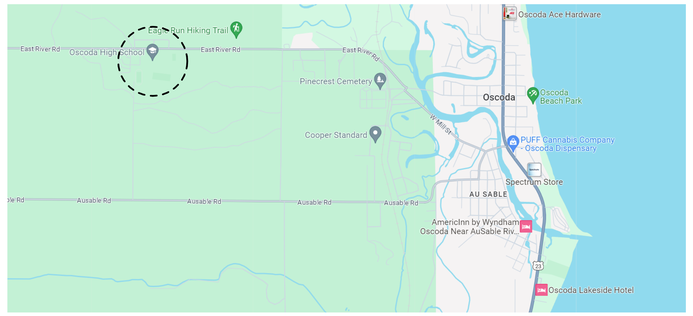
OAS Misc. Renovations - Athletic Field Restrooms

Oscoda Area Schools

3550 E River Rd, Oscoda, MI 48750



CITY MAP

PROJECT MAP

THE COLLAB ORATIVE +ACOCK

KTS ENGINEERING GROUP

MEP ENGINEERS

491 E. WRIGHT AVE.
SHEPERD, MI 48883

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

CIVIL ENGINEERS

2960 LUCERNE DRIVE SE,
GRAND RAPIDS, MI 49546

ANDREW BROCK ENGINEER
structural & civil engineering

STRUCTURAL ENGINEER

3301 CHASENWOOD WAY,
PERRYSBURG, OH 43551

DRAWING INDEX: (ALL DRAWINGS LISTED BELOW, EXCEPT THOSE UNDER "DEFFERRED SUBMITTALS" ARE INCLUDED IN THIS PACKAGE, UNLESS NOTED OTHERWISE)

DEFERRED SUBMITTALS

THE FOLLOWING ITEMS ARE NOT INCLUDED IN THIS PACKAGE AND ARE CONSIDERED "DEFERRED SUBMITTALS" AS THEIR DESIGN & CONTENT ARE DELEGATED DESIGNS TO BE AUTHORED BY THE CONTRACTOR(S) AND/OR THE CONTRACTOR'S ENGINEER(S). CONTRACTOR(S) AND/OR CONTRACTOR'S ENGINEER(S) ARE RESPONSIBLE TO SUBMIT THE NECESSARY DOCUMENTS & DRAWINGS TO THE LOCAL AUTHORITY-HAVING-JURISDICTION (AHJ) FOR REVIEW AND APPROVED TO OBTAIN THE REQUIRED PERMITTING TO EXECUTE THE WORK LISTED BELOW.

LIST OF DEFERRED SUBMITTALS:

-COLD-FORMED METAL FRAMING ENGINEERED DRAWINGS AND DOCUMENTS
-STRUCTURAL STEEL ENGINEERED DRAWINGS AND DOCUMENTS
-STEEL JOIST ENGINEERED DRAWINGS AND DOCUMENTS
-GUARDRAIL ENGINEERED DRAWINGS AND DOCUMENTS

LIFE SAFETY & CODE INFORMATION

LS1.00	FIRST FLOOR LIFE SAFETY PLAN

CIVIL

C-101	SITE PLAN
C-102	GRADING & UTILITY PLAN
C-501	CIVIL DETAILS
V-101	TOPOGRAPHIC SURVEY

STRUCTURAL

S001	STRUCTURAL NOTES & SPECIAL INSPECTIONS
S1.00	STRUCTURAL PLANS AND DETAILS

ARCHITECTURAL

A0.00	GENERAL INFORMATION
A1.00	OVERALL FLOOR PLAN & RAILING DETAILS
A1.10	FIRST FLOOR PLAN & INTERIOR ELEVATIONS
A1.11	ROOF PLAN & EXTERIOR ELEVATIONS
A4.10	WALL SECTIONS & DETAILS

MECHANICAL

M001	MECHANICAL COVER SHEET
M101	MECHANICAL PLANSM001 - MECHANICAL COVER SHEET
M101	MECHANICAL PLANS

PLUMBING

P001	PLUMBING COVER SHEET
P101	PLUMBING FLOOR PLAN
P601	PLUMBING SCHEDULES

ELECTRICAL

M001	MECHANICAL COVER SHEET
M101	MECHANICAL PLANSM001 - MECHANICAL COVER SHEET
M101	MECHANICAL PLANS

11.21.2025	BID/PERMIT
09.12.2025	DESIGN DEVELOPMENT
07.18.2025	SCHEMATIC DESIGN

STATE OF MICHIGAN
Brandon M. Andrzejczak
License No. 1301066065
LICENSED ARCHITECT

Brandon M. Andrzejczak,
License #1301066065
Expiration Date 08/24/2027

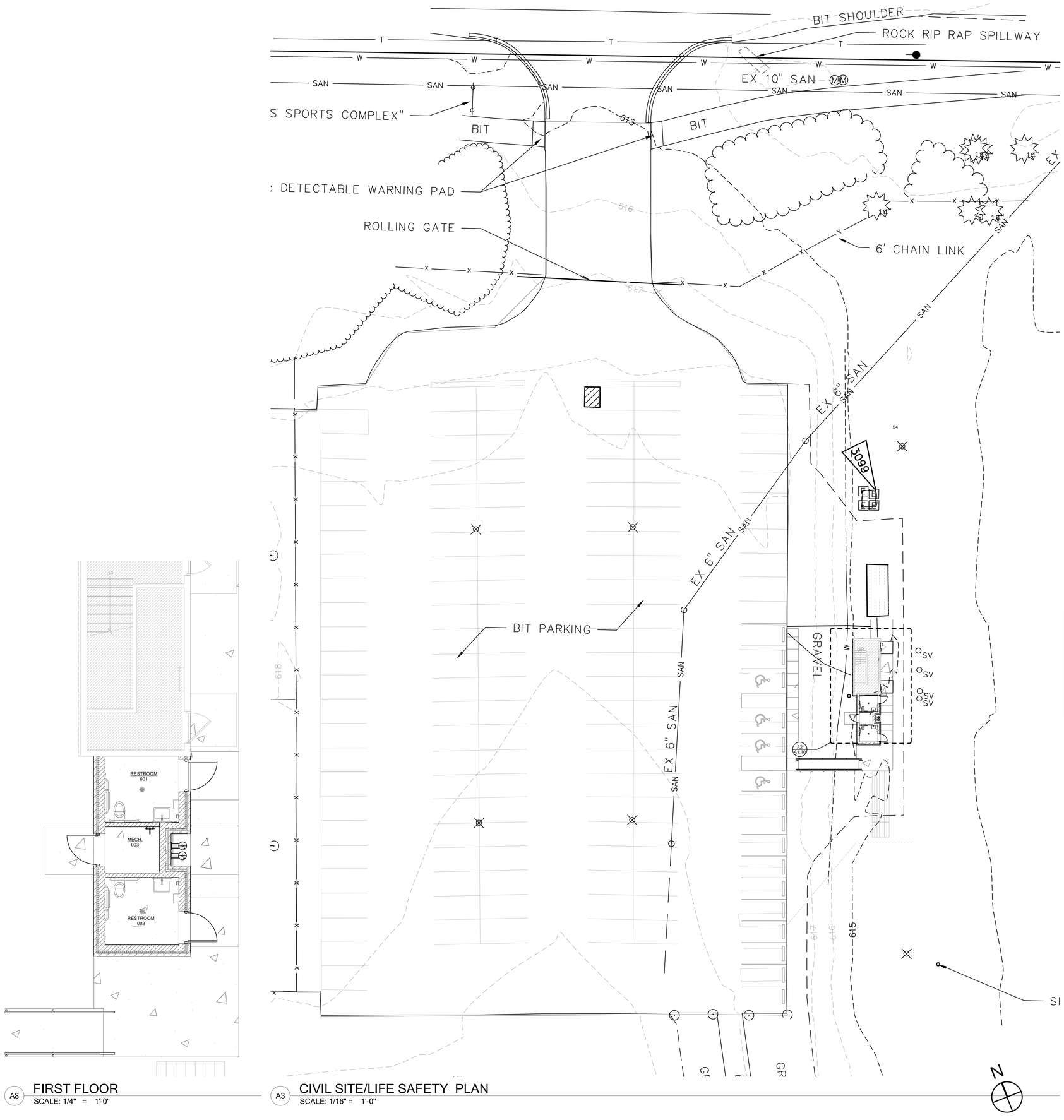
TC JOB NO. Project No. 107348

OWNER JOB NO. #Client Custom

One SeaGate, Park Level 118
Toledo, OH 43604 / 419.242.7405

213 South Main Street, Suite 200
Ann Arbor, MI 48104 / 734.922.8002

383 North Front Street Arena District
Columbus, OH 43215 / 614.228.1586



A8 FIRST FLOOR
SCALE: 1/4" = 1'-0"

A3 CIVIL SITE/LIFE SAFETY PLAN
SCALE: 1/16" = 1'-0"

BUILDING CODE:	2021 MICHIGAN BUILDING CODE
TYPE OF PROJECT:	ADDITION
EXISTING USE GROUP:	A-5
EXISTING CONSTRUCTION CLASSIFICATION:	IIB (2012 MRCEB) - UNALTERED TYPE II - 000 (NFPA 101)
FIRE SPRINKLER SYSTEM:	NO
STANDPIPES:	NO
FIRE ALARM SYSTEM:	NO

PROPOSED BUILDING HEIGHT:	EXISTING	ALLOWABLE	PROPOSED
OVERALL HEIGHT (FEET)	18'	55'	8'-5"
NUMBER OF STORIES	2	UL	1

ALLOWABLE AREA PER STORY:
TABULAR AREA: UL

BUILDING AREA:	EXISTING	PROPOSED
FIRST FLOOR	264	470

FIRE RESISTANCE RATINGS:	REQUIRED/PROVIDED
STRUCTURAL FRAME - INCLUDING COLUMNS, BEAMS, TRUSSES	0 HOUR
BEARING WALLS -	
EXTERIOR	0 HOUR
INTERIOR	0 HOUR
NON BEARING WALLS & PARTITIONS -	
EXTERIOR	0 HOUR
INTERIOR	0 HOUR
FLOOR CONSTRUCTION - INCLUDING SUPPORTING BEAMS & JOISTS	0 HOUR
ROOF CONSTRUCTION - INCLUDING SUPPORTING BEAMS & JOISTS	0 HOUR
EXTERIOR WALLS	0 HOUR
FIRE WALLS	0 HOUR
(TO SEPARATE BUILDINGS AREAS W/ STRUCTURAL STABILITY)	
FIRE BARRIERS	
SEPARATION OF INCIDENTAL USES	1 HOUR
FIRE PARTITIONS	0 HOUR
SHAFT ENCLOSURES	1 HOUR
CORRIDORS	1 HOUR
EXIT STAIRS	1 HOUR

INTERIOR WALL & CEILING FINISH REQUIREMENTS:	OCCUPANCY GROUP	EXIT ENCLOSURE & EXIT PASSAGEWAY	CORRIDORS	ROOMS & ENCLOSED SPACES
	E	A	B	C

OCCUPANT LOAD: 128 OCCUPANTS (CALCULATED BASED ON TEMPORARY BLEACHERS)

PLUMBING FIXTURES REQUIRED:	REQUIRED	NEW
WOMEN'S WATER CLOSETS	2	1
WOMEN'S LAVATORIES	1	1
MEN'S WATER CLOSETS	1	1
MEN'S URINALS	-	-
MEN'S LAVATORIES	1	1
DRINKING FOUNTAINS	1	2
SERVICE SINKS	1	1

WE ARE PROVIDING 2 ADA SINGLE USER RESTROOMS FOR USE NEAR A LIMITED USE SOCCOR FIELD, ONLY TO BE USED DURING PRACTICE AND DURING SCHEDULED GAMES, DUE TO THE LIMITED USE AND TEMPORARY SEATING WE FEEL 2 RESTROOMS ARE SUFFICIANT TO COVER THE CURRENT OCCUPANT COUNT.

LEGEND

- 1 HOUR WALL
- 2 HOUR WALL
- 3 HOUR WALL
- 4 HOUR WALL
- 20 / 180 — REQUIRED OCCUPANT LOAD FOR THIS EXIT / PROVIDED OCCUPANT LOAD FOR THIS EXIT
- (NFPA 10) F.E. — BRACKET MOUNTED FIRE EXTINGUISHER
- (NFPA 10) F.E. CAB. — FIRE EXTINGUISHER AND CABINET

THE COLLABORATIVE +ACOCK

STATE OF MICHIGAN
Brandon M. Andrzejczak
License No. 1301066065
LICENSED ARCHITECT

PROJECT TITLE
Oscoda Area Schools

OAS Misc. Renovation Projects
3550 E River Rd,
Oscoda Township, MI 48750

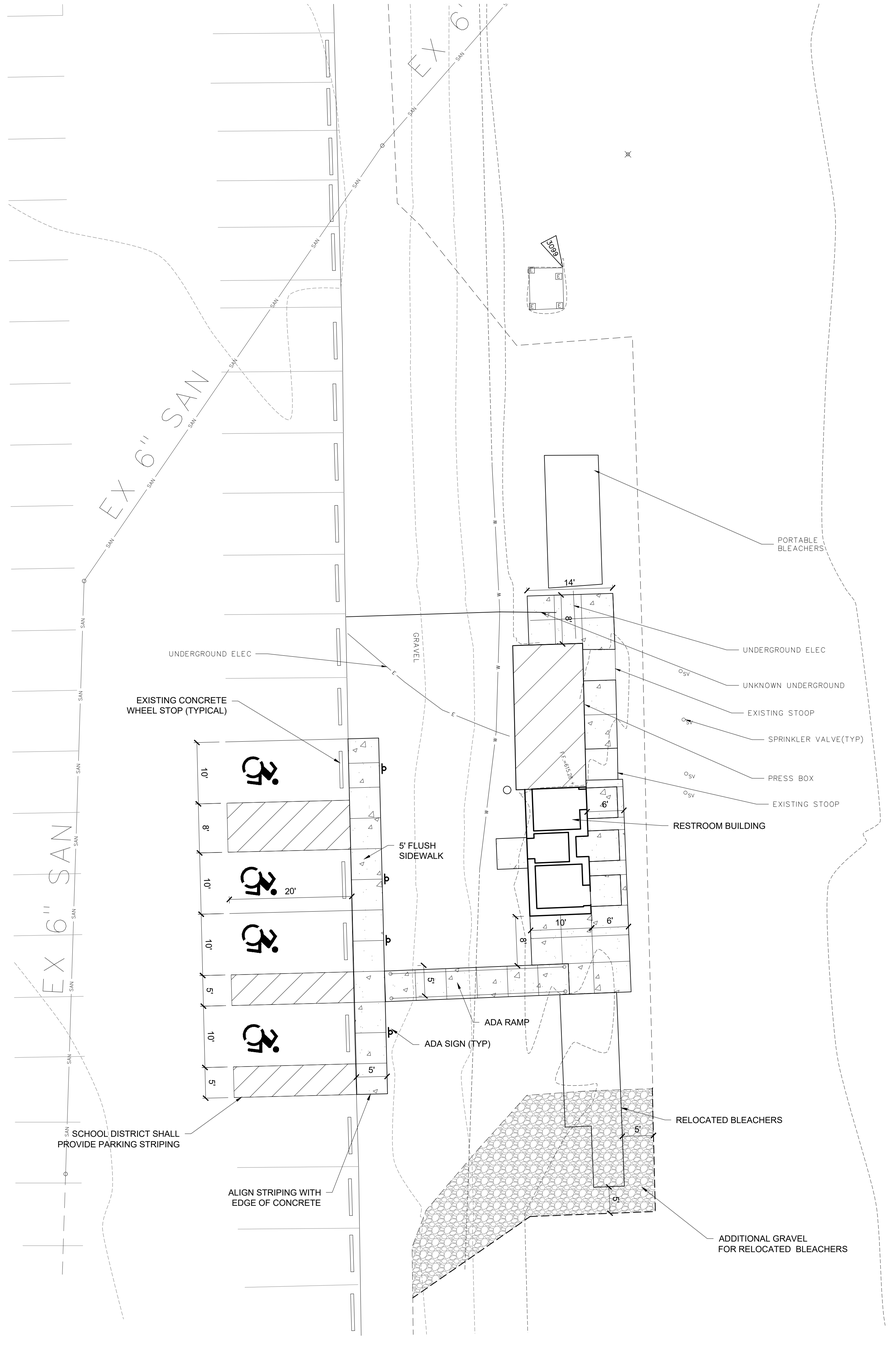
11.21.2025	BID/PERMIT
09.12.2025	DESIGN DEVELOPMENT
07.18.2025	SCHEMATIC DESIGN

TC JOB NO. Project No. 107348

SHEET TITLE
FIRST FLOOR LIFE SAFETY PLAN

SHEET NO.
LS1.00

NOTE: KEEP THIS AREA CLEAR FOR SET BINDING - NO DRAWING AND/OR NOTATION TO THE LEFT OF THIS LINE



THE COLLAB ORATIVE +ACOCK

F&V

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P: 616.977.1000
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F&V #867853

STATE OF MICHIGAN
MICHAEL COMPETZER
License No. 6201044511
REGISTERED PROFESSIONAL ENGINEER

PROJECT TITLE

Oscoda Area Schools

Oscoda Misc. Renovation PROJECTS

3550 E River Rd,
Oscoda Township,, MI 48750

11.21.2025	BID/PERMIT

TC JOB NO. 107348

OWNER JOB NO. #Client Custom

SHEET TITLE

SITE PLAN

SHEET NO.

C-101

NOTE: KEEP THIS AREA CLEAR FOR SET BINDING - NO DRAWING AND/OR NOTATION TO THE LEFT OF THIS LINE

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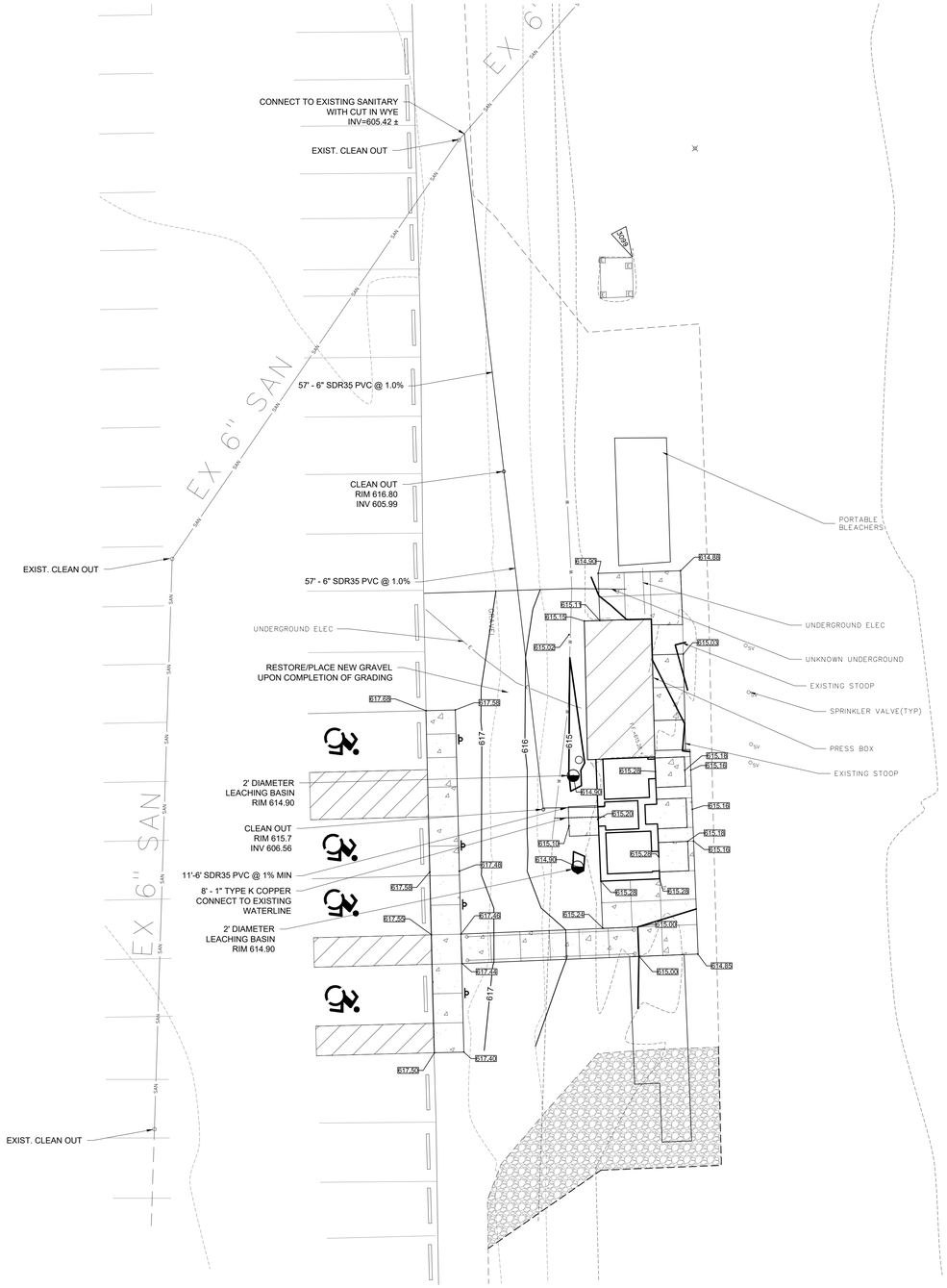

NORTH

0 10 20

SCALE IN FEET

THE COLLAB ORATIVE +ACOCK

F&V

2960 Lucerne Drive SE
Grand Rapids, MI 49546
P: 616.977.1000
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F&V #867853

STATE OF MICHIGAN
MICHAEL COLPETZER
License No. 6201045511
REGISTERED PROFESSIONAL ENGINEER

PROJECT TITLE

Oscoda Area Schools

Oscoda Misc. Renovation PROJECTS

3550 E River Rd,
Oscoda Township,, MI 48750

11.21.2025	BID/PERMIT

TC JOB NO. 107348

OWNER JOB NO. #Client Custom

SHEET TITLE

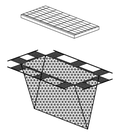
GRADING & UTILITY PLAN

SHEET NO.

