



# Building Permit

Permit No. 04-24

Date: 6/10/2024

Expires: 7/31/2025

Permittee's Name: Craig High School

Building Address: 1950 Craig-Klawock Highway Rd (Block 1A, Tract, ANCSA14(c)3)

QUESTIONS OR COMMENTS?  
CONTACT THE CRAIG BUILDING OFFICIAL  
(CRAIG CITY PLANNER) AT 907-826-3275.

*Brian Templin*, Craig Building Official  
Building Official  
POST ON BUILDING SITE

## CITY OF CRAIG, ALASKA BUILDING PERMIT APPLICATION

Applicant Information	Owner Information (if not also applicant)
Name <u>R &amp; M Engineering, Inc - Ketchikan</u>	Name <u>Craig City School District</u>
Mailing Address <u>7180 Revilla Rd, Suite 300</u>	Mailing Address <u>PO Box 800</u>
Street Address <u>Same as Mailing</u>	Street Address <u>1 Panther Way</u>
City, State, Zip <u>Ketchikan, AK 99901</u>	City, State, Zip <u>Craig, AK 99921</u>
Telephone <u>907-226-7917</u>	Telephone <u>907-826-3274 ext. 4003</u>

**Property Description**

Subdivision Name \_\_\_\_\_

Survey Number: \_\_\_\_\_ Tract Number: \_\_\_\_\_ Lot Number: 10 Block Number: 603

Army Corps of Engineers Permit Name and/or Number: N/A

**Building Activity Information (please check one)**

<input type="checkbox"/> Single Family Home	<input type="checkbox"/> Duplex	<input type="checkbox"/> Triplex	<input type="checkbox"/> Fourplex or greater
<input type="checkbox"/> Deck	<input type="checkbox"/> Porch	<input type="checkbox"/> Retaining Wall	<input type="checkbox"/> Addition
<input checked="" type="checkbox"/> Commercial Building	<input type="checkbox"/> Wannigan	<input type="checkbox"/> Garage	<input type="checkbox"/> Shed
<input type="checkbox"/> Mobile Home (Year and Make) _____			
<input type="checkbox"/> Travel Trailer (Year and Make) _____			
<input type="checkbox"/> Other (Please describe): _____			

Height of Building at Roof Eve: 16'-9" Closest setback to property line: 5A'-10"

Building Dimensions: 60'-5" x 48'-5" Area of building footprint: 2925.5 SF

What use(s) do you propose for the building? \_\_\_\_\_

**Site Plan**

Please complete on reverse side or attached sheet a site plan showing all proposed construction.

**Owner's/Applicant's Statement**

I acknowledge that I have read this application and state that the above information is correct. I agree to comply with all codes and ordinances of the City of Craig applicable to building and construction, and all land use regulations as pertaining to this permit. Any violation of land management regulations are the responsibility of the property owner. This permit becomes void upon completion of the approved work, or one year, whichever comes first. Work not documented in this application is not authorized by this building permit. I understand that this permit is revocable if work is not completed consistent with this applicant or if work does not comply with the requirements of the City of Craig Municipal Code. I agree to provide the City of Craig with an as-built survey of the lot in the event one is completed for this project.

Signature of Applicant: [Signature] Date: 6.6.24

Signature of Property Owner (if other than applicant): [Signature] Date: 6/6/24

**Special Conditions of Approval.**

The following conditions of approval are made a part of this permit as provided by section 18.06.001B.6 of the Craig Land Development Code:

- No modifications of the existing plan may be made without further review and approval by the Fire Marshal.
- All new construction must observe 10' property setbacks and maintain at least 10' distance from other structures.

Permission is hereby granted to perform the above work in compliance with any and all conditions listed above and in compliance with the Craig Land Development Code and all other ordinances of the City of Craig and the State of Alaska pertaining to the construction of buildings.

Signature of City Building Official: [Signature] Date: 6/11/2024

Plan Review Approval Letter & Certificate  
Grantor: State of Alaska, Department of Public Safety, Division of Fire & Life Safety  
Grantee: Craig City School District  
Recording District:  
Legal Description:

State of Alaska  
Office of the State Fire Marshal  
Plan Review

This is to certify that the plans for this building were reviewed by the *State Fire Marshal* on 2/16/2024 for conformance with AS 18.70.010 -- 100; 13 AAC 50.027.

This certificate shall be posted in a conspicuous place on the premises named Craig High School - Wood Shop Classroom & Storage and shall remain posted until construction is completed.

**NOTICE:** Any changes or modifications to the approved plans **must** be resubmitted for review by the *State Fire Marshal*.

Plan Review #: 2024ANCH0031

By: 

Oscar Lage  
Building Plans Examiner I

Authority: AS 18.70.080

Form: 12-741

(6/01) **Full Plan Review**



THE STATE  
of ALASKA  
GOVERNOR MIKE DUNLEAVY

## Department of Public Safety

DIVISION OF FIRE AND LIFE SAFETY

Plan Review Bureau – Anchorage

5700 East Tudor Road

Anchorage, Alaska 99705-1225

Main: 907.269.2004

Fax: 907.269.0098

02/16/2024

Return to Applicant: Nycole Gizinski  
7180 Revilla Rd, Suite 300  
Ketchikan, AK 99901

SUBJECT: Craig High School - Wood Shop Classroom & Storage - Full Plan Review  
ADDRESS: 100 Panther Way  
CITY: Craig  
PLAN REVIEW: 2024ANCH0031  
TYPE OF CONSTRUCTION: V-B  
OCCUPANCY: E Educational  
2021 INTERNATIONAL BUILDING AND FIRE CODE

Dear Nycole Gizinski:

Plans for the Full Plan Review have been reviewed by this office for conformity with the State Fire Safety Regulations and are hereby approved. Enclosed is a certificate of approval that must be posted on the premises until completion of the above project.

**It is prohibited to occupy this building until construction is completed, and if applicable, the Automatic Fire System(s) is installed, tested, and certified as operable.** Any changes to the approved plans must be submitted to this office for review and approval.

Approval of submitted plans is not approval of omissions or oversights by this office or noncompliance with any applicable regulations of the Municipal Government. The plans have not been reviewed for compliance with the federal Americans with Disabilities Act or structural requirements.

It must be understood that the inclusion of and compliance with State Fire Safety Regulations does not preclude the necessity of compliance with the requirements of local codes and ordinances.

If we can be of further assistance in this matter, please feel free to contact us at the address above.

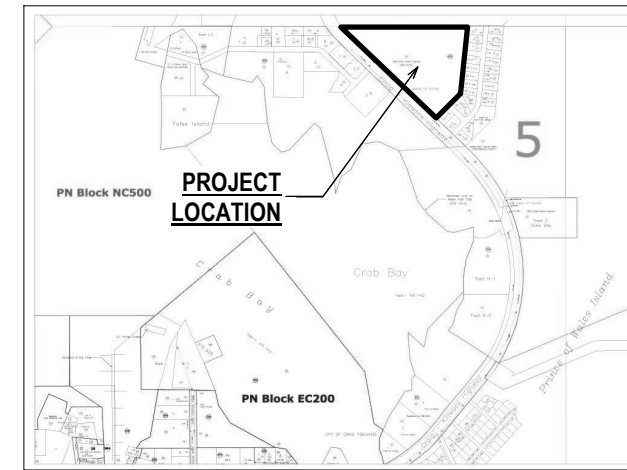
Approved By:  
Oscar Lage  
Building Plans Examiner I  
oscar.lage@alaska.gov

Enclosure: Approval Certificate

# Craig High School New Shop Building

Craig, AK

## LOCATION MAP



## PARTICIPANTS

**CLIENT:**  
CRAIG CITY SCHOOL DISTRICT  
PO Box 800  
Craig, AK 99921  
907.826.3274 EXT. 4003

**ARCHITECT / CIVIL ENGINEER:**  
R&M ENGINEERING-KETCHIKAN, INC.  
7180 REVILLA ROAD, SUITE 300  
KETCHIKAN, ALASKA 99901  
907.225.7917

**MECHANICAL/ELECTRIC ENGINEER:**  
CUSHING TERRELL  
306 RAILROAD ST. W, #104  
MISSOULA MT, 59802  
406.728.9522

## SHEET INDEX

### GENERAL

G100 Cover Sheet  
G101 Abbreviations & Symbols

### CIVIL

C1.1 Civil Site Plan

### ARCHITECTURAL

A100 Site Plan  
A200 Main Floor Plan  
A201 Roof Plan  
A300 Sections & Elevations  
A700 Details

### STRUCTURAL

S100 Structural Notes  
S200 Foundation Plan  
S300 Structural Section  
S400 Structural Details

### MECHANICAL

M001 Mechanical Schedule & Notes  
M002 Mechanical Schedules  
M003 Mechanical Schedules & Details  
M100 HVAC Plan  
M200 Mechanical Sections & Details

### ELECTRICAL

E001 Legends, Schedules, & Panels  
E002 Electrical One-Line Diagram  
E003 Electrical Panel Schedule  
E100 Site Plan  
E200 Electrical Lighting Plans  
E300 Power Plans

## GENERAL NOTES

COMPLY WITH ALL PROVISIONS OF THE INTERNATIONAL CODES AS ADOPTED BY THE CITY OF CRAIG AND THE STATE OF ALASKA.

- ALL WORK SHALL CONFORM TO ALL APPLICABLE CODES, INCLUDING THE LATEST ADOPTED EDITIONS OF THE IBC, IFC, IMC, IPC, IRC, UFC, UMC, UPC, NEC, AND ADA ACCESSIBILITY GUIDELINES.
- THE ARCHITECTURAL DRAWINGS ARE A PART OF LARGER SET OF DRAWINGS WHICH, WHEN COMPLETE, CONSISTS OF ALL DRAWINGS LISTED BY THE INDEX OF DRAWINGS. THE WORK DESCRIBED BY THE DRAWINGS OF ANY ONE DISCIPLINE MAY BE AFFECTED BY THE WORK DESCRIBED ON DRAWINGS OF ANOTHER DISCIPLINE AND MAY REQUIRE REFERENCE TO THE DRAWINGS OF ANOTHER DISCIPLINE. PARTIAL SETS OF DRAWINGS ARE INCOMPLETE AND SHOULD NOT BE DISTRIBUTED OR UTILIZED BY THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND COORDINATE THE WORK OF ALL SUBCONTRACTORS, TRADES, AND SUPPLIERS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BEFORE COMMENCING CONSTRUCTION, AND TO ASSURE THAT ALL PARTIES ARE AWARE OF ALL REQUIREMENTS, REGARDLESS OF WHERE THE REQUIREMENTS OCCUR IN THE CONTRACT DOCUMENTS., WHICH MIGHT AFFECT THE WORK OF THAT PARTY.
- CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS AND BUILDING DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK. ANY VARIATION FROM THE CONDITIONS AND DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE REPORTED TO THE OWNER OR ARCHITECT FOR RESOLUTION PRIOR TO CONSTRUCTION.
- CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
- WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DIMENSIONS ARE TO CENTERLINE OF COLUMNS OR TO FACE OF FRAMING, UNLESS OTHERWISE NOTED. DIMENSIONS NOTED AS "CLEAR" ARE TO FACE OF FINISH MATERIALS.
- REFER TO THE STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL, LANDSCAPE AD PLUMBING DRAWINGS FOR THE DETAILED DESIGN OF STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL, LANDSCAPE AND PLUMBING SYSTEMS, OF WHICH PORTIONS MAY BE SHOWN ON THE ARCHITECTURAL DRAWINGS.
- FINISH FLOOR ELEVATIONS ARE TO TOP OF CONCRETE FLOOR SLAB OR WOOD SUB-FLOOR, UNLESS OTHERWISE NOTED.
- CEILING HEIGHT DIMENSIONS ARE TO FINISHED SURFACES, UNLESS OTHERWISE NOTED.
- PROVIDE TWO 2A 10BC FIRE EXTINGUISHERS.

## SCOPE OF WORK

CONSTRUCTION OF AN 2,400 SF PRE-MANUFACTURED METAL BUILDING FOR A WOOD (ONLY) SHOP CLASSROOM & ASSOCIATED SHOP STORAGE AREA FOR THE CRAIG HIGH SCHOOL.

## ZONING REVIEW

CRAIG MUNICIPAL CODE CHAPTER 18 REVIEW

LEGAL DESCRIPTION: Block 503, Lot 10

PARCEL NUMBER: NC-503-010

ZONING: Public

LOT SIZE: 1,305,117 SF

BUILDING GROSS AREA: 2,400 SF

BUILDING HEIGHT:  
MAXIMUM: 30'  
PROPOSED: 19' - 0"

SETBACKS:  
MINIMUM: 10'  
PROPOSED: See Site Plan

## CODE REVIEW

PROJECT LOCATION:  
100 Panther Way, Craig, AK 99921

IBC 2021 REVIEW

I. TYPE OF CONSTRUCTION - EXISTING/PROPOSED (Chapter 6)  
V-B  
SPRINKLED - NO

II. USE & OCCUPANCY CLASSIFICATION (Chapter 3)  
E, Education

III. OCCUPANCY SEPARATIONS  
None

IV. BUILDING AREA (508.3.2 & Table 503)  
ALLOWED:  
Education E: 9,500 SF/Story, 1 STORY

PROPOSED:  
1 Story, 2,400 SF

V. BUILDING HEIGHT (Table 503)  
ALLOWED: 40'  
PROPOSED: 19' - 0"

VI. OCCUPANT LOAD (Table 1004.1.2)

WOOD SHOP:	2,082 NET SF / 50	42
STORAGE AREA:	697 GROSS SF / 300	3
TOTAL OCCUPANCY		45

REVISIONS:

Craig High School  
New Shop Building

STATUS:

CONSTRUCTION  
DOCUMENTS

DRAWN BY: NMG  
CHECKED BY: NMG  
DATE: 12.11.23  
PROJECT #: 182360

**R&M**  
R&M ENGINEERING-KETCHIKAN, INC.  
7180 REVILLA ROAD, SUITE 300  
KETCHIKAN, ALASKA 99901  
PH: 907.225.7187  
www.ketchikanengineer.com



SHEET DESCRIPTION:

Cover Sheet

**G100**

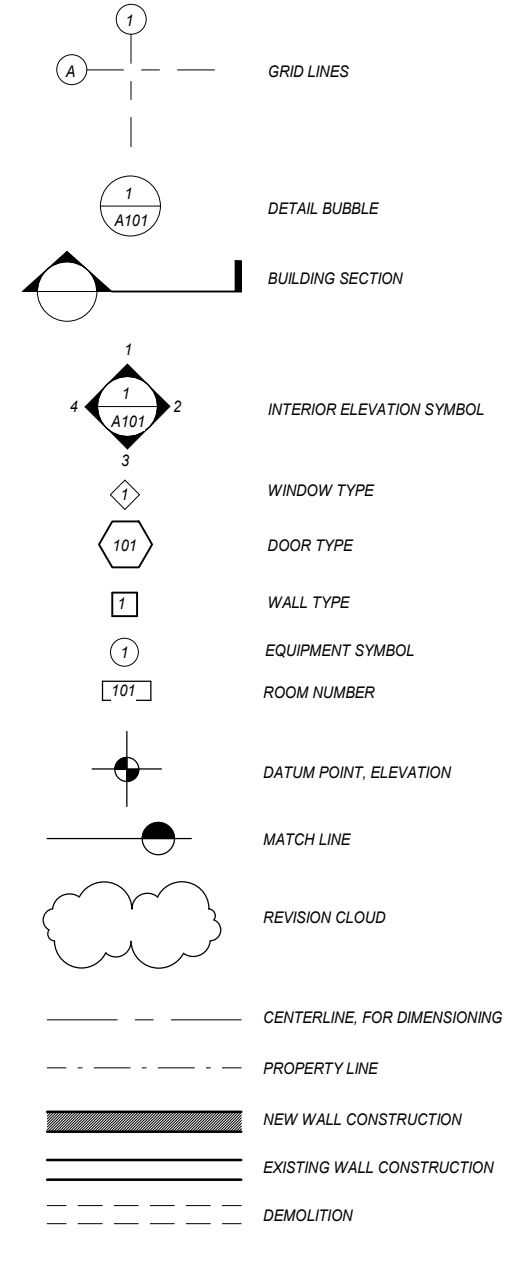
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01 of xx

# ARCHITECTURAL ABBREVIATIONS

AB	ANCHOR BOLT	F/F	FACE TO FACE	MACH	MACHINE
ABV	ABOVE	F.F	FINISH FLOOR	MAN	MANUAL
ACOUS	ACOUSTICAL	FA	FIRE ALARM	MATL	MATERIAL
ACT	ACOUSTICAL CEILING TILE	FBD	FIBERBOARD	MAX	MAXIMUM
AD	AREA DRAIN	FD	FLOOR DRAIN	MC	MEDICINE CABINET
ADDL	ADDITIONAL	FDC	FIRE DEPARTMENT CONNECTION	MECH	MECHANICAL
ADJ	ADJUSTABLE	FND	FOUNDATION	MEMB	MEMBRANE
AFF	ABOVE FINISHED FLOOR	FDV	FIRE DEPARTMENT VALVE	MET	METAL
AFG	ABOVE FINISHED GRADE	FE	FIRE EXTINGUISHER	MFR	MANUFACTURER
AFS	ABOVE FINISHED SLAB	FEB	FIRE EXTINGUISHER BRACKET	MH	MANHOLE
AL	ALUMINUM	FEC	FIRE EXTINGUISHER CABINET	MIN	MINIMUM
ALT	ALTERNATE	FHY	FIRE HYDRANT	MIR	MIRROR
AP	ACCESS PANEL	FIN	FINISH	MISC	MISCELLANEOUS
APPROX	APPROXIMATE(LY)	FIN GR	FINISH GRADE	MOD	MODULAR
ARCH	ARCHITECT(URAL)	FL	FLOOR(ING)	MTD	MOUNTED
ASPH	ASPHALT	FLASH	FLASHING	MTG	MOUNTING
AUTO	AUTOMATIC	FLEX	FLEXIBLE	MULL	MULLION
		FLR SK	FLOOR SINK		
BD	BOARD	FLUOR	FLUORESCENT	(N)	NEW
BKG	BACKING	FNR	FEMININE NAPKIN RECEPTACLE	N	NORTH
BLDG	BUILDING	FNTD	FEMININE NAPKIN-TAMPON DISPENSER	NA	NOT APPLICABLE
BLKG	BLOCKING	FOC	FACE OF CONCRETE	NAT	NATURAL
BLW	BELOW	FOF	FACE OF FINISH	NIC	NOT IN CONTRACT
BOT	BOTTOM	FOM	FACE OF MASONARY	NO	NUMBER
BRKT	BRACKET	FOS	FACE OF STUD	NOM	NOMINAL
BSMT	BASEMENT	FRPF	FIREPROOFING	NRC	NOISE REDUCTION COEFFICIENT
BTW	BETWEEN	FRZ	FREEZER	NTS	NOT TO SCALE
BURS	BUILT UP ROOFING SYSTEM	FSB	FOLDING SHOWER BENCH		
		FSTNR	FASTENER	OA	OVERALL
CAB	CABINET	FT	FOOT, FEET	OC	ON CENTER
CB	CATCH BASIN	FTG	FOOTING	OD	OUTSIDE DIAMETER
CCTV	CLOSED CIRCUIT TELEVISION	FURN	FURNITURE	OFCI	OWNER FURNISHED-CONTRACTOR INSTALLED
CG	CORNER GUARD	FURR	FURRING	OFOI	OWNER FURNISHED-OWNER INSTALLED
CEM	CEMENT	FUS	FOLDING UTILITY SEAT	OH	OPPOSITE HAND
CER	CERAMIC	FUT	FUTURE	OPNG	OPENING
CER TILE	CERAMIC TILE	FXTR	FIXTURE	OPP	OPPOSITE
CL	CENTERLINE			OVHD	OVERHEAD
CLG	CEILING	GA	GAUGE	PBD	PARTICLE BOARD
CLJ	CONTROL JOINT	GALV	GALVANIZED	PCF	POUNDS PER CUBIC FOOT
CLR	CLEAR	GB	GRAB BAR	PERF	PERFORATED
CMU	CONCRETE MASONRY UNIT	GC	GENERAL CONTRACTOR	PERIM	PERIMETER
CNTR	COUNTER	GL	GLASS	PERM	PERMANENT
CO	CASED OPENING	GL BLK	GLASS BLOCK	PERP	PERPENDICULAR
CONC	CONCRETE	GLULAM	GLUE LAMINATED	PH	PANIC HARDWARE
CONF	CONFERENCE	GLZ	GLAZING	PL	PROPERTY LINE
CONN	CONNECTION	GND	GROUND	PLAM	PLASTIC LAMINATE
CONSTR	CONSTRUCTION	GR	GRADE, GRADING	PLAT	PLATFORM
CONT	CONTINUOUS	GRV	GRAVEL	PLBG	PLUMBING
CORR	CORRIDOR	GYP BD	GYPSPUM BOARD	PLF	POUNDS PER LINEAL FOOT
CRPT	CARPET			PLYWD	PLYWOOD
CSWK	CASEWORK	H	HIGH	PNL	PANEL
CT	CARPET TILE	HB	HOSE BIB	PREFAB	PREFABRICATED
CUST	CUSTOM	HC	HOLLOW CORE	PRKG	PARKING
CW	COLD WATER	HCP	HANDICAPPED	PROJ	PROJECT
		HD	HEAD	PROP	PROPERTY
DBL	DOUBLE	HDBD	HARDBOARD	PSF	POUNDS PER SQUARE FOOT
DEMO	DEMOLISH	HDWE	HARDWARE	PSI	POUNDS PER SQUARE INCH
DET	DETAIL	HM	HOLLOW METAL	PT	POINT
DF	DRINKING FOUNTAIN	HNDRL	HANDRAIL	PTD	PAPER TOWEL DISPENSER
DIA	DIAMETER	HR	HOUR	PTD/R	PAPER TOWEL DISPENSER W/ RECEPTACLE
DIAG	DIAGONAL	HT	HEIGHT	PTR	PAPER TOWEL RECEPTACLE
DIFF	DIFFUSER	HVAC	HEATING, VENTILATION, AIR CONDITIONING, & COOLING	PVMT	PAVEMENT
DIM	DIMENSION			PWR	POWER
DIM PT	DIMENSION POINT	HW	HOT WATER		
DISP	DISPENSER	ID	INSIDE DIAMETER	QT	QUARRY TILE
DIST	DISTANCE	INCAND	INCANDESCENT	QTR	QUARTER
DLV	DOOR LOUVER	INCL	INCLUDING	QTY	QUANTITY
DMPF	DAMP PROOFING	INFO	INFORMATION		
DN	DOWN	INSUL	INSULATION	R	RISER
DR	DRAIN	INT	INTERIOR	RA	RETURN AIR
DS	DOWNSPOUT			RAD	RADIUS
DT	DRAIN TILE	JAN	JANITOR	RCP	REFLECTED CEILING PLAN
DWG	DRAWING	JB	JUNCTION BOX	RD	ROOF DRAIN
DWGS	DRAWINGS	JT	JOINT	REF	REFRIGERATOR
DWR	DRAWER			REINF	REINFORCED
		KIT	KITCHEN	REQD	REQUIRED
(E)	EXISTING	KPL	KICK PLATE	RESIL	RESILIENT
E	EAST	KS	KNEE SPACE	RET	RETURN
EA	EACH			REV	REVISION
ECAB	ELECTRICAL CABINET	LAB	LABORATORY	RH	RIGHT HAND
EG	EDGE GUARD	LAM	LAMINATE	RM	ROOM
EIFS	EXTERIOR INSULATION FINISH SYSTEM	LAV	LAVATORY	RO	ROUGH OPENING
EL	ELEVATION	LB	POUND	ROW	RIGHT OF WAY
ELEC	ELECTRICAL	LF	LINEAR FOOT		
ELEV	ELEVATION	LG	LENGTH	S	SOUTH
EMER	EMERGENCY	LH	LEFT HAND	SA	SUPPLY AIR
ENCL	ENCLOSURE	LIN	LINEAR	SB	SPLASH BLOCK
ENGR	ENGINEER	LKR	LOCKER	SC	SOLID CORE
EO	ELECTRICAL OUTLET	LT	LIGHT	SCD	SEAT COVER DISPENSER
EQL SP	EQUALLY SPACED	LT WT	LIGHT WEIGHT	SCHED	SCHEDULED
EQUIP	EQUIPMENT	LTG	LIGHTING	SCR	SHOWER CURTAIN ROD
EQUIV	EQUIVALENT			SD	SOAP DISPENSER
EXP	EXPANSION			SECT	SECTION
EXPO	EXPOSED			SEP	SEPARATION
EXIST	EXISTING			SF	SQUARE FOOT
EXT	EXTERIOR				

