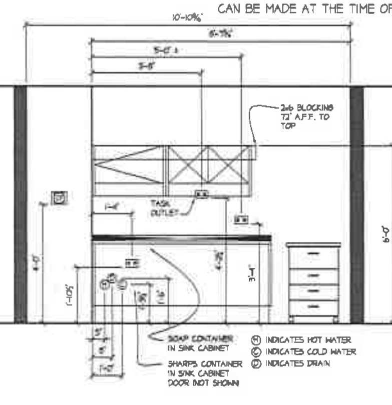
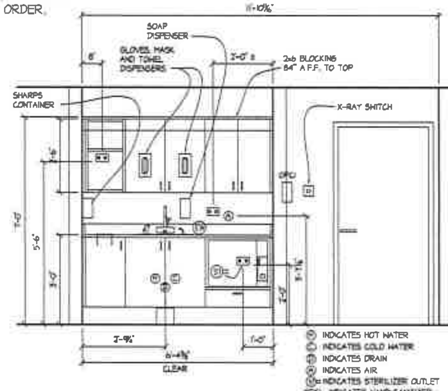
IF THIS DIMENSION DOES NOT MEASURE ONE INCH (1") EXACTLY, THIS DRAWING HAS BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES 1" ACTUAL

CABINET NOTES:
CABINETS ILLUSTRATED PROVIDED BY BURKHART ARE FOR PRE-DESIGNED FUNCTIONS. VARIATIONS CAN BE MADE AT THE TIME OF THE ORDER.

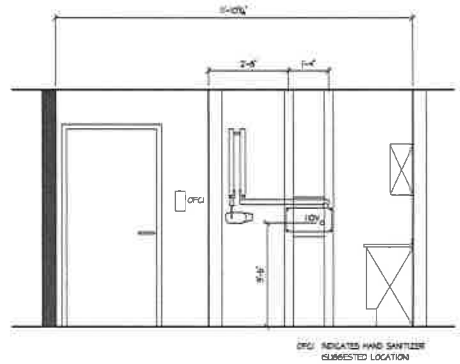


A OPERATORY ELEVATION
D1.1 D4.1
SCALE: 1/2" = 1'-0"



Ⓗ INDICATES HOT WATER
Ⓒ INDICATES COLD WATER
Ⓓ INDICATES DRAIN
Ⓐ INDICATES AIR
Ⓢ INDICATES STERILIZER OUTLET
GFCI INDICATES HAND SANITIZER SUGGESTED LOCATION
Ⓔ INDICATES EYEWASH STATION

B STERILIZATION ELEVATION
D1.1 D4.1
SCALE: 1/2" = 1'-0"



GFCI INDICATES HAND SANITIZER SUGGESTED LOCATION

C OPERATORY ELEVATION
D1.1 D4.1
SCALE: 1/2" = 1'-0"

DENTAL EQUIPMENT SPECIFIC TO THESE SPECIFICATIONS CAN BE AQUIRED FROM:

BURKHART
DENTAL SUPPLY COMPANY
2502 South 78th Street
Tacoma, Washington 98409
12000 Industry Way, Unit N-1
Anchorage, Alaska 99515
Attn: Carter Barnes
Phone: 1-866-324-1983
Fax: 1-253-212-4981

NOTE:

All framing, bracing, door sizes, floor levels, cabinet heights, rest room and lunch room facilities (if any) and other design details should be modified to comply with latest Americans With Disabilities Act (A.D.A.) guidelines and similar State requirements. Architect or Contractor must submit plans to building and and other local officials as necessary for compliance with all Federal, State and Local building codes, including A.D.A. guidelines, before commencing work. Notify Burkhart Dental of any changes that would modify any dental treatment rooms and/or any dental cabinet layout.

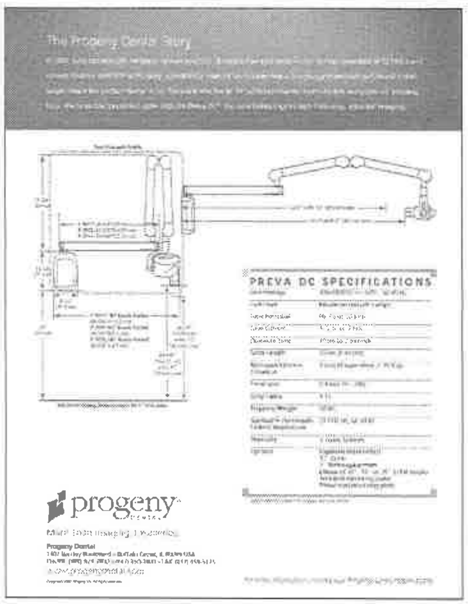
These plans are not meant to be a design for building-out an operatory but, instead, represent only a sample layout, a similar layout of the equipment in a dentist's facilities will not necessarily be compatible with the A.D.A. or other applicable law or code. The manufacturers and Burkhart Dental are not Architects or Engineers; the manufacturers and Burkhart Dental do not warrant or represent that the plans are in compliance with the A.D.A. or other applicable law or code. The dentist should consult their Architects prior to installing the equipment to ensure compliance with the A.D.A. or other applicable law or code.

The Contractor should furnish all electrical, plumbing, and structural requirements listed, as this is necessary before the dental equipment can be installed. The tenant, or B.D.S. will furnish the dental equipment. Check all measurements with the actual building dimensions, or Architect's plans. The specifications shown on the plan have not been checked for compliance with Federal, State or Local building codes and regulations.

Listed requirements show only the services, connections and fixtures required for the dental office equipment shown; and these drawings do not provide for the electrical, mechanical and structural requirements for the building or office as a whole.

See Mechanical Specification and Detail Sheets for further information.

THIS IS A SUGGESTED PLAN WITH SPECIFICATIONS FOR THE DENTAL EQUIPMENT ONLY.



1 INTRAORAL X-RAY SYSTEM
D1.1 D4.1 PROGENY PREVA
SCALE: NO SCALE

a-dec 6300 DENTAL LIGHT
www.a-dec.biz **Track-Mounted Installation Guide**

Figure 1. 6300 track light.

Recommended Tools

- Utility knife
- Phillips screwdriver
- Rubber mallet
- Socket and ratchet - 7/16"
- Level
- Hex key set
- Drill and bit - 3/16"
- Plumb bob

Before You Begin

NOTE: A data line has been included with the dental light for use with A-dec 500™ products. If the light is not being used with an A-dec 500 products, disregard the data line. The data line should never be plugged into a telephone jack.

Do not remove the track from the ceiling pallet.

WARNING: To prevent injury two people are required to install the track light.

Requirements for Electrical Wiring and Power

Electrical wiring must be installed by a licensed electrician according to local building codes and must meet the following additional requirements.

1. Electrical power/transformer and data lines are available above the head of the chair (see Figure 2 and box template) at a point 13-3/4" (349.25mm) from the edge of the chair baseplate.
2. Allow a stub of at least 6" (152mm) of wiring for connection to the light transformer.
   - Use wiring suitable for at least 90°C (194°F)
   - Ensure that wiring is properly grounded
   - Protect the circuit with a circuit breaker
3. A-dec recommends installation of a wall switch between the power source and the dental light transformer. A wall switch provides safety and convenience during installation and service. For transformer wiring information refer to page 7.

Figure 2. Recommended distances for positioning.

2 TRACK LIGHT
D1.1 D4.1 ALSO SEE SHEET D1.1
SCALE: NO SCALE

WATTERSON CONSTRUCTION

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

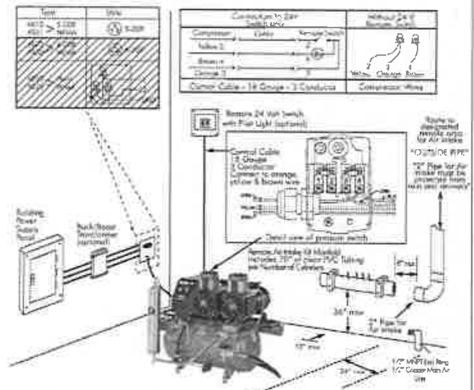
100% CONSTRUCTION DRAWINGS

12-152
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:

PROJECT NO:	12-152
DATE:	14 JUNE 2013
DRAWN BY:	JS
CHECKED BY:	RR
REVISIONS:	–

DETAILS & ELEVATIONS For Dental Equipment
Sheet 4 of 6
D4.1



Buck/Boost Transformer	P/N
for AS-10	67005

Remote Air Intake Kits	P/N
for AS-10	85491

Service Clearance

- Allow 12" on all sides for all models

Ambient Temperature

- Must not exceed 100°F
- Must be above 40° F

Air System Plumbing Connection

- 1/2" FNPT Shut-off valve and a 4 ft. pressure hose (supplied)
- Air distribution piping for all models - 1/2" type "L" or type "K" copper
- If pipe volume is too great, more than 225 in³ or more than 100 ft. of 1/2" diameter pipe, a pressure regulator should be installed between the main tank and the distribution piping and set to 80 psi.

Site Requirements

Electrical	AirStar 10	AirStar 21	AirStar 22	AirStar 30	AirStar 50	AirStar 70
Voltage Min./Max.	105/125*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Full Load Amps in Circuit	8.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Breaker Rating (Amps)	20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Min. Wire Size (AWG)	12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

*Install a buck/boost transformer if service is above/below these ranges.

Product Specifications - Dimensions

	AirStar 10	AirStar 21	AirStar 22	AirStar 30	AirStar 50	AirStar 70
Horsepower	0.75	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Voltage Rating	115	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Voltage Min./Max.	105/125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CFM (Cubic Ft./Min) @ Rated Capacity Peak / Continuous	2.4/1.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pump-up Time 0-100 PSI (sec.) ±5%	165	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Recovery Time 80-100 PSI (sec.) ±5%	48	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Purge Time 100-0 PSI (sec.)	45-55	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Tank Size (cu. ft.) (US Gal.)	0.8 6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Shipping Weight (lbs) (Approx)	160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Dimensions (in.) (HxWxD)	26×23×18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Dimensions (in.) w. Sound Reducing Cover (HxWxD)	31×25×25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

1 COMPRESSOR SPECIFICATIONS
D2.1/D3.1/D5.1 AIRSTAR 10C
SCALE: NO SCALE

DENTAL EQUIPMENT SPECIFIC TO THESE SPECIFICATIONS CAN BE AQUIRED FROM:

BURKHART
DENTAL SUPPLY COMPANY
2502 South 78th Street
Tacoma, Washington 98409
12000 Industry Way, Unit N-1
Anchorage, Alaska 99515
Attn: Carter Barnes
Phone: 1-866-324-1983
Fax: 1-253-212-4981

NOTE:

All framing, bracing, door sizes, floor levels, cabinet heights, rest room and lunch room facilities (if any) and other design details should be modified to comply with latest Americans With Disabilities Act (A.D.A.) guidelines and similar State requirements. Architect or Contractor must submit plans to building and and other local officials as necessary for compliance with all Federal, State and Local building codes, including A.D.A. guidelines, before commencing work. Notify Burkhart Dental of any changes that would modify any dental treatment rooms and/or any dental cabinet layout.

These plans are not meant to be a design for building-out an operatory but, instead, represent only a sample layout; a similar layout of the equipment in a dentist's facilities will not necessarily be compatible with the A.D.A. or other applicable law or code. The manufacturers and Burkhart Dental are not Architects or Engineers. The manufacturers and Burkhart Dental do not warrant or represent that the plans are in compliance with the A.D.A. or other applicable law or code. The dentist should consult their Architects prior to installing the equipment to ensure compliance with the A.D.A. or other applicable law or code.

The Contractor should furnish all electrical, plumbing, and structural requirements listed, as this is necessary before the dental equipment can be installed. The tenant, or B.D.S., will furnish the dental equipment. Check all measurements with the actual building dimensions, or Architect's plans. The specifications shown on this plan have not been checked for compliance with Federal, State or Local building codes and regulations.

Listed requirements show only the services, connections and fixtures required for the dental office equipment shown; and these drawings do not provide for the electrical, mechanical and structural requirements for the building or office as a whole.

See Mechanical Specification and Detail Sheets for further information.

THIS IS A SUGGESTED PLAN WITH SPECIFICATIONS FOR THE DENTAL EQUIPMENT ONLY.

WATTERSON CONSTRUCTION

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS

2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

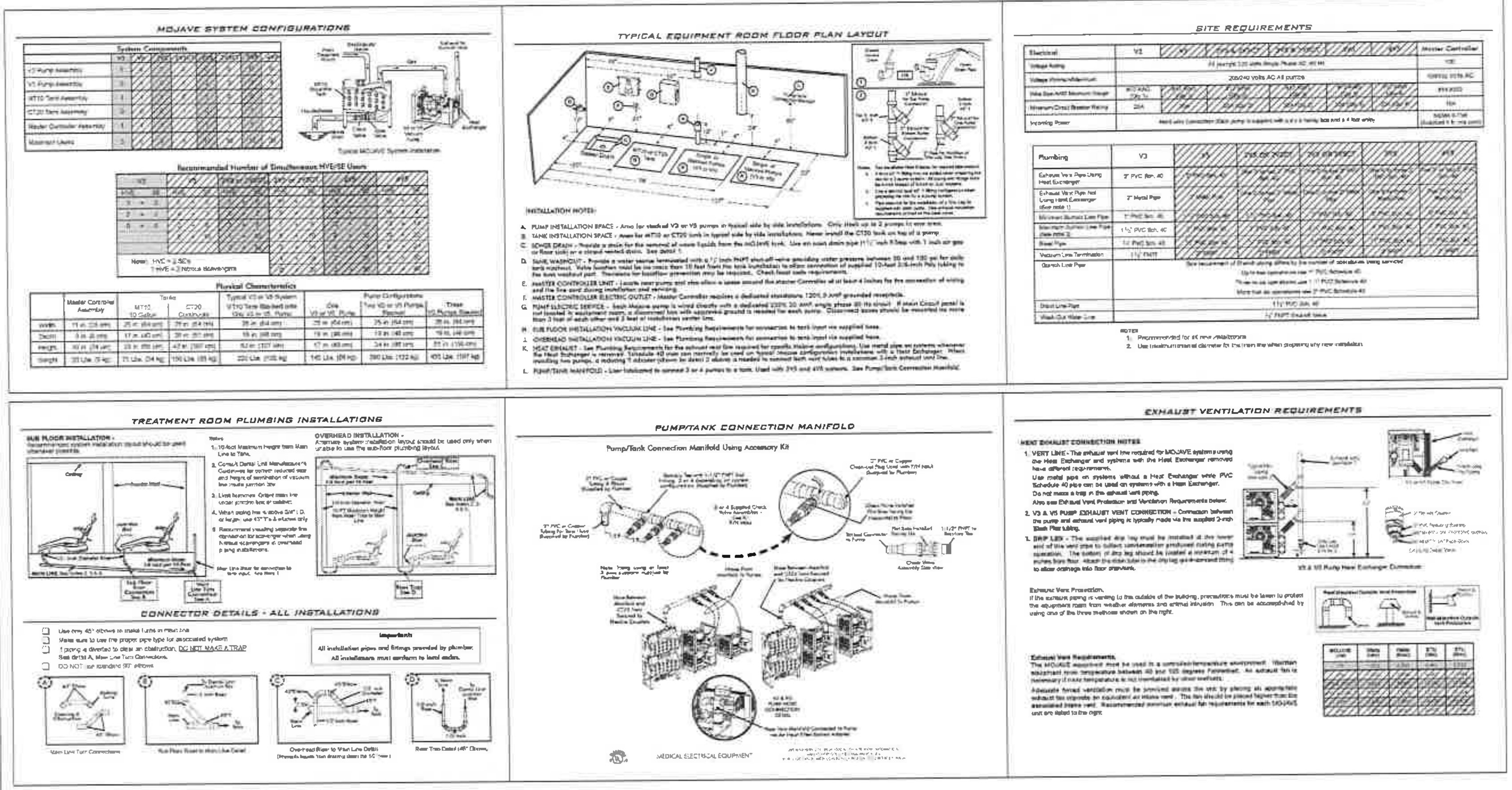
100% CONSTRUCTION DRAWINGS

12-152
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:

PROJECT NO:	12-152
DATE:	14 JUNE 2013
DRAWN BY:	JS
CHECKED BY:	RR
REVISIONS:	-

DETAILS
For Dental Equipment
Sheet 5 of 6
D5.1



VACUUM SPECIFICATIONS

D2.1/D3.1/D6.1 MOJAVE V3

SCALE: NO SCALE

DENTAL EQUIPMENT SPECIFIC TO THESE SPECIFICATIONS CAN BE AQUIRED FROM:

BURKHART
DENTAL SUPPLY COMPANY
2502 South 78th Street
Tacoma, Washington 98409
12000 Industry Way, Unit N-1
Anchorage, Alaska 99515
Attn: Carter Barnes
Phone: 1-866-324-1983
Fax: 1-253-212-4981

NOTE:

All framing, bracing, door sizes, floor levels, cabinet heights, rest room and lunch room facilities (if any) and other design details should be modified to comply with latest Americans With Disabilities Act (A.D.A.) guidelines and similar State requirements. Architect or Contractor must submit plans to building and and other local officials as necessary for compliance with all Federal, State and Local building codes, including A.D.A. guidelines, before commencing work. Notify Burkhart Dental of any changes that would modify any dental treatment rooms and/or any dental cabinet layout.

These plans are not meant to be a design for building-out an operatory but, instead, represent only a sample layout; a similar layout of the equipment in a dentist's facilities will not necessarily be compatible with the A.D.A. or other applicable law or code. The manufacturers and Burkhart Dental are not Architects or Engineers; the manufacturers and Burkhart Dental do not warrant or represent that the plans are in compliance with the A.D.A. or other applicable law or code. The dentist should consult their Architects prior to installing the equipment to ensure compliance with the A.D.A. or other applicable law or code.

The Contractor should furnish all electrical, plumbing, and structural requirements listed, as this is necessary before the dental equipment can be installed. The tenant, or B.D.S. will furnish the dental equipment. Check all measurements with the actual building dimensions, or Architect's plans. The specifications shown on this plan have not been checked for compliance with Federal, State or Local building codes and regulations.

Listed requirements show only the services, connections and fixtures required for the dental office equipment shown; and these drawings do not provide for the electrical, mechanical and structural requirements for the building or office as a whole.

See Mechanical Specification and Detail Sheets for further information.

THIS IS A SUGGESTED PLAN WITH SPECIFICATIONS FOR THE DENTAL EQUIPMENT ONLY.

IF THIS DIMENSION DOES NOT MEASURE ONE INCH (1") EXACTLY, THIS DRAWING HAS BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES — 1" ACTUAL

WATTERSON CONSTRUCTION

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

100% CONSTRUCTION DRAWINGS

12-152
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:

PROJECT NO:	12-152
DATE:	14 JUNE 2013
DRAWN BY:	JS
CHECKED BY:	RR
REVISIONS:	-

DETAILS
For Dental Equipment
Sheet 5 of 6

D6.1

IF THIS DIMENSION DOES NOT MEASURE ONE INCH (1") EXACTLY, THIS DRAWING IS NOT FULL SIZE HAS BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES

ABBREVIATIONS

(A)	ABOVE			PSF	POUNDS PER SQUARE FOOT
AB	ANCHOR BOLT	FD	FLOOR DRAIN	PSI	POUNDS PER SQUARE INCH
A/C	ASPHALITC CONCRETE	FDN	FOUNDATION	PT	PRESSURE TREATED
ACI	AMERICAN CONCRETE INSTITUTE	FIN	FINISH, FINISHED	PT.	POST TENSION
ADDL	ADDITIONAL	FF	FINISHED FLOOR, FAR FACE	PVC	POLYVINYL CHLORIDE
AGGR	AGGREGATE	FLG	FLANGE	PVMT	PAVEMENT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	FLR	FLOOR	PWT	PRE-ENGINEERED WOOD TRUSS
		FLASH	FLASHING		
AISI	AMERICAN IRON AND STEEL INSTITUTE	FOS	FACE OF STUDS	R	RADIUS
		FP	FIREPROOF, FULL PENETRATION	RD	ROOF DRAIN, ROUND
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION	FS	FINISH SLAB EL, FAR SIDE	O	ROUND
		FT OR '	FOOT, FEET	REF	REFERENCE
ALT.	ALTERNATE	FTG	FOOTING	REINF	REINFORCING, REINFORCEMENT, REINFORCED
ALUM	ALUMINUM	FUT	FUTURE		
ARCH	ARCHITECT, ARCHITECTURAL	FV	FIELD VERIFY	REQD	REQUIRED
@	AT			RO	ROUGH OPENING
APPROX	APPROXIMATELY	GA	GAUGE, GAGE		
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	GALV	GALVANIZED	S	AMERIAN STANDARD STEEL SHAPE.
		GEN	GENERAL	SOUTH	
ASPH	ASPHALT	GIRD	GIRDER	SCHED	SCHEDULE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIAL	GL	GLUE LAMINATED	SEC-	SECTION
		GND	GROUND	SH	SHEAR PLATE
AWS	AMERICAN WELDING SOCIETY	GR	GRADE	SHT	SHEET
&	AND	GWB	GYPSUM WALL BOARD	SHTG	SHEETING
		GYP	GYPSUM	SIM	SIMILAR
(B)	BELOW			SIP	STRUCTURAL INSULATED PANEL
B	BOTTOM (BEAM AND JOIST SCHEDULES ONLY)	HEF	HORIZONTAL EACH FACE	SLBB	SHORT LEGS BACK TO BACK
		HORIZ	HORIZONTAL	SP	SPIRAL
BD	BOARD	HP	HIGH POINT, HP STEEL SHAPE	SPA	SPACE; SPACING
BITUM	BITUMINOUS	HSB	HIGH STRENGTH BOLT		SPACES
	BUILDING LINE	HSS	HOLLOW STRUCTURAL SECTION	SPEC	SPECIFICATION
BLDG	BUILDING	HT	HEIGHT	SQ	SQUARE
BLK	BLOCK			SS	STAINLESS STEEL
BLKG	BLOCKING	IBC	INTERNATIONAL BUILDING CODE	SSL	SHORT SLOTTED HOLE
BOD	BOTTOM OF DECK EL	ID	INSIDE DIAMETER	ST	STRUCTURAL T FROM S SERIES SECTION
BM	BEAM	IE	INVERT ELEVATION		
BOT	BOTTOM	IF	INSIDE FACE	STA	STATION
BRG	BEARING	IN OR "	INCH	STD	STANDARD
BSMT	BASEMENT	INCL	INCLUDE	STIFF	STIFFENED
BTWN	BETWEEN	INSUL	INSULATION, INSULATED, INSULATE	STIRR	STIRRUP
		INT	INTERIOR	STL	STEEL
C	AMERICAN CHANNELS			STRUCT	STRUCTURAL
CB	CATCH BASIN	JT	JOINT	SUP	STRUCTURAL USE PANEL
CG	CENTER OF GRAVITY	JST	JOIST	SUPT	SUPPORT
CJ	CONSTRUCTION JOINT			SUSP	SUSPENDED
CIP	CAST-IN-PLACE	K	KIP, KIPS	SYMM	SYMMETRICAL
CJP	COMPLETE JOINT PENETRATION	KSI	KIPS PER SQUARE INCH		
CL	CENTER LINE			T	TOP
CLKG	CAULKING	LB OR #	POUND	TC	TOP OF CURB
CLR	CLEAR	LLBB	LONG LEG BACK TO BACK	T&G	TOUNGE AND GROOVE
CMP	CORRUGATED METAL PIPE	LLH	LONG LEGS HORIZONTAL	TEMP	TEMPERATURE, TEMPORARY
CMU	CONCRETE MASONRY UNIT	LLV	LONG LEGS VERTICAL	THK	THICK
CO	CLEANOUT; CONCRETE OPENING	LONGIT	LONGITUDINAL	THRU	THROUGH
COL	COLUMN	LP	LOW POINT	TOB	TOP OF BEAM EL
CONC	CONCRETE	LSL	LONG SLOTTED HOLES	TOC	TOP OF CONCRETE EL, TOP OF CMU EL
CONN	CONNECTION	LT	LIGHT		
CONSTR	CONSTRUCTION	LT WT	LIGHT WEIGHT	TOF	TOP OF FOOTING EL
CONT	CONTINUOUS	L	ANGLE	TOS	TOP OF STEEL EL
CONTR	CONTRACTOR			TOW	TOP OF WALL EL
CTJ, CJ	CONTROL JOINT, CONTRACTION JOINT	M	MISCELLANEOUS SHAPE	TP	TOP OF PAVEMENT
		MAS.	MASONRY	TRANS	TRANSVERSE
CTR	CENTER	MATL	MATERIAL	TS	STRUCTURAL TUBE
CTSK	COUNTERSUNK	MAX	MAXIMUM	TYP	TYPICAL
CU	CUBIC	MC	MISCELLANEOUS CHANNEL SECTION		
		MECH	MECHANICAL	UBC	UNIFORM BUILDING CODE
DBL	DOUBLE	MEMB	MEMBRANE	UL	UNDERWRITERS LABORATORY
DEPT	DEPARTMENT	MFR	MANUFACTURER	UON	UNLESS OTHERWISE NOTED
DET	DETAIL	MFRG	MANUFACTURING	UT	ULTRASONIC TEST
DIA OR Ø	DIAMETER	MIN	MINIMUM		
DIAA	DRILLED-IN ADHESIVE ANCHOR	MISC	MISCELLANEOUS	VEF	VERTICAL EACH FACE
DIAB	DRILLED-IN ADHESIVE BOLT	MT	STRUCTURAL TEE FROM M SERIES SECTION	VERT	VERTICAL
DIAG	DIAGONAL			VIF	VERTICAL INSIDE FACE
DIAPH	DIAPHRAGM	MTD	MOUNTED	VOF	VERTICAL OUTSIDE FACE
DIEB	DRILLED-IN EXPANSION BOLT	MTL	METAL		
DIM	DIMENSION			W	WEST, W SERIES SECTION
DN	DOWN	N	NORTH	W/	WITH
do	DITTO	NF	NEAR FACE	W/O	WITHOUT
DP	DEEP	NIC	NOT IN CONTRACT	WD	WOOD
DWG	DRAWING	No OR #	NUMBER	WH	WEEP HOLE
DWL	DOWEL	NOM	NOMINAL	WP	WATERPROOF, WORK POINT
		NS	NEAR SIDE	WPJ	WEAKENED PLANE JOINT
E	EAST	NTS	NOT TO SCALE	WT	WEIGHT, STRUCTURAL TEE FROM W SERIES SECTION
EA	EACH				
EB	EXPANSION BOLT	OA	OVERALL	WWF	WELDED WIRE FABRIC
EF	EACH FACE	OC	ON CENTER		
EXJ	EXPANSION JOINT	OD	OUTSIDE DIAMETER	YD	YARD
EL	ELEVATION (HEIGHT)	OF	OUTSIDE FACE		
ELEC	ELECTRICAL	OPNG	OPENING		
ELEV	ELEVATOR	OPP	OPPOSITE		
ENCL	ENCLOSURE	OVS	OVERSIZED		
ENGR	ENGINEER				
EQ	EQUAL	PC	PRECAST		
EQJ	EARTHQUAKE JOINT	PERP	PERPINDICULAR		
EQUIP	EQUIPMENT	PL	PLATE (STEEL) PROPERTY LINE		
ES	EACH SIDE	PJ	PANEL JOINT		
EW	EACH WAY	PL	PLATE (WOOD)		
EXIST. (E)	EXISTING	PLCS	PLACES		
EXP	EXPANSION	PLWD	PLYWOOD		
EXT	EXTERIOR	PP	PARTIAL PENETRATION		
		PS	PRESTRESSED		

GENERAL NOTES

THE FOLLOWING NOTES APPLY UNLESS INDICATED OTHERWISE:

CODE:

INTERNATIONAL BUILDING CODE, 2009 EDITION.

DESIGN SOIL PRESSURE:

2000 PSF MAX DEAD + LIVE LOAD.

CAST FOOTINGS ON COMPACTED GRANULAR FILL OVER COMPACTED SUBGRADE. CONSULT SOILS REPORT BY SHANNON AND WILSON ENGINEERS, DATED MARCH, 2013, FOR FOUNDATION AND EXCAVATION INFORMATION.

