AN AIR-ENTRAINING AGENT COMPLYING WITH ASTM C260. THE AMOUNT OF ENTRAINED AIR SHALL BE IN ACCORDANCE WITH TABLE 1 OF ASTM C94 FOR MODERATE EXPOSURE. TESTS FOR AIR CONTENT SHALL BE MADE AT THE DISCHARGE END OF THE TRUCKS PLACING HOSE IN ACCORDANCE WITH ASTM C173.

WATER/CEMENT RATIO: SHALL BE MEASURED BY WEIGHT AND BE BASED ON TOTAL CEMENTITIOUS MATERIAL, INCLUDING CEMENT AND POZZOLANS SUCH AS FLY ASH AND SILICA FUME.

MAXIMUM AGGREGATE SIZE: SHALL BE 3/4", BUT NOT MORE THAN 3/4 TIMES THE CLEAR DISTANCE BETWEEN REINFORCING BARS NOR 1/5 TIMES THE NARROWEST DIMENSION BETWEEN SIDES OF FORMS. MAXIMUM AGGREGATE SIZE FOR SLABS ON GRADE SHALL BE 1/3 TIMES THE SLAB THICKNESS.

SLUMP: REQUIRED FOR PROPER PLACEMENT SHALL BE DETERMINED BY CONTRACTOR AND SUPPLIER, AND INCLUDED IN MIX DESIGN SUBMITTALS. FIELD MEASURED SLUMP SHALL CONFORM TO SUBMITTED CONCRETE MIX DESIGN. SLUMP SHALL CONFORM TO ASTM C94.

EMBEDDED ITEMS: CONDUIT AND SLEEVES SHALL NOT BE EMBEDDED IN OR PASS THROUGH CONCRETE WITHOUT APPROVAL. ALUMINUM ITEMS SHALL NOT BE EMBEDDED IN CONCRETE. SUBMIT CONDUIT LAYOUT AND EMBEDDED ITEM PLANS TO THE ARCHITECT FOR REVIEW BY ENGINEER PRIOR TO PLACING CONCRETE.

BONDING AGENT: SHALL BE "CONCRESIVE 1080 LIQUID" BASF, OR APPROVED EQUAL, AND SHALL BE USED WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE. PLACE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, INCLUDING PREPARATION OF EXISTING SURFACES.

NON-SHRINK GROUT: SHALL BE "CONSTRUCTION GROUT" BY BASF, OR APPROVED EQUAL, AND SHALL BE MIXED AND PLACED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (3,000 PSI MINIMUM).

COORDINATION: SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE CONSTRUCTION. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT EXPOSED CONCRETE SURFACES.

CONCRETE REINFORCEMENT

REFERENCE STANDARDS: CONCRETE REINFORCEMENT SHALL CONFORM TO ALL REQUIREMENTS OF THE FOLLOWING CODES, SPECIFICATIONS, AND STANDARDS, EXCEPT AS MODIFIED BELOW:

ACI 301	"STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE"
ACI SP-66	"ACI DETAILING MANUAL"
ACI 318	"BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
CRSI	"PLACING REINFORCING BARS"
CRSI	"MANUAL OF STANDARD PRACTICE" MSP-1
WRI	"WELDED WIRE FABRIC MANUAL OF STANDARD PRACTICE"

MATERIALS:

DEFORMED BARS	ASTM A615, GRADE 60
SMOOTH WELDED WIRE	ASTM A185, Fy=56 KSI (W1.2) & 65 KSI (W1.2)
DEFORMED BAR ANCHORS	ASTM A496, 75 KSI YIELD
BAR SUPPORTS	CONFORM TO CHAPTER 3, CRSI MSP-1
WELDED HEADED STUDS	ASTM A108

REINFORCEMENT: SHALL BE PLACED AND SUPPORTED IN ACCORDANCE WITH CRSI MSP-1. REINFORCEMENT SHALL BE DETAILED IN ACCORDANCE WITH ACI SP-66. NO BENDING OR STRAIGHTENING OF REINFORCEMENT WILL BE PERMITTED AFTER PARTIAL EMBEDMENT IN CONCRETE.

LAP: ALL CONTINUOUS REINFORCEMENT (#5 AND SMALLER) 40 BAR DIAMETERS OR 2'-0" MINIMUM UNLESS OTHERWISE NOTED. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS (#5 AND SMALLER) 40 BAR DIAMETERS OR 2'-0" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 318-08, CLASS B. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 1 CROSS WIRE SPACING + 2" OR 8" WHICHEVER IS GREATER.

CONCRETE COVER: UNLESS NOTED OTHERWISE, MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE:

SLABS ON GRADE	2" BOTTOM
INTERIOR WALL FACES	3/4" (#11 AND SMALLER) 1 1/2" (#14 AND #18)
EXPOSED FORMED WALL FACES	1 1/2" (#5 AND SMALLER) 2" (#6 AND LARGER)
FOOTINGS	3" (EXCEPT 2" TOP AND FORMED SIDES)
BEAMS, COLUMNS	1 1/2" (ALL REINFORCEMENT INCLUDING TIES, SPIRALS, STIRRUPS)

CONCRETE ANCHORAGE

POST-INSTALLED ANCHORS INTO NORMAL-WEIGHT CONCRETE SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND NOTED ICC-ES REPORTS. SUBSTITUTES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW BY ENGINEER WITH ICC-ES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. ANCHORS SHALL BE THE FOLLOWING TYPES:

EXPANSION ANCHORS SHALL BE HILTI "KWIK BOLT TZ" (ESR-1917) OR SIMPSON STRONG BOLT (ESR-1771) OR POWERS "POWER STUD+ SD2".

ADHESIVE ANCHORS SHALL BE HILTI HIT-RE 500-V3 (ESR-3814) OR SIMPSON SET-XP (ESR-2508) OR POWERS FIS(OO)+ (ESR-2583).

SCREW ANCHORS INTO CONCRETE SHALL BE SIMPSON TITEN HD (ESR-2713) OR POWERS SNAKE+ (ESR-2272).

DRIVE PINS AND OTHER POWDER-ACTUATED FASTENERS SHALL BE ITW RAMSET/RED HEAD (ESR-1799).

NO REINFORCING BARS SHALL BE CUT TO INSTALL ANCHORS. ALL DEFECTIVE ANCHOR HOLES SHALL BE GROUTED WITH EPOXY ADHESIVE AND A NEW HOLE DRILLED A MINIMUM OF 3 BOLT DIAMETERS AWAY.

STEEL

REFERENCE STANDARDS: STRUCTURAL STEEL SHALL CONFORM TO ALL REQUIREMENTS OF THE FOLLOWING DOCUMENTS:

AISC 360	"SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"
AISC 341	"SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS"
AISC 303	"CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"
AWS D1.1	"STRUCTURAL WELDING CODE - STEEL"
AISC 348	"SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS"
AISC 358	"PREQUALIFIED CONNECTIONS FOR SPECIAL AND INTERMEDIATE STEEL MOMENT FRAMES FOR SEISMIC APPLICATIONS"

STRUCTURAL STEEL, INCLUDING PLATES, ANGLES, CHANNELS, AND RODS, SHALL CONFORM TO ASTM A36, Fy = 36 KSI, WIDE FLANGE AND WT STEEL SHAPES SHALL CONFORM TO ASTM A992, Fy = 50 KSI. STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B, Fy = 35 KSI. STRUCTURAL TUBING (HSS) SHALL CONFORM TO ASTM A500, GRADE B, Fy = 46 KSI. ANCHOR BOLTS AND CONNECTION BOLTS SHALL CONFORM TO ASTM A307.

WELDING: ALL WELDS SHALL COMPLY WITH AWS D1.1. WELDS SHALL BE MADE USING LOW HYDROGEN E70XX ELECTRODES. ONLY AWS PREQUALIFIED WELDED JOINTS SHALL BE USED. SHOP DRAWINGS SHALL SHOW ALL WELDING WITH AWS A2.4 STANDARD SYMBOLS. WELDS SHOWN ON DRAWINGS ARE MINIMUM SIZES. INCREASE WELD SIZE TO AWS MINIMUM SIZES BASED ON PLATE THICKNESS. WELDS NOT SPECIFIED SHALL BE CONTINUOUS 3/16" FILLET WELDS.

WELDS SHOWN ON DRAWINGS ARE FOR FINAL CONNECTIONS. UNLESS FIELD WELD SYMBOLS ARE SHOWN, CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING IF A WELD SHOULD BE SHOP OR FIELD WELDED IN ORDER TO FACILITATE STEEL ERECTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL JOINT PREPARATIONS AND WELDING PROCEDURES, INCLUDING ROOT OPENINGS AND FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, TAPERS, AND SURFACE ROUGHNESS.

WELDER CERTIFICATION: AWS OR WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO).

COLD-FORMED STEEL FRAMING: SHALL COMPLY WITH ASTM A653, TYPE SS, GRADE 33, UNLESS NOTED OTHERWISE. FOR SIZES SHOWN ON DRAWINGS, REFER TO ICC-ES ER-4943 DESIGNATIONS. ALL STUDS, TRACKS, AND JOISTS SHALL BE GALVANIZED PER ASTM A924, G60. FASTENINGS NOT SHOWN ON DRAWINGS SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

MASONRY ANCHORAGE

POST-INSTALLED MASONRY ANCHORS INTO SOLID GROUTED MASONRY SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND NOTED ICC-ES REPORTS. SUBSTITUTES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW BY ENGINEER WITH ICC-ES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. ANCHORS SHALL BE THE FOLLOWING TYPES:

EXPANSION ANCHORS SHALL BE SIMPSON WEDGE-ALL (ESR-1396) OR HILTI KWIK BOLTS (ICC-ESR 1385).

ADHESIVE ANCHORS SHALL BE SIMPSON SET (ESR-1772) OR HILTI HY-150 (ESR-2678).

WOOD

REFERENCE STANDARDS: WOOD SHALL CONFORM TO ALL REQUIREMENTS OF THE FOLLOWING DOCUMENTS:

AITC	"TIMBER CONSTRUCTION MANUAL"
NDS	"NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION"
AF AND PA SDPWS	"SUPPLEMENT SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC"
AITC A190.1	"STRUCTURAL GLUED LAMINATED TIMBER"
AITC A171	"STANDARD SPECIFICATIONS FOR STRUCTURAL GLUED LAMINATED TIMBER OF SOFTWOOD SPECIES"
TPI 1	"NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION"

PLYWOOD & ORIENTED STRAND BOARD (OSB): WOOD STRUCTURAL PANELS SHALL CONFORM TO REQUIREMENTS OF US DEPARTMENT OF COMMERCE PS-1 OR PS-2, EACH PANEL SHALL BEAR THE AMERICAN PLYWOOD ASSOCIATION (APA) GRADE MARK. SEE DRAWINGS FOR GRADE, GLUE TYPE AND THICKNESS.

SHEATHING: UNLESS NOTED OTHERWISE, ROOF AND FLOOR PANELS SHALL BE INSTALLED WITH LONG DIMENSION PERPENDICULAR TO SUPPORTS AND CONTINUOUS OVER 2 OR MORE SPANS. PLACE NAILS 3/8" FROM PANEL ENDS AND EDGES.

SAWN LUMBER: SAWN LUMBER SHALL BE IDENTIFIED BY THE GRADE MARK OF A LUMBER GRADING OR INSPECTION AGENCY APPROVED BY AN ACCREDITATION BODY COMPLYING WITH US DEPARTMENT OF COMMERCE PS20. SAWN LUMBER SPECIES AND GRADES SHALL BE AS FOLLOWS:

USE	SIZE	SPECIES	GRADE
WALL STUDS	2x 3x	DOUG-FIR	#3 OR STUD
SILL PLATES	2x 3x	DOUG-FIR	#3 OR STUD
JOISTS	2x	DOUG-FIR	#2
JOISTS	3x 4x	DOUG-FIR	#2
BEAMS / POSTS	4x	DOUG-FIR	#1
BEAMS / POSTS	6x	DOUG-FIR	#1

GLUE LAMINATED MEMBERS (GLULAMS) SHALL BE MANUFACTURED IN CONFORMANCE WITH AITC 117 AND ASTM D3737. EACH MEMBER SHALL BEAR AN AITC OR APA IDENTIFICATION MARK AND BE ACCOMPANIED BY AN AITC CERTIFICATE OF CONFORMANCE. GLULAMS SHALL BE INDUSTRIAL GRADE WITH STRENGTH GRADES AS NOTED BELOW:

SIMPLE SPAN BEAMS:	24F-V4 (Fb = 2400 PSI, Fv=240 PSI, E = 1800 KSI)
CONTINUOUS BEAMS:	24F-V8 (Fb = 2400 PSI, Fv=240 PSI, E = 1800 KSI)
COLUMNS:	DOUGLAS FIR COMBINATION 1-DF-L3
(2 LAMINATIONS)	Fc = 1200 PSI, Fcxy = 1000 PSI, Fcxx = 1250 PSI, E = 1500 KSI
(3 LAMINATIONS)	Fc = 1200 PSI, Fcxy = 1250 PSI, Fcxx = 1250 PSI, E = 1800 KSI
(4 OR MORE LAMINATIONS)	Fc = 1550 PSI, Fcxy = 1450 PSI, Fcxx = 1500 PSI, E = 1500 KSI

GLUED LAMINATED MEMBERS EXPOSED TO WEATHER OR MOISTURE SHALL BE TREATED WITH A NON-CORROSIVE, APPROVED PRESERVATIVE.

PREFABRICATED WOOD I-JOISTS: DESIGN SHOWN ON DRAWINGS IS BASED ON JOISTS MANUFACTURED BY WEYERHAEUSER IN ACCORDANCE WITH ICC-ES ESR-1153. SUBSTITUTES SHALL BE SUBMITTED WITH A CURRENT ICC-ES OR IAPMO EVALUATION REPORT AND AN ITEMIZED SUBSTITUTION LIST FOR APPROVAL. JOISTS SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS. ALL NECESSARY ACCESSORIES, SUCH AS BRIDGING, BLOCKING AND STIFFENERS, SHALL BE FURNISHED BY THE MANUFACTURER. PERMANENT AND TEMPORARY BRIDGING SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH ENGINEERED WOOD I-JOISTS PROVIDED.

ALL I-JOIST HANGERS SHALL BE "HU" SERIES, UNLESS OTHERWISE NOTED.

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STATE OF WASHINGTON · 43107 · REGISTERED PROFESSIONAL ENGINEER

11/18/16

SOUTH KING FIRE & RESCUE
FACILITY IMPROVEMENTS
FIRE STATION 67
2238 223rd STREET
DES MOINES, WASHINGTON

PROJECT # 262016.018

BID SET

ISSUED: NOVEMBER 22, 2016

REVISION SCHEDULE

GENERAL NOTES

SHEET:

S00.02

GENERAL STRUCTURAL NOTES

STRUCTURAL COMPOSITE LUMBER: DESIGN SHOWN ON DRAWINGS IS BASED ON LUMBER MANUFACTURED BY WEYERHAEUSER IN ACCORDANCE WITH ICC-ES ESR-1387. SUBSTITUTES SHALL BE SUBMITTED WITH A CURRENT ICC-ES EVALUATION REPORT AND AN ITEMIZED SUBSTITUTION LIST FOR APPROVAL.

BEAMS: LAMINATED STRAND LUMBER (LSL)
Fb = 2250 PSI, E = 1500 KSI, Fv = 400 PSI (DEPTH > 9 1/2")
Fb = 1700 PSI, E = 1300 KSI, Fv = 400 PSI (DEPTH < 9 1/2")

LAMINATED VENEER LUMBER (LVL)
Fb = 2600 PSI, E = 1900 KSI, Fv = 285 PSI

PARALLEL STRAND LUMBER (PSL)
Fb = 2900 PSI, E = 2000 KSI, Fv = 290 PSI

RIM BOARD: LAMINATED STRAND LUMBER (LSL)
Fb = 1700 PSI, E = 1300 KSI, Fv = 400 PSI

STUDS: LAMINATED STRAND LUMBER (LSL)
Fb = 2250 PSI, E = 1500 KSI, Fv = 400 PSI, Fc = 1350 PSI (WIDTH > 7 1/4")
Fb = 1700 PSI, E = 1300 KSI, Fv = 400 PSI, Fc = 1400 PSI (WIDTH < 7 1/4")

POSTS: PARALLEL STRAND LUMBER (PSL)
Fb = 2400 PSI, E = 1800 KSI, Fv = 290 PSI, Fc = 2500 PSI

CONNECTORS: DESIGN SHOWN ON DRAWINGS IS BASED ON CONNECTORS MANUFACTURED BY SIMPSON STRONG-TIE IN ACCORDANCE WITH CATALOG C-C-2015. SUBSTITUTES SHALL BE SUBMITTED WITH A CURRENT ICC-ES EVALUATION REPORT AND AN ITEMIZED SUBSTITUTION LIST FOR APPROVAL. CONNECTORS SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS. ALL TIMBER JOISTS AND MULTIPLE JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "HU" SERIES JOIST HANGERS, UNLESS OTHERWISE NOTED.

ALL TIMBER CONNECTORS IN CONTACT WITH PRESSURE-TREATED WOOD THAT USES PRESERVATIVE CHEMICALS SHALL BE MANUFACTURED FROM ZMAX STEEL BY SIMPSON (G185 STEEL PER ASTM A653) OR TYPE 304 OR 316 STAINLESS STEEL. ALTERNATIVELY, CONNECTORS CAN BE POST HOT DIP GALVANIZED PER ASTM A123 OR MECHANICALLY GALVANIZED PER ASTM B695, CLASS 55 OR GREATER. STAINLESS STEEL FASTENERS SHALL BE USED WITH STAINLESS STEEL CONNECTORS, AND HOT DIP GALVANIZED FASTENERS PER ASTM A153 SHALL BE USED WITH GALVANIZED CONNECTORS.

NAILING: NOT SHOWN SHALL BE AS SHOWN IN IBC TABLE 2304.9.1. NAILS SHALL COMPLY WITH ASTM F1667. MINIMUM NAIL DIMENSIONS SHALL BE AS FOLLOWS:

SIZE	DIAMETER	LENGTH
SHTHG NAILS		
8d	0.131"	2 1/4"
10d	0.148"	2 1/2"
FRAMING NAILS		
10d	0.148"	3"
12d	0.148"	3 1/4"
16d	0.162"	3 1/2"

BOLTS SHALL CONFORM TO ASTM A307, LAG SCREWS SHALL CONFORM TO ASME B18.2.1. INSTALL WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. INSTALLATION OF LAG SCREWS SHALL CONFORM TO 2012 NDS SECTION 11.1.4, AND INSTALLATION OF BOLTS SHALL CONFORM TO 2012 NDS SECTION 11.1.3.

PRESERVATIVE TREATED WOOD: ALL WOOD MEMBERS EXPOSED TO WEATHER AND SPECIFIED AS "PT" ON THE DRAWINGS SHALL BE PRESERVATIVE-TREATED IN ACCORDANCE WITH AWPA U1. EACH MEMBER SHALL BE IDENTIFIED BY THE QUALITY MARK OF AN INSPECTION AGENCY LISTED BY THE AMERICAN LUMBER STANDARDS TREATED WOOD PROGRAM, AND COMPLYING WITH IBC SECTION 2303.1.8.1. FASTENERS IN PRESERVATIVE OR FIRE TREATED WOOD MEMBERS SHALL BE HOT DIPPED ZINC COATED GALVANIZED PER ASTM A153.

SEE GENERAL STRUCTURAL NOTE REGARDING CONNECTORS FOR MATERIAL REQUIREMENTS OF CONNECTORS AND FASTENERS IN CONTACT WITH PRESSURE-TREATED MEMBERS. INSTALL 2 LAYERS OF ASPHALT-IMPREGNATED BUILDING PAPER BETWEEN UNTREATED LEDGERS, BLOCKING, ETC., AND CONCRETE OR MASONRY.

GENERAL WOOD FRAMING NOTES: THE FOLLOWING APPLY UNLESS OTHERWISE NOTED ON THE DRAWINGS:

A. ALL WOOD FRAMING DETAILS SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE IBC. MINIMUM NAILING SHALL CONFORM TO IBC TABLE 2304.10.1 OR CURRENT ICC-ES REPORT NER-272, UNLESS OTHERWISE NOTED. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS.

B. WALL FRAMING: TWO STUDS MINIMUM SHALL BE INSTALLED AT THE ENDS OF ALL WALLS, UNLESS OTHERWISE NOTED. INSTALL SOLID BLOCKING FOR WOOD COLUMNS THROUGH FLOOR SPACES TO SUPPORTS BELOW.

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS AT 12"oc STAGGERED OR BOLTED TO CONCRETE WITH 5/8" DIAMETER ANCHOR BOLTS @ 4'-0"oc PER IBC SECTION 2308.3 (EMBED 7") UNLESS OTHERWISE NOTED. 3" x 3" x 0.229" PLATE WASHERS SHALL BE USED WITH ALL SILL PLATE ANCHOR BOLTS PER SDPWS SECTION 4.3.6.4.3. INDIVIDUAL MEMBERS OF BUILT-UP STUD POSTS SHALL BE NAILED TO EACH OTHER WITH 16d @ 12"oc STAGGERED.

C. FLOOR AND ROOF FRAMING: INSTALL DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS. INSTALL SOLID BLOCKING AT ALL BEARING POINTS. TOENAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH 16d @ 12"oc STAGGERED.

ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED AS SHOWN ON THE DRAWINGS. INSTALL APPROVED PANEL EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED TONGUE-AND- GROOVE JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d @ 12"oc. AT BLOCKED FLOOR AND ROOF DIAPHRAGMS, INSTALL FLAT 2x BLOCKING AT ALL UNFRAMED PANEL EDGES AND NAIL WITH EDGE NAILING SPECIFIED.

SPECIAL INSPECTION SCHEDULE

ITEM	CI	PI	REFERENCE STANDARD	IBC 2015 REFERENCE	REMARK
CONCRETE:					
POST-INSTALLED ANCHORS		X	ACI 318 SECTIONS 17.8.2 AND 17.8.2.4		PER EVALUATION REPORT
STEEL:					
STRUCTURAL STEEL MATERIALS			ASTM A6, A568, AS NOTED		ID MARKS, MFR CERT MILL TEST REPORTS
WELD FILLER MATERIALS			AISC 360 A3.5, AWS D1.1	1705.2.1	ID MARKS, MFR CERTIFICATION OF COMPLIANCE
WELDING:					
SINGLE PASS FILLET WELDS ≤ 5/16"		X	AISC 360, AISC 341, AWS D1.1	1705.2.1, 1705.12.1	
WOOD:					
FASTENERS, BOLTS, STRAPS, HOLDOWNS, ETC		X		1705.11, 1705.12.2	

INSPECTION SCHEDULE NOTES:

1. ITEMS MARKED WITH AN "X" INDICATE WHETHER THE INSPECTION IS CONTINUOUS OR PERIODIC AS DEFINED IN IBC SECTION 202 FOR ITEMS NOT MARKED WITH AN "X", COMPLY WITH IBC CHAPTER 17.
2. CI = CONTINUOUS INSPECTION.
3. PI = PERIODIC INSPECTION.
4. TESTING AND INSPECTION REPORTS SHALL BE SUBMITTED TO THE ARCHITECT, ENGINEER, BUILDING OFFICIAL, AND CONTRACTOR.

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11/18/16

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PROJECT # 262016.018

BID SET

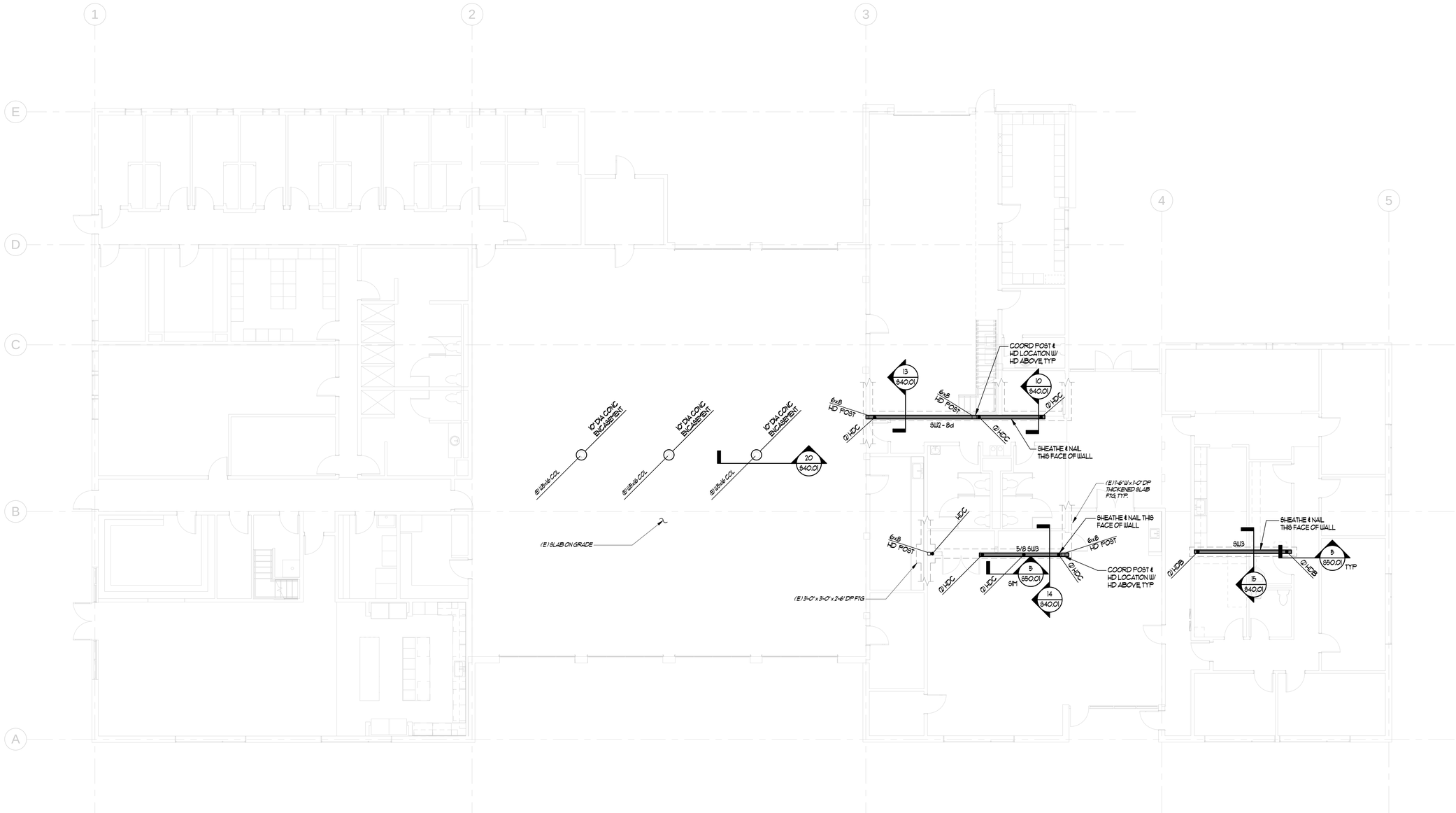
ISSUED: NOVEMBER 22, 2016

REVISION SCHEDULE

GENERAL NOTES AND SPECIAL INSPECTION SCHEDULE

SHEET:

S00.03



FOUNDATION AND FIRST FLOOR FRAMING PLAN

1/8" = 1'-0"

LEGEND

(SEE S00.01 FOR ABBREVIATIONS)

SWX — SHEAR WALL THIS LEVEL PER 20/S50.01

HDX — HOLDOWN PER SCHEDULE 19/S50.01
TYP HOLD DOWN BY SIMPSON STRONG-TIE WITH TR EMBEDDED INTO EXISTING SLAB

SHEET NOTE:

ALL DIMENSIONS, ELEVATION, AND LOCATIONS OF EXISTING STRUCTURAL COMPONENTS ARE BASED ON INFORMATION GATHERED FROM ORIGINAL DRAWINGS OR CURSORY FIELD MEASUREMENTS AND ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL FILED MEASURE AND VERIFY ALL CONDITIONS PRIOR TO COMMENCING ANY WORK. NOTIFY ENGINEER WHERE CONDITIONS VARY FROM THOSE SHOWN.