# DRAWING SYMBOLS



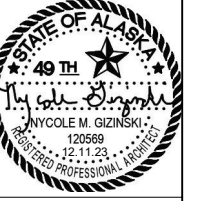
REVISIONS:


Craig High School  
 New Shop Building

STATUS:  
**CONSTRUCTION DOCUMENTS**

DRAWN BY: NMG  
 CHECKED BY: NMG  
 DATE: 12.11.23  
 PROJECT #: 182360

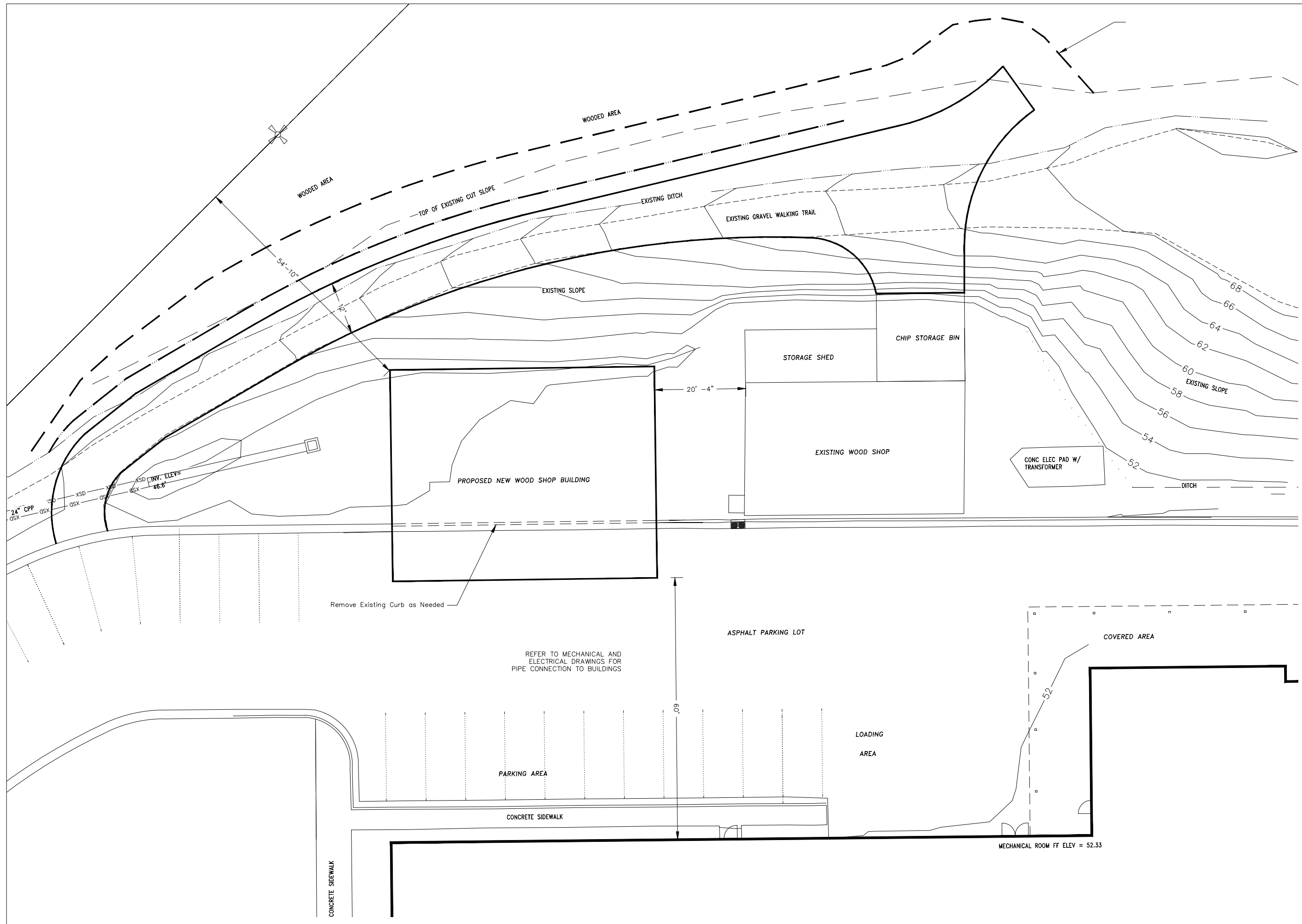
**R&M**  
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 7180 REVILLA ROAD, SUITE 300  
 KETCHIKAN, ALASKA 99901  
 PH: 907.225.7187  
 www.ketchikanengineer.com



SHEET DESCRIPTION:  
 Abbreviations & Symbols

**G101**

SHEET:  
 02 of xx



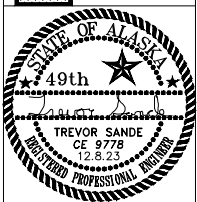
REVISIONS:


Craig City School District  
New Shop Building

STATUS:  
**Permit Documents**

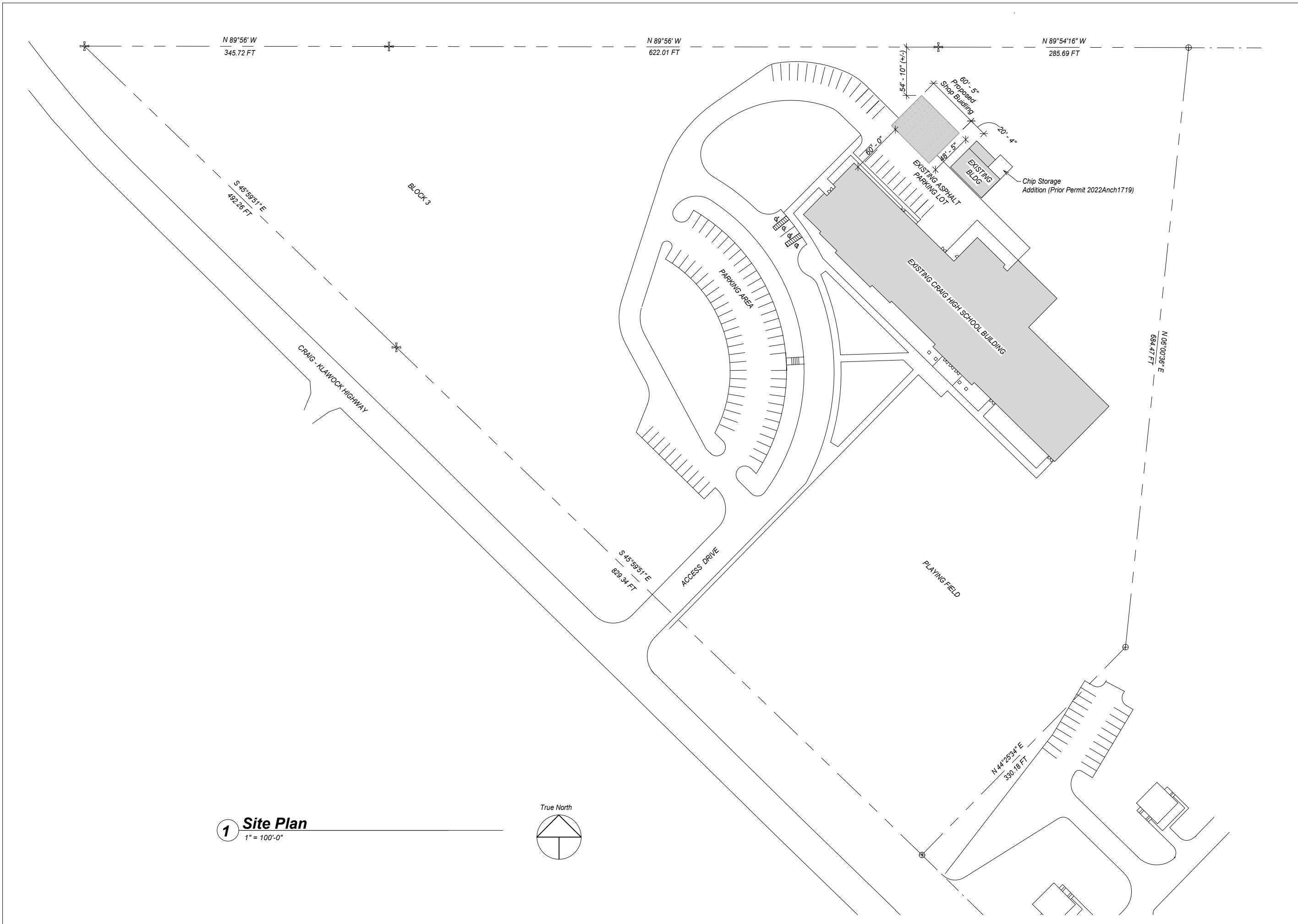
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CHECKED BY: TSS  
DATE: 12.08.23  
PROJECT #: 182361

**R&M ENGINEERING-KETCHIKAN, INC.**  
7180 REVILLA ROAD, SUITE 300  
KETCHIKAN, ALASKA 99901  
PH: 907.225.7187  
www.ketchikanengineer.com



SHEET DESCRIPTION:  
CIVIL SITE PLAN

**C1.0**  
SHEET: of



**1 Site Plan**  
1" = 100'-0"



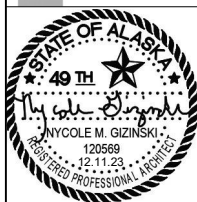
REVISIONS:

**Craig High School  
New Shop Building**

STATUS:  
**CONSTRUCTION DOCUMENTS**

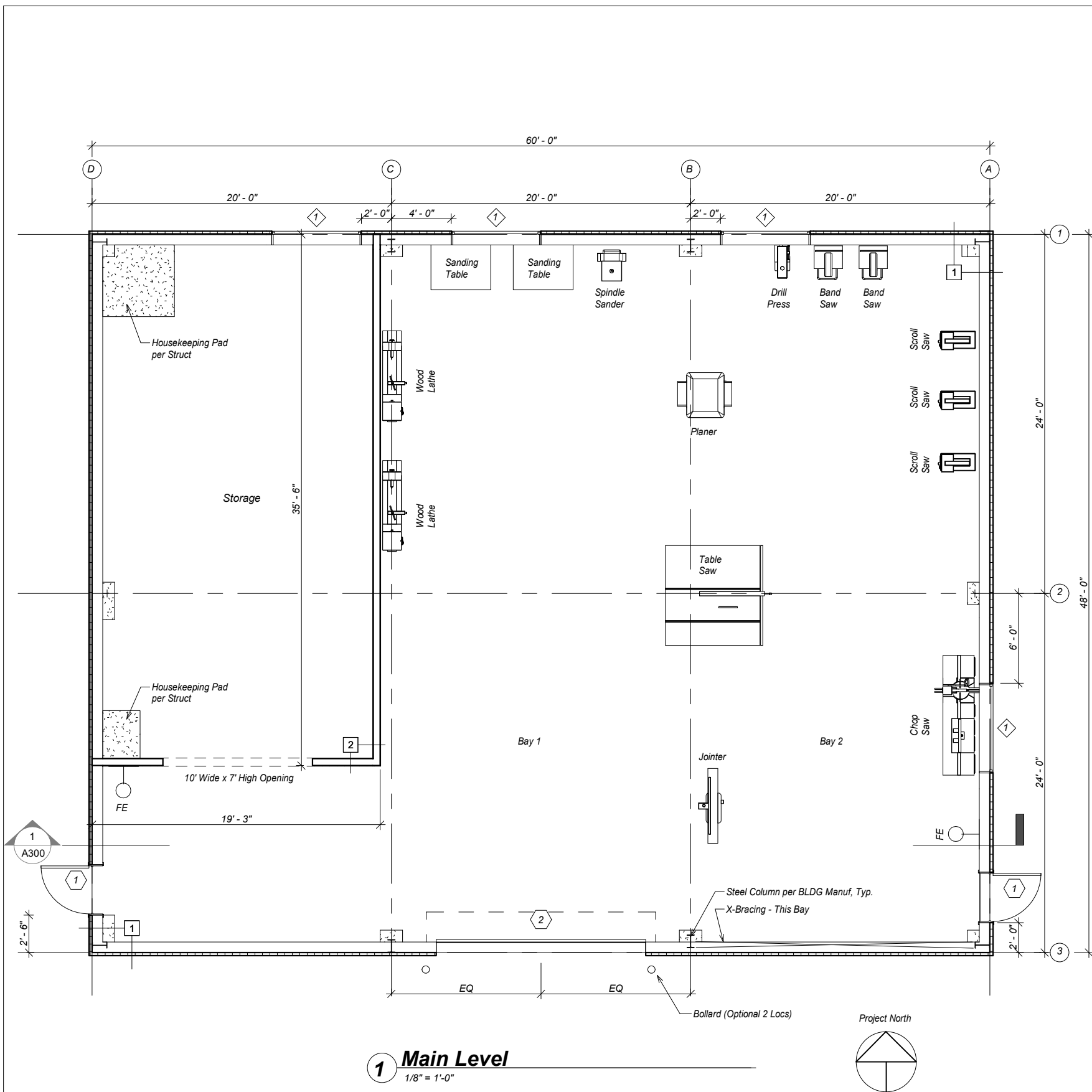
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CHECKED BY: NMG  
DATE: 12.11.23  
PROJECT #: 182360

**R&M**  
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7180 REVILLA ROAD, SUITE 300  
KETCHIKAN, ALASKA 99901  
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SHEET DESCRIPTION:	Site Plan
<b>A100</b>	
SHEET:	04 of xx





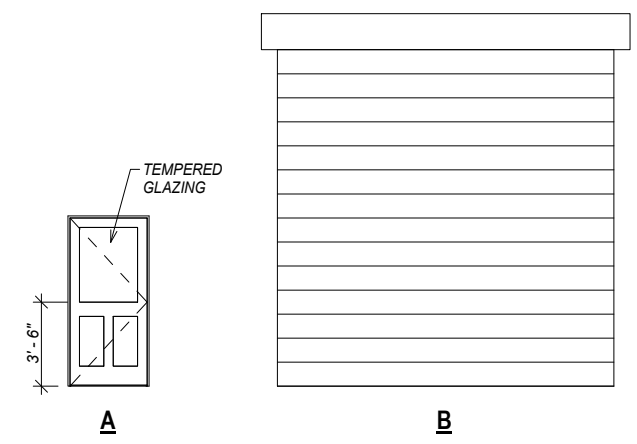
**1 Main Level**  
1/8" = 1'-0"

### Door Schedule

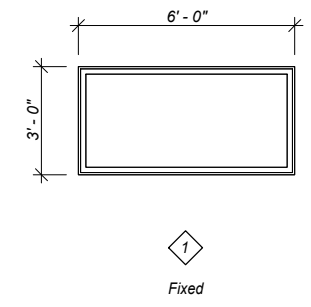
Type Mark	Door Type	Width	Height	Thickness	Door Material	Frame Material	Hardware
1	A	3'-0"	7'-0"	0'-1 3/4"	HM	HM	HDW-1
2	B	14'-0"	14'-0"	0'-2"	Steel	HM	

NOTE: ALL DOOR HANDLES TO BE ADA COMPLIANT LEVER TYPE

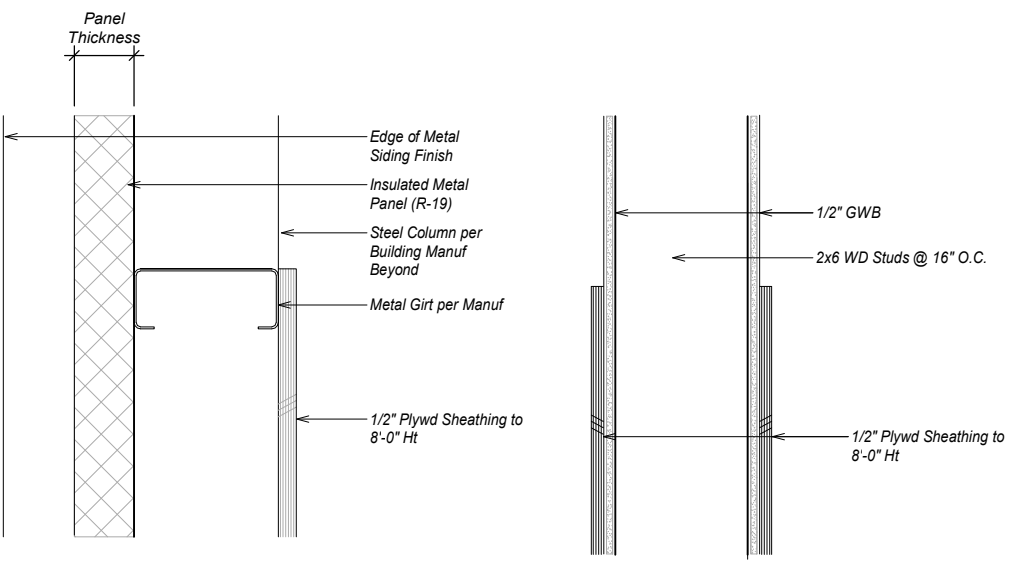
**DOOR TYPES**



**WINDOW TYPES**



**WALL TYPES**



**1 Typical Exterior Wall Constr.**

**2 Typ. Interior Wall (2x6)**

REVISIONS:


**Craig High School  
New Shop Building**

STATUS:  
**CONSTRUCTION DOCUMENTS**

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CHECKED BY: NMG  
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PROJECT #: 182360

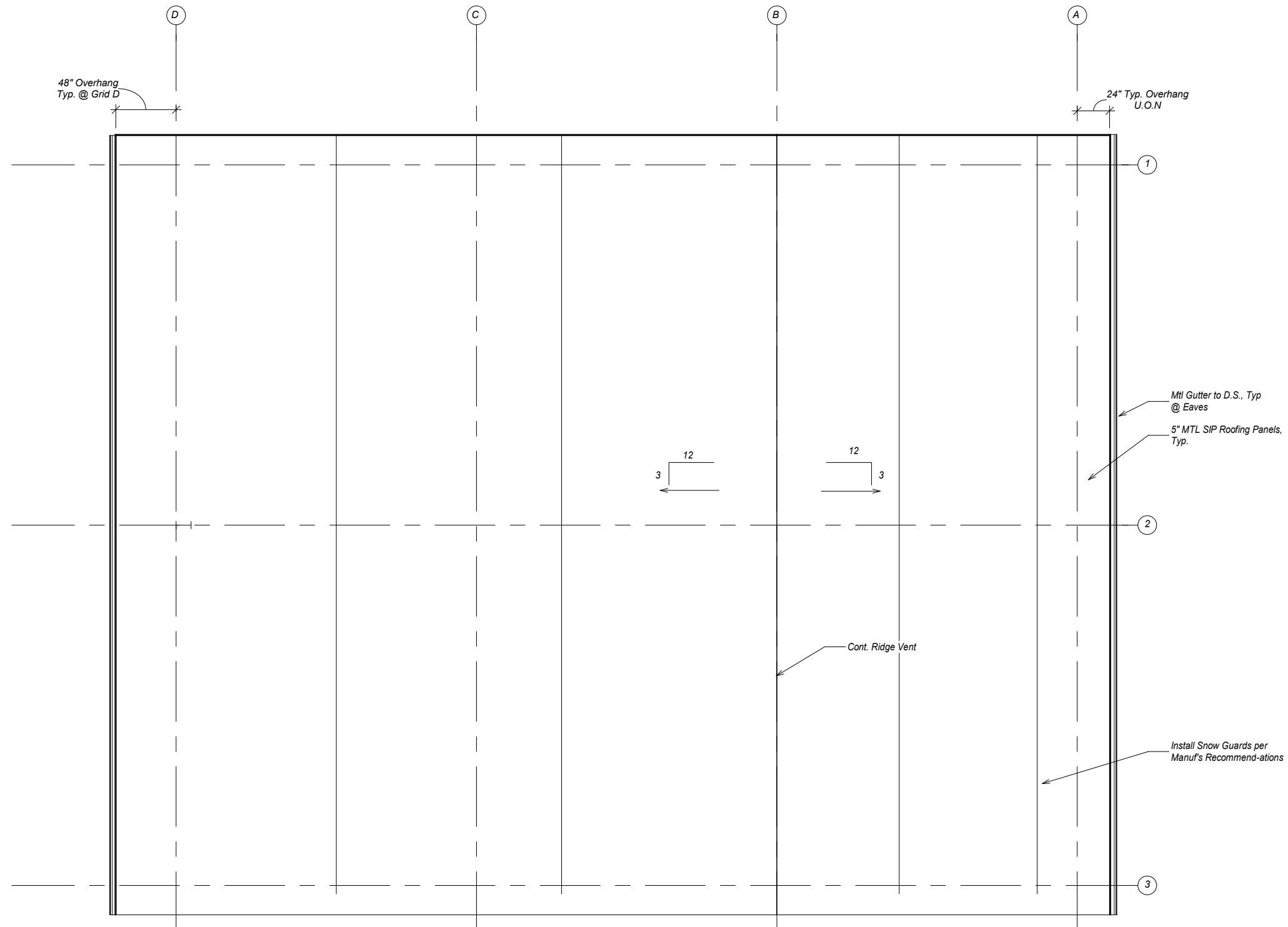
**R&M**  
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7180 REVILLA ROAD, SUITE 300  
KETCHIKAN, ALASKA 99901  
PH: 907.225.7187  
www.ketchikanengineer.com



SHEET DESCRIPTION:  
Main Floor Plan

**A200**

SHEET:  
05 of xx



**1 Roof Plan**  
1/8" = 1'-0"

REVISIONS:

Craig High School  
New Shop Building

STATUS:

**CONSTRUCTION DOCUMENTS**

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CHECKED BY: NMG  
DATE: 12.11.23  
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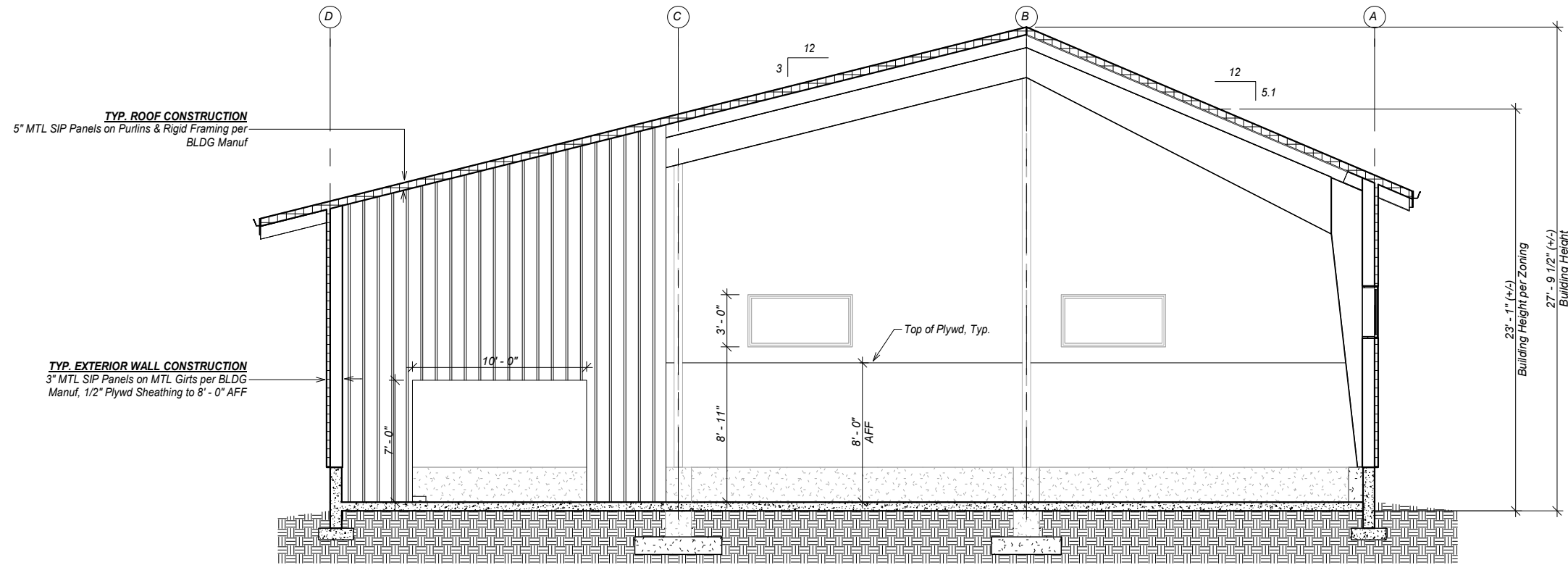
SHEET DESCRIPTION:

Roof Plan

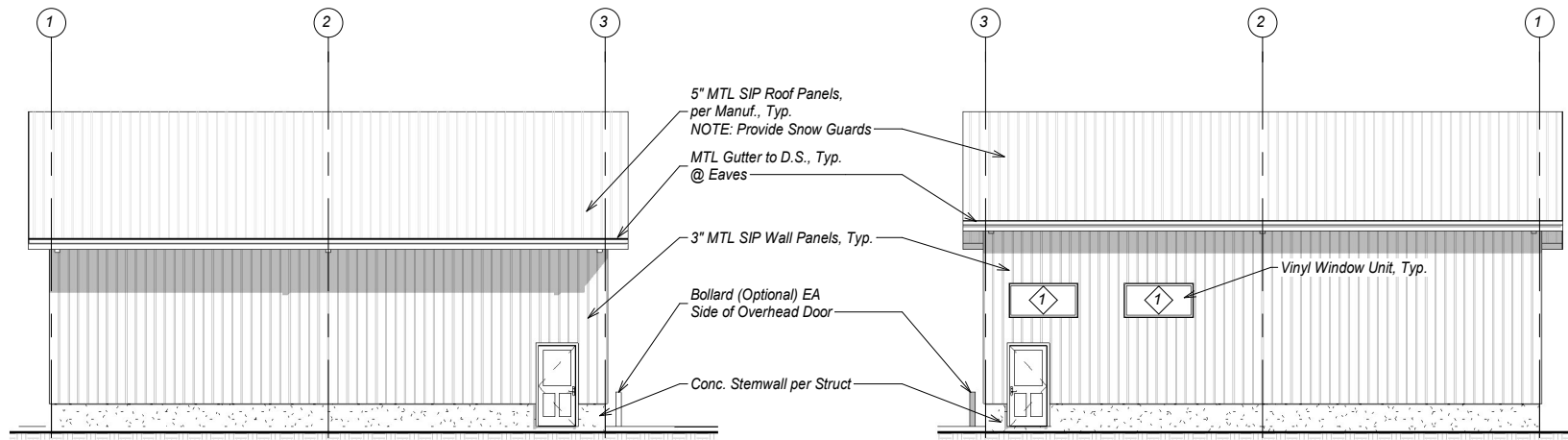
**A201**

SHEET:

06 of xx

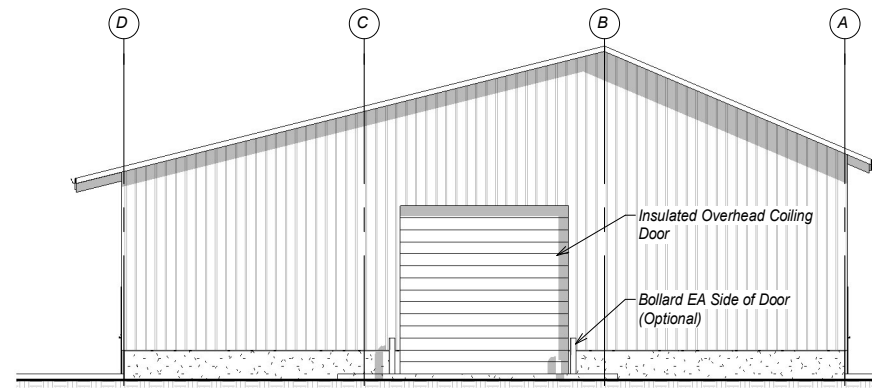


**1 Section 1**  
1/8" = 1'-0"

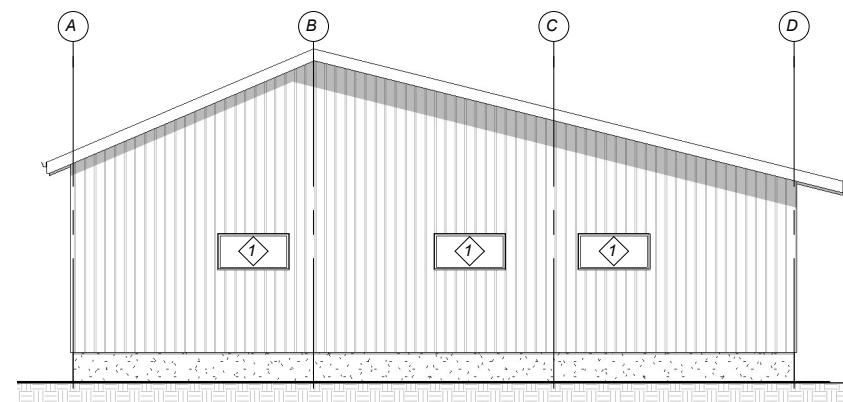


**5 West Elevation**  
1/16" = 1'-0"

**2 East Elevation**  
1/16" = 1'-0"



**4 South Elevation**  
1/16" = 1'-0"



**3 North Elevation**  
1/16" = 1'-0"

REVISIONS:

Craig High School  
New Shop Building

STATUS:  
**CONSTRUCTION DOCUMENTS**

DRAWN BY: NMG  
CHECKED BY: NMG  
DATE: 12.11.23  
PROJECT #: 182360

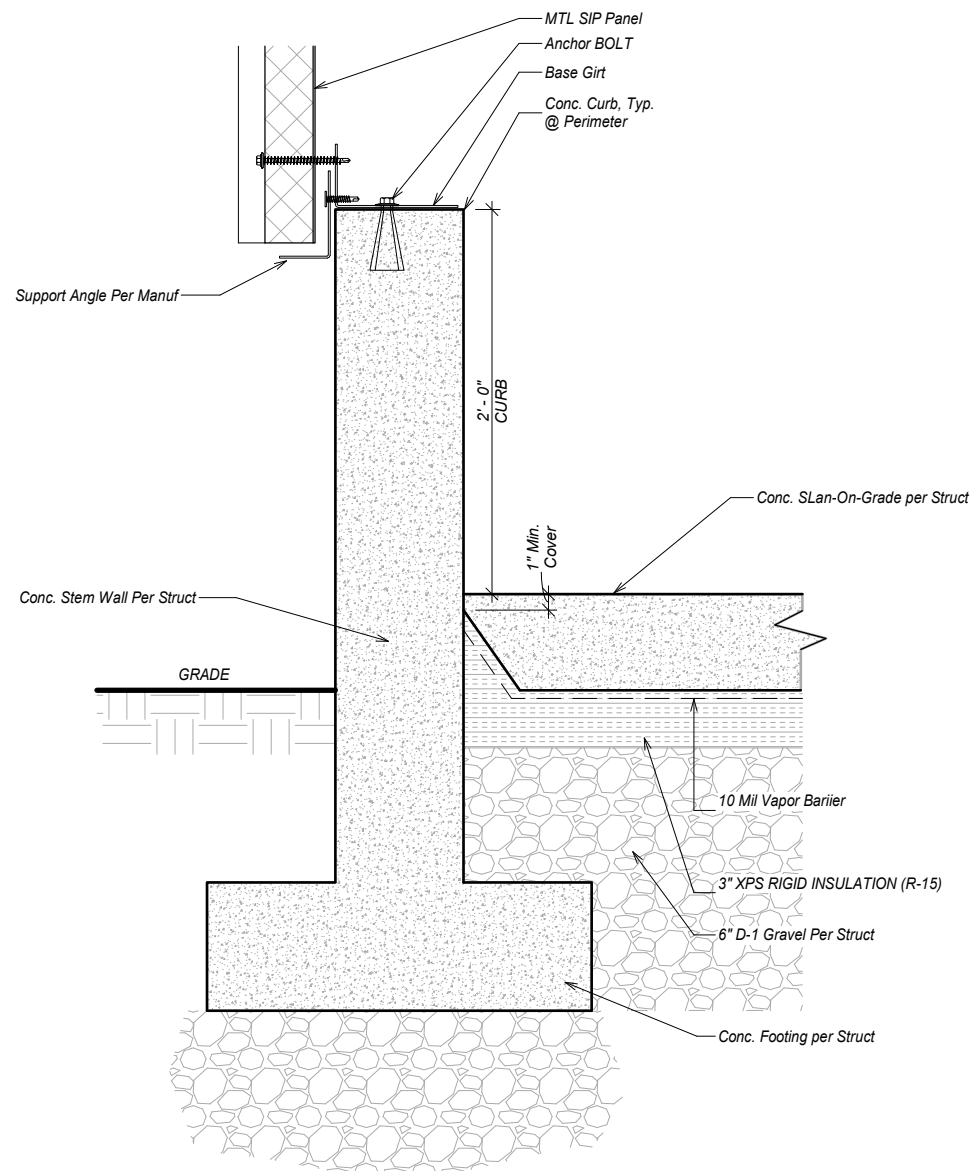
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SHEET DESCRIPTION:  
Sections & Elevations

**A300**

SHEET:  
07 of xx



**1** **Typ. Foundation Detail**  
 1" = 1'-0"

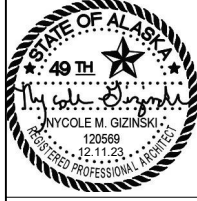
REVISIONS:


Craig High School  
 New Shop Building

STATUS:  
**CONSTRUCTION DOCUMENTS**

DRAWN BY: NMG  
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SHEET DESCRIPTION:  
 Details

**A700**

SHEET:  
 08 of xx

**GENERAL STRUCTURAL NOTES**

**GENERAL**

**BUILDING CODE:** ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (IBC), 2021 EDITION.

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

**LOADS AND CRITERIA**

**GRAVITY:** IN ADDITION TO THE SELF WEIGHT, THE FOLLOWING WERE USED FOR DESIGN:

**SNOW DESIGN DATA:**

GROUND SNOW LOAD  $P_g = 40$  PSF  
 FLAT-ROOF SNOW LOAD  $P_f = 25.2$  psf  
 SNOW EXPOSURE FACTOR  $C_e = 0.9$   
 SNOW LOAD IMPORTANCE FACTOR  $I_s = 1.0$   
 THERMAL FACTOR  $C_t = 1.0$   
 RAIN-ON-SNOW SURCHARGE = 0 PSF  
 SLOPED ROOF SNOW LOAD  $P_s = 25.2$  PSF  
 DESIGN SNOW LOAD = 40 PSF

**WIND DESIGN DATA (GOVERNS DESIGN OF LATERAL FORCE RESISTING SYSTEM):**

BASIC WIND SPEED (3-SECOND GUST)  $V = 150$  MPH  
 WIND RISK CATEGORY  $I_w = II$   
 SURFACE ROUGHNESS = B  
 EXPOSURE CATEGORY = d  
 INTERNAL PRESSURE COEFFICIENT  $GC = 0.18$  : ENCLOSED  
 COMPONENT AND CLADDING PRESSURE  $P_{ci} = +/- .41$  PSF

**SEISMIC DESIGN DATA**

MAPPED SPECTRAL RESPONSE  $S_s = 0.468$  %g  
 $S_1 = 0.361$  %g  
 SPECTRAL RESPONSE COEFFICIENTS  $S_{ds} = 0.448$  %g  
 $S_{d1} = 0.467$  %g  
 SEISMIC DESIGN CATEGORY D

**SHOP DRAWINGS AND SUBMITTALS** SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION OR CONSTRUCTION OF THESE ITEMS:

CONCRETE MIX DESIGN  
 CONCRETE REINFORCING

CONTRACTOR SHALL REVIEW AND STAMP SUBMITTALS PRIOR TO SUBMISSION. IF SHOP DRAWINGS DIFFER FROM DESIGN SHOWN ON STRUCTURAL DRAWINGS, THEY SHALL BE SEALED BY THE ALASKA STATE REGISTERED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN. DIMENSIONS AND QUANTITIES ARE CONTRACTOR'S RESPONSIBILITY AND WILL NOT BE REVIEWED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS PLACED PRIOR TO RECEIPT OF REVIEWED SUBMITTALS. CONTRACTOR SHALL ALLOW SUFFICIENT TIME FOR REVIEW.

**NOTE:**  
 SUBMIT TRUSS CALCULATIONS AND LAYOUT PLAN TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO SUBMITTAL TO CITY. PLANS AND CALCULATIONS TO BE APPROVED BY CITY PRIOR TO REQUESTING FRAME INSPECTION.

SOIL BEARING PRESSURE: 3000 PSF (IBC TABLE 1804.2)  
 SOIL BEARING IS BASED ON THREE TEST PITS EXCAVATED TO THE NATIVE BEACH GRAVEL WHICH CONFIRMED THE SITE WAS FILLED WITH SHOT ROCK FILL.

**SPECIAL INSPECTION**  
 CONTRACTOR SHALL PROVIDE SPECIAL INSPECTION FOR THE FOLLOWING:  
 SOIL SUBGRADE  
 GENERAL FRAMING  
 REBAR PLACEMENT  
 CONCRETE PLACEMENT  
 STRUCTURAL HOLD DOWNS  
 ROCK BOLTS (SEE NOTE BELOW)  
 SUMMARY OF BUILDING INSPECTION (PUR-102)

**CONCRETE**

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

ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE"  
 ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"  
 ACI 304 "GUIDE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE"  
 ACI 311 "GUIDE FOR CONCRETE INSPECTION"

**MATERIALS:**

CEMENT ASTM C150, C595  
 AGGREGATE ASTM C33  
 ADMIXTURES ASTM C260, C494, & C1017  
 FLY ASH ASTM C618, CLASS "F" OR "C"

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

MAXIMUM LOSS ON IGNITION SHALL BE 1%.

CONCRETE SHALL BE PROPORTIONED TO ACHIEVE A WORKABLE MIX THAT CAN BE PLACED WITHOUT SEGREGATION OR EXCESS FREE SURFACE WATER. MIX DESIGNS SHALL BE SUBMITTED FOR REVIEW PRIOR TO USE. COMPLY WITH IBC SECTION 1905. MIXES SHALL MEET OR EXCEED THE FOLLOWING CRITERIA:

TYPE OF CONSTRUCTION	COMPRESSIVE STRENGTH (f <sub>c</sub> )	TEST AGE	MAXIMUM WATER/CEMENT RATIO
FOOTINGS, TOPPING SLABS, RETAINING AND FOUNDATION WALLS, CONCRETE ON METAL DECK, WALLS	4,000 PSI	28 DAYS	0.50

**ADMIXTURES:** ALL CONCRETE, INCLUDING SLAB ON GRADE, SHALL HAVE A WATER-REDUCING ADMIXTURE COMPLYING WITH ASTM C-494 ADDED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. CALCIUM CHLORIDE OR OTHER CHLORIDE ADMIXTURES SHALL NOT BE USED.

ALL HORIZONTAL SURFACE EXPOSED TO WEATHER SHALL CONTAIN AN AIR-ENTRAINING AGENT COMPLYING WITH ASTM C260. THE AMOUNT OF ENTRAINED AIR SHALL BE 5% +/- 1 1/2% BY VOLUME. TESTS FOR AIR CONTENT SHALL BE MADE AT THE DISCHARGE END OF THE PLACING HOSE IN ACCORDANCE WITH ASTM C173.

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

**MAXIMUM AGGREGATE SIZE** SHALL BE 1 1/2". BUT NOT MORE THAN 3/4 TIMES THE CLEAR DISTANCE BETWEEN REINFORCING BARS NOR 1/5 TIMES THE NARROWEST DIMENSION BETWEEN SIDES OF FORMS. MAXIMUM AGGREGATE SIZE FOR SLABS ON GRADE SHALL BE 1/3 TIMES THE SLAB THICKNESS.

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

**EMBEDDED ITEMS:** CONDUIT AND SLEEVES SHALL NOT BE EMBEDDED IN OR PASS THROUGH CONCRETE WITHOUT APPROVAL. ALUMINUM ITEMS SHALL NOT BE EMBEDDED IN CONCRETE. SUBMIT CONDUIT LAYOUTS AND EMBEDDED ITEM PLANS FOR REVIEW PRIOR TO PLACING CONCRETE.

**CONSTRUCTION JOINTS** IN WALLS SHALL BE KEYED IN ACCORDANCE WITH TYPICAL CONSTRUCTION JOINT DETAILS SHOWN ON DRAWINGS OR, AT CONTRACTOR'S OPTION, SHALL BE AN INTENTIONALLY ROUGHENED CONSTRUCTION JOINT DEFINED BY THE FOLLOWING:

1. SURFACE OF JOINT SHALL BE SAND BLASTED OR ROUGHENED WITH A CHIPPING HAMMER TO EXPOSE AGGREGATE EMBEDDED IN PREVIOUS POUR.
2. EXPOSED AGGREGATE SHALL BE CLEANED AND LAITANCE REMOVED.
3. JOINT SURFACE SHALL BE CLEANED AND LAITANCE REMOVED.
4. JOINT SHALL BE WETTED AND STANDING WATER REMOVED IMMEDIATELY BEFORE NEW CONCRETE IS PLACED.

**CONSTRUCTION JOINTS** WHEN REQUIRED SHALL BE IN ACCORDANCE WITH ACI 6.4. SUBMIT JOINT LAYOUT PLAN FOR REVIEW PRIOR TO PLACING CONCRETE.

**CONCRETE REINFORCEMENT**

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

ACI 301  
 ACI SP-66  
 ACI 318  
 CRSI  
 CRSI  
 WRI

**MATERIALS:**

DEFORMED BARS ASTM A615, GRADE 60  
 SMOOTH WELDED WIRE ASTM A185, 65 KSI YIELD  
 BAR SUPPORTS CONFORM TO CHAPTER 3, CRSI MSP-1

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

**LAP** ALL CONTINUOUS REINFORCEMENT IN ACCORDANCE WITH THE SECTIONS AND DETAILS. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 1 CROSS WIRE SPACING + 2" OR 8" WHICHEVER IS GREATER.

BAR SIZE	#4	#5
L	30"	37.5"
L <sub>d</sub> 18"	22.5"	

**WELDING OR TACK WELDING** OF REINFORCING BARS TO OTHER BARS OR TO PLATES, ANGLES, ETC IS PROHIBITED, EXCEPT WHERE SPECIFICALLY APPROVED. WHERE WELDING IS APPROVED, IT SHALL BE DONE BY AWS CERTIFIED WELDERS USING E9018 ELECTRODES. WELDING PROCEDURES SHALL COMPLY WITH AWS-D1.4.

**CONCRETE COVER:** UNLESS NOTED OTHERWISE, MINIMUM COVER FOR REINFORCING SHALL BE:

ELEVATED SLABS 3/4" (1" AT FIRE-RESISTIVE RATING ≥ 2 HOURS)  
 SLABS ON GRADE 2" BOTTOM  
 INTERIOR WALL FACES 3/4"  
 EXPOSED FORMED WALL FACES 1 1/2" (#5 AND SMALLER), 2" (#6 & LARGER)  
 FOOTINGS 3" (2" TOP AND FORMED SIDES)  
 BEAMS, COLUMNS 1 1/2" (TO TIES, SPIRALS, STIRRUPS)

**FIBROUS REINFORCEMENT:** POLYPROPYLENE FIBROUS REINFORCEMENT ("FIBERMESH", "GRACE FIBERS", OR APPROVED EQUAL) SHALL BE USED WHERE NOTED ON THE DRAWINGS. SUBMIT PROPOSED PRODUCT DATA AND SPECIFICATIONS FOR REVIEW. ADD FIBERS TO CONCRETE MIX AND FINISH IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COMPLY WITH ASTM C116, TYPE III, PERFORMANCE LEVEL 1. MINIMUM APPLICATION RATE SHALL BE 1.5 LB/CY.

**ANCHORAGE**

**POST-INSTALLED ANCHORS** SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND NOTED ICC-ES REPORTS. SUBSTITUTES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH ICC-ES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. ALLOWABLE EPOXY PRODUCTS INCLUDE HILTI HY-150 OR APPROVED EQUAL.

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

**WOOD**

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

AITC  
 AF & PA

**PLYWOOD:** WOOD STRUCTURAL PANELS SHALL CONFORM TO REQUIREMENTS OF U.S. DEPARTMENT OF COMMERCE PS-1 OR PS-2. EACH PANEL SHALL BEAR THE AMERICAN PLYWOOD ASSOCIATION (APS) GRADE MARK. SEE DRAWINGS FOR GRADE AND THICKNESS.