C-102

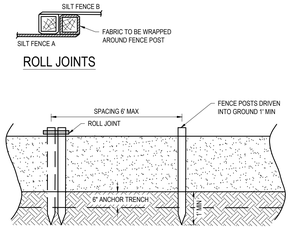
NOTE: KEEP THIS AREA CLEAR FOR SET BINDING - NO DRAWING AND/OR NOTATION TO THE LEFT OF THIS LINE

NOTE: KEEP THIS AREA CLEAR FOR SET BINDING - NO DRAWING AND/OR NOTATION TO THE LEFT OF THIS LINE



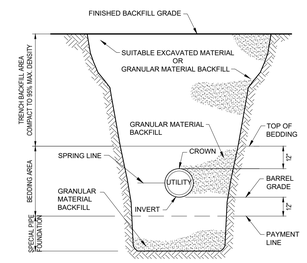
INLET PROTECTION FABRIC DROP

NOT TO SCALE



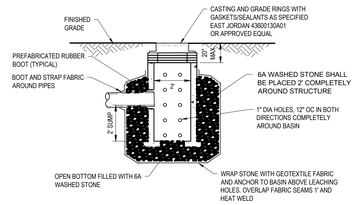
SILT FENCE

NOT TO SCALE



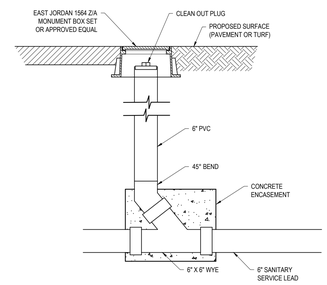
UTILITY TRENCHING AND BACKFILLING TERMINOLOGY

NOT TO SCALE



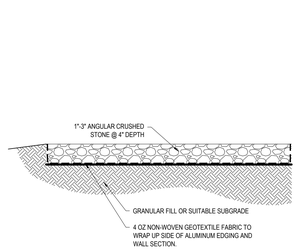
2' DIA LEACHING BASIN

NOT TO SCALE



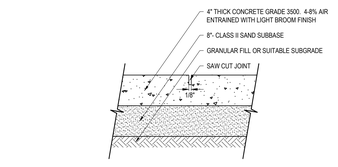
CLEAN OUT

NOT TO SCALE



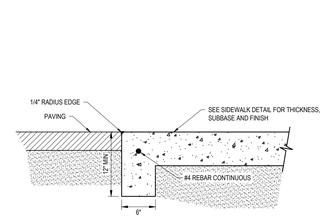
STONE MAINTENANCE STRIP

NOT TO SCALE



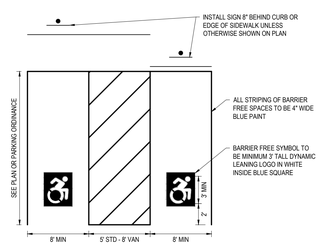
CONCRETE SIDEWALK - 4 INCH

NOT TO SCALE



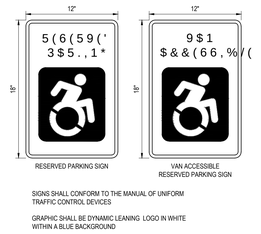
FLUSH SIDEWALK EDGE

NOT TO SCALE



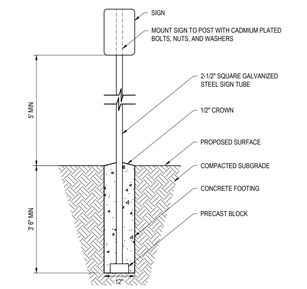
BARRIER FREE PARKING SPACE LAYOUT

NOT TO SCALE



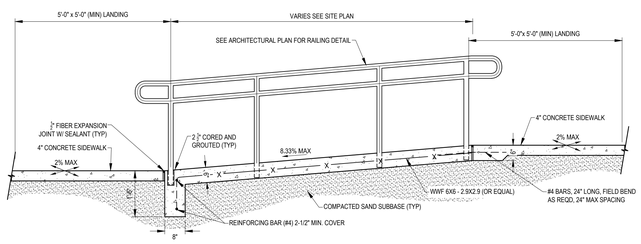
BARRIER FREE SIGNS

NOT TO SCALE



SIGN MOUNTING - STEEL

NOT TO SCALE



ACCESSIBLE RAMP AND HANDRAIL DETAIL

NOT TO SCALE

NOTE: KEEP THIS AREA CLEAR FOR SET BINDING - NO DRAWING AND/OR NOTATION TO THE LEFT OF THIS LINE

THE COLLABORATIVE +ACOCK

F&V

2960 Lucerne Drive SE
Grand Rapids, MI 49546
P: 616.977.1000
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F&V #867853

STATE OF MICHIGAN
MICHAEL COLPETZER
LICENSED PROFESSIONAL ENGINEER
License No. 6201045511

PROJECT TITLE

Oscoda Area Schools

Oscoda Misc. Renovation PROJECTS

3550 E River Rd,
Oscoda Township,, MI 48750

11.21.2025	BID/PERMIT

TC JOB NO. 107348

OWNER JOB NO. #Client Custom

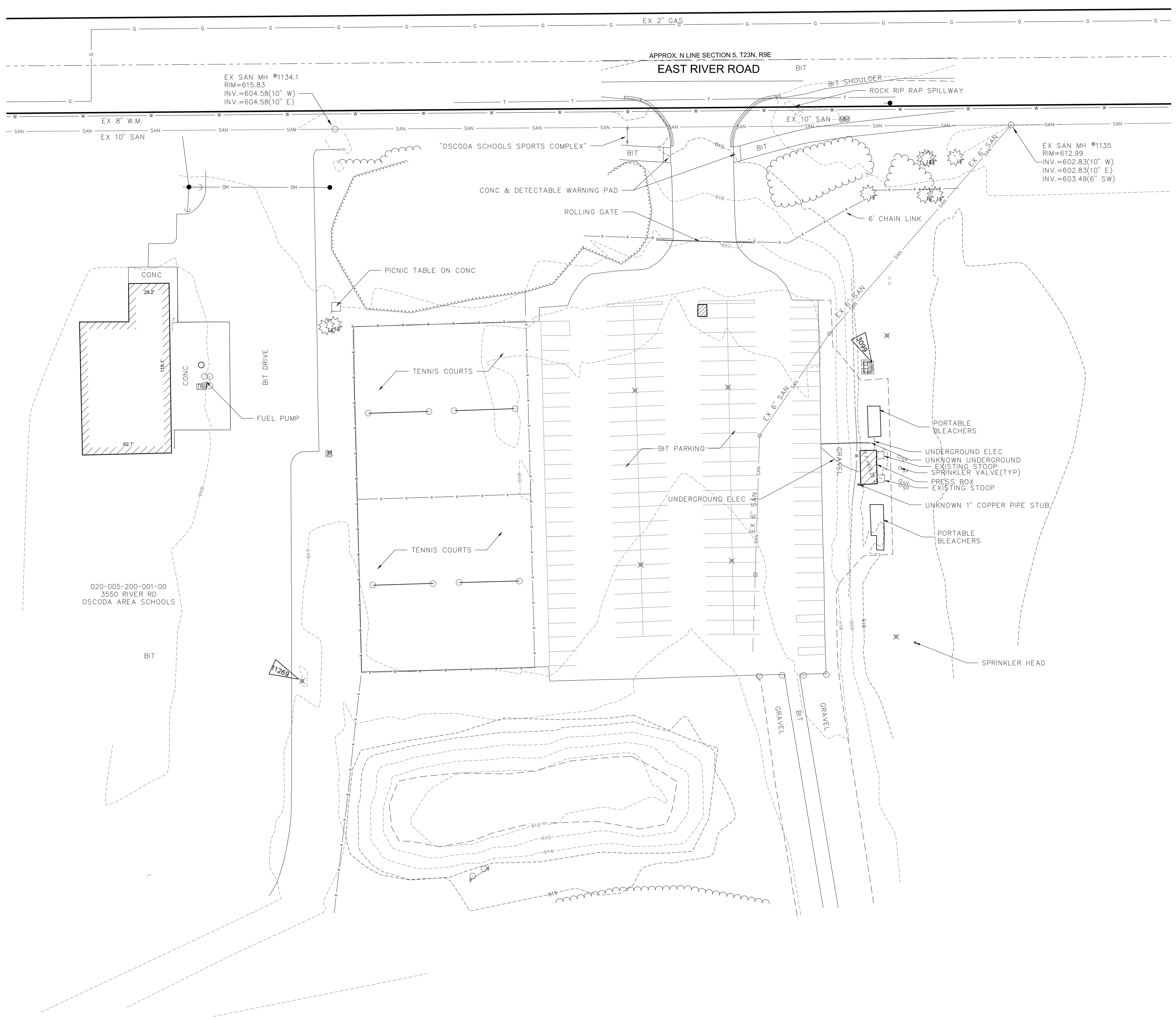
SHEET TITLE

CIVIL DETAILS

SHEET NO.

C-501

NOTE: KEEP THIS AREA CLEAR FOR SET BINDING - NO DRAWING AND/OR NOTATION TO THE LEFT OF THIS LINE



BM #3099 EL. 615.48'
NE COR CONC EBOX PAD, E OF PARKING LOT, 57' N OF PRESS BOX
(NAVD88 VIA VRS & GPS OBSV)

BM #11269 EL. 618.27'
LAG SCREW E FACE LP, E SIDE TRANSPORTATION DRIVE, 42' W OF SW COR TENNIS COURTS
(NAVD88 VIA VRS & GPS OBSV)

NORTH

0 40 80
SCALE IN FEET

NOTES:

1.THE LOCATION OF UTILITIES DEPICTED ON THIS DRAWING WERE DETERMINED FROM ON-SITE OBSERVATION AND FROM RECORDS PROVIDED BY OTHERS. SOME UTILITIES MAY NOT BE SHOWN, BUT ARE PRESENT. UTILITIES MAY NOT BE IN THE EXACT POSITION SHOWN. RESPONSES HAVE NOT BEEN RECEIVED FROM ALL UTILITY OWNERS. BEFORE CONSTRUCTION OR ANY SUBSURFACE WORK CONTACT MISS DIG AND EXERCISE CAUTION.

2. FLEIS AND VANDENBRINK ENGINEERING, INC. HAS NOT REVIEWED THIS PROJECT FOR ENVIRONMENTAL CONCERNS, SOIL CONTENT, FLOOD ZONE OR WETLAND CONCERNS EXCEPT AS SHOWN.

3. BEARINGS ARE BASED ON: NAD83 MICHIGAN STATE PLANE, CENTRAL ZONE, INTERNATIONAL FOOT

4. THE VERTICAL DATUM USED FOR THIS PROJECT IS: NAVD88

5. THE PARCEL(S) DEPICTED ON THIS SURVEY WERE TAKEN IOSCO COUNTY GIS. TITLE COMMITMENT HAS NOT BEEN PROVIDED. BOUNDARY SURVEY OF PARCEL HAS NOT BEN PERFORMED.

P.P.# 020-005-200-001-00 TAX DESCRIPTION: T23N R9E SEC 5 A-63 NW 1/4 OF NW 1/4 AND THE W 716 FT OF THE NE 1/4 OF THE NW 1/4

P.P.# 020-006-100-002-00 TAX DESCRIPTION: T23N R9E SEC 6 A-30 E 1/2 OF NE 1/4 OF NE 1/4 AND E 1/2 OF W 1/2 OF NE 1/4 OF NE 1/4

6. ACCORDING TO FEMA, FLOOD INSURANCE RATE MAP 26069C0270E & 26069C0286E, EFFECTIVE DATE 1/6/2012 THE SUBJECT PROPERTY LIES WITHIN FLOOD ZONE "X - AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD"

7. SANITARY SEWER LOCATIONS AND INVERTS TAKEN FROM F&V PROJECT #815910 AND BARTOW & KING SEWER AS-BUILT PLANS PROJECT NO 980921, FEB 2000 AND HAVE NOT BEEN FIELD VERIFIED

8. EXCEPT WHERE SHOWN, THE BUILDING(S) DEPICTED ON THIS SURVEY ARE APPROXIMATE. EXCEPT WHERE SHOWN, NO BUILDING MEASUREMENTS AT GROUND LEVEL WERE ASKED TO BE REVIEWED AS A PART OF THIS SURVEY. HENCE, SAID BUILDING LAYOUT AND SHOULD NOT BE USED FOR ARCHITECTURAL DESIGN PURPOSES.

9. THE CONTOURS DEPICTED ON THIS SURVEY WERE GENERATED FROM A TOPOGRAPHIC SURVEY COMPLETED BY FLEIS AND VANDENBRINK ENGINEERING, INC IN SEPTEMBER 2024. CONTOUR INTERVAL = 1'.

10. ANY ELECTRONIC REPRODUCTION OF THIS SURVEY SHOWING A COPY OF THE SIGNATURE AND IMPRESSION OF A PROFESSIONAL SURVEYOR'S SEAL IS PROVIDED FOR COURTESY PURPOSES ONLY AND SHALL NOT BE CONSIDERED AS THE ACTUAL SURVEY DOCUMENT. FLEIS & VANDENBRINK ENGINEERING, INC. IS NOT RESPONSIBLE FOR ANY UNAUTHORIZED USE, MISUSE OR COPY OF THIS DOCUMENT. THE ORIGINAL OF THIS DOCUMENT SHOWS THE RAISED STAMP AND HAS BEEN SIGNED USING BLUE INK.

EXISTING FEATURES LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	TREE (DECIDUOUS)		CABLE BOX		SURVEY CONTROL POINT
	BUSH		TELEPHONE RISER	BM#1	BENCHMARK
	TREE (CONIFEROUS)		TELEPHONE MANHOLE		SECTION CORNER
	DEAD TREE		TELEPHONE HANDHOLE		BOUNDARY LINE
	STUMP		ELECTRICAL RISER		PROPERTY LINE
	MANHOLE		ELECTRICAL MANHOLE	W	WATERMAIN
	SANITARY CLEANOUT		ELECTRICAL HANDHOLE	SAN	SANITARY SEWER
	RD. CATCH BASIN		POWER POLE	STM	STORM SEWER
	SQ. CATCH BASIN		LIGHT POLE		CULVERT (21" AND UNDER)
	CULVERT END		GUY POLE		CULVERT (24" AND UP)
	FIRE HYDRANT		GUY ANCHOR	CATV	CABLE T.V.
	WATER VALVE		PED CROSSING SIGNAL	T	TELEPHONE
	CURB STOP & BOX		YARD LIGHT	E	ELECTRIC
	WELL		SIGN	G	GAS
	WATER MANHOLE		MAILBOX	OH	OVERHEAD LINES
	WATER METER		POST		GUARDRAIL
B#	SOIL BORING		FOUND CONC. MONUMENT	X	FENCE
	MONITORING WELL		FOUND IRON ROD		WOODLINE
	GAS VALVE		SET IRON ROD		BUSH/HEDGE ROW
	GAS RISER				

NOTE: ALL ITEMS LISTED ON THE LEGEND MAY NOT BE PRESENT ON DRAWING.

THE COLLAB ORATIVE +ACOCK

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F&V #867853

PROJECT TITLE

Oscoda Area Schools

Oscoda Misc. Renovation PROJECTS

3550 E River Rd,
Oscoda Township,, MI 48750

11.21.2025	BID/PERMIT

TC JOB NO. 107348

OWNER JOB NO. #Client Custom

SHEET TITLE

TOPOGRAPHIC SURVEY

SHEET NO.

V-101

STRUCTURAL DESIGN CRITERIA

BUILDING INFORMATION

STRUCTURE: RISK CATEGORY I
DESIGNED USING MICHIGAN BUILDING CODE 2025 w/ IBC 2021 & ASCE 7-16 BASIS
LATERAL FORCE RESISTING SYSTEM:
ORDINARY REINFORCED MASONRY BEARING & SHEAR WALLS

FLOOR LOADS

SLAB ON GRADE LIVE LOAD = 125 psf

ROOF LOADS

ROOF LIVE LOAD = 20 psf *(UNREDUCED)*
ROOF TOTAL DEAD LOAD = 15 psf
COLLATERAL = 5 psf

SNOW DESIGN

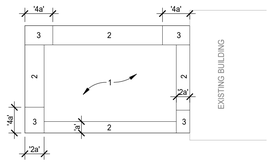
GROUND SNOW LOAD, P_g = 40 psf
ROOF FLAT SNOW LOAD, P_f = 24.6 psf
SNOW IMPORTANCE FACTOR, I_s = 0.8
ROOF EXPOSURE FACTOR, C_e = 1.0
ROOF THERMAL FACTOR, C_t = 1.1
RAIN ON SNOW SURCHARGE = 5 psf
ROOF MIN. SNOW LOAD, P_m = 16.0 psf
DESIGN ROOF SNOW LOAD = 24.6 psf

WIND DESIGN

ULTIMATE DESIGN WIND SPEED, V_{ult} = 100 mph *(V_{asd} = 78 mph)*
GUST FACTOR, G = 0.85
WIND EXPOSURE CATEGORY = C
TOPOGRAPHIC FACTOR, K_{zt} = 1.0
DIRECTIONALITY FACTOR, K_d = 0.85
ELEVATION FACTOR, K_e = 0.97
INTERNAL PRESSURE COEFFICIENT, GC_{pi} = +/- 0.18 (ENCLOSED)
EDGE STRIP, a = 3.0 ft
BASE PRESSURE, q_h = 18.1 psf

SELECTED WIND COMPONENT AND CLADDING LOADS

	A_e	10 sf		50 sf		100 sf	
		(+)	(-)	(+)	(-)	(+)	(-)
ROOF							
	ZONE 1	16.0	23.1 psf	16.0	23.1 psf	16.0	23.1 psf
	ZONE 2	16.0	26.7 psf	16.0	25.5 psf	16.0	24.9 psf
	ZONE 2'	16.0	32.2 psf	16.0	30.9 psf	16.0	30.3 psf
	ZONE 3	16.0	35.8 psf	16.0	28.2 psf	16.0	24.9 psf
	ZONE 3'	16.0	50.2 psf	16.0	37.6 psf	16.0	32.2 psf
WALLS		(+)	(-)	(+)	(-)	(+)	(-)
	ZONE 4	19.5	21.1 psf	17.5	19.1 psf	16.6	18.3 psf
	ZONE 5	19.5	26.0 psf	17.5	22.0 psf	16.6	20.3 psf



SEISMIC DESIGN

RISK CATEGORY = I
SEISMIC IMPORTANCE FACTOR, I_e = 1.0
S_s = 0.060g S_{DS} = 0.064g
S_1 = 0.030g S_{D1} = 0.048g
SITE CLASS = D (ASSUMED)
SEISMIC DESIGN CATEGORY = A
LATERAL FORCE RESISTING SYSTEM:
ORDINARY REINF. MASONRY SHEAR & BEARING WALLS

RESPONSE COEFFICIENT, C_s = 0.032
RESPONSE MODIFICATION FACTOR, R = 2.0
OVERSTRENGTH, Ω_0 = 1.75
DEFLECTION AMPLIFICATION, C_d = 1.75
ANALYSIS PROCEDURE:
EQUIVALENT LATERAL FORCE

BASE SHEAR, V = 0.6k

STORY DRIFT = 0.007 h_{sx} = 0.76"

VERTICAL IRREGULARITY: NONE PRESENT
HORIZONTAL IRREGULARITY: NONE PRESENT

GENERAL CONDITIONS

1. THE CONTRACTOR SHALL EXAMINE THE STRUCTURAL DRAWINGS AND SHALL NOTIFY THE STRUCTURAL ENGINEER IN WRITING OF ANY DISCREPANCIES FOUND BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.
2. WORKING DIMENSIONS SHOULD NOT BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON THESE DRAWINGS.
3. REFER TO THE ARCHITECTURAL DRAWINGS FOR INFORMATION NOT COVERED BY THESE GENERAL NOTES OR THE STRUCTURAL DRAWINGS.
4. PIPES, DUCTS, SLEEVES, OPENINGS, POCKETS, CHASES, BLOCK-OUTS, ETC., CAN NOT BE PLACED IN SLABS, FOUNDATIONS, ETC., AND NO STRUCTURAL MEMBER CAN BE CUT FOR SUCH ITEMS, UNLESS SPECIFICALLY DETAILED ON THESE STRUCTURAL DRAWINGS.
5. WHILE EVERY ATTEMPT HAS BEEN MADE TO COORDINATE BETWEEN ALL DISCIPLINES, THE CONTRACTOR ULTIMATELY MUST REVIEW AND COORDINATE BETWEEN TRADES REGARDING OPENINGS AND CLASHES ON THIS CONSTRUCTION PROJECT. DO NOT ASSUME THE DOCUMENTS ARE CLASH-FREE AND SHOW EVERY OPENING, PENETRATION, AND/OR CONDITION.

SAFETY

1. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE WHEN COMPLETED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE PROCEDURES FOR ERECTION AND CONSTRUCTION SEQUENCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE BUILDING AND ITS OCCUPANTS THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ADEQUATE SHORING OR BRACING DURING CONSTRUCTION TO RESIST FORCES SUCH AS WIND AND UNBALANCED LOADING DUE TO CONSTRUCTION.

FOUNDATION

1. STRUCTURAL DESIGN COMPLIES WITH THE PRESUMED VALUES PER MICHIGAN BUILDING CODE 2021 PRESUMPTIVE DESIGN VALUES PER TABLE 1806.2.

   ALLOWABLE SHALLOW SOIL BEARING PRESSURE = 1500 psf
   SUBGRADE MODULUS OF REACTION = 100 pci
   FROST DEPTH = 42" BELOW GRADE MIN.
2. GROUNDWATER IS NOT EXPECTED WITHIN THE CONSTRUCTION DEPTH. CONTRACTOR SHOULD REPORT ANY STANDING EXCAVATION WATER TO THE ENGINEER FOR REVIEW.
3. SUBGRADE PREPARATION, DRAINAGE PROVISIONS, AND OTHER RELEVANT SOIL CONSIDERATIONS ARE TO BE IN ACCORDANCE WITH GEOTECHNICAL INSPECTOR DIRECTION.
4. A GEOTECHNICAL ENGINEER SHOULD BE RETAINED TO PROVIDE OBSERVATION AND TESTING SERVICES DURING FOUNDATION SOILS EXCAVATION, BACKFILL GRADING, COMPACTION AND SUBGRADE PREPARATIONS. THE GEOTECHNICAL INSPECTION SHALL COMPLY WITH THE SPECIAL INSPECTIONS NOTE ELSEWHERE IN THESE DOCUMENTS. DO NOT COMMENCE CONSTRUCTION OF FOUNDATIONS UNTIL SITE IS IN CONFORMANCE.
5. FILL UNDER BUILDING SLABS SHALL BE MADE WITH CRUSHED STONE COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 UNLESS NOTED OTHERWISE.
6. FOUNDATION ELEMENTS BEARING ON SHALLOW FOUNDATIONS SHALL BEAR ON SUBGRADE WITH A MINIMUM BEARING PRESSURE AS SHOWN ABOVE AND SHALL BE TESTED TO ENSURE THIS BEARING PRESSURE IS MET. THESE EXISTING SOILS SHALL BE PREPARED OR UNDERCUT & FILLED FOLLOWING THE GEOTECHNICAL INSPECTOR'S AND REPORT RECOMMENDATIONS.

STRUCTURAL AND MISCELLANEOUS STEEL

1. FABRICATION AND ERECTION OF STEEL SHALL BE IN ACCORDANCE WITH THE FOLLOWING AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) STANDARDS AND SPECIFICATIONS:

   A. *MANUAL OF STEEL CONSTRUCTION, 15th EDITION*

   B. *CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, LATEST EDITION*

   C. *SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.*
2. STEEL SHALL CONFORM TO THE FOLLOWING STANDARDS:

BEAM WIDE FLANGE & CHANNELS:	ASTM A992 (Min. F_y = 50 ksi)
CHANNELS & ANGLES, &, T:	ASTM A36/A572 (Min. F_y = 50 ksi)
HSS RECT. & SQUARE TUBE:	ASTM A500, GRADE C (F_y = 50 ksi)
HSS ROUND:	ASTM A500, GRADE C (F_y = 50 ksi)
PIPE:	ASTM A53, GRADE B (F_y = 35 ksi)
GUSSET PLATES:	ASTM A36 (F_y = 36 ksi)
ALL OTHER STEEL:	ASTM A36 (F_y = 36 ksi)
COMMON BOLTS:	ASTM A325
ANCHOR RODS:	ASTM F1554 (GRADES PER DETAILS)
ANCHOR ROD WASHER DIAMETERS REQUIRED:	3/4" ROD = 2" ⌀ WASHER / 1/4" THK. 1" ROD = 3" ⌀ WASHER / 3/8" THK. 1.25" ROD = 3" ⌀ WASHER / 1/2" THK.

   HEAVY HEX HEAD OR DOUBLE-NUT THREADED ROD
3. ALL BOLTS SHALL BE SNUG-TIGHT
4. ALL COLUMNS SHALL HAVE A NON-SHRINK GROUT AND 1/4" LEVELING PLATE(s) AND/OR NUTS BETWEEN THE BASE PLATE AND CONCRETE.

STRUCTURAL STEEL WELDING

1. CONFORM TO THE AWS CODES D1.1 AND D1.3, AND USE ONLY CERTIFIED WELDERS. INCREASE WELD SIZE TO AWS MINIMUM SIZES, BASED ON PLATE THICKNESS. USE DRY E70xx ELECTRODES. CONFORM TO AWS D.18 FOR SEISMIC APPLICATIONS.
2. ALL WELDING SHALL MEET APPLICABLE PRE-HEAT REQUIREMENTS
3. ANY SPECIFIED FIELD CJP WELDS FOR MEMBER SPLICES SHALL BE TESTED w/ NDT.