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11/18/16

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PROJECT # 262016.018

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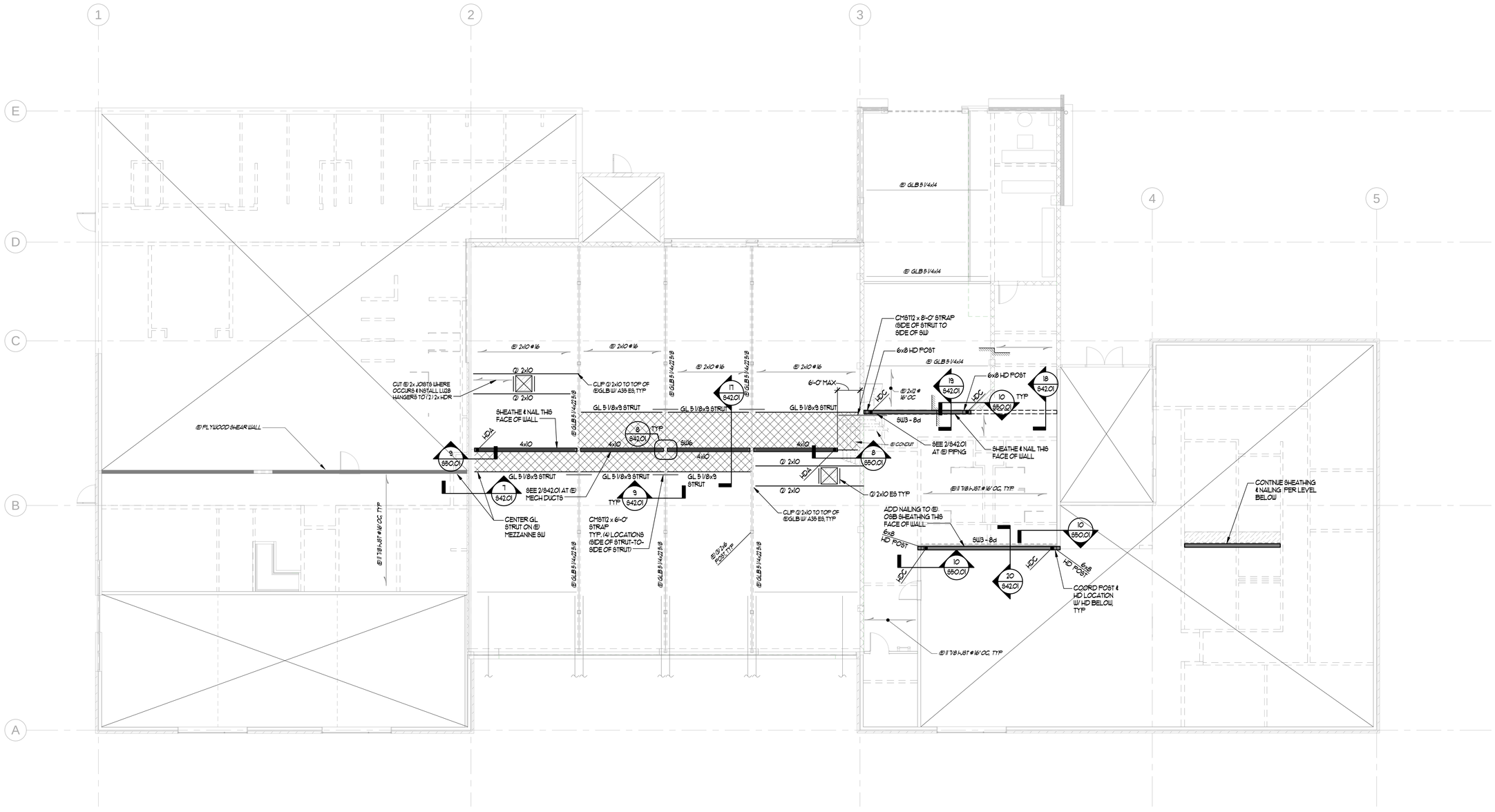
ISSUED: NOVEMBER 22, 2016

REVISION SCHEDULE

FOUNDATION AND FIRST FLOOR FRAMING PLAN

SHEET:

S21.11



PLAN NOTE:

1. NAIL SHEATHING IN HATCHED AREA WITH 10d @ 4" OC AT ALL PANEL EDGES AT INTERMEDIATE FRAMING. INSTALL 2x6 FLAT BLOCKING AT ALL UNFRAMED PANEL EDGES.

MEZZANINE FRAMING PLAN

1/8" = 1'-0"

LEGEND

(SEE S00.01 FOR ABBREVIATIONS)

- SW3 — SHEAR WALL THIS LEVEL PER 20/S50.01
- SPAN DIRECTION OF FRAMING MEMBERS
- BLOCKED DIAPHRAGM PER NOTE 1
- HDU4 — HOLDOWN PER SCHEDULE 13/S50.01 TYP HOLD DOWN BY SIMPSON STRONG-TIE WITH TR EMBEDDED INTO EXISTING SLAB

SHEET NOTE:

ALL DIMENSIONS, ELEVATION, AND LOCATIONS OF EXISTING STRUCTURAL COMPONENTS ARE BASED ON INFORMATION GATHERED FROM ORIGINAL DRAWINGS OR CURSORY FIELD MEASUREMENTS AND ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL FILED MEASURE AND VERIFY ALL CONDITIONS PRIOR TO COMMENCING ANY WORK. NOTIFY ENGINEER WHERE CONDITIONS VARY FROM THOSE SHOWN.

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CORRIE MICHAEL KNAPP — STATE OF WASHINGTON — 43107 — REGISTERED PROFESSIONAL ENGINEER
11/18/16

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 67
2238 223rd STREET
DES MOINES, WASHINGTON

PROJECT # 262016.018

BID SET

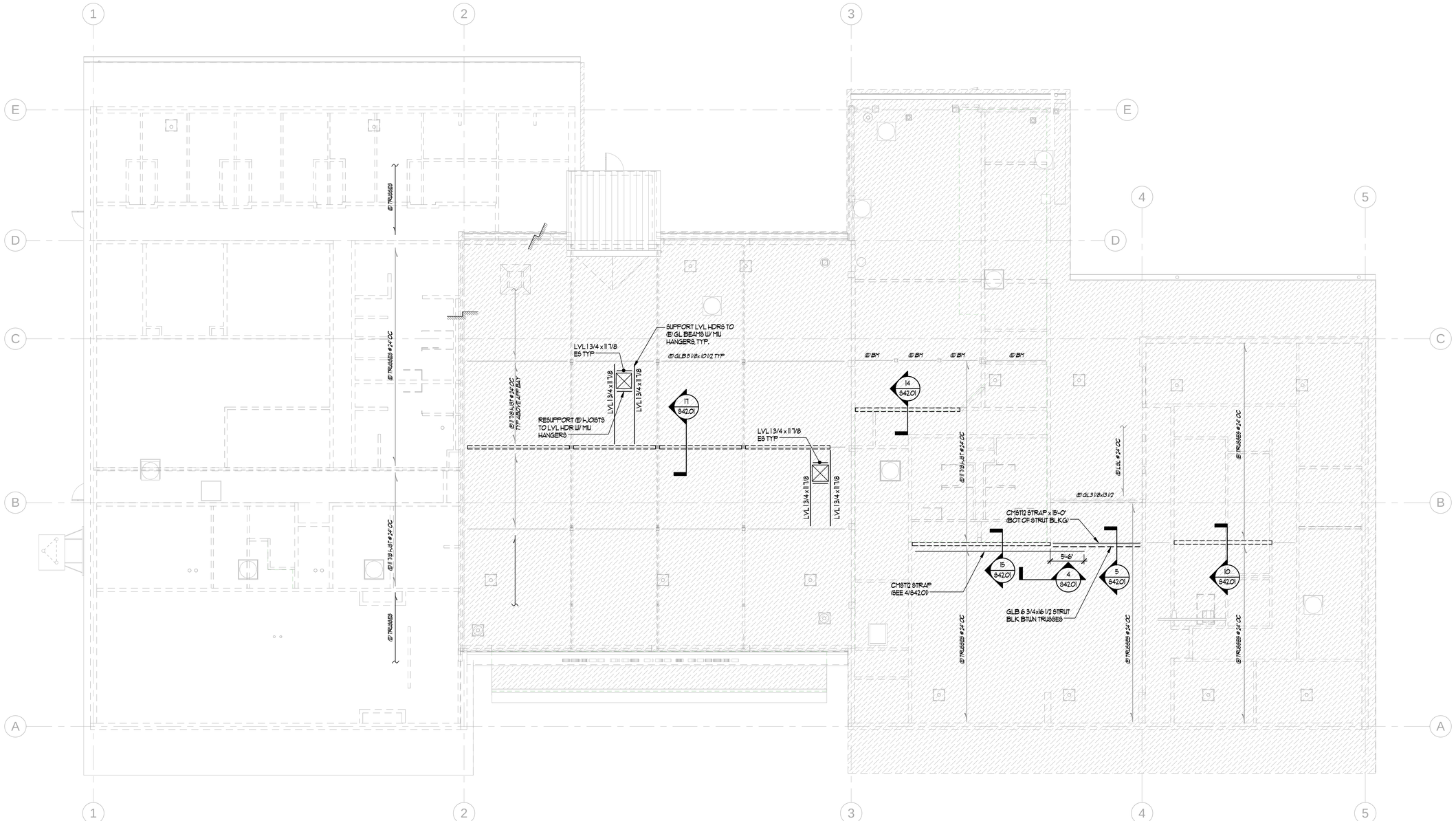
ISSUED: NOVEMBER 22, 2016

REVISION SCHEDULE

MEZZANINE FRAMING PLAN

SHEET:

S22.11



ROOF FRAMING PLAN

1/8" = 1'-0"

LEGEND

(SEE S00.01 FOR ABBREVIATIONS)

- SPAN DIRECTION OF FRAMING MEMBERS
- SIMPSON STRAP
- POST BELOW
- SHEAR WALL BELOW

SHEET NOTE:

ALL DIMENSIONS, ELEVATION, AND LOCATIONS OF EXISTING STRUCTURAL COMPONENTS ARE BASED ON INFORMATION GATHERED FROM ORIGINAL DRAWINGS OR CURSORY FIELD MEASUREMENTS AND ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL FIELD MEASURE AND VERIFY ALL CONDITIONS PRIOR TO COMMENCING ANY WORK. NOTIFY ENGINEER WHERE CONDITIONS VARY FROM THOSE SHOWN.

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SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

2238 223rd STREET
FIRE STATION 67
DES MOINES, WASHINGTON

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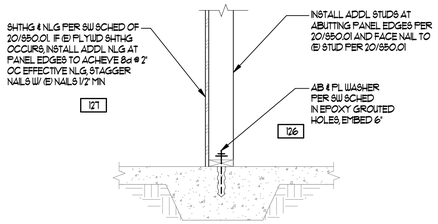
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REVISION SCHEDULE

ROOF FRAMING PLAN

SHEET:

S23.11

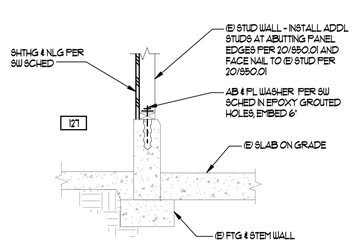


NOTE:

1. FOR CALL-OUTS IN COMMON SEE 15/640.01.

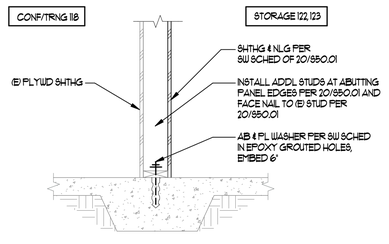
SHEAR WALL STRENGTHENING 10

3/4" = 1'-0"



SHEAR WALL STRENGTHENING AT MAINT BAY 13

3/4" = 1'-0"

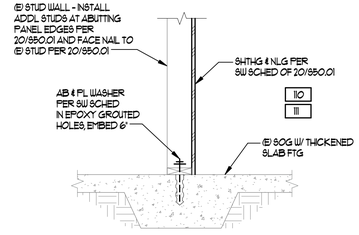


NOTE:

1. FOR CALL-OUTS IN COMMON SEE 15/640.01.

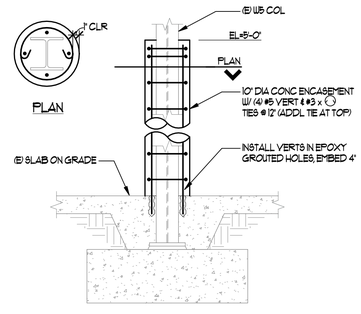
SHEAR WALL STRENGTHENING 14

3/4" = 1'-0"



SHEAR WALL STRENGTHENING 15

3/4" = 1'-0"



APP BAY COLUMN ENCASEMENT 20

3/4" = 1'-0"

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11/18/16

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 67

2238 223rd STREET

DES MOINES, WASHINGTON

PROJECT # 262016.018

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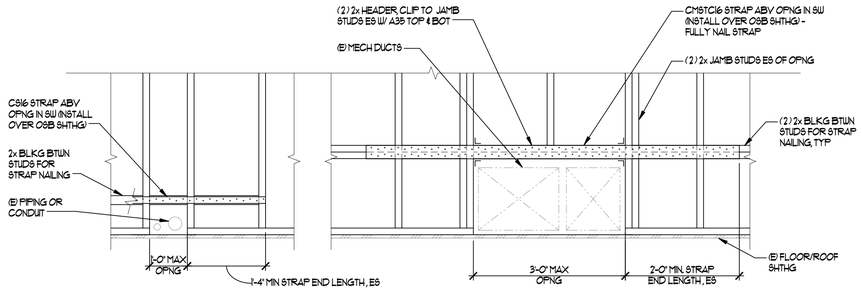
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REVISION SCHEDULE

SECTIONS AND DETAILS

SHEET:

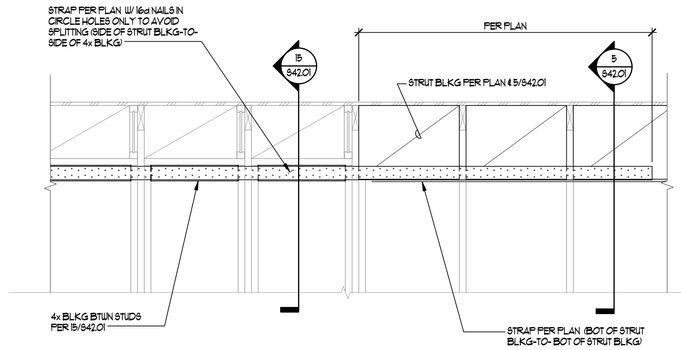
S40.01



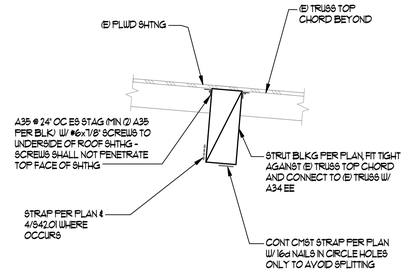
ELEVATION

NOTE.
SHEAR WALL SHEATHING NOT SHOWN FOR CLARITY.

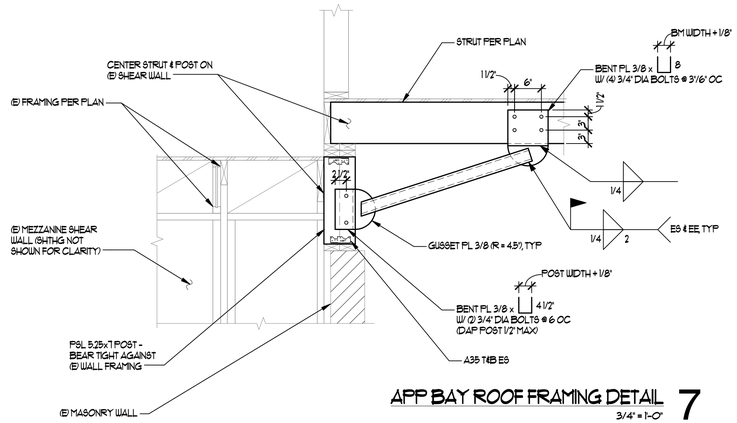
DUCT & PIPING THRU SW 2
3/4" = 1'-0"



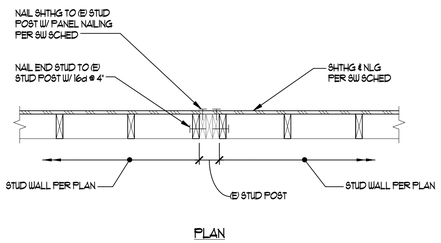
STRUT BLKG TO SW CONNECTION 4
3/4" = 1'-0"



STRUT BLOCKING CONNECTION 5
3/4" = 1'-0"

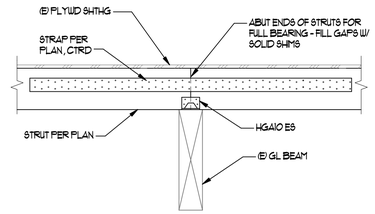


APP BAY ROOF FRAMING DETAIL 7
3/4" = 1'-0"

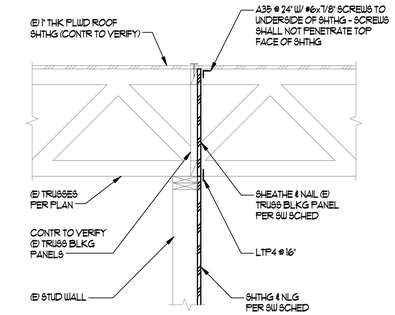


PLAN

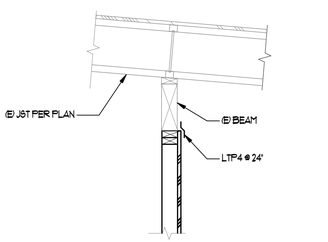
APPARATUS ATTIC SHEAR WALL 8
3/4" = 1'-0"



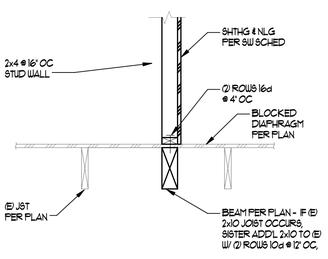
STRUT-TO-STRUT CONN 9
3/4" = 1'-0"



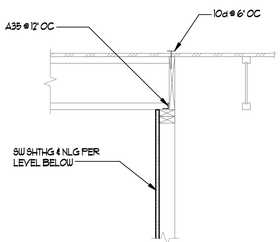
ROOF FRAMING DETAIL 10
3/4" = 1'-0"



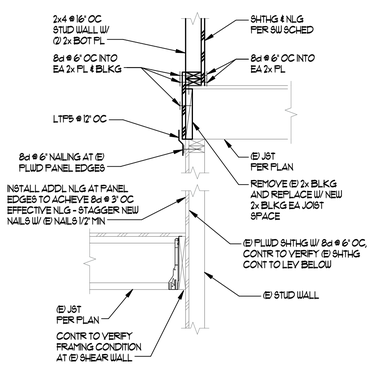
FLOOR FRAMING DETAIL 17
3/4" = 1'-0"



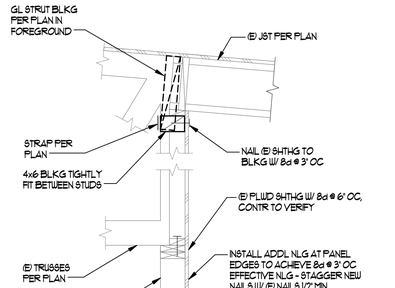
FLOOR FRAMING DETAIL 18
3/4" = 1'-0"



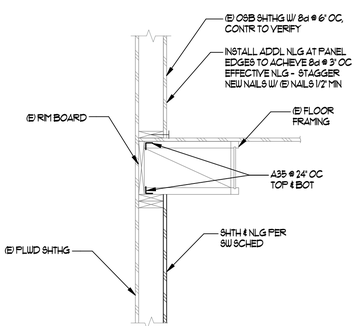
ROOF FRAMING DETAIL 14
3/4" = 1'-0"



FLOOR FRAMING DETAIL 19
3/4" = 1'-0"



ROOF FRAMING DETAIL 15
3/4" = 1'-0"



FLOOR FRAMING DETAIL 20
3/4" = 1'-0"

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1/18/16

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS
FIRE STATION 67
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DES MOINES, WASHINGTON

PROJECT # 262016.018

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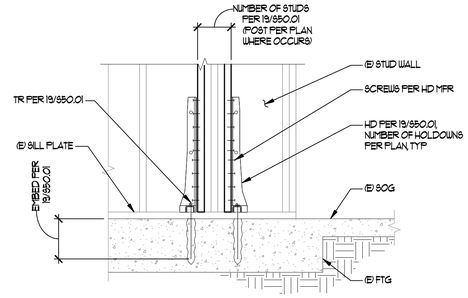
ISSUED: NOVEMBER 22, 2016

REVISION SCHEDULE

ROOF FRAMING DETAILS

SHEET:

S42.01

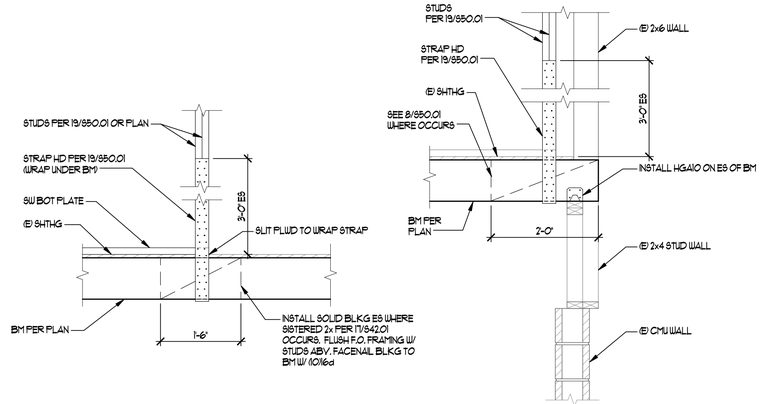


NOTE:

1. EXISTING WALL SHEATHING NOT SHOWN FOR CLARITY.

DOUBLE HOLDOWN DETAIL 5

3/4" = 1'-0"

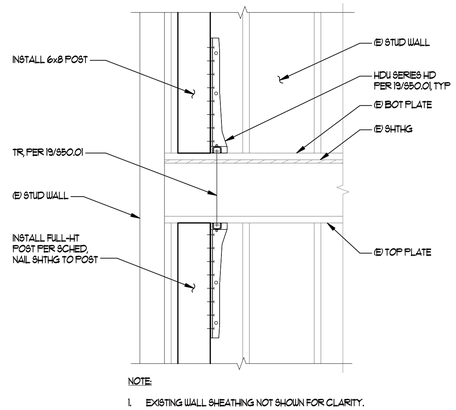


HOLDOWN AT MEZZANINE 8

3/4" = 1'-0"

HOLDOWN AT MEZZANINE 9

3/4" = 1'-0"



NOTE:

1. EXISTING WALL SHEATHING NOT SHOWN FOR CLARITY.

HOLDOWN AT MEZZANINE 10

3/4" = 1'-0"

HOLDOWN SCHEDULE

MARK	MODEL (NOTE 1)	WOOD POST, UNO PER PLAN OR DETAILS (NOTES 2 & 6)	2x POST NAILING (NOTE 3)	THREADED ROD AT WOOD FLOOR AND CONCRETE/NOTES 4 AND 5)		
				TR DIA	TR CONCRETE EMBED	
					(E) FDN WALL	(E) FOOTING
HDA	CMSTC16	(2) 2x	12d @ 6"OC	-	-	-
HDB	HDU11-SD2.5	(5) 2x	(2) ROWS 12d @ 6"OC	1"	9"	9"
HDC	HDU14-SD2.5	(5) 2x	(2) ROWS 12d @ 4"OC	1"	9"	9"

NOTES:

1. HOLDOWN MODELS REFER TO SIMPSON STRONG TIE CATALOG CALLOUTS. INSTALL FASTENERS PER HOLDOWN MFR.
2. SIZES LISTED IN THE SCHEDULE ARE FOR THE NOMINAL THICKNESS OF WOOD POST PERPENDICULAR TO THE HOLD DOWN. WIDTH OF THE POST IS THE SAME AS THE WIDTH OF THE WALL IN WHICH THE HOLD DOWN IS LOCATED.
3. FASTEN TOGETHER 2x MEMBERS OF POST AT THE SPECIFIED SPACING. "12d" NAIL IS 0.148" DIA x 3 1/4" AT (3) 2x POSTS, FASTEN SECOND TO FIRST STUD AND THIRD TO SECOND STUD AT THE SPECIFIED SPACING.
4. "TR" IS A CARBON STEEL STUD (e.g. THREADED ROD) COMPLYING WITH ASTM A307, GRADE A.
5. INSTALL A CARBON STEEL HEX NUT COMPLYING WITH ASTM A563, GRADE A, AT EACH BOLT.
6. NAIL PLYWOOD OR OSB SHEATHING TO HOLDOWN STUDS OR POST W/ SCHEDULED PANEL EDGE NAILING. STAGGER NAILS SO THAT EACH STUD IS NAILED, AT SOLID HOLDOWN POSTS, NAIL SHEATHING W/ (2) ROWS OF PANEL EDGE NAILING.