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

USE	SIZE	SPECIES	GRADE
WALL STUDS	2x 3x	HEM-FIR	#2
SILL PLATES	2x 3x	HEM-FIR	#2
JOISTS	2x	HEM-FIR	#2
JOISTS	3x 4x	HEM-FIR	#2
BEAMS/POSTS	4x	HEM-FIR	#2
BEAMS/POSTS	6x	HEM-FIR	#1
T&G DECKING	2x	HEM-FIR	#2

**GLUE LAMINATED MEMBERS (GLULAMS)** SHALL BE FABRICATED IN CONFORMANCE WITH U.S. PRODUCT STANDARD PS 56-73 AND AITC STANDARD SPECIFICATIONS FOR STRUCTURAL GLUED LAMINATED TIMBER OF SOFTWOOD SPECIES, MANUFACTURING REQUIREMENTS AITC 117-93. EACH MEMBER SHALL BEAR AN AITC OF CONFORMANCE. GLULAMS SHALL BE ARCHITECTURAL GRADE WITH STRENGTH GRADES AS NOTED BELOW:

BEAMS: 24F-E11 (F<sub>b</sub>=2400 PSI, F<sub>v</sub>=195 PSI, E=1800 KSI)

**ENGINEERED WOOD JOISTS:** DESIGN SHOWN ON DRAWINGS IS BASED ON JOISTS MANUFACTURED BY BOISE CASCADE. SUBSTITUTES SHALL BE SUBMITTED WITH A CURRENT ICC-ES EVALUATION REPORT AND AN ITEMIZED SUBSTITUTION LIST FOR APPROVAL. JOIST SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS. ALL NECESSARY ACCESSORIES, SUCH AS BRIDGING, BLOCKING AND STIFFENERS, SHALL BE FURNISHED BY THE MANUFACTURER.

**ENGINEERED LUMBER:** DESIGN SHOWN ON DRAWINGS IS BASED ON LUMBER MANUFACTURED BY BOISE CASCADE. SUBSTITUTES SHALL BE SUBMITTED WITH A CURRENT ICC-ES EVALUATION REPORT AND AN ITEMIZED SUBSTITUTION LIST FOR APPROVAL.

**CONNECTORS:** DESIGN SHOWN ON DRAWINGS IS BASED ON CONNETEERS MANUFACTURED BY SIMPSON STRONG-TIE IN ACCORDANCE WITH CATALOG C-2004. SUBSTITUTES SHALL BE SUBMITTED WITH A CURRENT ICC-ES EVALUATION REPORT AND AN ITEMIZED SUBSTITUTION LIST FOR APPROVAL. CONNECTORS SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS.

**NAILING** NOT SHOWN SHALL BE AS SHOWN IN IBC TABLE 2304.9.1 OR CURRENT ICC-ES REPORT NER-272. MINIMUM NAIL DIMENSIONS SHALL BE AS FOLLOWS:

SIZE	DIAMETER	LENGTH
6d	0.113"	2"
8d	0.131"	2 1/2"
10d	0.148"	3"
12d	0.148"	3 1/4"
16d	0.162"	3 1/2"
20d	0.192"	4"

**BOLTS AND LAG SCREWS** SHALL CONFORM TO ASTM A307.

**WOOD PROTECTION:** ALL WOOD MEMBERS EXPOSED TO WEATHER AND SPECIFIED AS "PT" ON THE DRAWINGS SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE. FASTENERS IN TREATED WOOD SHALL BE HOT DIPPED ZINC COATED GALVANIZED PER ASTM A153, STAINLESS STEEL, SILICON BRONZE OR COPPER.

**FLOOR FRAMING:** ALL FLOOR FRAMING TO HAVE A MINIMUM LIVE LOAD DEFLECTION LIMIT OF L/480.

REVISIONS:


**Craig High School  
New Shop Building**

STATUS:  
**CONSTRUCTION DOCUMENTS**

DRAWN BY: NMG  
 CHECKED BY: ISS  
 DATE: 12.11.23  
 PROJECT #: 182360

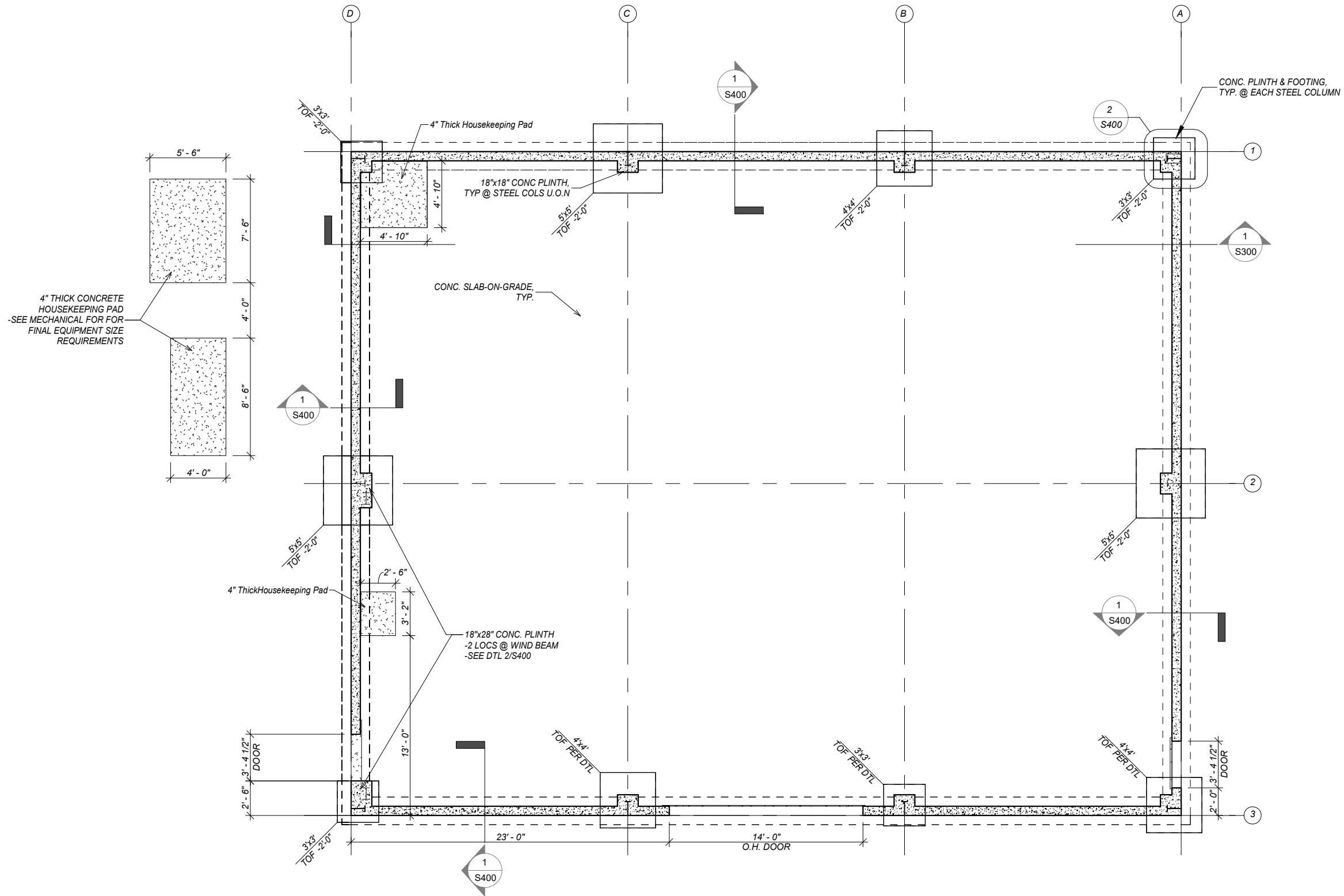
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SHEET DESCRIPTION:  
 Structural Notes

**S100**

SHEET:  
 09 of xx



**1 Foundation Plan**  
1/8" = 1'-0"

REVISIONS:


**Craig High School  
New Shop Building**

STATUS:  
**CONSTRUCTION DOCUMENTS**

DRAWN BY: NMG  
CHECKED BY: TSS  
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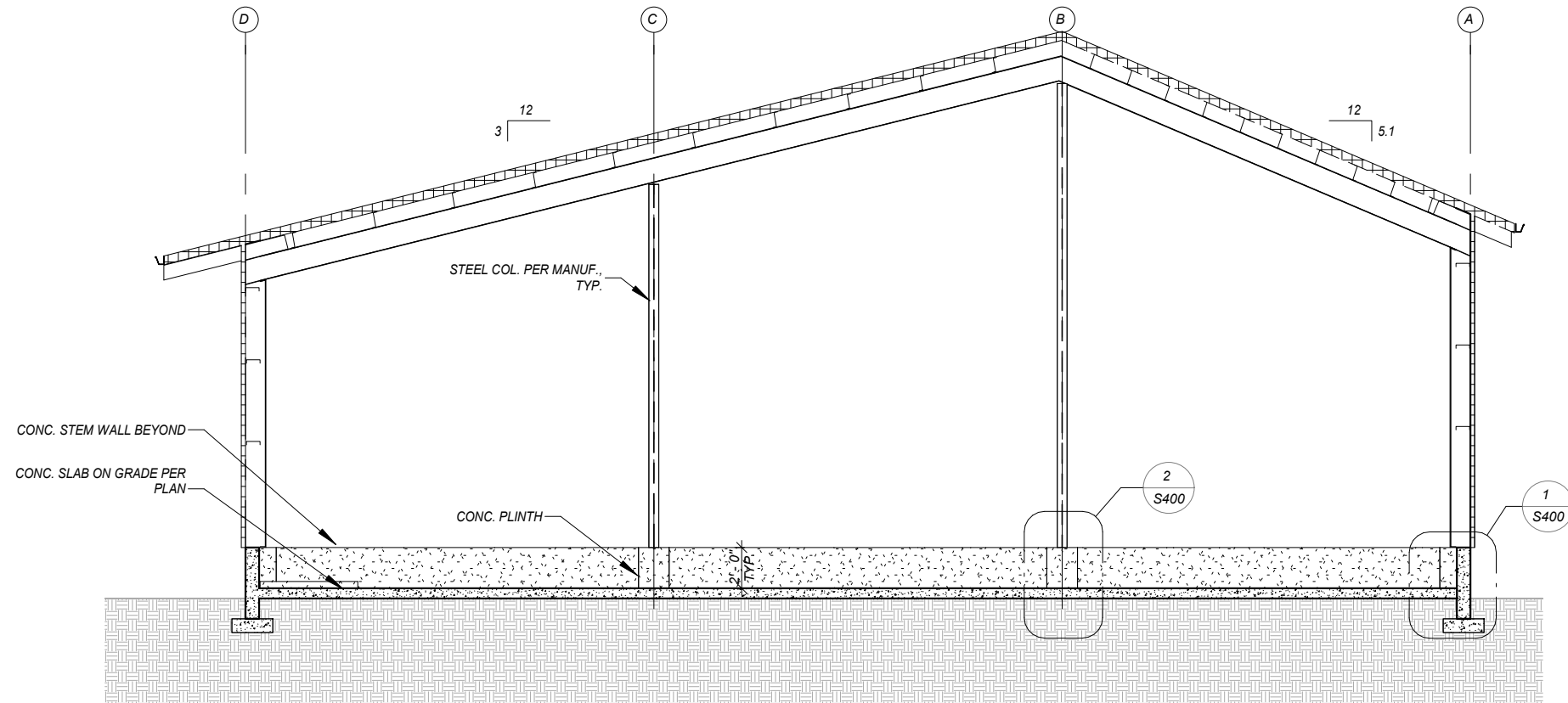
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SHEET DESCRIPTION:  
Foundation Plan

**S200**

SHEET:  
10 of xx



**1 Structural Section**  
 1/8" = 1'-0"

REVISIONS:


Craig High School  
 New Shop Building

STATUS:  
**CONSTRUCTION DOCUMENTS**

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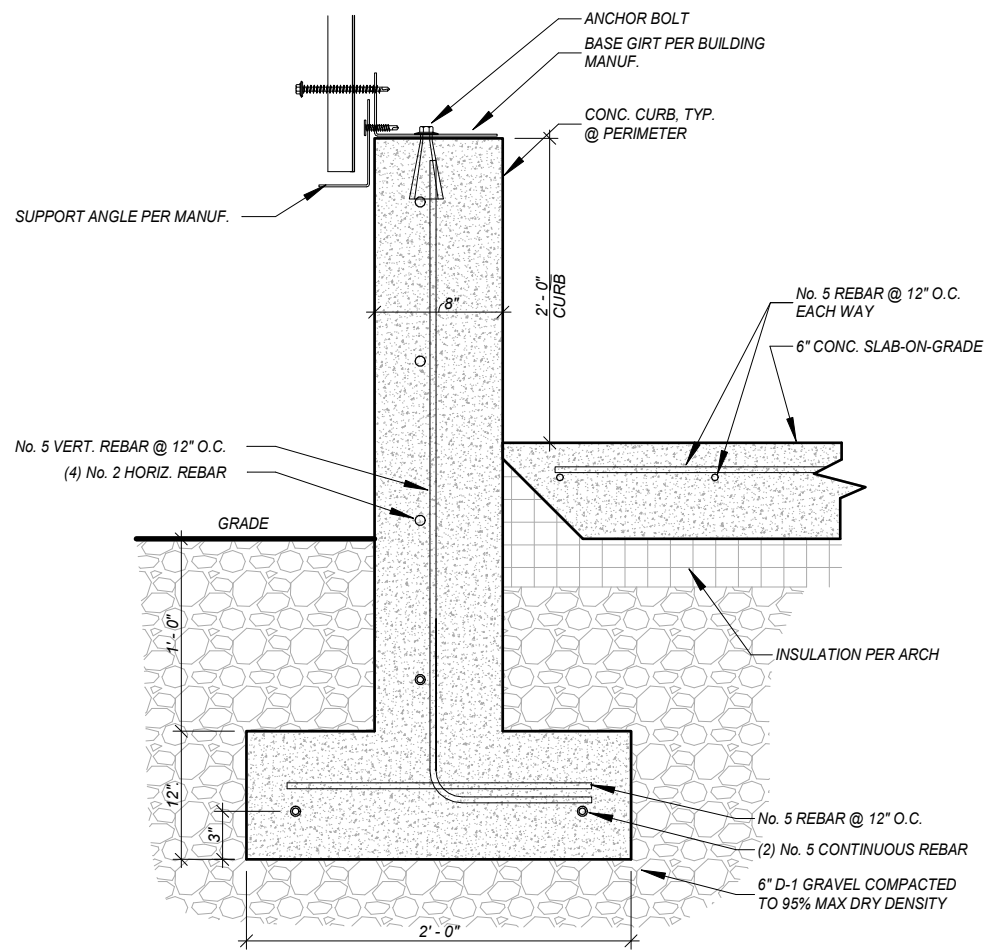
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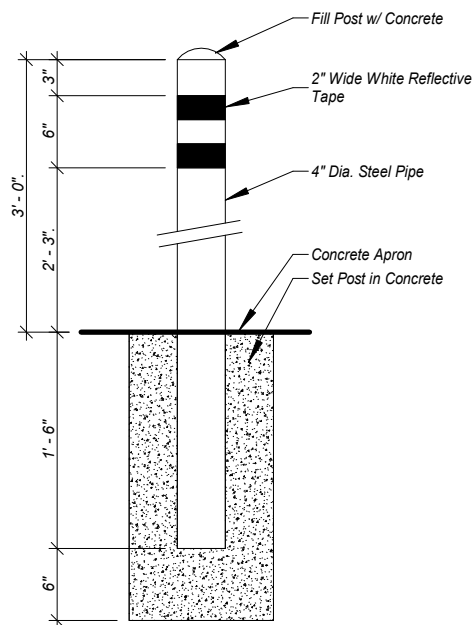
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 Structural Section

**S300**

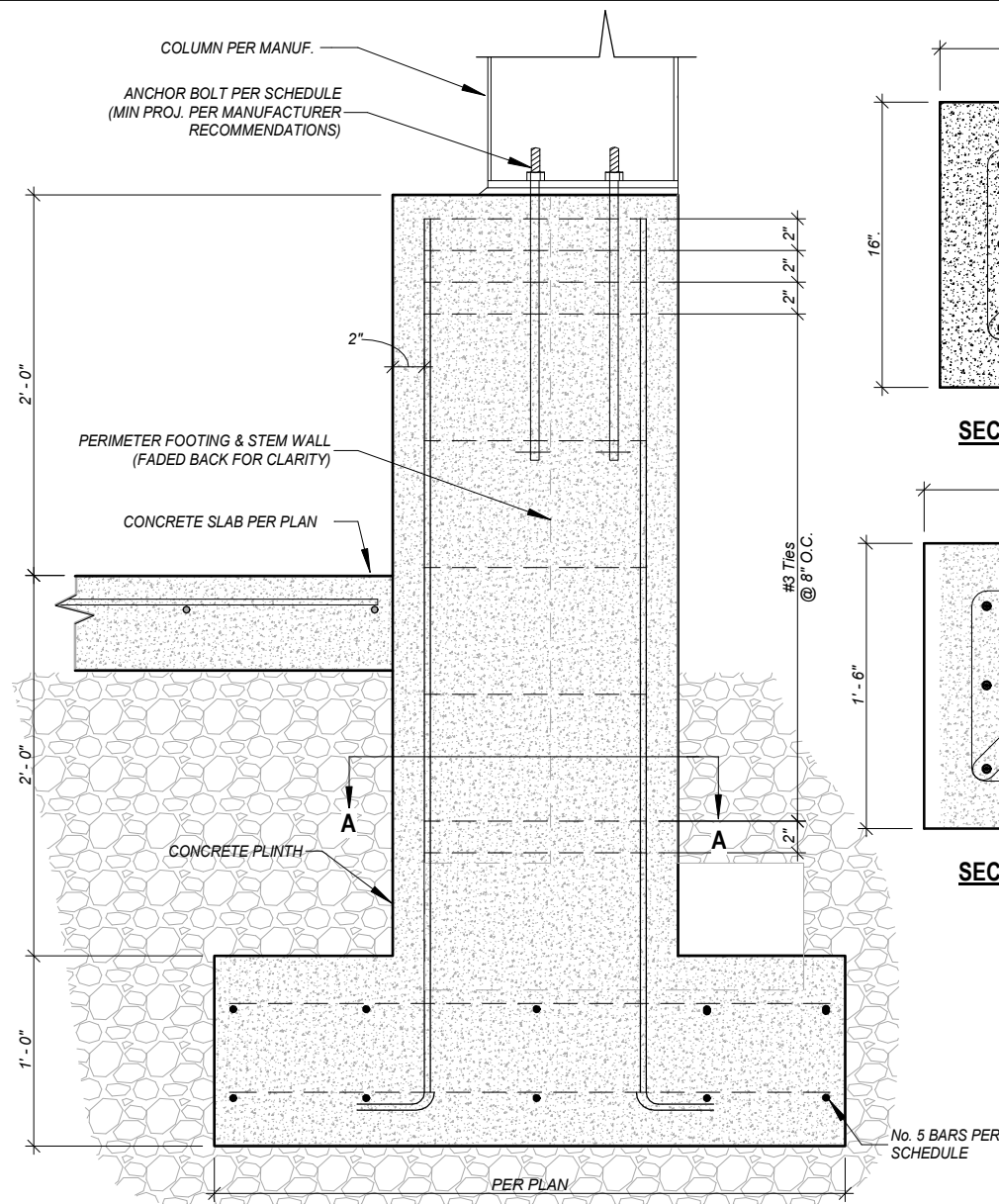
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 11 of xx



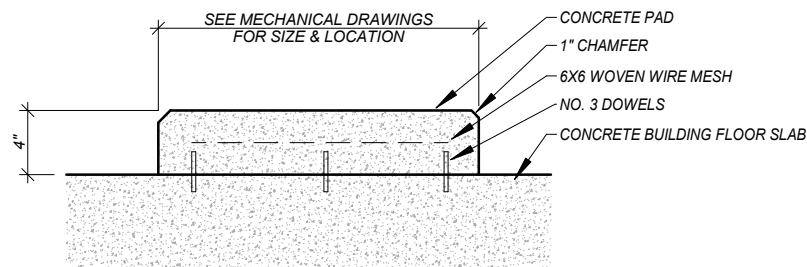
**1 Typical Perimeter Footing**  
1" = 1'-0"



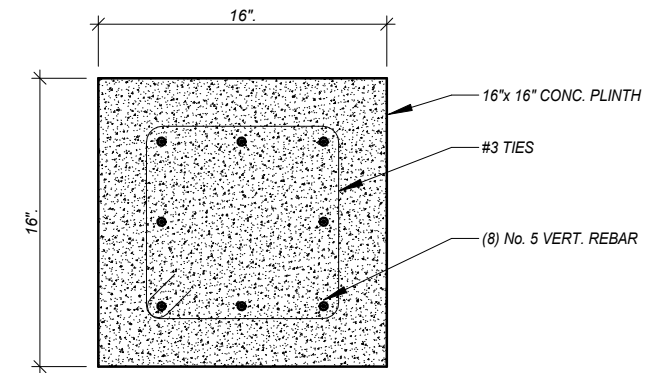
**3 Typ. Bollard Detail**  
3/4" = 1'-0"



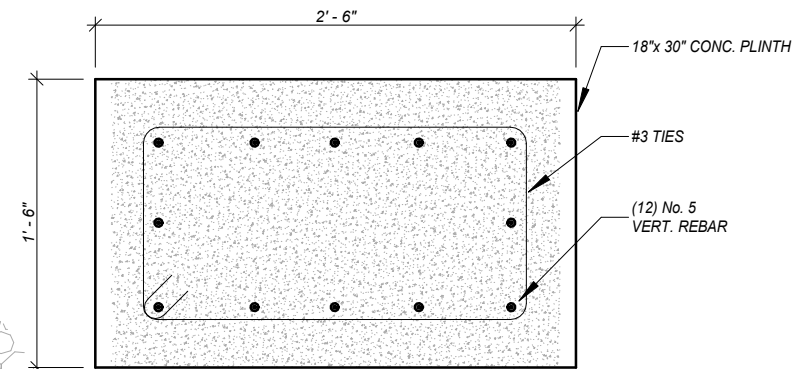
**2 Typ. Building Column Footing**  
1" = 1'-0"



**4 Typ. Housekeeping Pad**  
1" = 1'-0"



**SECTION A-A THRU TYP. PLINTH**



**SECTION A-A THRU WIND BEAM PLINTH**

FOOTING SCHEDULE - SIZE & THICKNESS PER PLAN

SIZE	THICKNESS	FOOTING REINFORCING
3'-0" x 3'-0"	12"	(4) #5 EW TB
4'-0" x 4'-0"	12"	(5) #5 EW TB
5'-0" x 5'-0"	12"	(6) #5 EW TB

ANCHOR BOLT SCHEDULE

SIZE	LENGTH
5/8"	12"
3/4"	17"
1"	24"

REVISIONS:

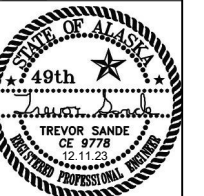
Craig High School  
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SHEET DESCRIPTION:

Structural Details

**S400**

SHEET:

12 of xx



# HVAC ABBREVIATIONS

%	PERCENT	MAX	MAXIMUM
ACFM	ACTUAL CFM	MBH	BTU PER HOUR (THOUSAND)
AFF	ABOVE FINISHED FLOOR	MC	MECHANICAL CONTRACTOR
AMP	AMPERE (AMP, AMPS)	MIN	MINIMUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	N/A	NOT APPLICABLE
APD	AIR PRESSURE DROP	NC	NORMALLY CLOSED
BHP	BRAKE HORSEPOWER, BOILER HORSEPOWER	NO	NORMALLY OPEN
BOD	BOTTOM OF DUCT	NTS	NOT TO SCALE
BTU	BRITISH THERMAL UNIT	OA	OUTSIDE AIR
CFM	CUBIC FEET PER MINUTE	OBD	OPPOSED BLADE DAMPER
DBT	DRY-BULB TEMPERATURE	PH	PHASE (ELECTRICAL)
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
EAT	ENTERING AIR TEMPERATURE	RA	RETURN AIR
EC	ELECTRICAL CONTRACTOR	RH	RELATIVE HUMIDITY
ESP	EXTERNAL STATIC PRESSURE	RPM	REVOLUTIONS PER MINUTE
F	FAHRENHEIT	SA	SUPPLY AIR
FPM	FEET PER MINUTE	SCFM	CFM, STANDARD CONDITIONS
FPS	FEET PER SECOND	SPEC	SPECIFICATION
FT	FOOT OR FEET	STD	STANDARD
GA	GAGE OR GUAGE	SUCT	SUCTION
GAL	GALLONS	T STAT	THERMOSTAT
GC	GENERAL CONTRACTOR	TC	TEMPERATURE CONTROL
GPD	GALLONS PER DAY	TEMP	TEMPERATURE
GPM	GALLONS PER MINUTE	V	VOLT
HD	HEAD	VAV	VARIABLE AIR VOLUME
HP	HORSEPOWER	VEL	VELOCITY
HZ	FREQUENCY	VFD	VARIABLE FREQUENCY DRIVE
KW	KILOWATT	VOL	VOLUME
LAT	LEAVING AIR TEMPERATURE	W/	WITH
LBS	POUNDS	WPD	WATER PRESSURE DROP
LF	LINEAR FEET		

# MECHANICAL LEGEND

SYMBOL	DESCRIPTION
	BALL VALVE
	UNION
	TEE UP
	TEE DOWN
	ELBOW UP
	ELBOW DOWN
	PIPE SIZE CHANGE
	THERMOSTAT/TEMPERATURE SENSOR
	MANUAL BALANCING DAMPER
	FLEX CONNECTOR
	TURNING VANE ELBOW

**NOTE:**  
ALL SCHEDULED EQUIPMENT IS BASIS OF DESIGN. EQUIVALENT PRODUCTS FROM OTHER MANUFACTURERS ARE ACCEPTABLE PENDING APPROVAL FROM ENGINEER.