CONCRETE

1. CONCRETE SHALL CONFORM TO THE INDICATED REFERENCE CODES AND STANDARDS EXCEPT AS MODIFIED BELOW:

   ACI-301 - "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE"
   ACI-318 - "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
   ACI-305R - "HOT WEATHER CONCRETING"
   ACI-306R - "COLD WEATHER CONCRETING"
   ACI-304 - "GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE"
2. CONCRETE MIX SPECIFICATIONS:

   MIX CATEGORIES:

   -SLAB ON GRADE: 4000 psi w/ 0.45 w/c RATIO TARGET; NO AIR; MAX. AGGREGATE: 1", GGBFS OR FLY ASH IS ACCEPTABLE UP TO 10% OF CEMENT WEIGHT. EXPOSURES: F0, C1, W2, S0

   -FOUNDATIONS: 4500 psi w/ 0.45 w/c RATIO TARGET; 6% AIR; MAX. AGGREGATE: 1.5", GGBFS OR FLY ASH IS ACCEPTABLE UP TO 25% OF CEMENT WEIGHT. EXPOSURES: F2, C1, W1, S0
3. TOTAL AIR CONTENT IS SPECIFIED IN THE TABLE ABOVE. AIR CONTENT TOLERANCE SHALL BE +/- 1-1/2 % AND SHALL BE MEASURED AT THE POINT OF PLACEMENT.
4. MUD-MAT OR FLOWABLE FILL SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 7-DAYS OF 1500 psi.
5. THE CONCRETE MIX SUBMITTAL SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER CEMENT RATIO, TARGET SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA, w/ CHLORIDE ION CONTENT
6. ACCELERATED SET, OR HIGH EARLY STRENGTH MAY BE ACHIEVED BY USING APPROVED ADMIXTURES. ALL ADMIXTURES SHALL BE CHLORIDE FREE.
7. CURING: REFERENCE ACI 308 - STANDARD PRACTICE FOR CURING CONCRETE AND ACI 301 - STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE. CURING COMPOUNDS SHALL BE COMPATIBLE WITH FUTURE FLOOR FINISHES. SLABS TO RECEIVE SUBSEQUENT FLOORING MATERIALS SHALL RECEIVE AN APPROVED DISSIPATING SEALER. BASIS OF DESIGN IS EUCLID CHEMICAL DR. VOX.
8. NON-SHRINK, NON-METALLIC GROUT SHALL BE CEMENT BASED AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF F_c = 8,500 psi AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM C1099M. GROUT BASIS OF DESIGN IS EUCLID CHEMICAL "NS GROUT" OR APPROVED EQUAL.
9. PROVIDE CONTROL JOINTS IN SLABS ON GRADE AS ANNOTATED ON THE FOUNDATION PLAN DRAWINGS. LOCATE CONTROL JOINTS AT COLUMN CENTER LINES OR AS INDICATED ON THE DRAWINGS. SAW CUT JOINTS TO 1/3 SLAB DEPTH.

REINFORCING STEEL

1. DESIGN, DETAIL, FABRICATE, AND ERECT REINFORCING STEEL ACCORDING TO THE LATEST ACI AND CRSI SPECIFICATION, REFERENCE STANDARDS: *ACI "DETAILING MANUAL" (SP-66); CRSI MANUAL OF STANDARD PRACTICE (MSP-1).*
2. DO NOT WELD REBAR UNLESS OTHERWISE APPROVED BY ENGINEER
3. EPOXY-COATED OR STAINLESS REBAR IS NOT PERMITTED
4. REINFORCING STEEL: ASTM A706 / A615, GRADE 60 (60 ksi), TYPICAL
5. STANDARD CONCRETE COVER REQUIREMENTS, UNLESS OTHERWISE NOTED:
   EARTH CAST:
   FOOTINGS: 3"
   SLABS: 2"
   FORM CAST:
   #5 BARS & SMALLER, EXPOSED FACE: 1.5"
   LARGER THAN #5 BARS, EXPOSED FACE: 2"
   SLABS & WALLS, INTERIOR FACE: 0.75"
   BEAMS & COLUMNS, INTERIOR FACE: 1.5"
   EXPOSED SURFACES
   COLUMNS (CLEAR TO TIES, HOOPS, OR SPIRALS): 1.5"
   COLUMNS (CLEAR TO PRIMARY REINF.): 2"
   COLUMNS & WALLS: 0.75"
   SLABS, INTERIOR: 0.75"
   SLABS, EXTERIOR; 1"
   CONCRETE IN CONTACT WITH OR OVER WATER: 2" MIN.
   CAISSONS / DRILLED SHAFTS: 4" (TO VERT. REINF.)
6. REINFORCING LAP SPLICES IN CONCRETE SHALL CONFORM WITH ACI 318-19 (22) SECTIONS 25.4.2 AND 25.5. ALL SPLICES SHALL BE CLASS A SPLICES.
7. REINFORCING TENSION DEVELOPMENT LENGTHS SHALL CONFIRM WITH ACI 318-19 (22) SECTION 25.4.2.4a

POST-INSTALLED EPOXY ADHESIVES ANCHORS & MECHANICAL ANCHORS

1. ANCHORS SHOWN IN DETAILS AND SCHEDULES CONSTITUTE A BASIS OF DESIGN ANCHOR.
2. CONTRACTOR MAY SUBMIT ALTERNATIVE ANCHOR MANUFACTURERS THROUGH SHOP DRAWINGS. PROVIDE AN ICC REPORT VALIDATING THE PROPOSED ANCHOR PERFORMANCE IS EQUAL TO THE BASIS OF DESIGN ANCHOR.
3. CONTRACTOR SHALL INSTALL ALL POST-INSTALLED EPOXY AND MECHANICAL ANCHORS PER ALL MANUFACTURER INSTRUCTIONS, WITH ATTENTION TO TEMPERATURE AND HOLE PREPARATION REQUIREMENTS.
4. CONTRACTOR MAY NOT DEVIATE FROM THE ANCHOR DIAMETER, EMBEDMENT, EDGE DISTANCE AND SPACING CRITERIA NOTED ON THE DETAILS. IF NOT NOTED, PROVIDE THE MOST RESTRICTIVE SPACING AND EDGE DISTANCE DIMENSIONS THAT ALLOW FOR NO REDUCTION IN ANCHOR STRENGTH. ANY DEVIATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
5. NOTIFY THE ENGINEER IMMEDIATELY IF CONDITIONS ENCOUNTERED DIFFER FROM THE EXPECTED CONDITIONS. FOR EXAMPLE, IF THE MASONRY CELL IS HOLLOW INSTEAD OF GROUTED.

CONCRETE MASONRY

1. CEMENT FOR MORTAR AND GROUT SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C150; MORTAR AGGREGATE PER ASTM C144; GROUT PER ASTM C404; HYDRATED LIME PER ASTM C207; QUICK LIME PER ASTM C5; WATER WILL BE CLEAN AND POTABLE.
2. NEW CMU WALL DESIGN TARGET f'_m = 2000 psi
3. CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT AND HAVE A MIN. NET AREA COMPRESSIVE STRENGTH f'_{cmu} = 3250 psi IN ACCORDANCE WITH ASTM C90.
4. MORTAR SHALL BE MASONRY-CEMENT, TYPE S, UNIFORMLY MIXED, IN ACCORDANCE WITH ASTM C91. AVERAGE COMPRESSIVE STRENGTH OF MORTAR (28-DAY) IS 1800 psi. THE MAXIMUM AIR CONTENT SHALL BE 19%.
5. GROUT FOR SHOULD CONFORM TO ASTM C476. MINIMUM COMPRESSIVE STRENGTH f'_g = 2000 psi (28-DAY) IS REQUIRED. FINE GROUT OR COARSE GROUT SHALL BE SELECTED BASED ON MINIMUM GROUT SPACING REQUIREMENTS OF ACI 530.1. MAX AGGREGATE SIZE IS 3/8" FOR COARSE GROUT. ADMIXTURES MAY BE ADDED TO ACHIEVE THE DESIRED SLUMP OR WORKABILITY.
6. ALL CELLS CONTAINING REINFORCING OR EMBEDDED ITEMS AND ALL CELLS BELOW GRADE SHALL BE SOLID GROUTED. GROUT LIFTS SHALL BE LESS THAN 5'-4". HIGH LIFT GROUTING w/ CLEANOUTS CAN BE USED UP TO 12'-8"
7. ALL UNITS TO BE CONSTRUCTED UP IN RUNNING BOND. THICKNESS OF BED AND HEAD JOINTS SHALL NOT EXCEED 5/8".
8. ALL EXTERIOR EXPOSED CMU SHALL HAVE INTRINSIC WATERPROOFING ADMIXTURE ADDED TO CONCRETE MASONRY CASTING MIX. SUBMIT DATA SHEET TO A/E FOR REVIEW.
9. ALL WALLS HAVE LADDER MASONRY WALL REINFORCEMENT IN EVERY OTHER HORIZONTAL JOINT (16" C/C) AND IN EACH JOINT (8" C/C) FOR TWO JOINTS ABOVE & BELOW OPENINGS. REINFORCEMENT SHALL BE CONTINUOUS WITH 6" MIN. LAPS. REINFORCEMENT AT OPENINGS SHALL EXTEND 2'-0" BEYOND EACH SIDE OF THE OPENING. CAVITY WALLS SHALL HAVE ONE ROD FOR EACH BED JOINT. MIN. LADDER WIRE SIZE IS W1.7 (9 ga) GALVANIZED.
10. **MASONRY WALLS ON THESE DOCUMENTS ARE NOT DESIGNED AS FREE-END CANTILEVER** OR RETAINING WALL ELEMENTS. WALLS SHALL BE EQUALLY BACKFILLED BOTH SIDES. DO NOT ATTEMPT TO UNEQUALLY BACKFILL WALLS. DO NOT OPERATE HEAVY EQUIPMENT IN THE VICINITY OF THESE SUB-SURFACE MASONRY WALLS. WALLS ABOVE GRADE MUST BE BRACED DURING CONSTRUCTION FOR WIND LOADS WHILE UNDER CONSTRUCTION.
11. MASONRY DEVELOPMENT OR EMBED LENGTHS (inches)

REBAR	CENTERED SPLICE / DEVELOP.	OFFSET DEVELOP.	HOOK EMBED
#3	12"	19"	4.8"
#4	15"	34"	6.5"
#5	23"	45"	8.1"
#6	43"	54"	9.7"
#7	60"	63"	11.3"

LIGHT-GAUGE METAL FRAMING (COLD-FORMED STEEL)

1. LIGHT GAUGE FRAMING SHALL BE DESIGNED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE LATEST AISI *"SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS"*.
2. COLD FORMED STEEL STUDS ON THIS PROJECT HAVE BEEN DESIGNED AND DO NOT NEED A DELEGATED ENGINEERING DESIGN. PROVIDE STUD SIZES AS NOTED ON THE ARCHITECTURAL AND STRUCTURAL PLANS. SHOP DRAWINGS SHALL BE SUBMITTED TO THE A/E FOR REVIEW.
3. MATERIALS SHALL MEET ASTM A446 AND A525 REQUIREMENTS FOR ZINC COATED SHEET STEEL. ALL COLD FORMED STUDS USED IN EXTERIOR CURTAINWALL AND SHEARWALL APPLICATIONS SHALL BE MIN. 50 ksi (F_y=50 ksi) STRENGTH.
4. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS "CODE FOR WELDING IN BUILDING CONSTRUCTION, D1.0" AND ANSI Z49.1. IF WELDING IS USED, APPLY A REPLACEMENT ZINC-RICH PAINT.
5. MINIMUM WELD THICKNESS (t) MUST MATCH OR EXCEED BASE STEEL THICKNESS OF THE THINNEST CONNECTED PART UNLESS NOTED OTHERWISE.
6. COLD-FORMED LIGHT GAUGE STEEL FRAMING MEMBERS SHALL INCLUDE "C"-SHAPED AND ANGLES, STRUCTURAL STEEL STUDS, JOIST, AND RUNNER TRACK.
7. PROVIDE WALL BRACING, JOIST BRIDGING, WEB STIFFENERS, AND OTHER ACCESSORIES PER MANUFACTURERS' SPECIFICATIONS AND REQUIREMENTS. WALL STUDS SHOULD BE BRACED TO PREVENT ROTATION OF FLANGES AT 4' MAX. JOISTS SHALL BE BRACED AGAINST ROTATION AT 5' MAX. BASIS OF DESIGN FOR KNOCK OUT BRACING BTW. STUDS IS "CLARK DIETRICH TRADEREADY SPAZZER 5400 BRIDGING/SPACER". STUD TO BRACE SHALL BE EITHER "CLARK DIETRICH S545 w/ (2) #10-16 SCREWS TO STUD & TO SPAZZER" OR "CLARK DIETRICH SPAZZER 5400 GUARD w/ (2) #10-16 SCREWS"
8. USE A MIN. OF (3) STUDS AT CORNERS OF ALL EXTERIOR WALLS AND (3) STUDS AT INTERSECTIONS OF ALL LOAD BEARING WALLS (INTERIOR AND EXTERIOR).
9. HEADERS AND BEAMS SHALL BE CONSTRUCTED OF UNPUNCHED MATERIALS.
10. MAXIMUM GAP BETWEEN WEB OF STUDS AND WEB OF TRACK FOR A SEATED STUD IS 1/8" FOR ALL STRUCTURAL WALLS. PRESSURE SHOULD BE APPLIED TO NEST STUDS INTO TRACKS.
11. HEADERS SHALL BE LOCATED AT THE TOP OF THE WALL OR AT BEARING OF STRUCTURE ABOVE WITH "FALSEWORK" DOWN TO FORM OPENING. VOIDS WITHIN HEADERS IN INSULATED WALLS SHALL BE FILLED w/ INSULATION.
12. JAMB STUDS (JACK STUDS) SHALL BE ATTACHED TO KING (FULL HEIGHT) STUDS w/ (1) #10 SCREW @ 8" O.C., CENTERED ON STUD.
13. SILL TRACK ASSEMBLY SHALL BE ANCHORED TO JAMB STUDS w/ LIGHT GAUGE CLIP ANGLE, BASIS OF DESIGN IS "CLARK DIETRICH S545 w/ (2) #10-16 SCREWS PER LEG"
14. SHEATHING MATERIALS SHALL BE FASTENED TO STUD WALLS IN COMPLIANCE w/ PLANS.
15. INSTALLER SHALL NOTE ALL WALL LOUVERS & DUCT PENETRATIONS AND PROVIDE BOX HEADERS, JACK STUDS, AND APPROPRIATE METHODS FOR SUCH LOCATIONS.
16. SCREWS ARE AS INDICATED ON DETAILS OR DRAWINGS, PROVIDED TO FOLLOWING:
    A. CFS TO CFS: #10-16 x 5/8" PAN HEAD, BUILDEX "TEKS" OR GRABBER SELF-DRILL
    B. CFS TO CFS: #12-24 x 1-1/4" HEX HEAD, #5 TIP, BUILDEX "TEKS" OR HILTI KWIK-PRO
    C. CFS TO CONCRETE: 0.157" DIA. PAF (POWDER ACTUATED FASTENER), HILTI X-U
17. ALL SCREWS REQUIRE 1/2" MINIMUM CLEARANCE TO EDGES OF MEMBERS AND 1/2" MINIMUM CLEARANCE BETWEEN SCREWS.

SPECIAL INSPECTIONS

1. SPECIAL INSPECTIONS LISTED BELOW SHOULD COMPLY WITH THE APPLICABLE LISTED STANDARDS. SPECIFIC INSPECTION REQUIREMENTS ARE NOT NOTED HERE FOR PURPOSES OF BREVITY. THE OWNER AND/OR CONTRACTOR SHALL PROVIDE FOR SPECIAL INSPECTIONS AS INDICATED BELOW.
2. AT THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR AND/OR OWNER OR THEIR REPRESENTATIVE WILL PROVIDE A STATEMENT OF CONFORMANCE TO THE ENGINEER FOR REVIEW, CONCURRENCE, AND SUBMITTAL TO THE AUTHORITY HAVING JURISDICTION FOR THE RECORD.
3. SPECIAL INSPECTIONS REQUIRED:
   A. STEEL SPECIAL INSPECTIONS PER 1705.2: NOT APPLICABLE
   B. CONCRETE SPECIAL INSPECTIONS PER 1705.3: **REQUIRED**
   C. MASONRY SPECIAL INSPECTIONS PER 1705.4: **REQUIRED, LEVEL 1**
   D. WOOD SPECIAL INSPECTIONS PER 1705.5: NOT APPLICABLE
   E. SOIL SPECIAL INSPECTIONS PER 1705.6: **REQUIRED**
   F. DEEP DRIVEN FOUNDATION SPECIAL INSPECTIONS PER 1705.7: NOT APPLICABLE
   G. SPECIAL INSPECTIONS FOR WIND RESISTANCE: NOT REQUIRED
   H. SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE: NOT REQUIRED
4. SPECIAL INSPECTIONS TO COMPLY WITH THE FOLLOWING:
   A. CONCRETE: TABLE 1705.3 AND ACI 318
      a. ITEM 3 ANCHORS - PERIODIC
      b. ITEM 4 POST-INSTALLED ANCHORS - CONTINUOUS
      c. ITEM 5 MIXES - PERIODIC
      d. ITEM 6 BATCH TESTING - CONTINUOUS
      e. ITEM 7 PLACEMENT - CONTINUOUS
      f. ITEM 8 CURING - PERIODIC
   B. MASONRY: TMS 402/602 TABLE 3 & TABLE 4
   C. SOIL: TABLE 1705.6
      a. ITEM 1 SOIL ADEQUACY - PERIODIC
      b. ITEM 2 EXCAVATION EXTENTS - PERIODIC
      c. ITEM 3 CLASS & COMPACTION - PERIODIC
      d. ITEM 4 MAT'L & THICKNESS TESTING - CONTINUOUS
      e. ITEM 5 SUBGRADE PREP - PERIODIC

THE COL LAB ORAT IVE

ANDREW BROCK ENGINEER
structural & civil engineering

STATE OF MICHIGAN
ANDREW M. BROCK
ENGINEER
No. 6201069379
LICENSED PROFESSIONAL ENGINEER
11/21/2025

KEY PLAN
N.T.S.

PROJECT TITLE
Oscoda Area Schools

OAS Misc. Renovation Projects

3550 E River Rd,
Oscoda Township, MI 48750

11.21.2025	BID/PERMIT

TC JOB NO. 107348
OWNER JOB NO.
AMB ENG. JOB NO. 20250131

SHEET TITLE
STRUCTURAL NOTES & SPECIAL INSPECTIONS

SHEET NO.
S001

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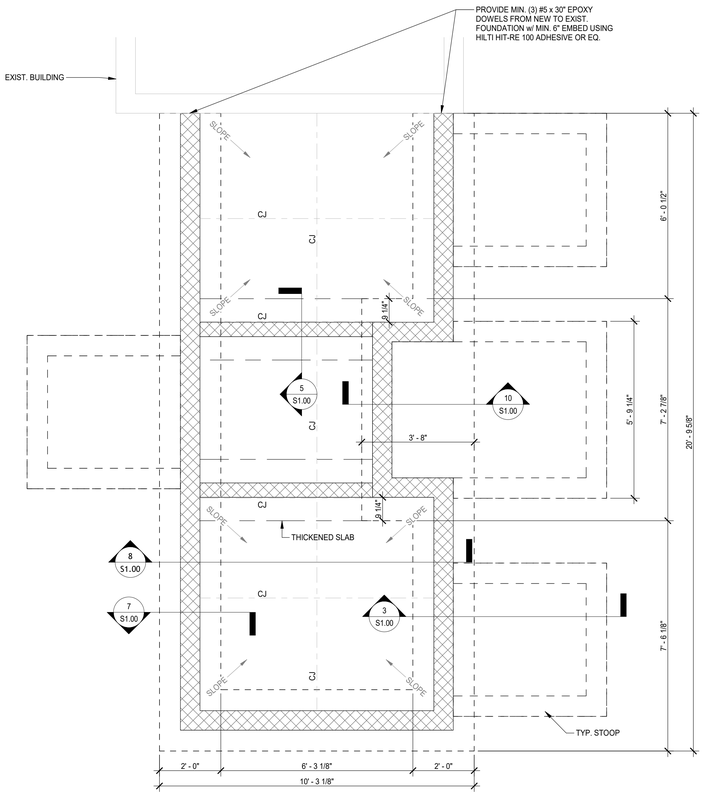
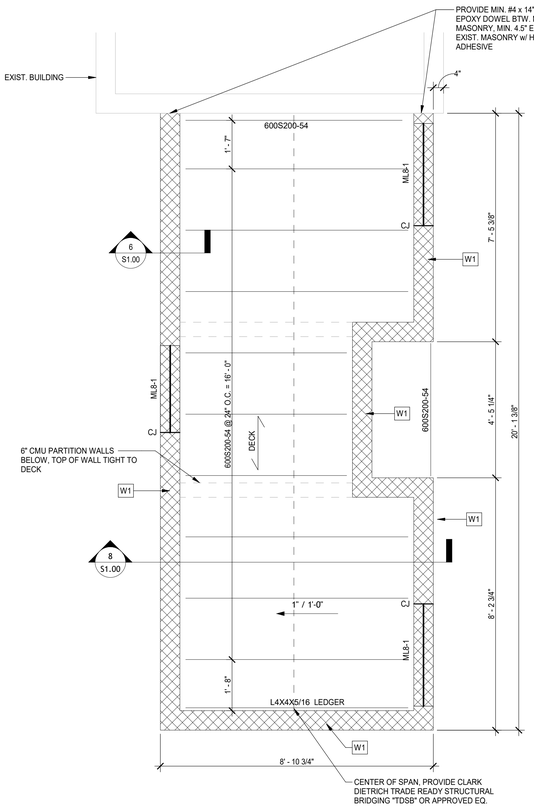


FOUNDATION PLAN

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

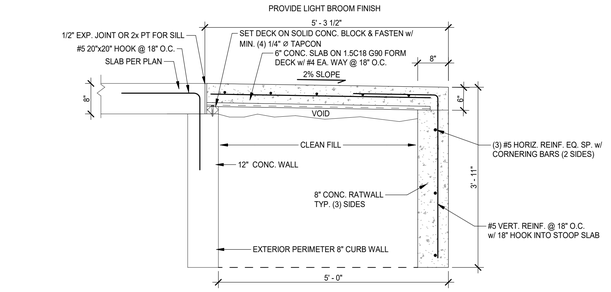
NOTES:
1. FINISH FLOOR = 100'-0" = REFER TO CIVIL PLANS
   A. 4" SLAB ON GRADE:
   B. REINFORCED w/ WWF 6x6xW2.9xW2.9
   C. ALT: MACROFIBERS, EUCLID CHEMICAL TUF-STRAND SF, DOSED AT 3.0 lbs/cy
   D. SUBBASE: 6" COMPACTED AGGREGATES, 1-1/2" MINUS w/ LIMITED FINES OR SIM. TO MDOT 21AA GRADATION
   E. PROVIDE 15 mil VAPOR BARRIER
2. PROVIDE SAW-CUT CONTROL JOINTS (CJ) AS INDICATED, CUT TO 1.33" DEPTH, FILLED w/ SIKAFLEX 1a JOINT SEALANT, 3/16" JOINT WIDTH.
3. CUT EVERY OTHER WIRE ACROSS CONTROL JOINTS, TYP. IF WWF USED
4. PROVIDE CONT. 1/2" PERIMETER EXPANSION JOINT AGAINST ALL MASONRY WALLS, FILLED w/ SIKAFLEX 1a JOINT SEALANT & BACKER ROD.
5. SLOPE SLABS AT RESTROOMS LOCALLY TO FLOOR DRAINS, TYP. WHERE INDICATED.