HOLDOWN SCHEDULE NTS 19

SHEAR WALL SCHEDULE

WALL MARK	WALL SHEATHING	PANEL EDGE NAILING	FRAMING AT ADJ PANEL EDGES	(2) 2x FRAMING NAILING (FACENAILING)	BOTTOM PLATE NAILING	TOP PLATE CONNECTION		FDN SILL PLATE	SILL PL AT / BRG PL TR
						A35	LTP4		
	NOTE #1, #8	NOTE #2	NOTES #5, #6	NOTE #6	NOTES #3, #12	NOTES #4, #11	NOTES #4, #11	NOTE #9	NOTE #9
SW6	15/32" OSB (1) SIDE	0.148 x 2 1/2 @ 6" OC	2x	-	0.148 x 3 1/4 @ 8" OC	@ 2'-8"OC	@ 1'-9"OC	2x	5/8" DIA @ 3'-0" OC
SW3	15/32" OSB (1) SIDE	0.148 x 2 1/2 @ 3" OC	3x ((2) 2x)	0.148 x 3 1/4 @ 3" OC	0.148 x 3 1/4 @ 3" OC	@ 1'-0"OC	@ 1'-7 OC	2x (3x)	5/8" DIA @ 2'-0"OC (@ 2'-6" OC)
5/8 SW3	19/32" OSB (1) SIDE	0.148 x 2 1/2 @ 3" OC	3x ((2) 2x)	(2) ROWS 0.148 x 3 1/4 @ 4" OC	(2) ROWS 0.148 x 3 1/4 @ 4" OC	@ 1'-7 OC	-	2x (3x)	5/8" DIA @ 1'-0"OC (@ 1'-4"OC)
SW3 - 8d	15/32" OSB (1) SIDE	0.131x 2 1/2 @ 3" OC	3x ((2) 2x)	0.148 x 3 1/4 @ 3" OC	0.148 x 3 1/4 @ 3" OC	@ 1'-0"OC	@ 1'-7 OC	2x (3x)	5/8" DIA @ 2'-0"OC (@ 2'-6" OC)
SW2 - 8d	15/32" OSB (1) SIDE	0.131x 2 1/2 @ 2" OC	3x ((2) 2x)	0.148 x 3 1/4 @ 3" OC	0.148 x 3 1/4 @ 3" OC	@ 1'-0"OC	@ 1'-7 OC	2x (3x)	5/8" DIA @ 2'-0"OC (@ 2'-6" OC)

SHEAR WALL NOTES:

1. STRUCTURAL PANEL WALL SHEATHING SHALL BE APA RATED ORIENTED STRAND BOARD (OSB) SHEATHING, EXP 1, PANEL SPAN RATING 24/16. OSB PANELS MAY BE INSTALLED VERTICALLY OR HORIZONTALLY.

2. THE SPECIFIED PANEL EDGE NAILING IS REQUIRED AT ALL PANEL EDGES AND ENDS. INSTALL 2x SOLID BLOCKING AT ALL UNSUPPORTED PANEL EDGES AND ENDS WITH MINIMUM 2x SOLID BLOCKING, UNO (SEE NOTES 5 AND 6). MAXIMUM SPACING OF NAILING AT INTERMEDIATE FRAMING MEMBERS IS 12" OC. SPACE NAILS MINIMUM 3/8" FROM EDGES AND ENDS OF WALL PANELS, WALL STUDS, TOP AND BOTTOM PLATES, AND BLOCKING.

3. TOP AND BOTTOM PLATE NAILS ARE 0.148" DIA x 3 1/4". SPACE BOTTOM PLATE NAILS 1/2" MINIMUM FROM EDGES AND 2" MINIMUM FROM ENDS OF THE BLOCKING (OR JOIST OR RIM BOARD) BELOW. INSTALL THE TOP AND BOTTOM PLATE NAILS AT THE TOP AND BOTTOM, RESPECTIVELY, OF THE SCHEDULED SHEAR WALL AT THE SPECIFIED SPACING. INSTALL THE BOTTOM PLATE NAILS SO THAT THEY ARE CENTERED IN THE BLOCKING (OR JOIST OR RIM BOARD) BELOW.

4. SEE WOOD DETAILS FOR LOCATION OF TOP PLATE CONNECTIONS. INSTALL AT THE TOP OF THE SCHEDULED SHEAR WALL AT THE SPECIFIED SPACING. "NB NAIL" IS 0.131" DIA x 1 1/2" LONG. "NO NAIL" IS 0.148" DIA x 1 1/2" LONG

5. WHERE 3x WALL STUDS ARE SPECIFIED, INSTALL 3x WALL STUDS AT ADJOINING PANEL EDGE AND ENDS. INSTALL 3x SOLID BLOCKING AT ALL UNSUPPORTED PANEL EDGES AND ABUTTING PANEL EDGES. STAGGER PANEL EDGES NAILING 1/2" AT ALL WALL STUDS, PLATES AND BLOCKING. MAINTAIN SUFFICIENT EDGE DISTANCE TO AVOID SPLITTING OF WOOD.

6. (2) 2x WALL STUDS ARE PERMITTED TO BE SUBSTITUTED FOR 3x STUDS WHERE SPECIFIED IN ( ). INSTALL (2) 2x WALL STUDS AT ADJOINING PANEL EDGES AND ENDS. FASTEN STUDS TOGETHER WITH 0.148" DIA x 3 1/4" NAILS AT THE SPECIFIED SPACING, WHERE (2) ROWS OF NAILS ARE SPECIFIED, PLACE THE ROWS 1 1/2" APART. SEE WSUM-1. PROVIDE ALL UNSUPPORTED PANEL EDGES AND ENDS WITH MINIMUM 3x SOLID BLOCKING. (2) 2x SOLID BLOCKING PERMITTED PROVIDED THE 2x BLOCKS ARE FASTENED TOGETHER AS SPECIFIED ABOVE FOR THE (2) 2x STUDS. STAGGER PANEL EDGE NAILING 1/2" AT ALL WALL STUDS, PLATES AND BLOCKING. MAINTAIN SUFFICIENT EDGE DISTANCE TO AVOID SPLITTING OF WOOD.

7. NOT USED

8. NAIL SHEATHING AT INTERMEDIATE FRAMING WITH SAME SIZE NAILS AS PANEL EDGE NAILING @ 12" OC.

9. AT SILL PLATES, EMBED ANCHOR RODS A MINIMUM OF 7" INTO CONCRETE. SEE DETAILS. INSTALL 3"x3"x0.229" STEEL PLATE WASHER BETWEEN THE SILL PLATE AND NUT AT EACH ANCHOR ROD. LOCATE ANCHOR ROD AND PLATE WASHER SUCH THAT EDGE OF PLATE WASHER IS 1/2" MAX AWAY FROM EDGE OF SILL PLATE RECEIVING PANEL EDGE NAILING FROM SHEAR WALL SHEATHING. HOLE IN PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH A MAXIMUM WIDTH 3/16" > BOLT DIAMETER AND MAXIMUM LENGTH OF 1 3/4", PROVIDED STANDARD CUT WASHER INSTALLED BETWEEN PLATE WASHER AND NUT.

10. INSTALL LSL BLOCKING/RIM BOARD FOR TOP PLATE CONNECTION. SEE WOOD DETAILS.

11. TOP PLATE CONNECTIONS IDENTIFIED AS "A35", AND "LTP4" ARE MANUFACTURED BY SIMPSON STRONG-TIE. SEE GENERAL STRUCTURAL NOTES FOR FURTHER INFORMATION.

12. WHERE (2) ROWS OF NAILS ARE SPECIFIED, PLACE THE ROWS 1 1/2" APART. 3 1/2" LSL BLOCKING/RIM BOARD IS REQUIRED.

SHEAR WALL SCHEDULE NTS 20

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11/18/16

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 67
2238 223rd STREET
DES MOINES, WASHINGTON

PROJECT # 262016.018

BID SET

ISSUED: NOVEMBER 22, 2016

REVISION SCHEDULE

TYPICAL DETAILS

SHEET:

S50.01

MECHANICAL SYMBOLS LEGEND

HYDRONIC SYSTEM LABELS

- PIPE BREAK (CONTINUATION)
- HYDRONIC SUPPLY
- HYDRONIC RETURN
- DIRECTION OF FLOW
- CAP
- HEAT TRACED PIPING

HYDRONIC VALVES AND SPECIALTIES

- F.O. / F.C. — 2-WAY ELECTRIC CONTROL VALVE; FAIL OPEN / FAIL CLOSED
- 3-WAY ELECTRIC CONTROL VALVE
- 4-WAY CONTROL VALVE

DUCTWORK LABELS

- INTERNALLY LINED DUCT
- HIDDEN DUCT
- 16X12 — DUCT (1ST DIMENSION SIDE SHOWN, 2ND DIMENSION OTHER SIDE)
- REMOVE DUCT, PIPE OR MECH. EQUIPMENT
- FLEX DUCT
- RECTANGULAR SUPPLY DUCT OUT OF PAGE
- RECTANGULAR SUPPLY DUCT INTO PAGE
- SUPPLY DIFFUSER
- RECTANGULAR RETURN DUCT OUT OF PAGE
- RECTANGULAR RETURN DUCT INTO PAGE
- OR — RETURN OR EXHAUST GRILLE
- TURNING VANES
- STRAIGHT TAP
- TAPERED FITTING
- BELL MOUTH FITTING
- CONICAL FITTING
- 45 DEG. ANGLE TAP
- ROUND ELBOW OUT OF PAGE
- ROUND ELBOW INTO PAGE
- ROUND DUCT OUT OF PAGE
- ROUND DUCT INTO PAGE
- ROUND DUCT BREAK (CONTINUATION)
- RECTANGULAR DUCT BREAK (CONTINUATION)
- FLEX CONNECTION

REFERENCE SYMBOLS

- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- AHU-1 — MECHANICAL EQUIPMENT
- D / 0 — DIFFUSER/GRILLE TYPE / CFM
- 1 — SECTION NUMBER / SHEET NUMBER

LIFE SAFETY SYMBOLS

- CEILING RADIATION DAMPER
- OR — COMBINATION SMOKE/FIRE DAMPER
- HORIZONTAL SMOKE DAMPER
- FIRE DAMPER

CONTROL SYMBOLS

- VOLUME DAMPER
- M — MOTORIZED CONTROL DAMPER
- T — THERMOSTAT IN DUCT
- REMOTE OPERATED VOLUME DAMPER
- BACKDRAFT DAMPER
- T — THERMOSTAT, MOUNT @ 4'-0" A.F.F.
- S — SENSOR
- CO / GEF-1 — CARBON MONOXIDE DETECTOR WITH FAN INDICATED
- CO2 — CARBON DIOXIDE DETECTOR

PIPING SYSTEM LABELS

- G — NATURAL GAS OR PROPANE
- BALL VALVE MANUAL LEVER
- BUTTERFLY VALVE MANUAL LEVER
- BUTTERFLY GEAR VALVE
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (CIRCUIT SETTER)
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PIPE TO DRAIN
- PRESSURE SAFETY VALVE
- AAV — AUTOMATIC AIR VENT
- MAV — MANUAL AIR VENT
- WYE STRAINER
- WYE STRAINER WITH VALVE AND HOSE END CAP
- HEAT TRACE PIPING
- HOSE END AND CAP
- EXPANSION LOOP

HVAC ENERGY CODE NOTES

1. SEE SCHEDULES FOR EQUIPMENT TYPE, CAPACITY AND EFFICIENCY. ALL EQUIPMENT SHALL MEET MINIMUM EFFICIENCY PER C403.2.3.
2. THERMOSTATS (OTHER THAN GROUP R) SHALL BE 7-DAY PROGRAMMABLE WITH AUTOMATIC SETBACK CONTROLS SET DOWN TO 55F AND UP TO 85F. CONTROLS SHALL MAINTAIN PROGRAMMING FOR AT LEAST 10 HOURS DURING LOSS OF POWER. CONTROLS SHALL HAVE A MANUAL 2 HR OVERRIDE FOR TEMPORARY OPERATION. CONTROLS SHALL ADJUST THE DAILY START TIME FOR MORNING WARMUP PRIOR TO SCHEDULED OCCUPANCY.
3. PROVIDE AMCA CLASS 1 MOTORIZED CONTROL DAMPERS FOR OUTSIDE AIR INTAKES, EXHAUST OUTLETS, RELIEF OPENINGS, STAIRWAY AND SHAFT VENTS AND RETURN SIDE OF AIRSIDE ECONOMIZERS.
4. PROVIDE DUCT, SHAFT AND PLENUM INSULATION PER C403.2.8 AND SPECIFICATION SECTION 23 07 00.
5. SEAL ALL TRANSVERSE AND LONGITUDINAL SEAMS, JOINTS AND CONNECTIONS OF ALL DUCTWORK WITH WELDS, GASKETS OR MASTICS.
6. ALL ELECTRIC MOTORS SHALL MEET THE EFFICIENCY REQUIREMENTS OF TABLES C405.8(1) THROUGH C405.8(4).
7. FAN MOTORS 1/12 HP UP TO 1 HP SHALL BE ECM.
8. PROVIDE A MEANS OF BALANCING EVERY AIR INLET AND OUTLET AND EVERY AIR OR WATER TERMINAL DEVICE.
9. ALL PIPE AND DUCT INSULATION SHALL BE LABELLED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).

HVAC GENERAL NOTES

1. THESE PLANS ARE SCHEMATIC AND DO NOT SHOW EXACT ROUTING OR EVERY OFFSET, WHICH MAY BE REQUIRED. THE HVAC CONTRACTOR IS TO COORDINATE WITH ALL OTHER TRADES AND IS TO VERIFY ALL CLEARANCES BEFORE COMMENCING WORK.
2. MATERIALS, METHODS AND INSTALLATION SHALL COMPLY WITH THE PROVISIONS OF THE LATEST EDITION OF THE MECHANICAL CODE, BUILDING CODE, FIRE CODE AND LOCAL CODES AND ORDINANCES.
3. DUCT CONSTRUCTION AND HANGING SHALL COMPLY WITH THE LATEST SMC AND WITH CURRENT SMACNA STANDARDS.
4. JOINTS OF DUCT SYSTEM SHALL BE SEALED WITH GASKETS OR LISTED MASTIC TYPE DUCT SEALANT.
5. DUCTS SHALL BE INSULATED AS INDICATED ON PLANS TO MEET THE REQUIREMENTS OF THE CURRENT ENERGY CODE AND SPECIFICATION.
6. FLEXIBLE DUCTS SHALL ONLY BE USED WHERE SHOWN AND SHALL NOT EXCEED 6 FT IN LENGTH UNLESS NOTED OTHERWISE.
7. PROVIDE EARTHQUAKE RESTRAINT FOR HVAC EQUIPMENT IN ACCORDANCE WITH THE CURRENT IBC.
8. PIPING PENETRATIONS OF FIRE RATED WALLS OR FLOOR SHALL BE SLEEVED AND FIRE STOPPED WITH LISTED MATERIALS SO AS TO MAINTAIN THE INTEGRITY AND RATING OF THE FLOOR OR WALL.
9. HVAC EQUIPMENT, VALVES AND DAMPERS SHALL BE LOCATED IN EASILY ACCESSIBLE LOCATIONS, UNLESS SHOWN ON ARCHITECTURAL DRAWINGS. REQUIRED ACCESS PANELS SHALL BE PROVIDED BY THE HVAC CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR.
10. HVAC CONTRACTOR MUST COORDINATE WITH LIGHTING FIXTURES PRIOR TO DUCT AND PIPING INSTALLATION.

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MEZZ	MEZZANINE
ADA	AMERICANS WITH DISABILITIES ACT	MIN	MINIMUM OR MINUTE
ADJ	ADJUSTABLE	MISC	MISCELLANEOUS
AFF	ABOVE FINISHED FLOOR		
AFG	ABOVE FINISHED GRADE	N/A	NOT APPLICABLE
ALT	ALTERNATE	NC	NORMALLY CLOSED
AP	ACCESS PANEL	NEG	NEGATIVE
APPROX	APPROXIMATE	NIC	NOT IN CONTRACT
ARCH	ARCHITECTURAL/ARCHITECT	NO	NORMALLY OPEN
AS	AIR SEPARATOR	NOM	NOMINAL
AUX	AUXILIARY	NPT	NATIONAL PIPE THREAD
		NTS	NOT TO SCALE
BFF	BELOW FINISHED FLOOR		
BHP	BRAKE HORSE POWER	OA	OUTSIDE AIR
BLDG	BUILDING	OBD	OPEN BLADE DAMPER
BOP	BOTTOM OF PIPE	OC	ON CENTER
BTU	BRITISH THERMAL UNIT	OD	OUTSIDE DIAMETER
BTUH	BRITISH THERMAL UNIT PER HOUR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CA	COMBUSTION AIR	OFOI	OWNER FURNISHED OWNER INSTALLED
CFH	CUBIC FEET PER HOUR		
CFM	CUBIC FEET PER MINUTE		
CLG	CEILING	ΔP	PRESSURE DIFFERENTIAL
CO	CARBON MONOXIDE	PERF	PERFORATED
CO2	CARBON DIOXIDE	Φ OR PH	PHASE
COND	CONDENSATE	PLBG	PLUMBING
CW	COLD WATER	POC	POINT OF CONNECTION
CX	CONNECT TO EXISTING	PRESS	PRESSURE
		PRV	PRESSURE REDUCING VALVE
dB	DECIBEL	PSF	POUNDS PER SQUARE FOOT
DB °F	DRY BULB TEMPERATURE	PSI	POUNDS PER SQUARE INCH
° OR DEG.	DEGREE	PSIG	POUNDS PER INCH GAUGE
Ø OR DIA	DIAMETER	PTAC	PACKAGE TERMINAL AIR CONDITIONER
DN	DOWN		
DWG(S)	DRAWING(S)		
DWV	DRAIN, WASTE, VENT	QTY	QUANTITY
EX	EXISTING/EXISTING TO REMAIN	REQD	REQUIRED
EA	EACH	RH	RELATIVE HUMIDITY
EA	EXHAUST AIR	RM	ROOM
EAT	ENTERING AIR TEMPERATURE	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
ERU	ENERGY RECOVERY UNIT	RPM	REVOLUTIONS PER MINUTE
ESP	EXTERNAL STATIC PRESSURE	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RTU	ROOF TOP UNIT
EXP	EXPANSION	RV	RELIEF VALVE
		RX	REMOVE EXISTING
FC	FAIL CLOSED		
FF	FINISHED FLOOR		
FLA	FULL LOAD AMPS	SD	SMOKE DETECTOR
FO	FAIL OPEN	SF	SQUARE FOOT
FP	FIRE PROTECTION	S.L.	SOUND LINER
FPM	FEET PER MINUT	SP	STATIC PRESSURE
FPS	FEET PER SECOND	SPEC	SPECIFICATION
FT	FEET/FOOT	S/S, OR SS	STAINLESS STEEL
FTG	FOOTING	STD	STANDARD
		SYM	SYMBOL
G	NATURAL GAS		
GA	GAUGE	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
GAL	GALLON		
GALV	GALVANIZED	TBD	TO BE DETERMINED
G.C.	GENERAL CONTRACTOR	TEMP	TEMPERATURE
GSM	GALVANIZED SHEET METAL	TOB	TOP OF BEAM
		TOC	TOP OF CONCRETE
H	HEIGHT	TOD	TOP OF DECK
HD	HEAD	TOJ	TOP OF JOIST
HP	HORSEPOWER	TOS	TOP OF SLAB/TOP OF STEEL
HVAC	HEATING VENTILATING AND AIR CONDITIONING	T&P	TEMPERATURE & PRESSURE
		TSP	TOTAL STATIC PRESSURE
HW	HOT WATER	TYP	TYPICAL
HX	HEAT EXCHANGER		
HZ	HERTZ	UL	UNDERWRITERS LABORATORY
		UNO	UNLESS NOTED OTHERWISE
ID	INSIDE DIAMETER/DIMENSION		
IN	INCH/INCHES	V	VOLT
IN WC	INCHES WATER COLUMN	VAV	VARIABLE AIR VOLUME
		VERT	VERTICAL
KW	KILOWATT/KILOWATTS	VFD	VARIABLE FREQUENCY DRIVE
		VIB	VALVE-IN-BOX
LAT	LEAVING AIR TEMPERATURE	VOL	VOLUME
LBS	POUNDS		
LF	LINEAL FOOT	W/	WITH
LRA	LOCKED ROTOR AMPS	W/IN	WITHIN
LTG	LIGHTING	W/O	WITHOUT
LWT	LEAVING WATER TEMPERATURE	WB °f	WET BULB TEMPERATURE
		WC	WATER COLUMN
MBH	1000 BRITISH THERMAL UNIT PER HOUR	WPD	WATER PRESSURE DROP
		WT	WEIGHT
MED	MEDIUM		
MEP	MECHANICAL, ELECTRICAL		

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SOUTH KING FIRE & RESCUE
FACILITY IMPROVEMENTS
FIRE STATION 67 — 2238 S 223rd STREET
DES MOINES, WASHINGTON

PROJECT # 16025

BID SET

ISSUED: NOVEMBER 22, 2016

REVISION SCHEDULE

COVER SHEET

SHEET:

M00.01

DIFFUSER AND GRILLE SCHEDULE

ITEM	MAKE	MODEL	DESCRIPTION	SIZE	MARK
EXHAUST GRILLE	TITUS	355RL	1/2" BLADE SPACING, 35 DEG DEFLECTION, BLADES PARALLEL TO LONG DIMENSION, STEEL, WHITE	12" X 12"	G-1

NOTES:
1. CEILING UNIT FRAME SHALL BE COMPATIBLE WITH CEILINGS; FLAT FRAME SURFACE MOUNT (TITUS BORDER TYPE 1) FOR DRYWALL CEILINGS AND WITH LAY-IN PANEL FOR EXPOSED GRID CEILINGS (TITUS BORDER TYPE 3). SEE ARCHITECTURAL PLANS FOR CEILING TYPES.
2. BEVELED DROP FACE DIFFUSERS (TITUS BORDER TYPE 6) ARE NOT ACCEPTABLE.
3. SIZE INDICATES DUCT COLLAR.

SEQUENCE OF OPERATIONS

1. CONTROL SYSTEM.

   PROVIDE ELECTRIC/ELECTRONIC CONTROLS TO PERFORM FUNCTIONS IN ACCORD WITH THE FOLLOWING.

2. APPARATUS BAY EXHAUST FAN EF-1:

   FANS OPERATE WITH 60-MIN WALL TIMER SWITCH (BY M.C.) OR RELAY FROM CO/NO2 SENSORS. FANS ACTIVATE ON CARBON MONOXIDE (CO) LEVEL OF 50 PPM (ADJ) OR NITROGEN DIOXIDE (NO2) LEVEL OF 3 PPM (ADJ).
   FAN STARTER INTERLOCK OPENS ASSOCIATED FAN & PENTHOUSE MOTORIZED DAMPERS WHEN FANS ARE OPERATING.
   ON A CO LEVEL OF 100 PPM (ADJ) OR A NO2 LEVEL OF 5 PPM RELAYS TO ACTIVATE WARNING BELLS (BY E.C.)

3. BUNKER GEAR STORAGE GENERAL EXHAUST FAN: EF-2

   FAN OPERATES CONTINUOUSLY.

4. RADIANT CEILING PANELS: RCP

   UNITS OPERATE WITH ELECTRONIC LINE/LOW VOLTAGE HEATING ONLY WALL THERMOSTATS.

FAN SCHEDULE

MARK	SERVES	MAKE	MODEL	TYPE	CFM	LOW SPEED	ESP INCH WC	RPM	BHP	MOTOR HP (W)	ELEC VOLT/PH	WGT. LBS	MAX SOUND	NOTES:
EF-1	APP BAY	GREENHECK	GB-260	ROOF CENT	6500	N/A	0.375	601	1.2	1-1/2	208/3	180	63 DBA	A, 1, 2, 3
EF-2	BUNKER GEAR	GREENHECK	SQ-85-VG	INLINE CENT	250	N/A	0.5	1545	0.06	1/10	115/1	60	52 DBA	B, 4, 5

NOTES:
1. FACTORY INSULATED CURB, MATCH ROOF SLOPE
2. ALUMINUM BIRDSCREEN, CURB SEAL, AND HINGE KIT
3. MOTORIZED INSULATED CONTROL DAMPER
4. NEOPRENE HANGING ISOLATION
5. ECM SPEED CONTROL

A. 60 MIN WALL TIMER SWITCH
B. RUNS CONTINUOUSLY

PENTHOUSE SCHEDULE

MARK	MAKE	MODEL	SIZE	AIRFLOW DIRECTION	CFM	P.D. IN WG	FREE AREA	MATERIAL	WEIGHT (LBS)	NOTES:
PH-1	GREENHECK	WIH	32X32	INTAKE	6500	0.15	8.28 SQFT	ALUMINUM	130	ALL

NOTES:
1. 1" HOOD INSULATION
2. ALUMINUM BIRDSCREEN AND ALUMINUM INSECT SCREEN
3. FACTORY CURB W/ LINER, MATCH ROOF SLOPE
4. INSULATED MOTORIZED CONTROL DAMPER.
5. ALUMINUM INTAKE FILTERS.

RADIANT CEILING PANEL SCHEDULE

MARK	MFR.	MODEL	SIZE	ELECTRICAL WATTS	ELECTRICAL VOLT/PH	WEIGHT	NOTES:
RCP	MARKEL	RCP-807	24"X48"	750	208/1	20	ALL

NOTES:
1. PROVIDE LINE VOLTAGE WALL THERMOSTAT.
2. PROVIDE MOUNTING FRAME FOR GWB CEILINGS.
3. SEE PLANS FOR UNIT QUANTITY.