## BOOSTER PUMP SCHEDULE

PLAN CODE	SERVICE	MANUFACTURER	MODEL	TYPE	PERFORMANCE					REMARKS
					INLET PRESSURE RANGE (PSI)	MINIMUM SHUTOFF PRESSURE (PSI)	MAXIMUM WORKING PRESSURE (PSI)	PUMP (HP)	ELECTRICAL (V / PH / HZ)	
BP-1	SPARK ARRESTER	A.Y. MCDONALD	DURAMAC	INLINE	0-5	60	75	1	230 / 1 / 60	NOTES 1,2,3

**NOTES:**  
1 - FACTORY ASSEMBLED UNIT WITH 2.1 GALLON PRESSURE TANK, PRESSURE GAUGE, AND PUMP CONTROLLER.  
2 - PUMP CONTROLLER SHALL BE MODEL 15000 PC2.  
3 - RUN PUMP IN PRESSURE MODE, SET START PRESSURE AT 50 PSI.

## STORAGE TANK SCHEDULE

PLAN CODE	MFGR	MODEL NO.	FLUID	DIAMETER (IN)	HEIGHT (IN)	TANK VOL. (GAL)	EMPTY WEIGHT (LBS)	FULL WEIGHT (LBS)	CONNECTION SIZE (IN)	REMARKS
ST-1	DURACAST	DC-900400	WATER	43	72	400	81	3420	1.25	NOTES 1,2,3

**NOTES:**  
1 - PROVIDE WITH (2) 2" FEMALE NPT CONNECTION FOR VENT AND PUMP CONNECTION. SEE 3/M003 FOR STORAGE TANK CONNECTION DETAIL.  
2 - PROVIDE WITH 18" MANWAY AT TOP OF TANK.  
3 - TANK SHALL BE CONSTRUCTED OF UV STABILIZED POLYETHYLENE RESIN.

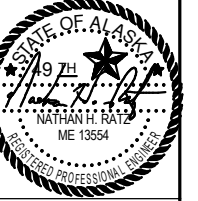
REVISIONS:					
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Craig City School District  
New Shop Building

STATUS:  
**Construction Documents**

DRAWN BY: HERBST  
CHECKED BY: RATZ  
DATE: 12.08.2023  
PROJECT #: CHS\_BOMASS\_Shop

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SHEET DESCRIPTION:  
MECHANICAL SCHEDULE AND LEGENDS

**M001**

SHEET:  
01 of 05

## DUST COLLECTOR SCHEDULE

PLAN CODE	MFGR	MODEL	CFM	TSP (IN W.G.)	FAN MOTOR (BHP / HP)	POWER V/PH/HZ	WEIGHT (LBS)	SERVES	STORAGE CAPACITY	REMARKS
DC-1	CAMFIL	GS6	4,400	14.0	11 / 15	208 / 3 / 60	3,200	WOOD SHOP	1 @ 55 GAL	1, 2, 3, 4, 5, 6, 7, 8

NOTES:

- 1) PROVIDE NFPA COMPLIANT EXPLOSION ISOLATION VALVE. INSTALL WHERE INDICATED ON PLANS AND PER MANUFACTURERS RECOMMENDATIONS.
- 2) PROVIDE 90 PSI COMPRESSED AIR HEADER WITH DIAPHRAGM VALVES, PRESSURE GAUGE, AND THERMOSTATICALLY CONTROLLED SOLENOID HEATER (120/60/1).
- 3) PROVIDE NFPA COMPLAINT EXPLOSION VENT WITH BURST DETECTOR AND VERTICAL EXPLOSION VENT PLENUM/WEATHERHOOD.
- 4) PROVIDE FACTORY PROGRAMMED VFD WITH INTEGRAL DISCONNECT AND DUCT PRESSURE TRANSDUCER.
- 5) PROVIDE NEMA 4X ENCLOSURE FOR DUST COLLECTOR TIMER CONTROLS (120-240/60/1) WITH DIGITAL AND ANALOG DISPLAY, FILTER MONITORING, AND AUTOMATIC PULSE FILTER CLEANING.
- 6) PROVIDE WITH CARTRIDGE OVER-BAGS, DUST LEVEL INDICATOR(S) FOR DRUM(S), AND 55 GALLON DRUM(S).
- 7) PROVIDE WITH INTEGRATED RIGA-FLO SAFETY MONITORING FILTERS
- 8) SEE SPECIFICATIONS FOR INTERCONNECTION DETAILS

## ENERGY RECOVERY VENTILATOR SCHEDULE

PLAN CODE	MFGR	MODEL	CFM		MIN ESP (IN WC)		WINTER DESIGN (DB / WB, °F)		SENSIBLE EFFECTIVENESS (%)	LATENT EFFECTIVENESS (%)	POWER			REMARKS
			VENT	EXHAUST	VENT	EXHAUST	OA	RA			MCA	MOP	V / PH / HZ	
ERV-1	ALDES	E1800L-Fi-EC-N	1,470	1,370	0.40	0.40	17.5 / 17.5	65	65	60	10.2A	15A	208 / 1 / 60	1, 2, 3, 4, 5, 6

NOTES:

1) EC FAN MOTORS	2) MOTORIZED OA DAMPER
3) MERV 8 OUTDOOR AIR AND MERV 8 RETURN AIR FILTER BOTH UPSTREAM OF THE HEAT EXCHANGER	4) BACKDRAFT DAMPER
5) UNIT TO RUN DURING OCCUPIED HOURS DETERMINED BY OWNER. CONTROLLED BY TIMER	6) PROVIDE WITH ALDES DIGITAL MULTIFUNCTION CONTROLLER

## GRILLES, REGISTERS AND DIFFUSERS SCHEDULE

PLAN CODE	MFGR	MODEL	FACE SIZE			NECK SIZE			MAX CFM	NOISE CRITERIA (NC)	TOTAL PRESSURE (IN WC)	STYLE	MATERIAL	FINISH	REMARKS
			WIDTH	HEIGHT	Ø	WIDTH	HEIGHT	Ø							
S-1	PRICE	520	38	16		36	14		1,800	30	0.08	SURFACE	STEEL	WHITE	1, 2, 3
S-2	PRICE	520	22	22		20	20		1,280	26	0.06	SURFACE	STEEL	WHITE	1, 2, 3
R-1	PRICE	530	38	16		36	14		1,700	24	0.09	SURFACE	STEEL	WHITE	1, 2

NOTES:

1) FRAME STYLE 31    2) 45 DEGREE DEFLECTION    3) DOUBLE DEFLECTION GRILLE

## LOUVER SCHEDULE

PLAN CODE	MFGR	MODEL	SERVICE	FRAME TYPE	FREE AREA (SF)	SIZE (IN)		CFM	VELOCITY (FPM)	APD (IN WC)	MATERIAL	REMARKS
						WIDTH	HEIGHT					
L-1	RUSKIN	ELF6375DX	INTAKE	FLANGE	3.5	42	24	1,800	515	0.1	ALUMINUM	1, 2
L-2	RUSKIN	ELF6375DX	EXHAUST	FLANGE	3.5	42	24	1,700	485	0.1	ALUMINUM	1, 2

NOTES:

1) PROVIDE BAKED ENAMEL FINISH FACTORY COLOR TO BE SELECTED BY ARCHITECT    2) PROVIDE WITH BIRDSCREEN

## DESTRATIFICATION FAN SCHEDULE

PLAN CODE	MFGR	MODEL	DRIVE	RPM	MOTOR HP	POWER V / PH / HZ	TYPE	REMARKS
DF-1	AIRIUS	A-25-SP-STD	DIRECT	1,670	37 W	120 / 1 / 60	THERMAL EQUALIZATION	1, 2, 3

NOTES:

- 1) PROVIDE WITH TRIAC CONTROLLER TO CONTROL BOTH FANS. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR.
- 2) MANUFACTURER'S MOUNTING HARDWARE
- 3) PROVIDE WITH FACTORY CORD AND PLUG

REVISIONS:							
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New Shop Building

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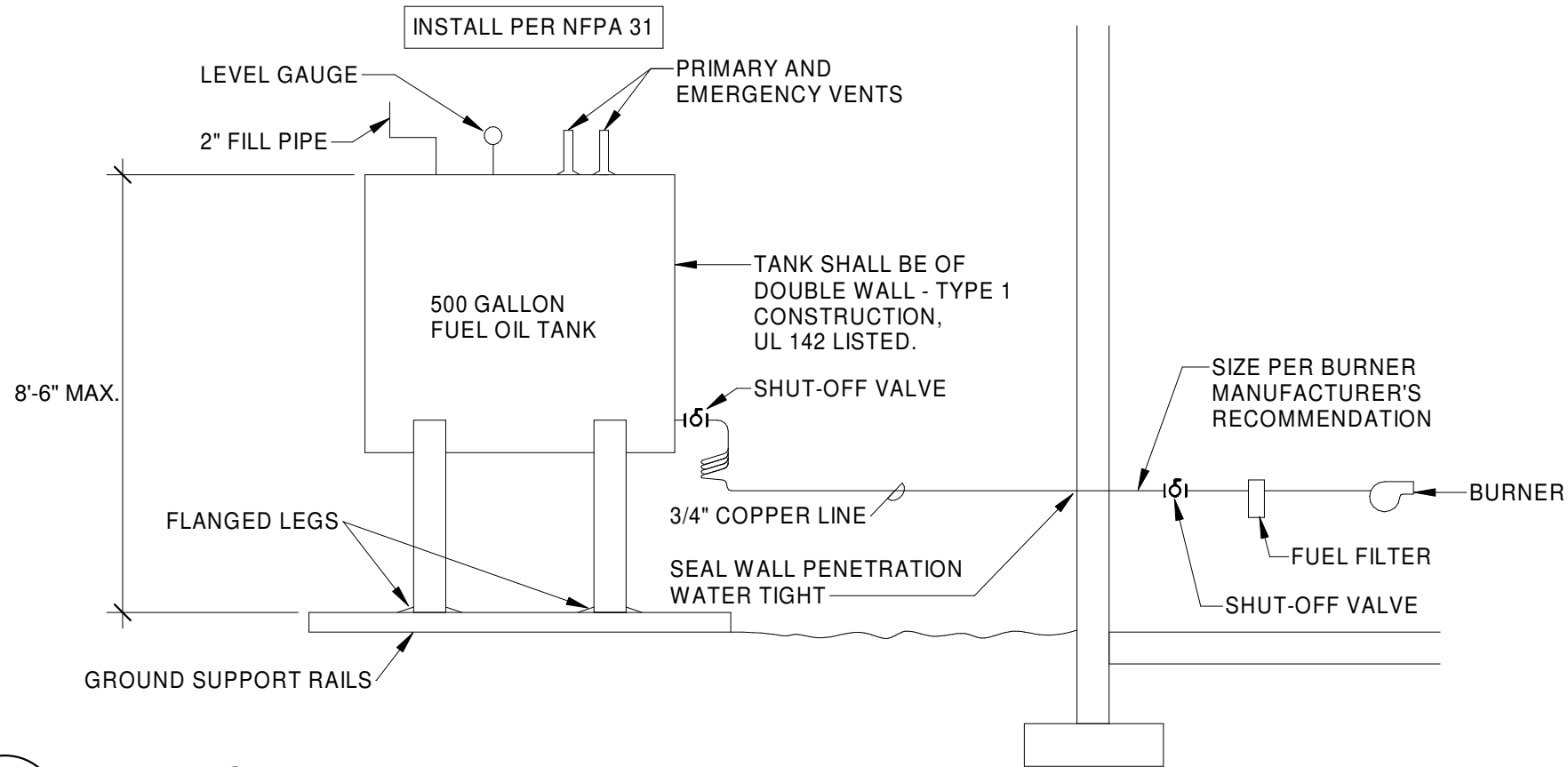
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SHEET DESCRIPTION:  
MECHANICAL SCHEDULES

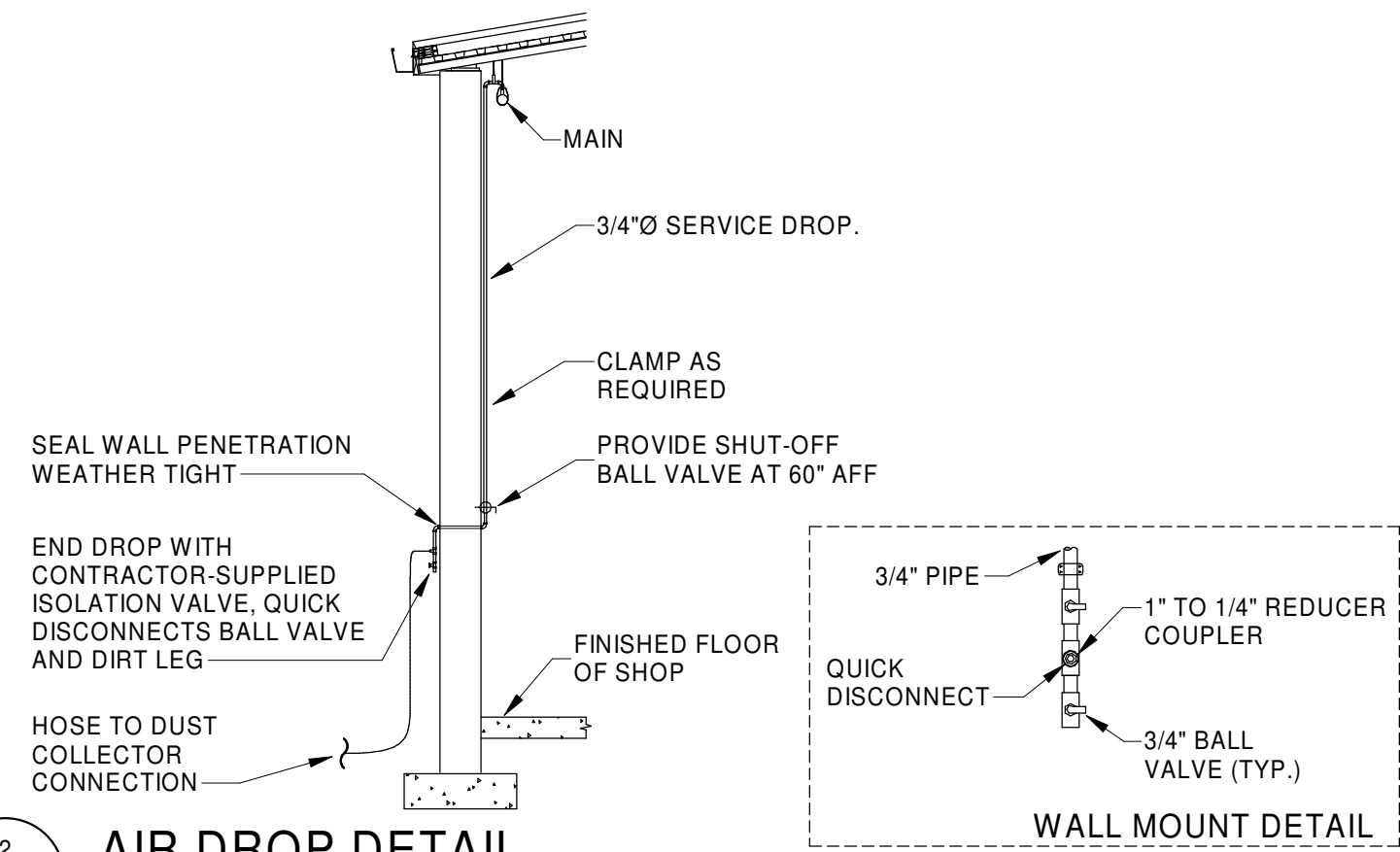
M002

SHEET:  
02 of 05



FUEL OIL FURNACE SCHEDULE	
PLAN CODE	F-1
MANUFACTURER	TRANE
MODEL	XP80-THV1M087A
CONFIGURATION	UPFLOW VERTICAL
SUPPLY FAN SECTION	
TYPE	4-SPEED DIRECT DRIVE
CFM	1,280
ESP W/ FILTERS (IN WC)	1.0
HP	1/2
POWER (V/PH/HZ)	120 / 1 / 60
MCA	12.1
HEATING SECTION	
TYPE	#2 FUEL OIL
INPUT (MBH)	119.0
OUTPUT (MBH)	98.0
AFUE	82.6
FUEL FLOW RATE (GPH)	0.85
FILTER SECTION	
TYPE / THICKNESS	MERV 8 / 1-INCH
REMARKS	1, 2, 3, 4, 5, 6
NOTES:	
1) FILTER RACK.	
2) ANTI-SHORT CYCLE TIMER.	
3) 24V 7- OR 5/2-DAY PROGRAMMABLE THERMOSTAT.	
4) UL LISTED	
5) FLEXIBLE CONNECTOR ON SUPPLY DUCT.	
6) TOP FLUE CONNECTION.	

1 FUEL OIL TANK DETAIL  
M003 NOT TO SCALE



2 AIR DROP DETAIL  
M003 NOT TO SCALE

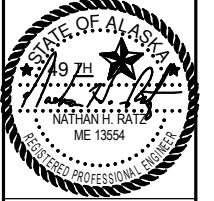
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SHEET DESCRIPTION:  
MECHANICAL SCHEDULES AND DETAILS

**M003**

SHEET:  
03 of 05

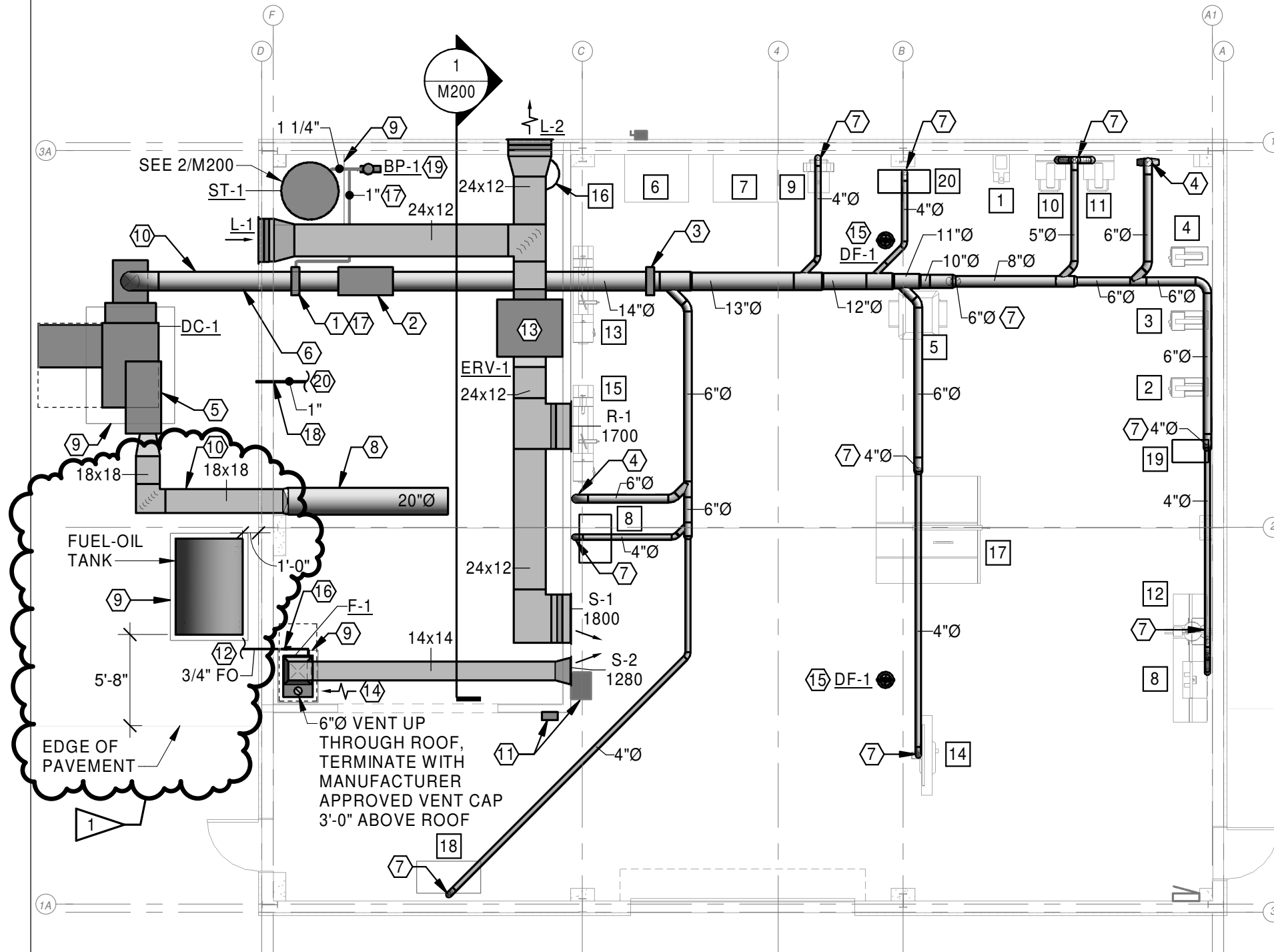
# GENERAL NOTES

- A. DO NOT RUN DUCTWORK OR PIPING OVER ELECTRICAL PANELS FROM PANEL TO STRUCTURE ABOVE AND FROM ACCESS SPACE TO 80-INCHES ABOVE FLOOR.
- B. NO DUCTWORK SHALL BE FABRICATED PRIOR TO FIELD VERIFICATION OF DUCT SIZES AND ROUTING BY MECHANICAL CONTRACTOR.
- C. ALL OUTSIDE AIR DUCTWORK SHALL BE INSULATED.