DESIGN LIVE LOADS:

SNOW	=	Pg = 60 PSF, Pf = 50 PSF
	=	Ce = 1.0, Ct = 1.0, I = 1.0 SNOW DRIFT
	=	PER ASCE 7-05
FLOORS, LIVE	=	60 PSF, REDUCIBLE
WIND	=	90 MPH 3-SECOND GUST BUILDING OCCUPANCY CATEGORY II I = 1.0 EXPOSURE B (GCpi = 0.18), qh = 13 PSF
MAIN FORCE RESISTING SYSTEM, PARAPETS	=	27 PSF
COMPONENTS AND CLADDING		
WALL WITHIN 3 FT OF OUTSIDE CORNERS	=	20 PSF
REMAINDER OF WALL	=	18 PSF
ROOF, WITHIN 3 FT OF ROOF CORNERS	=	35 PSF
WITHIN 3 FT OF ROOF EDGES	=	24 PSF
WITHIN 3 FT OF RIDGES AND HIPS	=	24 PSF
REMAINDER OF ROOF	=	14 PSF

SEISMIC

BUILDING OCCUPANCY CATEGORY II
SEISMIC DESIGN CATEGORY D
SOIL SITE CLASS D, I = 1.0
Ss = 1.1, S1 = 0.31, Sds = 0.781, Sd1 = 0.368
BASIC SEISMIC FORCE RESISTING SYSTEM: BEARING/SHEAR WALLS, PLYWOOD
R = 6.5 OMEGA = 3.0, Cs = 0.12

STRUCTURAL STEEL:

ALL STEEL ASTM A36. FABRICATION AND ERECTION PER AISC SPECIFICATIONS. SUBMIT SHOP DRAWINGS. WELDING PER AWS D1.1. MINIMUM SIZE WELDS 3/16" CONTINUOUS FILLET, WELDERS CERTIFIED PER AMERICAN WELDING SOCIETY FOR 60D AND POSITION. ELECTRODES SHALL BE E70XX MINIMUM. WITH MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LB AT -20 DEG F.

BOLTS PER ASTM A307, HOT DIP GALVANIZED.

APPLY ONE COAT OF SHOP PAINT TO ALL STEEL.

GLUED-LAMINATED TIMBER:

BEAMS AND GIRDERS - DOUGLAS FIR SPECIES, COMBINATION 24F-V4. FABRICATE PER ANSI/AITC A190.1. PROVIDE WET-USE ADHESIVES. MOISTURE CONTENT - 14 PERCENT MAXIMUM. APPEARANCE - INDUSTRIAL GRADE. SUBMIT SHOP DRAWINGS. USE MILD STEEL PLATE WASHERS AT ALL BOLT HEADS AND NUTS BEARING ON WOOD.

STRUCTURAL SAWN LUMBER:

LUMBER VISUALLY GRADED AND STAMPED PER WWPA STANDARD GRADING RULES. MOISTURE CONTENT OF LUMBER 2" OR LESS IN THICKNESS - 19 PERCENT MAXIMUM.

STRUCTURAL FRAMING - HEM FIR SPECIES, #2 GRADE OR BETTER

MINIMUM NAILING FOR CONNECTION OF VARIOUS COMPONENTS PER TABLE 2304.9.1 OF THE IBC. USE MILD STEEL PLATE WASHERS AT ALL BOLT HEADS AND NUTS BEARING ON WOOD. USE COMMON NAILS ONLY. USE HOT-DIPPED GALVANIZED FASTENERS IN ALL PRESERVATIVE TREATED AND FIRE RETARDENT TREATED WOOD. USE GALVANIZED FRAMING HARDWARE MANUFACTURED BY SIMPSON COMPANY OR APPROVED EQUAL. ICC-ES CERTIFICATION REQUIRED.

MINIMUM NAIL SIZES - 8d COMMON - 0.131" DIA X 2 ½"
10d COMMON - 0.148" DIA X 3"
16d COMMON - 0.162" DIA X 3 ½"

SHEATHING:

SHEATHING GRADE - CD EXPOSURE 1 WITH EXTERIOR GLUE LAID FACE GRAIN PERPENDICULAR TO SUPPORT.

ROOF SHEATHING - 3/4" THICK, 48/24 SPAN RATING.
WALL SHEATHING - 1/2" THICK, 16/32 SPAN RATING.
FLOOR SHEATHING - 7/8" THICK, 48/24 SPAN RATING T & G EDGES.

PROVIDE 2x4 BLOCKING AT ALL UNSUPPORTED WALL PANEL EDGES. GLUE FLOOR SHEATHING TO ALL SUPPORTS WITH ADHESIVE COMPLYING WITH APA AFG-01 AT A 50 PERCENT SKIP PATTERN AND A 3/16" DIA. BEAD MINIMUM.

NAILING AT ALL PANEL EDGES AND AT ALL STUDS WITH HOLDOWNS IS AS FOLLOWS:

ROOF SHEATHING - 10d @ 6" OC.
WALL SHEATHING - 10d @ 6" OC.
FLOOR SHEATHING - 12d RING SHANK @ 6" OC.

NAILING AT ALL PANEL INTERMEDIATE SUPPORTS OTHER THAN STUDS WITH HOLDOWNS IS AS FOLLOWS:

ROOF SHEATHING - 10d @ 12" OC.
WALL SHEATHING - 10d @ 12" OC.
FLOOR SHEATHING - 12d RING SHANK @ 12" OC.

PRE-ENGINEERED WOOD TRUSSES (PWT):

WOOD TRUSSES DESIGNED, MANUFACTURED AND INSTALLED PER TRUSS PLATE INSTITUTE SPECIFICATIONS. ICC-ES CERTIFICATION REQUIRED.

WEB AND CHORD SIZES INDICATED ON PLANS ARE MINIMUM ONLY. ROOF DESIGN DEAD LOAD - 15 PSF MINIMUM. ROOF DESIGN WIND UPLIFT - 24 PSF MINIMUM. COORDINATE WEIGHTS, LOCATIONS AND SUPPORT DETAILS. SUBMIT SHOP DRAWINGS SHOWING TRUSSES AND ERECTION BRACING NEED AND CONNECTIONS. SHOP DRAWINGS AND DESIGN CALCULATIONS BOTH STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN STATE OF ALASKA. PROVIDE STANDARD TRUSS CAMBER. PROVIDE ERECTION BRACING PER MANUFACTURER'S INSTRUCTIONS AND PERMANENT BRACING AS INDICATED ON PLANS.

PREFABRICATED TIMBER JOISTS:

JOISTS DESIGNED AND MANUFACTURED BY REDBUILT LLC OR APPROVED EQUAL. ICC-ES CERTIFICATION REQUIRED.

JOIST DESIGNATIONS ARE PER REBUILT STANDARDS. COORDINATE WEIGHTS, LOCATIONS AND SUPPORT DETAILS. PROVIDE STANDARD JOIST CAMBER. PROVIDE BRIDGING AND ERECTION BRACING PER MANUFACTURER'S INSTRUCTIONS.

STRUCTURAL INSULATED PANELS (SIP):

FACTORY ASSEMBLED WALL, FLOOR AND ROOF PANELS CONSISTING OF ORIENTED STRAND BOARD OR PLYWOOD FACINGS WITH EXPANDED POLYSTYRENE CORES. PANEL FACINGS TO COMPLY WITH APA STANDARDS AND SHEATHING THICKNESS NOTED FOR PLYWOOD. STRUCTURAL BOND REQUIRED BETWEEN FACINGS AND CORE. REINFORCE PANELS WITH SAWN LUMBER OR PREFABRICATED TIMBER JOISTS AS REQUIRED. PROVIDE SHOP DRAWINGS.

DEFERRED SUBMITTALS:

THE FOLLOWING DEFERRED SUBMITTALS SHALL BE SUBMITTED TO THE ARCHITECT AND THE LOCAL BUILDING DEPARTMENT:

METAL PLATE CONNECTED WOOD TRUSSES

REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR OTHER DEFERRED SUBMITTALS.

MISCELLANEOUS:

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. THE EXISTING CONDITIONS SHOWN ON THE DRAWINGS ARE BASED ON EITHER SITE OBSERVATION, ORIGINAL DRAWINGS OR WERE ASSUMED BASED ON EXPECTED CONDITIONS. IF THE EXISTING CONDITIONS DO NOT CLOSELY MATCH THE CONDITIONS SHOWN ON THE DRAWINGS, OR IF THE EXISTING MATERIALS ARE OF QUESTIONABLE OR SUBSTANDARD QUALITY, NOTIFY THE ARCHITECT PRIOR TO COMMENCING ANY WORK

DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.

REFER TO ARCHITECTURAL DRAWINGS FOR WALL OPENINGS, ARCHITECTURAL TREATMENT AND DIMENSIONS NOT SHOWN.

REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF DUCT OPENINGS, PIPING, CONDUITS, ETC., NOT SHOWN.

SHOP DRAWINGS SHALL BE SUBMITTED AND REVIEWED PRIOR TO FABRICATION.

PROVIDE TEMPORARY ERECTION BRACING AND SHORING AS REQUIRED FOR STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.

WATTERSON CONSTRUCTION
ph: (907)563-7441 fax: (907)563-7222
BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET, SUITE 710, ANCHORAGE, ALASKA 99503 907.563-3789
212 FRONT STREET, FAIRBANKS, ALASKA 99701 907.456-3789
WWW.BETTISWORTHNORTH.COM

100% CONSTRUCTION DRAWINGS

12-152
TANANA CHIEFS CONFERENCE
RUBY CLINIC

RUBY, ALASKA

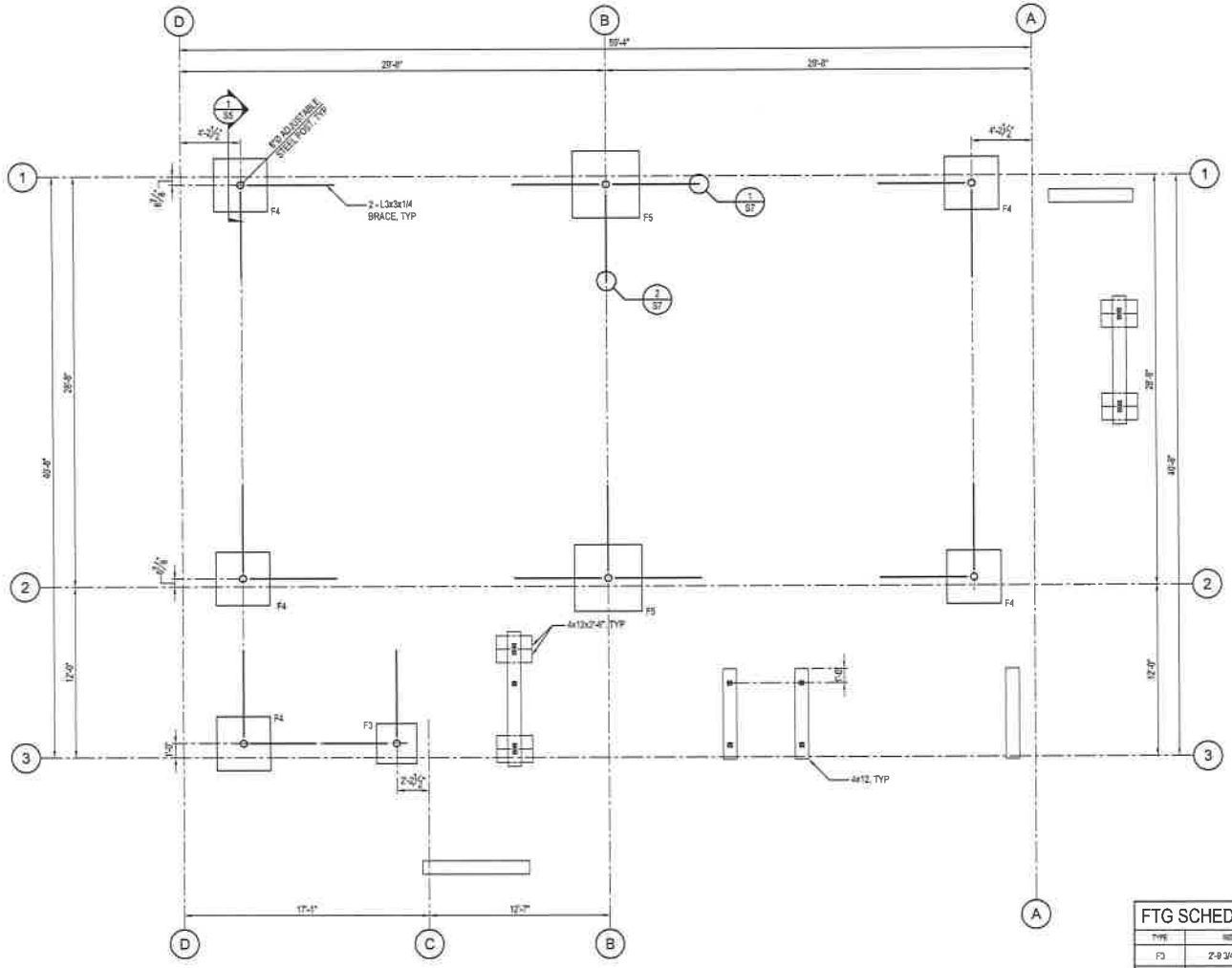
CONSULTANT:
BBFM Engineers Inc.
8111 Street, Suite 200
Anchorage, AK 99518-1849
Phone: (907) 274-2236 Fax: 274-2520

PROJECT NO:	12-152
DATE:	14 JUNE 2013
DRAWN BY:	KWK
CHECKED BY:	TJF
REVISIONS:	-

GENERAL NOTES AND ABBREVIATIONS

S1

IF THIS DIMENSION DOES NOT MEASURE ONE INCH (1"), EXACTLY, THIS DRAWING HAS BEEN PLANNED OR REDUCED, AFFECTING ALL LABELED SCALES



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

FTG SCHEDULE	
TYPE	SIZE
F3	2'-9 3/4" SQ
F4	3'-6" SQ
F5	4'-6 1/4" SQ

NOTE:
SEE DETAILS 1 AND 2/S5 FOR FTG CONSTRUCTION.

100% CONSTRUCTION DRAWINGS

12-152
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

WATTERSON CONSTRUCTION
ph. (907)563-7441 fax. (907)563-7722

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 458-3780
WWW.BETTISWORTHNORTH.COM

CONSULTANT:
BBFM Engineers Inc.
510 L Street, Suite 200
Anchorage, AK 99501-1949
Phone: (907) 274-7736 Fax: 274-2520

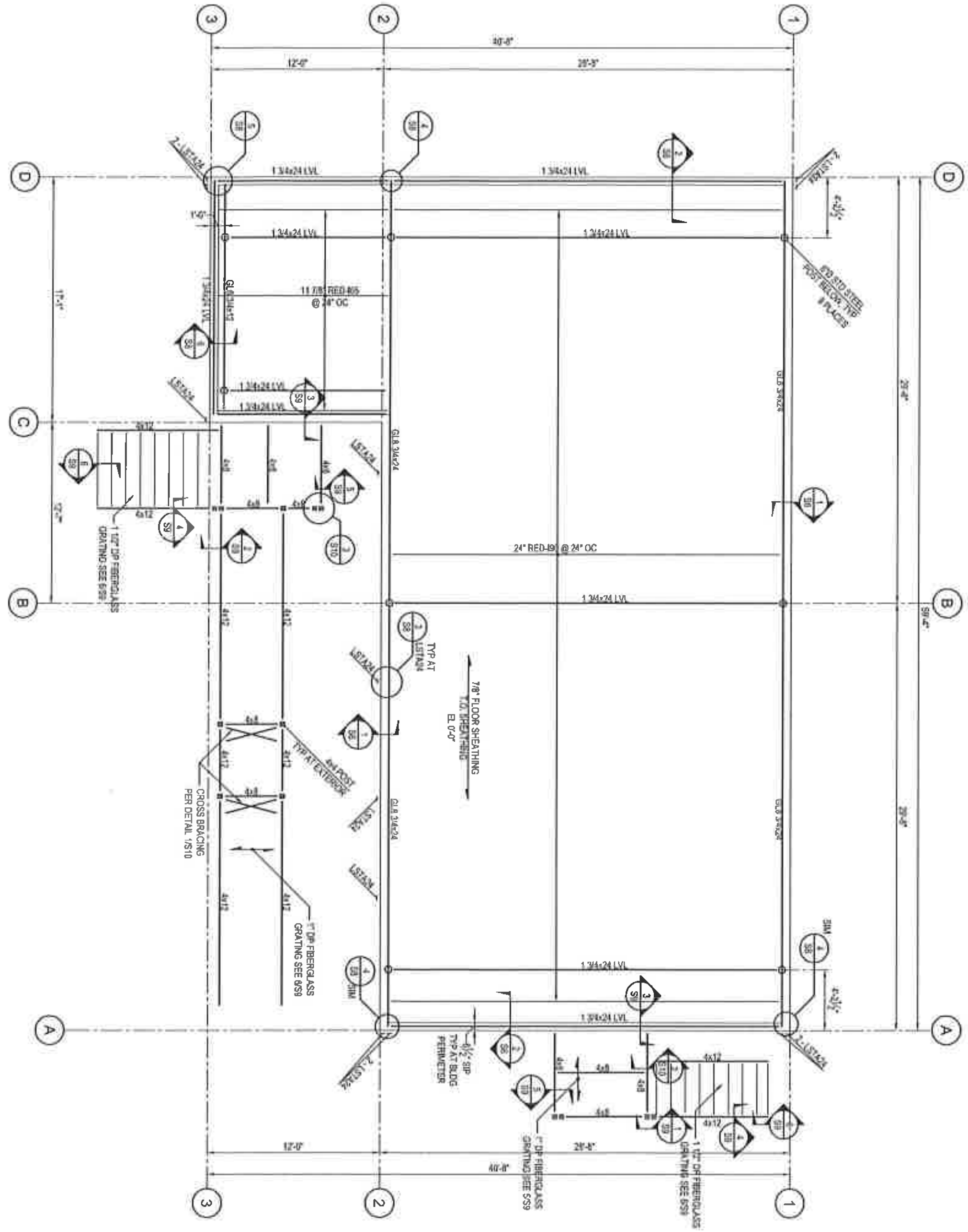
PROJECT NO:	12-152
DATE:	14 JUNE 2013
DRAWN BY:	JWC
CHECKED BY:	TJF
REVISIONS:	-

FOUNDATION PLAN

S2

IF THIS DIMENSION DOES NOT MEASURE ONE INCH (1") EXACTLY, THIS DRAWING HAS BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES 1" ACTUAL

NOTES:
1. ALL DECK/LANDING/STAIR FRAMING TO BE PT WOOD.
2. PULTRUDED GRATING/TREADS 1" DEEP UNO.



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

PROJECT NO:	12-152
DATE:	14 JUNE 2013
DRAWN BY:	JWC
CHECKED BY:	TJF
REVISIONS:	-

CONSULTANT:
BBFM Engineers Inc.

100% CONSTRUCTION DRAWINGS

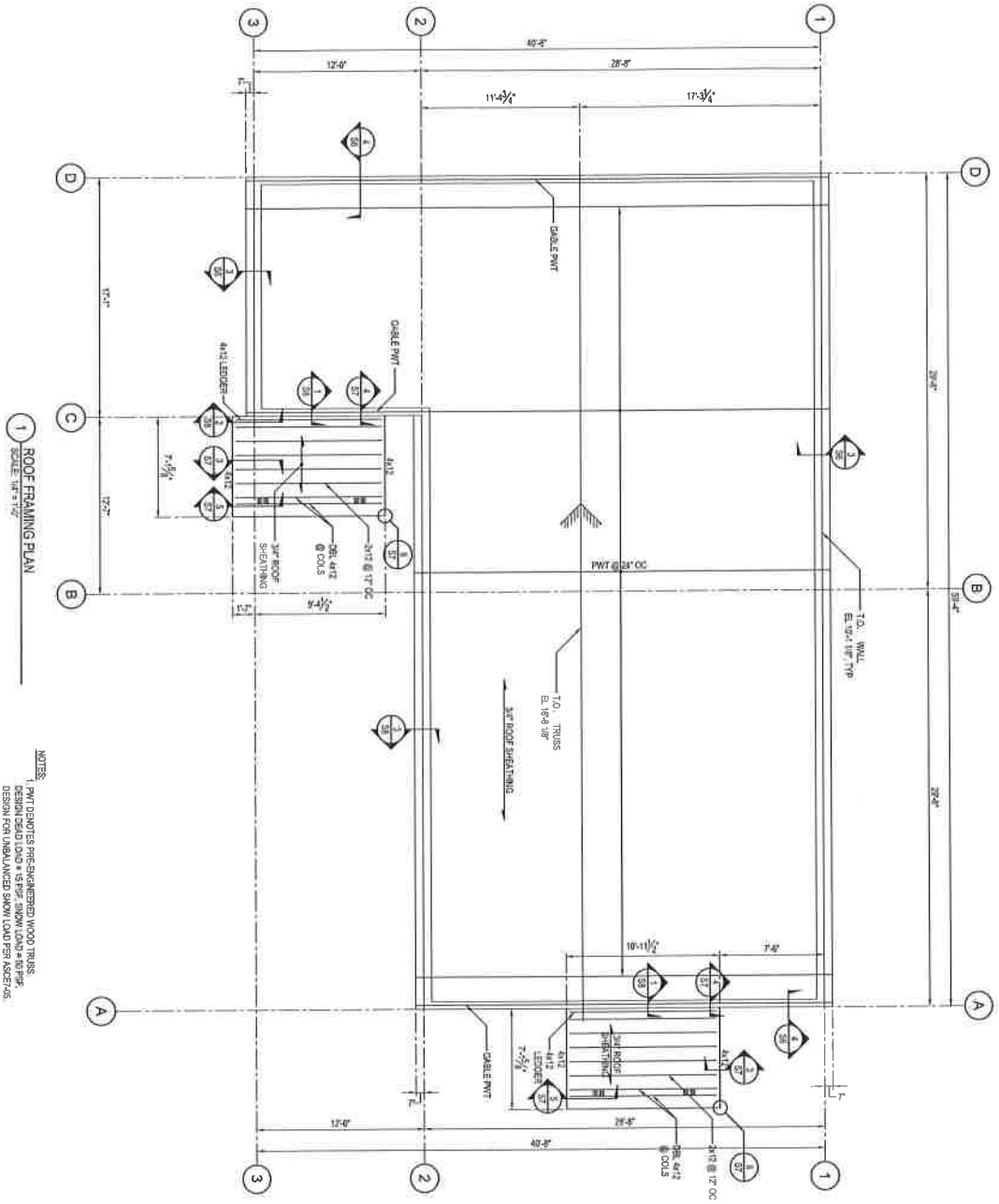
12-152
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

WATTERSON CONSTRUCTION
ph: (907)563-7441 fax: (907)563-7222

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

FLOOR FRAMING PLAN
S3

IF THIS DIMENSION DOES NOT MEASURE ONE INCH (1") EXACTLY, THIS DRAWING HAS BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES. 1" ACTUAL



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

NOTES:
1. PWT DENOTES PRE-ENGINEERED WOOD TRUSS.
DESIGN DEAD LOAD = 15 PSF, SNOW LOAD = 60 PSF.
DESIGN FOR UNBALANCED SNOW LOAD PER ASCE7-05.
2. CANOPY FRAMING TO BE PT.

100% CONSTRUCTION DRAWINGS

12-152
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
BBFM Engineers Inc.
910 L Street, Suite 200
Anchorage, Alaska 99501
Phone (907) 274-2799 Fax 274-2535

PROJECT NO: 12-152
DATE: 14 JUNE 2013
DRAWN BY: JWC
CHECKED BY: TJF
REVISIONS: –

ROOF FRAMING PLAN

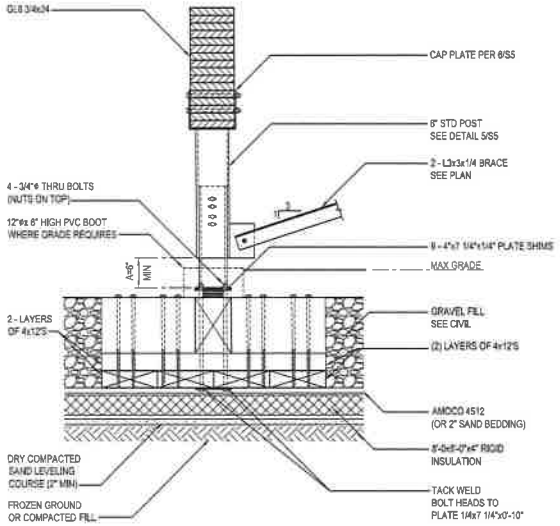
S4

WATTERSON CONSTRUCTION
ph: (907)563-7441 fax: (907)563-7222

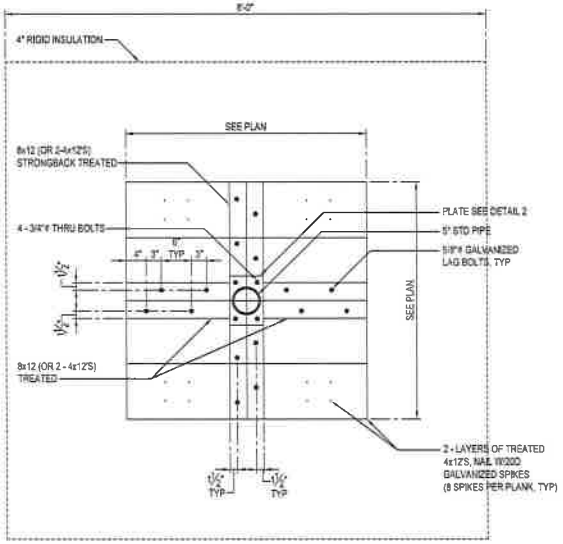
BETTISWORTH NORTH
ARCHITECTS AND PLANNERS

2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW. BETTISWORTHNORTH.COM

IF THIS DIMENSION DOES NOT MEASURE ONE INCH (1") EXACTLY, THIS DRAWING HAS BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELLED SCALES. 1" ACTUAL



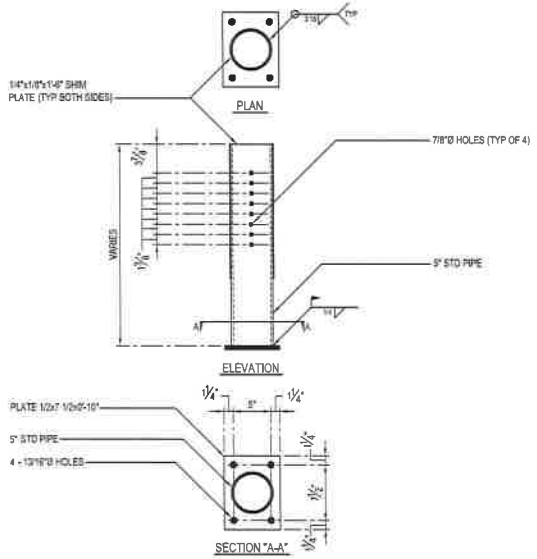
1 FOUNDATION SECTION
SCALE: 1" = 1'-0"



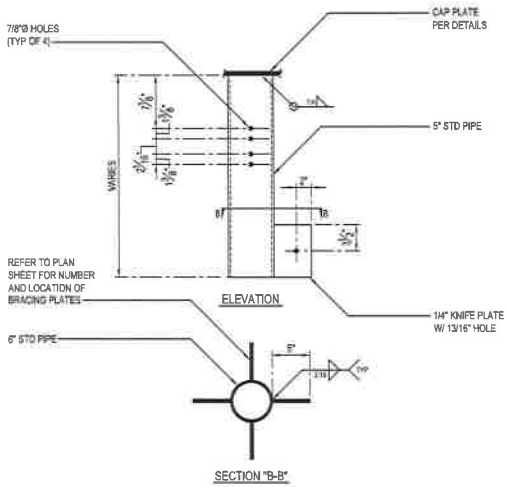
2 FOOTING - PLAN VIEW
SCALE: 1" = 1'-0"

NOTES: EASY LEVEL POST & PAD SYSTEM

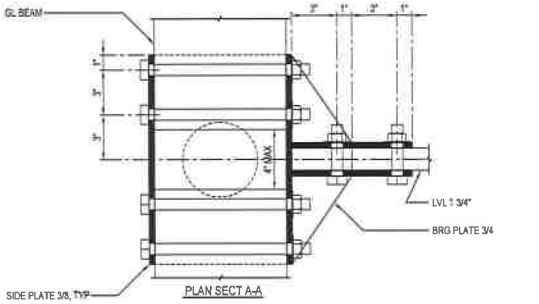
1. DIMENSIONS ARE FOR FLAT GROUND. WHERE STRUCTURE IS BUILT ON SLOPING GROUND DIMENSION "A" CAN BE INCREASED TO A MAXIMUM OF 3'-0".
2. APPLY HEAVY COATING OF 90 WT GREASE TO THE INSIDE OF THE 8" PIPE PRIOR TO SETTING. THE INITIAL PIN SETTINGS ARE TO BE PLACED SO THAT THE POST SYSTEM CAN BE ADJUSTED 4" IN EITHER DIRECTION.
3. CONTRACTOR SHALL FURNISH 8 SHIMS, INITIAL SETTING SHALL HAVE A MINIMUM OF 1/2" OF SHIMS AND A MAXIMUM OF 1 1/2" OF SHIMS.
4. CONTRACTOR SHALL TAKE ALL MEASURES TO KEEP THE GROUND BENEATH THE TIMBER PADS FROZEN WHEN EXCAVATING FOR THE TIMBER PADS. THE GROUND SHALL BE OVER EXCAVATED IF NECESSARY AND THE EXCAVATED AREA FILLED WITH COMPACTED TYPE IIA FILL OR FILL MATERIAL AS APPROVED BY THE ENGINEER. THE BALANCE OF THE CONSTRUCTION INCLUDING THE LAYING OF THE SAND BEDDING MATERIAL, RIGID INSULATION AND TIMBER PADS SHALL PROCEED AS QUICKLY AS POSSIBLE TO MAINTAIN THE GROUND BENEATH THE PADS IN A FROZEN CONDITION. FAILURE TO KEEP THE GROUND BENEATH THE PADS FROZEN DURING THE INSTALLATION SEQUENCE WILL RESULT IN THE PAD SYSTEM BEING REJECTED.
5. FOR INSTALLATIONS ON SLOPED GROUND, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING ALL POSTS AND BRACING TO FIT THE EXISTING CONDITIONS.
6. THE GRADE SHALL NOT EXCEED THIS ELEVATION. THIS ELEVATION SHALL BE USED FOR THE POSTS WITH THE DEEPEST PENETRATION INTO THE FINAL GRADE. IN ALL CASES THE POST WITH THE DEEPEST PENETRATION SHALL BE SET AT THIS GRADE WITH THE INTENT OF KEEPING THE F.F. ELEVATION AS LOW AS POSSIBLE WITH RESPECT TO THE SURROUNDING GROUND.
7. ADJUSTMENTS SHALL BE MADE USING THE POST PINS AND BASE PLATE SHIMS WHENEVER DIFFERENTIAL VERTICAL MOVEMENT OF THE GLULAM BEAM EXCEEDS 1" BETWEEN ADJACENT POSTS OR 2" BETWEEN ANY POSTS.
8. TOP OF POST ELEVATION SHALL BE PLACED WITHIN 1/4" WITH RESPECT TO ALL OTHER POSTS & POSTS SHALL BE PLUMB WITHIN 2% OF VERTICAL. POSTS SHALL BE PLACED WITH A HORIZONTAL TOLERANCE OF 1" WITH RESPECT TO ALL OTHER POSTS.
9. CONTRACTOR MAY SUBSTITUTE EXTRA STRONG FOR 6"- STD. PIPE AND ELIMINATE SHIM PLATE ON 5" LOWER SECTION. IT SHALL BE CONTRACTORS RESPONSIBILITY TO ASSURE A SMOOTH FIT BETWEEN LOWER AND UPPER SECTIONS.