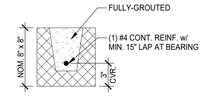
ROOF BEARING

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

NOTES:
1. W1 = 8" CMU w/ #4 VERT. REINF. @ 48" O.C. IN FULLY GROUTED CELLS w/ TOP COURSE CONT. BOND BEAM, FULLY GROUTED, w/ (1) #4 CONT.
2. ROOF DECK = 1-1/2" B DECK, 50 ksi YIELD, 22 GAUGE
   A. FASTENER LAYOUT (FIELD): 36/4 w/ (2) SIDELAP FASTENERS PER SPAN. SUPPORT FASTERS ARE #12-24 TEK SCREWS. SIDELAP FASTENERS ARE #12-24 TEK SCREWS.
   B. DECK SPANNING ATOP CMU, PROVIDE 1/4"Ø HILTI KWIK CON II + ANCHORS AT EA. LOW RIB OF DECK, TYP.
3. FASTEN L4x4 DECK LEDGER AT CMU EMDWALLS w/ 1/2"Ø HILTI KWIK HUS EZ (KH-EZ) ANCHORS w/ MIN. 4.25" EMBED SPACED @ 24" O.C. ALONG LEDGER. TOP OF ANGLE LEDGER TO MATCH BOTTOM OF DECK ELEVATION

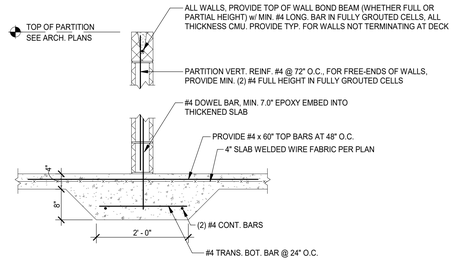


3 S1.00 TYP. STOOP SECTION
SCALE: 3/4" = 1'-0"



ALL CMU LINTELS:
1. MIN. f'm = 2500 psi
2. MIN. 8" BEARING EA. END
3. PRECAST CONC. LINTELS ARE ACCEPTABLE, SUBMIT TO A/E FOR REVIEW & APPROVAL

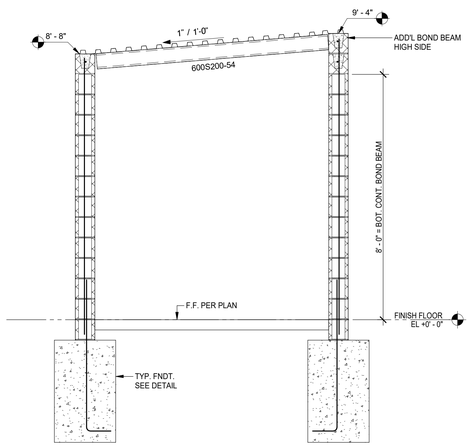
4 S1.00 MASONRY LINTELS
SCALE: 1 1/2" = 1'-0"



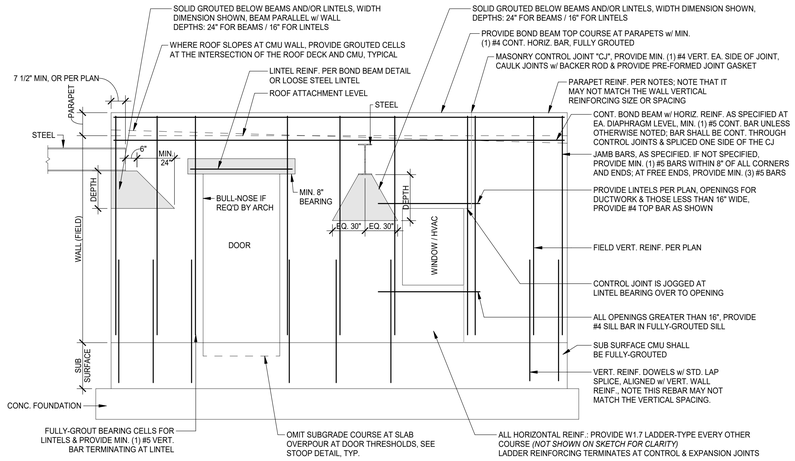
5 S1.00 THICKENED SLAB DETAIL
SCALE: 3/4" = 1'-0"

6 S1.00 ROOF JOIST CONNECTION
SCALE: 1" = 1'-0"

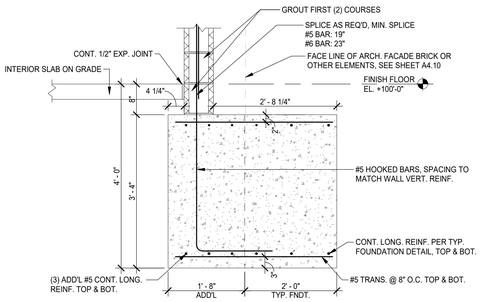
7 S1.00 TYP. CMU FOUNDATION MARK "WF1"
SCALE: 3/4" = 1'-0"



8 S1.00 BUILDING SECTION
SCALE: 1/2" = 1'-0"



9 S1.00 ORDINARY REINF. CMU WALL TYPICAL ELEVATION
SCALE: 3/8" = 1'-0"



10 S1.00 CMU FOUNDATION MARK "WF2"
SCALE: 3/4" = 1'-0"

THE COLLABORATIVE

ANDREW BROCK ENGINEER
structural & civil engineering

STATE OF MICHIGAN
ANDREW W. BROCK
ENGINEER
No. 6201069379
LICENSED PROFESSIONAL ENGINEER
11/21/2025

KEY PLAN
N.T.S.

PROJECT TITLE

Oscoda Area Schools

OAS Misc. Renovation Projects

3550 E River Rd,
Oscoda Township, MI 48750

11.21.2025	BID/PERMIT

TC JOB NO. 107348

OWNER JOB NO.

AMB ENG. JOB NO. 20250131

SHEET TITLE

STRUCTURAL PLANS AND DETAILS

SHEET NO.

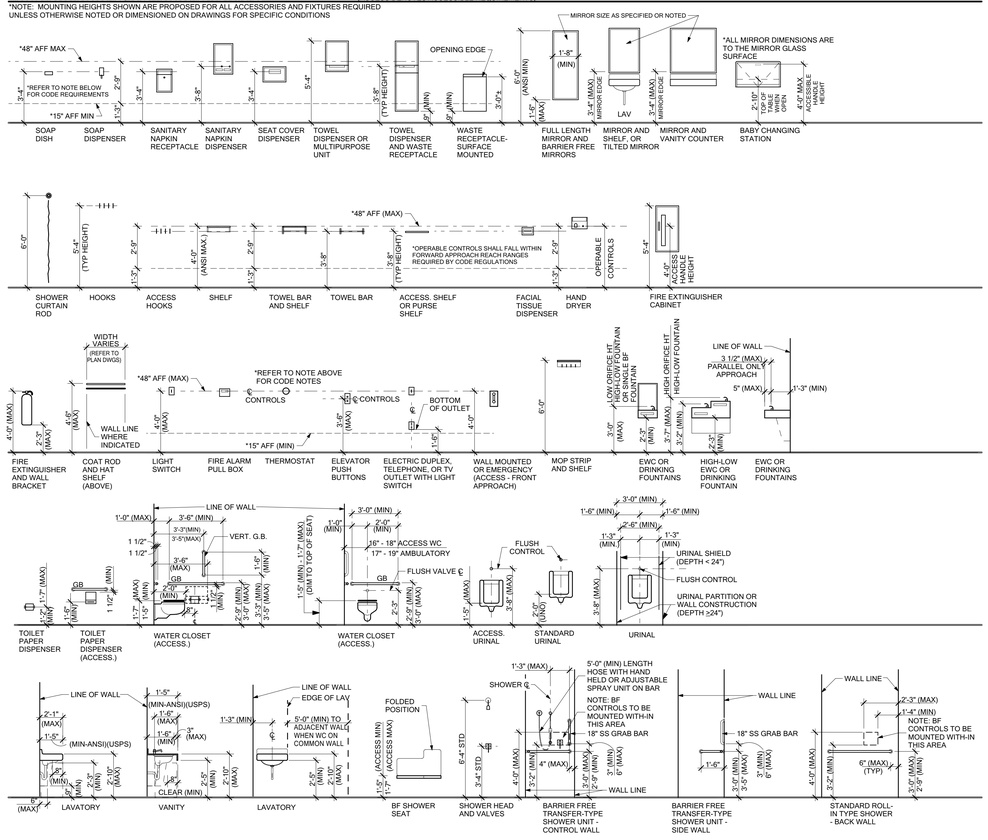
S1.00

PLOTTED: 11/20/2025 10:59:48 AM

TYPICAL MOUNTING HEIGHTS (BASED ON ICC - A117.1 - 2009)

MISCELLANEOUS ACCESSORIES, TOILET ACCESSORIES AND FIXTURES (ACCESS DENOTES ACCESSIBLE REQUIREMENTS)

*NOTE: MOUNTING HEIGHTS SHOWN ARE PROPOSED FOR ALL ACCESSORIES AND FIXTURES REQUIRED UNLESS OTHERWISE NOTED OR DIMENSIONED ON DRAWINGS FOR SPECIFIC CONDITIONS



REFERENCE SYMBOLS

ROOM NAME AND NUMBER IDENTIFICATION

ROOM NAME
000 — ROOM IDENTIFICATION NUMBER

KEYED NOTE IDENTIFICATION

XX-# — KEYED NOTE IDENTIFICATION NUMBER AS LISTED IN "KEYED NOTES LEGEND"

GRID LINE IDENTIFICATION

A — GRID ID (NEW CONSTRUCTION)

A — GRID ID (EXISTING CONSTRUCTION)

WALL TYPE IDENTIFICATION

C — WALL CONSTRUCTION TYPE LETTER AS LISTED IN "WALL TYPES" SHEET

(DESCRIPTION ORIGINATES AT WALL SURFACE DESIGNATION)

FENESTRATION IDENTIFICATION

A — WINDOW IDENTIFICATION NUMBER, REFER TO WINDOW SCHEDULE

SF-A — STOREFRONT IDENTIFICATION NUMBER, REFER TO STOREFRONT ELEVATIONS

CW-A — CURTAIN WALL IDENTIFICATION NUMBER, REFER TO CURTAIN WALL ELEVATIONS

DOOR IDENTIFICATION

101
101A — DOOR IDENTIFICATION NUMBER

STAIR DIRECTION NOTATION

10 T (11 R) — UP (DN) — STAIR DIRECTION TO FLOOR ABOVE (UP) OR BELOW (DN.)

NUMBER OF TREADS (OR RISERS) IN STAIR RUN

MATERIAL OR WORK DIVISION NOTATION

MATERIAL "A" (NEW CONST.) — MATERIAL "B" (EXIST. CONST.)

JOINT BETWEEN MATERIALS (OR CONSTRUCTION WORK DIVISION LINE)

DRAWING DIMENSION LINES

5'-3" — NOTE: DO NOT SCALE DRAWINGS WITHOUT GRAPHIC SCALES WITH PROPORTIONS OTHER THAN 1:1

NORTH INDICATION

N — ASSUMED NORTH IF NOT TRUE NORTH OR PLAN NORTH WHERE TRUE NORTH IS INDICATED BY ARROW NOTATION

DRAWING NOTE

MATERIAL NOTATION AND INFORMATION (REFER TO TECHNICAL SPECIFICATIONS FOR MATERIAL DESCRIPTIONS AND METHODS OF CONSTRUCTION)

DRAWING/DETAIL/SECTION IDENTIFICATION

X — IDENTIFICATION NUMBER

DRAWING/DETAIL/SECTION TITLE
SCALE: 1/8" = 1'-0"

SECTION LOCATION INDICATION

X / X.XX — SECTION IDENTIFICATION NUMBER

SHEET IDENTIFICATION NUMBER

DETAIL LOCATION INDICATION

X / XX.XX — DETAIL IDENTIFICATION NUMBER

SHEET IDENTIFICATION NUMBER

MATCH LINE INDICATION

A1.1 / A1.2

SHEET IDENTIFICATION NUMBER (INDICATES SHEET NUMBER OF DRAWING)

ZONE 'A' — ZONE 'A'

ZONE 'B' — ZONE 'B'

SHEET IDENTIFICATION NUMBER (INDICATES SHEET NUMBER WHERE DRAWING IS CONTINUED)

ELEVATION INDICATION

X / XX.XX — ELEVATION IDENTIFICATION NUMBER(S)

INDICATES DIRECTION OF VIEW OR MULTIPLE VIEWS

SHEET IDENTIFICATION NUMBER

A B C D

DOOR INDICATION

BULLETIN OR ADDENDUM IDENTIFICATION

1 — BULLETIN NUMBER

(CURRENT REVISIONS SHALL BE SHOWN ENCIRCLED BY A FREEFORM LINE) 1

ABBREVIATIONS

A	
AB	ACOUSTIC BAFFLE
A/C	AIR CONDITIONING
ABV	ABOVE
ACCU	AIR COOLED CONDENSING UNIT
AD	AREA DRAIN
ADO	AUTOMATIC DOOR OPENER
ADJ	ADJUSTABLE / ADJACENT
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AL / ALUM	ALUMINUM
ALT	ALTERNATE
ANOD	ANODIZED
APC	ACOUSTIC PANEL CEILING
ARCH	ARCHITECT/ARCHITECTURAL
AVG	AVERAGE
AWT	ACOUSTIC WALL TREATMENT
B	
BB	BULLETIN BOARD
BSMT	BASEMENT
BM	BEAM
BRG	BEARING
BD	BOARD
BLR	BOILER
BOD	BASIS OF DESIGN
BOT	BOTTOM
BLDG	BUILDING
BUR	BUILT-UP ROOFING
C	
C&G	CURB AND GUTTER
CAB	CABINET
CAP	CAPACITY
CB	CATCH BASIN
CBB	CEMENTITOUS BACKER BOARD
CEM	CEMENT / CEMENTITOUS
CF	CONTRACTOR FURNISHED
CFMF	COLD-FORMED METAL FRAMING
CG	CORNER GUARD
CHBD	CHALKBOARD
CI	CONTRACTOR INSTALLED
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT/ CONSTRUCTION JOINT

C (CONT)	
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUE/CONTINUOUS
COORD	COORDINATE
CORR	CORRUGATED
CPT	CARPET
CSMT	CASEMENT
CT	CERAMIC TILE
CTB	CERAMIC TILE BASE
CTF	CERAMIC TILE FLOOR
CTR	CENTER
CU	COPPER
CU FT	CUBIC FEET/ CUBIC FOOT
CU YD	CUBIC YARD
CUH	CABINET UNIT HEATER
CW	COLD WATER PIPING
D	
D	DEEP
DEMO	DEMOLISH, DEMOLITION
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFUSER
DIM	DIMENSION
DIR	DIRECTION
DISC	DISCONNECT
DIST	DISTANCE
DL	DEAD LOAD
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DW	DISHWASHER
E	
EA	EACH
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC/ELECTRICAL

E (CONT)	
ELEV	ELEVATOR
EMER	EMERGENCY
ENGR	ENGINEER
EP	ELECTRICAL PANEL
EPT	EPOXY PAINT
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXT	EXTERIOR
F	
F	FILLER PANEL
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FCO	FLOOR CLEAN OUT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF&E	FURNITURE, FIXTURES & EQUIPMENT
FGL	FIBERGLASS
FH	FIRE HYDRANT
FIN	FINISH/FINISHED
FIXT	FIXTURE
FLR	FLOOR
FLG	FLOORING
FP	FIRE PROTECTION
FR	FIRE RATING / FIRE RESISTANCE
FRP	FIBERGLASS REINFORCED PLASTIC
FRT	FIRE RETARDANT TREATED
FTG	FOOTING
G	
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRRUPTER
GFRC	GLASS-FIBER REINFORCED CONCRETE
GFRG	GLASS-FIBER REINFORCED GYPSUM
GL	GLASS
GR	GRADE
GYP	GYPSUM

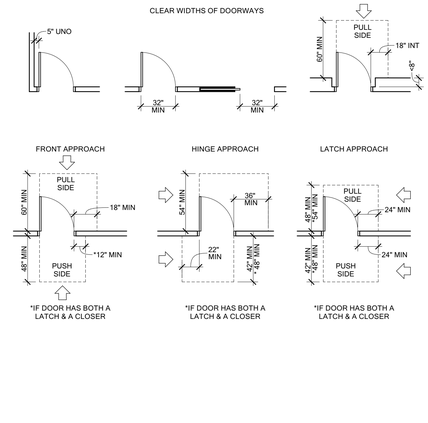
H	
H	HIGH / HEIGHT
HB	HOSE BIBB
HC	HOLLOW CORE
HD	HAND DRYER
HDR	HEADER
HDW	HARDWARE
HDWD	HARDWOOD
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT
HT	HEIGHT
HVAC	HEATING, VENTILATING, & AIR CONDITIONING
HW	HOT WATER PIPING
I	
ID	INSIDE DIAMETER / DIMENSION
INCL	INCLUDE/INCLUDING
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
J	
J-BOX	JUNCTION BOX
JT	JOINT
L	
LAM	LAMINATED
LAV	LAVATORY
LF	LINEAR FEET
LH	LEFT HAND
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
LT	LIGHT
M	
MATL	MATERIAL
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MDF	MEDIUM DENSITY FIBERBOARD
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MEMB	MEMBRANE
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS

M (CONT)	
MO	MASONRY OPENING
MP	METAL PANEL
MTD	MOUNTED
MTL	METAL
MULL	MULLION
N	
NIC	NOT-IN-CONTRACT
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFICIENT
NSMF	NON-STRUCTURAL METAL FRAMING
NTS	NOT-TO-SCALE
O	
OC	ON CENTER
OCC	OCCUPY / OCCUPANTS
OD	OUTSIDE DIAMETER
OF	OWNER FURNISHED
OH	OVERHEAD
OI	OWNER INSTALLED
OPNG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
P	
PB	PUSH BUTTON
PC	PRECAST
PCF	POUNDS PER CUBIC FOOT
PERF	PERFORATED
PERIM	PERIMETER
PERP	PERPENDICULAR
PLAM	PLASTIC LAMINATE
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PNL	PANEL
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PRKG	PARKING
PROJ	PROJECT
PROP	PROPERTY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PAINT
PTR	PRESERVATIVE TREATED
PVG	PAVING
PWD	PLYWOOD
PWR	POWER

Q	
QT	QUARRY TILE
QTB	QUARRY TILE BASE
QTF	QUARRY TILE FLOOR
QTY	QUANTITY
R	
RAD	RADIUS
RBR	RUBBER
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REC	RECESSED
RECPT	RECEPTACLE
RECT	RECTANGLE/RECTANGULAR
REF	REFRIGERATOR
REINF	REINFORCE
REQD	REQUIRED
RESIL	RESILIENT
RFG	ROOFING
RH	RIGHT HAND
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RTF	RUBBER TILE FLOOR
RTU	ROOF TOP UNIT
RWB	RESILIENT WALL BASE
S	
SAFB	SOUND ATTENUATION FIRE BLANKET
SAFM	SPRAY-APPLIED FIRE-RESISTIVE MATERIAL
SAN	SANITARY
SC	SOLID CORE
SCHED	SCHEDULE
SCRN	SCREEN
SCWD	SOLID CORE WOOD
SD	SMOKE DETECTOR
SF	SQUARE FEET
SHT	SHEET
SIM	SIMILAR
SM	SHEET METAL
SPEC	SPECIFICATIONS
SPKLR	SPRINKLER
SPKR	SPEAKER
SS	SOLID SURFACE
SSR	STANDING SEAM ROOF
SST	STAINLESS STEEL
STC	SOUND TRANSMISSION CLASS
STL	STEEL
STRUCT	STRUCTURAL
SURF	SURFACE
SUSP	SUSPEND / SUSPENDED

T	
T&G	TONGUE AND GROOVE
T&B	TOP AND BOTTOM
TB	TERRAZZO BASE
TD	TRENCH DRAIN
TEMP	TEMPORARY
TER	TERRAZZO
TG	TRANSFER GRILLE
THK	THICK/ THICKNESS
TME	TO MATCH EXISTING
TO	TOP OF
TOC	TOP OF CURB / CONCRETE
TSTAT	THERMOSTAT
TYP	TYPICAL
U	
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITER'S LABORATORY
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
V	
VAR	VARIATION / VARIES / VARIOUS
VAV	VARIABLE AIR VOLUME
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL/ VERTICALLY
VIF	VERIFY IN FIELD
VNR	VENEER
VWC	VINYL WALL COVERING
W	
W	WIDTH
W/	WITH
W/O	WITHOUT
WB	WOOD BASE
WBL	WOOD BLOCKING
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WD	WOOD
WH	WATER HEATER
WM	WATER METER
WP	WORKING POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC

DOOR CLEARANCE REQUIREMENTS



THE COLLABORATIVE +ACOCK

STATE OF MICHIGAN
Brandon M. Andrzejczak
License No. 4301066085
LICENSED ARCHITECT

PROJECT TITLE

Oscoda Area Schools

OAS Misc. Renovation Projects

3550 E River Rd,
Oscoda Township, MI 48750

11.21.2025	BID/PERMIT
09.12.2025	DESIGN DEVELOPMENT
07.18.2025	SCHEMATIC DESIGN

TC JOB NO. Project No. 107348

SHEET TITLE

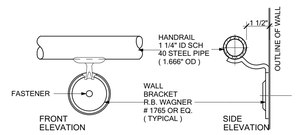
GENERAL INFORMATION

SHEET NO.

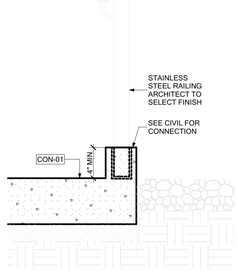
A0.00

PLAN GENERAL NOTES:

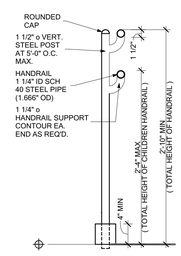
1. COORDINATE SIZE AND LOCATION OF ALL HOUSEKEEPING PADS AND/OR EQUIPMENT SUPPORTS WITH APPROPRIATE EQUIPMENT MANUFACTURER.
2. COORDINATE SIZES AND LOCATIONS OF ALL MISCELLANEOUS ACCESS PANELS REQUIRED. ACCESS PANELS ARE SPECIFIED ARCHITECTURALLY BUT ARE TO BE PROVIDED BY TRADES REQUIRING THEM. ALL LOCATIONS MUST BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
3. FLOOR PLANS ARE DIMENSIONED TO ACTUAL WALL THICKNESS UNLESS OTHERWISE NOTED.
4. DIMENSIONS FOLLOWED BY ▪ MUST BE FIELD REVIEWED AND ALL NECESSARY ADJUSTMENTS MADE PRIOR TO FABRICATION AND/OR INSTALLATION OF AFFECTED WORK. NOTIFY ARCHITECT IF DISCREPANCIES ARISE BEFORE PROCEEDING WITH THE WORK.
5. PROVIDE INTERIOR GYPSUM BOARD CONTROL JOINTS @ 25' O.C. AT LOCATIONS SHOWN ON PLANS AND/OR INTERIOR ELEVATIONS OR AS DIRECTED BY ARCHITECT.
6. VERIFY QUANTITY, SIZES, AND LOCATIONS OF ALL FLOOR, ROOF AND WALL OPENINGS FOR MECHANICAL AND ELECTRICAL WORK WITH THE APPROPRIATE TRADES. PROVIDE ALL OPENINGS SHOWN OR REQUIRED FOR THE COMPLETION OF THE WORK. PROVIDE ALL LINTELS REQUIRED FOR THESE OPENINGS PER SPECIFICATIONS.
7. REFER TO LS & A0 SERIES DRAWINGS FOR LOCATIONS OF REQUIRED FIRE RESISTANCE RATINGS, UL DESCRIPTIONS, AND JOINT DETAILS.
8. REFER TO FINISH PLANS FOR FLOOR FINISHES, ROOM FINISHES, AND FINISH LAYOUTS.
9. SEE REFLECTED CEILING PLANS FOR WINDOW SHADE LOCATIONS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.