# # SHEET NOTES

1. LOCATION OF SUPPRESSION NOZZLE.
2. LOCATION OF EXPLOSION ISOLATION VALVE.
3. LOCATION OF DETECTION EYE, 23-FT MINIMUM CENTERLINE DISTANCE TO SUPPRESSION NOZZLE. EYE SHALL BE DOWNSTREAM OF ALL BRANCHES.
4. DUCT TIGHT TO WALL AND DOWN TO FLOOR SWEEP.
5. FAN WITH SILENCER.
6. 12 GA. DUCT BETWEEN ISOLATION VALVE AND INLET OF DUST COLLECTOR.
7. ROUTE DUCTWORK DOWN AND PROVIDE 5-FEET OF HIGH TEMPERATURE THERMOPLASTIC RUBBER FLEX DUCT TO SHOP EQUIPMENT. KEEP AS VERTICAL AS POSSIBLE.
8. 10-FOOT PERFORATED PIPE. FIRST 5-FEET WRAPPED WITH 1-INCH LINER.
9. HOUSEKEEPING PAD. COORDINATE WITH STRUCTURAL TO CONFIRM SIZE AND LOCATION.
10. PROVIDE 2-INCH ARMAFLEX FLEXIBLE ELASTOMERIC THERMAL INSULATION WITH A WHITE 17.5 MILS LAMINATED COVERING FOR EXTERIOR DUCTWORK, OR EQUAL.
11. INTENDED LOCATION FOR DUST COLLECTION AND SPARK DETECTION AND EXTINGUISHING SYSTEM CONTROLLERS.
12. CONNECT TO FUEL OIL TANK SEE 1/M003 FOR DETAIL.
13. ERV-1 TO BE WALL-MOUNTED ON BRACKET AT 12'6" AFF. COORDINATE WITH STRUCTURAL.
14. F-1 FILTER BOX MOUNTED TO UNIT AT RETURN AIR CONNECTION. NO GRILLE.
15. DF-1 TO BE MOUNTED NEAR CEILING PEAK. FACTORY STANDARD ON/OFF CONTROLS. TYPICAL.
16. SHUT-OFF VALVE, TYPICAL.
17. PROVIDE 1-INCH WATER CONNECTION TO DUST COLLECTOR SUPPRESSION NOZZLE. MINIMUM WATER REQUIREMENTS ARE 17 GPM AT 44 PSI. PIPING FROM TANK TO SUPPRESSION NOZZLE MAY BE PEX OR COPPER.
18. PROVIDE AIR DROP FOR DUST COLLECTOR. SEE 2/M003 FOR AIR DROP DETAIL.
19. INSTALL BOOSTER PUMP BP-1 PER MANUFACTURER'S INSTRUCTIONS.
20. CONNECT COMPRESSED AIR TO SHOP COMPRESSED AIR SYSTEM. COMPRESSED AIR PIPING INSTALLED BY OWNER. COORDINATE DUST COLLECTOR COMPRESSED AIR CONNECTION WITH OWNER. MINIMUM REQUIRED PRESSURE IS 90 PSI.

WOOD SHOP EQUIPMENT LIST	
#	EQUIPMENT
1	JET DRILL PRESS
2	EXCALIBUR SCROLL SAW
3	EXCALIBUR SCROLL SAW
4	EXCALIBUR SCROLL SAW
5	GRIZZLY VARIABLE SPEED PLANER
6	GRIZZLY VACCUM SANDING TABLE
7	GRIZZLY VACCUM SANDING TABLE
8	ROUTER / TABLE
9	JET OSCILLATING SPINDLE SANDER
10	JET BAND SAW
11	JET BAND SAW
12	BOSCH MITER SAW
13	JET MINI LATHE
14	JET 8" JOINTER
15	DELTA LATHE
16	AIR COMPRESSOR
17	SAW STOP TABLE SAW
18	CNC ROUTER TABLE
19	KREG POCKET HOLE MACHINE
20	JET BELT / DISC SANDER



1 HVAC PLAN  
M100 1/8" = 1'-0"

REVISIONS:
REV #1 - 2.1.24

Craig City School District  
New Shop Building

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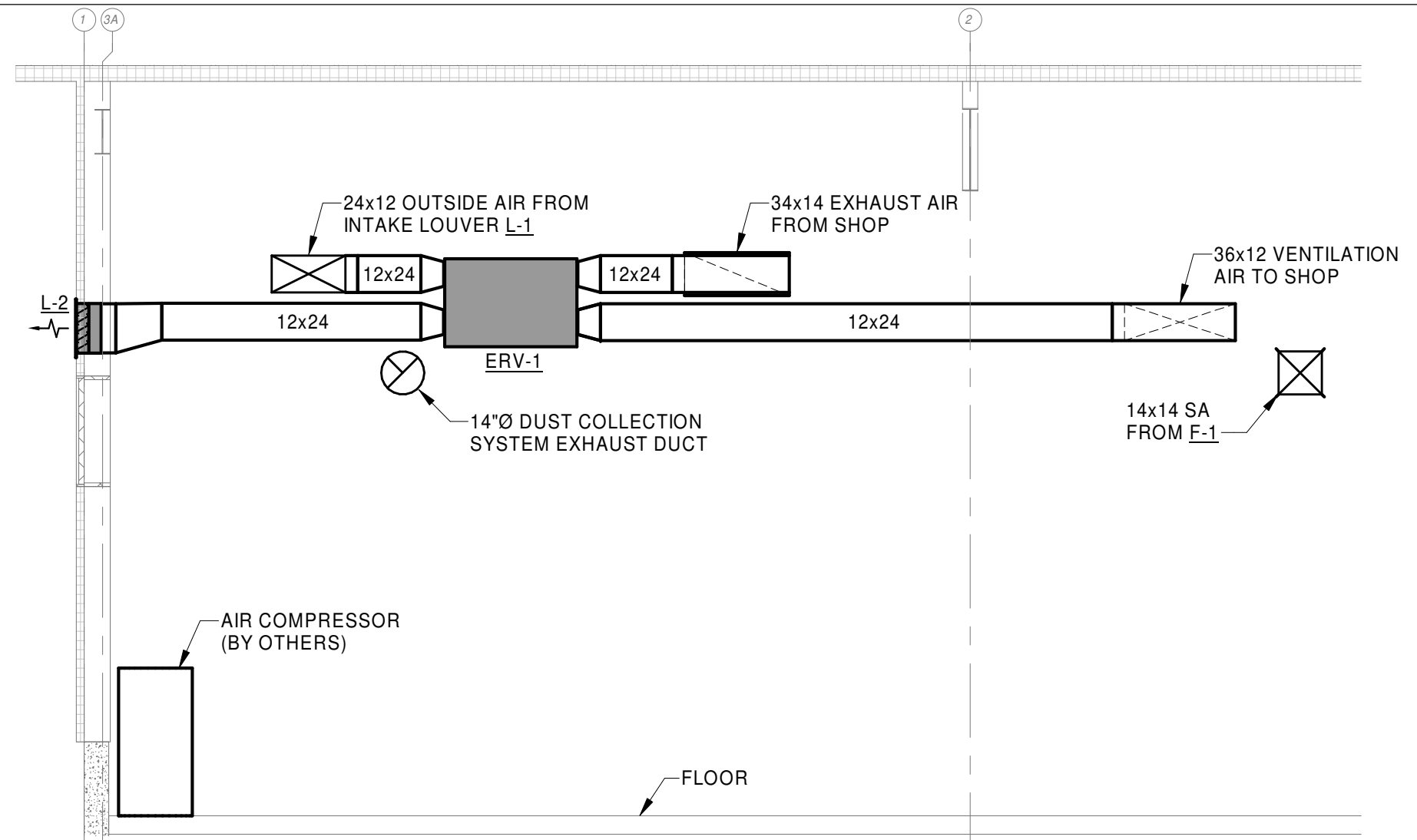
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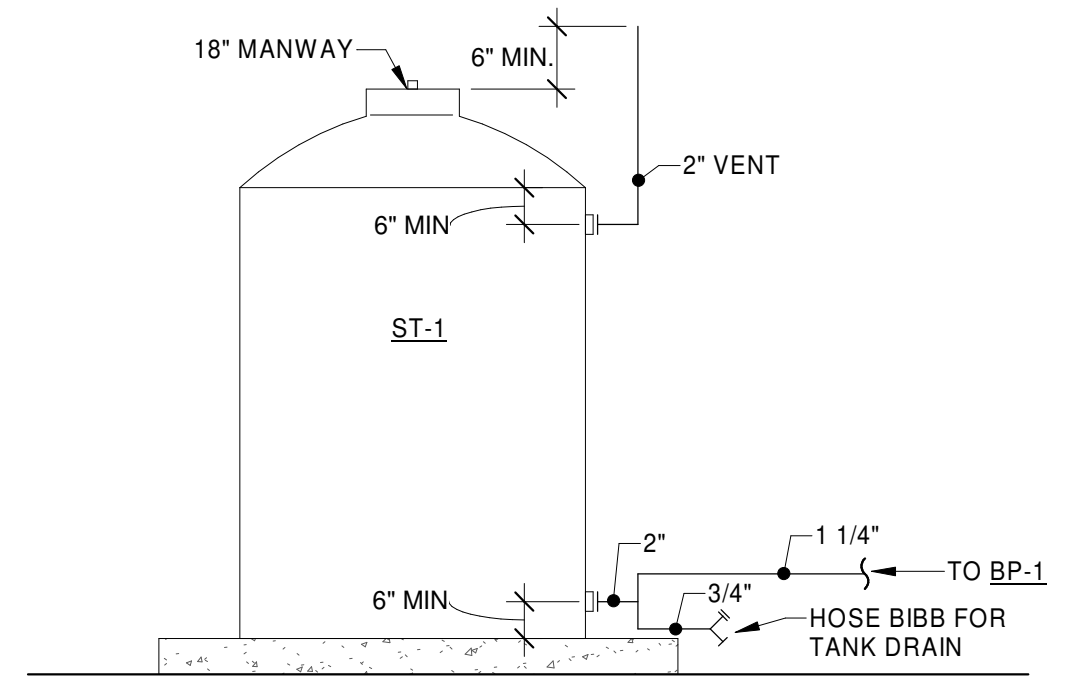
SHEET DESCRIPTION:  
HVAC PLAN

M100

SHEET:  
04 of 05



1 ERV-1 SECTION  
M200 1/4" = 1'-0"



2 STORAGE TANK CONNECTIONS DETAIL  
M200 NOT TO SCALE

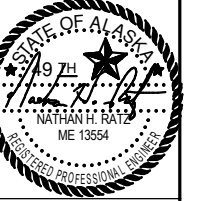
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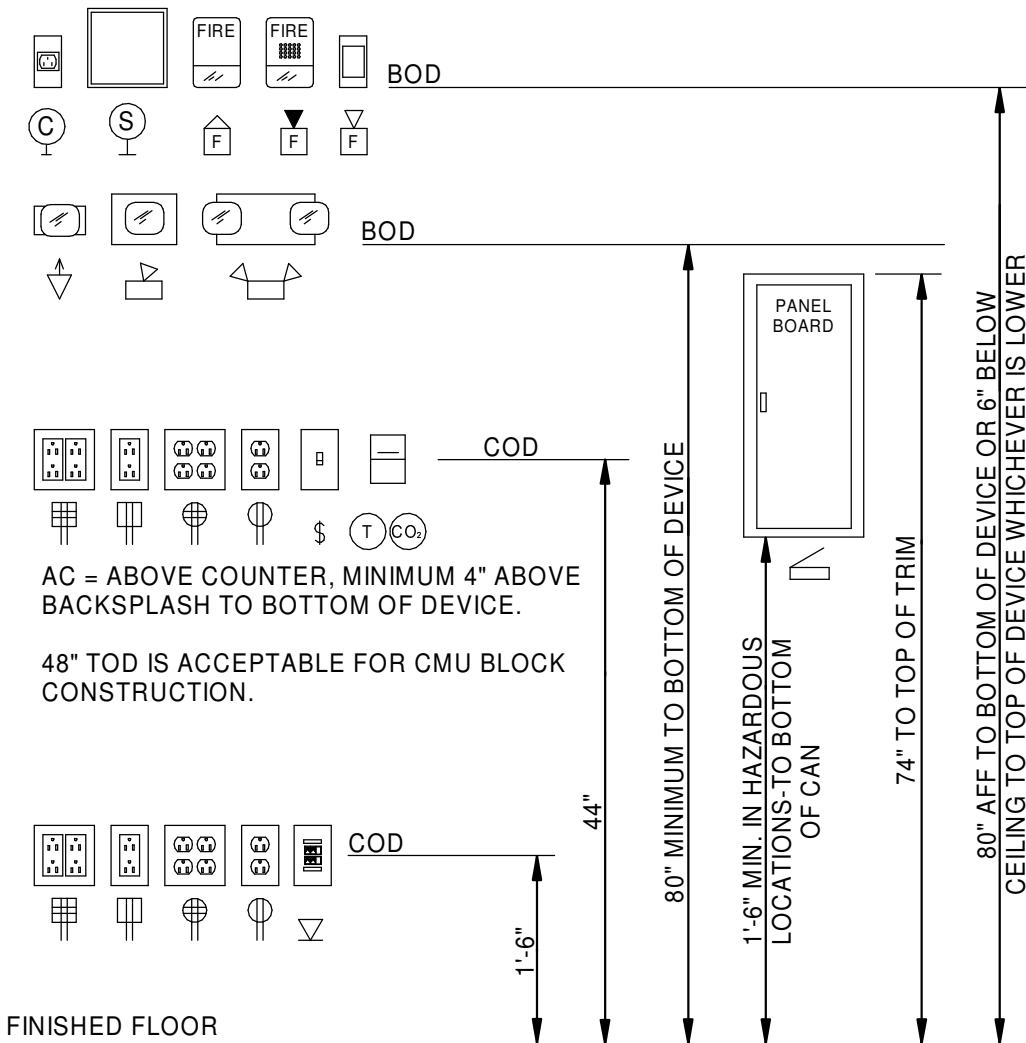
SHEET DESCRIPTION:  
MECHANICAL SECTIONS & DETAIL

**M200**

SHEET:  
05 of 05

# INTERIOR BOX MOUNTING HEIGHTS

FINISHED CEILING



FINISHED FLOOR

## ELECTRICAL SHEET INDEX

- E001 LEGENDS, SCHEDULES AND PANELS
- E002 ONE LINE DIAGRAM AND LIGHTING FIXTURE SCHEDULE
- E003 ELECTRICAL PANEL SCHEDULE
- E100 SITE PLAN
- E200 ELECTRICAL LIGHTING PLANS
- E300 POWER PLANS

# ELECTRICAL LEGEND

SYMBOLS APPLY ONLY WHEN USED ON DRAWINGS

## LIGHTING

SYMBOL	DESCRIPTION
	PENDANT OR SURFACE MOUNTED FIXTURE
	CEILING MOUNTED, WALL MOUNTED EXIT LIGHT (W/ DIRECTIONAL ARROWS)
	1 HEAD REMOTE EMERGENCY LIGHT

## ABBREVIATIONS AND MISCELLANEOUS

SYMBOL	DESCRIPTION
AC	ABOVE COUNTER, 4" BACK SPLASH
ATS	AUTOMATIC TRANSFER SWITCH
AFG	ABOVE FINISHED GRADE
AFF	ABOVE FINISHED FLOOR
BLG	BELOW GRADE
BOD	BOTTOM OF DEVICE
C	CONDUIT
CLG	CEILING
COD	CENTER OF DEVICE
CU	COPPER
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
GC	GENERAL CONTRACTOR
GND	GROUND
MC	MECHANICAL CONTRACTOR
(N)	NEW
QTY	QUANTITY
(R)	RELOCATED
SF	SURFACE
TC	TEMPERATURE CONTROL CONTRACTOR
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
W/	WITH
WP	WEATHER PROOF (WHILE IN USE)
XFMR	TRANSFORMER
a,b,c etc	SWITCH DESIGNATION
BN1L-2,4,6	CIRCUIT DESIGNATION, PANEL BN1L, CIRCUITS 2,4,6

1/E501	INDICATES DETAIL 1 ON SHEET E501
	SHEET WORK NOTE
	HOME RUN TO PANEL
	CONDUIT CONCEALED IN CEILING OR WALL
	CONDUIT CONCEALED UNDER FLOOR
	CIRCUIT, NUMBER OF HASH MARKS INDICATES NUMBER OF CONDUCTORS IN CABLE/RACEWAY. GROUND WIRE IS NOT SHOWN BUT SHALL BE INCLUDED. NO HASH MARKS INDICATES 2 CONDUCTORS PLUS GROUND.

## DEVICES AND POWER

SYMBOL	DESCRIPTION
\$	SWITCH - SPST
2	SINGLE POLE, DOUBLE THROW
3	THREWAY
WP	WEATHERPROOF
OS	OCCUPANCY SENSOR
D	DIMMER
LV	LOW VOLTAGE
	OCCUPANCY SENSOR (CEILING) - SUBSCRIPT IS TYPE
	RECEPTACLE - SIMPLEX
	RECEPTACLE - DUPLEX, MOUNTING IN CEILING
	GFI RECEPTACLE - DUPLEX, MOUNTING IN CEILING
	RECEPTACLE - DUPLEX
	GFI RECEPTACLE - DUPLEX (GROUND FAULT INTERRUPT)
USB	DEVICE RECEPT W/2 USB PORTS
DC	DROP CORD
WP	WEATHERPROOF COVER & WEATHER RESISTANT RECEPTACLE
S	SURGE PROTECTED FILLED CENTER INDICATES HOSPITAL GRADE EMERGENCY RECEPTACLE
	RECEPTACLE - 208V
R	RANGE - NEMA 14-50R
D	DRYER - NEMA 14-30R
W	WELDER - NEMA 14-50R
*	NEMA CONFIGURATION AS NOTED
	208V RECEPTACLE IN RECESSED FLOORBOX
	DUPLEX RECEPTACLE/GFI IN RECESSED FLOORBOX
	DOUBLE DUPLEX RECEPTACLE/GFI IN RECESSED FLOORBOX
	J-BOX - BOX INDICATES FLOOR MOUNTING - 4"X4"X2-1/8" DEEP UNLESS OTHERWISE NOTED
T	THERMOSTAT/TEMPERATURE SENSOR BY MC OR TC, J-BOX AND CONDUIT TO CEILING BY EC
\$M	MANUAL MOTOR DISCONNECT/STARTER SWITCH
	EMERGENCY PUSHBUTTON
	SPECIAL PURPOSE CONNECTION - BOX INDICATES FLOOR MOUNTING - WORK AS NOTED
	ELECTRIC MOTOR CONNECTION
	COMBINATION STARTER/DISCONNECT SWITCH
	DISCONNECT SWITCH
	CONTACTOR
	CIRCUIT BREAKER
	PANELBOARD, SURFACE MOUNTED

REVISIONS:

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New Shop Building

STATUS:

Construction Documents

DRAWN BY: KAUFMAN  
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DATE: 12.08.2023  
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SHEET DESCRIPTION:  
LEGENDS, SCHEDULES AND PANELS

E001

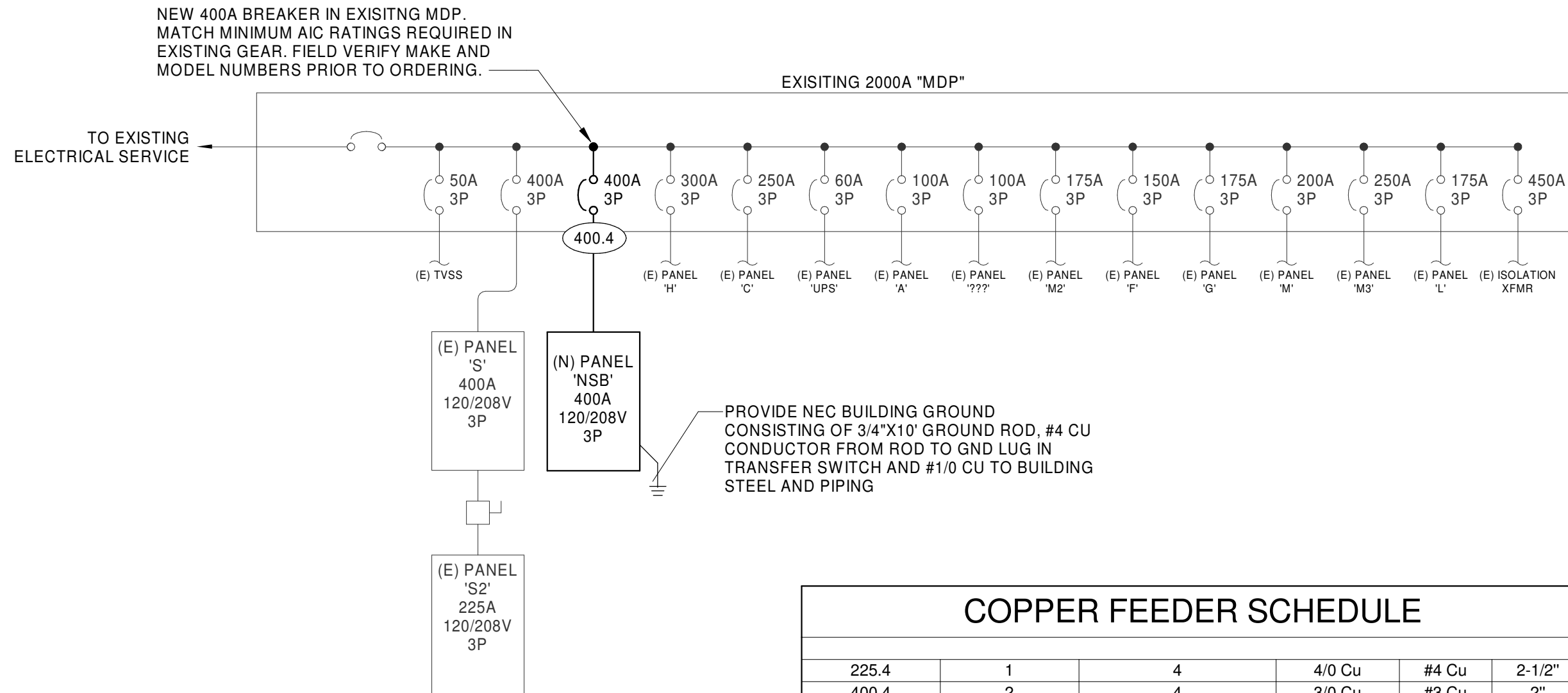
SHEET:

01 of 06

# LIGHTING FIXTURE SCHEDULE

FIXTURE							MOUNTING	
TYPE	DESCRIPTION	MFG.	CATALOG NUMBER	NOTES	VOLTS	WATTS	TYPE	HEIGHT
S1	LED STRIP LIGHT WITH CABLE HANGING KIT	LITHONIA	ZL1D-48-7000LM-FST-MVOLT-35K-ZACVHM100		120	41	CABLE	12FT
EX	LED EXIT SIGN WITH BATTERY AND EGRESS HEADS	LITHONIA	LHQM-LED-R-HO-M6 W/ELA-QWP REMOTE HEAD	1	120	4.3	WALL	6" ABOVE DOOR
W1	WALL MOUNTED LED FIXTURE WITH PHOTOCELL	LITHONIA	WDGE2LED-P3-40K-80CRI-T3M-MVOLT		120	32	WALL	10FT