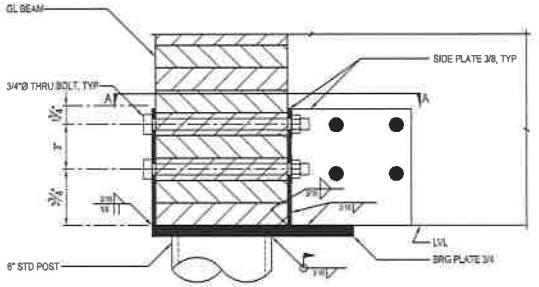


4 EASY LEVEL POST DETAIL
SCALE: 1 1/2" = 1'-0"



5 EASY LEVEL POST DETAIL
SCALE: 1 1/2" = 1'-0"





6 POST CAP
SCALE: 3" = 1'-0"

WATTERSON CONSTRUCTION
ph: (907)563-7441 fax: (907)563-7722
BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

100% CONSTRUCTION DRAWINGS

12-152
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

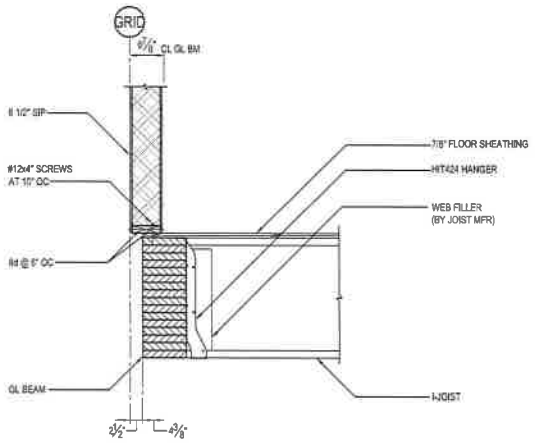
CONSULTANT:
BBFM Engineers Inc.
510 L Street, Suite 200
Anchorage, AK 99501-1949
Phone: (907) 274-2286 Fax: 274-2535

PROJECT NO:	12-152
DATE:	14 JUNE 2013
DRAWN BY:	JWC
CHECKED BY:	TJF
REVISIONS:	-

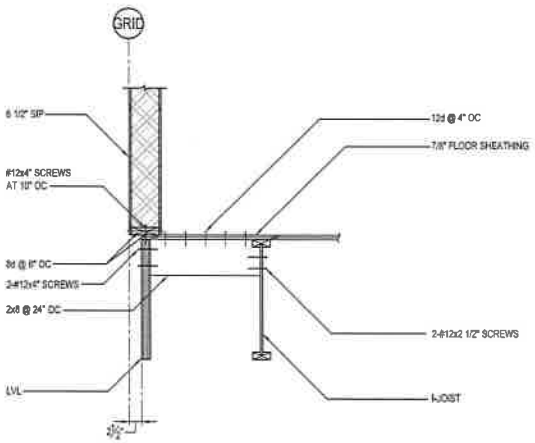
DETAILS

S5

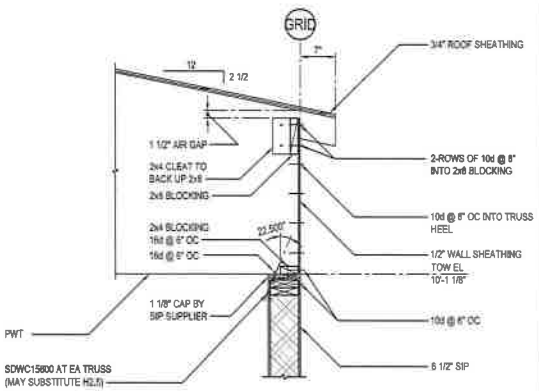
IF THIS DIMENSION DOES NOT MEASURE ONE INCH (1") EXACTLY, THIS DRAWING HAS BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES. ARCHITECTURAL



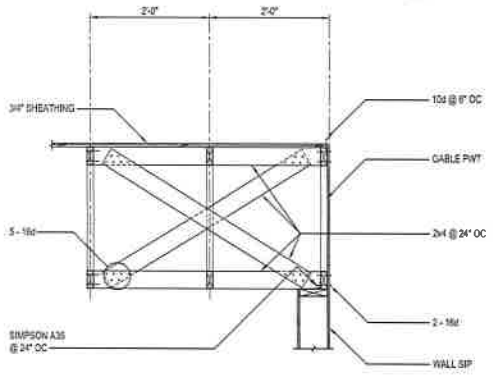
1 JOIST AT GL BEAM
SCALE: 1" = 1'-0"



2 SIP AT LVL
SCALE: 1" = 1'-0"



3 TRUSS AT SIP
SCALE: 1" = 1'-0"



4 GABLE WALL DETAIL
SCALE: 1" = 1'-0"

WATTERSON CONSTRUCTION
ph: (907)563-7441 fax: (907)563-7222

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
3000 DENALI STREET SUITE 210 ANCHORAGE, ALASKA 99503 907-561-2284
412 FRONT STREET FAIRBANKS, ALASKA 99701 907-456-2284
WWW.BETTISWORTHNORTH.COM

100% CONSTRUCTION DRAWINGS

12-152
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

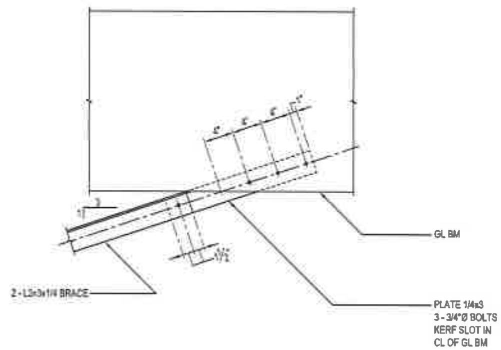
CONSULTANT:
BBFM Engineers Inc.
510 L Street, Suite 202
Anchorage, AK 99501-1949
Phone: (907) 274-2239 Fax: 274-2520

PROJECT NO:	12-152
DATE:	14 JUNE 2013
DRAWN BY:	KWK
CHECKED BY:	TJF
REVISIONS:	-

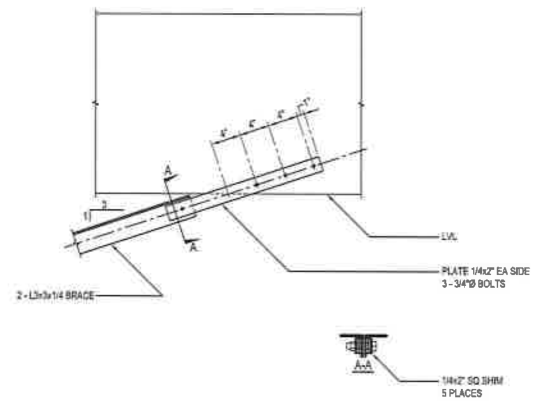
DETAILS

S6

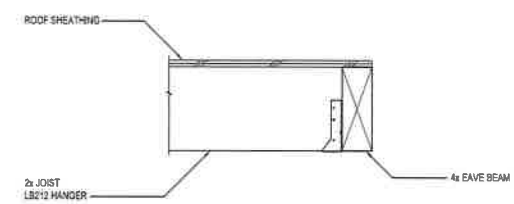
IF THIS DIMENSION DOES NOT MEASURE ONE INCH (1") EXACTLY, THIS DRAWING HAS BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES 1" ACTUAL



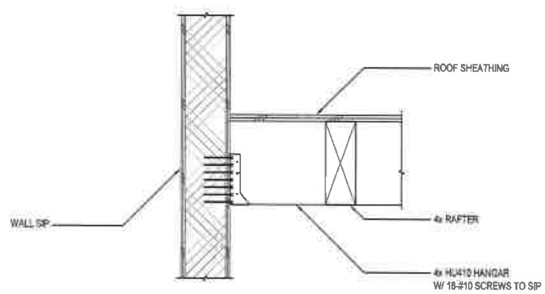
1 BRACE TO GL BEAM
SCALE: 1 1/2" = 1'-0"



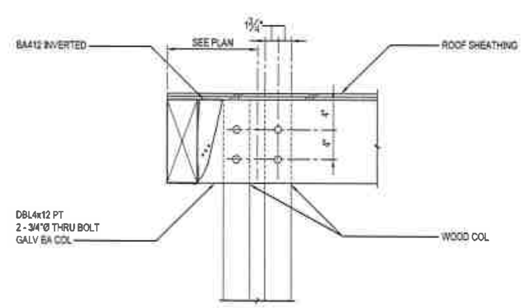
2 BRACE TO LVL
SCALE: 1 1/2" = 1'-0"



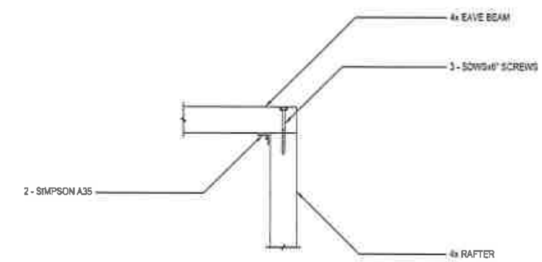
3 CANOPY RAFTER TO EAVE BM
SCALE: 1 1/2" = 1'-0"



4 EAVE 4x CONN TO WALL SIP
SCALE: 1 1/2" = 1'-0"



5 DBL CANOPY BM TO WOOD COLS
SCALE: 1 1/2" = 1'-0"



6 4x RAFTER CONN @ CORNER
SCALE: 1 1/2" = 1'-0"

WATTERSON CONSTRUCTION
ph: (907)563-7441 fax: (907)563-7222

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

100% CONSTRUCTION DRAWINGS

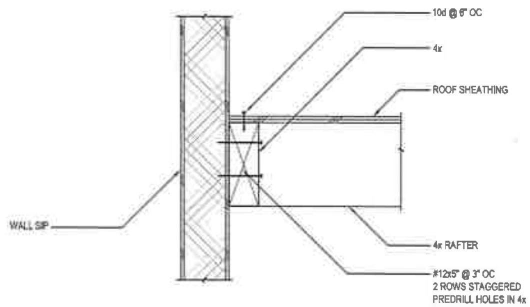
12-152
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
BBFM Engineers Inc.

PROJECT NO:	12-152
DATE:	14 JUNE 2013
DRAWN BY:	JWC
CHECKED BY:	TJF
REVISIONS:	-

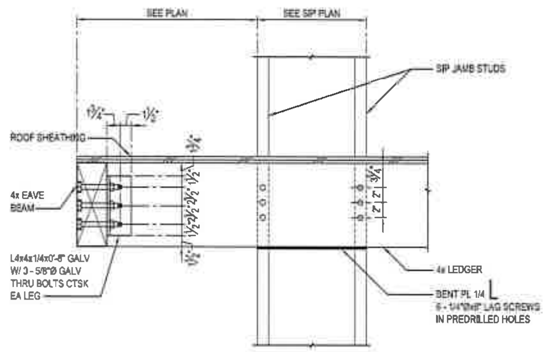
DETAILS
S7

IF THIS DIMENSION DOES NOT MEASURE ONE INCH (1") EXACTLY, THIS DRAWING HAS BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES 1" ACTUAL

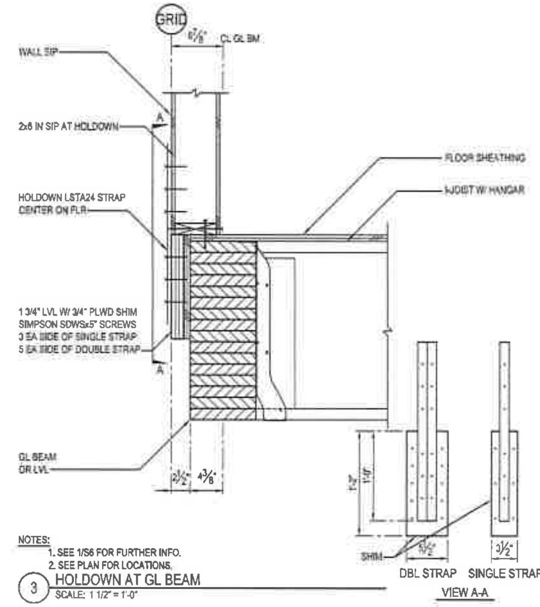


NOTE:
AT OPENING JAMBS ADD 3 - LAG SCREWS IN PREDRILLED HOLES.

1 LEDGER 4x CONN TO WALL SIP
SCALE: 1 1/2" = 1'-0"

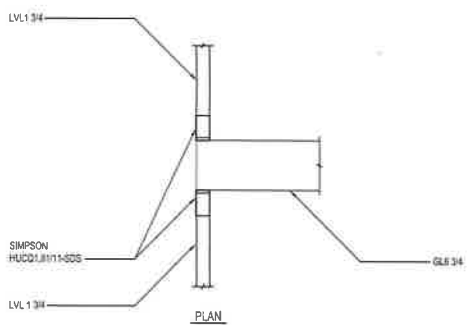


2 SOUTH CANOPY FRAMING ELEVATION
SCALE: 1 1/2" = 1'-0"



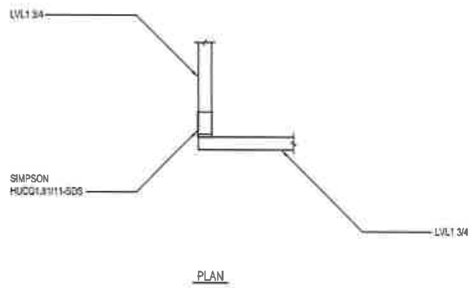
NOTES:
1. SEE 1/S6 FOR FURTHER INFO.
2. SEE PLAN FOR LOCATIONS.

3 HOLDOWN AT GL BEAM
SCALE: 1 1/2" = 1'-0"

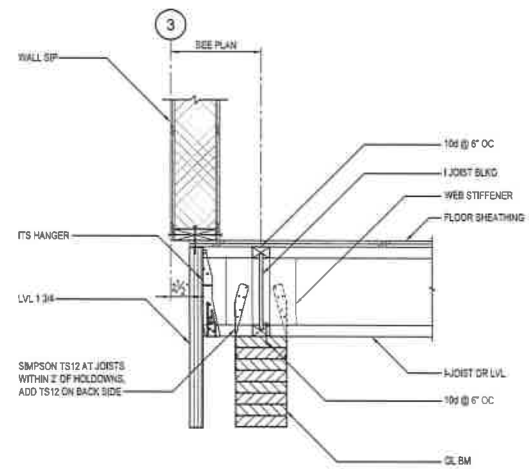


NOTE:
AT SIM COND, LVL ONE SIDE ONLY.

4 LVL TO GL BM CONN
SCALE: 1 1/2" = 1'-0"



5 LVL TO LVL CONN AT CORNER
SCALE: 1 1/2" = 1'-0"



NOTE:
SEE 1/S6 FOR FURTHER INFO.

6 SECTION AT CANTED FLR
SCALE: 1 1/2" = 1'-0"

WATTERSON CONSTRUCTION
ph: (907)563-7441 fax: (907)563-7222

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FROST STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

100% CONSTRUCTION DRAWINGS

12-152
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

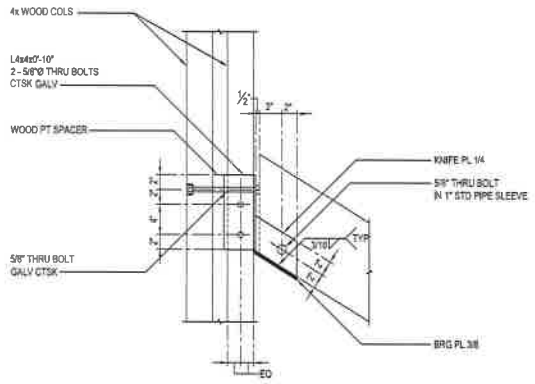
CONSULTANT:
BBFM Engineers Inc.

PROJECT NO:	12-152
DATE:	14 JUNE 2013
DRAWN BY:	JWC
CHECKED BY:	TJF
REVISIONS:	–

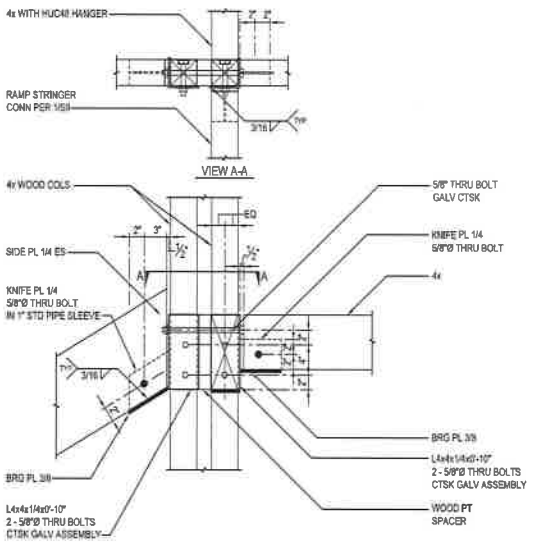
DETAILS
S8

IF THIS DIMENSION DOES NOT MEASURE ONE INCH (1") EXACTLY, THIS DRAWING HAS BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES

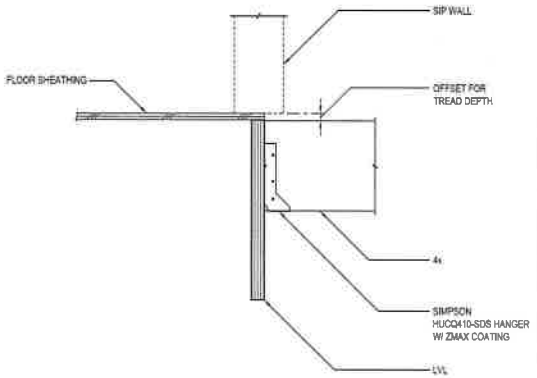
1 ACTUAL



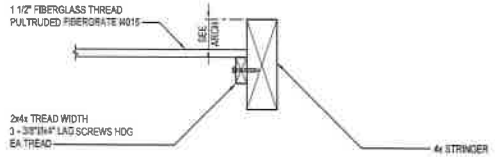
1 RAMP/STRINGER CONN TO WOOD COL
SCALE: 1 1/2" = 1'-0"



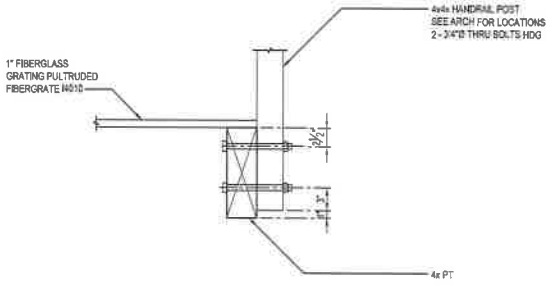
2 SOUTH CANOPY FRAMING ELEVATION
SCALE: 1 1/2" = 1'-0"



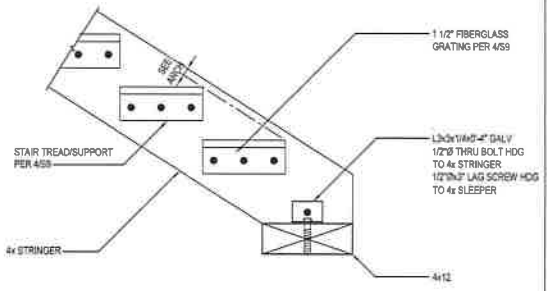
3 4x CONN TO BLDG
SCALE: 1 1/2" = 1'-0"



4 TREAD CONN TO 4x STAIR STRINGER
SCALE: 1 1/2" = 1'-0"



5 GRATING AT LANDING AND RAMP
SCALE: 1 1/2" = 1'-0"



6 STAIR STRINGER CONN TO SLEEPER
SCALE: 1 1/2" = 1'-0"

WATTERSON CONSTRUCTION
ph: (907)563-7441 fax: (907)563-7222

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
3500 DENALI STREET SUITE 210 ANCHORAGE, ALASKA 99503 907-561-2780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907-456-2780
WWW.BETTISWORTHNORTH.COM

100% CONSTRUCTION DRAWINGS

12-152
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

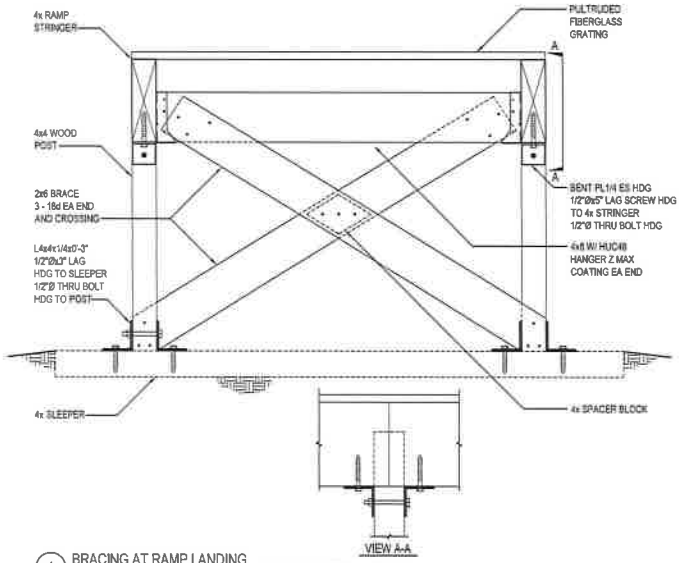
CONSULTANT:
BBFM Engineers Inc.
510 L Street, Suite 200
Anchorage, AK 99501-1949
Phone: (907) 274-2296 Fax: 274-2520

PROJECT NO:	12-152
DATE:	14 JUNE 2013
DRAWN BY:	JWC
CHECKED BY:	TJF
REVISIONS:	-

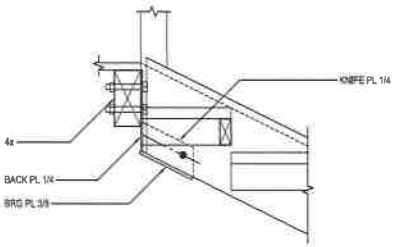
DETAILS

S9

IF THIS DIMENSION DOES NOT MEASURE ONE INCH (1") EXACTLY, THIS DRAWING HAS BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES

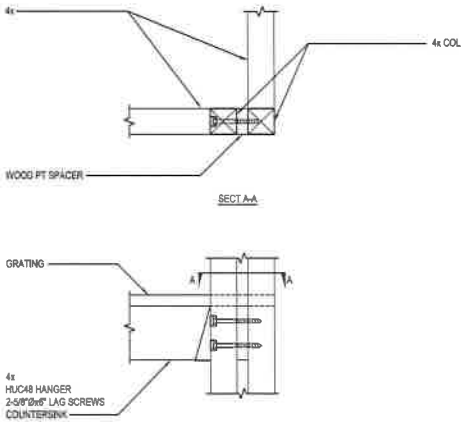


1 BRACING AT RAMP LANDING
SCALE: 1 1/2" = 1'-0"



NOTE:
SEE 1/S9 FOR FURTHER INFO

2 STAIR STRINGER CONN TO 4x
SCALE: 1 1/2" = 1'-0"



3 CORNER CONN @ LANDING
SCALE: 1 1/2" = 1'-0"

WATTERSON CONSTRUCTION
ph: (907)563-7441 fax: (907)563-7222
BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 310 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

100% CONSTRUCTION DRAWINGS

12-152
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
BBFM Engineers Inc.
510 L Street, Suite 200
Anchorage, AK 99501-1949
Phone: (907) 274-2238 Fax: 274-2535

PROJECT NO:	12-152
DATE:	14 JUNE 2013
DRAWN BY:	CMS
CHECKED BY:	TJF
REVISIONS:	-

DETAILS

S10

MECHANICAL LEGEND

- WASTE
- VENT PIPING
- COLD WATER
- HOT WATER
- HOT WATER RECIRCULATED
- SEE ABBREVIATIONS FOR MEDIA
- PIPE UP
- PIPE DOWN
- TEE UP
- TEE DOWN
- CAP
- UNION
- DIRECTION OF FLOW
- ISOLATION VALVE
- 2-WAY CONTROL VALVE
- 3-WAY CONTROL VALVE
- CHECK VALVE
- BALANCE/SHUT-OFF VALVE
- PRESSURE REDUCING VALVE
- FLEXIBLE PIPING CONNECTOR
- PRESSURE/TEMPERATURE RELIEF VALVE
- HOSE BIBB
- PUMP
- CLEANOUT
- PIPE GUIDE
- PIPE ANCHOR
- THERMOMETER
- PRESSURE GAUGE WITH ISOLATION COCK
- STRAINER WITH BLOWDOWN
- FLOOR CLEANOUT
- FLOOR DRAIN
- SUPPLY AIR UP & DOWN (SQUARE) SUPPLY AIR DIFFUSER / GRILLE
- RETURN AIR UP & DOWN (SQUARE) RETURN AIR GRILLE
- EXHAUST AIR UP & DOWN (SQUARE) EXHAUST AIR GRILLE
- ROUND DUCT UP & DOWN
- VOLUME DAMPER
- MOTORIZED CONTROL DAMPER
- SOUND LINED DUCTWORK
- 24/12 — DUCT SIZE (FIRST NUMBER – SIDE SHOWN) (SECOND NUMBER – SIDE NOT SHOWN)
- INSULATED DUCTWORK
- TURNING VANES
- FLEXIBLE DUCT CONNECTION
- FIRE DAMPER
- DIFFUSER WITH FLEXIBLE DUCT
- THERMOSTAT OR SENSOR
- REVERSE ACTING THERMOSTAT
- HUMIDISTAT
- SHEET NOTES
- SX:CFM — SERVICE: S=SUPPLY, R=RETURN, E=EXHAUST; CFM; DIFFUSER OR GRILLE TAG
- 1/M1 — DETAIL NUMBER; SHEET LOCATED ON
- BB-1 / 12 — BASEBOARD DESIGNATION; ACTIVE LENGTH; GPM