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2238 S 223rd STREET
DES MOINES, WASHINGTON

PROJECT # 16025

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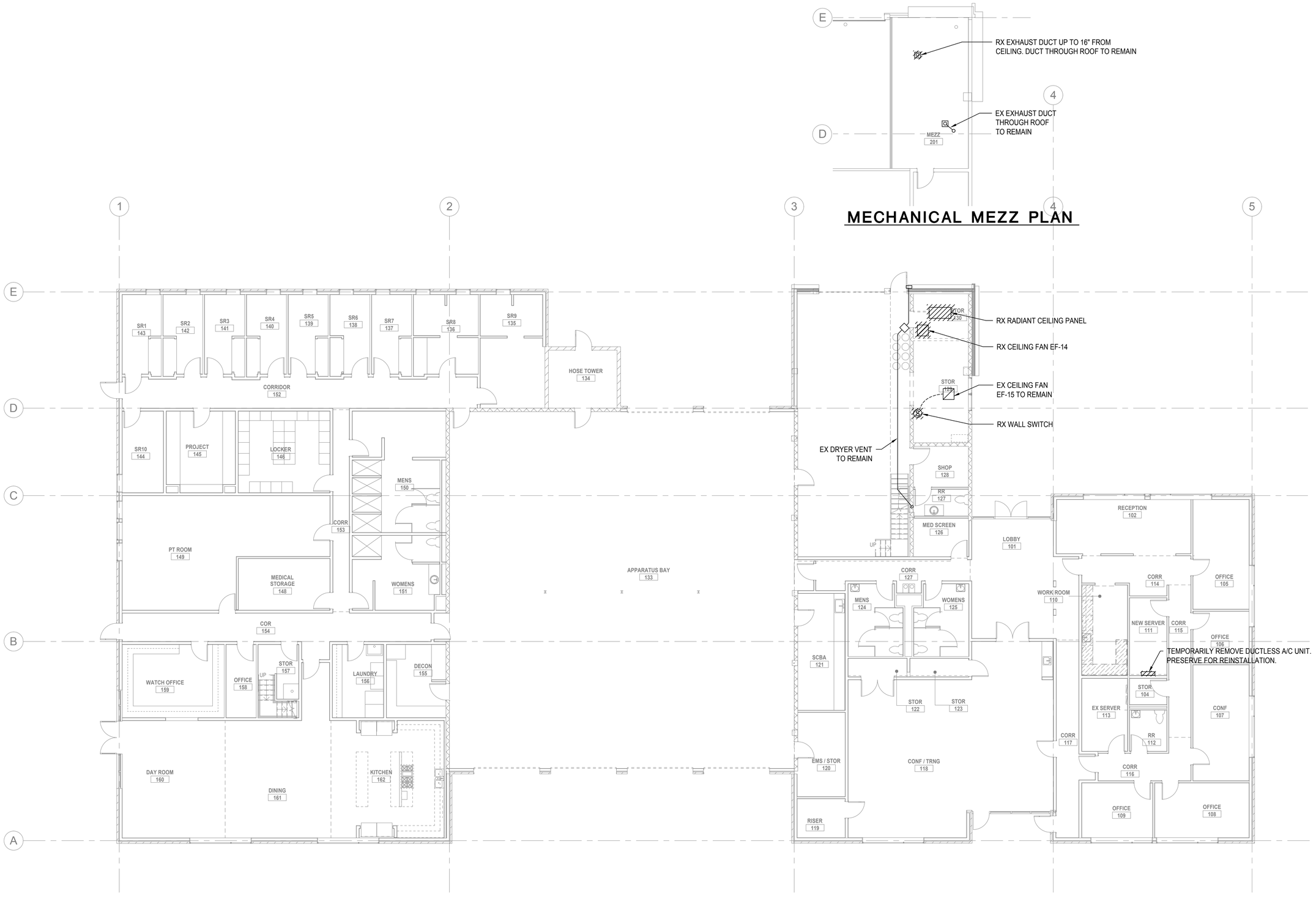
ISSUED: NOVEMBER 22, 2016

REVISION SCHEDULE

SCHEDULES

SHEET:

M00.02



MECHANICAL MEZZ PLAN

PARTIAL LEVEL 1 - MECHANICAL DEMOLITION FLOOR PLAN

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

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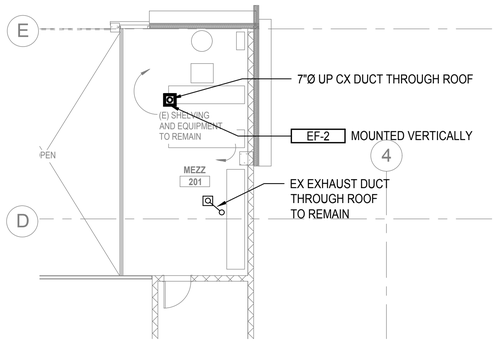
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REVISION SCHEDULE

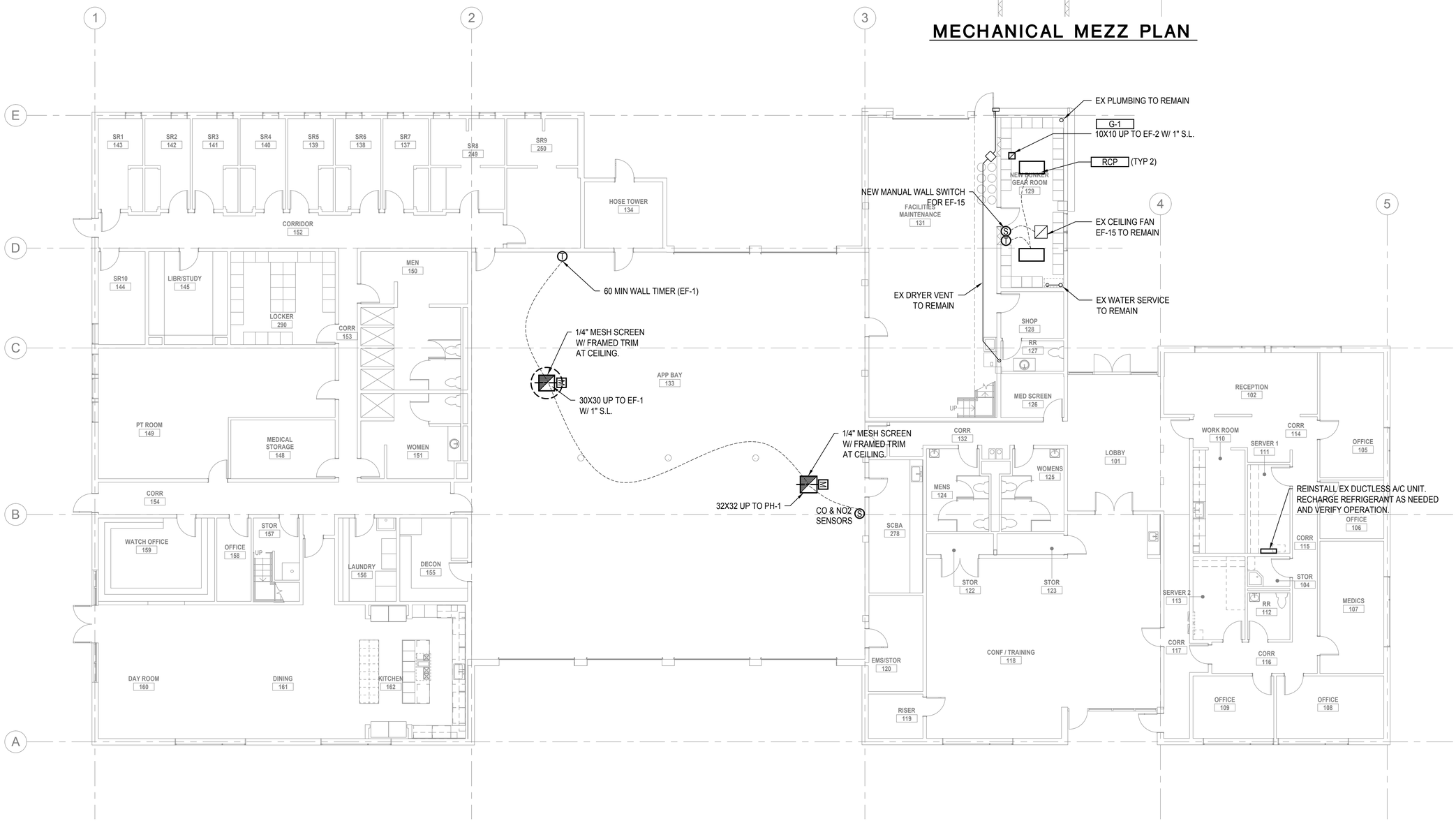
PARTIAL LEVEL 1
MECHANICAL
DEMOLITION
FLOOR PLAN

SHEET:

M20.11



MECHANICAL MEZZ PLAN



PARTIAL LEVEL 1 - MECHANICAL FLOOR PLAN

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

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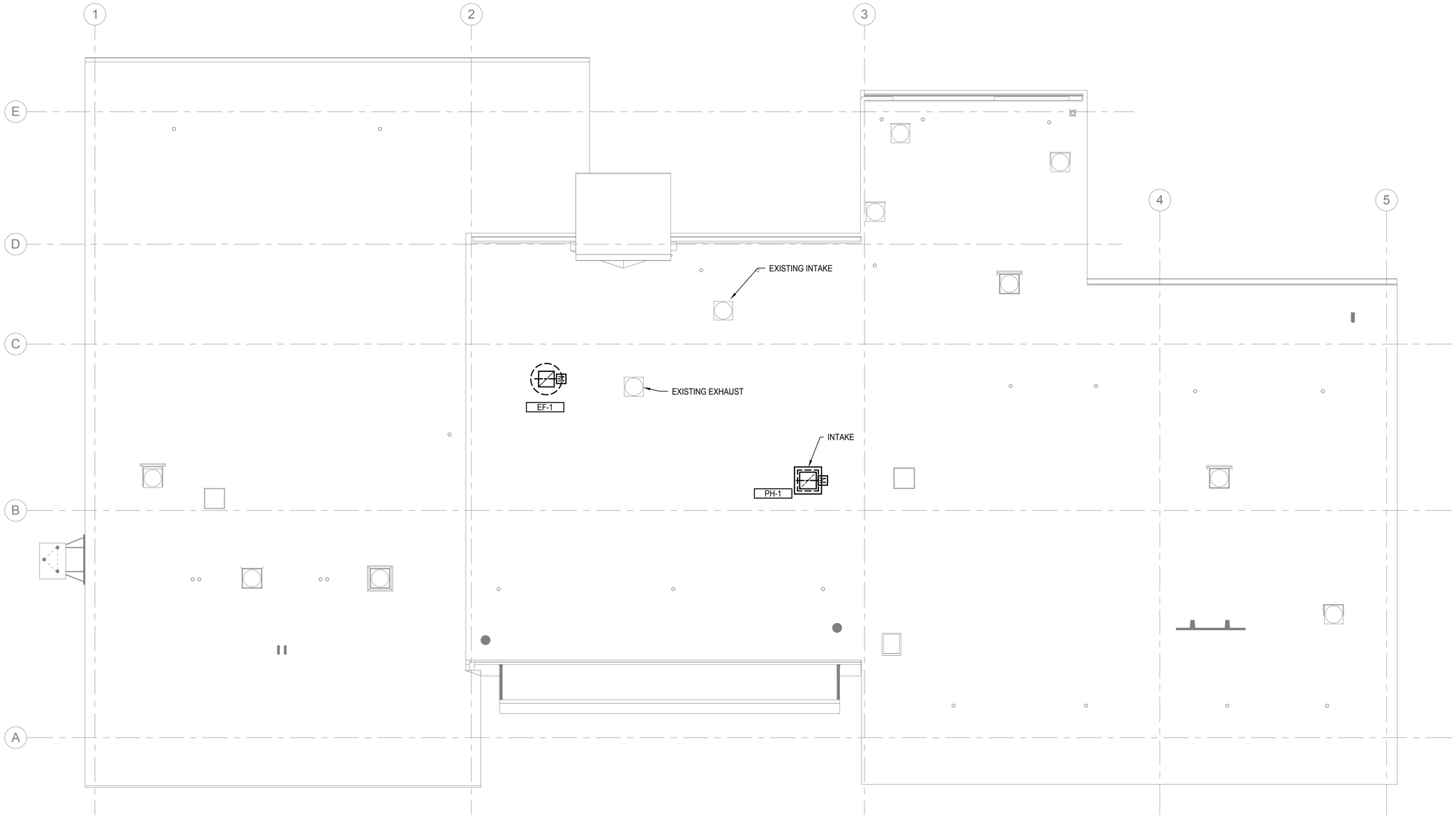
ISSUED: NOVEMBER 22, 2016

REVISION SCHEDULE

PARTIAL LEVEL 1 MECHANICAL FLOOR PLAN

SHEET:

M21.11



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

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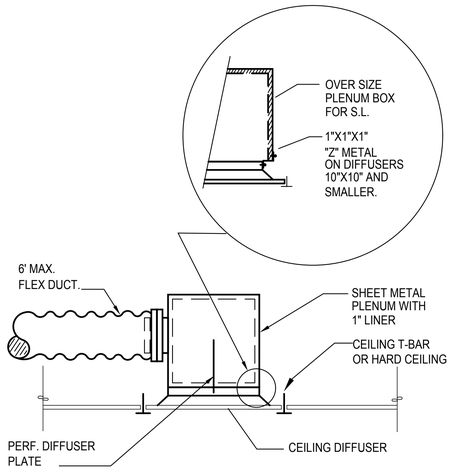
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MECHANICAL
ROOF PLAN

SHEET:

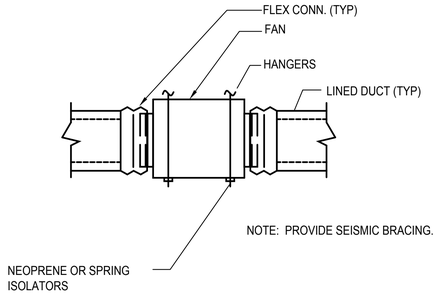
M21.13



NOTES:
1. SEE ARCHITECTURAL PLANS FOR CEILING TYPES.
2. SUPPLY SHOWN, DETAIL WITHOUT PERF PLATE IS TYPICAL FOR CEILING RETURN OR EXHAUST GRILLE INSTALLATION.

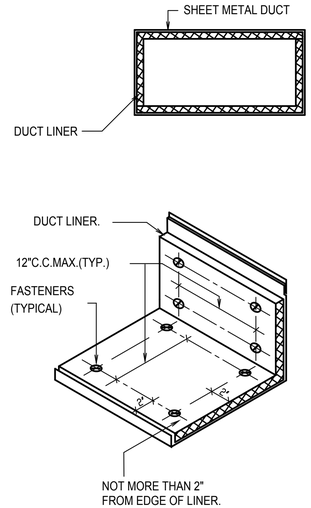
CEILING INSTALLATION TYPICAL DIFFUSER DETAIL

4 / M30.01 **Scale: NONE**



INLINE FAN DETAIL

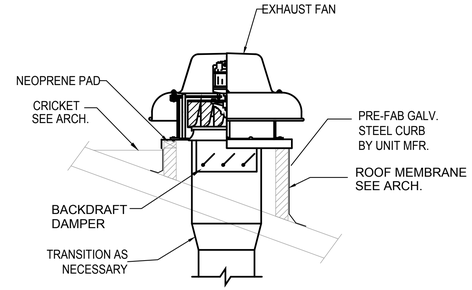
3 / M30.01 **Scale: NONE**



NOTES:
1. PROVIDE S/M NOSING AT EXPOSED EDGES OF INSULATION.
2. ALL TRANSVERSE AND LONGITUDINAL ENDS OF LINER TO BE COATED WITH ADHESIVE.

DUCT LINER DETAIL

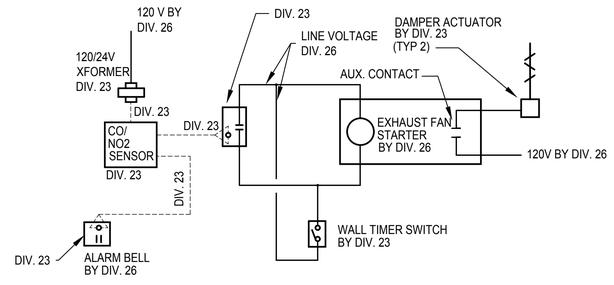
2 / M30.01 **N.T.S.**



PENTHOUSE CURB SIMILAR

ROOF EXHAUST FAN DETAIL

1 / M30.01 **Scale: NONE**



CO/NO2 (EF-1) SENSOR CONTROL SCHEMATIC

5 / M30.01 **Scale: NONE**

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REVISION SCHEDULE

DETAILS

SHEET:

M30.01

PLUMBING SYMBOLS LEGEND

LINETYPE LEGEND

- EXISTING
- NEW WORK DARK/HEAVY

PIPING SYSTEM LABELS

- CW — COLD WATER
- HW — HOT WATER
- (140) — HOT WATER (TEMPERATURE)
- HWC — HOT WATER CIRCULATING
- SD — STORM DRAIN
- PW — PUMPED WASTE
- WASTE (BURIED)
- W — WASTE (ABOVE GRADE)
- GW — GREASE WASTE
- V — VENT
- RL — RAINLEADER
- OD — OVERFLOW DRAIN
- NPW — NON-POTABLE COLD WATER
- G OR P — NATURAL GAS OR PROPANE
- F — FIRE SERVICE
- DIRECTION OF FLOW
- CA — COMPRESSED AIR
- DI — DIONIZED WATER
- V — VACUUM
- C — CONDENSATE
- PC — PUMPED CONDENSATE
- X" — SLOPE SYMBOL (X' PER FOOT)

PIPE FITTINGS

- PIPE DOWN
- PIPE UP
- TEE UP
- TEE DOWN
- UNION
- PIPE ANCHOR POINT
- PIPE GUIDE
- FLANGE
- CAP

DRAINS AND CLEANOUTS

- FLOOR SINK
- FLOOR DRAIN
- HIDDEN FLOOR DRAIN
- ROOF DRAIN
- OVERFLOW DRAIN
- FLOOR CLEANOUT
- GRADE CLEANOUT
- TRENCH DRAIN
- WALL CLEANOUT
- UP TO CLEANOUT
- FUNNEL DRAIN
- STANDPIPE FUNNEL DRAIN

PIPE VALVES AND SPECIALTIES

- P-1 — PLUMBING EQUIPMENT
- X — MEDICAL TAG
- M-1 — DETAIL NUMBER / SHEET
- FLAG NOTE
- 1 — REVISION TAG
- 1 / P-1 — PLUMBING RISER NO. / SHEET
- 1 — SECTION NUMBER / SHEET NUMBER

PIPE VALVES AND SPECIALTIES

- GATE VALVE
- GLOBE VALVE
- NON RISING STEM VALVE
- RISING STEM GATE VALVE
- BALANCING VALVE (CIRCUIT SETTER)
- AUTOFLOW VALVE
- CHECK VALVE
- BALL VALVE
- PRESSURE REDUCING VALVE
- PRESSURE GAUGE
- THERMOMETER
- STRAINER
- SAFETY VALVE
- PIPING FLEXIBLE CONNECTIONS
- BUTTERFLY VALVE
- OR — CAP
- HOSE BIBB
- DOUBLE CHECK VALVE
- RPBA
- TRIPLE DUTY VALVE
- BALL VALVE MANUAL LEVER
- BUTTERFLY VALVE MANUAL LEVER
- BUTTERFLY GEAR VALVE
- GLOBE VALVE MANUAL LEVER
- BALANCE VALVE (PRESSURE INDEPENDENT)
- PUMP
- M — METER
- M — METER

PLUMBING NOTES

1. PLUMBING FIXTURES SHALL BE DESIGNED OR EQUIPPED TO MEET FOLLOWING MAXIMUM WATER USE EFFICIENCY STANDARDS:
   - A. WATER CLOSETS (TANK STYLE OR FLUSH VALVE). 1.28 GPF
   - B. SHOWER HEADS 1.5 GPM
   - C. RESIDENTIAL LAVATORY FAUCETS. 1.5 GPM
   - D. PUBLIC LAVATORY FAUCETS. 0.5 GPM
   - E. KITCHEN SINK FAUCETS 1.5 GPM

   SINK AND LAVATORY DRAINS SHALL BE CHROME PLATED 17 GA. BRASS TUBING BY ENGINEERED BRASS, DEARBORN BRASS OR BRASSCRAFT. PROVIDE INSULATED P-TRAP AND SUPPLY COVERS (TRUEBRO OR EQUAL) AT ALL EXPOSED P-TRAPS AND SUPPLIES PER A.D.A. STANDARDS.
2. PLUMBING FIXTURE MOUNTING SHALL COMPLY WITH CONTRACT DOCUMENTS, ADA, AND WASHINGTON STATE ACCESSIBILITY CODE.
3. COLD WATER AND HOT WATER PIPING SHALL BE INSULATED AND ROUTED FULL SIZE WITH APPROPRIATE SIZE REDUCTION AT POINT OF CONNECTION TO FIXTURE. 1/2" WATER LINE LIMITED TO 10'-0" DISTANCE FROM FIXTURE. "DEAD-LEGS" OR "FUTURE" STUBS ON ACTIVE POTABLE WATER LINES SHALL BE LIMITED TO 4" TO PREVENT STAGNANT WATER CONDITIONS.
4. INSTALL WATER PIPING ON WARM SIDE OF BUILDING INSULATION. SEE SPEC. FOR INSULATION SYSTEMS. SEE DWGS. FOR ELEC. HEAT TRACE REQUIREMENTS. SEE PLUMBING DETAILS FOR PIPE HANGER STYLE. SEE SPEC. FOR HANGER SPACING.
5. RISER DIAGRAMS & PLANS DO NOT SHOW SOME PIPING OFFSETS REQUIRE FOR STRUCTURAL CLEARANCES. EXACT ROUTING MAY VARY FROM THAT INDICATED.

ENERGY CODE NOTES

1. SEE SCHEDULE FOR WATER HEATER EQUIPMENT TYPE, CAPACITY AND EFFICIENCY.
2. PROVIDE PIPE INSULATION PER ENERGY CODE SECTION C404.6 AND SPECIFICATION SECTION 22 07 00.
3. ALL PIPE AND WRAP INSULATION SHALL BE LABELED WITH ITS THICKNESS AND INSULATING VALUE (R OR K).

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	MBH	1000 BRITISH THERMAL UNITS PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT	MED	MEDIUM
ADJ	ADJUSTABLE	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR	MEZZ	MEZZANINE
AFG	ABOVE FINISHED GRADE	MIN	MINIMUM
ALT	ALTERNATE	MISC	MISCELLANEOUS
AP	ACCESS PANEL		
APPROX	APPROXIMATE	N/A	NOT APPLICABLE
ARCH	ARCHITECTURAL/ARCHITECT	NC	NORMALLY CLOSED
AS	AIR SEPARATOR	NEG	NEGATIVE
AUX	AUXILIARY	NIC	NOT IN CONTRACT
		NOM	NOMINAL
BFF	BELOW FINISHED FLOOR	NPC	NON-POTABLE COLD WATER
BFG	BELOW FINISHED GRADE	NPCW	NON POTABLE COLD WATER
BHP	BRAKE HORSE POWER	NPH	NON-POTABLE HOT WATER
BLDG	BUILDING	NPHR	NON-POTABLE HOT WATER RETURN
BOP	BOTTOM OF PIPE	NPT	NATIONAL PIPE THREAD
BTU	BRITISH THERMAL UNIT	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT PER HOUR		
		OD	OUTSIDE DIAMTER/OVERLOW DRAIN
CA	COMBUSTION AIR	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	CEILING	OFOI	OWNER FURNISHED OWNER INSTALLED
CMU	CONCRETE MASONRY UNIT	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	ORL	OVERFLOW RAINWATER LEADER
COND	CONDENSATE		
CW	COLD WATER	ΔP	PRESSURE DIFFERENTIAL
CX	CONNECT TO EXISTING		
		PD	PLANTER DRAIN; PRESSURE DROP
dB	DECIBEL	PERF	PERFORATED
DCVA	DOUBLE CHECK VALVE ASSEMBLY	PH	PHASE
DDCV	DOUBLE DETECTOR CHECK VALVE	PIV	POST INDICATOR VALVE
DDCVA	DOUBLE DETECTOR CHECK VAVLE ASSEMBLY	PLBG	PLUMBING
DF	DRINKING FOUNTAIN	PRESS	PRESSURE
DFU	DRAINAGE FIXTURE UNIT	PRV	PRESSURE REDUCING VALVE
DHW	DOMESTIC HOT WATER	PSF	POUNDS PER SQUARE FOOT
DHWC	DOMESTIC HOT WATER RECIRCULATION	PSI	POUNDS PER SQUARE INCH
Ø OR DIA	DIAMETER	PSIG	POUNDS PER INCH GAUGE
DN	DOWN		
DWG(S)	DRAWING(S)	QTY	QUANTITY
DWV	DRAIN, WASTE, VENT		
		RD	ROOF DRAIN
EA	EACH	REQD	REQUIRED
EEW	EMERGENCY EYEWASH	RL	RAIN WATER LEADER
EFF	EFFICIENCY	RM	ROOM
ELEV	ELEVATION	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
EQUIP	EQUIPMENT	RPM	REVOLUTIONS PER MINUTE
ES	EMERGENCY SHOWER	RLX	RELOCATE EXISTING
ET	EXPANSION TANK	RV	RELIEF VALVE
EX	EXISTING/EXISTING TO REMAIN	RX	REMOVE EXISTING
EXP	EXPANSION		
		S	SINK
FC	FAIL CLOSED	S	STORM
FCO	FLOOR CLEANOUT	SCFM	STANDARD CUBIC FEET PER MINUT
FD	FLOOR DRAIN	SD	STORM DRAIN
FDC	FIRE DEPARTMENT CONNECTION	SF	SQUARE FOOT
FF	FINISHED FLOOR	SFU	SUPPLY FIXTURE UNIT
FLA	FULL LOAD AMPS	SH	SHOWER
FM	FORCE MAIN	S.O.V.	SHUTOFF VALVE
FO	FAIL OPEN	SPEC	SPECIFICATION
FP	FIRE PROTECTION	SS	STAINLESS STEEL
FPM	FEET PER MINUTE	STD	STANDARD
FPS	FEET PER SECOND	SYM	SYMBOL
FS	FLOOR SINK		
FSZV	FIRE SPRINKLER ZONE VALVE ASSEMBLY	T&P	TEMPERATURE AND PRESSURE RELIEF VALVE
FT	FEET/FOOT	TBD	TO BE DETERMINED
FTG	FOOTING	TD	TRENCH DRAIN
FV	FLUSH VALVE	TEMP	TEMPERATURE
		TOB	TOP OF BEAM
G	NATURAL GAS	TOC	TOP OF CONCRETE
GA	GAUGE	TOD	TOP OF DECK
GAL	GALLON	TOJ	TOP OF JOIST
G.C.	GENERAL CONTRACTOR	TOS	TOP OF SLAB/TOP OF STEEL
GCO	GRADE CLEANOUT	TP	TRAP PRIMER
GD	GARAGE DRAIN	T&P	TEMPERATURE & PRESSURE
GPF	GALLONS PER FLUSH	TYP	TYPICAL
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE	UL	UNDERWRITERS LABORATORY
GW	GREASE WASTE	UNO	UNLESS NOTED OTHERWISE
		UR	URINAL
H	HEIGHT		
HB	HOSE BIBB	V	VENT(S)
HBVB	HOSE BIBB VACUUM BREAKER	V	VOLT
HD	HEAD	VERT	VERTICAL
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HS	HAND SINK	VIB	VALVE-IN-BOX
HW	HOT WATER	VTR	VENT THROUGH ROOF
HX	HEAT EXCHANGER		
		W	WASTE/WATER
IE	INVERT ELEVATION	W/	WITH
IN	INCH/INCHES	W/IN	WITHIN
		W/O	WITHOUT
KW	KILOWATT/KILOWATTS	WC	WATER CLOSET
		WCO	WALL CLEANOUT
LAV	LAVATORY	WH	WATER HEATER
LB	LAUNDRY BOX	WPD	WATER PRESSURE DROP
LBS	POUNDS	WT	WEIGHT
LF	LINEAL FOOT		
LTG	LIGHTING	YCO	YARD CLEANOUT
LWT	LEAVING WATER TEMPERATURE		

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SOUTH KING FIRE & RESCUE
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FIRE STATION 67
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DES MOINES, WASHINGTON