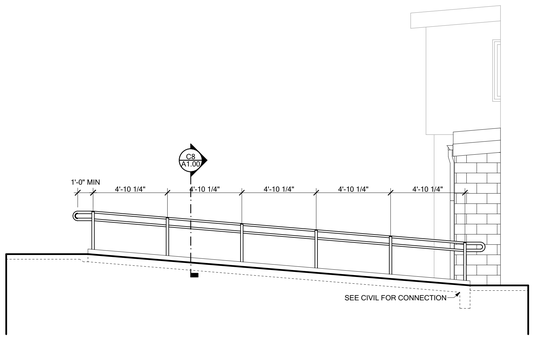
D6 HANDRAIL DETAIL
SCALE: 3" = 1'-0"



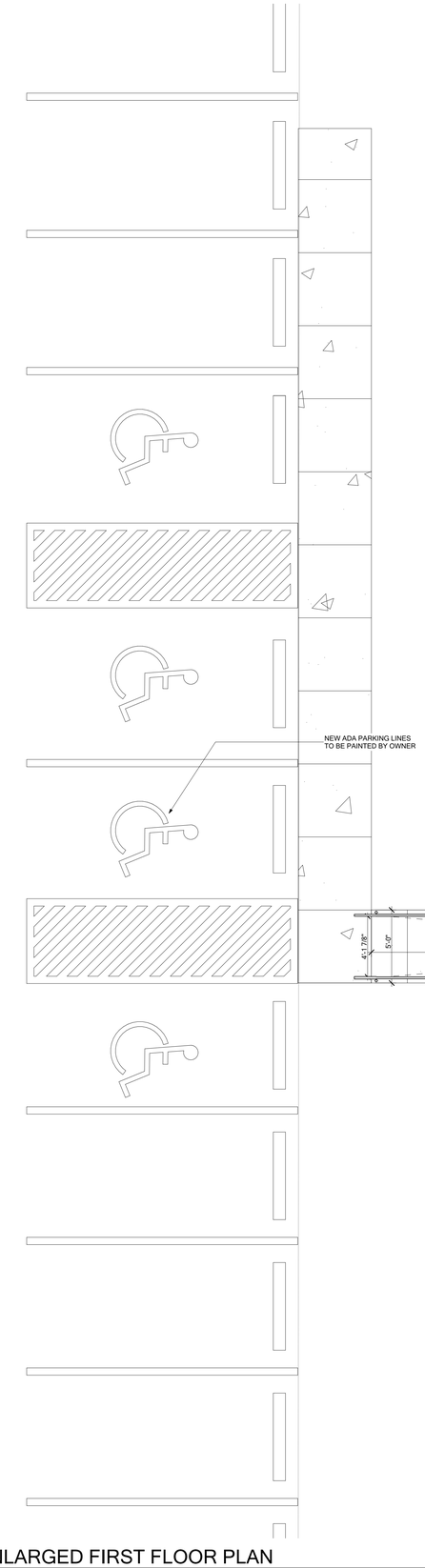
C8 BUILDING SECTION
SCALE: 1 1/2"= 1'-0"

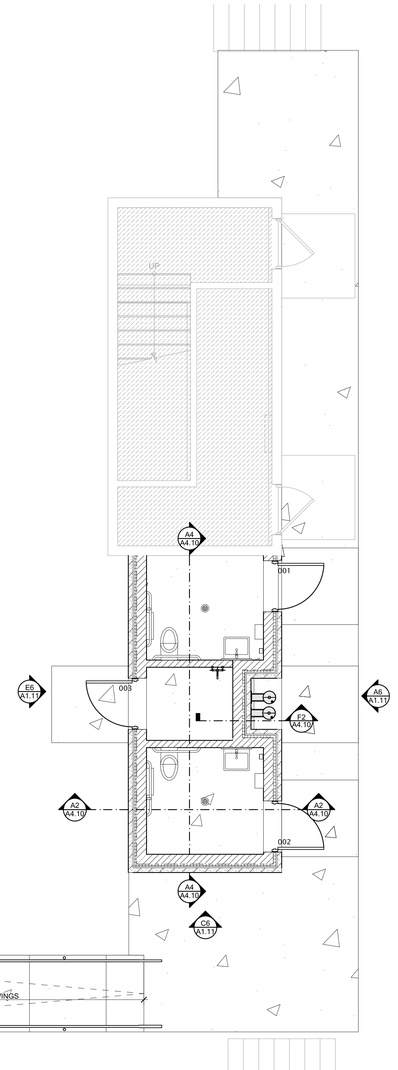


C7 GUARDRAIL DETAIL
SCALE: 1" = 1'-0"



A7 NORTH EXTERIOR ELEVATION
SCALE: 1/4" = 1'-0"





A2 ENLARGED FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

THE COLLAB ORATIVE +ACOCK

STATE OF MICHIGAN
Brandon M. Andrzejczak
License No. 4301066085
LICENSED ARCHITECT

PROJECT TITLE

Oscoda Area Schools

OAS Misc. Renovation Projects

3550 E River Rd,
Oscoda Township, MI 48750

11.21.2025	BID/PERMIT
09.12.2025	DESIGN DEVELOPMENT
07.18.2025	SCHEMATIC DESIGN

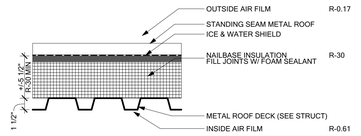
TC JOB NO. Project No. 107348

SHEET TITLE

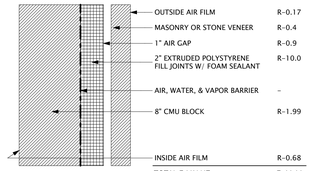
OVERALL FLOOR PLAN & RAILING DETAILS

SHEET NO.

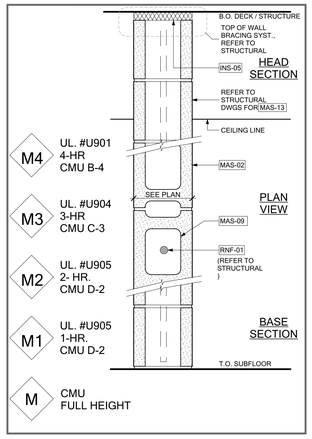
A1.00



R1 – ROOF TYPE – MEMBRANE



W1 – WALL TYPE – SPLIT FACE CMU ON CMU



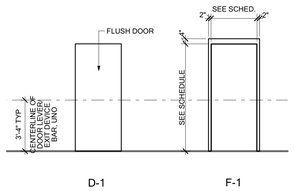
F7 EXTERIOR ASSEMBLIES

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

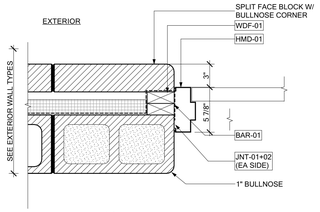
TOILET ROOM ACCESSORIES SCHEDULE				
	ITEM	MANUFACTURER	MODEL #	REMARKS
A1	GRAB BAR (42")	BRADLEY	#812	
A2	GRAB BAR (36")	BRADLEY	#812	
A3	GRAB BAR (18" VERTICAL BAR)	BRADLEY	#812	
B	TOILET TISSUE DISPENSER	BRADLEY	#5402	
C	SOAP DISPENSER	BRADLEY	#6542	
D	MIRROR - STAINLESS STEEL FRAME	BRADLEY	#780	
E	SANITARY NAPKIN DISPOSAL	BRADLEY	4A10-11	
F	DIAPER CHANGING STATION	BRADLEY	#962	
G	PAPER TOWEL DISPENSER	BRADLEY	#2494	
H	WASTE RECEPTACLE (FREE STANDING)	BRADLEY	377-36	
J	GARMENT HOOKS / DOOR STOP	PER TOILET PARTITION MFGR.	ONE PER COMPARTMENT	
K	PHENOLIC SHOWER SEAT	BRADLEY	#9569	
L	SHOWER CURTAIN, ROD AND HOOKS	BRADLEY	#9539, #9540, 9533	
M	MOP HOLDER	BRADLEY	#9953	
N	SEAT COVER DISPENSER	BRADLEY	#5831	
P	SOAP DISH	BRADLEY	#901	
R	FIXED SHELF	BRADLEY	#7512	
S	SANITARY NAPKIN AND TAMPON DISPENSER	BRADLEY	4017-11 (SURFACE MOUNTED)	
T				

ACCESSORY NOTES:
1. ACCESSORIES TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.
2. SEE A0.00 GENERAL INFORMATION FOR MOUNTING HEIGHTS.

DOOR SCHEDULE												
No.	SIZE	EL	MATL	FIN	FRAME			H	J	HDW FUNC	FIRE RATING	REMARKS
					EL	MATL	FIN					
001	3'-0"x7'-0"	D-1	HM	PT	F-1	HM	PT	-	J1	-	-	PT2, OSCODA BLUE
002	3'-0"x7'-0"	D-1	HM	PT	F-1	HM	PT	-	J1	-	-	PT2, OSCODA BLUE
003	3'-0"x7'-0"	D-1	HM	PT	F-1	HM	PT	-	J1	-	-	PT1, CLOUD MOUNTA



D-1 F-1



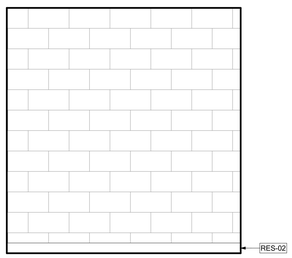
J1

D8 DOOR/DOOR FRAME ELEVATIONS

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

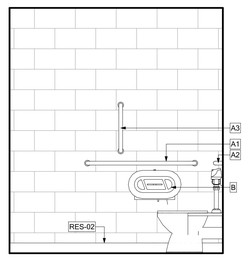
D6 DOOR JAMB DETAILS

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



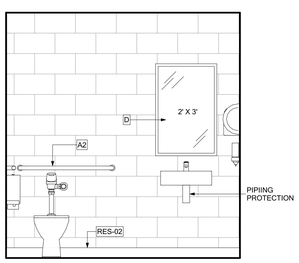
B8 SOUTH RR - S INTERIOR ELEVATION

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



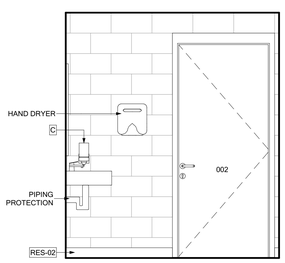
B6 SOUTH RR - E INTERIOR ELEVATION

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



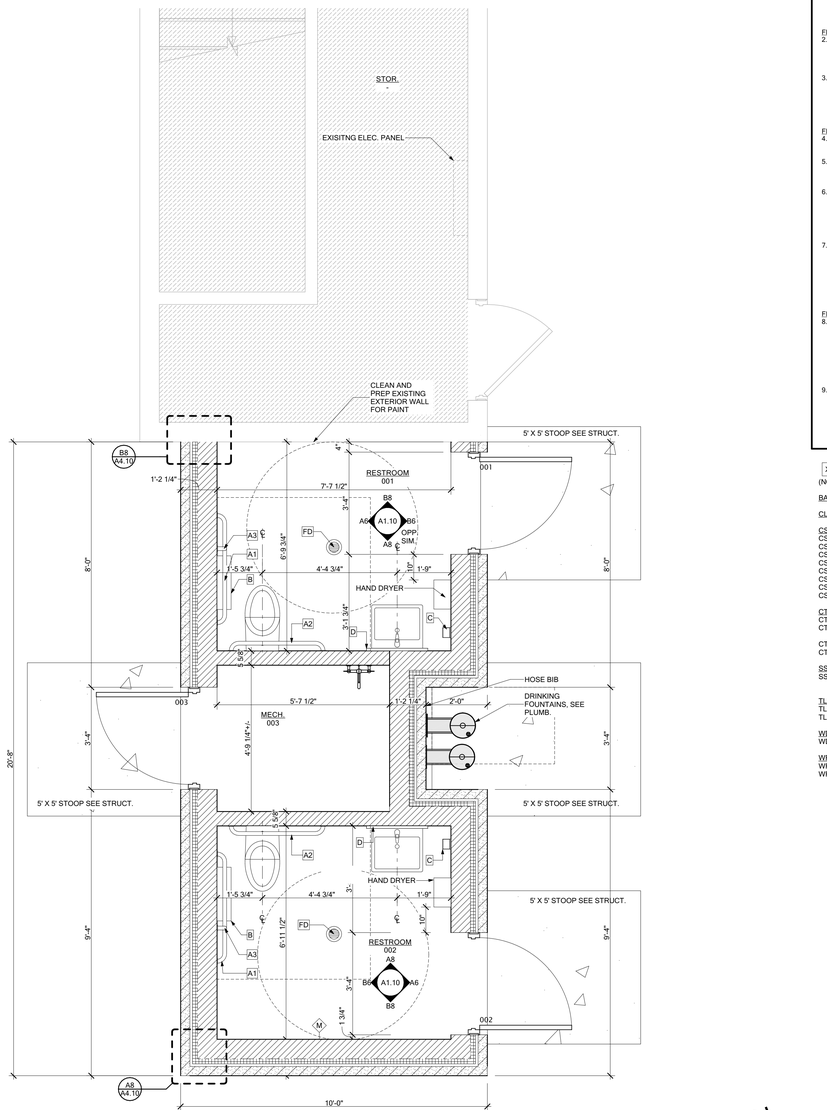
A8 SOUTH RR - N INTERIOR ELEVATION

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



A6 SOUTH RR - W INTERIOR ELEVATION

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



A2 FIRST FLOOR PLAN

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

PLAN GENERAL NOTES:

1. COORDINATE SIZE AND LOCATION OF ALL HOUSEKEEPING PADS AND/OR EQUIPMENT SUPPORTS WITH APPROPRIATE EQUIPMENT MANUFACTURER.
2. COORDINATE SIZES AND LOCATIONS OF ALL MISCELLANEOUS ACCESS PANELS REQUIRED. ACCESS PANELS ARE SPECIFIED ARCHITECTURALLY BUT ARE TO BE PROVIDED BY TRADES REQUIRING THEM. ALL LOCATIONS MUST BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
3. FLOOR PLANS ARE DIMENSIONED TO ACTUAL WALL THICKNESS UNLESS OTHERWISE NOTED.
4. DIMENSIONS FOLLOWED BY ± MUST BE FIELD REVIEWED AND ALL NECESSARY ADJUSTMENTS MADE PRIOR TO FABRICATION AND/OR INSTALLATION OF AFFECTED WORK. NOTIFY ARCHITECT IF DISCREPANCIES ARISE BEFORE PROCEEDING WITH THE WORK.
5. PROVIDE INTERIOR GYPSUM BOARD CONTROL JOINTS @ 25' O.C. AT LOCATIONS SHOWN ON PLANS AND/OR INTERIOR ELEVATIONS OR AS DIRECTED BY ARCHITECT.
6. VERIFY QUANTITY, SIZES, AND LOCATIONS OF ALL FLOOR, ROOF, AND WALL OPENINGS FOR MECHANICAL AND ELECTRICAL WORK WITH THE APPROPRIATE TRADES. PROVIDE ALL OPENINGS SHOWN OR REQUIRED FOR THE COMPLETION OF THE WORK. PROVIDE ALL LINTELS REQUIRED FOR THESE OPENINGS PER SPECIFICATIONS.
7. REFER TO LS & A0 SERIES DRAWINGS FOR LOCATIONS OF REQUIRED FIRE RESISTANCE RATINGS, UL DESCRIPTIONS, AND JOINT DETAILS.
8. REFER TO FINISH PLANS FOR FLOOR FINISHES, ROOM FINISHES, AND FINISH LAYOUTS.
9. SEE REFLECTED CEILING PLANS FOR WINDOW SHADE LOCATIONS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.

XX-# KEYNOTES:

(NOTE: NOT ALL NUMBERS ARE USED)

INS: INSULATION
- INS-01 RIGID INSULATION BOARD
- INS-02 SPRAYED-FOAM INSULATION
- INS-04 ACOUSTICAL BATT INSULATION
- INS-05 MINERAL WOOL FIRESAFING INSULATION

MAS: MASONRY
- MAS-02 CONCRETE MASONRY UNIT
- MAS-09 GROUT
- MAS-12 SOLID CONCRETE MASONRY UNIT
- MAS-13 CMU BOND BEAM

RNF: REINFORCING STEEL
- RNF-01 REINFORCING BAR

WALL TYPE GENERAL NOTES:

GENERAL
1. PROVIDE INTERIOR GYPSUM BOARD CONTROL JOINTS AT 25' O.C. MAXIMUM, AT LOCATIONS SHOWN ON DRAWINGS, AND AS OTHERWISE DIRECTED BY ARCHITECT.

FRAMING
2. ALL NON-STRUCTURAL METAL FRAMING, INCLUDING STUDS AND FURRING, IS TO BE INSTALLED AT 16" O.C. UNLESS OTHERWISE NOTED. SHAFT WALL (CH) FRAMING IS TO BE INSTALLED AT 24" O.C.
3. REFER TO SPECIFICATIONS FOR MINIMUM NON-STRUCTURAL FRAMING BASE METAL THICKNESSES AND STUD REQUIREMENTS FOR LOCATIONS WITH TILE FINISHES AND WALL-MOUNTED CASEWORK AND EQUIPMENT.

FINISHING
4. REFER TO FINISH PLANS FOR FLOOR FINISHES, WALL FINISHES, AND FINISH LAYOUTS.
5. REFER TO FINISH PLANS AND SPECIFICATIONS FOR LOCATIONS WHERE LEVEL 5 GYPSUM BOARD FINISHING IS REQUIRED.
6. PROVIDE TILE BACKER BOARD PER SPECIFICATIONS IN LIEU OF GYPSUM BOARD AT LOCATIONS TO RECEIVE TILE WALL FINISH. IF TILE IS TO BE INSTALLED AT FIRE-RESISTANCE RATED WALLS, BACKER BOARD MUST BE AN APPROVED PRODUCT LISTED IN THE IDENTIFIED UL ASSEMBLY.
7. REFER TO PLANS FOR LOCATIONS OF ABUSE- / IMPACT-RESISTANT GYPSUM BOARD TO BE USED IN LIEU OF GYPSUM BOARD SHOWN ON ASSEMBLIES ON THIS SHEET. IF SUBSTITUTION OCCURS AT FIRE-RESISTANCE RATED WALLS, ABUST- / IMPACT- RESISTANT GYPSUM BOARD MUST BE AN APPROVED PRODUCT LISTED IN THE IDENTIFIED UL ASSEMBLY.

FIRE-RESISTANCE RATED ASSEMBLIES
8. ALL UL LISTED ASSEMBLIES ON THIS SHEET ARE BASIS OF DESIGN ASSEMBLIES. ALL MATERIALS INSTALLED IN THESE ASSEMBLIES MUST MATCH THE PRODUCTS LISTED IN THE UL DESCRIPTIONS. ANY DEVIATIONS FROM THE MATERIALS LISTED IN THE BASIS OF DESIGN ASSEMBLIES MUST BE SUBMITTED WITH AN EQUIVALENT TESTED ASSEMBLY NUMBER AND APPROVED BY THE ARCHITECT PRIOR TO CONSTRUCTION.
9. AT ALL FIRE-RESISTANCE RATED ASSEMBLIES, A UL-LISTED FIRE-RESISTIVE HEAD JOINT DETAIL MUST BE SELECTED BASED ON CONSTRUCTION OF WALL AND OVERHEAD STRUCTURE. DETAIL AND LISTING MUST BE SUBMITTED TO AND APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

XX-# KEYNOTES:

(NOTE: NOT ALL NUMBERS ARE USED)

BASE: WALL BASE (SEE FINISH PLANS/LEGEND)

CLG: CEILINGS (SEE REFLECTED CEILING PLANS)

CSW: CASEWORK
- CSW-01 CABINET
- CSW-02 SHELVING
- CSW-03 COUNTERTOP
- CSW-04 SUPPORT BRACKET
- CSW-05 BACKSPLASH
- CSW-06 REMOVABLE SKIRT W/ CONCEALED FASTENERS
- CSW-07 COAT ROD
- CSW-08 FINISHED END PANEL

CTL: CERAMIC TILING
- CTL-01 TILE
- CTL-02 METAL TRIM (SEE BASE / WALL CORNERS DETAILS)
- CTL-03 BULLNOSE TILE
- CTL-04 TILE WALL BASE

SSU- SOLID SURFACE
- SSU-01 SOLID SURFACE MATERIAL, SEE FINISH SCHEDULE

TLT- TOILET PARTITIONS AND ACCESSORIES
- TLT-01 TOILET / URINAL PARTITION
- TLT-02 PLUMBING PIPING PROTECTION

WDF: ROUGH WOOD FRAMING (FRT UNO)
- WDF-01 WOOD BLOCKING

WFN: WOOD FINISH CARPENTRY
- WFN-01 WOOD TRIM
- WFN-02 WOOD VENEER TRIM PANEL

THE COLLABORATIVE +ACOCK

STATE OF MICHIGAN
Brandon M. Andrzejczak
License No. 4301066085
LICENSED ARCHITECT

PROJECT TITLE

Oscoda Area Schools

OAS Misc. Renovation Projects

3550 E River Rd, Oscoda Township, MI 48750

11.21.2025	BID/PERMIT
09.12.2025	DESIGN DEVELOPMENT
07.18.2025	SCHEMATIC DESIGN

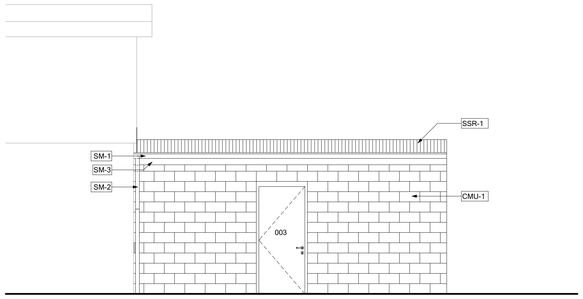
TC JOB NO. Project No. 107348

SHEET TITLE

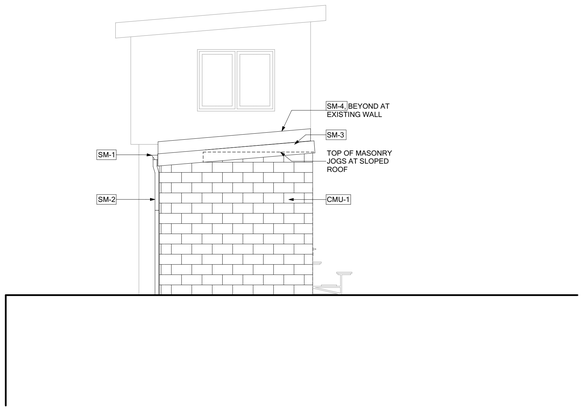
FIRST FLOOR PLAN & INTERIOR ELEVATIONS

SHEET NO.

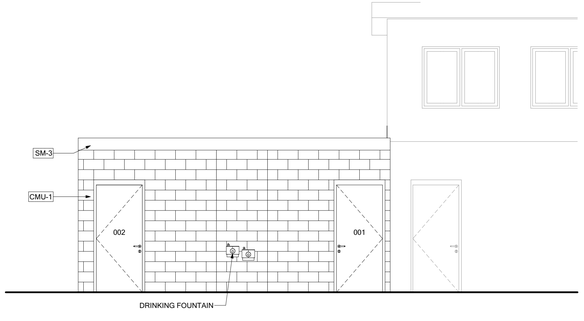
A1.10



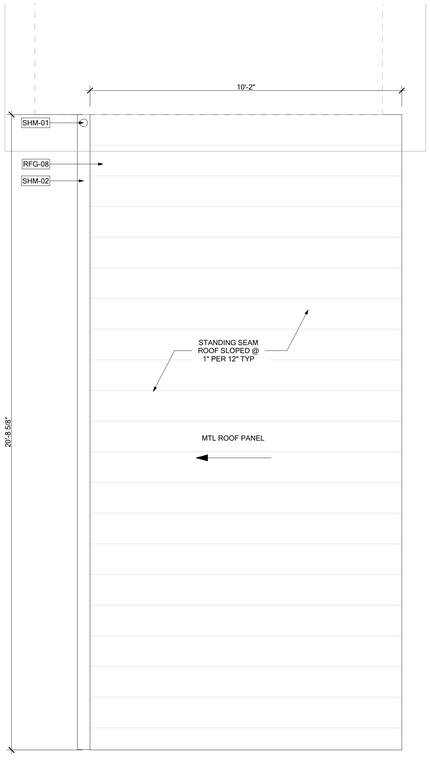
E6 EAST EXTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



C6 NORTH EXTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



A6 EXTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



A2 ROOF PLAN
SCALE: 1/2" = 1'-0"

N

ROOF GENERAL NOTES:

1. MAINTAIN ROOF DRAINS IN FUNCTIONING CONDITION TO ENSURE ROOF DRAINAGE AT END OF EACH WORKDAY.
2. PREVENT DEBRIS FROM ENTERING OR BLOCKING ROOF DRAINS AND CONDUCTORS.
3. PATCH ROOF SYSTEM AT ALL REMOVED PENETRATIONS, CURBS, AND EQUIPMENT. REFER TO MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
4. PATCH ROOF SYSTEM AND PROVIDE FLASHING AT ALL NEW ROOF PENETRATIONS, CURBS, AND EQUIPMENT. REFER TO MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.
5. SEE MECHANICAL, ELECTRICAL & PLUMBING DRAWINGS FOR GENERAL ROOFING NOTES SPECIFIC TO THOSE TRADES.
6. PROVIDE CRICKETS ON HIGH SIDE OF ROOFTOP UNITS & OTHER EQUIPMENT, TYPICAL.
7. FINAL LOCATION OF ROOFTOP EQUIPMENT TO BE COORDINATED WITH STRUCTURAL AND MECHANICAL WORK.
8. PAINT ALL EXPOSED ROOFTOP NATURAL GAS LINES, REFER TO SPECIFICATIONS.
9. ALL EQUIPMENT IS TO REMAIN OPERATIONAL DURING CONSTRUCTION. COORDINATE REMOVAL AND OR REPLACEMENT OF EQUIPMENT WITH OWNER.
10. ROOF SLOPES INDICATED ON THE DRAWINGS ARE TO INDICATE DESIGN INTENT ONLY. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR THE COMPLETE ROOFING SYSTEM TO ENSURE PROPER DRAINAGE, INCLUDING TAPERED INSULATION LAYOUT, FLOW DIRECTIONS, DRAIN LAYOUT, AND CRICKET LOCATIONS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
11. PROVIDE ROOF FLASHING FOR ALL ROOF MOUNTED EQUIPMENT AND PENETRATIONS AT ALL NEW ROOFING LOCATIONS. REFER TO PLUMBING, MECHANICAL & ELECTRICAL DRAWINGS.
12. REFER TO GENERAL ROOFING ASSEMBLY DETAILS AND SPECIFICATIONS FOR R-VALUE REQUIRED OF ROOFING INSULATION.
13. SEE ASSEMBLY DETAILS AND SPECIFICATIONS FOR COVERBOARD AND VAPOR RETARDER/AIR BARRIER REQUIREMENTS.
14. AT EXISTING AREAS TO RECEIVE NEW ROOFING, REMOVE ALL EXISTING ROOF RELATED ACCESSORIES INCLUDING, BUT NOT LIMITED TO, SNOW GUARDS, PITCH POCKETS, PIPE PENETRATION SLEEVES, EXPANSION JOINTS, CANTS, SADDLES, CRICKETS, ATTIC VENTS, RIDGE VENTS, WALKWAY PADS AND SIMILAR.