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	CW	HW	WASTE	VENT	TRAP	MANUFACTURER	MODEL	COLOR	TRIM / REMARKS
		MINIMUM CONNECTION SIZE								
WC-1	WATER CLOSET – FLOOR MOUNT – ADA	1/2"	---	3"	2"	---	KOHLER	HIGHLINE K-3427	WHITE	1.6 GALLON FLUSH, TANK LINER, LOCKING COVER, SPLIT RIM SEAT, COVER
LV-1	LAVATORY – COUNTER MOUNT	1/2"	1/2"	1-1/2"	1-1/2"	1-1/4"	KOHLER	PENNINGTON K-2196	WHITE	DELTA FAUCET 520LF-HGMHDF WITH POP UP DRAIN
SK-1	SINK – EXAM/LABORATORY	1/2"	1/2"	2"	1-1/2"	2"	JUST	SL-2222-A-GR	STAINLESS	DELTA FAUCET 24T2633 WITH RIGID SPOUT, PROVIDE SINK STRAINER
SK-2	SINK – DENTAL ROOM	1/2"	1/2"	2"	1-1/2"	2"	PER DENTAL SUPPLIER			TRIM PER DENTAL SUPPLIER
SK-3	SINK – KITCHEN	1/2"	1/2"	2"	1-1/2"	2"	JUST	SLX-2222-A-GR	STAINLESS	DELTA FAUCET 400 WITH HOSE SPRAY
SK-4	SINK – HALLWAY	1/2"	1/2"	2"	1-1/2"	2"	JUST	SL-2222-A-GR	STAINLESS	DELTA FAUCET 24T2633 WITH RIGIC SPOUT, PROVIDE SINK STRAINER, HAWS 7610 EMERGENCY EYEWASH
SK-5	SINK – JANITOR	1/2"	1/2"	3"	2"	3"	FIAT	MSB-2424	WHITE	FIAT FAUCET 830-AA, 832-AA HOSE AND BRACKET, E-77-AA VINYL BUMPERGUARD, 889-CC MOP HANGER
SH-1	SHOWER STALL – ADA	1/2"	1/2"	2"	1-1/2"	2"	FIBER-FAB	40H1KD	WHITE	DELTA R10000-UNWS, DELTA T13H152, 70" FLEX HOSE, ADJUSTABLE WALL BRACKET, ADJUSTABLE MAXIMUM TEMP. INTEGRAL CHECK STOPS, PRESSURE BALANCED, INTEGRAL CHECK VALVES, DRAIN WITH BRASS SCREEN
WB-1	WASHER BOX	1/2"	1/2"	2"	1-1/2"	2"	OATEY	38913	---	WITH WATER HAMMER ARRESTORS
FD-1	FLOOR DRAIN	1/2"	---	2"	1-1/2"	2"	J.R. SMITH	DX 2010	---	ROUND TOP, TRAP PRIMER CONNECTION, SECURING HOLES FOR WOOD FLOOR INSTALLATION
FS-1	FLOOR SINK	1/2"	---	2"	1-1/2"	2"	J.R. SMITH	DX 3007	---	TRAP PRIMER CONNECTION, SECURING HOLES FOR WOOD FLOOR INSTALLATION, 3/4 STAINLESS STEEL GRATE

EXPANSION TANK SCHEDULE

SYMBOL	MFGR / MODEL	FUNCTION	FLUID	TOTAL VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	DIMENSIONS	MATERIAL	LABEL	REMARKS
ET-1	AMTROL / SX-90V	HYDRONIC EXPANSION	50% P.G.	44.0	34.0	22"ø x 36"	STEEL/BUTYL	---	---
ET-2	AMTROL / ST-25V	DOMESTIC HOT WATER EXPANSION	WATER	10.3	10.3	15"ø x 19"	STEEL/BUTYL	NSF	---

TANK SCHEDULE

SYMBOL	MFGR / MODEL	FUNCTION	FLUID	CAPACITY (GALLONS)	DIMENSIONS	MATERIAL	LABEL	REMARKS
GT-1	AXIOM / MF200	GLYCOL MIX	50% P.G.	6.6	16"x12"x12"	PLASTIC	---	WITH PACKAGED PUMP AND CONTROLS; 50 WATTS, 120V, 1PH
FOT-1	ACE TANK / AC00550U2K4	FUEL OIL STORAGE	FUEL OIL	550	75"x32"x48"ø	STEEL	UL-142	DOUBLE WALL SKID TANK

HOT WATER GENERATOR SCHEDULE

SYMBOL	MFGR / MODEL	RECOVERY (GPH)	CAPACITY (GAL)	EWT	LWT	FLUID	FLOW (GPM)	WPD (FT HD)	EFT	LFT	LABEL	REMARKS
		DOMESTIC HOT WATER				HEATING MEDIUM						
HWG-1	HTP / SSU-600W	88	60	40°F	120°F	50% P.G.	7	13'	175°F	145°F	IAPMO	DOUBLE WALL VENTED COIL

PUMP SCHEDULE

SYMBOL	MFGR / MODEL	SERVICE	FLUID	GPM	HEAD FT.	HP	VOLTS/PH	REMARKS
						MOTOR DATA		
CP-1	GRUNDFOS / UPS 32-160/2	BUILDING HEATING CIRCULATION	50% P.G.	21	30'	3/4	230/1	SET INITIALLY AT SPEED TWO
CP-2	GRUNDFOS / UPS 32-160/2	HOT WATER GENERATOR	50% P.G.	7	34'	3/4	230/1	SET INITIALLY AT SPEED ONE
CP-3	GRUNDFOS / UP 26-64F	HEAT EXCHANGER CIRCULATION	50% P.G.	20	6'	1/12	120/1	---
CP-4	GRUNDFOS / UP 43-75F	WASHETERIA CIRCULATION	50% P.G.	20	13'	1/8	120/1	---
CP-5	GRUNDFOS / UP 15-42SF	WATER SERVICE RECIRCULATION	WATER	3	7'	1/25	120/1	RATED FOR OPEN SYSTEMS, 24 HOUR ON-OFF SYSTEM TIMER, BRONZE CONSTRUCTION

AIR SEPARATOR SCHEDULE

SYMBOL	MFGR / MODEL	SYSTEM	FLUID	FLOW RATE (GPM)	WPD (FT. HD)	INLET/OUTLET SIZE	DIMENSIONS	MATERIALS	LABEL	REMARKS
AS-1	SPIROTHERM / VJR-200	HEATING SYSTEM	50% P.G.	28.0	<1.0'	2"	10.8"H x 4.0"ø	BRASS	---	AIR SEPARATOR WITH AUTO AIR VENT

BOILER SCHEDULE

SYMBOL	MFGR / MODEL	FLUID	FUEL	GROSS INPUT (GPH)	NET AHRI OUTPUT (MBH)	HP	VOLTS/PH	LABEL	REMARKS
						BURNER			
B-1	U.S. BOILER / MPO-IQ231	50% P.G.	OIL	1.65	177	FR	120/1	UL	30 PSI RELIEF VALVE, SWING AWAY BURNER DOOR

BASEBOARD RADIATION SCHEDULE

SYMBOL	MFGR / MODEL	OUTPUT (BTU/LF)	FLUID	EFT	LFT	TUBE SIZE	ELEMENT FIN SIZE	FIN PER FOOT	FIN THICKNESS	NUMBER OF TIERS	MOUNTING HEIGHT	ENCLOSURE THICKNESS	REMARKS
BB-1	STERLING / JVA-S14 C3/4-35	820	50% P.G.	175°F	155°F	3/4"ø Cu	3-1/4" x 3-1/4"	50	0.020" AL	1	18"	18 GA	---
BB-2	STERLING / BARE C3/4-35	720	50% P.G.	175°F	155°F	3/4"ø Cu	3-1/4" x 3-1/4"	50	0.020" AL	1	---	---	BARE FINTUBE

DUCT COIL SCHEDULE

SYMBOL	MFGR	SIZE	CFM	AIR P.D. (IN. W.C.)	VELOCITY (FPM)	EAT	LAT	GPM	FLUID	EFT	LFT	WPD (FT. HD.)	REMARKS
DC-1	TITUS	PER MFGR	370	<0.1	<700	55°F	75°F	0.8	50% P.G.	175°F	145°F	<1'	COIL HEIGHT NOT TO EXCEED ADJACENT DUCT HEIGHT

HEAT EXCHANGER SCHEDULE

SYMBOL	MFGR / MODEL	TYPE	FLUID	FLOW (GPM)	WPD (FT HD)	EFT	LFT	CONN. SIZE	HEAT EXCHANGED (Btuh)	FLUID	FLOW (GPM)	WPD (FT HD)	EFT	LFT	CONN. SIZE	REMARKS
			HOT SIDE							COLD SIDE						
HE-1	FLATPLATE / FD10X20-60	BRAZED PLATE	50% P.G.	20.0	<1.4'	185°F	165°F	2"	160,000	50% P.G.	20.0	<1.4'	155°F	175°F	2"	---

WATTERSON CONSTRUCTION ph (907)563-7441 fax (907)563-7222

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS

2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

100% CONSTRUCTION DRAWINGS

2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
HZA
HAY, ZIETLOW & ASSOCIATES, LLC

PROJECT NO:	2013.008
DATE:	14 JUNE 2013
DRAWN BY:	TCH
CHECKED BY:	ACT
REVISIONS:	

MECHANICAL SCHEDULES AND LEGEND

M0.1

ABBREVIATIONS

A	COMPRESSED AIR
AAV	AUTOMATIC AIR VENT
AD	ACCESS DOOR
AF	AIR FOIL
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
AMPS	AMPERES
APD	AIR PRESSURE DROP
ARCH	ARCHITECTURAL
AWT	AVERAGE WATER TEMPERATURE
BDD	BACKDRAFT DAMPER
BHD	BOTTOM HORIZONTAL DISCHARGE
BI	BACKWARD INCLINE
BLDG	BUILDING
BOD	BOTTOM OF DUCT
BTUH	BRITISH THERMAL UNIT PER HOUR
C/A	COMBUSTION AIR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CONT	CONTINUED
CO	CLEANOUT
CONN	CONNECTION
CP	CIRCULATION PUMP
CUH	CABINET UNIT HEATER
CW	COLD WATER
ø	DIAMETER
dB	DECIBELS
DBD	DOWNBLAST DISCHARGE
DEG	DEGREE
DN	DOWN
DWG	DRAWING
E/A	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EG	ETHYLENE GLYCOL
ET	EXPANSION TANK
EXH	EXHAUST
EWT	ENTERING WATER TEMPERATURE
EST	EXTERNAL STATIC PRESSURE
EGT	ENTERING GLYCOL TEMPERATURE
EXIST	EXISTING
FT	FEET
FPM	FEET PER MINUTE
FPF	FINS PER FOOT
FC	FORWARD CURVE
F	FAHRENHEIT
FCO	FLOOR CLEAN OUT
FD	FIRE DAMPER, FLOOR DRAIN
FSD	FIRE SMOKE DAMPER
G	NATURAL GAS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GI	GREASE INTERCEPTOR
GT	GLYCOL TANK
HB	HOSE BIBB
HC	HEATING COIL
HD	HEAD
HGR	HEATING GLYCOL RETURN
HGS	HEATING GLYCOL SUPPLY
HW	HOT WATER
HWC	HOT WATER CIRCULATED
HP	HORSEPOWER
ID	INSIDE DIAMETER
IN	INCHES
LAT	LEAVING AIR TEMPERATURE
LF	LINEAL FEET
LGT	LEAVING GLYCOL TEMPERATURE
LPG	LIQUID PROPANE GAS
LWT	LEAVING WATER TEMPERATURE
MAU	MAKE UP AIR UNIT
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MFGR	MANUFACTURER
M/A	MAKEUP AIR
MIN	MINIMUM
MTD	MOUNTED
NC	NOISE CRITERIA
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NSF	NATIONAL SANITARY FOUNDATION
NTS	NOT TO SCALE
O/A	OUTSIDE AIR
OD	OUTSIDE DIAMETER
PD	PRESSURE DROP
PG	PROPYLENE GLYCOL
PH	PHASE
PSI	POUNDS PER INCH
R/A	RETURN AIR
RP	RADIANT PANEL
RPM	REVOLUTIONS PER MINUTE
RL	RAIN LEADER
S/A	SUPPLY AIR
SD	STORM DRAIN
SP	STATIC PRESSURE
T/A	TRANSFER AIR
TEMP	TEMPERATURE
TSP	TOTAL STATIC PRESSURE
TW	TEMPERED WATER
TWC	TEMPERED WATER CIRCULATED
TYP	TYPICAL
UH	UNIT HEATER
V	VENT
VEL	VELOCITY
VF	VENTILATION FAN
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THROUGH ROOF
WC	WATER COLUMN
WG	WATER GAGE
WCO	WALL CLEAN OUT
WHA	WATER HAMMER ARRESTOR
WH	WATER HEATER
W	WASTE
WPD	WATER PRESSURE DROP
YCO	YARD CLEAN OUT

UNIT HEATER SCHEDULE

SYMBOL	MFGR / MODEL	CAPACITY (MBH)	GPM	FLUID	EFT	LFT	WPD (FT HD)	CFM	MOTOR DATA HP	MOTOR DATA VOLTS/PH	REMARKS
UH-1	MODINE / HC-42	30.9	3.2	50% P.G.	175°F	155°F	<1'	730	1/12	120/1	----
CUH-1	MODINE / CW-06	29.9	4.4	50% P.G.	175°F	155°F	<1'	620	1/20	120/1	RECESSED CEILING MOUNT WITH FRAME
CUH-2	MODINE / CW-03	14.9	2.2	50% P.G.	175°F	155°F	<1'	330	1/30	120/1	RECESSED CEILING MOUNT WITH FRAME
CUH-3	MODINE / CW-02	8.3	1.3	50% P.G.	175°F	155°F	<1'	250	1/30	120/1	RECESSED CEILING MOUNT WITH FRAME

HEAT RECOVERY VENTILATOR SCHEDULE

SYMBOL	MFGR / MODEL	AIRFLOW (CFM)	ESP AT HIGH SPEED (IN. WG)	ELEC. DATA WATTS/VOLTS/PH	REMARKS
HRV-1	LIFEBREATH / 500DCS-REV	370	0.8"	570/120/1	BALANCE DAMPERS/AIR FLOW STATION, PROGRAMMABLE CONTROLLER WITH DEHUMIDISTAT, TIME CLOCK, REMOTE DIGITAL TIMER

FAN SCHEDULE

SYMBOL	MFGR / MODEL	SERVICE	TYPE	CFM	ESP (IN. WG)	MOTOR DATA AMPS	MOTOR DATA VOLTS/PH	DRIVE	SONES	REMARKS
EF-1	GREENHECK / SP-A710	MECHANICAL ROOM EXHAUST	CENTRIFUGAL	400	0.5"	4.4	120/1	DIRECT	<6	WITH SPEED CONTROLLER
EF-2	GREENHECK / SP-A190	TELECOM EXHAUST	CENTRIFUGAL	105	0.35"	1.30	120/1	DIRECT	<3	WITH SPEED CONTROLLER

GRILLE - REGISTER - DIFFUSER SCHEDULE

SYMBOL	MFGR / MODEL	TYPE	SERVICE	MATERIAL	FINISH	FACE SIZE	DIFFUSER NECK SIZE	THROW	REMARKS
SA	LIFEBREATH / TECHGRILLE	DIFFUSER	S/A	POLYPROPYLENE	WHITE	5.9"ø	4"ø	360°	ROUND FACE, AIRFLOW ADJUSTABLE BY POSITIONING CENTER CONE
SB	LIFEBREATH / TECHGRILLE	DIFFUSER	S/A	POLYPROPYLENE	WHITE	8.25"ø	5"ø	360°	ROUND FACE, AIRFLOW ADJUSTABLE BY POSITIONING CENTER CONE
SC	TITUS / OT-581	DIFFUSER	S/A	ALUMINUM	WHITE	12/3	----	1-WAY	FRAME FOR SIDEWALL MOUNTING
TA	TITUS / 50F	GRILLE	T/A	ALUMINUM	WHITE	12/12	----	----	FRAME FOR T-BAR CEILING, WITH 24/24 MODULE
EA	LIFEBREATH / TECHGRILLE	DIFFUSER	E/A	POLYPROPYLENE	WHITE	5.9"ø	4"ø	----	ROUND FACE, AIRFLOW ADJUSTABLE BY POSITIONING CENTER CONE
EB	LIFEBREATH / TECHGRILLE	DIFFUSER	E/A	POLYPROPYLENE	WHITE	7.5"ø	5"ø	----	ROUND FACE, AIRFLOW ADJUSTABLE BY POSITIONING CENTER CONE
EC	LIFEBREATH / TECHGRILLE	DIFFUSER	E/A	POLYPROPYLENE	WHITE	9.75"ø	8"ø	----	ROUND FACE, AIRFLOW ADJUSTABLE BY POSITIONING CENTER CONE

SPECIFICATIONS

PLANS
THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM. THE DRAWINGS ARE PARTLY DIAGRAMMATIC, NOT NECESSARILY SHOWING ALL OFFSETS OR EXACT LOCATIONS OF PIPING AND DUCTS UNLESS SPECIFICALLY DIMENSIONED. CONTRACTOR SHALL COORDINATE DIFFUSER LOCATIONS WITH ELECTRICAL PLANS AND ARCHITECTURAL REFLECTED CEILING PLANS TO AVOID CONFLICT. CONTRACTOR SHALL FIELD VERIFY AND COORDINATE WITH EXISTING SYSTEMS BEFORE START OF WORK TO AVOID CONFLICTS.

CODE
ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), 2009 EDITION, INTERNATIONAL MECHANICAL CODE (IMC), 2009 EDITION, UNIFORM PLUMBING CODE (UPC), 2009 EDITION, INTERNATIONAL FUEL GAS CODE (IFGC), 2009 EDITION AND NATIONAL ELECTRICAL CODE (NEC), 2011 EDITION. SHEET METAL WORK SHALL BE DONE IN ACCORDANCE WITH SMACNA STANDARDS.

PERMITS
THE CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS AND FEES.

WARRANTY
ALL WORK PERFORMED UNDER THIS CONTRACT TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM ACCEPTANCE. ANY FAULTY MATERIALS OR WORKMANSHIP SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER DURING THE GUARANTEE PERIOD.

MATERIALS
ALL MATERIALS SHALL BE NEW AND UNUSED, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND IN THE BEST PRACTICE OF THE CRAFT. OBTAIN OWNER'S APPROVAL OF ALL PRODUCTS PRIOR TO ORDERING OR INSTALLING ANY PART OF ANY SYSTEM.

EQUIPMENT SUBSTITUTIONS
ALL EQUIPMENT LISTED IS REPRESENTATIVE OF THE STANDARD OF QUALITY AND PERFORMANCE REQUIRED. "OR EQUAL" SUBSTITUTIONS WILL BE CONSIDERED IF THE SUBSTITUTES ARE SHOWN TO BE EQUAL OR BETTER QUALITY, INCLUDING EFFICIENCY OF PERFORMANCE, SIZE AND WEIGHT.

SUBMITTALS
THE CONTRACTOR SHALL SUBMIT PRODUCT DATA COMPILED IN A BOUND NOTEBOOK FOR MECHANICAL SYSTEMS. ELECTRONIC SUBMISSION OF SUBMITTALS IS NOT ACCEPTABLE. ALL PRODUCT DATA SHALL BE SUBMITTED AT ONE TIME. PARTIAL SUBMITTALS WILL BE RETURNED WITHOUT REVIEW. PRODUCT DATA SHALL BE APPROPRIATELY MARKED TO INDICATE PROPOSED PRODUCT.

OPERATION AND MAINTENANCE MANUAL
PROVIDE THE OWNER WITH AN OPERATING AND MAINTENANCE MANUAL, TO INCLUDE MANUFACTURER'S SPECIFICATIONS, OPERATING AND MAINTENANCE INSTRUCTIONS, WARRANTY INFORMATION ON EACH PIECE OF EQUIPMENT, START-UP REPORTS, BALANCE REPORT AND SCHEMATIC DIAGRAMS OF CONTROL SYSTEMS AS-BUILT, AS WELL AS A SOURCE OF SUPPLY FOR SPARE PARTS AND SERVICE.

ACCESS
PROVIDE WORKABLE ACCESS TO ALL SERVICEABLE AND/OR OPERABLE EQUIPMENT. PROVIDE ACCESS DOOR OF REQUIRED RATING FOR ACCESS TO ALL SERVICEABLE AND/OR OPERABLE EQUIPMENT LOCATED ABOVE HARD CEILINGS OR IN WALLS.

SLEEVES
PIPING SLEEVES THROUGH FIRE RATED ASSEMBLIES SHALL BE PREMANUFACTURED, UL LISTED ASSEMBLIES. PIPING SLEEVES THROUGH NON FIRE RATED ASSEMBLIES SHALL BE 18 GAUGE GALVANIZED STEEL.

SUPPORTS AND ANCHORS
PIPING, DUCTWORK AND EQUIPMENT SHALL BE ADEQUATELY SUPPORTED IN ACCORDANCE WITH CODE REQUIREMENTS AND GOOD PRACTICE. PIPING SUPPORTS SHALL BE CARBON STEEL, ADJUSTABLE SWIVEL HANGERS WITH THREADED ROD SUPPORT. INSULATED PIPING SHALL BE ROUTED THROUGH HANGERS AND PROVIDED WITH SHEETMETAL INSULATION PROTECTION SADDLES. ALL SUPPORTS SHALL BE SECURED TO BUILDING STRUCTURAL ELEMENTS. PIPE ANCHORS SHALL BE CONTRACTOR FABRICATED AND SECURED TO BUILDING STRUCTURE TO RESIST PIPING MOVEMENT.

SEISMIC RESTRAINT
PIPING AND DUCTWORK SYSTEMS SHALL BE SEISMICALLY RESTRAINED IN ACCORDANCE WITH SMACNA GUIDELINES FOR SEISMIC RESTRAINT - THIRD EDITION (2008). EQUIPMENT, PIPING AND DUCTWORK SYSTEMS SHALL BE SEISMICALLY RESTRAINED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE AND ASCE 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEISMIC RESTRAINT DESIGN FOR ALL PIPING, DUCTWORK AND EQUIPMENT USING PREMANUFACTURED SYSTEMS, AMBER BOOTH OR EQUAL, OR BY RETAINING THE SERVICES OF A PROFESSIONAL STRUCTURAL ENGINEER LICENSED BY THE STATE OF ALASKA. THE CONTRACTOR SHALL PROVIDE STRUCTURAL ENGINEERING CALCULATIONS FOR REVIEW AND APPROVAL BASED ON ACTUAL PIPING LAYOUT, ACTUAL DUCT LAYOUT AND ACTUAL EQUIPMENT TO BE USED ON THE PROJECT TO THE AUTHORITY HAVING JURISDICTION.

MECHANICAL IDENTIFICATION
PIPING, DUCTWORK, VALVES AND EQUIPMENT SHALL BE PROVIDED WITH IDENTIFICATION. PIPING, CONCEALED OR EXPOSED, SHALL BE LABELED WITH PREFABRICATED, EMI-RIGID PLASTIC, WRAP AROUND PIPE MARKERS OR PAINTED STENCIL, INDICATING SERVICE AND FLOW DIRECTION, AT NOT LESS THAN 20 FEET ON CENTER AND AT EACH SIDE OF WALL, FLOOR, CEILING PENETRATIONS. DUCTWORK, CONCEALED OR EXPOSED, SHALL BE LABELED WITH PAINTED STENCIL, INDICATING FAN SYSTEM AND FLOW DIRECTION, AT NOT LESS THAN 20 FEET ON CENTER AND AT EACH SIDE OF WALL, FLOOR, CEILING PENETRATIONS. VALVES SHALL BE LABELED WITH TAGS INDICATING SERVICE AND VALVE NUMBER CORRESPONDING TO A VALVE DIRECTORY TO BE DELIVERED TO THE OWNER. EQUIPMENT SHALL BE LABELED WITH PLASTIC NAMEPLATES.

INSULATION
COLD WATER, HOT WATER AND HEATING GLYCOL PIPING SHALL BE INSULATED WITH 1-1/2" PRE-FORMED FIBERGLASS INSULATION WITH FACTORY APPLIED VAPOR BARRIER JACKET AND PREMANUFACTURED PLASTIC FITTING INSULATION. PLUMBING VTR'S SHALL BE INSULATED WITH 1" PRE-FORMED FIBERGLASS INSULATION WITH FACTORY APPLIED VAPOR BARRIER JACKET DOWN TO 3' WITHIN THE BUILDING. COMBUSTION AIR DUCTWORK SHALL BE INSULATED WITH 2" RIGID FIBERGLASS INSULATION WITH FACTORY APPLIED VAPOR BARRIER WITH CANVAS COVERING. HRV OUTSIDE AIR DUCTWORK AND EXHAUST AIR DUCTWORK SHALL BE INSULATED WITH 2" RIGID FIBERGLASS INSULATION WITH FACTORY APPLIED VAPOR BARRIER WITH CANVAS COVERING. EXHAUST DUCTWORK SHALL BE INSULATED WITH 1" RIGID FIBERGLASS INSULATION WITH FACTORY APPLIED VAPOR BARRIER WITH CANVAS COVERING, TO A POINT 10 FEET WITHIN THE BUILDING. HANDICAPPED ACCESSIBLE SINK P-TRAPS, COLD AND HOT WATER PIPING SHALL BE INSULATED WITH PRE-MANUFACTURED INSULATION SYSTEMS.

PIPING
SANITARY WASTE AND VENT PIPING SHALL BE CAST IRON NO-HUB OR COPPER DWV. WATER PIPING SHALL BE TYPE L COPPER. SOLDER SHALL BE 95/5 OR LEAD-FREE OR PEX PIPING LISTED FOR POTABLE WATER APPLICATIONS. HEATING GLYCOL PIPING SHALL BE TYPE L COPPER, VICTAULIC AND PROPRESS NOT ALLOWED. FUEL OIL PIPING SHALL BE SCHEDULE 40 STEEL. NO COMPRESSION FITTINGS ALLOWED ON FUEL OIL PIPING. ROUTE PIPES PARALLEL WITH BUILDING LINES UNLESS OTHERWISE INDICATED. CONCEAL ALL PIPING IN FINISHED AREAS UNLESS AUTHORIZED BY OWNER.

VALVES
BALL VALVES OR BUTTERFLY VALVES. GATE VALVES AND GLOBE VALVES ARE NOT ACCEPTABLE. BALANCE VALVES SHALL BE B&G CIRCUIT SETTER, OR APPROVED EQUAL. PROVIDE ISOLATION VALVES AT EACH FIXTURE, PUMP AND TERMINAL HEATING UNIT. PROVIDE BALANCE VALVES WHERE INDICATED ON PLANS.

PLUMBING
PLUMBING FIXTURES SHALL BE COMMERCIAL GRADE, MANUFACTURER AND MODEL AS INDICATED IN THE PLUMBING FIXTURE SCHEDULE, OR APPROVED EQUAL. PLUMBING EQUIPMENT SHALL BE COMMERCIAL GRADE, MANUFACTURER AND MODEL AS INDICATED ON THE EQUIPMENT SCHEDULES, OR APPROVED EQUAL. PROVIDE SHOCK-TROL DEVICES AT ALL FIXTURES.

HEATING
HEATING EQUIPMENT SHALL BE COMMERCIAL GRADE, MANUFACTURER AND MODEL AS INDICATED ON THE EQUIPMENT SCHEDULES, OR APPROVED EQUAL. AIR VENTS SHALL BE PROVIDED AT ALL HIGH POINTS OF THE PIPING SYSTEM. LOW POINT DRAINS SHALL BE PROVIDED AT ALL LOW POINTS OF THE PIPING SYSTEM. POSITIVE PRESSURE, FUEL FIRED APPLIANCE CHIMNEY SHALL BE DOUBLE WALL, INSULATED, METALBESTOS MODEL IPS, OR APPROVED EQUAL.

GLYCOL
PROVIDE PRE-MIXED HYDRONIC GRADE PROPYLENE GLYCOL (DOWFROST HD OR EQUAL) AT A RATE OF 50% WATER TO 50% GLYCOL FOR A -20 DEGREES F PROTECTION OR BETTER. PROVIDE 10 GALLONS ADDITIONAL MIX AT THE END OF THE PROJECT.