PROJECT # 16025

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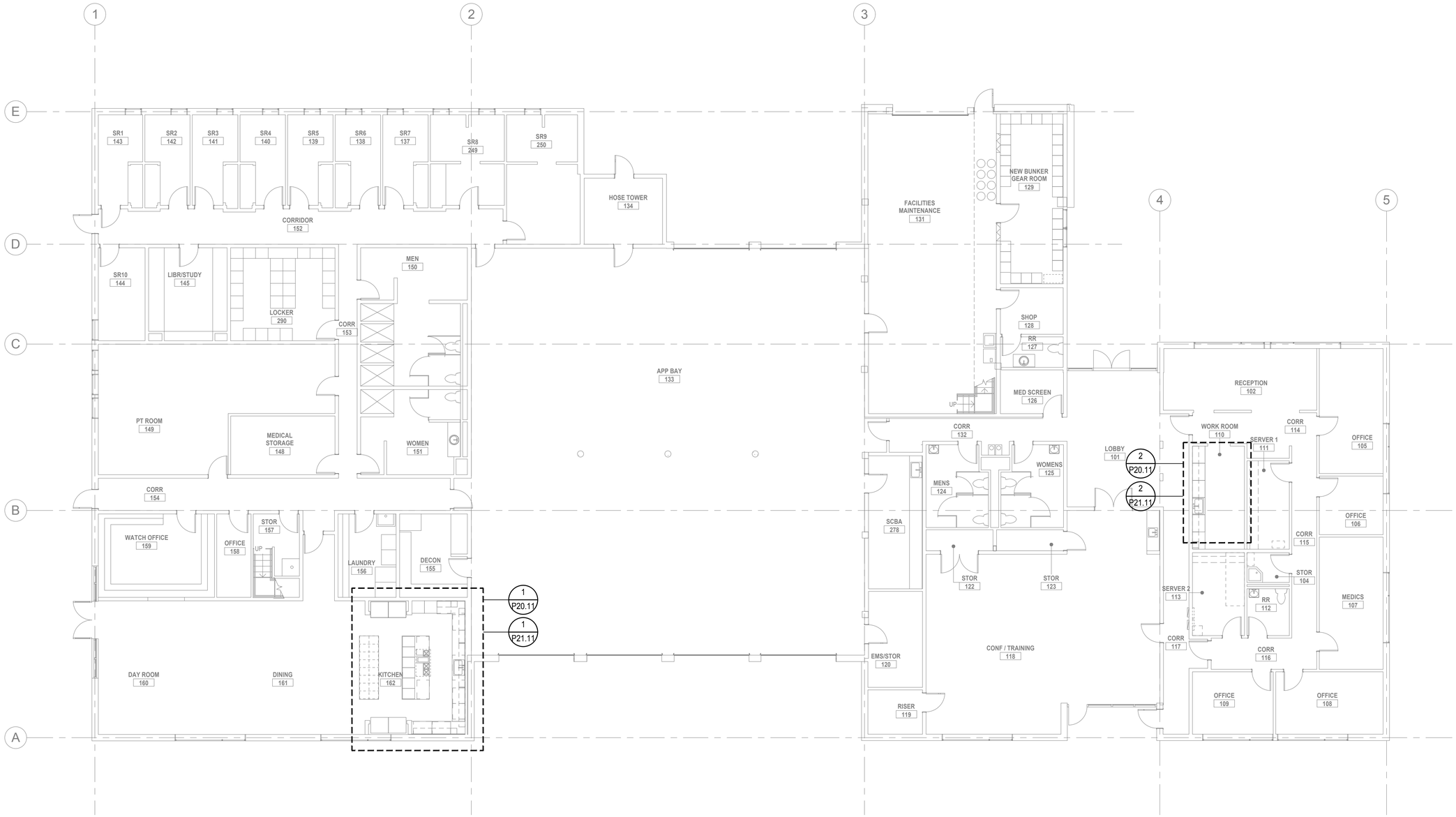
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REVISION SCHEDULE

COVER SHEET

SHEET:

P00.01



LEVEL 1 - PLUMBING FLOOR PLAN

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

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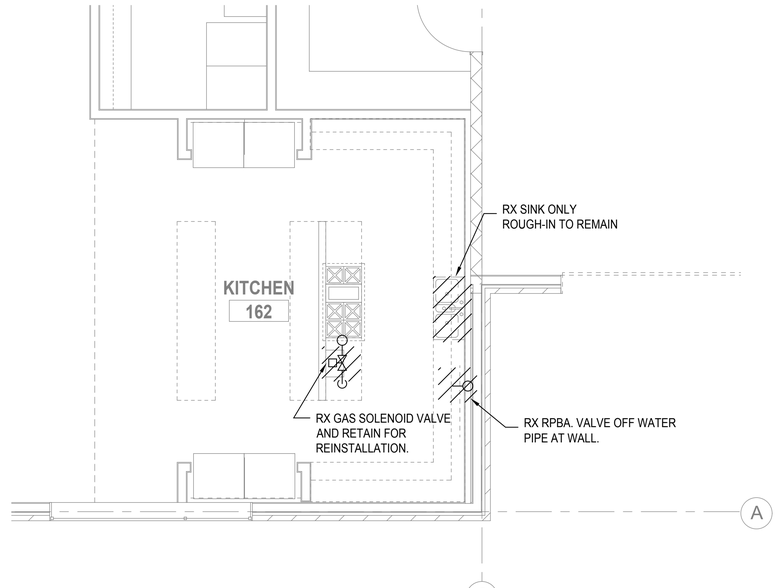
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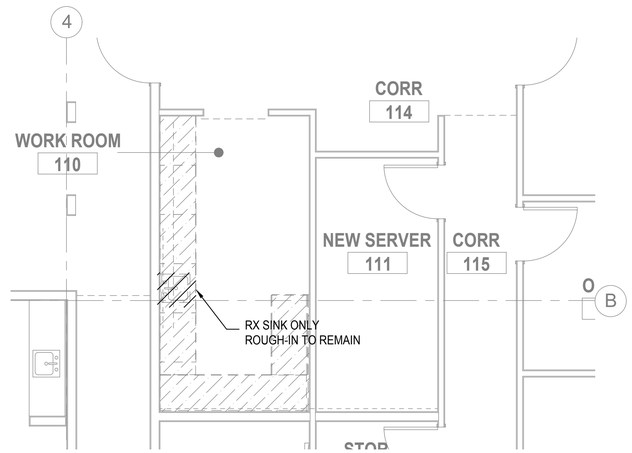
LEVEL 1
PLUMBING
FLOOR PLAN

SHEET:

P10.01



1 P20.11 N **ENLARGED KITCHEN DEMO PLAN**
SCALE: 1/4"=1'-0"



2 P20.11 N **ENLARGED WORK ROOM 110 DEMO PLAN**
SCALE: 1/4"=1'-0"

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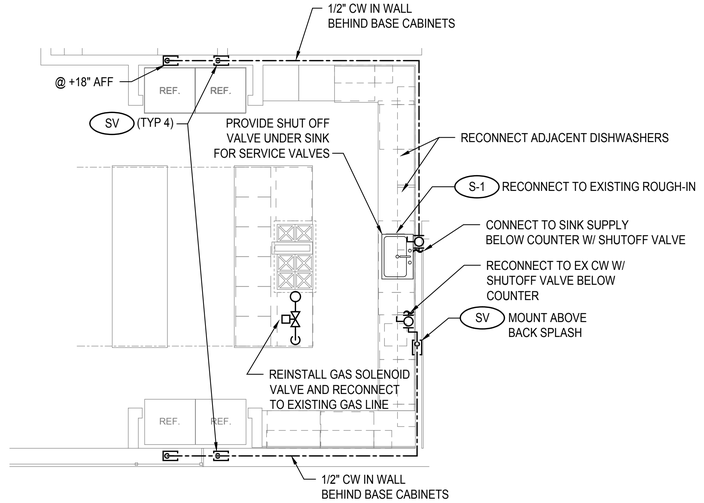
PARTIAL LEVEL 1
PLUMBING
DEMOLITION
FLOOR PLAN

SHEET:

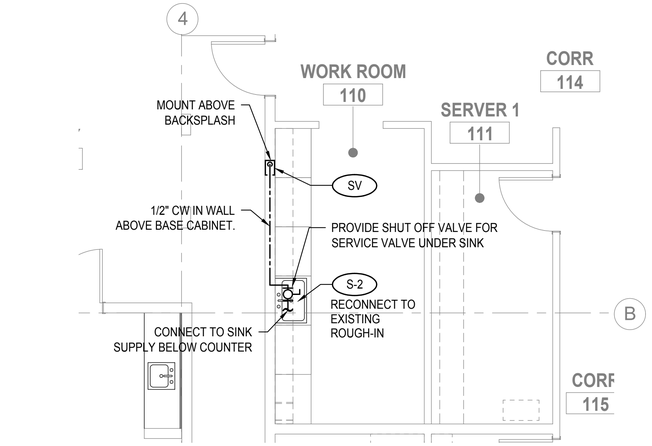
P20.11

PLUMBING FIXTURE SCHEDULE

MARK	ITEM	MFR: MODEL	DESCRIPTION
S-1	SINK	ELKAY: DLRS332212	33"X22"X12" DEEP, SINGLE COMPARTMENT, #18 GAUGE STAINLESS STEEL, SELF-RIMMING SOUND DEADENED, 5 HOLES ON 4" CENTERS.
	FAUCET	T&S BRASS: MPZ-2DLN-06	6" SWING NOZZLE, 8" RISER, 24" FLEXIBLE STAINLESS STEEL HOSE, 1.42 GPM, SINGLE HOLE FAUCET.
	DRAIN		CRUMB CUP STRAINER, 1 1/2" TAILPIECE, STAINLESS STEEL.
	HOT/COLD WATER DISPENSER	INSINKERATOR: F-HC3300 HWT-F1000S	2/3 GALLON HOT WATER TANK, ADJUSTABLE TEMPERATURE, SELF CLOSING VALVE, F-1000S FILTRATION SYSTEM, BRASS FAUCET 750 WATTS, 120 VOLT PLUG
	DISPOSER	INSINKERATOR: EVOLUTION EXCEL	1 HP, 1725 RPM 120 VOLT PLUG
S-2	WORK SINK	ELKAY: DLRS222210	22"X22"X10-1/8" DEEP, SINGLE COMPARTMENT, #18 GAUGE STAINLESS STEEL, SELF-RIMMING SOUND DEADENED, 4 HOLES ON 4" CENTERS.
	FAUCET	CHICAGO: 786-ABCP	9" HIGH X 5" SWINGING GOOSENECK, 2.0 GPM, LEVER HANDLES.
	DRAIN		CRUMB CUP STRAINER, 1 1/2" TAILPIECE, STAINLESS STEEL.
	HOT/COLD WATER DISPENSER	INSINKERATOR: F-HC3300 HWT-F1000S	2/3 GALLON HOT WATER TANK, ADJUSTABLE TEMPERATURE, SELF CLOSING VALVE, F-1000S FILTRATION SYSTEM, BRASS FAUCET 750 WATTS, 120 VOLT PLUG
SV	SERVICE VALVE	SIOUX CHIEF: 696-G1010MF	1/2" SERVICE STOP FOR SUPPLY WATER, WATER HAMMER ARRESTOR, OUTLET BOX, 5-3/4" X 7-1/4" BOX.



1 / P21.11 — **ENLARGED KITCHEN PLAN**
SCALE: 1/4"=1'-0"



2 / P21.11 — **ENLARGED WORK ROOM 110 PLAN**
SCALE: 1/4"=1'-0"

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PARTIAL FLOOR PLAN

SHEET:
P21.11

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	LIGHTING
	SURFACE OR PENDANT MOUNT LIGHT FIXTURE (CIRCLE INDICATES RECESSED OR CONCEALED JUNCTION BOX)
	SURFACE OR PENDANT MOUNT LIGHT (CIRCLE INDICATES RECESSED OR CONCEALED JUNCTION BOX)
	RECEPTACLES
	DUPLEX RECEPTACLE
G	DUPLEX RECEPTACLE (G INDICATES GROUND FAULT CIRCUIT INTERRUPTER)
C	DUPLEX RECEPTACLE (C INDICATES ABOVE COUNTER)
	FOURPLEX RECEPTACLE
	EQUIPMENT, WIRING AND RACEWAYS
	CONDUIT STUB OUT (PROVIDE CONCRETE MARKER ON EXTERIOR)
	DEDICATED CONDUIT HOMERUN TO PANEL & CIRCUIT NUMBERS AS INDICATED ON PLANS
	RACEWAY CONCEALED IN WALL OR CEILING
	RACEWAY CONCEALED UNDERGROUND OR UNDER FLOOR SLAB
	MARKS INDICATE NUMBER OF #12 AWG UNLESS NOTED OTHERWISE
	GROUNDING CONDUCTOR
	FLEXIBLE CONDUIT
	GROUNDING SYSTEM PER CODE
J	JUNCTION BOX - SIZE PER CODE (F INDICATES FIRE ALARM SYSTEM)
	MOTOR CONNECTION
M	MANUAL STARTER
	FUSED DISCONNECT SWITCH
	277/480 VOLT PANELBOARD
	120/208 VOLT PANELBOARD (OR AT RATED VOLTAGE AS NOTED)
	EXISTING PANELBOARD TO BE RETAINED
	MAIN DISTRIBUTION BOARD
	ENCLOSED CIRCUIT BREAKER, AMPERES AS INDICATED
M	METER
	METER CONTROL STATION

SYMBOL	DESCRIPTION
	SWITCHES
$	SINGLE POLE SWITCH
$D	DIMMING SWITCH - SINGLE POLE
$T	TIMER SWITCH
$VS	COMBINATION SWITCH / VACANCY SENSOR
$3	THREE WAY SWITCH
$4	FOUR WAY SWITCH
a $$ b	MULTI-GANGED SWITCH (LOWER CASE LETTERS INDICATES SWITCHING)
	PUSH BUTTON EMERGENCY SHUTOFF SWITCH
	SYSTEMS
TV	TELEVISION OUTLET - WALL MOUNT AT + 18" AFF UNLESS OTHERWISE NOTED.
	CABLE TRAY
	MISCELLANEOUS
1	CONSTRUCTION NOTES
1	DEMOLITION NOTES
W	W INDICATES WEATHERPROOF FOR ALL DEVICES, PROVIDE LOCKING COVER ON RECEPTACLES.
	ALL DEVICES WITH LIGHT LINE WEIGHT INDICATES EXISTING TO BE RETAINED
	ALL DEVICES WITH DASH LINE INDICATES EXISTING TO BE REMOVED
A / X	DETAIL CALL OUT - A INDICATES DETAIL IDENTIFICATION, X INDICATES SHEET DRAWN ON
AH1 / 1	MECHANICAL EQUIPMENT CONNECTION

ABBREVIATIONS

G	GROUND FAULT CIRCUIT INTERRUPTER	UC	UNDERCOUNTER
C	MOUNT ABOVE COUNTER	UG	UNDERGROUND
DW	DISHWASHER	C.	CONDUIT
EC	ELECTRICAL CONTRACTOR	CO	CONDUIT ONLY
MC	MECHANICAL CONTRACTOR	GR	GROUND
REQ'D	REQUIRED	SPD	SURGE PROTECTIVE DEVICE
TTB	TELEPHONE TERMINAL BOARD	CU	COPPER
MW	MICROWAVE	XFMR	TRANSFORMER
REF	REFRIGERATOR	GC	GENERAL CONTRACTOR

GENERAL NOTES

1. PRIOR TO BIDING, THE CONTRACTOR/INSTALLING VENDOR SHALL VERIFY ALL CMU/CONCRETE WALLS, BRICK WALLS, EXISTING UNDERGROUND CONDUIT CAPACITIES, CABLE ROUTING AND ALL WORK REQUIRED TO FACILITATE A COMPLETE AND FULLY FUNCTIONAL SYSTEM. ALL WALLS SHALL BE CORE DRILLED AS REQUIRED.
2. BIDS SHALL INCLUDE ALL CORE DRILLING REQUIRED TO FACILITATE ALL CONDUIT WORK. THE CONTRACTOR/INSTALLING VENDOR SHALL X-RAY THE EXISTING CONCRETE SLABS AND WALLS PRIOR TO CORE DRILLING. CORE DRILLED HOLES SHALL NOT PENETRATE THROUGH ANY EXISTING REBAR AND/OR CONDUIT CONTAINED IN THE EXISTING CONCRETE SLAB AND WALLS. CORE DRILL LOCATIONS MAY NEED TO BE MODIFIED TO ACCOMMODATE EXISTING OBSTRUCTIONS CONTAINED WITHIN THE FLOOR AND WALLS. NEVER CORE DRILL A STRUCTURAL BEAM OR MODIFY THE STRUCTURAL INTEGRITY OF THE BUILDING.
3. CONTRACTOR SHALL REFER TO STRUCTURAL DRAWINGS FOR BRACE FRAMED WALLS. CONTRACTOR SHALL MOUNT DEVICES AND ROUTE CONDUIT SO AS NOT TO INTERFERE WITH THE STRUCTURAL INTEGRITY OF THE WALL.
4. CONDUITS ARE NOT ALLOWED TO BE ROUTED IN ANY CONCRETE SLAB. CONDUITS MAY BE ROUTED UNDER THE SLAB ONLY.
5. ALL CONDUITS ROUTED UNDER THE CONCRETE SLAB SHALL BE ROUTED PARALLEL TO ONE ANOTHER AND MAY NOT CROSS OVER EACH OTHER UNLESS SPECIFICALLY ALLOWED BY THE ENGINEER.
6. ALL SPARE CONDUITS (FOR FUTURE USE) SHALL BE LABELED "SPARE/FUTURE CONDUIT" AT EACH END OF THE CONDUIT WITH 1/2" TALL LETTERS, USING A PERMANENT MARKER.
7. ALL CABLING SHALL BE RUN IN CONDUIT AND CONDUIT SHALL BE RUN PARALLEL OR PERPENDICULAR TO THE STRUCTURE. THE CONTRACTOR/INSTALLING VENDOR SHALL COORDINATE ALL CONDUIT ROUTING WITH THE OWNER. NEATLY SURFACE MOUNT EXPOSED CONDUIT.
8. ALL OUTLETS, SWITCHES, AND DEVICES MOUNTED BACK TO BACK IN A WALL MUST BE SPACED A MINIMUM OF 24" APART TO MEET ACOUSTICAL REQUIREMENTS.
9. THE CABLING AND EQUIPMENT REQUIREMENTS FOR ALL SYSTEMS SHALL BE INCLUDED IN THE CONTRACTOR'S/INSTALLING VENDOR'S BID.
10. WHEN PENETRATING FIRE RATED WALLS, FLOORS, OR CEILINGS, THE CONTRACTOR/ INSTALLING VENDOR SHALL UTILIZE FIRE RATED PENETRATION METHODS. THE FIRE RATING OF THE WALL SHALL BE MAINTAINED AFTER THE CONDUIT OR WIREWAY HAS BEEN INSTALLED.
11. REPAIRS FOR ANY DAMAGE DONE DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO REPAIRS WHERE EXISTING DEVICES ARE REMOVED, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR/INSTALLING VENDOR AT NO ADDITIONAL COST TO THE OWNER.
12. CONTRACTOR/INSTALLING VENDOR MAY UTILIZE ANY SPARE OR ABANDONED CONDUIT PER OWNERS APPROVAL.
13. ONLY BRANCH CIRCUIT HOME RUNS ARE SHOWN WITH NUMBER OF CONDUCTORS/WIRES. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED CONDUCTORS/WIRES TO ALL DEVICES AS NECESSARY IN ORDER TO INSTALL ALL CIRCUITS, SWITCHING AND GROUNDING COMPLETE. PANEL CIRCUIT NUMBERS AS SHOWN TO CLARIFY CIRCUITING CONFIGURATION. CONDUCTOR HASH MARKS ARE NOT SHOWN FOR #12 WIRE, #10 NEUTRAL SWITCH LEGS OR GROUNDING CONDUCTORS BETWEEN DEVICES.

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11/22/2016

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PROJECT # 2015137

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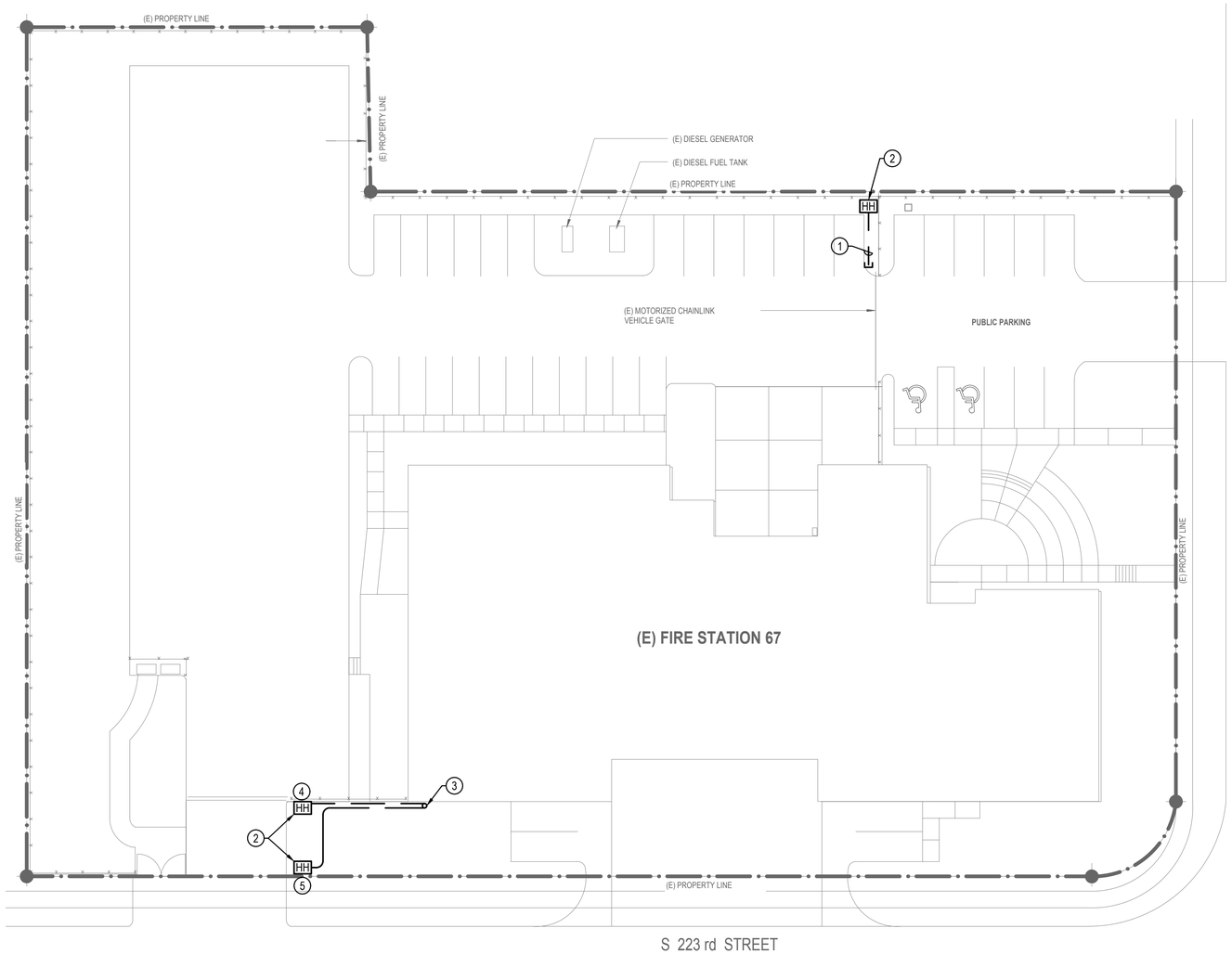
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ELECTRICAL LEGEND, GENERAL NOTES

SHEET:

E0.01



1 ELECTRICAL SITE PLAN
SCALE: 1"=20'-0"

N

CONSTRUCTION NOTES

1. EXTEND EXISTING (2) 1" C.O. TO NEW HANDHOLE.
2. PROVIDE FOGTITE TYPE 2 HANDHOLE. WITH GALVANIZED COVER.
3. ROUTE (2) 1" C.O. DOWN WALL, TO UNDERGROUND TO NEW HANDHOLES. SEE SHEET E1.12 FOR ADDITIONAL INFORMATION.
4. HANDHOLE FOR FUTURE GATE POWER.
5. HANDHOLE FOR FUTURE CARD ACCESS.

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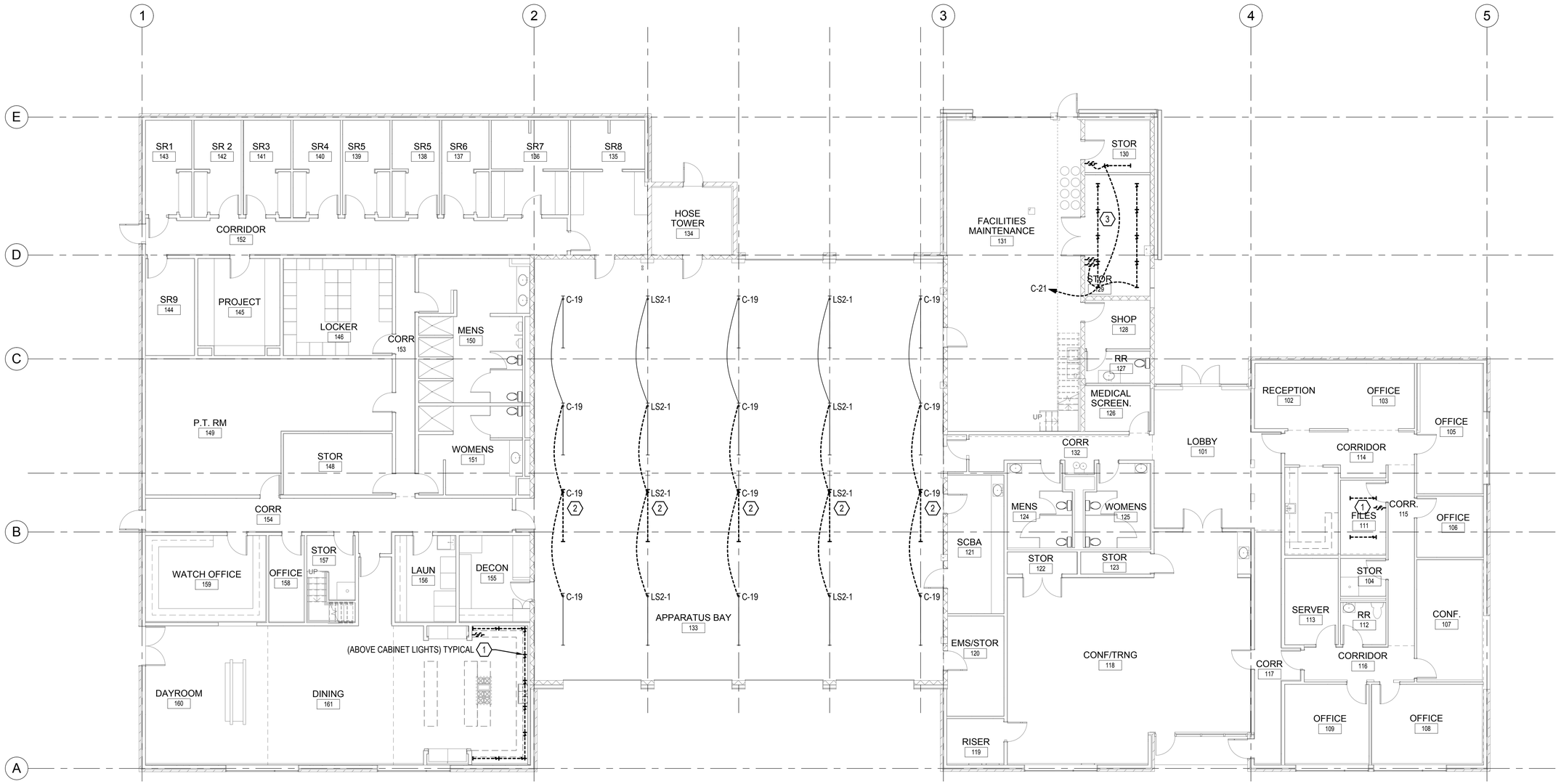
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ELECTRICAL SITE PLAN

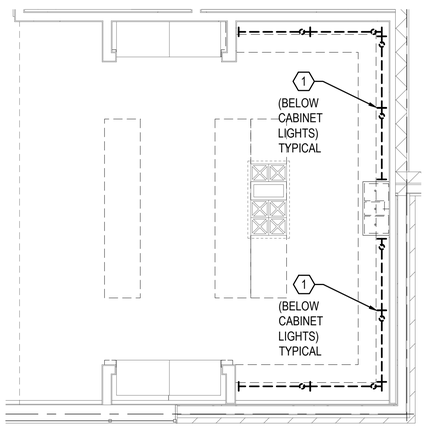
SHEET:

E1.01



1 LEVEL 1 - DEMO LIGHTING PLAN

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



2 LEVEL 1 - UNDER CABINET DEMO LIGHTING PLAN

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

DEMOLITION NOTES

1. DISCONNECT AND REMOVE EXISTING LIGHTS. MAINTAIN EXISTING CIRCUIT AND SWITCH TO NEW LIGHTS.
2. DISCONNECT AND RELOCATE EXISTING LIGHT TO ACCOMMODATE NEW STRUCTURAL INFRASTRUCTURE.
3. DISCONNECT AND REMOVE EXISTING LIGHTS AND SWITCHES. MAINTAIN EXISTING CIRCUIT AND HOMERUN FOR NEW LIGHTS.