EXTERIOR GENERAL NOTES:

1. SEALANT COLORS TO MATCH ADJACENT MATERIALS. VERIFY COLORS WITH ARCHITECT PRIOR TO APPLICATION. VERTICAL BRICK EXPANSION JOINT COLOR TO MATCH BRICK, NOT MORTAR.
2. END DAMS REQUIRED FOR EACH END OF FLASHINGS AT ALL DOORS, WINDOWS, STOREFRONTS, CURTAIN WALLS, AND SIMILAR OPENINGS.

EXTERIOR FINISH SCHEDULE:

NOTE: SEE SPECIFICATIONS FOR ADDITIONAL FINISH INFORMATION. ALL PRODUCTS AND MANUFACTURERS INDICATED BELOW ARE BASIS OF DESIGN. SPECIFICATIONS LIST OTHER ACCEPTABLE MANUFACTURERS AND/OR PRODUCTS.

(CMU) SPLIT FACE CONCRETE MASONRY UNITS

CMU-1	GRAND BLANC CEMENT PRODUCTS, 4" CMU, SPLIT FACE, COLOR: PETOSKY

(SM) SHEET METAL

SM-1	GUTTER, COLOR - ARCHITECT TO SELECT FROM MANUFACTURER'S STANDARD COLORS.
SM-2	DOWNSPOUT, COLOR - ARCHITECT TO SELECT FROM MANUFACTURER'S STANDARD COLORS.
SM-3	EAVE TRIM, COLOR TO MATCH STANDING SEAM METAL ROOF FINISH
SM-4	RAKEWALL FLASHING AT EXISTING WALL, COLOR TO MATCH EXISTING WALL FINISH

(SSMR) STANDING SEAM METAL ROOF

SSR-1	STANDING SEAM METAL ROOF, BASIS OF DESIGN PAC CLAD, TIGHT LOC PLUS, 18" O.C. SEAMS; COLOR - ARCHITECT TO SELECT FROM MANUFACTURER'S STANDARD COLORS.

STANDING SEAM METAL ROOF

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STATE OF MICHIGAN
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Oscoda Area Schools

OAS Misc. Renovation Projects

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Oscoda Township, MI 48750

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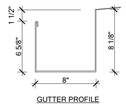
TC JOB NO. Project No. 107348

SHEET TITLE

ROOF PLAN & EXTERIOR ELEVATIONS

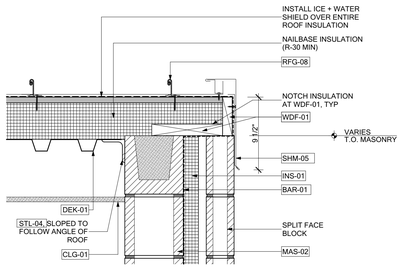
SHEET NO.

A1.11



GUTTER PROFILE

G8 DETAIL
SCALE: 1 1/2"= 1'-0"



E8 DETAIL
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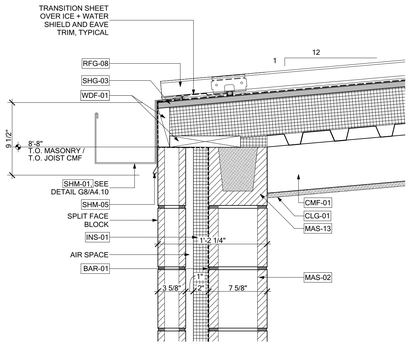

E6 DETAIL
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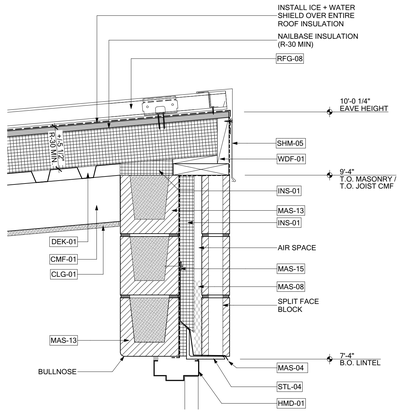
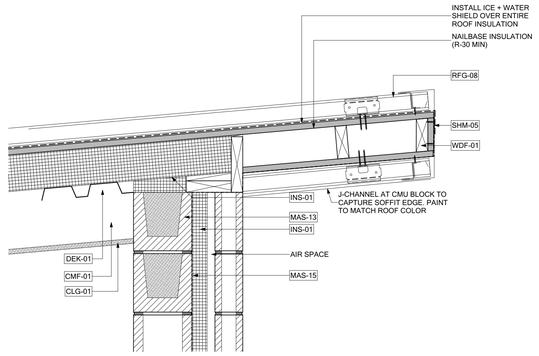
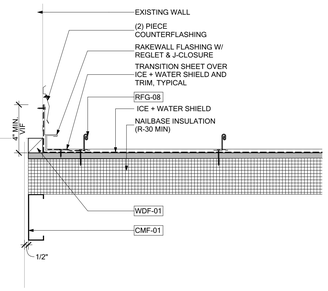


E4 DETAIL
SCALE: 1 1/2"= 1'-0"

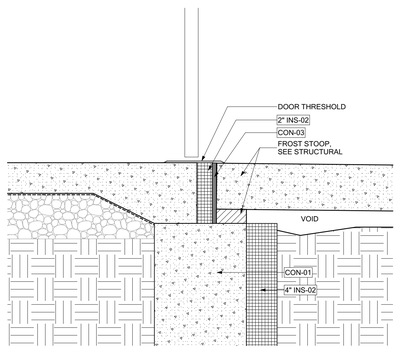


F2 DETAIL
SCALE: 1 1/2"= 1'-0"



D8 DETAIL
SCALE: 1 1/2"= 1'-0"

C6 DETAIL
SCALE: 1 1/2"= 1'-0"



C4 DETAIL
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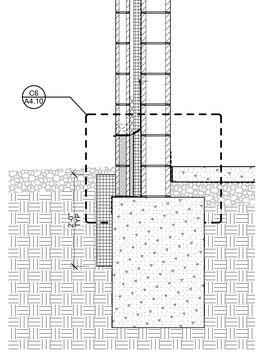
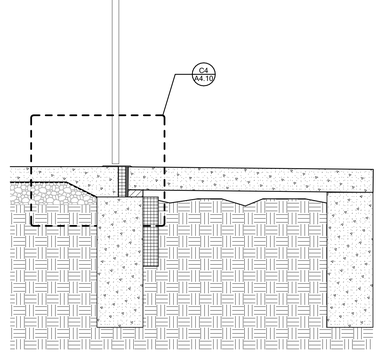


C3 WALL SECTION
SCALE: 3/4" = 1'-0"



C2 WALL SECTION
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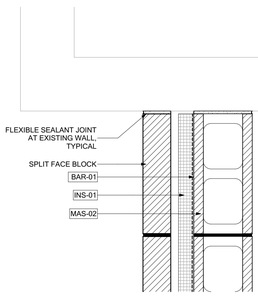

B8 PLAN DETAIL
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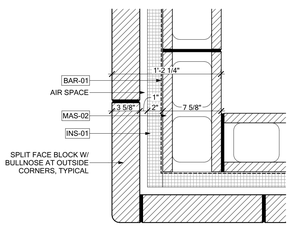

A8 PLAN DETAIL
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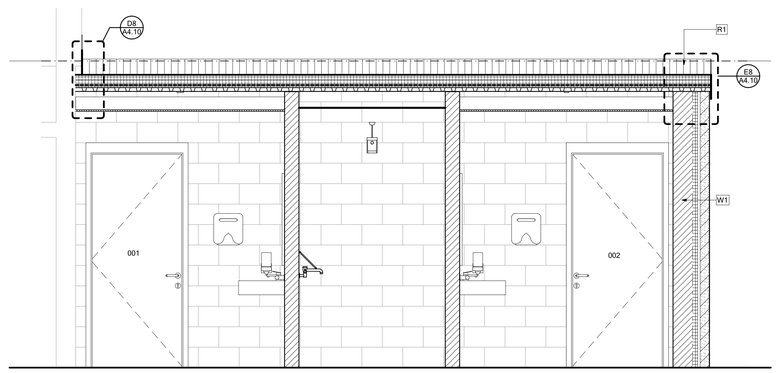
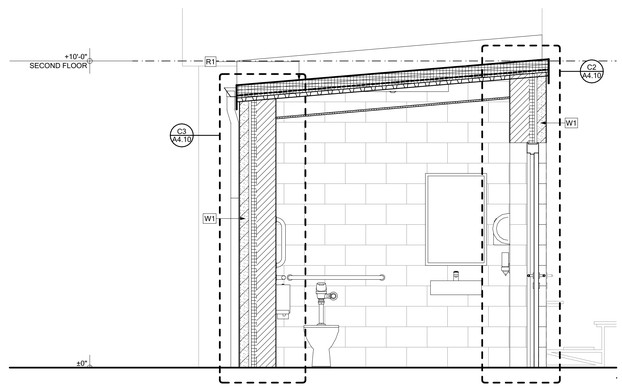


A4 BUILDING SECTION
SCALE: 1/2" = 1'-0"



A2 BUILDING SECTION
SCALE: 1/2" = 1'-0"

KEYNOTES:

XX-#

(NOTE: NOT ALL NUMBERS ARE USED)

BAR: VAPOR, AIR, AND WEATHER BARRIERS
- BAR-01 VAPOR-RETARDING AIR BARRIER SYSTEM
- BAR-02 VAPOR-PERMEABLE AIR BARRIER SYSTEM
- BAR-03 VAPOR-PERMEABLE WATER-RESISTIVE BARRIER
- BAR-04 BARRIER TRANSITION SHEET
- BAR-05 APPLIED DAMPPROOFING

CLG: CEILINGS
- CLG-01 SEE REFLECTED CEILING PLANS A7.00 SERIES SHEETS

CMF: COLD-FORMED METAL FRAMING (DELEGATED DESIGN)
- CMF-01 COLD-FORMED METAL FRAMING
- CMF-02 COLD-FORMED DEFLECTION TRACK
- CMF-03 COLD-FORMED CLIP ANGLE
- CMF-04 COLD-FORMED BOX HEADER

CON: CONCRETE
- CON-01 CAST-IN-PLACE CONCRETE
- CON-02 UNDERSLAB VAPOR RETARDER
- CON-03 EXPANSION JOINT FILLER
- CON-04 PRECAST CONCRETE PLANK
- CON-05 PRECAST CONCRETE PANEL

CST: CAST STONE
- CST-01 CAST STONE SILL
- CST-02 CAST STONE CAP
- CST-03 CAST STONE VENEER

DEK: METAL DECKING
- DEK-01 STEEL DECKING

EFS: EXTERIOR INSULATION AND FINISH SYTEMS
- EFS-01 EXTERIOR INSULATION FINISH SYSTEM
- EFS-02 DIRECT-APPLIED EXTERIOR FINISH SYSTEM

FST: FIRE STOPPING, SEALANTS, AND RESISTIVE MATERIALS
- FST-01 FIRESTOPPING
- FST-02 FIRE SEALANT
- FST-03 SPRAY-APPLIED FIRE-RESISTIVE MATERIAL
- FST-04 INTUMESCENT COATING

GYP: GYPSUM BOARD ASSEMBLIES
- GYP-01 GYPSUM BOARD
- GYP-02 GLASS MAT-FACED GYPSUM BOARD
- GYP-03 CONTROL JOINT
- GYP-04 CORNER BEAD
- GYP-05 J-BEAD
- GYP-06 F-REVEAL
- GYP-07 U-REVEAL
- GYP-08 Z-REVEAL
- GYP-09 CEMENT BACKER BOARD

HMD: HOLLOW METAL DOORS AND FRAMES
- HMD-01 HOLLOW METAL DOOR FRAME
- HMD-02 HOLLOW METAL WINDOW OPENING
- HMD-03 HOLLOW METAL DOOR

INS: INSULATION
- INS-01 RIGID INSULATION BOARD
- INS-02 SPRAYED-FOAM INSULATION
- INS-03 THERMAL BATT INSULATION
- INS-04 ACOUSTICAL BATT INSULATION
- INS-05 MINERAL WOOL FIRESAFING INSULATION
- INS-06 SEMIRIGID MINERAL WOOL INSULATION BOARD

JNT: JOINT SEALANTS
- JNT-01 JOINT SEALANT
- JNT-02 BACKER ROD & SEALANT
- JNT-03 ACOUSTICAL SEALANT
- JNT-04 PREFORMED JOINT SEAL
- JNT-05 BUILDING EXPANSION JOINT ASSEMBLY

MAS: MASONRY (GENERAL)
- MAS-01 BRICK MASONRY
- MAS-02 CONCRETE MASONRY UNIT
- MAS-03 DECORATIVE CMU VENEER
- MAS-04 FLASHING
- MAS-05 VENEER ANCHOR
- MAS-06 MASONRY WEEP, 24" O.C.
- MAS-07 PRESSURE EQUALIZATION VENT, 24" O.C.
- MAS-08 CAVITY DRAINAGE MATERIAL
- MAS-09 GROUT
- MAS-10 PREFORMED MASONRY CONTROL JOINT
- MAS-11 LINTEL
- MAS-12 SOLID CONCRETE MASONRY UNIT
- MAS-13 CMU BOND BEAM
- MAS-14 CMU FLASHING PAN
- MAS-15 FLASHING TERMINATION BAR

MPL: METAL PANELS
- MPL-01 ARCHITECTURAL METAL PANEL
- MPL-02 METAL COMPOSITE MATERIAL PANEL
- MPL-03 FLASHING TO MATCH METAL PANEL
- MPL-04 PERFORATED METAL PANEL
- MPL-05 INSULATED METAL PANEL
- MPL-06 METAL SOFFIT PANEL
- MPL-07 THERMAL CLIPS

NSF: NON-STRUCTURAL METAL FRAMING
- NSF-01 NON-STRUCTURAL METAL FRAMING
- NSF-02 NON-STRUCTURAL DEFLECTION TRACK
- NSF-03 HAT CHANNEL FURRING
- NSF-04 RESILIENT CHANNEL FURRING
- NSF-05 Z-FURRING
- NSF-06 NON-STRUCTURAL CLIP ANGLE
- NSF-07 SHAFT WALL FRAMING
- NSF-08 J-TRACK
- NSF-09 FRAMING TRACK

RAC: ROOFING ACCESSORIES
- RAC-01 ROOF HATCH
- RAC-02 PREFABRICATED CURB
- RAC-03 EQUIPMENT RAILS
- RAC-04 SNOW GUARDS

RFG: ROOFING
- RFG-01 SINGLE-PLY MEMBRANE ROOFING
- RFG-02 ROOF MEMBRANE FLASHING
- RFG-03 ROOFING INSULATION
- RFG-04 TAPERED ROOFING INSULATION
- RFG-05 ROOFING VAPOR RETARDER
- RFG-06 TERMINATION BAR
- RFG-07 PREFORMED PIPE BOOT
- RFG-08 STANDING-SEAM METAL ROOFING
- RFG-09 STANDING-SEAM ROOF FLASHING
- RFG-10 ROOFING UNDERLAYMENT
- RFG-11 ASPHALT SHINGLES ON UNDERLAYMENT

SHG: SHEATHING
- SHG-01 FIBERGLASS MAT GYPSUM SHEATHING
- SHG-02 PLYWOOD SHEATHING (FRT UNO)
- SHG-03 NAIL BASE SHEATHING

SHM: SHEET METAL FABRICATIONS
- SHM-01 GUTTER
- SHM-02 DOWNSPOUT
- SHM-03 GRAVEL STOP
- SHM-04 COPING
- SHM-05 SHEET METAL FLASHING
- SHM-06 DRIP EDGE
- SHM-07 COUNTERFLASHING

SSU: SOLID SURFACE
- SSU-01 SOLID SURFACE MATERIAL, SEE FINISH SCHEDULE

STL: STRUCTURAL STEEL
- STL-01 STEEL COLUMN
- STL-02 STEEL BEAM
- STL-03 STEEL PLATE
- STL-04 STEEL ANGLE
- STL-05 STEEL CHANNEL
- STL-06 STEEL WIDE FLANGE BEAM
- STL-07 STEEL RECTANGULAR TUBE
- STL-08 STEEL ROUND TUBE
- STL-09 STEEL JOIST
- STL-10 BEARING PLATE

WFN: WOOD FINISH CARPENTRY
- WFN-01 WOOD TRIM
- WFN-02 WOOD VENEER TRIM PANEL
- WFN-03 WOOD BASE
- WFN-04 WOOD FINISH FLOORING

WDF: ROUGH WOOD FRAMING (FRT UNO)
- WDF-01 WOOD BLOCKING
- WDF-02 WOOD FRAMING (2X4 UNO)
- WDF-03 WOOD FURRING

WIN: WINDOWS
- WIN-01: WINDOW

THE COLLABORATIVE +ACOCK

STATE OF MICHIGAN
Brandon M. Andrzejczak
License No. 1301066065
LICENSED ARCHITECT

PROJECT TITLE

Oscoda Area Schools

OAS Misc. Renovation Projects

3550 E River Rd,
Oscoda Township, MI 48750

11.21.2025	BID/PERMIT
09.12.2025	DESIGN DEVELOPMENT
07.18.2025	SCHEMATIC DESIGN

TC JOB NO. Project No. 107348

SHEET TITLE

WALL SECTIONS & DETAILS

SHEET NO.

A4.10

SHERWIN-WILLIAMS 701843 10/30/24
989-354-4988 Order# 0137700

INTERIOR ARCHITECTURAL
PROMAR 200 ZERO VOC LATEX
SEMI-GLOSS 1PC 7012NP
COMP(V005) V115-2 CLOUD MOUNTA
CUSTOM SHER-COLOR MATCH

CCE+COLORANT	OZ	32	64	128
B1-Black	0	26	1	-
G1-New Green	-	15	-	-
Y3-Deep Gold	-	32	1	-

FIVE GALLON EXTRA WHITE
B31W02951 65018714
NR

G9 CLOUD MOUNTA COLOR CODE
SCALE: 1' = 1'-0"

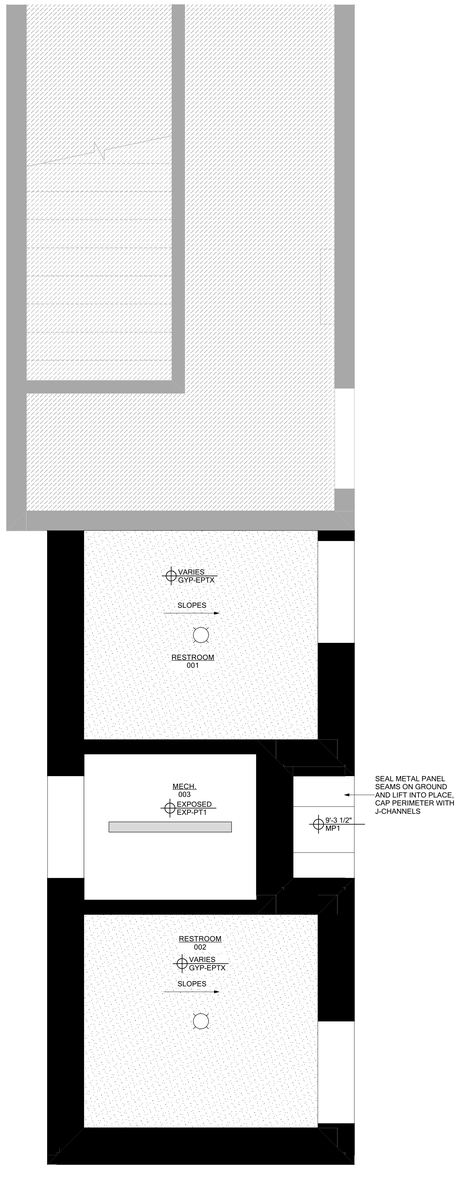
SHERWIN-WILLIAMS 701843 10/30/24
989-354-4988 Order# 0137700

EXTERIOR ARCHITECTURAL
DURATION LATEX
SATIN 1PC 7012NP
DELTA OSCODA BLUE
CUSTOM MANUAL MATCH

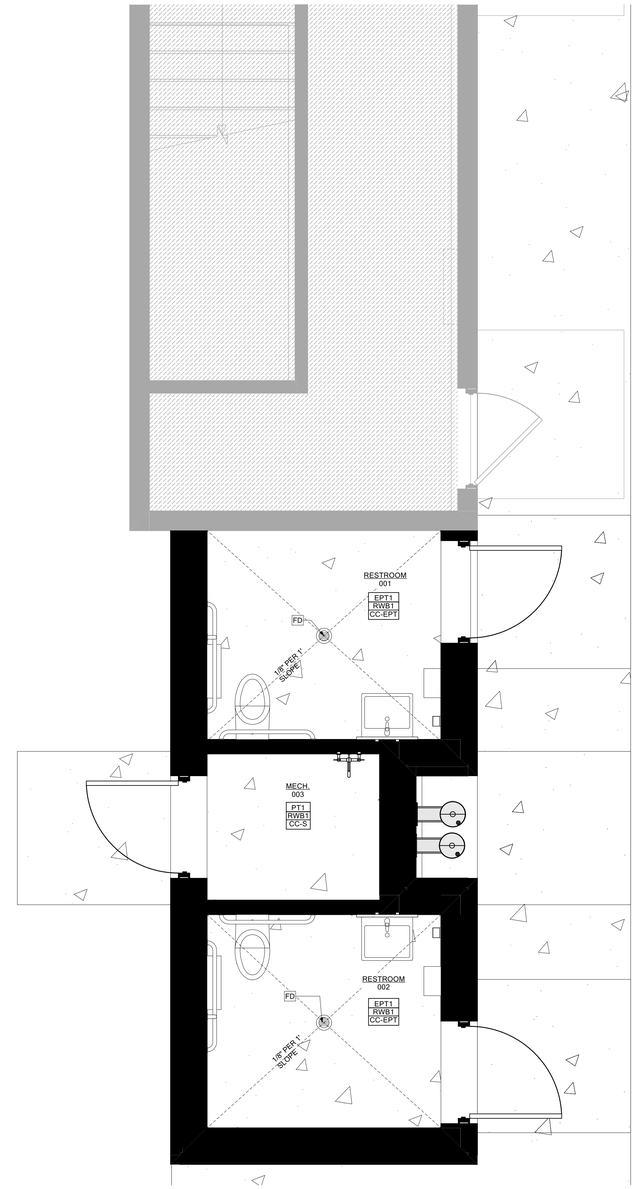
CCE+COLORANT	OZ	32	64	128
B2-White	6	54	-	1
G3-New Green	6	38	1	-
L1-Blue	48	44	-	-
R3-Regento	4	63	-	1

FIVE GALLON ULTRADEEP
K33T00254 65040G341
Extend
NOT RECOMMENDED FOR USE ON VINYL

F9 DELTA OSCODA BLUE COLOR CODE
SCALE: 1' = 1'-0"



A5 FIRST FLOOR REFLECTED CEILING PLAN
SCALE: 1/2" = 1'-0"



A2 FIRST FLOOR FINISH PLAN
SCALE: 1/2" = 1'-0"

N

CEILING LEGEND

REFER TO THE FOLLOWING TAG FOR CEILING TYPE & BOTTOM ELEVATION INFORMATION FOR EACH ROOM OR ELEMENT UNLESS OTHERWISE NOTED.