VENTILATION
VENTILATION EQUIPMENT SHALL BE COMMERCIAL GRADE, MANUFACTURER AND MODEL AS INDICATED ON THE EQUIPMENT SCHEDULES, OR APPROVED EQUAL. DUCTWORK SHALL BE GALVANIZED SHEET METAL, RECTANGULAR OR ROUND AS INDICATED ON PLANS, WHERE RECTANGULAR DUCTWORK IS INDICATED, ROUND MAY BE USED WHEN APPROVED BY THE ENGINEER. DUCTWORK SHALL BE CONSTRUCTED, INSTALLED, AND TESTED IN ACCORDANCE WITH SMACNA STANDARDS. VOLUME DAMPERS SHALL BE PROVIDED AS INDICATED ON PLANS. WHERE DAMPERS ARE LOCATED ABOVE HARD CEILING PROVIDE REMOTE OPERATORS.

FIRE PROTECTION
THE ENTIRE BUILDING SHALL BE PROVIDED WITH A WET PIPE SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13D REQUIREMENTS AND THE STATE OF ALASKA FIRE AND LIFE SAFETY POLICY 08-4. THE CONTRACTOR SHALL DESIGN THE SYSTEM, BY A PERSON NICET LEVEL III OR IV CERTIFIED, OR REGISTERED FIRE PROTECTION ENGINEER. PROVIDE ADEQUATE NUMBER OF SHOP DRAWINGS TO THE STATE OF ALASKA FIRE MARSHAL FOR APPROVAL AND TO THE OWNER FOR REVIEW. SUBMIT STATE FIRE MARSHAL APPROVED SHOP DRAWINGS, HYDRAULIC CALCULATIONS AND PRODUCT DATA TO THE ARCHITECT/ENGINEER FOR REVIEW. NO WET PIPING SHALL BE INSTALLED OUTSIDE THE THERMAL ENVELOPE OF THE BUILDING.

CONTROLS SYSTEMS
THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATIONAL CONTROL SYSTEM AS REQUIRED TO PROVIDE EQUIPMENT CONTROL AS SPECIFIED UNDER THE SEQUENCE OF OPERATIONS. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, POWER, WIRING, CONDUIT, CONTROLLERS, ACTUATORS, AND ASSOCIATED CONTROL COMPONENTS FOR A COMPLETE AND OPERATIONAL SYSTEM. ALL CONTROL WIRING SHALL BE ROUTED IN CONDUIT. MOUNT THERMOSTATS AT 48" ABOVE FINISH FLOOR UNLESS OTHERWISE INDICATED. THE CONTRACTOR SHALL SUBMIT SYSTEM PRODUCT DATA, VALVE SCHEDULES, SEQUENCE OF OPERATION AND WIRING DIAGRAMS.

TEST AND START-UP
TEST ALL PLUMBING AND PIPING SYSTEMS WITH 60 PSIG FOR ONE HOUR BEFORE FILLING AND IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE. FLUSH, DRAIN AND STERILIZE THE DOMESTIC WATER LINES IN ACCORDANCE WITH AWWA C601. FILL ALL HEATING PIPING WITH TRISODIUM PHOSPHATE SOLUTION AND OPERATE FOR SEVERAL HOURS AT TEMPERATURE BEFORE FLUSHING AND FILLING WITH WATER.

BALANCE
THE CONTRACTOR SHALL BALANCE THE WATER SYSTEM TO WITHIN +-10% OF INDICATED FLOWS, PER NEBB. AIRFLOWS ARE TO BE BALANCED TO WITHIN +-10% OF INDICATED AIRFLOWS, PER AABC RECOMMENDED METHODS. SUBMIT BALANCE REPORT FOR REVIEW.

WATTERSON CONSTRUCTION
ph: (907)563-7441 fax: (907)563-7722
BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

100% CONSTRUCTION DRAWINGS

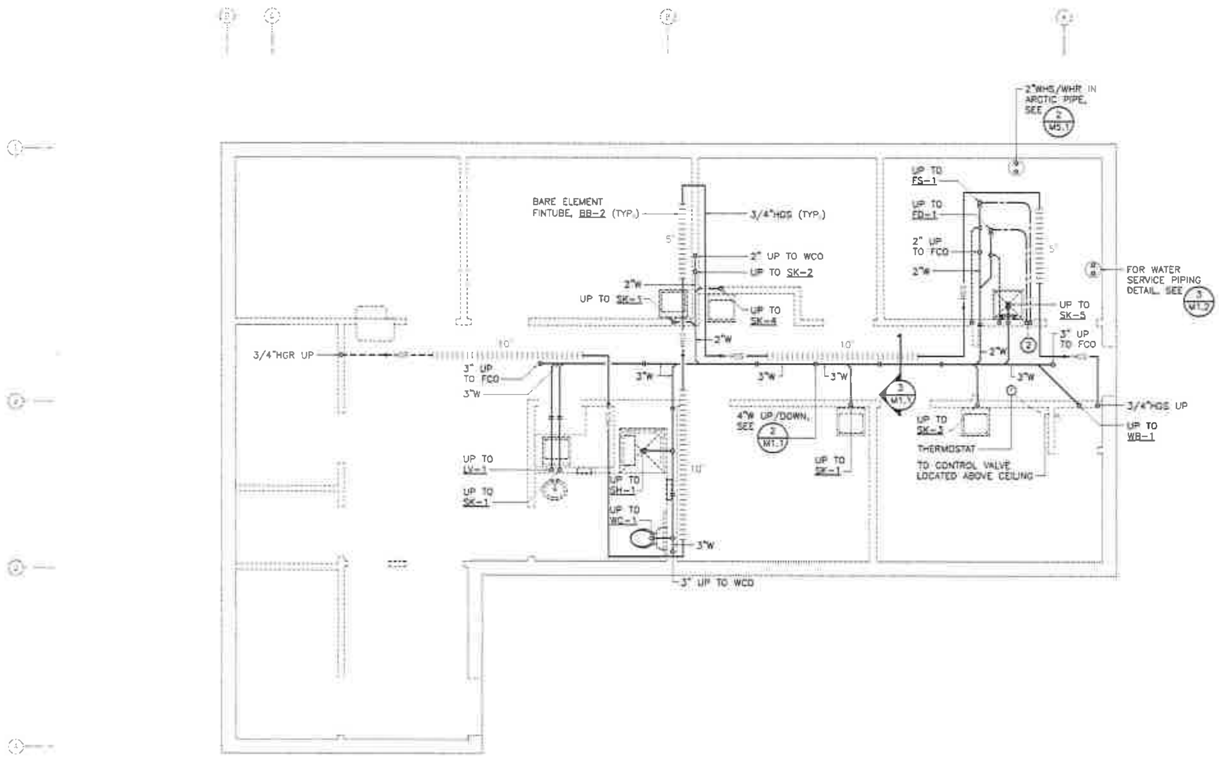
2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
HZA
HAY, ZITSMAN & ASSOCIATES, LLC

PROJECT NO:	2013.008
DATE:	14 JUNE 2013
DRAWN BY:	TCH
CHECKED BY:	ACT
REVISIONS:	

MECHANICAL SCHEDULES, ABBREVIATIONS AND SPECIFICATIONS

M0.2



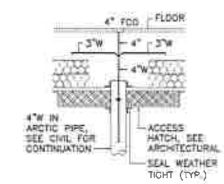
1 SUBFLOOR PIPING PLAN
M1.1 SCALE: 1/4" = 1'-0"

N

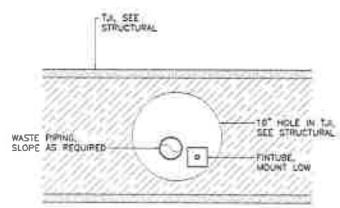
SHEET NOTES

1. BRANCH PIPING TO INDIVIDUAL PLUMBING FIXTURES SHALL EQUAL THE SIZE REQUIRED BY THE PLUMBING FIXTURES SCHEDULE UNLESS OTHERWISE INDICATED.

(2) 1/2"CW UP TO TRAP PRIMER, SEE 3/M1.2.



2 WASTE PIPE DETAIL
M1.1 SCALE: NONE



3 PIPE THROUGH TJI DETAIL
M1.1 SCALE: NONE

SEQUENCE OF OPERATION

BOILER (B-1)
BOILER CONTROLLER SHALL FIRE BOILER TO MAINTAIN SUPPLY TEMPERATURE BETWEEN 175°F AND 155°F (ADJUSTABLE) BASED ON OUTSIDE AIR TEMPERATURE. THE BOILER CONTROLLER SHALL DISABLE BOILER AND SYSTEM CIRCULATION PUMP, CP-1, ON OUTSIDE AIR TEMPERATURES OF 65°F (ADJUSTABLE) AND HIGHER. ON CALL FOR HEAT FROM THE HOT WATER GENERATOR THE BOILER SHALL FIRE TO MAINTAIN BOILER TEMPERATURE OF 175°F (ADJUSTABLE). REDUNDANT HIGH LIMIT CONTROLLER SHALL DISABLE BOILER ABOVE 200°F. AT LOW WATER CONDITION, LOW WATER CUT-OFF SHALL DISABLE BOILER, PROVIDE MANUAL RESET.

WASTE HEAT SYSTEM (HE-1, CP-3, AND CP-4)
CP-4 SHALL OPERATE AT OUTSIDE AIR TEMPERATURES OF 65°F (ADJUSTABLE) AND BELOW OR UPON CALL FOR HEAT FROM THE HOT WATER GENERATOR. TEMPERATURE SENSORS SHALL MONITOR THE CLINIC HEATING GLYCOL RETURN AND THE WASTE HEAT HEATING GLYCOL SUPPLY TEMPERATURES AT THE HEAT EXCHANGER, HE-1. UPON CALL FOR HEAT FROM ANY ZONE OR THE HOT WATER GENERATOR AND WHEN THE WASTE HEAT HEATING GLYCOL SUPPLY TEMPERATURE IS AT LEAST 8°F (ADJUSTABLE) GREATER THAN THE CLINIC HEATING GLYCOL RETURN TEMPERATURE, CP-3 SHALL OPERATE. CP-3 SHALL OPERATE UNTIL EITHER THERE IS NO LONGER A CALL FOR HEAT OR WHEN THE WASTE HEAT HEATING GLYCOL SUPPLY TEMPERATURE IS 4°F (ADJUSTABLE) OR LESS GREATER THAN THE CLINIC HEATING GLYCOL RETURN TEMPERATURE.

CIRCULATION PUMP (CP-1)
SPACE THERMOSTATS SHALL ENERGIZE THE CORRESPONDING ZONE VALVES OPEN ON CALL FOR HEAT. WHEN ANY THERMOSTAT IS CALLING FOR HEAT, THE CIRCULATION PUMP, CP-1, SHALL OPERATE.

HOT WATER GENERATOR (HWG-1 AND CP-2)
WATER HEATER'S AQUASTAT SHALL CALL FOR HEAT TO MAINTAIN TANK WATER TEMPERATURE OF 120°F (ADJUSTABLE). ON CALL FOR HEAT FROM THE HOT WATER GENERATOR THE CONTROL VALVE SHALL OPEN AND CIRCULATION PUMP, CP-2, SHALL OPERATE.

CIRCULATION PUMP (CP-5)
PUMP SHALL RUN CONTINUOUSLY.

BASEBOARD RADIATION (BB-1 AND BB-2)
ON CALL FOR HEAT FROM ZONE THERMOSTAT SIGNAL BOILER AND CYCLE ZONE CONTROL VALVE TO MAINTAIN SPACE TEMPERATURE.

CABINET UNIT HEATER (CUH-1, CUH-2, AND CUH-3)
ON CALL FOR HEAT FROM ZONE THERMOSTAT SIGNAL BOILER, CYCLE ZONE CONTROL VALVE AND BLOWER TO MAINTAIN SPACE TEMPERATURE.

UNIT HEATER (UH-1)
ON CALL FOR HEAT FROM ZONE THERMOSTAT SIGNAL BOILER AND BLOWER TO MAINTAIN SPACE TEMPERATURE.

EXHAUST FAN (EF-1 AND EF-2)
ON-OFF CONTROL VIA REVERSE ACTING THERMOSTAT. ON TEMPERATURE RISE ABOVE ADJUSTABLE SETPOINT FAN SHALL OPERATE.

DUCT COIL (DC-1)
THREE WAY CONTROL VALVE SHALL MODULATE TO MAINTAIN DUCT SUPPLY AIR TEMPERATURE (70°F ADJUSTABLE). PROVIDE CONTACTS ON VALVE SO THAT ON GREATER THAN 10% OPEN A CALL FOR HEAT IS PROVIDED TO THE BOILER AND CIRCULATION PUMP, CP-1.

HEAT RECOVERY VENTILATOR (HRV-1)
UNIT SHALL OPERATE CONTINUOUSLY DURING OCCUPIED HOURS, BASED ON 7-DAY, 24-HOUR PROGRAM AS DETERMINED BY OWNER. UNIT MOUNTED ELECTRONIC CONTROLLER SHALL CONTROL FAN SPEED. HUMIDISTAT SHALL INCREASE SPEED AUTOMATICALLY AS REQUIRED TO MAINTAIN 50% RH (ADJUSTABLE). ELECTRONIC CONTROLLER SHALL AUTOMATICALLY ENGAGE DEFROST CYCLE AS REQUIRED TO MAINTAIN HEAT TRANSFER COIL FROST FREE. REMOTE DIGITAL ELECTRONIC TIMERS SHALL ENGAGE HRV IF UNIT IS OFF, OR BOOST HRV TO HIGH SPEED IF UNIT IS ON, FOR 20-MINUTE TIME DURATION.

WATTERSON CONSTRUCTION

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

STATE OF ALASKA 49TH ALEC C. THOMSON ME-4494

100% CONSTRUCTION DRAWINGS

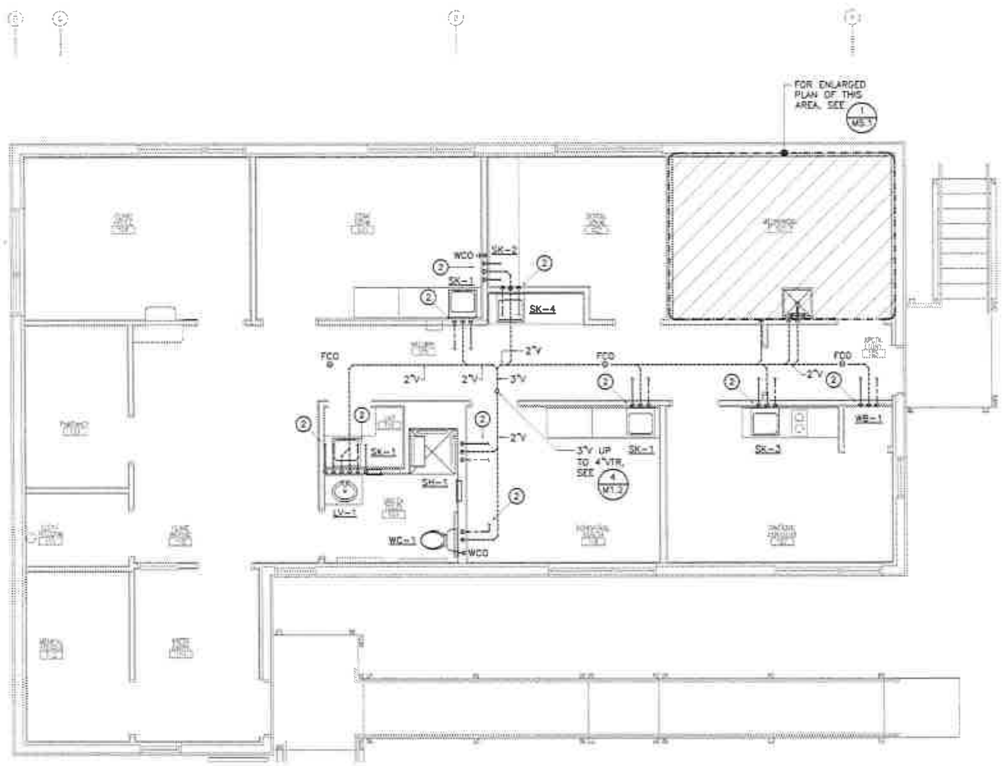
2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
HZA
HAY, ZIETLOW & ASSOCIATES, LLC

PROJECT NO: 2013.008
DATE: 14 JUNE 2013
DRAWN BY: TCH
CHECKED BY: ACT
REVISIONS:

SUBFLOOR PIPING PLAN

M1.1

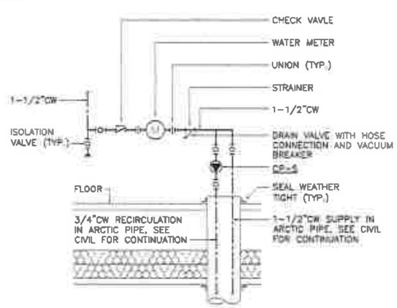


1 PLUMBING PLAN

M1.2 SCALE: 1/4" = 1'-0"

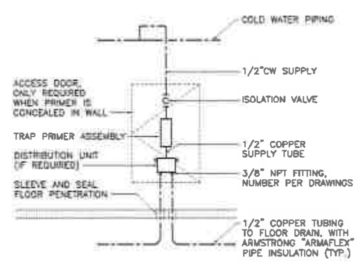
SHEET NOTES

1. BRANCH PIPING TO INDIVIDUAL PLUMBING FIXTURES SHALL EQUAL THE SIZE REQUIRED BY THE PLUMBING FIXTURES SCHEDULE UNLESS OTHERWISE INDICATED.
2. INDIVIDUAL FIXTURE'S HOT AND COLD WATER PIPING SHALL BE ROUTED BACK TO MANIFOLD AT BOILER ROOM.
3. PROVIDE POINT OF USE REVERSE OSMOSIS FILTERS AT EACH SINK AND LAVATORY.
4. PROVIDE CLEANOUTS AT ALL SINK RISERS.



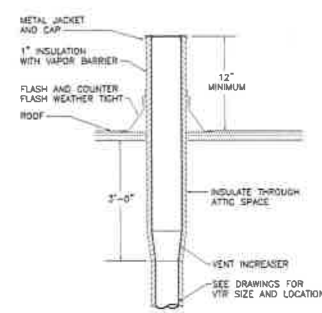
2 WATER SERVICE PIPING DETAIL

M1.2 SCALE: NONE



3 TRAP PRIMER DETAIL

M1.2 SCALE: NONE



4 VENT THROUGH ROOF DETAIL

M1.2 SCALE: NONE

WATTERSON CONSTRUCTION
ph. (907)563-9441 fax. (907)563-7222

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

STATE OF ALASKA 49TH ALEC C. THOMSON ME 4604

100% CONSTRUCTION DRAWINGS

2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
HZA
HAY, ZIETLOW & ASSOCIATES, LLC

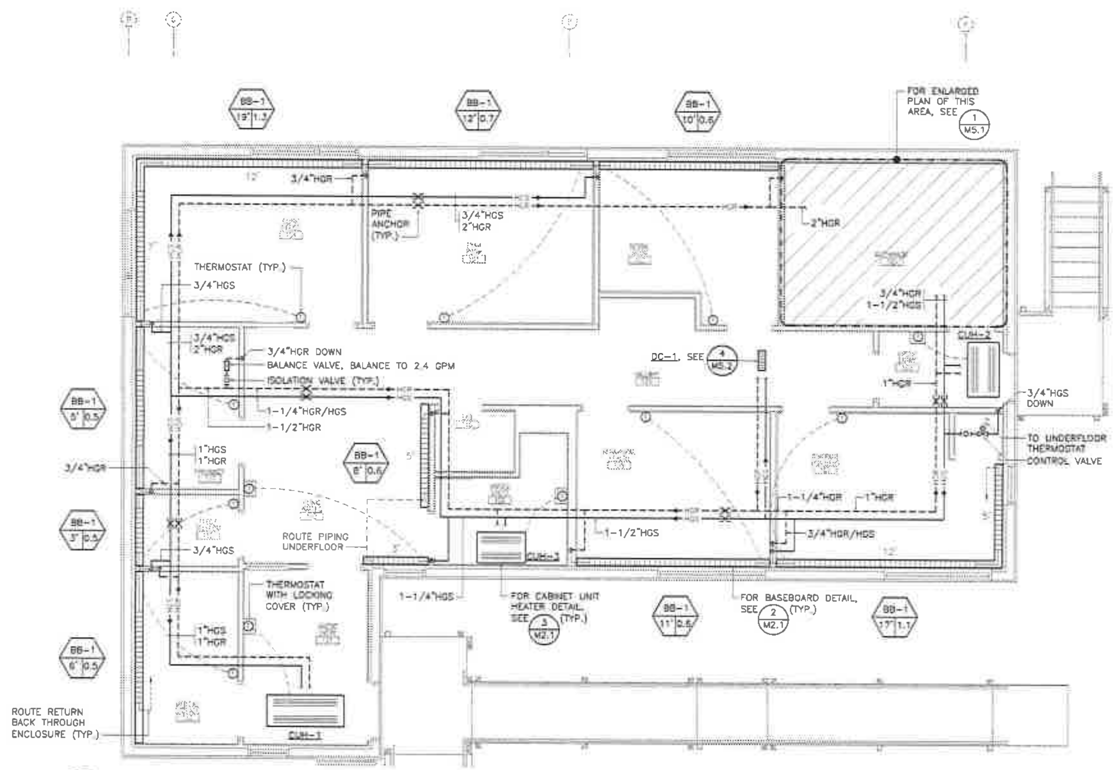
PROJECT NO: 2013.008
DATE: 14 JUNE 2013
DRAWN BY: TCH
CHECKED BY: ACT
REVISIONS:

PLUMBING PLAN

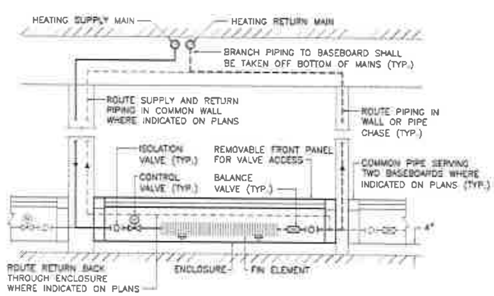
M1.2

SHEET NOTES

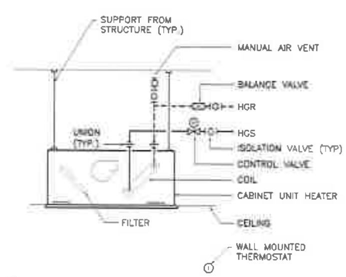
1. BRANCH PIPING TO INDIVIDUAL TERMINAL HEATING UNITS SHALL BE 3/4" UNLESS OTHERWISE INDICATED.



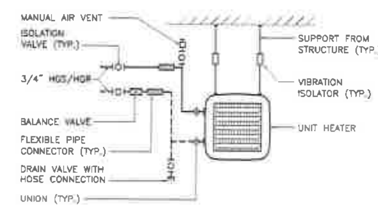
1 HEATING PLAN
M2.1 SCALE: 1/4" = 1'-0"



2 BASEBOARD DETAIL
M2.1 SCALE: NONE



3 CABINET UNIT HEATER DETAIL
M2.1 SCALE: NONE



4 UNIT HEATER DETAIL
M2.1 SCALE: NONE

WATTERSON CONSTRUCTION

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS

2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

STATE OF ALASKA 49TH ALEC C. THOMSON

100% CONSTRUCTION DRAWINGS

2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
HZA
HAY, ZEITLER & ASSOCIATES, LLC

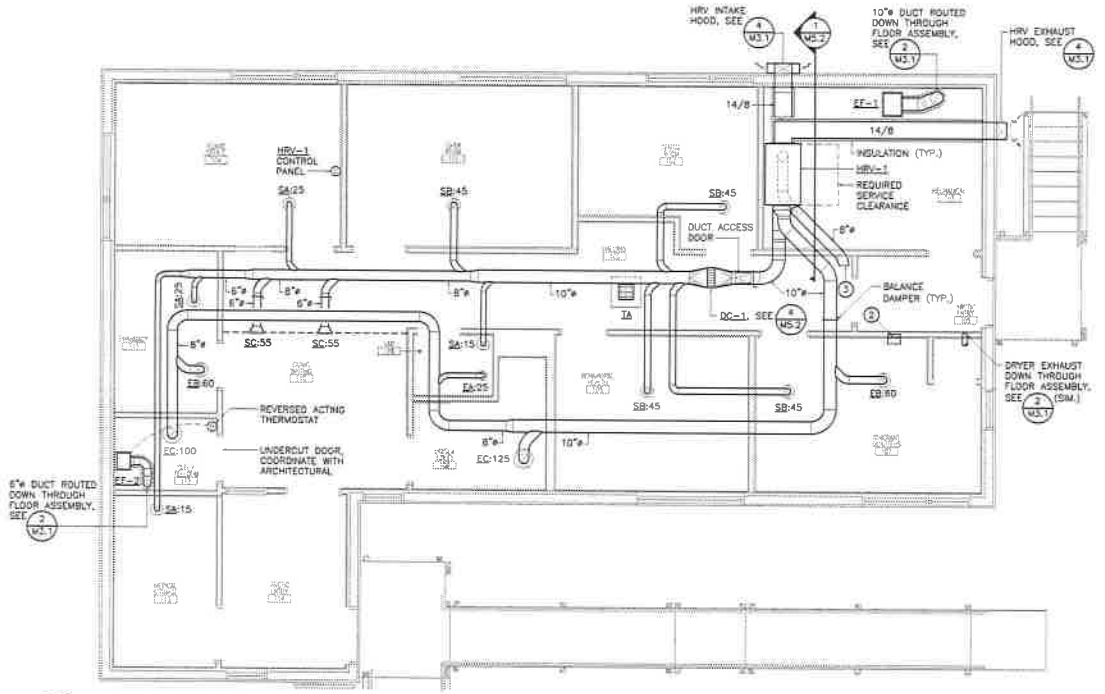
PROJECT NO:	2013.008
DATE:	14 JUNE 2013
DRAWN BY:	TCH
CHECKED BY:	ACT
REVISIONS:	

HEATING PLAN

M2.1

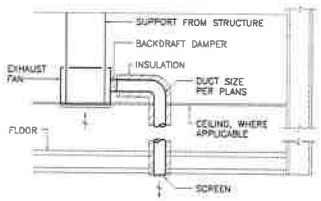
SHEET NOTES

1. BRANCH DUCTWORK TO INDIVIDUAL DIFFUSERS SHALL EQUAL THE DIFFUSER NECK SIZE UNLESS OTHERWISE INDICATED.
2. MICROWAVE/HOOD EXHAUST DUCT DOWN THROUGH FLOOR, TERMINATE SIMILAR TO 2/M3.1. PROVIDE SAME DUCT SIZE AS MICROWAVE/HOOD OUTLET SIZE. COORDINATE WITH ARCHITECTURAL FOR MICROWAVE/HOOD LOCATION.
3. PROVIDE SCREEN ON 8"ø DEFROST DUCT LOCATED ABOVE 108 HALLWAY CEILING AS INDICATED.