GENERAL DEMOLITION NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INCLUDE IN HIS/HER BID ALL COSTS ASSOCIATED WITH NECESSARY DEMOLITION TO ALLOW NEW CONSTRUCTION SHOWN IN CONTRACT DOCUMENTS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, LIGHTING FIXTURES, DEVICES, ABANDONED RACEWAYS, CONDUCTORS, TOGETHER WITH ANY AUXILIARY ITEMS TO ALLOW NEW CONSTRUCTION AND FINISH TO OCCUR AS COMPLIMENTED BY THE CONTRACT DOCUMENTS. DASHED LINES INDICATE EXISTING DEVICES AND EQUIPMENT TO BE REMOVED.
2. THESE PLANS DELINEATE THE BASIC SCOPE OF WORK FOR THE REMOVAL OF EXISTING MATERIAL. THE DEMOLITION DRAWINGS AND NOTES ARE PROVIDED WITH THE INTENT TO GENERALLY DESCRIBE AREAS AND LIMITS OF WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SITE AND CONDITIONS THERE AND SHALL NOT RELY SOLELY ON REVIEW OF THE BIDDING DOCUMENTS IN DETERMINING THE EXTENT OF DEMOLITION WORK REQUIRED. COORDINATION OF THESE DRAWINGS WITH REQUIREMENTS FOR CONTRACT WORK IS THE RESPONSIBILITY OF THE CONTRACTOR. DISCREPANCIES BETWEEN OR WITHIN THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. THE CONTRACTOR SHALL PROVIDE CLARITY SKETCHES, DIAGRAMS, AND FIELD DIMENSTIONS OF EXISTING CONDITIONS AT THE REQUEST OF THE ENGINEER IF/WHEN CONFLICTS ARE IDENTIFIED.
3. E.C. TO REMOVE ELECTRICAL CONNECTIONS TO ALL MECHANICAL EQUIPMENT TO BE DEMOLISHED. E.C. SHALL CHECK ALL DEMOLITION PLANS AND ACTUAL FIELD CONDITIONS FOR UNIT LOCATIONS. ALL CONDUITS PENETRATING THROUGH THE ROOF AND ACCESSIBLE SHALL BE REMOVED.
4. THE DEMOLITION PLANS HAVE NO INTENT TO SHOW ALL ELECTRICAL DEVICES TO BE REMOVED. ELECTRICAL CONTRACTOR SHALL VERIFY DEMOLITION WORK INVOLVED PRIOR TO BID.
5. REMOVE ALL ELECTRICAL AND SIGNALING DEVICES (INCLUDING, BUT NOT LIMITED TO REMOVAL OF ALL ELECTRICAL PANELS, LIGHTING FIXTURES, RECEPTACLES, MOTOR DISCONNECTS, FIRE ALARM AND OTHER LOW VOLTAGE DEVICES). UNLESS NOTED OTHERWISE.
6. REMOVE ALL WIRES, CABLES AND SURFACE MOUNT RACEWAYS AND APPURTENANCES WHICH SERVE DEVICES BEING REMOVED, CUT CONDUIT FLUSH TO CEILING OR WALL WHEN CONCEALED, AND SEAL OFF WITH SPRAY FOAM. ABANDON FLUSH BOXES AND NON-ACCESSIBLE CONDUIT. PROVIDE COVER PLATES FOR ALL BOXES TO REMAIN.
7. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR FOR ALL CUTTING, PATCHING AND FINISH WORK.
8. CONTRACTOR TO REMOVE AND DELIVER TO OWNER ALL DEVICES THAT ARE IDENTIFIED BY OWNER TO BE RETAINED. CONTRACTOR SHALL COORDINATE WITH OWNER TO ASSURE THAT ALL ITEMS TO BE RETAINED ARE IDENTIFIED PRIOR TO THE START OF DEMOLITION. ALL ITEMS NOT SO IDENTIFIED SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSE OF OFF SITE.
9. FIELD VERIFY EXISTING CONDITIONS AND RACEWAYS CAST IN CONCRETE.
10. EXTEND EXISTING SYSTEMS EQUIPMENT AS REQUIRED, TO HAVE EACH SEPARATED SYSTEM TO REMAIN FULLY FUNCTIONAL IN EACH BUILDING.

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CHARLES A. HEANEY — STATE OF WASHINGTON — 33886 — REGISTERED PROFESSIONAL ENGINEER

11/22/2016

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 67
2238 S 223rd STREET
DES MOINES, WASHINGTON

PROJECT # 2015137

BID SET

ISSUED: NOVEMBER 22,2016

REVISION SCHEDULE

LEVEL 1 - LIGHTING DEMO PLAN

SHEET:

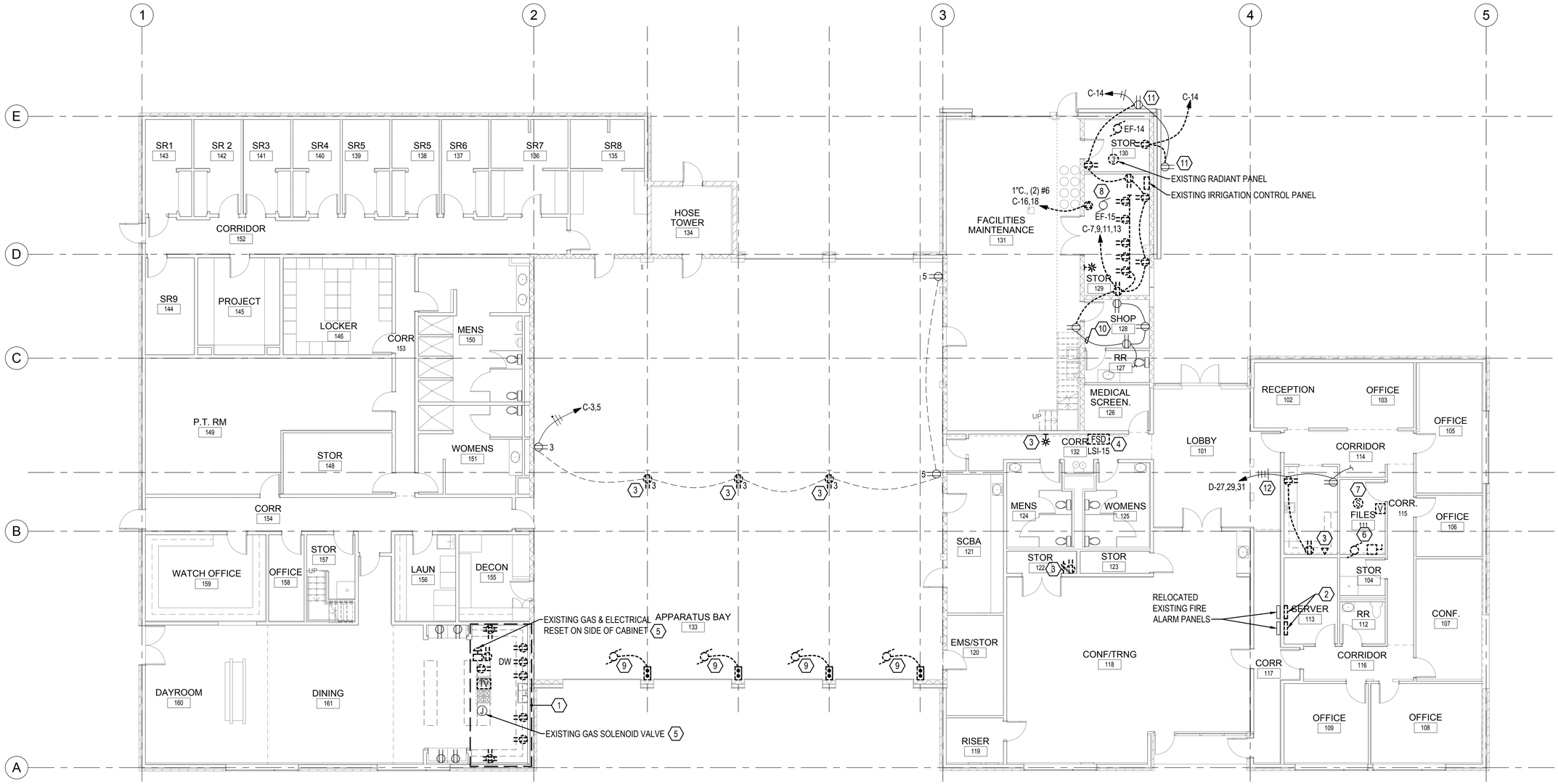
ED1.11

DEMOLITION NOTES

1. DISCONNECT AND REMOVE EXISTING DEVICES. MAINTAIN EXISTING CIRCUITS FOR RECONNECTION TO NEW DEVICES.
2. RELOCATE EXISTING FIRE ALARM PANELS TO NEW LOCATION AS INDICATED. INTERCEPT AND EXTEND EXISTING FIRE ALARM CIRCUITS.
3. REMOVE EXISTING DEVICE TO ALLOW FOR STRUCTURAL WORK. EXTEND EXISTING BACKBOX AND WIRING REINSTALL DEVICE AND PLATE.
4. DISCONNECT EXISTING FIRE / SMOKE DAMPER. RECONNECT TO NEW FIRE / SMOKE DAMPER.
5. DISCONNECT REMOVE AND REINSTALL TO ACCOMMODATE NEW CASEWORK.
6. DISCONNECT EXISTING MECHANICAL EQUIPMENT AND DISCONNECT SWITCH, TO ALLOW FOR STRUCTURAL UPGRADE. REINSTALL DISCONNECT SWITCH AND CONNECTION TO MECHANICAL EQUIPMENT.
7. DISCONNECT AND REMOVE EXISTING SPEAKER AND VOLUME CONTROL. TURN OVER TO OWNER.
8. MAINTAIN EXISTING EXHAUST FAN.
9. DISCONNECT EXISTING MOTORIZED DOOR MOTOR AND CONTROLS. RECONNECT NEW MOTORIZED DOOR MOTOR AND CONTROL AT SAME LOCATION.
10. RECONNECT EXISTING RECEPTACLE TO ADJACENT LIVE 120 VOLT CIRCUIT.
11. PROVIDE NEW CONNECTIONS TO EXISTING RECEPTACLES AND NEW HOMERUN TO PANEL.
12. MAINTAIN EXISTING HOMERUN FOR REUSE FOR NEW DEVICES. SEE SHEET E4.01 FOR ADDITIONAL INFORMATION.

GENERAL DEMOLITION NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INCLUDE IN HIS/HER BID ALL COSTS ASSOCIATED WITH NECESSARY DEMOLITION TO ALLOW NEW CONSTRUCTION SHOWN IN CONTRACT DOCUMENTS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, LIGHTING FIXTURES, DEVICES, ABANDONED RACEWAYS, CONDUCTORS, TOGETHER WITH ANY AUXILIARY ITEMS TO ALLOW NEW CONSTRUCTION AND FINISH TO OCCUR AS COMPLIMENTED BY THE CONTRACT DOCUMENTS. DASHED LINES INDICATE EXISTING DEVICES AND EQUIPMENT TO BE REMOVED.
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3. E.C. TO REMOVE ELECTRICAL CONNECTIONS TO ALL MECHANICAL EQUIPMENT TO BE DEMOLISHED. E.C. SHALL CHECK ALL DEMOLITION PLANS AND ACTUAL FIELD CONDITIONS FOR UNIT LOCATIONS. ALL CONDUITS PENETRATING THROUGH THE ROOF AND ACCESSIBLE SHALL BE REMOVED.
4. THE DEMOLITION PLANS HAVE NO INTENT TO SHOW ALL ELECTRICAL DEVICES TO BE REMOVED. ELECTRICAL CONTRACTOR SHALL VERIFY DEMOLITION WORK INVOLVED PRIOR TO BID.
5. REMOVE ALL ELECTRICAL AND SIGNALING DEVICES (INCLUDING, BUT NOT LIMITED TO REMOVAL OF ALL ELECTRICAL PANELS, LIGHTING FIXTURES, RECEPTACLES, MOTOR DISCONNECTS, FIRE ALARM AND OTHER LOW VOLTAGE DEVICES). UNLESS NOTED OTHERWISE.
6. REMOVE ALL WIRES, CABLES AND SURFACE MOUNT RACEWAYS AND APPURTENANCES WHICH SERVE DEVICES BEING REMOVED, CUT CONDUIT FLUSH TO CEILING OR WALL WHEN CONCEALED, AND SEAL OFF WITH SPRAY FOAM. ABANDON FLUSH BOXES AND NON-ACCESSIBLE CONDUIT. PROVIDE COVER PLATES FOR ALL BOXES TO REMAIN.
7. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR FOR ALL CUTTING, PATCHING AND FINISH WORK.
8. CONTRACTOR TO REMOVE AND DELIVER TO OWNER ALL DEVICES THAT ARE IDENTIFIED BY OWNER TO BE RETAINED. CONTRACTOR SHALL COORDINATE WITH OWNER TO ASSURE THAT ALL ITEMS TO BE RETAINED ARE IDENTIFIED PRIOR TO THE START OF DEMOLITION. ALL ITEMS NOT SO IDENTIFIED SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSE OF OFF SITE.
9. FIELD VERIFY EXISTING CONDITIONS AND RACEWAYS CAST IN CONCRETE.
10. EXTEND EXISTING SYSTEMS EQUIPMENT AS REQUIRED, TO HAVE EACH SEPARATED SYSTEM TO REMAIN FULLY FUNCTIONAL IN EACH BUILDING.



1 LEVEL 1 - DEMO POWER & SYSTEMS PLAN
SCALE: 1/8"=1'-0"

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11/22/2016

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

2238 S 223rd STREET
FIRE STATION 67
DES MOINES, WASHINGTON

PROJECT # 2015137

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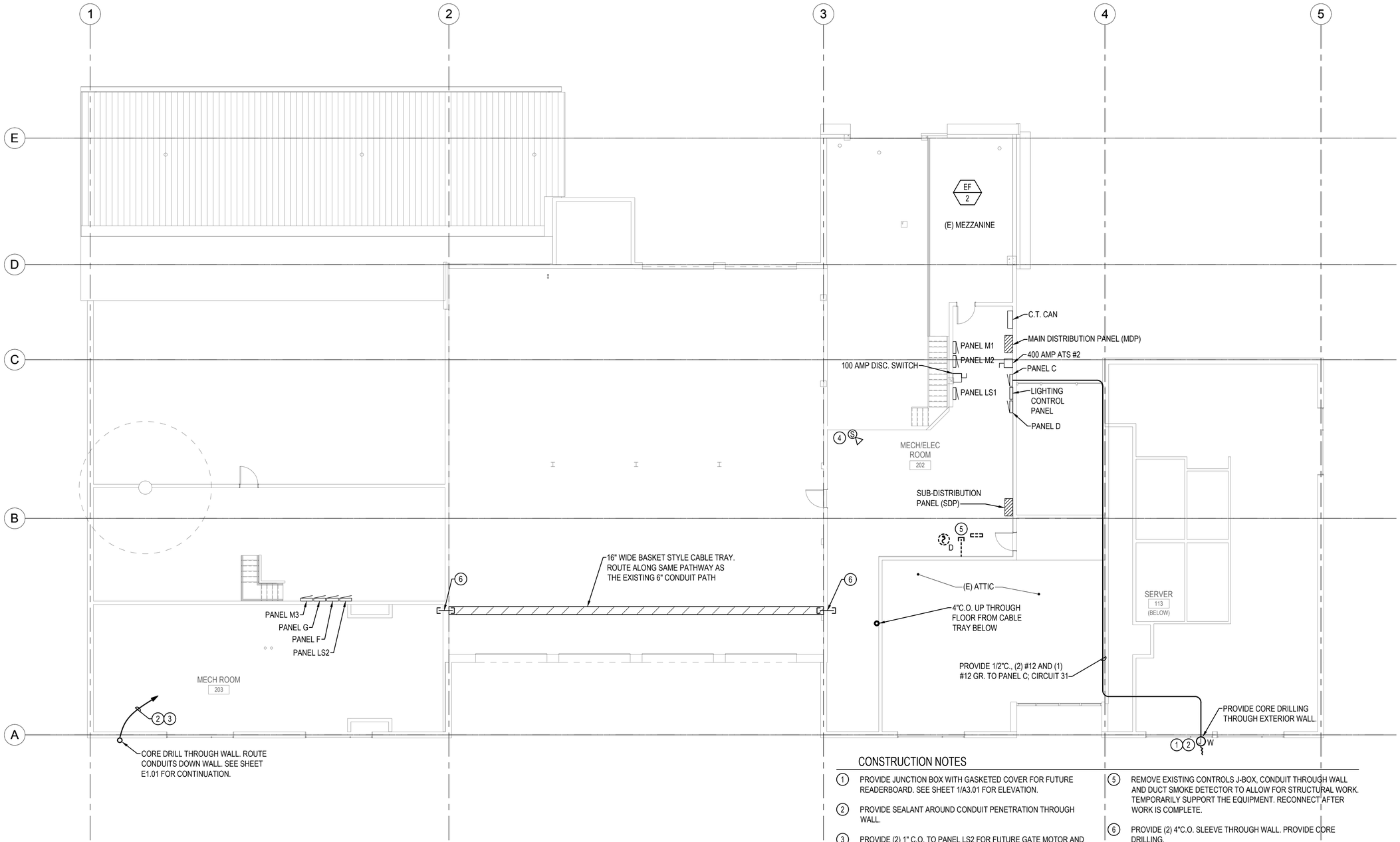
ISSUED: NOVEMBER 22,2016

REVISION SCHEDULE

LEVEL 1 - DEMO POWER & SYSTEMS PLAN

SHEET:

ED1.12



CONSTRUCTION NOTES

1. PROVIDE JUNCTION BOX WITH GASKETED COVER FOR FUTURE READERBOARD. SEE SHEET 1/A3.01 FOR ELEVATION.
2. PROVIDE SEALANT AROUND CONDUIT PENETRATION THROUGH WALL.
3. PROVIDE (2) 1" C.O. TO PANEL LS2 FOR FUTURE GATE MOTOR AND CARD ACCESS.
4. DISCONNECT AND REMOVE EXISTING LOUD SPEAKER TO ACCOMMODATE STRUCTURAL WORK. REINSTALL AFTER WORK IS COMPLETE.
5. REMOVE EXISTING CONTROLS J-BOX, CONDUIT THROUGH WALL AND DUCT SMOKE DETECTOR TO ALLOW FOR STRUCTURAL WORK. TEMPORARILY SUPPORT THE EQUIPMENT. RECONNECT AFTER WORK IS COMPLETE.
6. PROVIDE (2) 4"C.O. SLEEVE THROUGH WALL. PROVIDE CORE DRILLING.

1 LEVEL 2 - ELECTRICAL PLAN

SCALE: 1/8"=1'-0" (PANEL LOCATION REFERENCE ONLY)

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LEVEL 2 - EXISTING ELECTRICAL PLAN

SHEET:

E1.12

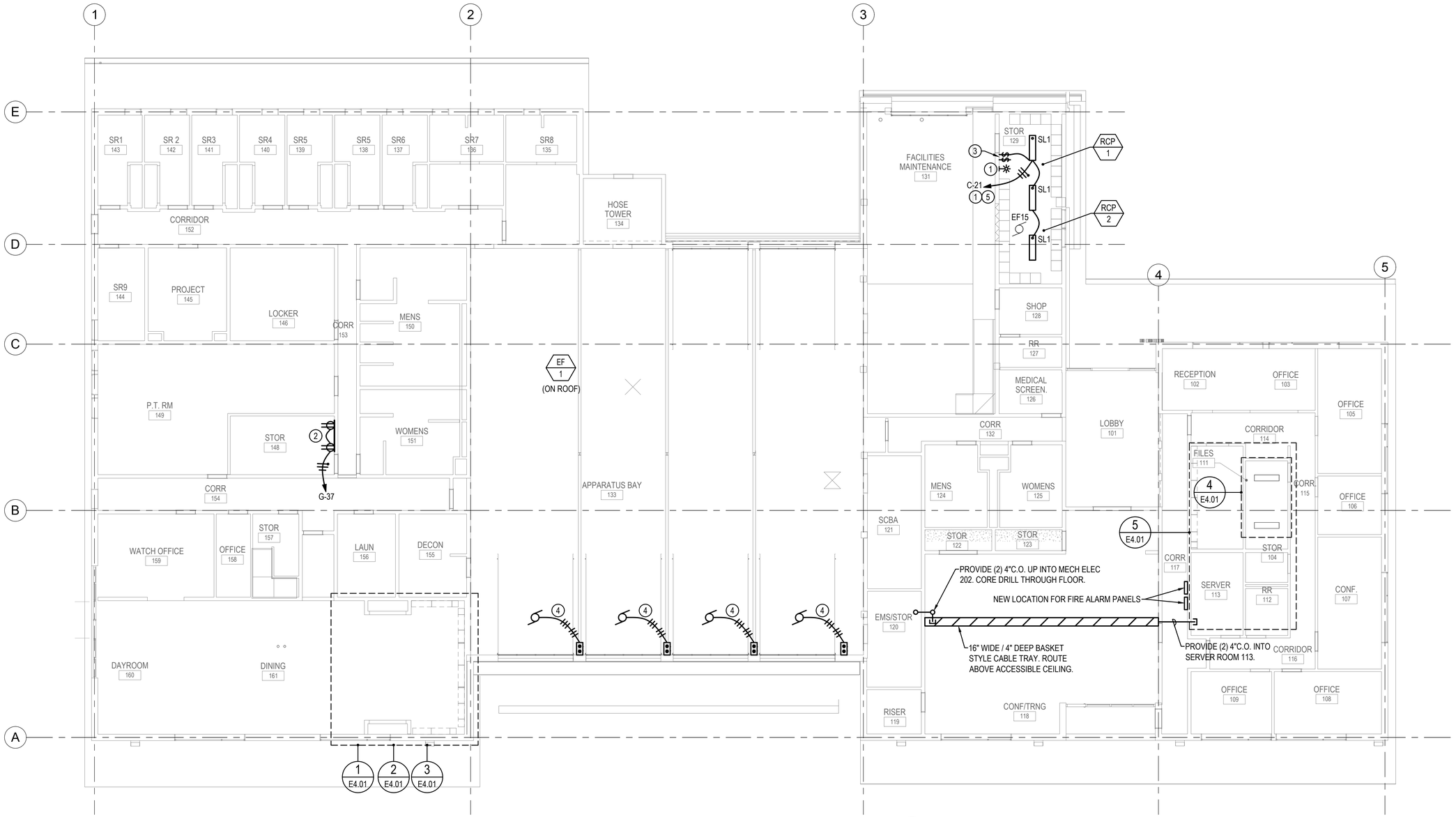
MECHANICAL EQUIPMENT CONNECTION SCHEDULE (EXHAUST FANS, AIR HANDLING UNITS, ETC)

EQUIP.	VOLT/PH	LOAD VA	LOAD MCA	LOAD HP	CIRCUIT PANEL	CIRCUIT BKR	CONDUIT/WIRE SIZE	MANUAL STARTER (NOTE 1)	MAGNETIC STARTER (NOTE 1)	FUSED DISC. (NOTE 1)	REMARKS
EF- 1	208/3	2482	6.9	1-1/2	M2	23,25,27	3/4" C., (4)#12 & (1) #12 GR	--	EC	EC	PROVIDE 60 MINUTE TIMER SWITCH ON WALL FOR CONTROL. COORDINATE WITH MECHANICAL CONTRACTOR & DRAWINGS FOR ADDITIONAL INFORMATION.
EF- 2	120/1	348	2.9	1/10	M2	5	1/2" C., (2)#12 & (1) #12 GR	--	EC	EC	
RCP- 1	208/1	750	3.6		M2	22,24	3/4" C., (3)#12 & (1) #12 GR	--	--	--	PROVIDE CONNECTION TO WALL MOUNT T-STAT. T-STAT PROVIDED BY MC, INSTALLED BY EC.
RCP- 2	208/1	750	3.6		M2	22,24	3/4" C., (3)#12 & (1) #12 GR	--	--	--	PROVIDE CONNECTION TO WALL MOUNT T-STAT. T-STAT PROVIDED BY MC, INSTALLED BY EC.

NOTE: 1. CONTRACTOR LISTED SHALL FURNISH AND INSTALL THE LISTED DEVICE.

CONSTRUCTION NOTES

1. NEW LOCATION FOR EXISTING FIRE ALARM HORN.
2. PROVIDE RECEPTACLES FOR CHARGERS. VERIFY WITH OWNER FOR EXACT HEIGHT.
3. PROVIDE LINE VOLTAGE SWITCH FOR CONTROL OF EXISTING EF-15.
4. PROVIDE CONNECTION TO NEW MOTORIZED DOOR AND CONTROLLER. RECONNECT TO EXISTING CIRCUIT.
5. RECONNECT NEW LIGHTS TO EXISTING LIGHT CIRCUIT.