9'-0" ← CEILING HEIGHT AS MEASURED TO BOTTOM OF ELEMENT
GYP-01 ← CEILING TYPE/FINISH

CEILING GENERAL NOTES

1. REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION ON MATERIALS AND CONSTRUCTION.
2. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR FIXTURE TYPES AND ADDITIONAL INFORMATION PERTAINING TO MECHANICAL AND ELECTRICAL WORK.
3. COORDINATE SIZE AND LOCATION OF ALL ACCESS PANELS WITH TRADE REQUIRING THE SAME. ACCESS PANELS ARE SPECIFIED ARCHITECTURALLY BUT ARE REQUIRED TO BE PROVIDED BY TRADE. INDICATE ALL LOCATIONS WITHIN FIXED GYPSUM BOARD CEILINGS BEFORE INSTALLATION OF GYPSUM BOARD AND RECEIVE WRITTEN APPROVAL FROM ARCHITECT BEFORE PROCEEING WITH INSTALLATION.
4. COORDINATE INSTALLATION OF CEILING SUSPENSION SYSTEMS WITH OTHER CEILING SPACE EQUIPMENT SUPPORTS.
5. ALL SMOKE BARRIER PARTITIONS, HORIZONTAL EXIT ENCLOSURES AND FIRE RATED PARTITIONS THAT EXTEND TO DECK ABOVE SHALL BE MARKED EVERY 20'-0" HORIZONTALLY WITHIN THE CEILING SPACE: "FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS."
6. ALL GYPSUM BOARD FASCIAS AT SOFFITS ADJACENT TO ACOUSTICAL PANEL CEILINGS SHALL EXTEND 6"MINIMUM ABOVE ACOUSTICAL PANEL CEILINGS.
7. PROVIDE WOOD BLOCKING ABOVE GYPSUM BOARD CEILINGS AS REQUIRED FOR MISCELLANEOUS SUSPENDED ITEMS, INCLUDING CURTAIN TRACKS, WINDOW SHADES, ACOUSTICAL BAFFLES, ETC.
8. CENTER ALL SPRINKLER HEADS IN CEILING PANELS UNLESS SHOWN OTHERWISE.
9. CONTRACTOR TO PAINT ALL NON-FINISH ELEMENTS IN AREAS NOTED AS EXP-PT TO INCLUDE, BUT NOT LIMITED TO, STRUCTURE (BEAMS, JOISTS, STRUTURAL DECK, ETC), FP/PLUMB LINES (PIPING, HANGERS, ETC), MECHANICAL DUCTWORK AND PIPING (HANGERS, STRAPPING, UNISTRUT, ETC), ELECTRICAL (CONDUITS, HANGERS, BACKBOXES, ETC), AND TECHNOLOGY (CONDUITS, HANGERS, BACKBOXES, ETC). COORDINATE WITH ARCHITECT FOR QUESTIONS RELATED TO ELEMENTS TO BE PAINTED.

CEILING MATERIAL LEGEND

- GYPSUM BOARD OR SYNTHETIC VENEER PLASTER CEILING / SOFFIT / BULKHEAD
- SUSPENDED ACOUSTICAL PANEL CEILING
- EXPOSED OR EXISTING CONSTRUCTION TO REMAIN

CEILING LEGEND

GYPSUM BOARD CEILINGS (GYP) - SEE FINISH PLANS FOR PAINT COLORS OR OTHER FINISHES:

GYP-PTX	PAINTED GYP-01 (UNO) CEILING ON SUSPENDED CEILING GRID SYSTEM OR NSMF-X
GYP-EPTX	EPOXY PAINTED GYP-01 (UNO) CEILING ON SUSPENDED CEILING GRID SYSTEM OR NSMF-X

METAL PANEL SOFFIT (MP)

MP1	SAME AS STANDING SEAM METAL ROOF, MATCH COLOR OF ROOF.

FINISHES LEGEND

REFER TO THE FOLLOWING TAG FOR GENERAL FLOOR FINISH, WALL BASE, AND WALL FINISH INFORMATION FOR EACH ROOM UNLESS OTHERWISE NOTED.

PT1 ← WALL FINISH KEYNOTE
RWB1 ← WALL BASE KEYNOTE
CC-S ← FLOOR FINISH KEYNOTE

FINISHES GENERAL NOTES

1. REFER TO REFLECTED CEILING PLANS FOR INFORMATION ON CEILING FINISHES AND WINDOW TREATMENTS.
2. REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION ON MATERIALS AND CONSTRUCTION.
3. GYPSUM BOARD THAT RECEIVES EPOXY PAINT(S) EPTX AND PAINT(S) PTX ARE TO RECEIVE A LEVEL 5 GYPSUM BOARD FINISH. SURFACES ARE TO BE SKIM COATED AND SHALL BE SMOOTH AND FREE OF TOOL MARKS AND RIDGES. REFER TO GYPSUM BOARD SPECIFICATIONS FOR ADDITIONAL INFORMATION, INCLUDING DETAILED LEVEL 5 FINISH REQUIREMENTS.
4. CONCRETE SLAB SAWCUT LOCATIONS MUST BE TRANSFERED UP TO CERAMIC FLOOR TILE AS EXPANSION JOINTS. ADDITIONAL JOINTS MAY ALSO NEED TO BE ADDED WHERE COLD JOINTS BETWEEN SLAB POURS OCCUR. IF ADDITIONAL JOINTS ARE REQUIRED, NOTIFY ARCHITECT AS ADDITIONAL EXPANSION JOINTS IN THE TILE PATTERN WILL NEED TO BE ADDED.
5. IF A MORTAR BED IS USED IN THE INSTALLATION OF CERAMIC FLOOR TILE, IT IS THE RESPONSIBILITY OF THE TILE CONTRACTOR TO ADJUST ALL FLOOR TRANSITION STRIPS WITH ADJOINING FLOOR MATERIALS DUE TO THE ADDED THICKNESS OF THE MORTAR BED. FLOOR SLABS MUST ALSO BE FEATHERED WHERE CERAMIC TILE ADJOINS AN EXPOSED CONCRETE FLOOR TO PROVIDE A THRESHOLD OF NO MORE THAN 1/2". IN AREAS WHERE FLOOR TILE SURROUNDS ARE SHOWN AROUND WALK OFF CARPETING, LEVELING COMPOUND MUST BE ADDED TO RAISE THE WALK OFF CARPET TO BE LEVEL WITH THE FLOOR TILE. CONTRACTOR TO FIELD VERIFY ALL DIFFERING CONDITIONS.
6. DOOR FRAME PAINT COLOR TO MATCH ADJACENT WALL COLOR UNO
7. ALL FLOORING TRANSITIONS MUST BE ACCESSIBLE, NOT TO EXCEED 1/2" RISE.

FINISHES SYMBOL LEGEND

NOTE: NOT ALL SYMBOLS SHOWN ARE USED ON DRAWINGS.

- CORNER GUARD (CG)
  WALL END CORNER GUARD (EG)
- FLOOR DRAIN (FD)
- 1 — TRANSITION TYPE TAG (SEE TRANSITION TYPE DETAILS)
- PTX — ACCENT FINISH AT WALLS INDICATED

FLOORING MATERIAL LEGEND

- CONCRETE - GROUND/POLISHED

FINISH SCHEDULE

CONCRETE FLOORING (CC):

CC-EPT	SHERWIN WILLIAMS RESUFLOR® DECO QUARTZ DB23. COLOR: SEASCAPE
CC-U	SHERWIN WILLIAMS POLY-CRETE™ SL WITH A PIGMENTED ACCELERA 4850 TOP COAT. COLOR: GRAY SQUIRREL
CC-S	CONCRETE - SEALED

PAINTS (PT) & EPOXY PAINTS (EPT):

PT1	SHERWIN WILLIAMS, SW7103 WHITETAIL
PT2	CUSTOM COLOR, DELTA OSCODA BLUE
PT3	CUSTOM COLOR, CLOUD MOUNTA
EPT1	SHERWIN WILLIAMS, SW7103 WHITETAIL

RUBBER WALL BASE (RWB):

RWB1	TARKETT/JOHNSONITE, 4" HIGH COVE BASE, COLOR: 63 BURNT UMBER

THE COLLAB ORATIVE +ACOCK

STATE OF MICHIGAN
Brandon M. Andrzejczak
License No. 4301066085
LICENSED ARCHITECT

PROJECT TITLE
Oscoda Area Schools

OAS Misc. Renovation Projects

3550 E River Rd,
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TC JOB NO. Project No. 107348

SHEET TITLE
FIRST FLOOR REFLECTED CEILING PLAN & FINISH PLAN

SHEET NO.
A7.10

PLUMBING SPECIFICATIONS/NOTES

1. PLUMBING PLANS ARE DIAGRAMMATIC IN NATURE, INTENDED TO INDICATE DESIGN INTENT ONLY. THE PLUMBING CONTRACTOR IS EXCLUSIVELY RESPONSIBLE TO COORDINATE SPECIFIC LOCATIONS OF ITEMS AND ADJUST AS REQUIRED TO ACCOMMODATE CODE REQUIREMENTS, EXISTING CONDITIONS (IF RENOVATION PROJECT), BUILDING STRUCTURE, SPRINKLER PIPING (IF ANY), LIGHTS, HVAC, ELECTRICAL WORK, AND THE WORK OF ALL OTHER TRADES. DIMENSIONS SHALL BE FIELD-VERIFIED AND COORDINATED PRIOR TO PROCUREMENT OR FABRICATION. FIELD MODIFICATIONS (SUCH AS OFFSETS IN PIPING) NEEDED DUE TO OBSTRUCTIONS OR INTERFERENCES SHALL BE PROVIDED AT NO ADDITIONAL COST.

2. ALL OF THE PLUMBING INFORMATION IS PRESENTED ON A REFERENCED BACKGROUND FLOOR PLAN. IN CASE OF CONFLICT BETWEEN BACKGROUND PLAN AND ARCHITECTURAL FLOOR PLAN, ARCHITECTURAL FLOOR PLAN SHALL GOVERN.

3. THE PLUMBING CONTRACTOR SHALL PROVIDE ALL ITEMS, ARTICLES, MATERIALS, OPERATIONS OR METHODS MENTIONED, LISTED OR SCHEDULED ON THE DRAWINGS AND IN THESE SPECIFICATIONS, INCLUDING ALL LABOR, MATERIALS, EQUIPMENT AND ALL INCIDENTALS NECESSARY REQUIRED FOR THE COMPLETION AND OPERATION OF ALL PLUMBING SYSTEMS.

4. THE ENGINEER WILL NOT HAVE CONTROL OR CHARGE OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES AND IS NOT RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, AND WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THOSE DOCUMENTS PREPARED BY THE ENGINEER.

5. IF BIDDING CONTRACTOR WOULD LIKE TO SUBSTITUTE ANY SPECIFIED PLUMBING DEVICES, VALVES, FIXTURES, WATER HEATERS, PIPING, INSULATION, HANGERS, ETC., THEY MUST PROVIDE SUBMITTAL TYPE DRAWINGS TO THE ENGINEER A MINIMUM OF 7 DAYS PRIOR TO BIDDING THE PROJECT. IF THESE APPROVAL DRAWINGS ARE NOT SUBMITTED AND ACCEPTED, THE SPECIFIED EQUIPMENT MUST BE USED - NO EXCEPTIONS.

6. THE INSTALLATION SHALL BE MADE SO THAT ALL COMPONENT PARTS FUNCTION TOGETHER AS A WORKABLE SYSTEM; IT SHALL BE COMPLETE WITH ALL ACCESSORIES NECESSARY FOR PROPER OPERATION. WHEN THE INSTALLATION IS COMPLETE, ALL EQUIPMENT SHALL BE OPERATIVE AND IN PROPER ADJUSTMENT. ALL WORK SHALL BE EXECUTED IN CONFORMITY WITH THE BEST PRACTICE SO AS TO CONTRIBUTE TO EFFICIENCY OF OPERATION, MINIMUM MAINTENANCE, ACCESSIBILITY AND SIGHTLINESS.

7. TO ACCOMPLISH THESE RESULTS, THE PLUMBING CONTRACTOR SHALL CONSULT THE ARCHITECT'S FIELD LAYOUTS OF THE CONTRACTORS FOR THESE TRADES AND THEIR SHOP DRAWINGS. HE/SHE SHALL COORDINATE THEIR WORK ACCORDINGLY.

8. DRAWINGS ARE INTENDED TO SHOW THE GENERAL ARRANGEMENT, DESIGN AND EXTENT OF THE WORK AND ARE PARTLY DIAGRAMMATIC. THEY ARE NOT INTENDED TO BE SCALED FOR ROUGHING-IN MEASUREMENTS OR TO SERVE AS SHOP DRAWINGS.THE ARCHITECTURAL DRAWINGS AND DETAILS SHALL BE EXAMINED FOR EXACT LOCATION OF FIXTURES AND EQUIPMENT. WHERE THEY ARE NOT DEFINITELY LOCATED, THIS INFORMATION SHALL BE OBTAINED FROM THE ENGINEER.

9. REFER THE TO THE ARCHITECTURAL PLANS FOR ALL BUILDING SECTIONS, INTERIOR, AND EXTERIOR ELEVATIONS. PLUMBING EQUIPMENT AND INSTALLATION METHODS SHOWN ON ARCHITECTURAL SECTIONS/DETAILS ARE CONSIDERED PART OF THE PLUMBING DOCUMENTS.

10. MINOR ITEMS AND ACCESSORIES OR DEVICES REASONABLY INFERABLE AS NECESSARY TO THE COMPLETE AND PROPER OPERATION OF ANY SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR OR SUB-CONTRACTOR FOR SUCH SYSTEM WHETHER OR NOT THEY ARE SPECIFICALLY CALLED FOR BY THE SPECIFICATIONS OR DRAWINGS.

11. WHERE WORK OF THE CONTRACTOR CONNECTS TO THAT OF ANOTHER TRADE, OR TO PIPING OR EQUIPMENT IN PLACE, THE CONTRACTOR SHALL TAKE SUCH MEASUREMENTS IN THE FIELD AS MAY BE NECESSARY TO MAKE HIS WORK COME TRUE OR LINE UP WITH THAT WORK.

12. THE PLUMBING CONTRACTOR SHALL FURNISH TO THE ARCHITECTURAL TRADES CONTRACTOR INFORMATION SUCH AS SIZE AND LOCATION CONCERNING ALL FRAMED OPENINGS AND EQUIPMENT BASES REQUIRED.

13. UNLESS OTHERWISE INDICATED, ALL MOTORS FOR PLUMBING SYSTEMS SHALL BE FURNISHED AND INSTALLED BY THE PLUMBING CONTRACTOR. UNLESS OTHERWISE INDICATED, THE ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL AND WIRE ALL STARTERS, SAFETY LINE SWITCHES AND CONTROLLERS.

14. ALL CONSTRUCTION SHALL BE DONE IN COMPLIANCE WITH CURRENT CODES, INCLUDING BUT NOT LIMITED TO:
    A. MICHIGAN BUILDING CODES
    B. MICHIGAN PLUMBING CODE
    C. MICHIGAN MECHANICAL & ENERGY CODES
    D. NATIONAL ELEC. CODE
    E. APPLICABLE NFPA CODES (INCLUDING LIFE SAFETY CODE - IF/AS APPLICABLE)
    F. STATE OF MICHIGAN PUBLIC HEALTH CODES - IF/AS APPLICABLE
    G. MICHIGAN REHABILITATION - IF/AS APPLICABLE
    H. MICHIGAN BARRIER FREE CODES
    I. OSHA REQUIREMENTS
    ALL CODES SHALL BE THE STATE OF MI LATEST ADOPTED EDITIONS AT THE TIME OF PLAN REVIEW

15. PLUMBING WORK SHALL BE DONE IN ACCORDANCE WITH THE PLUMBING CODE AS LOCALLY ADOPTED, LOCAL REGULATIONS AND OTHER CODES OR REGULATIONS HAVING LEGAL JURISDICTION IN THE AREA. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND CERTIFICATES OF INSPECTIONS AS MAY BE REQUIRED. PROVIDE FINAL CERTIFICATES OF INSPECTION TO THE GC UPON COMPLETION.

16. ANY CHANGES IN THE WORK TO SECURE CERTIFICATES SHALL BE MADE BY THIS CONTRACTOR AT HIS OWN EXPENSE. IN THE EVENT PLANS AND SPECIFICATIONS CONFLICT WITH ANY RULES, REGULATIONS OR CODES APPLYING, SAID RULES, REGULATIONS AND CODES SHALL GOVERN THE CONTRACTOR.

17. COMPLY WITH THE RULES OF THE LOCAL UTILITY COMPANIES. PLUMBING CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. CONTACT ENGINEER IMMEDIATELY IF CONFLICTS ARISE.

18. IT IS THE INTENT OF THESE DOCUMENTS TO ESTABLISH A STANDARD OF QUALITY. THE CONTRACTOR MUST SELECT ONE OF THE SPECIFIED MANUFACTURERS FOR EACH PIECE OF EQUIPMENT AND, WHERE ONLY ONE MANUFACTURER IS SPECIFIED, THAT MAKE MUST BE USED. THESE ITEMS MAY NOT BE CHANGED EXCEPT BY PERMISSION OF THE ENGINEER.

19. CONTRACTOR SHALL FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACES IN WHICH WORK WILL BE INSTALLED. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH INSTALLATION.

20. IF DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES FOR PROPER EXECUTION OF THE WORK.

21. FURNISH TO THE GC, FOR THE OWNER, TWO BOUND OPERATION MANUALS CONSISTING OF THE FOLLOWING:
    A. ONE COPY OF SHOP DRAWINGS OF EACH PIECE OF EQUIPMENT.
    B. INSTALLATION, OPERATING AND TROUBLESHOOTING MANUALS.
    C. PARTS LIST.
    D. USB DRIVE WITH ALL OF THE ABOVE IN PDF FORMAT.

22. THE CONTRACTOR SHALL FURNISH A COMPETENT INSTRUCTOR TO ADVISE THE OWNER IN SERVICING, OPERATING, ETC., OF MAIN PIECES OF EQUIPMENT.

23. CONTRACTOR SHALL GUARANTEE ALL WORK INSTALLED BY HIM OR SUB-CONTRACTORS TO BE FREE FROM DEFECT IN MATERIAL OR WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF THE WORK, AND HE SHALL REPAIR OR REPLACE AT NO ADDITIONAL COST TO THE OWNER ANY MATERIAL OR EQUIPMENT DEVELOPING DEFECTS AND SHALL ALSO MAKE GOOD ANY DAMAGE CAUSED BY SUCH DEFECTS OR THE CORRECTION OF DEFECTS. THIS REQUIREMENT SHALL BE BINDING EVEN THOUGH IT WILL EXCEED PRODUCTS GUARANTEES NORMALLY FURNISHED BY SOME MANUFACTURERS.

24. CONTRACTOR SHALL SUBMIT HIS OWN AND EACH EQUIPMENT MANUFACTURER'S WRITTEN CERTIFICATES, WARRANTING THAT EACH ITEM OR EQUIPMENT FURNISHED COMPLIES WITH ALL REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. NOTE THAT GUARANTEE SHALL RUN FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK, NOT FROM THE DATE OF INSTALLATION OF A DEVICE OR PIECE OF EQUIPMENT.

25. ALL WORK AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST STANDARDS PRESCRIBED BY LOCAL AND/OR STATE CODES AND/OR ORDINANCES INCLUDING THE LATEST RULES OF THE NFPA, AND AMERICAN STANDARDS ASSOCIATION, AND WITH ANY PREVAILING RULES AND REGULATIONS PERTAINING TO ADEQUATE PROTECTION AND/OR GUARDING OF ANY HAZARDOUS LOCATIONS.

26. ALL EQUIPMENT SHALL BE INSTALLED TO MANUFACTURER'S INSTALLATION INSTRUCTIONS. IN ALL CASES WHERE THE MANUFACTURERS OF ARTICLES USED IN THIS CONTRACT FURNISH DIRECTIONS COVERING POINTS NOT SHOWN ON THE DRAWINGS OR HEREIN SPECIFIED, SUCH DIRECTIONS SHALL BE FOLLOWED.

27. UNTIL FINAL ACCEPTANCE OF THE WORK, THE CONTRACTOR SHALL PROTECT ALL MATERIALS.

28. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE EQUAL IN QUALITY AND CAPACITY TO THAT SPECIFIED AND HARMONIOUS IN DESIGN AS DETERMINED BY THE ENGINEER.

29. PLUMBING WORK SHALL BE CAREFULLY EXECUTED BY SKILLED MECHANICS WELL VERSED IN THEIR PARTICULAR TRADES. IT SHALL ALSO HAVE A CLEAN, NEAT, WELL ARRANGED AND FINISHED APPEARANCE TO THE COMPLETE SATISFACTION OF THE OWNER AND THE ARCHITECT/ENGINEER.

30. THE CONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH THE CONDITIONS WHICH WILL AFFECT THE WORK HE IS TO PERFORM. THE SUBMISSION OF A PROPOSAL BY THIS CONTRACTOR SHALL BE CONCLUSIVE EVIDENCE THAT THIS CONTRACTOR HAS VISITED THE SITE AND HAS GIVEN PROPER CONSIDERATION AND EVALUATION OF THESE CONDITIONS IN THE PREPARATION OF HIS PROPOSAL. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE IN HIS BEHALF FOR EXTRA EXPENSE INCURRED DUE TO FAILURE OF NEGLECT ON HIS PART TO MAKE THIS VISIT AND EXAMINATION.

31. ALL PLUMBING EQUIPMENT PROVIDED SHALL MEET THE REQUIREMENTS OF ASHRAE 2019 EDITION, SECTION 90.1 (ENERGY REQUIREMENTS).

32. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE INDIVIDUAL STOPS. STOPS SHALL BE CHROMED BRASS WITH CHROMED BRASS TUBING AND COMPRESSION FITTINGS. PVC SUPPLIES AND/OR FLEXIBLE PLASTIC ARE NOT ACCEPTABLE.

33. PLUMBING FIXTURES SHALL BE CAULKED AT WALL AND FLOOR JOINTS WITH COMMERCIAL GRADE SILICONE CAULK, COLOR PER ARCHITECT.

34. ALL SHUTOFF VALVES 1/2" TO 2" SHALL BE 1/4 TURN BALL VALVES. SHUTOFF VALVES 2-1/2" AND LARGER SHALL BE BUTTERFLY VALVES.

35. PROVIDE ACCESS PANELS FOR ALL VALVES CONCEALED IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS. ACCESS PANELS SHALL BE FIRE RATED WHEN LOCATED IN FIRE ASSEMBLIES. PROVIDE 1/4 TURN LOCKS.

36. COORDINATE EXACT FLOOR DRAIN LOCATIONS WITH ARCHITECTURAL DRAWINGS. SET FLOOR DRAINS BELOW FINISHED FLOOR AS REQUIRED FOR ARCHITECTURALLY SPECIFIED SLOPE. FLOOR DRAIN TYPE SHALL BE ADJUSTABLE HEIGHT TYPE.

37. SURFACES OF ALL FLOOR DRAINS, CLEANOUTS, AND OTHER EQUIPMENT SHALL BE CLEANED AND LEFT IN FIRST CLASS CONDITION. FLOOR DRAINS SHALL BE SEALED DURING CONSTRUCTION TO PREVENT DEBRIS FROM ENTERING THE SANITARY SYSTEM.