**NOTES:**  
1. MOUNT REMOTE HEAD ON EXTERIOR OF BUILDING



### COPPER FEEDER SCHEDULE

225.4	1	4	4/0 Cu	#4 Cu	2-1/2"
400.4	2	4	3/0 Cu	#3 Cu	2"

1  
E002

## ONE LINE DIAGRAM

NOT TO SCALE

REVISIONS:


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New Shop Building

STATUS:  
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DATE: 12.08.2023  
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SHEET DESCRIPTION:  
ONE LINE DIAGRAM AND  
LIGHTING FIXTURE  
SCHEDULE

**E002**

SHEET:  
02 of 06

# PANEL: NSB

**LOCATION:** Janitor 4      **AMPS:** 400 A      **TYPE OF MAIN:** MCB  
**MOUNTING TYPE:** SURFACE      **VOLTAGE:** 120/208 Wye      **MINIMUM AIC RATING:** 10K AIC  
**MANUFACTURER:** SEE SPECIFICATIONS      **PHASES:** 3      **FED FROM:**  
**MODEL TYPE:** PANELBOARD      **WIRES:** 4      **ENCLOSURE:** NEMA 1  
**NOTES:**

LOAD NAME	CKT NO	BKR AMP	POLE	A		B		C		POLE	BKR AMP	CKT NO	LOAD NAME
RECEPTACLE MITER SAW	1	20	1	1800	180					1	20	2	RECEPTACLE SCROL SAW
RECEPTACLE SCROL SAW	3	20	1			180	180			1	20	4	RECEPTACLE SCROL SAW
RECEPTACLE VARIABLE SPEED PLANER	5	20	1					180	180	1	20	6	RECEPTACLE BAND SAW
RECEPTACLE DRILL PRESS	7	20	1	1080	1008					1	20	8	RECEPTACLE SPINDLE SANDER
RECEPTACLE BELT/DISK SANDER	9	20	1			528	528			1	20	10	RECEPTACLE SANDING TABLE
RECEPTACLE LATHE	11	20	1					960	960	1	20	12	RECEPTACLE LATHE
RECEPTACLES	13	20	1	540	900					2	20	14	RECEPTACLE PLANER
RECEPTACLE TABLE SAW	15	30	2			2364	900			--	--	16	--
--	17	--	--					2364	816	2	20	18	RECEPTACLE JOINTER
RECEPTACLES	19	20	1	360	816					--	--	20	--
SPARE	21	20	1			0	250			1	20	22	LIGHTING
RECEPTACLES	23	20	1					1800	51	1	20	24	LIGHTING
RECEPTACLE AIR COMP	25	20	2	1800	360					1	20	26	RECEPTACLES
--	27	--	--			1800	360			1	20	28	RECEPTACLES
RECEPTACLE ROUTER TABLE	29	--	1					--	76	1	20	30	DF-1 FAN
DUST COLLECTOR	31	70	3	5544	1620					1	20	32	FURNACE
--	33	--	--			5544	1584			2	20	34	PUMP BP-1
--	35	--	--					5544	1584	--	--	36	--
ERV-1	37	20	2	1056	1800					1	20	38	RECEPTACLE ROUTER TABLE
--	39	--	--			1056	1440			1	20	40	RECEPTACLE CNC ROUTER TABLE
SPARE	41	20	1					0	1800	1	20	42	RECEPTACLE ROUTER/TABLE
SPARE	43	20	1	0	536					1	20	44	RECEPTACLE BELT/DISK SANDER
SPARE	45	20	1			0	600			1	20	46	RECEPTACLE POCKET HOLE MACHINE
SPARE	47	20	1					0	0	1	20	48	SPARE
SPARE	49	20	1	0	0					1	20	50	SPARE
SPARE	51	20	1			0	0			1	20	52	SPARE
SPARE	53	20	1					0	0	1	20	54	SPARE
SPARE	55	20	1	0	0					1	20	56	SPARE
SPARE	57	20	1			0	0			1	20	58	SPARE
SPARE	59	20	1					0	0	1	20	60	SPARE

19400	17314	16315.4	<b>TOTAL CONNECTED PHASE VA</b>
162.9	145.6	136	<b>TOTAL CONNECTED PHASE AMPS</b>

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIPMENT	23608	100.00%	23608	<b>TOTAL CONNECTED LOAD:</b>	53029.4
LIGHTING	301	125.00%	377	<b>TOTAL CONNECTED AMPS:</b>	147.2
RECEPTACLES	29120	67.17%	19560		
				<b>TOTAL EST. DEMAND:</b>	43544.7
				<b>TOTAL EST. DEMAND AMPS:</b>	120.9

**NOTES:**

REVISIONS:


Craig City School District  
 New Shop Building

STATUS:  
**Construction Documents**

DRAWN BY: KAUFMAN  
 CHECKED BY: BRONEC  
 DATE: 12.08.2023  
 PROJECT #: CHS\_BOMASS\_Shp

**R&M**  
**R&M ENGINEERING-KETCHIKAN, INC.**  
 7180 REVILLA ROAD, SUITE 300  
 KETCHIKAN, ALASKA 99901  
 PH: 907.225.7187  
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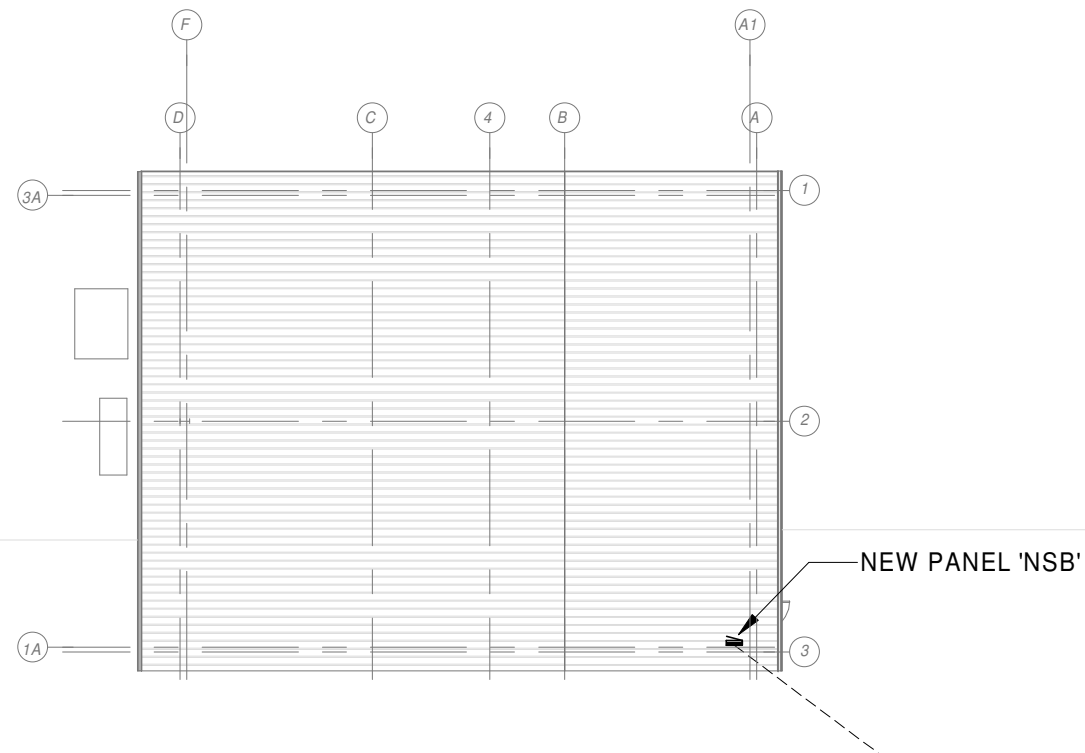
cushingterrell.com  
800.757.9522

SHEET DESCRIPTION:  
ELECTRICAL PANEL SCHEDULE

**E003**

SHEET:  
03 of 06



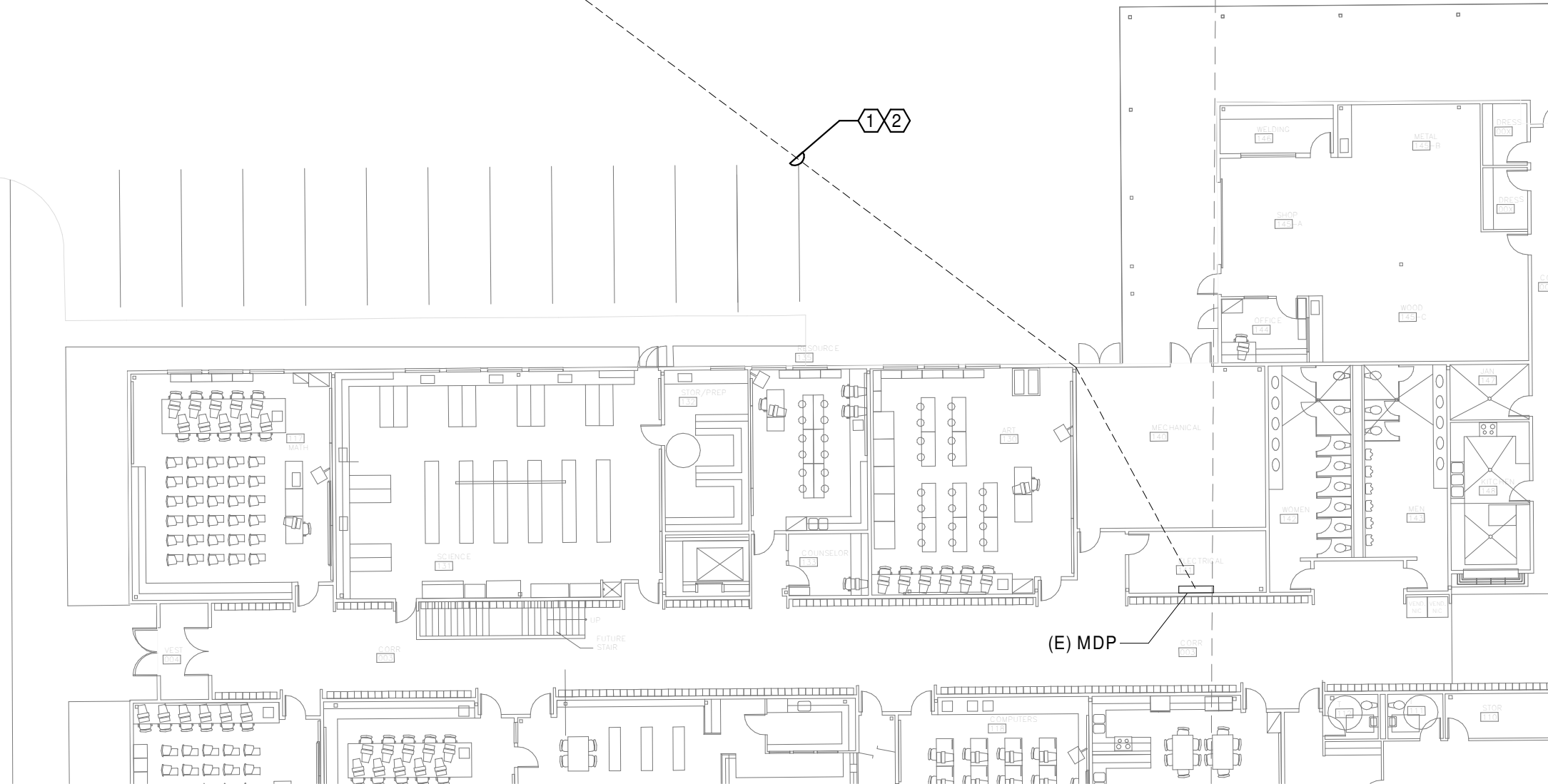


## GENERAL NOTES

- A. COMPLY WITH LATEST ADOPTED NEC AND APPLICABLE CODES/STANDARDS.
- B. SHARED NEUTRALS ARE NOT ALLOWED FOR SINGLE PHASE BRANCH CIRCUITS.

## # KEYNOTES

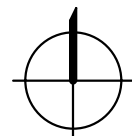
- 1. NEW SERVICE TO NEW WOODSHOP BUILDING. VERIFY ROUTING TO EXISTING MDP IN SCHOOL PRIOR TO BID.
- 2. INSTALL A SPARE 1-1/2" CONDUIT FOR FUTURE TELE/DATA TO THE SHOP.



1  
E100

## ELECTRICAL SITE PLAN

1" = 20'-0"



NORTH REF

REVISIONS:

Craig City School District  
New Shop Building

STATUS:  
**Construction Documents**

DRAWN BY: KAUFMAN  
CHECKED BY: BRONEC  
DATE: 12.08.2023  
PROJECT #: CHS\_BDMASS\_Shp

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SHEET DESCRIPTION:  
SITE PLAN

**E100**

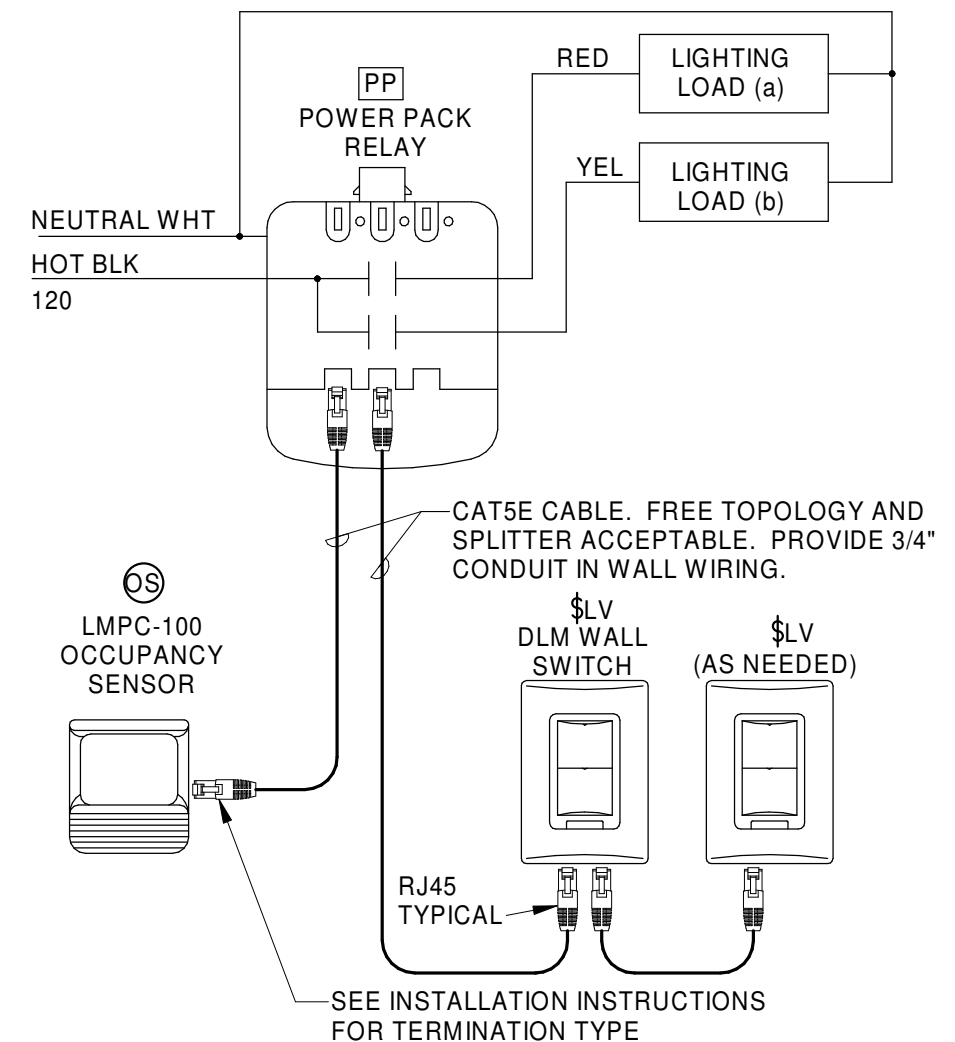
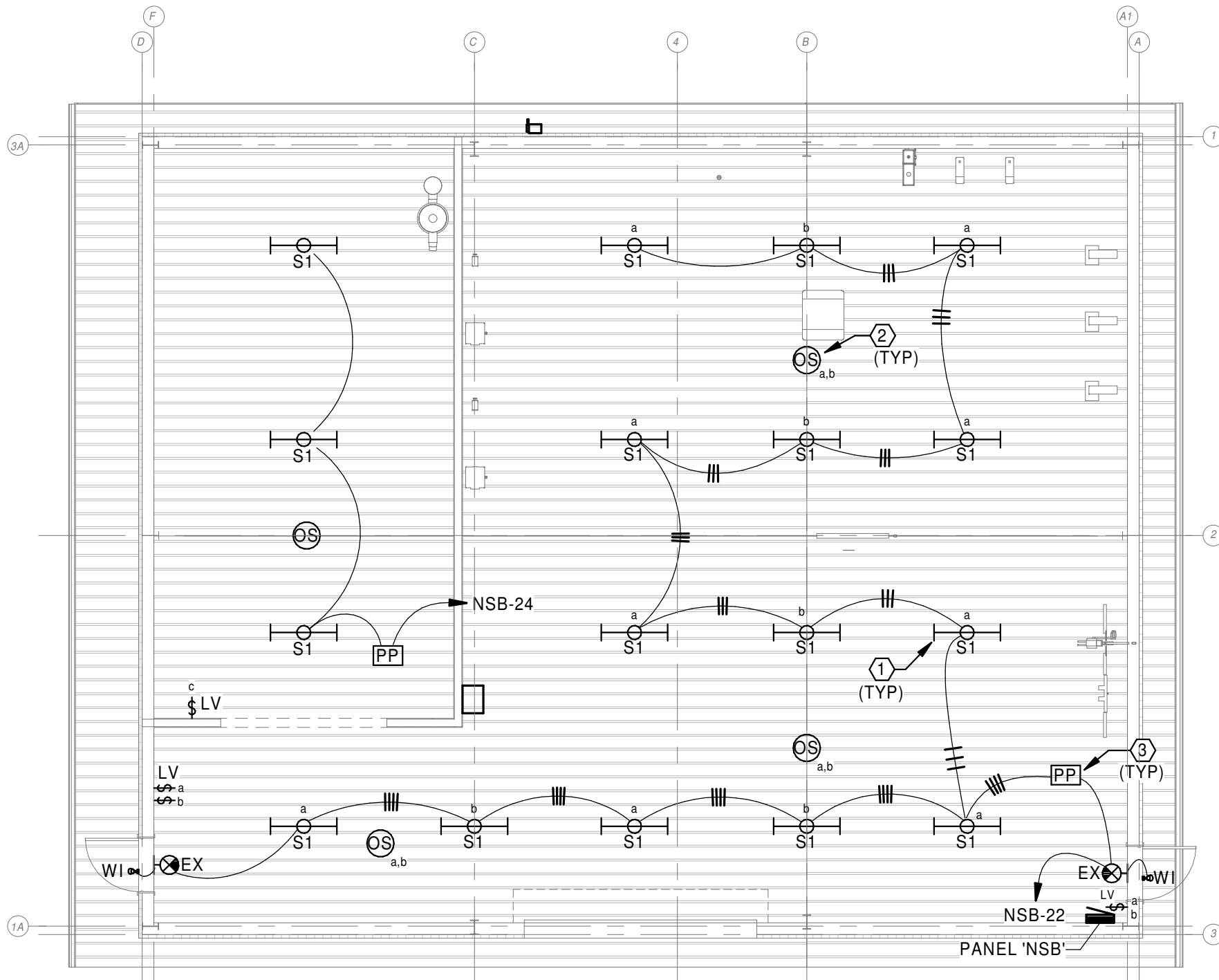
SHEET:  
04 of 06

# GENERAL NOTES

- A. COMPLY WITH LATEST ADOPTED NEC AND APPLICABLE CODES/STANDARDS.
- B. SHARED NEUTRALS ARE NOT ALLOWED FOR SINGLE PHASE BRANCH CIRCUITS.

# # KEYNOTES

- 1. CHAIN HANG LIGHT FIXTURE APPROX. 12 FT ABOVE FLOOR
- 2. MOUNT OCCUPANCY SENSOR 12FT AFF. WATTSTOPPER # LMPC-100
- 3. POWER PACK RELAY WATTSTOPPER # LMRC-102



1 LIGHTING PLAN  
E200 1/8" = 1'-0"

2 OCCUPANCY SENSOR DETAIL  
E200 NOT TO SCALE

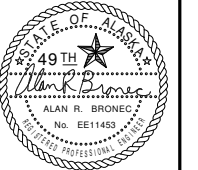
REVISIONS:


Craig City School District  
New Shop Building

STATUS:  
Construction Documents

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CHECKED BY: BRONEC  
DATE: 12.08.2023  
PROJECT #: CHS\_BOMASS\_Shp

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SHEET DESCRIPTION:  
ELECTRICAL LIGHTING PLANS

E200

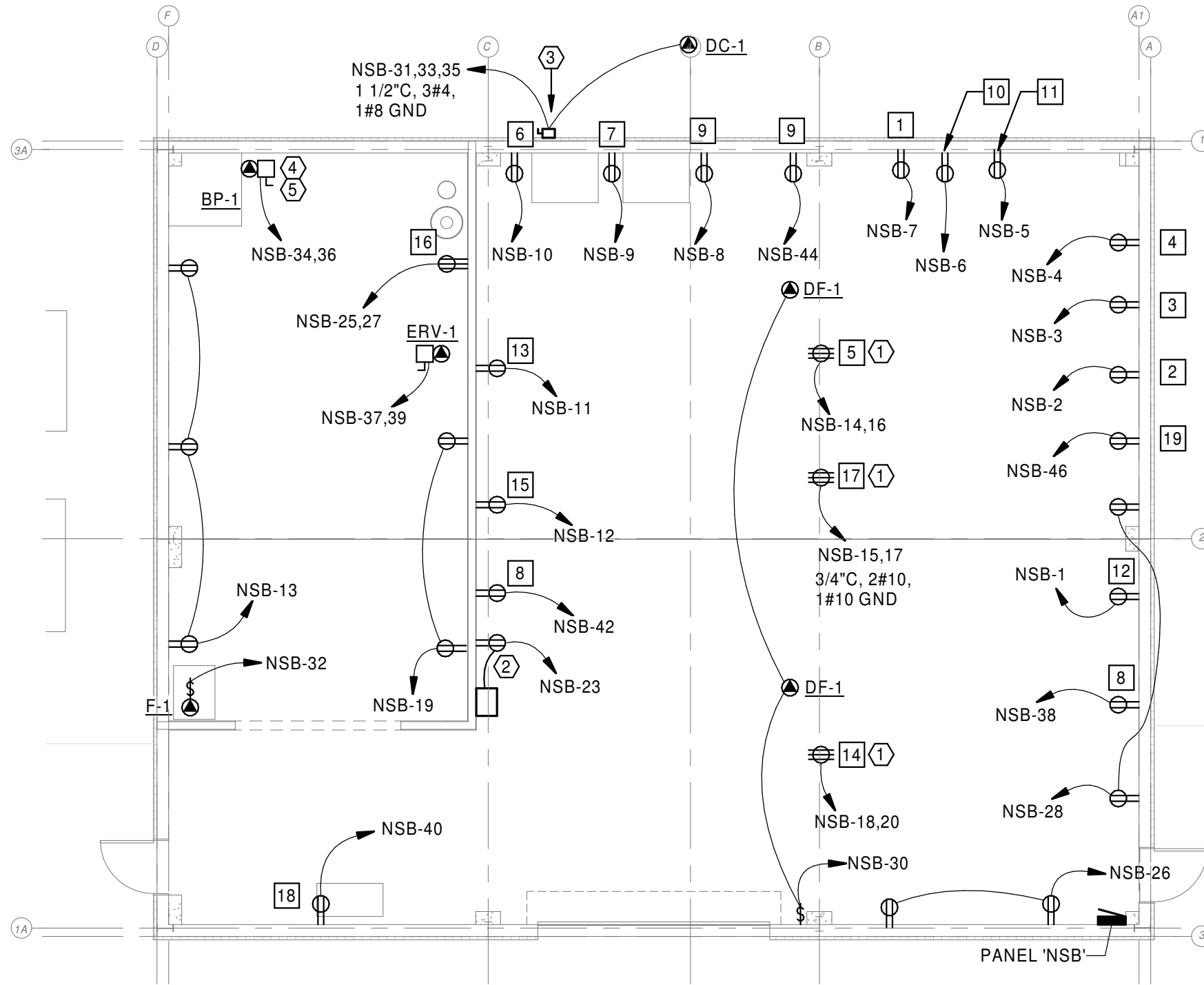
SHEET:  
05 of 06

# GENERAL NOTES

- A. COMPLY WITH LATEST ADOPTED NEC AND APPLICABLE CODES/STANDARDS.
- B. SHARED NEUTRALS ARE NOT ALLOWED FOR SINGLE PHASE BRANCH CIRCUITS.