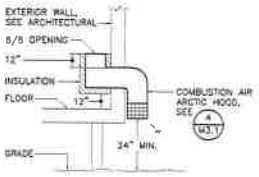


1 M3.1 **VENTILATION PLAN**
SCALE: 1/4" = 1'-0"

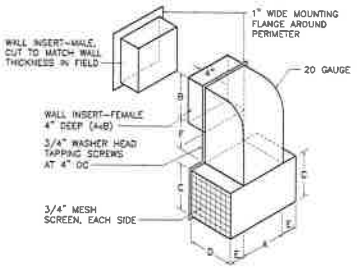
N



2 M2.1 **EXHAUST FAN DETAIL**
SCALE: NONE



3 M3.1 **VENTILATION DUCT DETAIL**
SCALE: NONE



LOCATION	SERVICE	A	B	C	D	E	F
EAVE END	HRV INTAKE	14"	8"	8"	8"	6"	8"
GABLE END	HRV EXHAUST	14"	8"	N/A*	8"	N/A*	8"
EAVE END	O/A INTAKE	8"	8"	6"	8"	6"	8"

* ARCTIC TEE NOT REQUIRED, TERMINATE WITH DOWN DISCHARGE

4 M3.1 **ARCTIC HOOD DETAIL**
SCALE: NONE

WATTERSON CONSTRUCTION
ph (907)563-7441 fx (907)563-7222
BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5750
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

STATE OF ALASKA 49TH
ALEC C. THOMSON
LICENSED ARCHITECT

100% CONSTRUCTION DRAWINGS

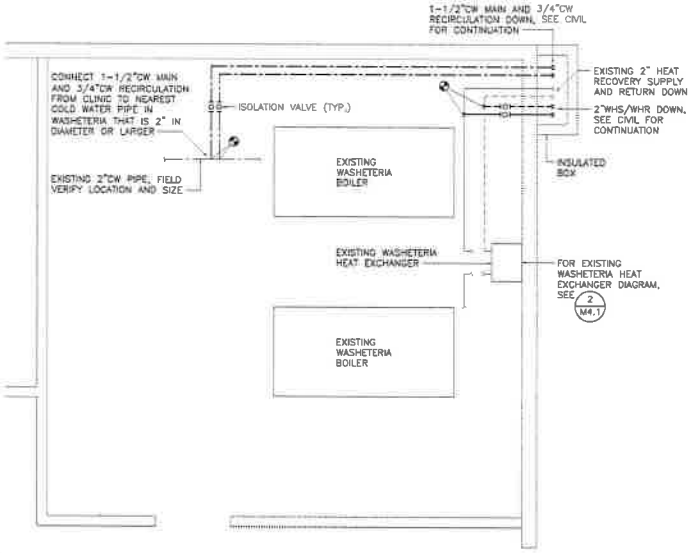
2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT(S)
HZA
HAY, ZIETLOW & ASSOCIATES, LLC

PROJECT NO:	2013.008
DATE:	14 JUNE 2013
DRAWN BY:	TCH
CHECKED BY:	ACT
REVISIONS:	

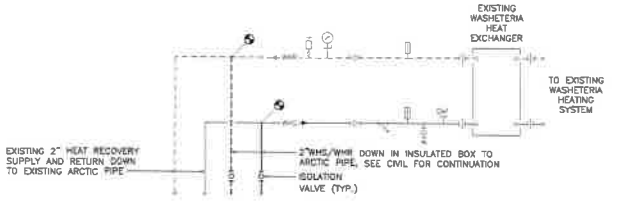
VENTILATION PLAN

M3.1



1 / M4.1 WASHETERIA BOILER ROOM PLAN

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



2 / M4.1 WASHETERIA HEAT EXCHANGER DIAGRAM

SCALE: NONE

WATTERSON CONSTRUCTION
ph (907)563-7441 fax (907)563-7222

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-1580
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-1580
WWW.BETTISWORTHNORTH.COM

STATE OF ALASKA 49TH
ALEC C. THOMSON
LICENSED
PROFESSIONAL ENGINEER

100% CONSTRUCTION DRAWINGS

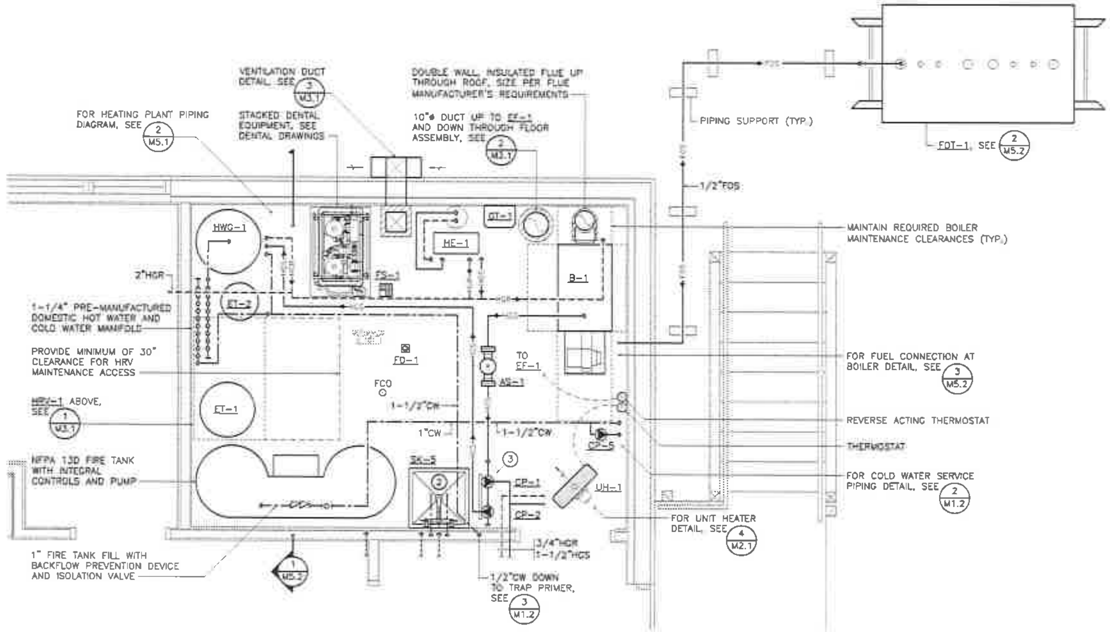
2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
HZA
HAY, ZIEFFLER & ASSOCIATES, LLC

PROJECT NO:	2013.008
DATE:	14 JUNE 2013
DRAWN BY:	TCH
CHECKED BY:	ACT
REVISIONS:	

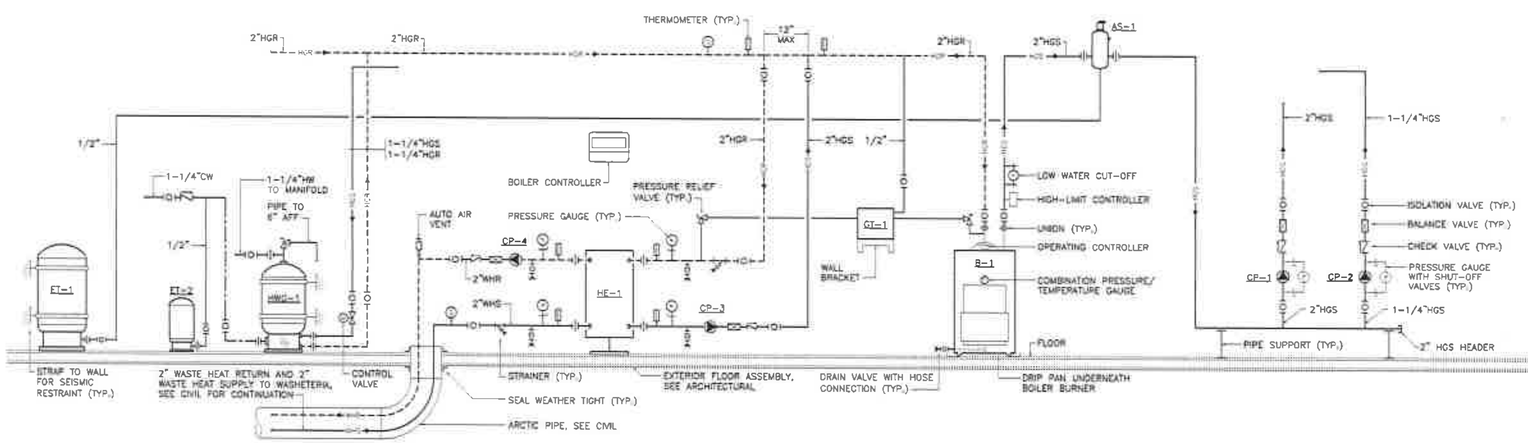
WASHETERIA BOILER ROOM

M4.1



1 MECHANICAL ROOM PLAN

M5.1 SCALE: 1/2" = 1'-0"



2 HEATING PLANT PIPING DIAGRAM

M5.1 SCALE: NONE

SHEET NOTES

1. BRANCH PIPING TO INDIVIDUAL PLUMBING FIXTURES SHALL EQUAL THE SIZE REQUIRED BY THE PLUMBING FIXTURES SCHEDULE UNLESS OTHERWISE INDICATED.
2. INDIVIDUAL FIXTURE'S HOT AND COLD WATER PIPING SHALL BE ROUTED BACK TO MANIFOLD AT BOILER ROOM.
3. PROVIDE RIGID SUPPORT FRAME FOR MOUNTING INLINE PUMPS.

WATTERSON CONSTRUCTION
ph (907)563-7441 fax (907)563-7222

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW. BETTISWORTHNORTH.COM

STATE OF ALASKA 49TH ALEC C. THOMSON ME4694 06/14/13 PROFESSIONAL ENGINEER

100% CONSTRUCTION DRAWINGS

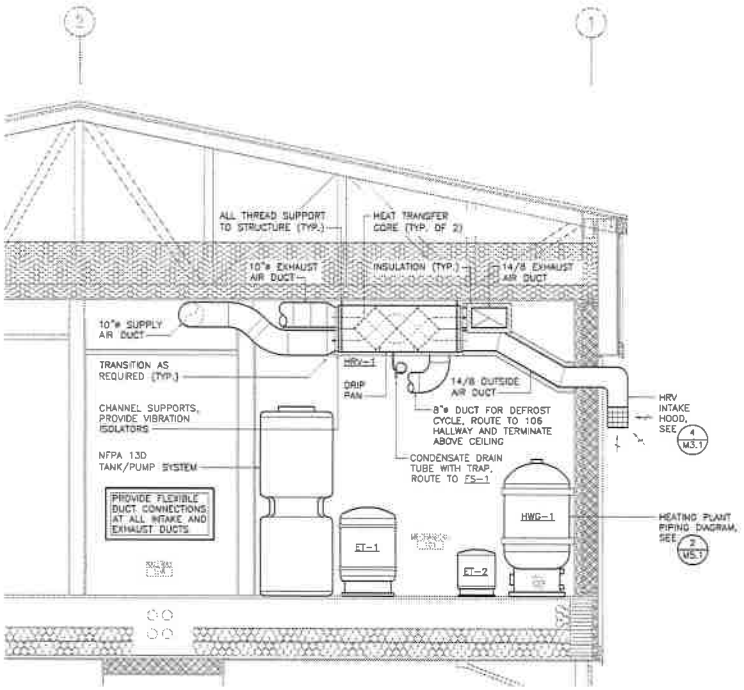
2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
HZA
HAY, ZIETLOW & ASSOCIATES, LLC

PROJECT NO:	2013.008
DATE:	14 JUNE 2013
DRAWN BY:	TCH
CHECKED BY:	ACT
REVISIONS:	

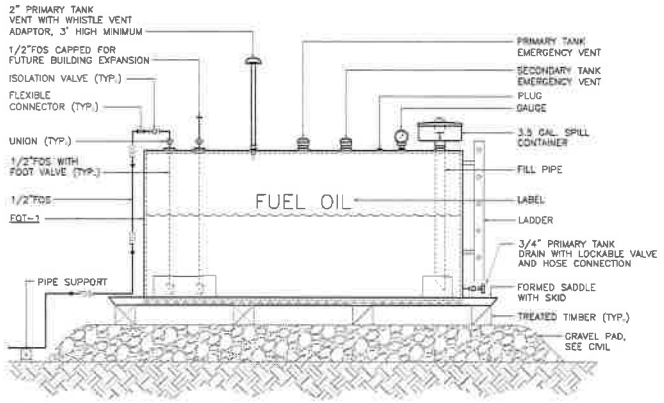
MECHANICAL ROOM PLAN

M5.1



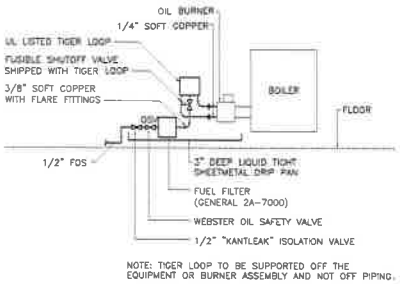
1 M5.2 MECHANICAL ROOM SECTION

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



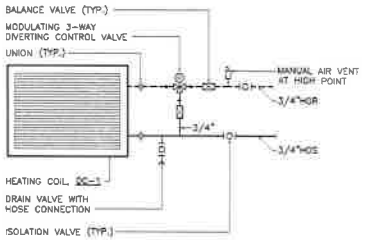
2 M5.2 FUEL OIL TANK DETAIL

SCALE: NONE



3 M5.2 FUEL CONNECTION DETAIL

SCALE: NONE



4 M5.2 DUCT COIL DETAIL

SCALE: NONE

WATTERSON CONSTRUCTION
ph (907)563-7441 fx (907)563-7222
BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
3600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907.561.5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907.456.5780
WWW.BETTISWORTHNORTH.COM

100% CONSTRUCTION DRAWINGS

2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
HAY, ZIETLOW & ASSOCIATES, LLC

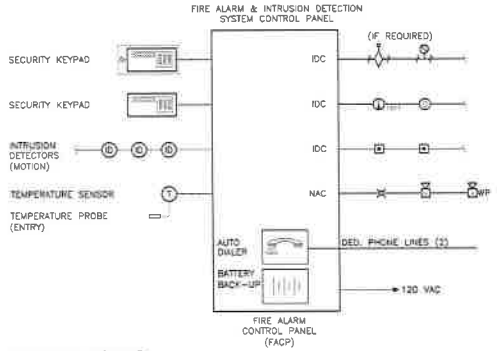
PROJECT NO:	2013.008
DATE:	14 JUNE 2013
DRAWN BY:	TCH
CHECKED BY:	ACT
REVISIONS:	

SECTION AND DETAILS

M5.2

ELECTRICAL SYMBOLS LEGEND

	LIGHT FIXTURE – SURFACE WALL MOUNTED		PANEL
	LIGHT FIXTURE – SURFACE MOUNTED		DUPLEX RECEPTACLE
	FLUORESCENT FIXTURE – RECESS MOUNTED 2'x4'		GROUND FAULT CURRENT INTERRUPTER RECEPTACLE
	FLUORESCENT FIXTURE – SURFACE MOUNTED 1'x4'		QUADRAPLEX RECEPTACLE
	FIXTURE WITH EMERGENCY BACK-UP		SPECIAL PURPOSE RECEPTACLE
	EXIT LIGHT – CEILING MOUNTED		JUNCTION BOX
	EXIT LIGHT – WALL MOUNTED		DISCONNECT SWITCH
X	FIXTURE IDENTIFICATION (LETTER INDICATES TYPE)		FUSED DISCONNECT SWITCH
S	SINGLE POLE SWITCH		COMBINATION MOTOR STARTER DISCONNECT
S_3 S_4	THREE WAY SWITCH AND FOUR WAY SWITCH	S	FRACTIONAL HP MOTOR SWITCH
S_{OC}	OCCUPANCY SENSOR SWITCH		MOTOR
	CONDUIT, CONCEALED		TELEPHONE OUTLET
#10	NUMBER AND SIZE OF WIRES (NO SLASHES = 3#12)		DATA (COMPUTER) OUTLET
A-2	HOMERUN TO PANEL (PANEL AND CIRCUIT No.)		FA SMOKE DETECTOR
X	NOTE TAG (No. INDICATES NOTE)		FA HEAT DETECTOR (FIXED TEMP. NOTED)
	PHOTOCELL		FA HORN STROBE
WP	WEATHERPROOF		FA MANUAL PULL STATION
GF	GROUND FAULT CIRCUIT INTERRUPTER		INTRUSION DETECTOR
AC	ABOVE COUNTER – COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF OUTLETS DENOTED AS ABOVE COUNTER TO BE INSTALLED 6" ABOVE COUNTERS OR BACKSPLASHES, WHICHEVER IS HIGHER	KP	INTRUSION DETECTION SYSTEM KEY PAD
			REMOTE HEAD ASSOCIATED W/ EMERGENCY LIGHT



DETAIL NOTES:

1. REFERENCE DRAWINGS AND SPECIFICATIONS FOR PROPOSED QUANTITY, LOCATION OF DEVICES AND ADDITIONAL REQUIREMENTS. PROVIDE NUMBER OF INITIATING (IDC), NOTIFICATION (NAC) AND SUPERVISORY (SC) LOOPS AS REQUIRED. CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPLETE FIRE ALARM DESIGN IN COMPLIANCE WITH GOVERNING CODES INCLUDING ANY NECESSARY DEVICES AND DETECTORS NOT SHOWN IN THESE DRAWINGS.
2. INSTALL TEMPERATURE SENSORS AND ANY CONTROLLERS IN LOCATIONS AS APPROPRIATE. CONNECT ALARM CONTACTS TO FIRE ALARM PANEL FOR DIAL OUT ANNUNCIATION OF LOW TEMPERATURE CONDITION.
3. PROVIDE ALL NECESSARY AUXILIARY CONTACTS, CONNECTIONS, ETC. TO PROVIDE A COMPLETE SYSTEM.

1 / E0.1 FIRE ALARM/SECURITY SYSTEM RISER DIAGRAM

SCALE: NTS

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER AND MODEL NUMBER	DESCRIPTION	LAMP		MOUNTING	
			TYPE	QUANTITY	TYPE	HEIGHT
A2	LITHONIA #2SP-G232-A12125 120-GEB10 (W/ BODINE B50ST)	2X4 SPECIFICATION GRADE STATIC TROFFER WITH ACRYLIC LENS AND EMERGENCY BATTERY WHERE SHOWN	F32/T8	2	RECESSED	CEILING
A3	LITHONIA #2SP-G332-A12125-120-GEB10 (W/ BODINE B50ST)	2X4 SPECIFICATION GRADE SEALED TROFFER WITH ACRYLIC LENS WITH 1-2 LAMP BALLAST AND 1-1 LAMP BALLAST AND EMERGENCY BATTERY WHERE SHOWN	F32/T-8	3	RECESSED	CEILING
B3	LITHONIA #2SRT-G332-FW-A 12125V-120-GEB10-RIF (W/ BODINE B50ST)	2X4 SPECIFICATION GRADE TROFFER, WITH ACRYLIC LENS WITH 1-2 LAMP BALLAST AND 1-1 LAMP BALLAST AND EMERGENCY BATTERY WHERE SHOWN	F32/T-8	3	RECESSED	CEILING
C2	LITHONIA #AW-232-AR-120-GEB10 (W/ BODINE B50ST)	1X4 WRAPAROUND STYLE FLUORESCENT FIXTURE WITH ACRYLIC LENS AND EMERGENCY BATTERY WHERE SHOWN	F32/T-8	2	SURFACE	CEILING
C3	LITHONIA #AW-332-AR-120-GEB10 (W/ BODINE B50ST)	1X4 WRAPAROUND STYLE FLUORESCENT FIXTURE WITH ACRYLIC LENS AND EMERGENCY BATTERY WHERE SHOWN	F32/T-8	3	SURFACE	CEILING
D	LITHONIA #C-232-MVOLT-GEB10-WG	1'X4' FLUORESCENT STRIPLIGHT FIXTURE, PROVIDE WITH WIREGUARD	F32/T-8	2	SURFACE	CEILING
E1	RUUD LIGHTING #SS0221-1LW	6" SQUARE SURFACE MOUNTED FLUORESCENT FIXTURE WITH POLYCARBONATE LENS AND 120V OPERATION	21W FL	1	SURFACE	WALL/CLG COORD EXACT LOCATION AT BEDS
F1	HUBBELL LIGHTING #LNC-9LU-5K-4-X-PC1-BZ	DECORATIVE WALL MOUNTED LED FIXTURE WITH WET LOCATION LISTING, FULL CUTOFF TYPE IV THROW DISTRIBUTION, 120V OPERATION, AND PHOTOCELL. BRONZE FINISH	9 LED'S/ ENGINE 700/50K	1 LIGHT ENGINES	SURFACE	WALL 7.5' AFF, VERIFY WITH ARCH.
G1	HUBBELL LIGHTING #PGW3-30LUSK-XX-PHOTOCONTROL-GRAY	LED WALLPACK WITH WET LOCATION LISTING, 5000K COLOR TEMPERATURE, 120V OPERATION, AND PHOTOCELL. GRAY FINISH	30 LED'S/ ENGINE 700/50K	1 LIGHT ENGINES	SURFACE	WALL, AS HIGH AS POSSIBLE
H	LITHONIA #UCB24-120	2' FLUORESCENT UNDERCABINET FIXTURE WITH ACRYLIC SHIELDING	F17/T-8	1	SURFACE	UNDER CABINET
I	LITHONIA #WP-217-MVOLT-GEB10	2' FLUORESCENT WALL BRACKET FIXTURE WITH ACRYLIC SHIELDING, MULTI-VOLT BALLAST	F17/T-8	2	SURFACE	ABOVE MIRROR
J1	LITHONIA #Z-132-MVOLT-GEB10-BILP-(EL55)	4' LOW PROFILE FLUORESCENT STRIP FIXTURE WITH MULTI-VOLT BALLAST, LOW BALLAST FACTOR AND EMERGENCY BATTERY WHERE SHOWN	F32/T-8	1	SURFACE	ARCH, COVE, COORD. WITH ARCHITECT
J2	LITHONIA #Z-232-MVOLT-GEB10-BILP-(EL55)	4' LOW PROFILE FLUORESCENT STRIP FIXTURE WITH MULTI-VOLT BALLAST, LOW BALLAST FACTOR AND EMERGENCY BATTERY WHERE SHOWN	F32/T-8	2	SURFACE	ARCH, COVE, COORD. WITH ARCHITECT
K	RITTER #355-025	SINGLE HEAD PROCEDURE LIGHT, 120V	100W HAL	1	SURFACE	CEILING
L	ADEC #6300	TRACK MOUNTED PROCEDURE LIGHT, 120V INPUT	LED	–	SURFACE	CEILING
	LITHONIA #LOMSW3R-120 EL-N	EMERGENCY EXIT SIGN WITH LED ILLUMINATION	LED		SURFACE	WALL/ CEILING
	LITHONIA #ELM	SELF CONTAINED EMERGENCY LIGHT WITH MAINTENANCE FREE LEAD CALCIUM BATTERY	5.4W	2	SURFACE	WALL 7'-6"
	LITHONIA #ELM54	SELF CONTAINED EMERGENCY LIGHTING UNIT WITH MAINTENANCE FREE LEAD CALCIUM BATTERY, WITH LAMP HEADS, AND 54W OUTPUT, FOR CONNECTION TO REMOTE HEADS	9W 6V	2	SURFACE	WALL 7'-6"
	LITHONIA #ELA-NX-H1206 (FINISH)	PAR36 SEALED AND GASKETED 6V EMERGENCY EXTERIOR FLOODLIGHT WITH SINGLE HEAD AND WET LOCATION LISTING. COORDINATE WITH ARCHITECT FOR FINISH COLOR	12W 6V	1	SURFACE	WALL 7.5' AFF, VERIFY WITH ARCH.

NOTES:
PROVIDE BALLAST DISCONNECTING MEANS PER NEC 410.130 FOR FLUORESCENT LUMINAIRES REQUIRING DOUBLE ENDED LAMPS.

GENERAL NOTES:

1. ALL BRANCH CIRCUITRY (SUPPLYING RECEPTACLES, LIGHTS, LIGHT SWITCHES, DEVICES, EQUIPMENT, ETC.), SERVING "PATIENT CARE AREAS", AS DEFINED BY NEC 517 (EXAM ROOMS, DENTAL ROOMS, ETC.) SHALL BE OF A TYPE LISTED FOR A REDUNDANT GROUNDING PATH (WIRING WITH A COPPER EQUIPMENT GROUNDING CONDUCTOR RUN IN A METALLIC CONDUIT THAT COMPLIES WITH THE LISTING REQUIREMENTS OF NEC 250.118) BACK TO THE SOURCE ELECTRICAL PANEL AS REQUIRED BY NEC 517.

WATTERSON CONSTRUCTION
ph (907)563-4881 fx (907)563-7122
BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5730
212 FROST STREET FAIRBANKS, ALASKA 99701 907 456-5760
WWW.BETTISWORTHNORTH.COM

100% CONSTRUCTION DRAWINGS

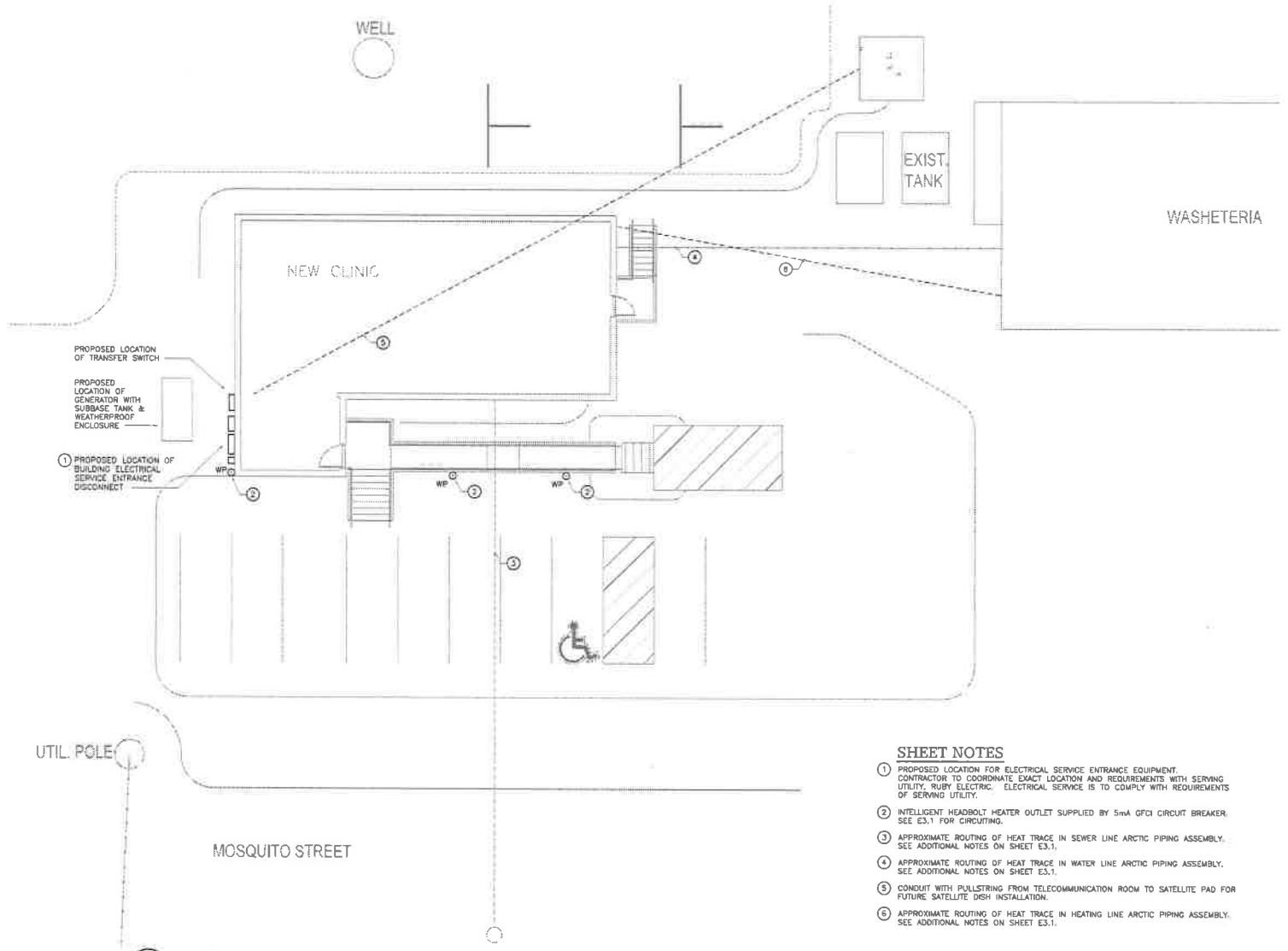
2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANTS:
HZA

PROJECT NO:	2013.008
DATE:	14 JUNE 2013
DRAWN BY:	BAB
CHECKED BY:	BAB
REVISIONS:	

LEGEND, SCHEDULE, AND DETAILS

E0.1



SHEET NOTES

1. PROPOSED LOCATION FOR ELECTRICAL SERVICE ENTRANCE EQUIPMENT. CONTRACTOR TO COORDINATE EXACT LOCATION AND REQUIREMENTS WITH SERVING UTILITY, RUBY ELECTRIC. ELECTRICAL SERVICE IS TO COMPLY WITH REQUIREMENTS OF SERVING UTILITY.
2. INTELLIGENT HEADBOLT HEATER OUTLET SUPPLIED BY 5mA GFCI CIRCUIT BREAKER. SEE E3.1 FOR CIRCUITING.
3. APPROXIMATE ROUTING OF HEAT TRACE IN SEWER LINE ARCTIC PIPING ASSEMBLY. SEE ADDITIONAL NOTES ON SHEET E3.1.
4. APPROXIMATE ROUTING OF HEAT TRACE IN WATER LINE ARCTIC PIPING ASSEMBLY. SEE ADDITIONAL NOTES ON SHEET E3.1.
5. CONDUIT WITH PULLSTRING FROM TELECOMMUNICATION ROOM TO SATELLITE PAD FOR FUTURE SATELLITE DISH INSTALLATION.
6. APPROXIMATE ROUTING OF HEAT TRACE IN HEATING LINE ARCTIC PIPING ASSEMBLY. SEE ADDITIONAL NOTES ON SHEET E3.1.