1 LEVEL 1 - LIGHTING, POWER & SYSTEMS PLAN
SCALE: 1/8"=1'-0"

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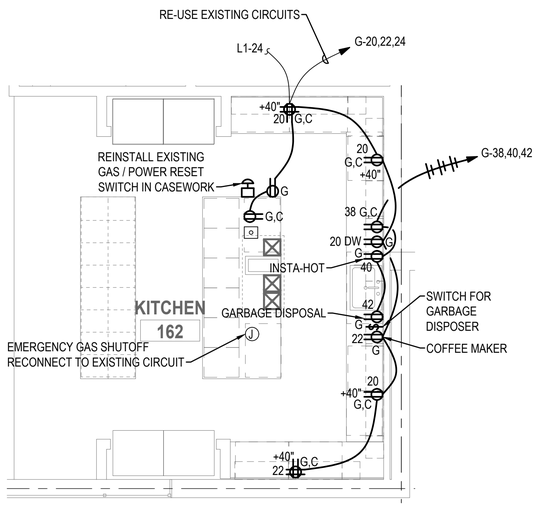
ISSUED: NOVEMBER 22,2016

REVISION SCHEDULE

LEVEL 1 - LIGHTING, POWER, & SYSTEMS PLAN

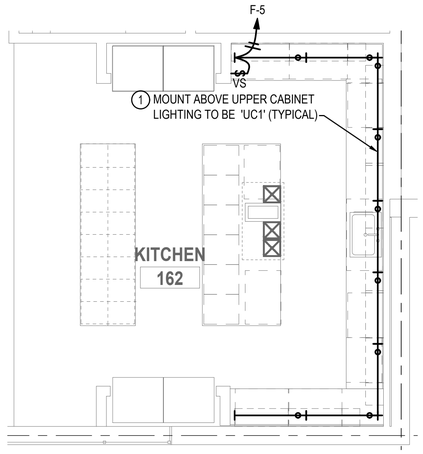
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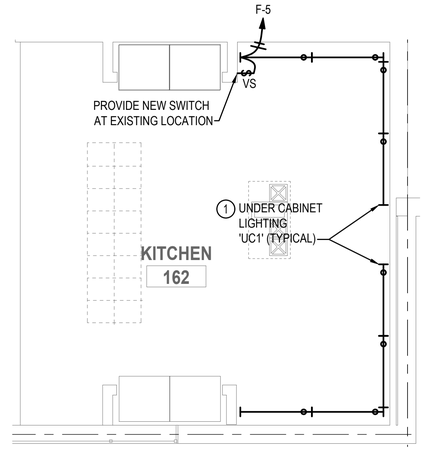
1 LEVEL 1 - ENLARGED KITCHEN POWER PLAN

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



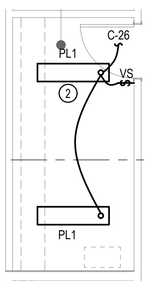
2 LEVEL 1 - ENLARGED KITCHEN LIGHTING PLAN

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



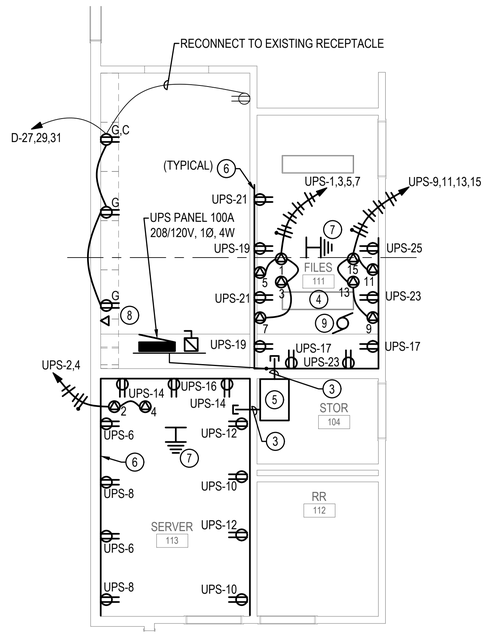
3 LEVEL 1 - ENLARGED KITCHEN UNDER CABINET LIGHTING PLAN

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



4 LEVEL 1 - ENLARGED SERVER 111 LIGHTING PLAN

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



5 LEVEL 1
ENLARGED SERVER 111/ 113 POWER & SYSTEMS PLAN

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

GENERAL NOTES FOR LIGHTING FIXTURE SCHEDULE

1. SEE DRAWINGS FOR EMERGENCY LIGHTING FIXTURES.

2. FOR LIGHTING CONTROLS WHICH INCLUDE DAYLIGHT, OCCUPANCY SENSORS AND TIME CLOCK CONTROLS, THE ELECTRICAL CONTRACTOR SHALL PROVIDE TESTING OF THE CONTROL DEVICES, COMPONENTS, EQUIPMENT AND SYSTEMS TO MAKE SURE THEY ARE CALIBRATED, ADJUSTED AND OPERATE IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS. SEQUENCES OF OPERATION SHALL BE FUNCTIONALLY TESTED IN THE PRESENCE OF THE ENGINEER. A COMPLETE REPORT OF TEST PROCEDURES AND RESULTS SHALL BE PREPARED AND FILED WITH THE OWNER.

3. FIXTURE TYPES LISTED ARE TO INDICATE THE TYPE OF STYLE, LAMPING CHARACTERISTICS AND MOUNTING REQUIRED TO FACILITATE THE DESIGN. OTHER FIXTURE MANUFACTURERS MEETING THE LIGHT FIXTURE TYPE CRITERIA ARE ACCEPTABLE UPON EVALUATION BY THE ENGINEER.

4. ALL LIGHT FIXTURE COLORS AND FINISHES SHALL BE COORDINATED AND SELECTED BY THE ARCHITECT.

LIGHTING FIXTURE SCHEDULE

DESIGNATION	FIXTURE DESCRIPTION	MANUFACTURER/MODEL #	LAMPS	LUMENS	V	W	MOUNTING & REMARKS
UC1	UNDERCABINET LIGHTING	WAC LIGHTING #WLED-T2430-*WT/3L-EN-24100-RB2-T/LED-T-CH/LED-TC-IC12-WT	LED - 30K	115/FT	120	96	PROVIDE WITH ALL ACCESSORIES AND CONNECTIONS REQUIRED FOR A COMPLETE SYSTEM.
PL1	1X4 PENDANT MOUNT	LITHONIA LIGHTING #WL4-30L-SLD-LP835-NESPDT7	LED - 35K	3095	120	28.2	PROVIDE WITH CHAIN MOUNTING HARDWARE. MOUNT AT +8'-0" ABOVE FLOOR.
SL1	1X4 SURFACE MOUNT WITH OCCUPANCY SENSOR	LITHONIA LIGHTING #WL4-30L-SLD-LP835-NESPDT7	LED - 35K	3095	120	28.2	

CONSTRUCTION NOTES

1. RECONNECT NEW LIGHTS TO EXISTING CIRCUIT AND SWITCH.
2. RECONNECT NEW LIGHTS TO EXISTING CIRCUIT. PROVIDE NEW VACANCY SENSOR SWITCH.
3. PROVIDE (3) 4" C.O. AT +96" AFF. PROVIDE CONDUIT BUSHINGS THROUGH SHEAR WALL.
4. PROVIDE (1) 6" C.O. AT +96" AFF. PROVIDE CONDUIT BUSHINGS THROUGH SHEAR WALL.
5. PROVIDE 12"W X 24"L X 12"D TROUGH J-BOX AT CEILING WITH CONTINUOUS HINGED BOTTOM.
6. PROVIDE SURFACE MOUNT POWER STRIP AROUND PERIMETER OF ROOM. MOUNT AT +42" AFF.
7. PROVIDE GROUNDING BAR AND TELECOM GROUNDING. SEE DETAIL 1/E7.01
8. RELOCATE EXISTING DATA OUTLETS FROM SOUTH WALL TO WEST WALL.
9. REINSTALL EXISTING MECHANICAL UNIT AND DISCONNECT SWITCH.

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REVISION SCHEDULE

ENLARGED ELECTRICAL PLANS & LIGHTING FIXTURE SCHEDULE

SHEET:

E4.01

PANEL: MDP (EXISTING) 3 PH 4 WIRE VOLTAGE: 208Y/120V 600A MLO
LOC: MOUNT: FLUSH FEED: BOTTOM
TYPE: NEMA 1; SER; 6-DISC. RULE POLES: 18 SF MAINS: 65,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
SF	6252		1	3		21905			3		2		15653	SF
SF	3692	ATS #1 (PANEL LS1/LS2)	3				15185				4	PANEL M1	11493	SF
SF	3552		5		60			12029		125	6		8477	SF
SF	39955		7	3		49680			3		8		9725	SF
SF	48615	ATS #2 (PANEL SDP)	9				58134				10	PANEL M3	9519	SF
SF	42862		11		400			52379		125	12		9517	SF
			13	3					3		14			
		SPACE	15								16	SPACE		
			17		125					125	18			
	144928	TOTAL		THIS PANEL->		71585	73319	64408					TOTAL 64384	
						71585	73319	64408						

LIGHTING(125%) = 24481.25 TOTAL CONNECTED LOAD (VA): 209,312.00
RECEPTS<=10000(100%) = 10000.00 LARGEST MOTOR(125%) = 5100.00 KITCHEN LOADS(65%) = 0.00 TOTAL CONNECTED CURRENT (A): 580.99
RECEPTS>10000(50%) = 19150.00 OTHER MOTORS(100%) = 89420.00 APPLIANCES(100%) = 0.00
RECEPTS TOTAL = 29150.00 MOTOR TOTAL = 94520.00 DEDICATED(100%) = 41516.00 TOTAL DEMAND LOAD (VA): 196,078.25
ELECTRIC HEAT(100%) = 2403.00 WATER HEATERS(100%) = 4008.00 MISC(100%) = 0.00 TOTAL DEMAND CURRENT (A) 544.26

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: SDP (EXISTING) 3 PH 4 WIRE VOLTAGE: 208Y/120V 400A MLO
LOC: CUTLER HAMMER MOUNT: FLUSH FEED: BOTTOM
TYPE: NEMA 1; 6-DISC. RULE POLES: 18 SF MAINS: 22,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
SF	9660		1	3		14156			3		2		4496	SF
SF	11100	PANEL G	3				15037				4	PANEL F	3937	SF
SF	10836		5		100			14415		60	6		3579	SF
SF	8220		7	3		13787			3		8		5567	SF
SF	7180	PANEL D	9				18077				10	PANEL M2	10897	SF
SF	9980		11		60			16916		60	12		6936	SF
SF	12012		13	3		12012			3		14			
SF	15501	PANEL C	15				15501				16	SPACE		
SF	11531		17		125			11531		125	18			
	96020	TOTAL		THIS PANEL->		39955	48615	42862					TOTAL 35412	
						39955	48615	42862						

LIGHTING(125%) = 23276.25 TOTAL CONNECTED LOAD (VA): 131,432.00
RECEPTS<=10000(100%) = 10000.00 LARGEST MOTOR(125%) = 5100.00 KITCHEN LOADS(65%) = 0.00 TOTAL CONNECTED CURRENT (A): 364.82
RECEPTS>10000(50%) = 16000.00 OTHER MOTORS(100%) = 20164.00 APPLIANCES(100%) = 0.00
RECEPTS TOTAL = 26000.00 MOTOR TOTAL = 25264.00 DEDICATED(100%) = 40156.00 TOTAL DEMAND LOAD (VA): 121,107.25
ELECTRIC HEAT(100%) = 2403.00 WATER HEATERS(100%) = 4008.00 MISC(100%) = 0.00 TOTAL DEMAND CURRENT (A) 336.16

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: SDP (EXISTING) REVISED 3 PH 4 WIRE VOLTAGE: 208Y/120V 400A MLO
LOC: CUTLER HAMMER MOUNT: FLUSH FEED: BOTTOM
TYPE: NEMA 1; 6-DISC. RULE POLES: 18 SF MAINS: 22,000AIC MINIMUM

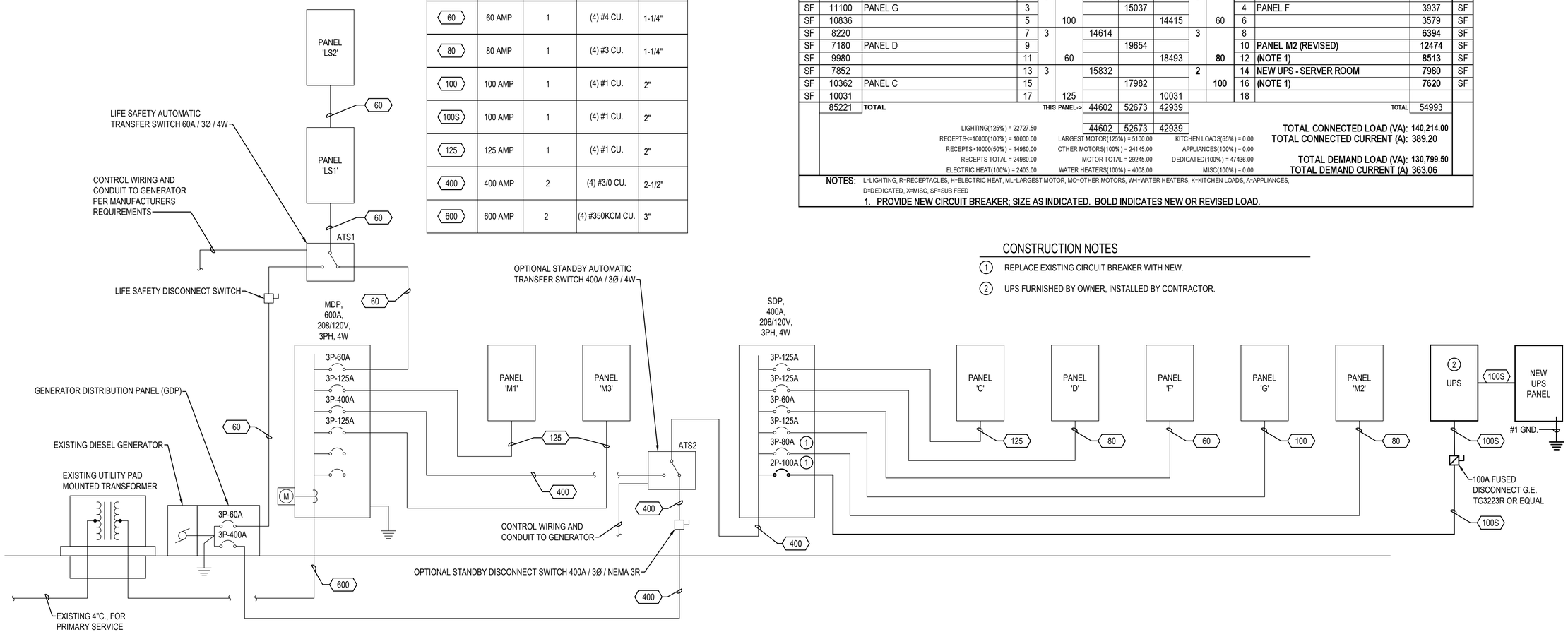
LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
SF	9660		1	3		14156			3		2		4496	SF
SF	11100	PANEL G	3				15037				4	PANEL F	3937	SF
SF	10836		5		100			14415		60	6		3579	SF
SF	8220		7	3		14614			**3**		8		**6394**	SF
SF	7180	PANEL D	9				19654				10	**PANEL M2 (REVISED)**	**12474**	SF
SF	9980		11		60			18493		**80**	12	**(NOTE 1)**	**8513**	SF
SF	7852		13	3		15832			**2**		14	**NEW UPS - SERVER ROOM**	**7980**	SF
SF	10362	PANEL C	15				17982			**100**	16	**(NOTE 1)**	**7620**	SF
SF	10031		17		125			10031			18			
	85221	TOTAL		THIS PANEL->		44602	52673	42939					TOTAL 54993	
						44602	52673	42939						

LIGHTING(125%) = 22727.50 TOTAL CONNECTED LOAD (VA): 140,214.00
RECEPTS<=10000(100%) = 10000.00 LARGEST MOTOR(125%) = 5100.00 KITCHEN LOADS(65%) = 0.00 TOTAL CONNECTED CURRENT (A): 389.20
RECEPTS>10000(50%) = 14980.00 OTHER MOTORS(100%) = 24145.00 APPLIANCES(100%) = 0.00
RECEPTS TOTAL = 24980.00 MOTOR TOTAL = 29245.00 DEDICATED(100%) = 47436.00 TOTAL DEMAND LOAD (VA): 130,799.50
ELECTRIC HEAT(100%) = 2403.00 WATER HEATERS(100%) = 4008.00 MISC(100%) = 0.00 TOTAL DEMAND CURRENT (A) 363.06

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED
1. PROVIDE NEW CIRCUIT BREAKER; SIZE AS INDICATED. BOLD INDICATES NEW OR REVISED LOAD.

FEEDER LEGEND

ID. NO.	AMPS	SETS	CONDUCTORS	CONDUIT
60	60 AMP	1	(4) #4 CU.	1-1/4"
80	80 AMP	1	(4) #3 CU.	1-1/4"
100	100 AMP	1	(4) #1 CU.	2"
100S	100 AMP	1	(4) #1 CU.	2"
125	125 AMP	1	(4) #1 CU.	2"
400	400 AMP	2	(4) #3/0 CU.	2-1/2"
600	600 AMP	2	(4) #350KCM CU.	3"



CONSTRUCTION NOTES

1. REPLACE EXISTING CIRCUIT BREAKER WITH NEW.
2. UPS FURNISHED BY OWNER, INSTALLED BY CONTRACTOR.

1 ONE-LINE DIAGRAM

SCALE: DIAGRAMMATIC

RICE ARCHITECTURE & PLANNING fergus MILLER
275 FIFTH STREET
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CHARLES A. HEANON STATE OF WASHINGTON 23006 REGISTERED PROFESSIONAL ENGINEER
11/22/2016

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 67
2238 S 223rd STREET
DES MOINES, WASHINGTON

PROJECT # 2015137
BID SET
ISSUED: NOVEMBER 22,2016

REVISION SCHEDULE

ELECTRICAL
ONE-LINE
DIAGRAM

SHEET:
E5.01

PANEL: D (EXISTING) — 3 PH 4 WIRE — VOLTAGE: 208Y/120V — 125A MLO
LOC: — MOUNT: FLUSH — FEED: BOTTOM
TYPE: NEMA 1 — POLES: 42 — SF MAINS: — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
R	540	REC - OFFICE 128	1	1	20	1260			1	20	2	REC - LOBBY 101, CORRIDOR 132	720	R
R	180	REC - RESTROOM 127	3	1	20		540		1	20	4	REC - MENS, WOMENS RR	360	R
R	360	REC - BP SCREENING	5	1	20			1800	1	20	6	REC - SCBA 121	1440	R
R	360	REC - A/V STOR. 123	7	1	20	900			1	20	8	REC - EMS, RISER, EXT	540	R
R	360	REC - A/V STOR. 123	9	1	20		1080		1	20	10	REC - CONF, TRAINING 118	720	R
R	360	REC - A/V STOR. 123	11	1	20			1080	1	20	12	REC - CONF, TRAINING 118	720	R
R	720	REC - 108,109	13	1	20	1620			1	20	14	REC - FLOOR CONF/TRAINING	900	R
R	720	REC - 108,109	15	1	20		1620		1	20	16	REC - 102, 103, 105	900	R
R	1080	REC - 106,107	17	1	20			1980	1	20	18	REC - 102, 103, 105	900	R
R	720	REC - 106,107	19	1	20	1720			1	20	20	PANIC, ENTRY CONTROL	1000	R
R	180	REC - CONFERENCE 118	21	1	20		680		1	20	22	POWER ASSIST DOOR	500	R
R	900	REC - CORRIDORS 115, 117	23	1	20			1260	1	20	24	REC - SERVER 112	360	R
R	180	STAFF RR 113	25	1	20	720			1	20	26	REC - MECH / ELEC 202	540	R
R	720	REC - WORK 110	27	1	20		1260		1	20	28	REC - REC MEZZ	540	R
R	360	REC - CORRIDOR 114	29	1	20			860	1	20	30	REC - TTB	500	R
D	1200	REC - COPIER	31	1	20	2000			1	20	32	AIR DRYER	800	D
D	1500	DRYER	33	2			2000		1	20	34	REC - TTB	500	R
D	1500		35		30			3000	1	20	36	WASHER	1500	D
		SPARE	37	1	20				1	20	38	SPARE		
		SPARE	39	1	20				1	20	40	SPARE		
		SPARE	41	1	20				1	20	42	SPARE		
	11940	**TOTAL**			THIS PANEL->	8220	7180	9980					TOTAL 13440	

LIGHTING(125%) = 0.00 — RECEPTS<=10000(100%) = 10000.00 — RECEPTS>10000(50%) = 4440.00 — RECEPTS TOTAL = 14440.00 — ELECTRIC HEAT(100%) = 0.00
LARGEST MOTOR(125%) = 0.00 — OTHER MOTORS(100%) = 0.00 — MOTOR TOTAL = 0.00 — WATER HEATERS(100%) = 0.00
KITCHEN LOADS(65%) = 0.00 — APPLIANCES(100%) = 0.00 — DEDICATED(100%) = 6500.00 — MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 25,380.00
TOTAL CONNECTED CURRENT (A): 70.45
TOTAL DEMAND LOAD (VA): 20,940.00
TOTAL DEMAND CURRENT (A) 58.12

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: C (EXISTING) — 3 PH 4 WIRE — VOLTAGE: 208Y/120V — 125A MLO
LOC: — MOUNT: FLUSH — FEED: BOTTOM
TYPE: NEMA 1 — POLES: 42 — SF MAINS: — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
R	180	REC - APPARATUS	1	1	20	720			1	20	2	REC - APPARATUS	540	R
R	540	REC - APPARATUS	3	1	20		1080		1	20	4	REC - SHOP 131	540	R
R	540	REC - APPARATUS	5	1	20			2040	1	20	6	PLUG STRIP SHOP 131	1500	R
R	540	REC - STOR. 129, 130	7	1	20	4700			2		8	WELDING SHOP 131	4160	D
R	1500	PLUG STRIP STOR. 129	9	1	20		5660			50	10		4160	D
R	360	REC - STOR. 129	11	1	20			540			12	REC SHOP - 131	180	R
R	360	REC - STOR. 129	13	1	20	900			1	20	14	REC - IRR, CTRL, FREEZE	540	R
R	360	CORD DROP REC - APPARATUS	15	1	20		4520		2		16	WELDING STOR. 129	4160	D
R	360	CORD DROP REC - APPARATUS	17	1	20			4520		50	18		4160	D
L	1767	LIGHTING - APPARATUS BAY	19	1	20	2892			1	20	20	LIGHTING - EXTERIOR	1125	L
L	1402	LIGHTING	21	1	20		2530		1	20	22	LIGHTING - EXTERIOR	1128	L
L	1806	LIGHTING - CONFERENCE ROOM	23	1	20			3006	1	20	24	LIGHTING - EXTERIOR SIGN	1200	L
L	1500	LIGHTING - CONFERENCE ROOM	25	1	20	2300			1	20	26	LIGHTING - EXTERIOR DRIVE	800	L
L	855	LIGHTING	27	1	20		1711		1	20	28	LIGHTING - MEZZANINE	856	L
L	500	EXTERIOR SIGN	29	1	20			1425	1	20	30	LIGHTING - PARKING STEPS	925	L
D	**500**	**BUILDING SIGN (NOTE 1)**	31	1	20	500					32	SPACE		
		SPACE	33								34	SPACE		
		SPARE	35	1	20				1	20	36	SPARE		
		SPARE	37	1	20				1	20	38	SPARE		
		SPARE	39	1	20				1	20	40	SPARE		
		SPARE	41	1	20				1	20	42	SPARE		
	13070	**TOTAL**			THIS PANEL->	12012	15501	11531					TOTAL 25974	

LIGHTING(125%) = 17330.00 — RECEPTS<=10000(100%) = 8040.00 — RECEPTS>10000(50%) = 0.00 — RECEPTS TOTAL = 8040.00 — ELECTRIC HEAT(100%) = 0.00
LARGEST MOTOR(125%) = 0.00 — OTHER MOTORS(100%) = 0.00 — MOTOR TOTAL = 0.00 — WATER HEATERS(100%) = 0.00
KITCHEN LOADS(65%) = 0.00 — APPLIANCES(100%) = 0.00 — DEDICATED(100%) = 17140.00 — MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 39,044.00
TOTAL CONNECTED CURRENT (A): 108.38
TOTAL DEMAND LOAD (VA): 42,510.00
TOTAL DEMAND CURRENT (A) 118.00

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED
1. PROVIDE CIRCUIT BREAKER; SIZE AS INDICATED.

PANEL: GENERATOR (EXISTING) — 3 PH 4 WIRE — VOLTAGE: 208Y/120V
LOC: — MOUNT: — FEED: BOTTOM
TYPE: NEMA 1 — POLES: 12 — SF MAINS:

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
SF	6252		1	3		47034			3		2		40782	SF
SF	3692	ATS#1 (PANEL LS1/LS2)	3				53884				4	ATS#2 (PANEL SDP)	50192	SF
SF	3552		5		60			47991		400	6		44439	SF
			7								8			
			9								10			
			11								12			
	13496	**TOTAL**			THIS PANEL->	47034	53884	47991					TOTAL 135413	

LIGHTING(125%) = 24481.25 — RECEPTS<=10000(100%) = 10000.00 — RECEPTS>10000(50%) = 19150.00 — RECEPTS TOTAL = 29150.00 — ELECTRIC HEAT(100%) = 2403.00
LARGEST MOTOR(125%) = 5100.00 — OTHER MOTORS(100%) = 29017.00 — MOTOR TOTAL = 34117.00 — WATER HEATERS(100%) = 4008.00
KITCHEN LOADS(65%) = 0.00 — APPLIANCES(100%) = 0.00 — DEDICATED(100%) = 41516.00 — MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 148,909.00
TOTAL CONNECTED CURRENT (A): 413.33
TOTAL DEMAND LOAD (VA): 135,675.25
TOTAL DEMAND CURRENT (A) 376.60

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: C (EXISTING) REVISED — 3 PH 4 WIRE — VOLTAGE: 208Y/120V — 125A MLO
LOC: — MOUNT: FLUSH — FEED: BOTTOM
TYPE: NEMA 1 — POLES: 42 — SF MAINS: — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR BRKR P	CIR BRKR AMP	A	B	C	CIR BRKR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
R	180	REC - APPARATUS	1	1	20	720			1	20	2	REC - APPARATUS	540	R
R	540	REC - APPARATUS	3	1	20		540		1	20	4	**SPARE**		
R	540	REC - APPARATUS	5	1	20			540	1	20	6	**SPARE**		
R	540	REC - STOR. 129, 130	7	1	20	540			2		8	**SPARE**		
R	1500	PLUG STRIP STOR. 129	9	1	20		1500			50	10			
R	360	REC - STOR. 129	11	1	20			540			12	REC SHOP - 131	180	R
R	360	REC - STOR. 129	13	1	20	900			1	20	14	REC - IRR, CTRL, FREEZE	540	R
R	360	CORD DROP REC - APPARATUS	15	1	20		4520		2		16	WELDING STOR. 129	4160	D
R	360	CORD DROP REC - APPARATUS	17	1	20			4520		50	18		4160	D
L	1767	LIGHTING - APPARATUS BAY	19	1	20	2892			1	20	20	LIGHTING - EXTERIOR	1125	L
L	**963**	*LIGHTING	21	1	20		2091		1	20	22	LIGHTING - EXTERIOR	1128	L
L	1806	LIGHTING - CONFERENCE ROOM	23	1	20			3006	1	20	24	LIGHTING - EXTERIOR SIGN	1200	L
L	1500	LIGHTING - CONFERENCE ROOM	25	1	20	2300			1	20	26	LIGHTING - EXTERIOR DRIVE	800	L
L	855	LIGHTING	27	1	20		1711		1	20	28	LIGHTING - MEZZANINE	856	L
L	500	EXTERIOR SIGN	29	1	20			1425	1	20	30	LIGHTING - PARKING STEPS	925	L
D	**500**	**BUILDING SIGN (NOTE 1)**	31	1	20	500					32	SPACE		
		SPACE	33								34	SPACE		
		SPARE	35	1	20				1	20	36	SPARE		
		SPARE	37	1	20				1	20	38	SPARE		
		SPARE	39	1	20				1	20	40	SPARE		
		SPARE	41	1	20				1	20	42	SPARE		
	12631	**TOTAL**			THIS PANEL->	7852	10362	10031					TOTAL 15614	

LIGHTING(125%) = 16781.25 — RECEPTS<=10000(100%) = 6000.00 — RECEPTS>10000(50%) = 0.00 — RECEPTS TOTAL = 6000.00 — ELECTRIC HEAT(100%) = 0.00
LARGEST MOTOR(125%) = 0.00 — OTHER MOTORS(100%) = 0.00 — MOTOR TOTAL = 0.00 — WATER HEATERS(100%) = 0.00
KITCHEN LOADS(65%) = 0.00 — APPLIANCES(100%) = 0.00 — DEDICATED(100%) = 8820.00 — MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 28,245.00
TOTAL CONNECTED CURRENT (A): 78.40
TOTAL DEMAND LOAD (VA): 31,601.25
TOTAL DEMAND CURRENT (A) 87.72

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED
1. PROVIDE CIRCUIT BREAKER; SIZE AS INDICATED.