# # KEYNOTES

- 1. CORP DROP RECEPTACLE. COORDINATE RECEPTACLE WITH EXISTING EQUIPMENT.
- 2. DUST COLLECTOR CONTROL PANEL. PROVIDE CONDUIT/WIRE FROM CONTROL PANEL TO DUST COLLECTOR AND SPARK/EXTINGUISHING SYSTEM AS REQUIRED PER MFG DATA SHEETS.
- 3. 100A/3P/NEMA 3R DISC SWITCH.
- 4. 30A/3P/NEMA 1 DISC SWITCH.
- 5. PROVIDE BUCK/BOOST TRANSFORMER TO BOOST 208V TO 230V FOR PUMP POWER.



WOODSHOP EQUIPMENT SCHEDULE				
ID #	EQUIPMENT	VOLTAGE	PHASE	AMPS
1	JET DRILL PRESS	115/230	1	9/4.5
2	EXCALIBUR SCROLL SAW	120	1	1.3
3	EXCALIBUR SCROLL SAW	120	1	1.3
4	EXCALIBUR SCROLL SAW	120	1	1.3
5	GRIZZLY VARIABLE SPEED PLANER	220	1	7.5
6	GRIZZLY VACCUM SANDING TABLE	110	1	4.4
7	GRIZZLY VACCUM SANDING TABLE	110	1	4.4
8	ROUTER / TABLE	120	1	15
9	JET OSCILLATING SPINDLE SANDER	115	1	8.4
10	JET BAND SAW	115/230	1	7.5/3.75
11	JET BAND SAW	115/230	1	7.5/3.75
12	BOSCH MITER SAW	120	1	15
13	JET MINI LATHE	115	1	5
14	JET 8" JOINTER	230	1	6.8
15	DELTA LATHE	120	1	8
16	AIR COMPRESSOR	240	1	15
17	SAW STOP TABLE SAW	230	1	19.7
18	CNC ROUTER TABLE	120	1	12
19	KREG POCKET HOLE MACHINE	120	1	5
20	JET BELT SANDER / DISK SANDER	115/230	1	12.8/6.2

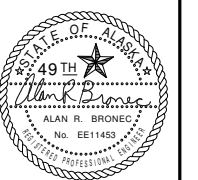
REVISIONS:
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Craig City School District  
New Shop Building

STATUS:  
Construction Documents

DRAWN BY: KAUFMAN  
CHECKED BY: BRONEC  
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SHEET DESCRIPTION:  
POWER PLANS

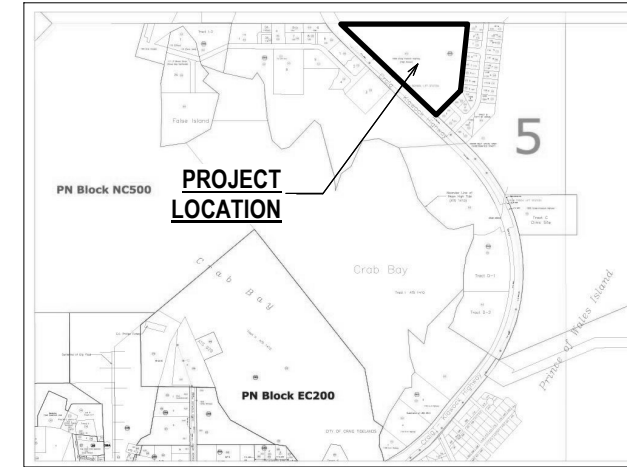
E300

SHEET:  
06 of 06

# Craig High School New Shop Building

Craig, AK

## LOCATION MAP



## PARTICIPANTS

**CLIENT:**  
CRAIG CITY SCHOOL DISTRICT  
PO Box 800  
Craig, AK 99921  
907.826.3274 EXT. 4003

**ARCHITECT / CIVIL ENGINEER:**  
R&M ENGINEERING-KETCHIKAN, INC.  
7180 REVILLA ROAD, SUITE 300  
KETCHIKAN, ALASKA 99901  
907.225.7917

**MECHANICAL/ELECTRIC ENGINEER:**  
CUSHING TERRELL  
306 RAILROAD ST. W, #104  
MISSOULA MT, 59802  
406.728.9522

## SHEET INDEX

### GENERAL

G100 Cover Sheet  
G101 Abbreviations & Symbols

### CIVIL

C1.1 Civil Site Plan

### ARCHITECTURAL

A100 Site Plan  
A200 Main Floor Plan  
A201 Roof Plan  
A300 Sections & Elevations  
A700 Details

### STRUCTURAL

S100 Structural Notes  
S200 Foundation Plan  
S300 Structural Section  
S400 Structural Details

### MECHANICAL

M001 Mechanical Schedule & Notes  
M002 Mechanical Schedules  
M003 Mechanical Schedules & Details  
M100 HVAC Plan  
M200 Mechanical Sections & Details

### ELECTRICAL

E001 Legends, Schedules, & Panels  
E002 Electrical One-Line Diagram  
E003 Electrical Panel Schedule  
E100 Site Plan  
E200 Electrical Lighting Plans  
E300 Power Plans

## GENERAL NOTES

COMPLY WITH ALL PROVISIONS OF THE INTERNATIONAL CODES AS ADOPTED BY THE CITY OF CRAIG AND THE STATE OF ALASKA.

- ALL WORK SHALL CONFORM TO ALL APPLICABLE CODES, INCLUDING THE LATEST ADOPTED EDITIONS OF THE IBC, IFC, IMC, IPC, IRC, UFC, UMC, UPC, NEC, AND ADA ACCESSIBILITY GUIDELINES.
- THE ARCHITECTURAL DRAWINGS ARE A PART OF LARGER SET OF DRAWINGS WHICH, WHEN COMPLETE, CONSISTS OF ALL DRAWINGS LISTED BY THE INDEX OF DRAWINGS. THE WORK DESCRIBED BY THE DRAWINGS OF ANY ONE DISCIPLINE MAY BE AFFECTED BY THE WORK DESCRIBED ON DRAWINGS OF ANOTHER DISCIPLINE AND MAY REQUIRE REFERENCE TO THE DRAWINGS OF ANOTHER DISCIPLINE. PARTIAL SETS OF DRAWINGS ARE INCOMPLETE AND SHOULD NOT BE DISTRIBUTED OR UTILIZED BY THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND COORDINATE THE WORK OF ALL SUBCONTRACTORS, TRADES, AND SUPPLIERS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BEFORE COMMENCING CONSTRUCTION, AND TO ASSURE THAT ALL PARTIES ARE AWARE OF ALL REQUIREMENTS, REGARDLESS OF WHERE THE REQUIREMENTS OCCUR IN THE CONTRACT DOCUMENTS., WHICH MIGHT AFFECT THE WORK OF THAT PARTY.
- CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS AND BUILDING DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK. ANY VARIATION FROM THE CONDITIONS AND DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE REPORTED TO THE OWNER OR ARCHITECT FOR RESOLUTION PRIOR TO CONSTRUCTION.
- CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
- WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DIMENSIONS ARE TO CENTERLINE OF COLUMNS OR TO FACE OF FRAMING, UNLESS OTHERWISE NOTED. DIMENSIONS NOTED AS "CLEAR" ARE TO FACE OF FINISH MATERIALS.
- REFER TO THE STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL, LANDSCAPE AD PLUMBING DRAWINGS FOR THE DETAILED DESIGN OF STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL, LANDSCAPE AND PLUMBING SYSTEMS, OF WHICH PORTIONS MAY BE SHOWN ON THE ARCHITECTURAL DRAWINGS.
- FINISH FLOOR ELEVATIONS ARE TO TOP OF CONCRETE FLOOR SLAB OR WOOD SUB-FLOOR, UNLESS OTHERWISE NOTED.
- CEILING HEIGHT DIMENSIONS ARE TO FINISHED SURFACES, UNLESS OTHERWISE NOTED.
- PROVIDE TWO 2A 10BC FIRE EXTINGUISHERS.

## SCOPE OF WORK

CONSTRUCTION OF AN 2,400 SF PRE-MANUFACTURED METAL BUILDING FOR A WOOD (ONLY) SHOP CLASSROOM & ASSOCIATED SHOP STORAGE AREA FOR THE CRAIG HIGH SCHOOL.

## ZONING REVIEW

CRAIG MUNICIPAL CODE CHAPTER 18 REVIEW

LEGAL DESCRIPTION: Block 503, Lot 10

PARCEL NUMBER: NC-503-010

ZONING: Public

LOT SIZE: 1,305,117 SF

BUILDING GROSS AREA: 2,400 SF

BUILDING HEIGHT:  
MAXIMUM: 30'  
PROPOSED: 19' - 0"

SETBACKS:  
MINIMUM: 10'  
PROPOSED: See Site Plan

## CODE REVIEW

PROJECT LOCATION:  
100 Panther Way, Craig, AK 99921

IBC 2021 REVIEW

I. TYPE OF CONSTRUCTION - EXISTING/PROPOSED (Chapter 6)  
V-B  
SPRINKLED - NO

II. USE & OCCUPANCY CLASSIFICATION (Chapter 3)  
E, Education

III. OCCUPANCY SEPARATIONS  
None

IV. BUILDING AREA (508.3.2 & Table 503)  
ALLOWED:  
Education E: 9,500 SF/Story, 1 STORY

PROPOSED:  
1 Story, 2,400 SF

V. BUILDING HEIGHT (Table 503)  
ALLOWED: 40'  
PROPOSED: 19' - 0"

VI. OCCUPANT LOAD (Table 1004.1.2)

WOOD SHOP:	2,082 NET SF / 50	42
STORAGE AREA:	697 GROSS SF / 300	3
TOTAL OCCUPANCY		45

REVISIONS:

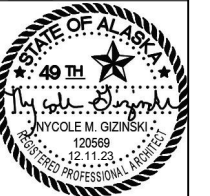
Craig High School  
New Shop Building

STATUS:

CONSTRUCTION  
DOCUMENTS

DRAWN BY: NMG  
CHECKED BY: NMG  
DATE: 12.11.23  
PROJECT #: 182360

**R&M**  
R&M ENGINEERING-KETCHIKAN, INC.  
7180 REVILLA ROAD, SUITE 300  
KETCHIKAN, ALASKA 99901  
PH: 907.225.7187  
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SHEET DESCRIPTION:

Cover Sheet

**G100**

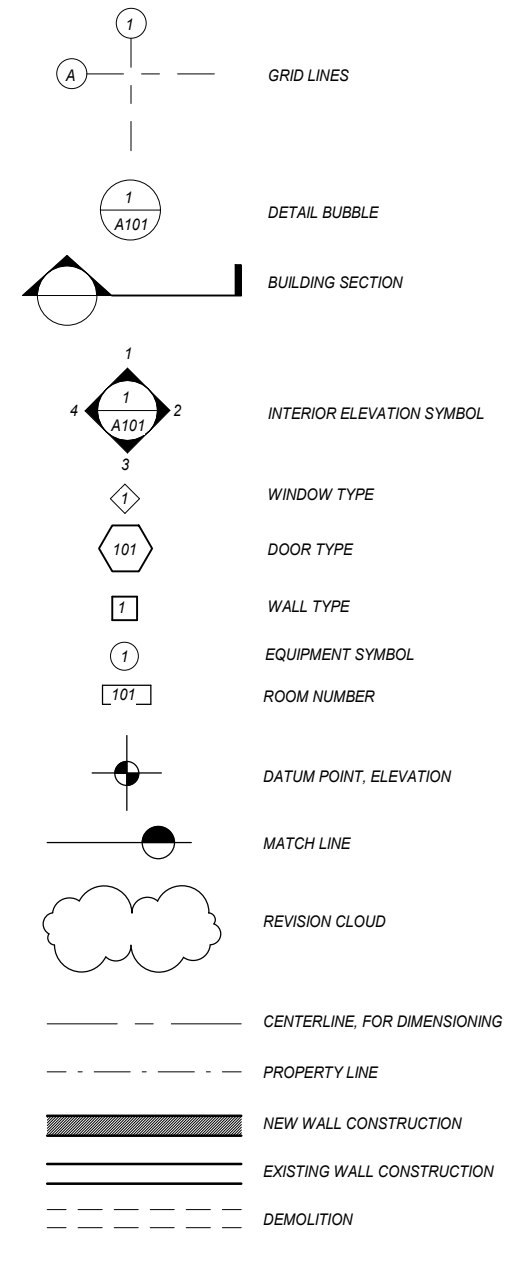
SHEET:

01 of xx

**ARCHITECTURAL ABBREVIATIONS**

AB	ANCHOR BOLT	F/F	FACE TO FACE	MACH	MACHINE
ABV	ABOVE	F.F	FINISH FLOOR	MAN	MANUAL
ACOUS	ACOUSTICAL	FA	FIRE ALARM	MATL	MATERIAL
ACT	ACOUSTICAL CEILING TILE	FBD	FIBERBOARD	MAX	MAXIMUM
AD	AREA DRAIN	FD	FLOOR DRAIN	MC	MEDICINE CABINET
ADDL	ADDITIONAL	FDC	FIRE DEPARTMENT CONNECTION	MECH	MECHANICAL
ADJ	ADJUSTABLE	FND	FOUNDATION	MEMB	MEMBRANE
AFF	ABOVE FINISHED FLOOR	FDV	FIRE DEPARTMENT VALVE	MET	METAL
AFG	ABOVE FINISHED GRADE	FE	FIRE EXTINGUISHER	MFR	MANUFACTURER
AFS	ABOVE FINISHED SLAB	FEB	FIRE EXTINGUISHER BRACKET	MH	MANHOLE
AL	ALUMINUM	FEC	FIRE EXTINGUISHER CABINET	MIN	MINIMUM
ALT	ALTERNATE	FHY	FIRE HYDRANT	MIR	MIRROR
AP	ACCESS PANEL	FIN	FINISH	MISC	MISCELLANEOUS
APPROX	APPROXIMATE(LY)	FIN GR	FINISH GRADE	MOD	MODULAR
ARCH	ARCHITECT(URAL)	FL	FLOOR(ING)	MTD	MOUNTED
ASPH	ASPHALT	FLASH	FLASHING	MTG	MOUNTING
AUTO	AUTOMATIC	FLEX	FLEXIBLE	MULL	MULLION
		FLR SK	FLOOR SINK		
BD	BOARD	FLUOR	FLUORESCENT	(N)	NEW
BKG	BACKING	FNR	FEMININE NAPKIN RECEPTACLE	N	NORTH
BLDG	BUILDING	FNTD	FEMININE NAPKIN-TAMPON DISPENSER	NA	NOT APPLICABLE
BLKG	BLOCKING	FOC	FACE OF CONCRETE	NAT	NATURAL
BLW	BELOW	FOF	FACE OF FINISH	NIC	NOT IN CONTRACT
BOT	BOTTOM	FOM	FACE OF MASONARY	NO	NUMBER
BRKT	BRACKET	FOS	FACE OF STUD	NOM	NOMINAL
BSMT	BASEMENT	FRPF	FIREPROOFING	NRC	NOISE REDUCTION COEFFICIENT
BTW	BETWEEN	FRZ	FREEZER	NTS	NOT TO SCALE
BURS	BUILT UP ROOFING SYSTEM	FSB	FOLDING SHOWER BENCH		
		FSTNR	FASTENER	OA	OVERALL
CAB	CABINET	FT	FOOT, FEET	OC	ON CENTER
CB	CATCH BASIN	FTG	FOOTING	OD	OUTSIDE DIAMETER
CCTV	CLOSED CIRCUIT TELEVISION	FURN	FURNITURE	OFCI	OWNER FURNISHED-CONTRACTOR INSTALLED
CG	CORNER GUARD	FURR	FURRING	OFOI	OWNER FURNISHED-OWNER INSTALLED
CEM	CEMENT	FUS	FOLDING UTILITY SEAT	OH	OPPOSITE HAND
CER	CERAMIC	FUT	FUTURE	OPNG	OPENING
CER TILE	CERAMIC TILE	FXTR	FIXTURE	OPP	OPPOSITE
CL	CENTERLINE			OVHD	OVERHEAD
CLG	CEILING	GA	GAUGE		
CLJ	CONTROL JOINT	GALV	GALVANIZED	PBD	PARTICLE BOARD
CLR	CLEAR	GB	GRAB BAR	PCF	POUNDS PER CUBIC FOOT
CMU	CONCRETE MASONRY UNIT	GC	GENERAL CONTRACTOR	PERF	PERFORATED
CNTR	COUNTER	GL	GLASS	PERIM	PERIMETER
CO	CASED OPENING	GL BLK	GLASS BLOCK	PERM	PERMANENT
CONC	CONCRETE	GLULAM	GLUE LAMINATED	PERP	PERPENDICULAR
CONF	CONFERENCE	GLZ	GLAZING	PH	PANIC HARDWARE
CONN	CONNECTION	GND	GROUND	PL	PROPERTY LINE
CONSTR	CONSTRUCTION	GR	GRADE, GRADING	PLAM	PLASTIC LAMINATE
CONT	CONTINUOUS	GRV	GRAVEL	PLAT	PLATFORM
CORR	CORRIDOR	GYP BD	GYPSPUM BOARD	PLBG	PLUMBING
CRPT	CARPET			PLF	POUNDS PER LINEAL FOOT
CSWK	CASEWORK	H	HIGH	PLYWD	PLYWOOD
CT	CARPET TILE	HB	HOSE BIB	PNL	PANEL
CUST	CUSTOM	HC	HOLLOW CORE	PREFAB	PREFABRICATED
CW	COLD WATER	HCP	HANDICAPPED	PRKG	PARKING
		HD	HEAD	PROJ	PROJECT
DBL	DOUBLE	HDBD	HARDBOARD	PROP	PROPERTY
DEMO	DEMOLISH	HDWE	HARDWARE	PSF	POUNDS PER SQUARE FOOT
DET	DETAIL	HM	HOLLOW METAL	PSI	POUNDS PER SQUARE INCH
DF	DRINKING FOUNTAIN	HNDRL	HANDRAIL	PT	POINT
DIA	DIAMETER	HR	HOUR	PTD	PAPER TOWEL DISPENSER
DIAG	DIAGONAL	HT	HEIGHT	PTD/R	PAPER TOWEL DISPENSER W/ RECEPTACLE
DIFF	DIFFUSER	HVAC	HEATING, VENTILATION, AIR CONDITIONING, & COOLING	PTR	PAPER TOWEL RECEPTACLE
DIM	DIMENSION			PVMT	PAVEMENT
DIM PT	DIMENSION POINT	HW	HOT WATER	PWR	POWER
DISP	DISPENSER			QT	QUARRY TILE
DIST	DISTANCE	ID	INSIDE DIAMETER	QTR	QUARTER
DLV	DOOR LOUVER	INCAND	INCANDESCENT	QTY	QUANTITY
DMPF	DAMP PROOFING	INCL	INCLUDING		
DN	DOWN	INFO	INFORMATION	R	RISER
DR	DRAIN	INSUL	INSULATION	RA	RETURN AIR
DS	DOWNSPOUT	INT	INTERIOR	RAD	RADIUS
DT	DRAIN TILE			RCP	REFLECTED CEILING PLAN
DWG	DRAWING	JAN	JANITOR	RD	ROOF DRAIN
DWGS	DRAWINGS	JT	JOINT	REF	REFRIGERATOR
DWR	DRAWER			REINF	REINFORCED
		KIT	KITCHEN	REQD	REQUIRED
(E)	EXISTING	KPL	KICK PLATE	RESIL	RESILIENT
E	EAST	KS	KNEE SPACE	RET	RETURN
EA	EACH			REV	REVISION
ECAB	ELECTRICAL CABINET	LAB	LABORATORY	RH	RIGHT HAND
EG	EDGE GUARD	LAM	LAMINATE	RM	ROOM
EIFS	EXTERIOR INSULATION FINISH SYSTEM	LAV	LAVATORY	RO	ROUGH OPENING
EL	ELEVATION	LB	POUND	ROW	RIGHT OF WAY
ELEC	ELECTRICAL	LF	LINEAR FOOT		
ELEV	ELEVATION	LG	LENGTH	S	SOUTH
EMER	EMERGENCY	LH	LEFT HAND	SA	SUPPLY AIR
ENCL	ENCLOSURE	LIN	LINEAR	SB	SPLASH BLOCK
ENGR	ENGINEER	LKR	LOCKER	SC	SOLID CORE
EO	ELECTRICAL OUTLET	LT	LIGHT	SCD	SEAT COVER DISPENSER
EQL SP	EQUALLY SPACED	LT WT	LIGHT WEIGHT	SCHED	SCHEDULED
EQUIP	EQUIPMENT	LTG	LIGHTING	SCR	SHOWER CURTAIN ROD
EQUIV	EQUIVALENT			SD	SOAP DISPENSER
EXP	EXPANSION			SECT	SECTION
EXPO	EXPOSED			SEP	SEPARATION
EXIST	EXISTING			SF	SQUARE FOOT
EXT	EXTERIOR				

**DRAWING SYMBOLS**



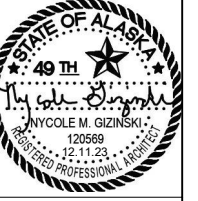
REVISIONS:


**Craig High School  
New Shop Building**

STATUS:  
**CONSTRUCTION DOCUMENTS**

DRAWN BY: NMG  
 CHECKED BY: NMG  
 DATE: 12.11.23  
 PROJECT #: 182360

**R&M**  
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SHEET DESCRIPTION:  
 Abbreviations & Symbols

**G101**

SHEET:  
 02 of xx