1 / E1.1 ELECTRICAL SITE PLAN
SCALE: 1/8" = 1'-0"

WATTERSON CONSTRUCTION
pm (907)561-7222 fax (907)561-7222

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907.561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907.456-5780
WWW.BETTISWORTHNORTH.COM

STATE OF ALASKA 49TH BRETT A. BETTISWORTH ES-10011 REGISTERED ARCHITECT

100% CONSTRUCTION DRAWINGS

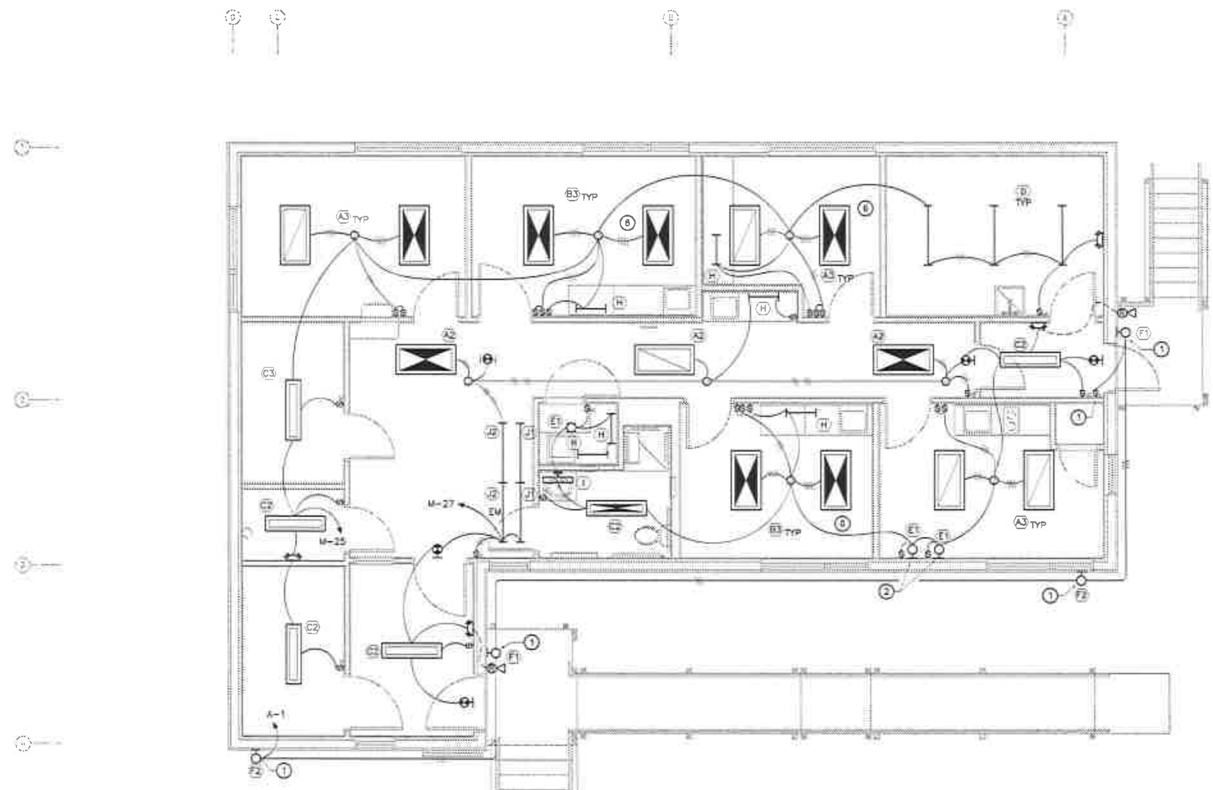
2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
HZA
HAW, ZIETLOW & ASSOCIATES, LLC

PROJECT NO:	2013.008
DATE:	14 JUNE 2013
DRAWN BY:	BAB
CHECKED BY:	BAB
REVISIONS:	

ELECTRICAL SITE PLAN

E1.1



1 LIGHTING PLAN

E2.1 SCALE: 1/4" = 1'-0"

SHEET NOTES:

1. ALL EXTERIOR LIGHTS ARE TO BE PHOTOCELL CONTROLLED WITH SWITCH "z" OVERRIDE OFF.
2. WALL MOUNTED FIXTURES AND SWITCHES ARE TO BE STACKED AS APPROPRIATE FOR INDIVIDUAL USE WITH BUNK BEDS. COORDINATE EXACT HEIGHTS AND LOCATIONS WITH OWNER AND FURNITURE DIMENSIONS PRIOR TO ROUGH-IN.
3. FLUORESCENT FIXTURES IN ROOMS WITH 2 SWITCHES SHALL HAVE DUAL BALLASTS AND SWITCH INBOARD/OUTBOARD LAMPS SEPARATELY.
4. "EM" FIXTURES: DENOTES FIXTURE IS EQUIPPED WITH A BODINE B50 EMERGENCY BALLAST CONNECTED TO THE LOCAL LIGHTING CIRCUIT AHEAD OF ANY SWITCHES. THE FIXTURE IS SWITCHED WITH THE LOCAL LIGHTING CIRCUIT AND ONLY OVERRIDES THE SWITCH UPON POWER FAILURE.
5. CONTRACTOR IS TO COORDINATE WORK WITH OWNER SUPPLIED FURNISHINGS, FIXTURES, EQUIPMENT AND DENTAL EQUIPMENT.
6. EXAM PROCEDURE LIGHT FIXTURES TYPE "K" AND "L" ARE SHOWN ON POWER PLANS, E3.1. COORDINATE LOCATION WITH ROOM LIGHTING FIXTURES.

WATTERSON CONSTRUCTION
ph: (907)563-7441 fax: (907)563-7222

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

STATE OF ALASKA 49TH BRETT A. BINGHAM

100% CONSTRUCTION DRAWINGS

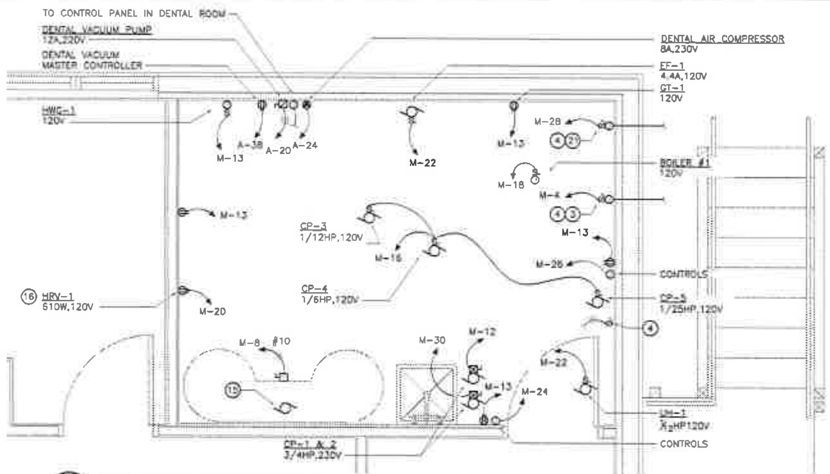
2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
HZA
HAY, ZIETLOW & ASSOCIATES, LLC

PROJECT NO:	2013.008
DATE:	14 JUNE 2013
DRAWN BY:	BAB
CHECKED BY:	BAB
REVISIONS:	

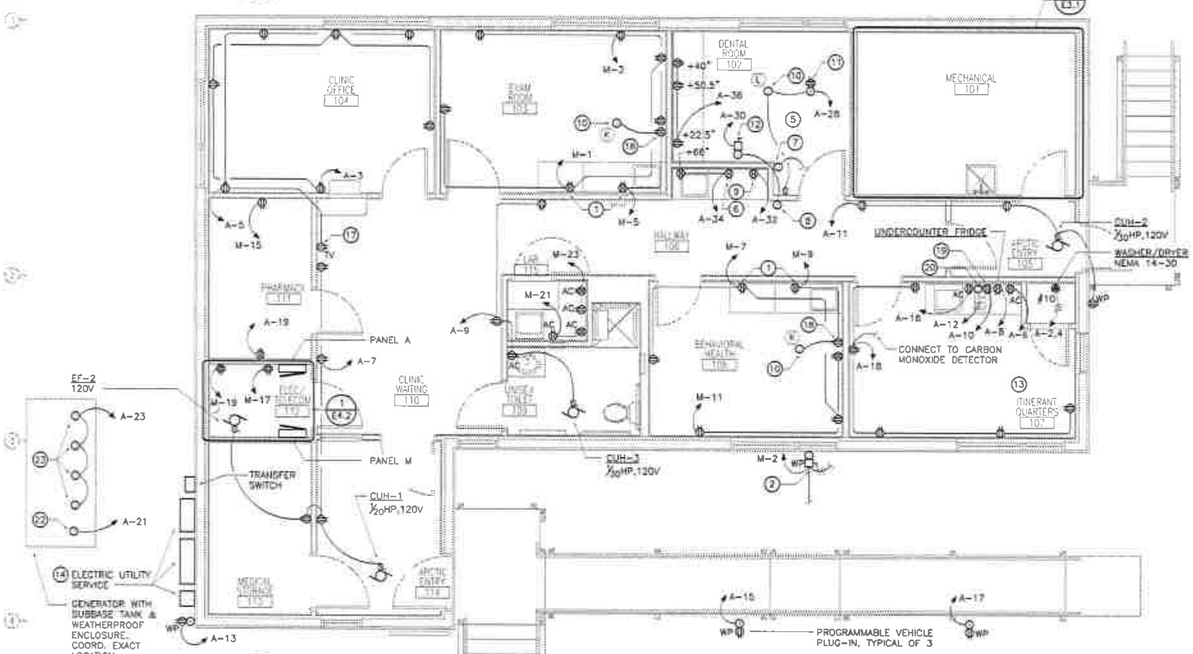
LIGHTING PLAN

E2.1



2 ENLARGED MECHANICAL ROOM POWER PLAN

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



1 POWER PLAN

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

SHEET NOTES:

(1) COORDINATE HEIGHT AND LOCATION OF DEVICES WITH OWNER PROVIDED AND INSTALLED FURNITURE.

(2) WEATHERPROOF JUNCTION BOX AND DISCONNECT FOR BRANCH CIRCUIT CONNECTION TO SEWER LINE ARCTIC PIPE/HEAT TRACE ASSEMBLY. PROVIDE AND INSTALL HEAT TRACE FROM CLINIC TO LOCATION AS SHOWN ON CIVIL DRAWINGS. COORDINATE WITH CIVIL FOR THE INSTALLATION OF HEAT TRACE. SEE CIVIL AND MECHANICAL DRAWINGS FOR EXACT LOCATION, LENGTHS, DETAILS, AND REQUIREMENTS. CONNECT TO PILOT LIGHT SWITCH IN MECHANICAL ROOM FOR CONTROL. PROVIDE IDENTIFICATION LABEL FOR SWITCH.

(3) JUNCTION BOX AND DISCONNECT FOR BRANCH CIRCUIT CONNECTION TO WATER LINE ARCTIC PIPE/HEAT TRACE ASSEMBLY. PROVIDE AND INSTALL HEAT TRACE FROM FLOOR PENETRATION IN MECHANICAL ROOM CLINIC TO LOCATION AS SHOWN ON CIVIL DRAWINGS. COORDINATE WITH CIVIL FOR THE INSTALLATION OF HEAT TRACE. SEE CIVIL AND MECHANICAL DRAWINGS FOR EXACT LOCATION, LENGTHS, DETAILS, AND REQUIREMENTS. PROVIDE IDENTIFICATION LABEL FOR SWITCH.

(4) PILOT LIGHT SWITCHES FOR CONTROL OF WATER, HEAT, AND SEWER HEAT TRACE SUPPLY CIRCUITS. PROVIDE IDENTIFICATION LABEL FOR EACH SWITCH.

(5) VERIFY EXACT HEIGHT AND LOCATION OF DEVICES IN DENTAL ROOM WITH DENTAL EQUIPMENT SUPPLIER.

(6) ULTRASONIC CLEANER, 1.3 AMPS 110 VOLTS, VERIFY. COORDINATE EXACT HEIGHT AND LOCATION WITH OWNER PRIOR TO ROUGH-IN.

(7) DENTAL CONTROL PANEL FOR REMOTE CONTROL OF COMPRESSOR AND VAC PUMP. PROVIDE LOW VOLTAGE CONTROL WIRING AS REQUIRED BY DENTAL DRAWINGS.

(8) DENTAL X-RAY COMPONENT AT +60" PROVIDE JUNCTION BOX SIZED AS REQUIRED FOR X-RAY REMOTE SWITCH AND CONDUIT AND LOW VOLTAGE CONTROL WIRING AS REQUIRED BY DENTAL DRAWINGS TO X-RAY COMPONENT.

(9) STERILIZER 110V, 15A. COORDINATE EXACT HEIGHT AND LOCATION WITH OWNER PRIOR TO ROUGH-IN.

(10) EXAM ROOM LIGHT, (120V). PROVIDE BACKING PER MANUFACTURER. FIELD ADJUST "B3" LIGHT FIXTURES FOR PROPER CLEARANCES.

(11) RECEPTACLE FOR CONNECTION OF DENTAL CHAIR. COORDINATE WITH EQUIPMENT MANUFACTURER FOR EXACT LOCATION AND TYPE OF RECEPTACLE REQUIRED.

(12) DENTAL X-RAY COMPONENT, 120V. COORDINATE EXACT LOCATION AND CONNECTION TYPE WITH DENTAL SUPPLIER.

(13) ALL 125 VOLT, 15 AND 20 AMP RECEPTACLES IN THIS ROOM SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES AS REQUIRED BY NEC 406.14.

(14) COORDINATE LOCATION AND TYPE OF UTILITY SERVICE DROP WITH SERVING UTILITY. COORDINATE LOCATION WITH ARCHITECT.

(15) DSYSTEM FIRE PUMP AND CONTROLLER. 2HP 120/240V ASSUMED. CONTRACTOR TO COORDINATE WITH SYSTEM PROVIDER AND PROVIDE APPROPRIATELY SIZED DISCONNECTING MEANS, CIRCUIT BREAKERS, CIRCUITS, CONNECTIONS, ETC. AS REQUIRED. PROVIDE ALARM CONNECTIONS.

(16) HRV-1. COORDINATE WITH MECHANICAL FOR EXACT LOCATION AND HEIGHT OF RECEPTACLE.

(17) COORDINATE HEIGHT OF RECEPTACLE FOR TV WITH ARCHITECT, PRIOR TO ROUGH-IN.

(18) RECEPTACLE MOUNTED FOR CONNECTION TO WALL MOUNTED OTO/OPTHALMOSCOPE. COORDINATE HEIGHT WITH OWNER PRIOR TO ROUGH-IN.

(19) COORDINATE EXACT HEIGHT AND LOCATION FOR BUILT-IN MICROWAVE/HOOD POWER CONNECTION.

(20) BUILT-IN COOKTOP, 20A, 240V. CIRCUIT BREAKER IS TO HAVE PROVISIONS FOR LOCKING IN THE OPEN (OFF) POSITION PER NEC 422.31(B). COORDINATE WITH CABINETRY AND EQUIPMENT MANUFACTURER DRAWINGS FOR EXACT LOCATION OF POWER SUPPLY.

(21) JUNCTION BOX AND DISCONNECT FOR BRANCH CIRCUIT CONNECTION TO HEAT LINE ARCTIC PIPE/HEAT TRACE ASSEMBLY. PROVIDE AND INSTALL HEAT TRACE FROM FLOOR PENETRATION IN MECHANICAL ROOM CLINIC TO LOCATION AS SHOWN ON CIVIL DRAWINGS. COORDINATE WITH CIVIL FOR THE INSTALLATION OF HEAT TRACE. SEE CIVIL AND MECHANICAL DRAWINGS FOR EXACT LOCATION, LENGTHS, DETAILS, AND REQUIREMENTS. PROVIDE IDENTIFICATION LABEL FOR FOR SWITCH.

(22) GENERATOR BATTERY CHARGER.

(23) CONNECTION TO GENERATOR BATTERY HEATER, ALTERNATOR HEATER, COOLANT HEATER, AND OIL PAN HEATER.

24. COORDINATE EXACT LOCATIONS OF ELECTRICAL SERVICE ENTRANCE EQUIPMENT, PANELBOARDS, DISTRIBUTION EQUIPMENT, ETC. TO ENSURE THAT THEY HAVE NEC REQUIRED WORKING CLEARANCES AS REQUIRED BY NEC 110.26.

WATTERSON CONSTRUCTION
BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

100% CONSTRUCTION DRAWINGS

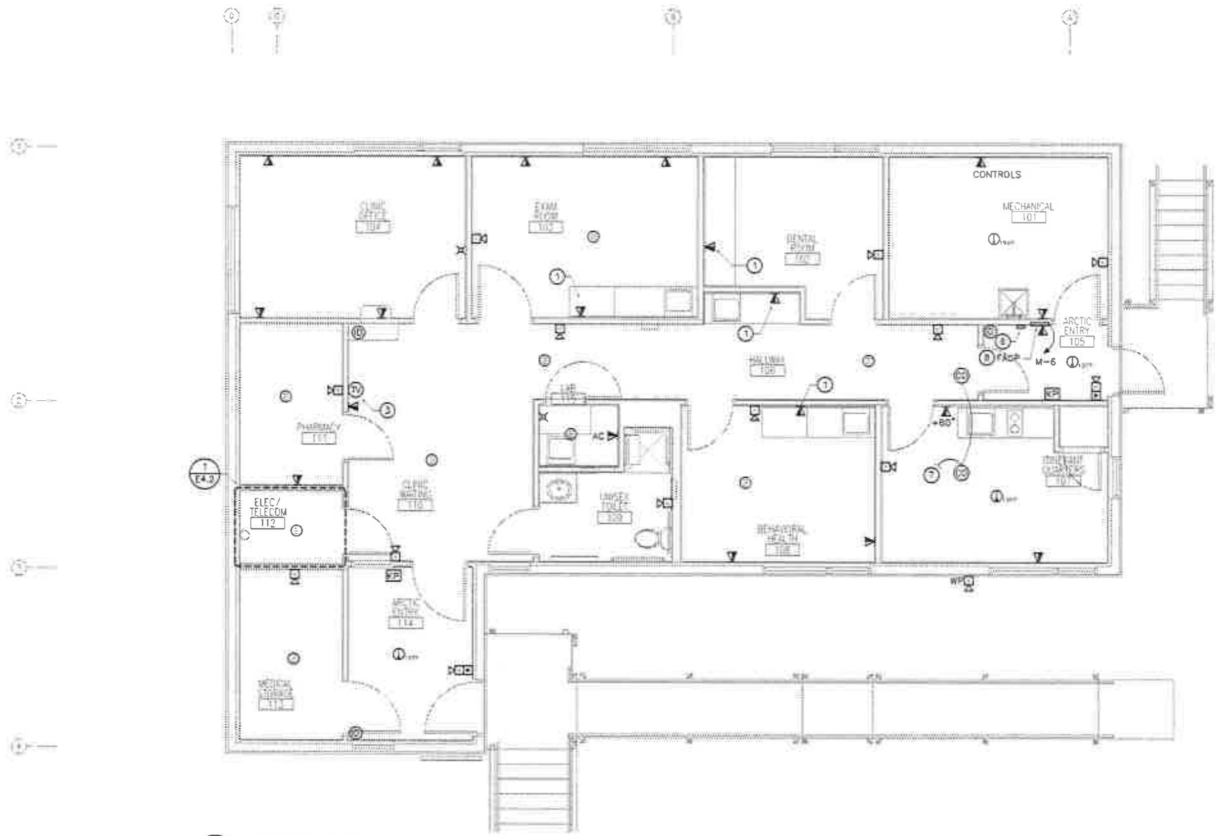
2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
HZA

PROJECT NO:	2013.008
DATE:	14 JUNE 2013
DRAWN BY:	BAB
CHECKED BY:	BAB
REVISIONS:	

POWER PLAN

E3.1



1 SIGNAL PLAN

E4.1 SCALE: 1/4" = 1'-0"

SHEET NOTES:

1. COORDINATE EXACT HEIGHT AND LOCATION OF DEVICE WITH FURNITURE SUPPLIER.
2. ALL TELECOM OUTLETS SHALL HAVE A MINIMUM OF 3 CAT6 HOMERUNS UNLESS OTHERWISE NOTED. SEE 5/E4.2.
3. PREWIRE TV OUTLET WITH RG59 CABLE TO TELCOM DEMARC BOARD. COORDINATE HEIGHT AND LOCATION WITH ARCHITECT.
4. STUB UP MIN. OF 3/4"C INTO ACCESSIBLE ATTIC SPACE FOR EACH TELECOM OUTLET.
5. DO NOT PUT ANY RECESSED DEVICE BOXES BACK TO BACK IN THE SAME STUD SPACE.
6. TEMPERATURE SENSOR. FIELD LOCATE SENSOR AS APPROPRIATE.
7. PROVIDE AND INSTALL STAND ALONE 120V CARBON MONOXIDE DETECTOR WITH BATTERY BACKUP. CONNECT TO RECEPTACLE POWER CIRCUIT IN ITINERANT QUARTERS, SHOWN ON SHEET E3.1.
8. COORDINATE EXACT LOCATION OF FIRE ALARM PANEL WITH AUTHORITY HAVING JURISDICTION AND ARCHITECT.
9. ALL REQUIRED FIRE ALARM DEVICES MAY NOT BE SHOWN ON THESE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COMPLETE DESIGN OF FIRE ALARM AND DETECTION SYSTEMS. PROVIDE ALL NECESSARY DEVICES, WIRING, ETC. AS REQUIRED FOR COMPLIANCE WITH GOVERNING CODES INCLUDING DETECTORS THAT MAY NOT BE SHOWN.

WATTERSON CONSTRUCTION

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW. BETTISWORTHNORTH.COM

STATE OF ALASKA 49TH BRETT A. BOHAM

100% CONSTRUCTION DRAWINGS

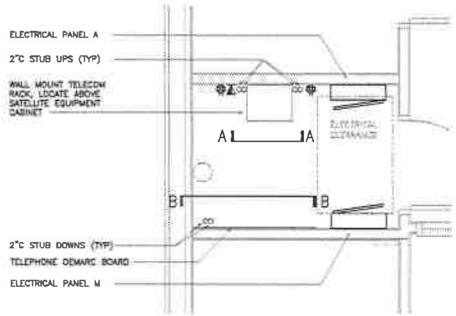
2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
HZA
HAY, ZIETLOW & ASSOCIATES, LLC

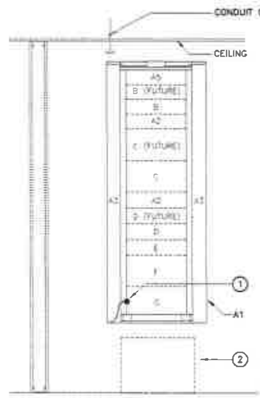
PROJECT NO:	2013.008
DATE:	14 JUNE 2013
DRAWN BY:	BAB
CHECKED BY:	BAB
REVISIONS:	

SIGNAL PLAN

E4.1



1 TELECOM ROOM DETAIL
E4.2 SCALE: 1/2" = 1'-0"



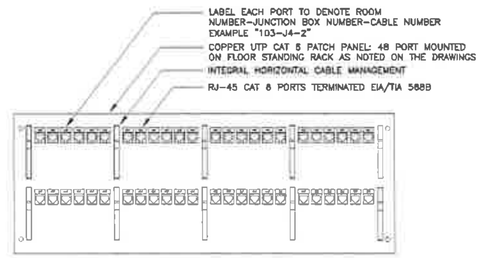
PROVIDE THE FOLLOWING RACK EQUIPMENT AS NOTED:

A1-WALL MOUNT RACK
A2-HORIZONTAL WIRE MANAGEMENT PANEL, 2RMU
A3-VERTICAL WIRE MANAGEMENT
A4-NA
A5-MODEM SHELF (MODEM NIC)
B- 24 PORT RJ-45 PATCH PANEL FOR TELCO, PRECONFIGURED 25PR, TERMINATED 1-PAIR PER JACK, CONNECTORIZED
C- 48-PORT RJ-45 PATCH PANEL FOR CAT 6 DISTRIBUTION
D- 24-PORT ACTIVE HUB (NIC)
E- MONITOR/KEYBOARD/MOUSE (NIC)
F- SERVER (NIC)
G- 1.0 KVA UPS (NIC)

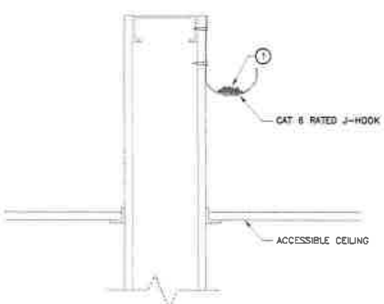
DETAIL NOTES

1. ALL GROUND CONNECTIONS SHALL BE IRREVERSABLE CRIMP TYPE.
2. SPACE FOR OWNER PROVIDED SATELLITE COMMUNICATION EQUIPMENT CART.

2 TELECOM ROOM RACK DETAIL A-A
E4.2 SCALE: NTS



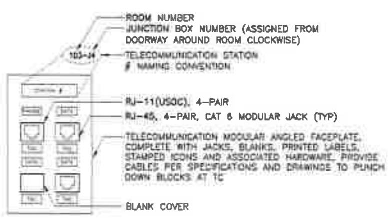
3 TELECOM PATCH PANEL (TYP)
E4.2 SCALE: NTS



DETAIL NOTES

1. PROVIDE CAT 6 RATED J-HOOKS TO SUPPORT ALL CABLES WHERE NOT INSTALLED IN CONDUIT. SIZE J-HOOKS TO ALLOW 20% SPARE CAPACITY FOR FUTURE CABLES.

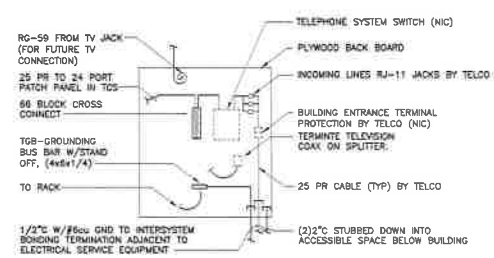
4 TYP. CABLE SUPPORT
E4.2 SCALE: NTS



DETAIL NOTES

1. EACH DEVICE PLATE SHALL BE 4 PORT MINIMUM WITH (1) RJ-11 AND (2) RJ-45 JACK CAT 6 RATED, UON ON THE DRAWINGS.
2. FILL ACTIVE PORTS IN FACEPLATE FROM LEFT TO RIGHT AND TOP TO BOTTOM.
3. TERMINATE EACH CAT 6 CABLE ON RJ-11 OR RJ-45 CAT 6 RATED JACK AS INDICATED.
4. PROVIDE BLANKS FOR UNUSED PORT SPACES.
5. PROVIDE LABEL DENOTING ROOM NUMBER AND JUNCTION BOX NUMBER AS SHOWN ON THE FLOOR PLANS ON EACH DEVICE PLATE WHERE NOTED ABOVE AS STATION NUMBER.
6. ALL LABELS SHALL BE PRINTED WITH THERMAL OR LASER PRINTER SYSTEM.

5 TELECOM OUTLET (TYP.)
E4.2 SCALE: NTS



6 TELCO SERVICE DEMARC DETAIL B-B
E4.2 SCALE: 1/2" = 1'-0"

WATTERSON CONSTRUCTION
ph. (907)563-1441 fax. (907)563-7222

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

STATE OF ALASKA
49TH
BRETT A. BINGHAM

100% CONSTRUCTION DRAWINGS

2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
HZA
HAY, ZIMMERMAN & ASSOCIATES, LLC

PROJECT NO:	2013.008
DATE:	14 JUNE 2013
DRAWN BY:	BAB
CHECKED BY:	BAB
REVISIONS:	

TELECOM DETAILS

E4.2

ELECTRICAL SPECIFICATIONS:

GENERAL CONDITIONS – PROVIDE AND INSTALL ALL LABOR, MATERIAL, AND EQUIPMENT FOR A COMPLETE AND PROPERLY OPERABLE ELECTRICAL SYSTEM AS DESCRIBED ON THE DRAWINGS AND IN THESE SPECIFICATIONS. ALL WORK SHALL BE PERFORMED IN A NEAT AND PROFESSIONAL MANNER USING GOOD ENGINEERING PRACTICES. ALL NEW WORK AND EXISTING WORK MODIFIED BY THIS PROJECT SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE, NFPA, INTERNATIONAL BUILDING CODE, AND INTERNATIONAL FIRE CODE INCLUDING ALL STATE AND LOCAL CODES AND AMENDMENTS. THIS CONTRACTOR SHALL INQUIRE INTO AND COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, AND REGULATIONS.