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CHARLES A. HEANEY — STATE OF WASHINGTON — 23006 — REGISTERED PROFESSIONAL ENGINEER
11/22/2016

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 67 — 2238 S 223rd STREET — DES MOINES, WASHINGTON

PROJECT # 2015137

BID SET

ISSUED: NOVEMBER 22,2016

REVISION SCHEDULE

PANEL SCHEDULES

SHEET:

E6.01

PANEL: F (EXISTING) — 3 PH 4 WIRE — VOLTAGE: 208Y/120V — 60A MLO
LOC: — MOUNT: FLUSH — FEED: BOTTOM
TYPE: NEMA 1 — POLES: 42 — SF MAINS: — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR P	CIR BRKR AMP	A	B	C	CIR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
MO	512	EF-7,8,9,10,11	1	1	20	2100			1	20	2	F-6	1588	MO
WH	528	WH-1, WH-2	3	1	20		2328		1	20	4	F-7, F-8, F-9	1800	MO
L	982	LIGHTING - KITCHEN/LOUNGE	5	1	20			2182	1	20	6	F-10, F-11	1200	MO
L	1332	LIGHTING	7	1	20	1812			1	20	8	HWCP-1	480	WH
L	1327	LIGHTING	9	1	20		1609		2		10	EWH-7	282	H
L	1116	LIGHTING - DORM ROOMS	11	1	20			1397		20	12		281	H
MO	584	DRYER VENT FAN	13	1	20	584					14	SPACE		
		SPACE	15								16	SPACE		
		SPACE	17								18	SPACE		
		SPACE	19								20	SPACE		
		SPACE	21								22	SPACE		
		SPACE	23								24	SPACE		
		SPACE	25								26	SPACE		
		SPACE	27								28	SPACE		
		SPACE	29								30	SPACE		
		SPACE	31								32	SPACE		
		SPACE	33								34	SPACE		
		SPARE	35	1	20				1	20	36	SPARE		
		SPARE	37	1	20				1	20	38	SPARE		
		SPARE	39	1	20				1	20	40	SPARE		
		SPARE	41	1	20				1	20	42	SPARE		
	6381	**TOTAL**			THIS PANEL->	4496	3937	3579				TOTAL	5631	

LIGHTING(125%) = 5946.25 — LARGEST MOTOR(125%) = 0.00 — KITCHEN LOADS(65%) = 0.00 — **TOTAL CONNECTED LOAD (VA): 12,012.00**
RECEPTS<=10000(100%) = 0.00 — OTHER MOTORS(100%) = 5684.00 — APPLIANCES(100%) = 0.00 — **TOTAL CONNECTED CURRENT (A): 33.34**
RECEPTS>10000(50%) = 0.00 — MOTOR TOTAL = 5684.00 — DEDICATED(100%) = 0.00 — **TOTAL DEMAND LOAD (VA): 13,201.25**
RECEPTS TOTAL = 0.00 — WATER HEATERS(100%) = 1008.00 — MISC(100%) = 0.00 — **TOTAL DEMAND CURRENT (A) 36.64**
ELECTRIC HEAT(100%) = 563.00

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: G (EXISTING) — 3 PH 4 WIRE — VOLTAGE: 208Y/120V — 125A MLO
LOC: — MOUNT: FLUSH — FEED: BOTTOM
TYPE: NEMA 1 — POLES: 42 — SF MAINS: — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR P	CIR BRKR AMP	A	B	C	CIR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
D	1560	GAS DRYER	1	1	25	1560			1	20	2	SPARE		
D	1560	GAS DRYER	3	1	25		1560		1	20	4	SPARE		
		SPARE	5	1	20			720	1	20	6	REC - UNION OFFICE 158	720	R
		SPARE	7	1	20	900			1	20	8	REC - LOUNGE 160	900	R
D	1500	WASH MACHINE	9	1	20		2580		1	20	10	REC - LOUNGE 160	1080	R
D	1500	WASH MACHINE	11	1	20			3000	1	20	12	REC - REFER.	1500	D
R	360	REC - LAUNDRY	13	1	20	1860			1	20	14	REC - REFER.	1500	D
R	360	REC - MENS, WOMENS RR	15	1	20		1860		1	20	16	REC - REFER.	1500	D
R	1440	REC - CORR 152, 153, 154	17	1	20			2940	1	20	18	REC - REFER.	1500	D
R	540	REC - 146, 147	19	1	20	1260			1	20	20	REC - KITCHEN 162	720	R
R	720	REC - 146, 147	21	1	20		1440		1	20	22	REC - KITCHEN 162	720	R
R	540	REC - LIB/STUDY 145	23	1	20			1040	1	20	24	REC - BIO HAZ. 155	500	R
R	540	REC - LIB/STUDY 145	25	1	20	900			1	20	26	REC - MECH/ELEC 203	360	R
R	720	REC - FITNESS 149	27	1	20		1020		1	20	28	STOVE GAS SHUTOFF	300	D
		SPARE	29	1	20				1	20	30	SPARE		
R	900	REC - DORMS	31	1	20	1620			1	20	32	REC - DORMS	720	R
R	720	REC - DORMS	33	1	20		1440		1	20	34	REC - DORMS	720	R
R	720	REC - DORMS	35	1	20			1440	1	20	36	REC - DORMS	720	R
R	**360**	**CHARGERS***	37	1	20	1560			1	20	38	**COFFEE MAKER ***	**1200**	D
		SPARE	39	1	20		1200		1	20	40	**INSTA - HOT ***	**1200**	D
		SPARE	41	1	20			1696	1	20	42	**GARBAGE DISPOSAL ***	**1696**	D
	14040	**TOTAL**			THIS PANEL->	9660	11100	10836				TOTAL	17556	

LIGHTING(125%) = 0.00 — LARGEST MOTOR(125%) = 0.00 — KITCHEN LOADS(65%) = 0.00 — **TOTAL CONNECTED LOAD (VA): 31,596.00**
RECEPTS<=10000(100%) = 10000.00 — OTHER MOTORS(100%) = 0.00 — APPLIANCES(100%) = 0.00 — **TOTAL CONNECTED CURRENT (A): 87.70**
RECEPTS>10000(50%) = 2540.00 — MOTOR TOTAL = 0.00 — DEDICATED(100%) = 16516.00 — **TOTAL DEMAND LOAD (VA): 29,056.00**
RECEPTS TOTAL = 12540.00 — WATER HEATERS(100%) = 0.00 — MISC(100%) = 0.00 — **TOTAL DEMAND CURRENT (A) 80.65**
ELECTRIC HEAT(100%) = 0.00

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED
*** - NEW ADDED LOADS**

PANEL: LS1 (EXISTING) — 3 PH 4 WIRE — VOLTAGE: 208Y/120V — 60A MLO
LOC: — MOUNT: FLUSH — FEED: BOTTOM
TYPE: NEMA 1 — POLES: 30 — SF MAINS: NO — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR P	CIR BRKR AMP	A	B	C	CIR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
MO	696	DOOR OPEN MOTOR, APP	1	1	20	3640			3		2		2944	SF
MO	696	DOOR OPEN MOTOR, APP	3	1	20		1596				4	PANEL LS2	900	SF
MO	696	DOOR OPEN MOTOR, APP	5	1	20			1776		40	6		1080	SF
MO	696	DOOR OPEN MOTOR, APP	7	1	20	1196			1	20	8	LOBBY AUTOMATIC DOOR	500	D
MO	696	DOOR OPEN MOTOR, APP	9	1	20		1196		1	20	10	CREW PANIC BUTTON	500	D
MO	696	DOOR OPEN MOTOR, APP	11	1	20			1056	1	20	12	REC - RECEPTION	360	R
MO	696	DOOR OPEN MOTOR, APP	13	1	20	1416			1	20	14	REC - SERVER 112	720	R
D	180	FIRE SMOKE DAMPERS	15	1	20		900		1	20	16	REC - SERVER 112	720	R
		SPACE	17					720	1	20	18	REC - SERVER 112	720	R
		SPACE	19								20	SPACE		
		SPACE	21								22	SPACE		
		SPACE	23								24	SPACE		
		SPARE	25	1	20				1	20	26	SPARE		
		SPARE	27	1	20				1	20	28	SPARE		
		SPARE	29	1	20				1	20	30	SPARE		
	5052	**TOTAL**			THIS PANEL->	6252	3692	3552				TOTAL	8444	

LIGHTING(125%) = 1205.00 — LARGEST MOTOR(125%) = 0.00 — KITCHEN LOADS(65%) = 0.00 — **TOTAL CONNECTED LOAD (VA): 13,496.00**
RECEPTS<=10000(100%) = 6300.00 — OTHER MOTORS(100%) = 4872.00 — APPLIANCES(100%) = 0.00 — **TOTAL CONNECTED CURRENT (A): 37.46**
RECEPTS>10000(50%) = 0.00 — MOTOR TOTAL = 4872.00 — DEDICATED(100%) = 1360.00 — **TOTAL DEMAND LOAD (VA): 13,737.00**
RECEPTS TOTAL = 6300.00 — WATER HEATERS(100%) = 0.00 — MISC(100%) = 0.00 — **TOTAL DEMAND CURRENT (A) 38.13**
ELECTRIC HEAT(100%) = 0.00

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: LS2 (EXISTING) — 3 PH 4 WIRE — VOLTAGE: 208Y/120V — 60A MLO
LOC: — MOUNT: FLUSH — FEED: BOTTOM
TYPE: NEMA 1 — POLES: 24 — SF MAINS: — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR P	CIR BRKR AMP	A	B	C	CIR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
L	964	EMERGENCY LIGHTING - DORMS	1	1	20	1684			1	20	2	REC - WATCH/SHIFT	720	R
D	180	FIRE SMOKE DAMPERS	3	1	20		900		1	20	4	REC - WATCH/SHIFT	720	R
		SPACE	5					1080	1	20	6	REC - WATCH/SHIFT	1080	R
		SPACE	7			1260			1	20	8	REC - WATCH/SHIFT	1260	R
		SPACE	9								10	SPACE		
		SPACE	11								12	SPACE		
		SPACE	13								14	SPACE		
		SPACE	15								16	SPACE		
		SPACE	17								18	SPACE		
		SPARE	19	1	20				1	20	20	SPARE		
		SPARE	21	1	20				1	20	22	SPARE		
		SPARE	23	1	20				1	20	24	SPARE		
	1144	**TOTAL**			THIS PANEL->	2944	900	1080				TOTAL	3780	

LIGHTING(125%) = 1205.00 — LARGEST MOTOR(125%) = 0.00 — KITCHEN LOADS(65%) = 0.00 — **TOTAL CONNECTED LOAD (VA): 4,924.00**
RECEPTS<=10000(100%) = 3780.00 — OTHER MOTORS(100%) = 0.00 — APPLIANCES(100%) = 0.00 — **TOTAL CONNECTED CURRENT (A): 13.67**
RECEPTS>10000(50%) = 0.00 — MOTOR TOTAL = 0.00 — DEDICATED(100%) = 180.00 — **TOTAL DEMAND LOAD (VA): 5,165.00**
RECEPTS TOTAL = 3780.00 — WATER HEATERS(100%) = 0.00 — MISC(100%) = 0.00 — **TOTAL DEMAND CURRENT (A) 14.34**
ELECTRIC HEAT(100%) = 0.00

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

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11/22/2016

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DES MOINES, WASHINGTON

PROJECT # 2015137

BID SET

ISSUED: NOVEMBER 22,2016

REVISION SCHEDULE

PANEL SCHEDULES

SHEET:

E6.02

PANEL: M1 (EXISTING) — 3 PH 4 WIRE — VOLTAGE: 208Y/120V — 125A MLO
LOC: — MOUNT: FLUSH — FEED: BOTTOM
TYPE: NEMA 1 — POLES: 30 — SF MAINS: — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR P	CIR BRKR AMP	A	B	C	CIR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
MO	4317		1	3		5981			2		2	CU-2	1664	MO
MO	4317	CU-1	3				5981			30	4		1664	MO
MO	4317		5		60			4317			6	SPACE		
MO	1352	CU-5	7	2		5512			2		8	CU-3	4160	MO
MO	1352		9		20		5512			60	10		4160	MO
		SPACE	11					4160	2		12	CU-4	4160	MO
		SPACE	13			4160				60	14		4160	MO
		SPACE	15								16	SPACE		
		SPACE	17								18	SPACE		
		SPACE	19								20	SPACE		
		SPACE	21								22	SPACE		
		SPARE	23								24	SPARE		
		SPARE	25								26	SPARE		
		SPARE	27								28	SPARE		
		SPARE	29								30	SPARE		
	15655	TOTAL			THIS PANEL->	15653	11493	8477				TOTAL	19968	

LIGHTING(125%) = 0.00 — 15653 — 11493 — 8477
RECEPTS<=10000(100%) = 0.00 — LARGEST MOTOR(125%) = 0.00 — KITCHEN LOADS(65%) = 0.00
RECEPTS>10000(50%) = 0.00 — OTHER MOTORS(100%) = 35623.00 — APPLIANCES(100%) = 0.00
RECEPTS TOTAL = 0.00 — MOTOR TOTAL = 35623.00 — DEDICATED(100%) = 0.00
ELECTRIC HEAT(100%) = 0.00 — WATER HEATERS(100%) = 0.00 — MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 35,623.00
TOTAL CONNECTED CURRENT (A): 98.88
TOTAL DEMAND LOAD (VA): 35,623.00
TOTAL DEMAND CURRENT (A) 98.88

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: M3 (EXISTING) — 3 PH 4 WIRE — VOLTAGE: 208Y/120V — 125A MLO
LOC: — MOUNT: FLUSH — FEED: BOTTOM
TYPE: NEMA 1 — POLES: 30 — SF MAINS: — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR P	CIR BRKR AMP	A	B	C	CIR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
MO	4317		1	3		5669			2		2	CU-9	1352	MO
MO	4319	CU-6	3				5671			20	4		1352	MO
MO	4317		5		60			5669	2		6	CU-10	1352	MO
MO	1352	CU-7	7	2		2704				20	8		1352	MO
MO	1352		9		20		3848		2		10	CU-11	2496	MO
MO	1352	CU-8	11	2				3848		40	12		2496	MO
MO	1352		13		20	1352					14	SPACE		
		SPACE	15								16	SPACE		
		SPACE	17								18	SPACE		
		SPACE	19								20	SPACE		
		SPACE	21								22	SPACE		
		SPARE	23	1	20				1	20	24	SPARE		
		SPARE	25	1	20				1	20	26	SPARE		
		SPARE	27	1	20				1	20	28	SPARE		
		SPARE	29	1	20				1	20	30	SPARE		
	18361	TOTAL			THIS PANEL->	9725	9519	9517				TOTAL	10400	

LIGHTING(125%) = 0.00 — 9725 — 9519 — 9517
RECEPTS<=10000(100%) = 0.00 — LARGEST MOTOR(125%) = 0.00 — KITCHEN LOADS(65%) = 0.00
RECEPTS>10000(50%) = 0.00 — OTHER MOTORS(100%) = 28761.00 — APPLIANCES(100%) = 0.00
RECEPTS TOTAL = 0.00 — MOTOR TOTAL = 28761.00 — DEDICATED(100%) = 0.00
ELECTRIC HEAT(100%) = 0.00 — WATER HEATERS(100%) = 0.00 — MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 28,761.00
TOTAL CONNECTED CURRENT (A): 79.83
TOTAL DEMAND LOAD (VA): 28,761.00
TOTAL DEMAND CURRENT (A) 79.83

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: UPS (NEW) — 1 PH 3 WIRE — VOLTAGE: 120/208V — 100A MCB
LOC: SERVER ROOM — MOUNT: SURFACE — FEED: BOTT — 100A BUS
TYPE: NEMA 1 — POLES: 30 — SF MAINS: — 22,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR P	CIR BRKR AMP	A	B	CIR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
D	1200	SERVER RACK - RM 111	1	1	30	2400		1	30	2	SWITCH RACK - RM 113	1200	D
D	1200	SERVER RACK - RM 111	3	1	30		2400	1	30	4	SWITCH RACK - RM 113	1200	D
D	1200	SERVER RACK - RM 111	5	1	30	1560		1	20	6	DED. RECEPT - RM 113	360	D
D	1200	SERVER RACK - RM 111	7	1	30		1560	1	20	8	DED. RECEPT - RM 113	360	D
D	1200	SERVER RACK - RM 111	9	1	30	1560		1	20	10	DED. RECEPT - RM 113	360	D
D	1200	SERVER RACK - RM 111	11	1	30		1560	1	20	12	DED. RECEPT - RM 113	360	D
D	1200	SERVER RACK - RM 111	13	1	30	1560		1	20	14	DED. RECEPT - RM 113	360	D
D	1200	SERVER RACK - RM 111	15	1	30		1380	1	20	16	DED. RECEPT - RM 113	180	D
D	360	SERVER EQP - WALL -RM 111	17	1	20	360		1	20	18	SPARE		
D	360	SERVER EQP - WALL -RM 111	19	1	20		360	1	20	20	SPARE		
D	360	SERVER EQP - WALL -RM 111	21	1	20	360		1	20	22	SPARE		
D	360	SERVER EQP - WALL -RM 111	23	1	20		360	1	20	24	SPARE		
D	180	SERVER EQP - WALL -RM 111	25	1	20	180				26	SPACE		
		SPACE	27							28	SPACE		
		SPACE	29							30	SPACE		
	11220	TOTAL			THIS PANEL->	7980	7620				TOTAL	4380	

LIGHTING(125%) = 0.00 — 7980 — 7620
RECEPTS<=10000(100%) = 0.00 — LARGEST MOTOR(125%) = 0.00 — KITCHEN LOADS(65%) = 0.00
RECEPTS>10000(50%) = 0.00 — OTHER MOTORS(100%) = 0.00 — APPLIANCES(100%) = 0.00
RECEPTS TOTAL = 0.00 — MOTOR TOTAL = 0.00 — DEDICATED(100%) = 15600.00
ELECTRIC HEAT(100%) = 0.00 — WATER HEATERS(100%) = 0.00 — MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 15,600.00
TOTAL CONNECTED CURRENT (A): 75.00
TOTAL DEMAND LOAD (VA): 15,600.00
TOTAL DEMAND CURRENT (A): 75.00

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

PANEL: M2 (EXISTING) — 3 PH 4 WIRE — VOLTAGE: 208Y/120V — 125A MLO
LOC: — MOUNT: FLUSH — FEED: BOTTOM
TYPE: NEMA 1 — POLES: 42 — SF MAINS: — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR P	CIR BRKR AMP	A	B	C	CIR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
H	400	UH-1, UH-2	1	1	20	1400			3		2		1000	WH
H	1440	UH-3, UH-4, UH-5	3	1	20		2440				4	WH-3	1000	WH
MO	560	EF-1,2,3,13,15	5	1	20			1560		20	6		1000	WH
MO	356	EF-4,5,6,12	7	1	20	1184			1	20	8	F-1	828	MO
ML	4080	EU-1	9	1	50		5585		1	20	10	F-2, F-3	1505	MO
ML	1920	EU-2	11	1	20			3425	1	20	12	F-4, F-5	1505	MO
		SPARE	13			1031			2		14	EWH-1, EWH-2	1031	MO
ML	920	MAU-1	15	2			1952			20	16		1032	MO
ML	920		17		20			1951	2		18	EWH-3, EWH-6	1031	MO
ML	920	MAU-2	19	2		1952				20	20		1032	MO
ML	920		21		20		920		2		22			
		SPACE	23							20	24			
		SPACE	25								26	SPACE		
		SPACE	27								28	SPACE		
		SPACE	29								30	SPACE		
		SPACE	31								32	SPACE		
		SPACE	33								34	SPACE		
		SPARE	35	1	20				1	20	36	SPARE		
		SPARE	37	1	20				1	20	38	SPARE		
		SPARE	39	1	20				1	20	40	SPARE		
		SPARE	41	1	20				1	20	42	SPARE		
	12436	TOTAL			THIS PANEL->	5567	10897	6936				TOTAL	10964	

LIGHTING(125%) = 0.00 — 5567 — 10897 — 6936
RECEPTS<=10000(100%) = 0.00 — LARGEST MOTOR(125%) = 5100.00 — KITCHEN LOADS(65%) = 0.00
RECEPTS>10000(50%) = 0.00 — OTHER MOTORS(100%) = 14480.00 — APPLIANCES(100%) = 0.00
RECEPTS TOTAL = 0.00 — MOTOR TOTAL = 19580.00 — DEDICATED(100%) = 0.00
ELECTRIC HEAT(100%) = 1840.00 — WATER HEATERS(100%) = 3000.00 — MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 23,400.00
TOTAL CONNECTED CURRENT (A): 64.95
TOTAL DEMAND LOAD (VA): 24,420.00
TOTAL DEMAND CURRENT (A) 67.78

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

1. **PROVIDE CIRCUIT BREAKER, SIZE AS INDICATED.**

PANEL: M2 (EXISTING) REVISED — 3 PH 4 WIRE — VOLTAGE: 208Y/120V — 125A MLO
LOC: — MOUNT: FLUSH — FEED: BOTTOM
TYPE: NEMA 1 — POLES: 42 — SF MAINS: — 10,000AIC MINIMUM

LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR P	CIR BRKR AMP	A	B	C	CIR P	CIR BRKR AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
H	400	UH-1, UH-2	1	1	20	1400			3		2		1000	WH
H	1440	UH-3, UH-4, UH-5	3	1	20		2440				4	WH-3	1000	WH
MO	560	EF-1,2,3,13,15	5	1	20			1560		20	6		1000	WH
MO	356	EF-4,5,6,12	7	1	20	1184			1	20	8	F-1	828	MO
ML	4080	EU-1	9	1	50		5585		1	20	10	F-2, F-3	1505	MO
ML	1920	EU-2	11	1	20			3425	1	20	12	F-4, F-5	1505	MO
		SPARE	13			1031			2		14	EWH-1, EWH-2	1031	MO
ML	920	MAU-1	15	2			1952			20	16		1032	MO
ML	920		17		20			1951	2		18	EWH-3, EWH-6	1031	MO
ML	920	MAU-2	19	2		1952				20	20		1032	MO
ML	920		21		20		1670		2		22	**RCP-1, RCP-2**	**750**	MO
ML	**827**		23	**3**				1577		20	24		**750**	MO
ML	**827**	**NEW EF-1 (APP BAY) - NOTE 1**	25			827					26	SPACE		
ML	**827**		27		**20**		827				28	SPACE		
		SPACE	29								30	SPACE		
		SPACE	31								32	SPACE		
		SPACE	33								34	SPACE		
		SPARE	35	1	20				1	20	36	SPARE		
		SPARE	37	1	20				1	20	38	SPARE		
		SPARE	39	1	20				1	20	40	SPARE		
		SPARE	41	1	20				1	20	42	SPARE		
	14917	TOTAL			THIS PANEL->	6394	12474	8513				TOTAL	12464	

LIGHTING(125%) = 0.00 — 6394 — 12474 — 8513
RECEPTS<=10000(100%) = 0.00 — LARGEST MOTOR(125%) = 5100.00 — KITCHEN LOADS(65%) = 0.00
RECEPTS>10000(50%) = 0.00 — OTHER MOTORS(100%) = 18461.00 — APPLIANCES(100%) = 0.00
RECEPTS TOTAL = 0.00 — MOTOR TOTAL = 23561.00 — DEDICATED(100%) = 0.00
ELECTRIC HEAT(100%) = 1840.00 — WATER HEATERS(100%) = 3000.00 — MISC(100%) = 0.00

TOTAL CONNECTED LOAD (VA): 27,381.00
TOTAL CONNECTED CURRENT (A): 76.00
TOTAL DEMAND LOAD (VA): 28,401.00
TOTAL DEMAND CURRENT (A) 78.83

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

1. **PROVIDE CIRCUIT BREAKER, SIZE AS INDICATED. BOLD INDICATES NEW OR REVISED LOAD.**

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11/22/2016

SOUTH KING FIRE & RESCUE FACILITY IMPROVEMENTS

FIRE STATION 67
2238 S 223rd STREET
DES MOINES, WASHINGTON

PROJECT # 2015137

BID SET

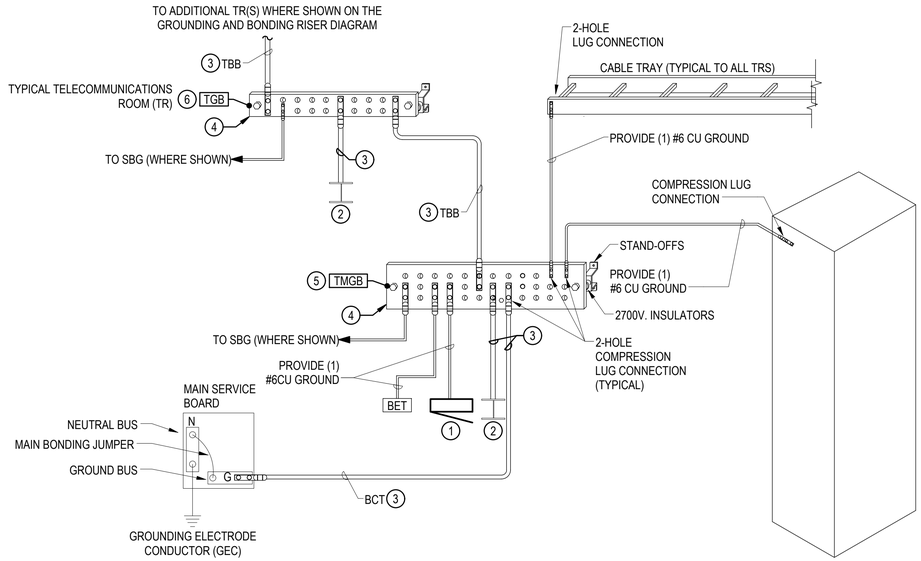
ISSUED: NOVEMBER 22,2016

REVISION SCHEDULE

PANEL SCHEDULES

SHEET:

E6.03



1 TELECOMMUNICATIONS TYPICAL GROUNDING AND BONDING DETAIL

SCALE: DIAGRAMMATIC

TYPICAL RACK OR CABINET. REFERENCE PLANS AND SPECIFICATIONS FOR DETAILS.

CONSTRUCTION NOTES

1. PROVIDE CONNECTION TO UPS PANEL IN THE TELECOMM ROOM
2. PROVIDE BOND CONNECTION TO BUILDING STEEL, SIZED PER FIGURE 6.3.2 (SIZING OF THE TBB) OF TIA-607-B2 INCLUDED ON THIS SHEET.
3. PROVIDE COPPER GROUND CONDUCTOR WITH GREEN OUTER JACKET. SIZED AS SHOWN ON THE TELECOMMUNICATIONS GROUNDING AND BONDING RISER DIAGRAM.
4. MOUNT PLATE ON PLYWOOD BACKBOARD
5. TELECOMMUNICATION MAIN GROUND BUSBAR 20"x4"x1/4" (CHATSWORTH #40153-020 OR APPROVED EQUAL)
6. TELECOMMUNICATION GROUND BUSBAR 12"x4"x1/4"

ABBREVIATIONS	
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
BET	BUILDING ENTRANCE TERMINALS
BCT	BONDING CONDUCTOR FOR TELECOMMUNICATIONS

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11/22/2016

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DES MOINES, WASHINGTON

PROJECT # 2015137

BID SET

ISSUED: NOVEMBER 22,2016

REVISION SCHEDULE

ELECTRICAL DETAILS

SHEET:

E7.01