THE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, NOT NECESSARILY SHOWING ALL FEATURES OR EXACT LOCATIONS OF FIXTURES, EQUIPMENT, ETC. UNLESS SPECIFICALLY NOTED OTHERWISE. THE CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS FOR EQUIPMENT TO BE PROVIDED BY OTHER DIVISIONS AND REQUIRING INSTALLATION AND/OR CONNECTION IN ACCORDANCE WITH THIS SECTION. APPARENT CONFLICTS BETWEEN PLANS AND SPECIFICATIONS, GOVERNING CODES OR UTILITIES REGULATIONS AS WELL AS UNCLEAR DIRECTIVES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. CODES, ORDINANCES, REGULATIONS, MANUFACTURER'S INSTRUCTIONS OR OTHER ESTABLISHED STANDARDS SHALL TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT OR CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS.

INSTALLATION OF ALL WORK SHALL BE PROVIDED SO THAT ALL COMPONENT PARTS SHALL FUNCTION AS AN INTEGRATED SYSTEM COMPLETE WITH ALL ASSOCIATED EQUIPMENT NECESSARY FOR PROPER OPERATION. ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED TO ENSURE CONFORMANCE WITH APPLICABLE INDUSTRY STANDARDS, NEMA STANDARDS AND UNDERWRITERS LABORATORIES STANDARDS WHERE APPLICABLE.

MARK UP A CLEAN SET OF RECORD DRAWINGS AS THE WORK PROGRESSES TO SHOW THE DIMENSIONED LOCATION OF ALL ELECTRICAL WORK WHICH WILL BECOME PERMANENTLY CONCEALED. SHOW ROUTING OF WORK IN PERMANENTLY CONCEALED BLIND SPACES WITHIN THE BUILDING. SHOW COMPLETE ROUTING AND SIZING OF ANY REVISIONS TO THE SYSTEMS SHOWN ON THE CONSTRUCTION DRAWINGS.

PROVIDE A COMPLETE ELECTRICAL DISTRIBUTION SYSTEM INCLUDING SERVICE, MAIN DISTRIBUTION EQUIPMENT, FEEDERS, BRANCH CIRCUIT PANELS, BRANCH CIRCUITS, JUNCTION BOXES, OUTLET BOXES, WIRING DEVICES, COVERPLATES, CONDUIT, ETC. PROVIDE EQUIPMENT THAT IS RATED FOR AVAILABLE FAULT CURRENT LEVELS.

REFERENCE SYMBOLS – THE ELECTRICAL "LEGEND" ON THE DRAWINGS IS A STANDARDIZED VERSION, AND ALL SYMBOLS SHOWN MAY NOT BE USED FOR THIS PROJECT. USE THE ELECTRICAL "LEGEND" AS A REFERENCE FOR THE SYMBOLS USED ON THE PROJECT DRAWINGS.

IDENTIFICATION – PROVIDE NAMEPLATES AND LABELS WHERE REQUIRED BY THE NEC AND TO IDENTIFY ALL ELECTRICAL DISTRIBUTION AND CONTROL EQUIPMENT AND LOADS SERVED. SECURE NAMEPLATES TO EQUIPMENT FRONTS USING SCREWS, RIVETS OR ADHESIVES. SECURE NAMEPLATE TO INSIDE FACE OF RECESSED PANELBOARD DOORS IN FINISHED LOCATIONS.

WIRING DEVICES: PROVIDE LABELS TO IDENTIFY WIRING DEVICES SUCH AS SWITCHES, AND FRACTIONAL HORSEPOWER MOTOR STARTER SWITCHES. LABEL SHALL INCLUDE SUPPLY PANEL AND CIRCUIT.

CONDUITS: IDENTIFY THE CIRCUIT NUMBERS OF THE BRANCH CIRCUIT CONDUCTORS CONTAINED INSIDE ALL CONDUITS ENTERING OR LEAVING PANELBOARDS WITH INDELIBLE BLACK MARKING PEN OR OTHER PERMANENT MEANS.

JUNCTION BOXES: IDENTIFY THE CIRCUIT NUMBERS OF THE BRANCH CIRCUIT CONDUCTORS CONTAINED INSIDE EACH JUNCTION BOX WITH INDELIBLE BLACK MARKING PEN OR OTHER PERMANENT MEANS. ON EXPOSED JUNCTION BOXES IN PUBLIC AREAS, MARK ON INSIDE OF COVER. MARK ALL FIRE ALARM SYSTEM JUNCTION BOXES AND COVERS WITH A RED PAINT AND "FA" NOTATION. APPROPRIATELY IDENTIFY ALL OTHER SPECIAL SYSTEM JUNCTION BOXES WITH SHEET STEEL COVERS.

CONDUIT – ALL WIRING SHALL BE INSTALLED IN METALLIC RACEWAY OR SHALL BE METAL CLAD CABLE (HEALTH CARE FACILITIES RATED) AS ALLOWED BY THE NEC AND LOCAL CODES. RACEWAY AND METAL CLAD CABLE SHALL BE INSTALLED CONCEALED EXCEPT AT SURFACE MOUNTED CABINETS, MOTORS AND EQUIPMENT CONNECTIONS. UTILIZE SHORT EXTENSIONS OF FLEXIBLE CONDUIT, PROPERLY SUPPORTED, FOR CONNECTION OF ALL MOTORS AND OTHER EQUIPMENT SUBJECT TO VIBRATION. UTILIZE LIQUID-TIGHT FLEXIBLE CONDUIT FOR MOTOR AND EQUIPMENT CONNECTIONS IN WET LOCATIONS. INSTALL FITTINGS TO ACCOMMODATE EXPANSION AND CONTRACTION WHERE RACEWAY CROSSES CONTROL AND EXPANSION JOINTS.

CONDUCTORS – ALL CONDUCTORS SHALL BE COPPER WITH TYPE XHHW, THWN, THW OR THHN INSULATION. WIRING IN LIGHTING FIXTURE CHANNELS SHALL BE COPPER WITH TYPE THHN OR OTHER INSULATION RATED 90 DEGREES C OR HIGHER, 600 VOLT. PULL ALL CONDUCTORS INTO THE RACEWAY AT THE SAME TIME. COLOR CODE CONDUCTORS AS FOLLOWS: 120/240 VOLT SYSTEMS: BLACK, RED, AND WHITE. USE PROPERLY SIZED INSULATED SPRING WIRE CONNECTORS WITH INSULATING CAPS FOR ALL CONDUCTORS #8 AWG AND SMALLER. TERMINATE #6 AWG AND LARGER CONDUCTORS WITH CRIMP OR COMPRESSION TYPE AND INSULATE WITH PROPERLY SIZED 600 VOLT RATED HEAT SHRINK TUBING TO EQUAL OR EXCEED THE INSULATION QUALITY OF THE TERMINATED CONDUCTOR.

OUTLET BOXES – PROVIDE OUTLET AND JUNCTION BOXES OF A TYPE SUITABLE FOR CONDITIONS WHERE INSTALLED AND AS PERMITTED BY THE NEC. PROVIDE CAST ALUMINUM OR FERALLOY TYPE BOXES WITH GASKETED COVER, THREADED HUBS AND NEMA 3R RATING FOR USE IN EXTERIOR OR WET LOCATIONS. PROVIDE OUTLET AND JUNCTION BOXES SIZED AS REQUIRED AND IN QUANTITIES AND LOCATIONS AS SHOWN ON THE DRAWINGS, AND AS REQUIRED FOR SPLICES, TAPS, WIRE PULLING, EQUIPMENT CONNECTIONS, DEVICE INSTALLATION AND CODE COMPLIANCE. DO NOT INSTALL BOXES BACK-TO-BACK IN WALLS. PROVIDE WALL STUD SEPARATION FOR MINIMUM SOUND TRANSMISSION. USE MULTIPLE-GANG BOXES WHERE MORE THAN ONE DEVICE ARE MOUNTED TOGETHER. ADEQUATELY SUPPORT BOXES INDEPENDENTLY OF CONDUIT. COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF ALL DEVICES MOUNTED ABOVE COUNTERS, BENCHES AND BACKSPLASHES WITH ARCHITECTURAL ELEVATIONS.

PANELBOARDS – PROVIDE DEAD-FRONT CIRCUIT BREAKER PANELBOARDS WITH BUS SIZE, MAXIMUM INTERRUPT RATING, AND NUMBER AND SIZE OF BRANCH CIRCUITS AS SHOWN ON THE DRAWINGS. CABINETS SHALL BE 5 3/4 INCHES DEEP BY 20 INCHES WIDE MINIMUM. PROVIDE FLUSH OR SURFACE COVERS, AS NOTED ON THE DRAWINGS, WITH CONCEALED TRIM CLAMPS, CONCEALED HINGE AND LOCK. PANELBOARD SHALL BE FACTORY FINISHED IN MANUFACTURER'S STANDARD GRAY ENAMEL. MOLDED CASE CIRCUIT BREAKERS SHALL BE BOLT-ON THERMAL MAGNETIC TRIP TYPE WITH COMMON TRIP HANDLE FOR ALL POLES. PROVIDE CIRCUIT BREAKERS UL LISTED AS TYPE HCAR FOR AIR HANDLING/CONDITIONING CIRCUITS. PROVIDE UL LISTED BREAKERS AS SWD FOR LIGHTING CIRCUITS SWITCHED AT THE PANEL. PROVIDE ARC FAULT TYPE CIRCUIT BREAKERS FOR ALL OUTLETS INSTALLED IN THE GUEST SLEEPING ROOM AS REQUIRED BY THE NEC AND AS INDICATED ON THE DRAWINGS. PROVIDE CIRCUIT BREAKERS SUPPLYING MULTIWIRE CIRCUITS WITH COMMON TRIP HANDLES OR AN APPROVED MEANS OF SIMULTANEOUSLY DISCONNECTING ALL UNGROUNDED CONDUCTORS. PROVIDE UL CLASS A GROUND FAULT INTERRUPTER CIRCUIT BREAKERS FOR GFCI CIRCUITS AS INDICATED ON THE DRAWINGS. GROUP UNGROUNDED AND GROUNDED CONDUCTORS OF EACH MULTIWIRE BRANCH CIRCUIT WITHIN THE PANEL WITH AN APPROVED MEANS. PROVIDE TYPED OR NEATLY HANDWRITTEN CIRCUIT DIRECTORIES FOR EACH PANELBOARD. MEASURE LOAD CURRENTS OF EACH PANELBOARD FEEDER UNDER NORMAL OPERATING CONDITIONS, AND REARRANGE BRANCH CIRCUITS AS REQUIRED TO MAINTAIN A MAXIMUM 20 PERCENT CURRENT DIFFERENCE BETWEEN PHASE CONDUCTORS. REVISE CIRCUIT DIRECTORY TO REFLECT CIRCUITING CHANGES REQUIRED TO BALANCE PHASE LOADS. PROVIDE TWO ¾ INCH SPARE CONDUITS FOR FLUSH MOUNTED PANELS INTO ACCESSIBLE CEILING ABOVE AND CRAWL SPACE (IF PRESENT) BELOW.

RECEPTACLES – PROVIDE NEMA 5-20R DUPLEX GROUNDING TYPE RECEPTACLES WITH FINISH AS DETERMINED BY THE OWNER. UL NO. 498 APPROVED, SELF-GROUNDING, CERTIFIED TO COMPLY WITH NEMA WD-1 SCREW TERMINAL OR SCREW CLAMP TYPE ONLY. PROVIDE DUPLEX CONVENIENCE RECEPTACLES WITH CLASS "A" INTEGRAL GROUND FAULT CURRENT INTERRUPTER AND SPECIFIC-USE RECEPTACLES WHERE INDICATED ON THE DRAWINGS AND AS REQUIRED BY CODES. PROVIDE LISTED WEATHER RESISTANT TYPE RECEPTACLES WHERE LOCATED IN DAMP OR WET LOCATIONS. PROVIDE LISTED TAMPER RESISTANT RECEPTACLE IN THE GUEST ROOM AS REQUIRED BY THE NEC. UNLESS OTHERWISE NOTED ON THE DRAWINGS, INSTALL RECEPTACLES 18 INCHES ABOVE FINISH FLOOR, 4 INCHES ABOVE COUNTERS AND BACKSPLASHES WITH GROUNDING POLE ON BOTTOM. UNLESS OTHERWISE NOTED DIMENSIONS ARE TO CENTERLINE OF OUTLET. LOCATE GROUND FAULT CURRENT INTERRUPTER TYPE RECEPTACLES SO THAT THEY ARE READILY ACCESSIBLE AS REQUIRED BY THE NEC.

PANEL A SCHEDULE

400A MLO — 120/240V, 1PH,3W

	CKT	AMP	POLE	LOAD DESCRIPTION	PHASE A VA		PHASE B VA		LOAD DESCRIPTION	POLE	AMP	CKT	
	1	20	1	LTG-EXTERIOR	500	2500			REC-WASHER/DRYER		20	2	
	3	20	1	REC-CLINIC OFFICE			720	2500		2		4	
	5	20	1	REC-CLINIC OFFICE	720	1500			REC-ITINERANT QUARTERS CNTR	1	20	6	
	7	20	1	REC-WAITING, ENTRY, MED STORAGE			1150	600	REC-ITINERANT QUARTERS FRIDGE	1	20	8	
	9	20	1	REC-WAITING, JAN, TOILET, HALL	970	1560			REC-ITINERANT QRTRS MW/HOOD	1	20	10	
	11	20	1	REC-HALL, ENTRY, EXTERIOR			790	1500	COOKTOP-ITINERANT QUARTERS		20	12	LF
GF	13	20	1	REC-HEADBOLT HEATER	1500	1500				2		14	
GF	15	20	1	REC-HEADBOLT HEATER			1500	1000	REC-ITINERANT QUARTERS CNTR	1	20	16	
GF	17	20	1	REC-HEADBOLT HEATER	1500	800			REC-ITINERANT QUARTERS	1	20	18	A
	19	20	1	REC-PHARMACY PICKPOINT			1500	1440	DENTAL VACUUM		20	20	
	21	20	1	GENERATOR BATTERY CHARGER	1500	1440				2		22	
	23	20	1	GENERATOR HEATERS			1500	960	DENTAL COMPRESSOR		20	24	
	25	20	1	SPARE		960				2		26	
	27	20	1	SPARE				960	REC-DENTAL CHAIR	1	20	28	A
	29	20	1	SPARE		1080			DENTAL [illegible] COMPONENT	1	20	30	
	31	20	1	SPARE				1500	REC-STERILIZER	1	20	32	
	33	-	1	SPACE		300			REC-ULTRASONIC CLEANER	1	20	34	
	35	-	1	SPACE				540	REC-DENTAL COUNTER	1	20	36	
	37	-	1	SPACE		500			DNTL VACUUM MSTR CNTRLR	1	20	38	
	39	-	1	SPACE				11510	PANEL M		100	40	
	41	-	1	SPACE		11426				2		42	
	CONNECTED LOAD (VA)					[illegible]		[illegible]	[illegible] VA				
	CONNECTED LOAD (AMPERES)					[illegible]		251	252 A				
	DEMAND LOAD (VA)					30,88[illegible]		30,530	61,413 VA				
	DEMAND LOAD (AMPERES)					257		254	256 A				
	AMPERE INTERRUPT RATING								10,000 AIC				

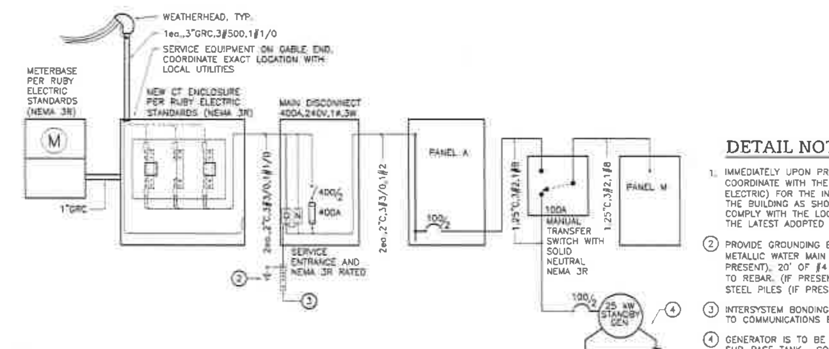
GF - PROVIDE 5mA GFCI TYPE CIRCUIT BREAKER.
LF - CIRCUIT BREAKER IS TO COME WITH PROVISION FOR LOCKING IN OFF POSITION PER NEC 422.31(B).
A - PROVIDE ARC-FAULT TYPE CIRCUIT BREAKER.

PANEL M SCHEDULE

100A MLO — 120/240V, 1PH,3W

	CKT	AMP	POLE	LOAD DESCRIPTION	PHASE A VA		PHASE B VA		LOAD DESCRIPTION	POLE	AMP	CKT	
	1	20	1	REC-EXAM ROOM	540	720			SEWER LINE HEAT TRACE	1	20	2	GE
	3	20	1	REC-EXAM ROOM			540	720	WATER LINE HEAT TRACE	1	20	4	GE
	5	20	1	REC-EXAM ROOM	540	500			FIRE ALARM CIRCUIT	1	20	6	LN
	7	20	1	REC-EXAM ROOM			540	1030	[illegible] FIRE PUMP		25	8	LN
	9	20	1	REC-EXAM ROOM	540	1030				2		10	
	11	20	1	REC-EXAM ROOM			360	830	CP-1		20	12	
	13	20	1	REC-MECHANICAL ROOM, HWG-1	820	830				2		14	
	15	20	1	REC-PHARMACY FRIDGE			1000	1060	CP-3, CP-4, CP-5	1	20	16	
	17	20	1	REC-TELECOMM	360	500			BOILER	1	25	18	
	19	20	1	REC-TELECOMM			360	610	HWV-1	1	20	20	
	21	20	1	REC-LAB	360	830			UH, EF	1	20	22	
	23	20	1	REC-LAB			360	500	MECHANICAL CONTROLS	1	20	24	
	25	20	1	LTG-OFF,EXM,DNTL,MECH,PHRMCY	995	500			MECHANICAL CONTROLS	1	20	26	
A	27	20	1	LTG-HALL,LAB,RSTRM,EXAM,QRTRS			1125	720	HEAT LINE HEAT TRACE	1	20	28	GE
	29	20	1	REC-MECHANICAL ROOM, HWG-1	820	830			CP-2		20	30	
	31	20	1	SPARE				830		2		32	
	33	20	1	SPARE					SPACE	1	-	34	
	35	-	1	SPACE					SPACE	1	-	36	
	37	-	1	SPACE					SPACE	1	-	38	
	39	-	1	SPACE					SPACE	1	-	40	
	41	-	1	SPACE					SPACE	1	-	42	
	CONNECTED LOAD (VA)					10,720		10,610	21,330 VA				
	CONNECTED LOAD (AMPERES)					[illegible]		[illegible]	89 A				
	DEMAND LOAD (VA)					11,40[illegible]		11,510	22,918 VA				
	DEMAND LOAD (AMPERES)					95		96	95 A				
	AMPERE INTERRUPT RATING								10,000 AIC				

GE - PROVIDE 30mA GFEP TYPE CIRCUIT BREAKER.
LN - PROVIDE LOCK-ON TYPE CIRCUIT BREAKER WITH RED MARKING PER NFPA 72.
A - PROVIDE ARC-FAULT TYPE CIRCUIT BREAKER.



DETAIL NOTES:

1. IMMEDIATELY UPON PROJECT INCEPTION THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL ELECTRICAL UTILITY COMPANY (RUBY ELECTRIC) FOR THE INSTALLATION OF A NEW ELECTRICAL SERVICE TO THE BUILDING AS SHOWN. ALL EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE LOCAL ELECTRICAL UTILITY COMPANY STANDARDS AND THE LATEST ADOPTED NEC.

(2) PROVIDE GROUNDING ELECTRODE SYSTEM AS FOLLOW: #1/0 CU. TO METALLIC WATER MAIN (IF PRESENT), #1/0 CU. TO BUILDING STEEL (IF PRESENT), 20' OF #4 CU. ENCASED IN FOOTING CONCRETE AND BONDED TO REBAR. (IF PRESENT) AND #4 CU. TO 2 DRIVEN ROD ELECTRODES. STEEL PILES (IF PRESENT) ARE TO BE BONDED TO BUILDING STEEL.

(3) INTERSYSTEM BONDING TERMINATION PER NEC 250.94 FOR CONNECTION TO COMMUNICATIONS BONDING AND GROUNDING CONDUCTORS.

(4) GENERATOR IS TO BE PROVIDED WITH WEATHERPROOF ENCLOSURE AND SUB-BASE TANK. COORDINATE EXACT LOCATION.

1 ELECTRICAL SINGLE LINE DIAGRAM

E5.1 SCALE: NTS

SWITCHES – PROVIDE NEMA WD-1 20, UL NO. 20 LISTED, 20 AMPERE, 120/277 VOLT AC GENERAL USE SNAP SWITCH, WITH GROUNDING SCREW AND SELF GROUNDING CLIP, WITH TOGGLE FINISH AS SELECTED BY THE OWNER, SINGLE POLE, DOUBLE POLE, THREE WAY OR FOUR WAY AS INDICATED ON THE DRAWINGS. PROVIDE LINE VOLTAGE RED LIGHTED NEON TOGGLE PILOT LIGHT SWITCHES AS INDICATED ON THE DRAWINGS. INSTALL SWITCHES 48 INCHES ABOVE FINISHED FLOOR, "OFF" POSITION DOWN. SWITCH BOXES SHALL INCLUDE A "GROUNDED CONDUCTOR" (NEUTRAL) OF THE CONTROLLED LIGHTING CIRCUIT AS REQUIRED BY NEC 404.2(C).

DEVICE PLATES – PROVIDE UL LISTED ONE PIECE ROUNDED EDGE FLUSH DEVICE PLATES OF SATIN FINISH 430 STAINLESS STEEL WITH METAL, COUNTER SUNK SCREWS TO MATCH DEVICE PLATE. PROVIDE GALVANIZED DEVICE PLATES WHERE EXPOSED WIRING IS PERMITTED. PROVIDE WEATHERPROOF GASKETED STAINLESS STEEL WITH HINGED GASKETED DEVICE COVERS FOR ALL OUTLETS IN WET LOCATIONS OR ON THE EXTERIOR OF THE BUILDING. PROVIDE WET WHILE IN USE WEATHERPROOF COVERS WHEN MANDATED BY THE AUTHORITY HAVING JURISDICTION.

LIGHTING EQUIPMENT – PROVIDE AND INSTALL ALL LIGHTING EQUIPMENT OR APPROVED EQUAL AS SHOWN ON THE DRAWINGS AND DESCRIBED IN THE DRAWINGS. PROVIDE LIGHTING EQUIPMENT AS A COMPLETE SYSTEM, WIRED, ASSEMBLED, WITH PROPER FLANGES, MOUNTING SUPPORTS, HARDWARE, ETC. ALL LIGHTING EQUIPMENT TO BE INSTALLED IN LAY-IN TYPE CEILINGS SHALL BE PHYSICALLY ATTACHED TO THE GRID SYSTEM AND PROVIDED WITH SAFETY SUPPORTS, CAPABLE OF SUPPORTING 200 POUNDS, SECURELY FASTENED TO A MINIMUM OF TWO OPPOSING CORNERS OF THE LIGHT FIXTURE AND THE BUILDING STRUCTURE TO SUPPORT THE FIXTURE IN THE EVENT OF A CEILING SUPPORT FAILURE. PROVIDE BALLAST DISCONNECTING MEANS FOR FLUORESCENT LUMINARIES REQUIRING DOUBLE ENDED LAMPS AS REQUIRED BY NEC 410.130.

EQUIPMENT CONNECTIONS – PROVIDE AND INSTALL WIRING AND CONNECTIONS OF EQUIPMENT REQUIRING ELECTRICAL POWER BUT SPECIFIED UNDER OTHER DIVISIONS OF THE PROJECT. MAKE WIRING CONNECTIONS IN THE CONTROL PANEL OR IN THE WIRING COMPARTMENT OF THE EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. PROVIDE INTERCONNECTING WIRING AND LOCAL DISCONNECTS WHERE REQUIRED.

DISCONNECT SWITCHES/MOTOR STARTERS – PROVIDE DISCONNECTS AND MOTOR STARTERS WHERE APPROPRIATE AND AS REQUIRED. SWITCHES AND STARTERS SHALL BE SIZED AND RATED FOR LOADS CONTROLLED AND WHERE LOCATED.

FIRE ALARM – FIRE ALARM AND DEVICES SHOWN ON THE DRAWINGS ARE PROPOSED LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DESIGN AND INSTALLATION FOR A COMPLETE AND FULLY OPERATIONAL FIRE ALARM SYSTEM IN ACCORDANCE WITH THE OWNER'S REQUIREMENTS, THESE SPECIFICATIONS, NFPA 72, AND ALL OTHER APPLICABLE CODES.

THE COMPLETE FIRE ALARM SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. FIRE ALARM SYSTEM WIRING SHALL CONFORM WITH LOCAL AND NATIONAL CODES. MAKE ALL CONNECTIONS TO DOOR RELEASE DEVICES, SPRINKLER FLOW SWITCHES, SPRINKLER VALVE TAMPER SWITCHES, FIRE SUPPRESSION SYSTEM CONTROL PANELS AND DUCT SMOKE DETECTORS WHERE PROVIDED.

SEISMIC RESTRAINTS – PROVIDE SEISMIC BRACING AND SUPPORT OF ALL ELECTRICAL EQUIPMENT AS REQUIRED BY THE IBC AND OTHER APPLICABLE CODES. EQUIPMENT TO BE BRACED AND SUPPORTED SHALL INCLUDE BUT IS NOT LIMITED TO LIGHTS, PANELS, CONDUIT, ETC. WHEN REQUIRED BY THE LOCAL JURISDICTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING STRUCTURAL RESTRAINTS DESIGNED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED BY THE STATE OF ALASKA.

PENETRATIONS OF FIRE BARRIERS – ALL ELECTRICAL PENETRATIONS THROUGH FIRE RATED BARRIERS SHALL BE SEALED IN ACCORDANCE WITH NEC ARTICLE 300.21 AND THE FOLLOWING:

"ALL HOLES OR VOIDS CREATED TO EXTEND ELECTRICAL SYSTEMS THROUGH FIRE RATED FLOORS, WALLS OR CEILING SHALL BE SEALED WITH AN ASBESTOS-FREE INTUMESCENT FIRE STOPPING MATERIAL CAPABLE OF EXPANDING 8 TO 10 TIMES WHEN EXPOSED TO TEMPERATURES 250 DEGREES F OR HIGHER. MATERIALS SHALL BE SUITABLE FOR THE FIRE STOPPING OF PENETRATIONS MADE BY STEEL, GLASS, PLASTIC AND SHALL BE CAPABLE OF MAINTAINING AN EFFECTIVE BARRIER AGAINST FLAME, SMOKE AND GASES IN COMPLIANCE WITH THE REQUIREMENTS OF ASTM E814, UL 1479 AND THE UL FIRE RESISTANCE DIRECTORY REQUIREMENTS FOR THROUGH-PENETRATION FIRESTOP DEVICES (XHCR). THE RATING OF THE FIRE STOPS SHALL BE THE SAME AS THE TIME-RATED FLOOR, WALL OR CEILING ASSEMBLY. INSTALL FIRE STOPPING MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. UNLESS PROTECTED FROM POSSIBLE LOADING OR TRAFFIC, INSTALL FIRE STOPPING MATERIALS IN FLOORS HAVING VOID OPENINGS OF FOUR (4) INCHES OR MORE TO SUPPORT THE SAME FLOOR LOAD REQUIREMENTS AS THE SURROUNDING FLOOR."

WATTERSON CONSTRUCTION
ph (907)563-7441 fax (907)563-7222

BETTISWORTH NORTH
ARCHITECTS AND PLANNERS
2600 DENALI STREET SUITE 710 ANCHORAGE, ALASKA 99503 907 561-5780
212 FRONT STREET FAIRBANKS, ALASKA 99701 907 456-5780
WWW.BETTISWORTHNORTH.COM

100% CONSTRUCTION DRAWINGS

2013.008
TANANA CHIEFS CONFERENCE
RUBY CLINIC
RUBY, ALASKA

CONSULTANT:
HZA

PROJECT NO: 2013.008
DATE: 14 JUNE 2013
DRAWN BY: BAB
CHECKED BY: BAB
REVISIONS:

SINGLE LINE DIAGRAM
PANEL SCHEDULES

E5.1