38. CLEANOUT COVERS SHALL BE FLUSH WITH GRADE OR SLAB. COVERS SHALL BE BRONZE TOP WITH SCORED SURFACES AND LABELED "CO".

39. CHARACTER OF PIPING WORK SHALL BE AS FOLLOWS:
    A. ALL PIPING SHALL BE INSTALLED SO AS TO PERMIT COMPLETE DRAINAGE.
    B. ALL PIPING SHALL BE INSTALLED SO AS TO BE FREE FROM POCKETS CAUSED BY SAGGING. SPECIAL CARE SHALL BE TAKEN TO ENSURE UNHINDERED EXPANSION AND CONTRACTION OF PIPING. EXPANSION AND CONTRACTION OF PIPING SHALL BE PROVIDED FOR IN A SATISFACTORY, APPROVED AND SAFE MANNER BY MEANS OF LOOPS OR OFFSETS OR SWING CONNECTIONS, WHERE MECHANICAL EXPANSION JOINTS ARE NOT SPECIFICALLY CALLED FOR. CORRUGATED COPPER PIPE SLEEVES SHALL BE USED AT ALL CONSTRUCTION EXPANSION JOINTS.
    C. RISER AND VERTICAL PIPES ARE TO BE RUN PLUMB, STRAIGHT AND TRUE AND HAVE NO UNNECESSARY OFFSETS. NO PIPING SHALL BE INSTALLED IN SUCH A MANNER AS TO INTERFERE WITH NECESSARY HEADROOM OR WITH DOORS OR WINDOWS.
    D. PIPING SUSPENDED FROM CEILING OR BENEATH FLOOR SLABS SHALL BE KEPT AS CLOSE TO CONSTRUCTION AS POSSIBLE, CONSISTENT WITH THE INSTALLATION AND PITCH REQUIREMENTS.
    E. ALL THREADED PIPE JOINTS SHALL BE MADE TIGHT, METAL TO METAL, USING AN APPROVED THREAD PASTE, TO BE APPLIED ON MALE THREADS ONLY. REAM OUT ALL THREADED PIPE ENDS, TURN ON END AND RATTLE BEFORE INSTALLING. CLEAN AND SWAB OUT ALL PIPING BEFORE INSTALLING.

40. IF DISSIMILAR METALS ARE TO BE JOINED, APPROVED INSULATION UNIONS SHALL BE UTILIZED.

41. COORDINATE ALL PIPE RISERS IN CHASES WITH ALL OTHER TRADES.

42. RUN ALL PIPING AND RELATED PLUMBING CONCEALED IN WALLS WHENEVER POSSIBLE. AVOID EXPOSED INSTALLATION UNLESS SPECIFICALLY REQUIRED. (TYPICAL UNLESS NOTED OTHERWISE)

43. DO NOT SUPPORT CEILINGS, OTHER BUILDING STRUCTURES, OR CONDUITS FROM DUCTWORK, PIPES OR CONDUIT. DO NOT ALLOW DUCTS, PIPES OR CONDUITS TO DIRECTLY TOUCH BUILDING WALLS, FLOORS, OR STRUCTURE AT ANY LOCATION.

44. SANITARY AND WASTE LINES SHALL PITCH DOWN NOT LESS THAN 1/8" PER FOOT IN THE DIRECTION OF FLOW AND SHALL BE PROVIDED WITH ACCESSIBLE CLEANOUTS AT ALL TURNS AND EVERY 100' ON STRAIGHT RUNS. PROVIDE VENTS AS SHOWN ON THE DRAWING OR REQUIRED BY THE PLUMBING CODE. VENTS EXTENDING THROUGH THE ROOF SHALL BE PVC, MINIMUM 3".

45. SOIL, VENT AND DRAIN PIPING SHALL BE RUN AS DIRECT AS POSSIBLE. MAKE ALL CONNECTIONS TO FLOOR DRAINS, FIXTURES, ETC. WITH PVC TRAPS, PROVIDING CLEANOUT WITH FITTED PVC THREADED PLUGS.

46. ALL PIPING SHALL BE THOROUGHLY CLEANED AND SWABBED OUT BEFORE INSTALLATION IN SUCH A MANNER THAT ALL DEBRIS, CONSTRUCTION DIRT AND FOREIGN PARTICLES SHALL BE ENTIRELY REMOVED FROM THE PIPING.

47. ALL DOMESTIC WATER PIPING SHALL BE PROPERLY STERILIZED PER MICHIGAN DEPARTMENT OF PUBLIC HEALTH AND LOCAL MUNICIPALITIES PRIOR TO BEING PUT INTO OPERATION.

48. WATER AND PRESSURIZED PLUMBING LINES SHALL BE TESTED PER MICHIGAN PLUMBING CODE, LATEST ADOPTED EDITION.

49. ALL SYSTEMS SHALL BE THOROUGHLY CLEANED, TESTED, AND BALANCED AS REQUIRED.

50. ALL OPENINGS IN CONSTRUCTION, THROUGH WHICH ANY AND ALL PLUMBING PIPING PASS SHALL BE SEALED UP AIR TIGHT AFTER INSTALLATION OF ALL PIPING. PENETRATIONS OF FLOOR/CEILING ASSEMBLIES REQUIRED TO HAVE A FIRE-RESISTANCE RATING SHALL BE PROTECTED IN ACCORDANCE WITH THE MICHIGAN BUILDING CODE, LATEST ADOPTED EDITION.

51. IF THIS IS A RENOVATION/ADDITION PROJECT, ANY SLAB CUTS AND REPAIRS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR TO DETERMINE IF THEY SHOULD BE INCLUDED IN THE PLUMBING CONTRACTOR'S BID.

52. FAILURE TO DETECT INFERIOR WORK, OR WORK NOT IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND APPLICABLE CODES SHALL NOT BE CONSTRUED AS ACCEPTANCE OF SUCH WORK.

53. THE PLUMBING CONTRACTOR SHALL REMOVE FROM THE SITE ALL DEBRIS AND RUBBISH ACCUMULATING AS A RESULT OF THE PLUMBING INSTALLATION. REMOVE WEEKLY. UPON COMPLETION OF THE WORK HE/SHE SHALL LEAVE ALL AREAS CLEAN, INCLUDING BUT NOT LIMITED TO THE PLUMBING ROOM AND THE PLUMBING EQUIPMENT IN THAT SAID ROOM.

54. ALL CUTTING AND PATCHING IS THE RESPONSIBILITY OF THE TRADE REQUIRING THE WORK, WITH THE EXCEPTION OF ANY REQUIRED ROOF WORK, WHICH WILL BE THE RESPONSIBILITY OF THE ROOFING CONTRACTOR.

55. ALL REQUIRED INSURANCE SHALL BE CARRIED BY THE CONTRACTOR FOR THE PROTECTION AGAINST PUBLIC LIABILITY OR PROPERTY DAMAGE FOR THE DURATION OF THE WORK.

PLUMBING SYMBOL SCHEDULE

AAV	AIR ADMITTANCE VALVE	WC-1	FIXTURE TAG
AFF	ABOVE FINISHED FLOOR		
AFG	ABOVE FINISHED GRADE	—CW—	COLD WATER PIPING
ASR	AUTOMATIC SPRINKLER RISER		
B	BOILER	—XCW—	EXISTING COLD WATER PIPING
BC	BLOWER COIL OR BALANCE COCK		
BFF	BELOW FINISHED FLOOR	—HW—	HOT WATER PIPING
BFG	BELOW FINISHED GRADE		
BT	BATHTUB	—XHW—	EXISTING HOT WATER PIPING
BTVA	BUTTERFLY VALVE		
BV	BALL VALVE	—HWR—	HOT WATER PIPING
CHVA	CHECK VALVE		
CO	CLEANOUT	—XHWR—	EXISTING HOT WATER PIPING
CP	CIRCULATING PUMP		
CV	CONTROL VALVE	—SAN—	SANITARY PIPING
DW	DISHWASHER		
DWH	DOMESTIC WATER HEATER	—XSAN—	EXISTING SANITARY PIPING
ETR	EXISTING TO REMAIN		
EWC	ELECTRIC WATER COOLER	—V—	VENT PIPING
EWF	ELECTRIC WATER FOUNTAIN		
EWH	ELECTRIC WATER HEATER	—XV—	EXISTING VENT PIPING
EWS	EYE WASH STATION		
FCO	FLOOR CLEANOUT	—COND—	CONDENSATE PIPING
FD	FLOOR DRAIN		
FS	FLOOR SINK	—GW—	GREASE WASTE PIPING
FUT	FUTURE		
GR	GRADE	—OW—	OILY WASTE PIPING
GT	GREASE TRAP		
HB	HOSE BIBB		POINT OF NEW CONNECTION
IE	INVERT ELEVATION		
IMB	ICE MAKER BOX		ELBOW UP
MAN	MANUAL		
MPC	MICHIGAN PLUMBING CODE		ELBOW DOWN
OS	OIL SEPARATOR		
OSY	OUTSIDE SCREW & YOKE		CAP
PB	PUSH BUTTON		
PONC	POINT OF NEW CONNECTION		TEE UP
RI	ROUGH-IN		
RS	ROOF SUMP		TEE UP
S	SINK		
SH	SHOWER		DIRECTION OF FLOW
SD	SHOWER DRAIN		
SP	SUMP PUMP		BALL VALVE
SS	SERVICE SINK		
SCCV	SELF-CONTAINED CONTROL VALVE		BALANCE OR GAS COCK
TYP	TYPICAL		
UNO	UNLESS NOTED OTHERWISE		CHECK VALVE
UR	URINAL		
V	VENT		BUTTERFLY VALVE
VIF	VERIFY IN FIELD		
VTR	VENT THRU ROOF		SOLENOID VALVE
WAF	WASH FOUNTAIN		
WC	WATER CLOSET		UNION
WCO	WALL CLEANOUT		
WH	WALL HYDRANT		
WF	WASHER FITTING		
WM	WASHING MACHINE		

PLUMBING SHEET INDEX

PIPE INSULATION SCHEDULE

BASED ON THE 2021 MICHIGAN COMMERCIAL ENERGY CODE INCLUDING:
2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
ANSI/ASHRAE/IES STANDARD 90.1-2019
THE MORE STRINGENT REQUIREMENTS ARE USED AS LISTED BELOW.

ASHRAE 90.1, TABLE 6.8.3-1 "MINIMUM PIPING INSULATION THICKNESS HEATING AND HOT WATER SYSTEMS (STEAM, STEAM CONDENSATE, HOT-WATER HEATING AND DOMESTIC WATER SYSTEMS)"
ASHRAE 90.1, TABLE 6.8.3-2 "MINIMUM PIPING INSULATION THICKNESS COOLING SYSTEMS (CHILLED WATER, BRINE, AND REFRIGERANT)."
IECC, SECTION C404 "SERVICE WATER HEATING (MANDATORY)" PARAGRAPH C404.4 "INSULATION OF PIPING."
IECC, TABLE C403.12.3 "MINIMUM PIPE INSULATION THICKNESS."

NOTES:
1. PROVIDE WITH VAPOR BARRIER. HANGERS/SUPPORTS SHALL BE INSTALLED OUTSIDE OF INSULATION.
2. THE FOLLOWING DOMESTIC/SERVICE HOT WATER PIPING SHALL BE INSULATED AS INDICATED:
   a. RECIRCULATING SYSTEM PIPING, INCL THE SUPPLY AND RETURN PIPING OF A CIRCULATING TANK TYPE WATER HEATER.
   b. THE FIRST 8FT. OF OUTLET PIPING FOR A CONSTANT TEMPERATURE NONRECIRCULATING STORAGE SYSTEM.
   c. THE INLET PIPE BETWEEN THE STORAGE TANK AND A HEAT TRAP IN A NONRECIRCULATING STORAGE SYSTEM.
   d. PIPES THAT ARE EXTERNALLY HEATED (SUCH AS HEAT TRACE OR IMPEDANCE HEATING).
3. PIPING INSULATION IS NOT REQUIRED BETWEEN THE CONTROL VALVE AND COIL ON RUN-OUTS WHEN THE CONTROL VALVE IS LOCATED WITHIN 4 FT. OF THE COIL AND THE PIPE SIZE IS 1" OR LESS.
4. INSTALL (2) LAYERS OF 1" CLOSED CELL INSULATION ADHERED TO UNDERSIDE OF ROOF SUMPS.
5. INSULATE PLUMBING VENT PIPING WITHIN 10 FEET OF BUILDING EXTERIOR.

FLUID OPERATING TEMP RANGE, °F	INSULATION CONDUCTIVITY		INSULATION THICKNESS					NOTE
	CONDUCTIVITY RANGE BTU-IN/HR-FT2-°F	MEAN TEMP RATING, °F	NOMINAL PIPE OR TUBE SIZE					
			<1"	1" TO <1.5"	1.5" TO <4"	4" TO <8"	>8"	
105° - 140°	0.22 - 0.28	100 °F	1.0"	1.0"	1.5"	1.5"	1.5"	2, 3
DOM CW	0.21 - 0.27	75 °F	1.0"	1.0"	1.0"	1.0"	1.0"	1
VENT	0.21 - 0.27	75 °F		1.0"	1.0"	1.0"	1.0"	5

THE COLLABORATIVE +ACOCK

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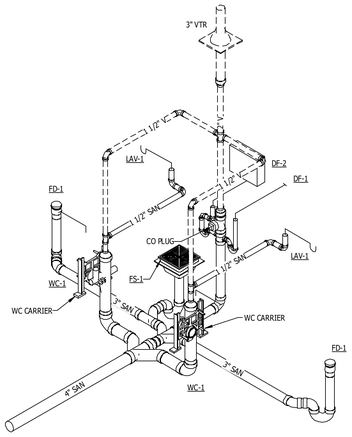
11.21.2025	BID/PERMIT

TC JOB NO. 107348

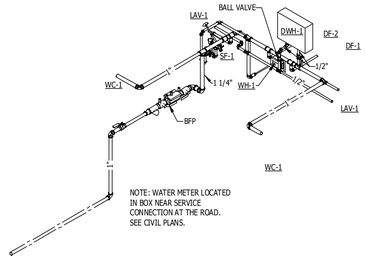
OWNER JOB NO.

SHEET TITLE
PLUMBING COVER SHEET

SHEET NO.
P001



1 P101 SANITARY ISOMETRIC
NOT TO SCALE



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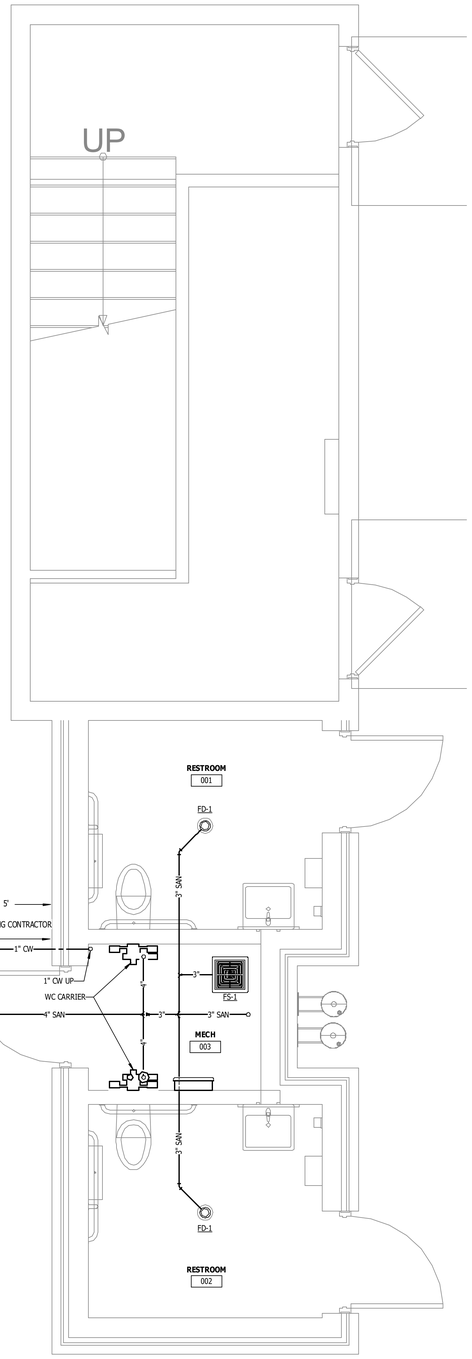
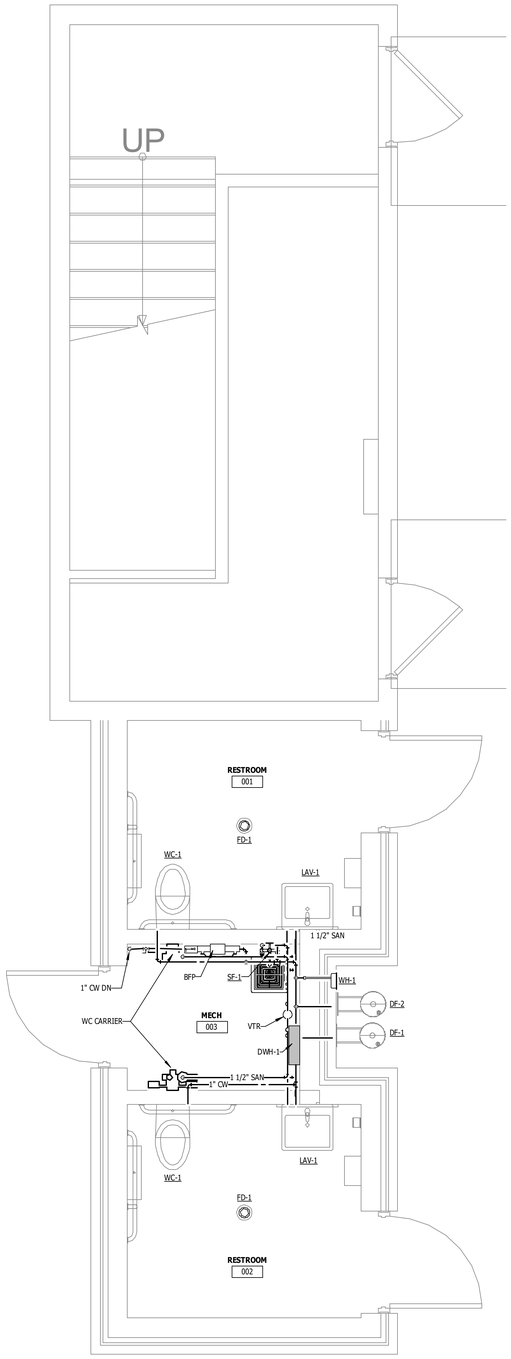


FIRST FLOOR PLAN - PLUMBING UNDERGROUND
1/2" = 1'-0"



FIRST FLOOR PLAN - PLUMBING
1/2" = 1'-0"

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SHEET TITLE
PLUMBING FLOOR PLAN

SHEET NO.
P101

PLUMBING FIXTURE CONNECTION SCHEDULE

TAG	FIXTURE TYPE	PIPE CONNECTION DATA				ELECTRICAL DATA		COMMENTS
		COLD WATER	HOT WATER	VENT	SANITARY	FLA	VOLTAGE	
DF-1	DRINKING FOUNTAIN	1/2"	-	1-1/4"	1-1/2"	-	-	SEE ARCH FOR MOUNTING HEIGHT
DF-2	DRINKING FOUNTAIN	1/2"	-	1-1/4"	1-1/2"	-	-	SEE ARCH FOR MOUNTING HEIGHT
FD-1	FLOOR DRAIN	-	-	1-1/2"	3"	-	-	
FS-1	FLOOR SINK	-	-	1-1/2"	3"	-	-	
LAV-1	LAVATORY	1/2"	1/2"	1-1/4"	1-1/2"	-	-	
SF-1	SERVICE FAUCET	1/2"	1/2"	-	-	-	-	
WC-1	WALL HUNG WATER CLOSET	1"	-	1-1/2"	3"	-	-	
WH-1	WALL HYDRANT - FROST PROOF	3/4"	-	-	-	-	-	

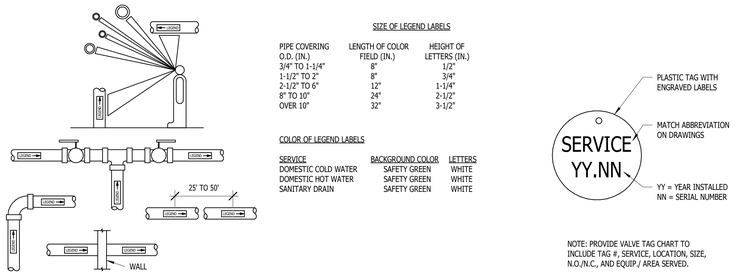
DOMESTIC WATER HEATER SCHEDULE

COMMENTS:
1. POINT OF USE HEATER.

TAG	MANUFACTURER	MODEL	TURN ON FLOW	FLOW	TEMP. RISE	ELECTRICAL DATA			COMMENTS
						POWER INPUT	AMPS	VOLTAGE	
DWH-1	Eemax Inc.	EX180T2T	0.7 GPM	2.0 GPM	61 °F	18 kW	50 A	208V / 3Ø	1

PLUMBING FIXTURE SPECIFICATIONS

TAG FIXTURE TYPE	FIXTURE		FAUCETS, FITTINGS, AND ACCESSORIES	
	BASIS OF DESIGN	DESCRIPTION	BASIS OF DESIGN	DESCRIPTION
DF-1 DRINKING FOUNTAIN	ELKAY LK4405FRK	OUTDOOR, WALL MOUNT, NON-FILTERED, NON-REFRIGERATED, FREEZE RESISTANT FOUNTAIN. FEATURES SHALL INCLUDE HEAVY DUTY VANDAL RESISTANT, SEALED FREEZE RESISTANT, 300 SERIES STAINLESS. FURNISHED WITH VANDAL RESISTANT BUBBLER. MECHANICAL BUTTON ACTIVATION. PRODUCT SHALL BE WALL MOUNT (ON WALL), FOR OUTDOOR APPLICATIONS, SERVING 1 STATION(S). UNIT SHALL COMPLY WITH MICHIGAN'S FILTER FIRST LAW, ADA & ICC A117.1, ASME A112.19.3, NSF/ANSI 61 & 372. UNIT SHALL HAVE BLUE POWDER COAT FINISH. SUBMIT COLOR CHART FOR VERIFICATION. SEE ARCHITECTURAL PLANS FOR MOUNTING HEIGHT. ACCEPTABLE: ELKAY OR PRE-APPROVED EQUAL BY HAWS, MURDOCK, OR OASIS.	-	-
DF-2 DRINKING FOUNTAIN	ELKAY LK4405FRK	SAME AS DF-1. MOUNT IN LOW HEIGHT POSITION. SEE ARCHITECTURAL FOR DIMENSIONS.	-	-
FD-1 FLOOR DRAIN	ZURN ZN-2415-BZ-1	FIXTURE: FLOOR AND SHOWER DRAIN, COATED CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAGE SLOTS AND TOP ASSEMBLY, UP TO 1" OF VERTICAL POST POUR ADJUSTMENT, PRE-PACKAGED SHIMS FOR TILT CORRECTION AND INTEGRATED, SELF-CONTAINED "TYPE B" LIGHT DUTY, HEEL PROOF STRAINER WITH ROUGH-IN COVER FOR PROTECTION DURING CONCRETE POUR. STRAINER TO BE 6" DIAMETER, POLISHED NICKEL BRONZE. ACCEPTABLE: ZURN, J.R. SMITH, JOSAM, SIOUX CHIEF, WADE, WATTS		TRAP SEAL PROTECTION DEVICE SHALL BE INSTALLED IN THE PIPE BETWEEN THE FLOOR DRAIN STRAINER AND THE FIXTURE TRAP TO PREVENT THE EVAPORATION OF THE TRAP SEAL AND THE ESCAPE OF SEWER GASES. THE TRAP SEAL SHALL BE MADE FROM A MOLDED CHEMICALLY RESISTANT ELASTOMER. DEVICE SHALL COMPLY WITH ASSE 1072. ACCEPTABLE: J.R. SMITH, SURE-SEAL, SIOUX CHIEF, ZURN,
FS-1 FLOOR SINK	SIOUX CHIEF 861 SERIES	FLOOR SINK SHALL BE MOLDED FROM IMPACT-MODIFIED PVC WITH SCH. 40 HUB CONNECTION WHICH CONFORMS TO ASTM D2665. FLOOR SINK SHALL SHOW NO SIGNIFICANT DISTORTION AT WATER TEMPERATURES UP TO 180°F. STRAINER SHALL BE HEEL-PROOF AND SHALL MEET ALL APPLICABLE LOAD REQUIREMENTS FOR INTENDED USE. FLOOR SINK SHALL BE DESIGNED WITH A CONCRETE ANCHOR FLANGE FOR SOLID INSTALLATIONS. SUMP AREA SHALL HAVE SMOOTH, PITCHED INNER SURFACES FOR QUICK AND COMPLETE DRAINAGE. DESIGNED IN ACCORDANCE WITH ASME A112.6.7-01.		TRAP SEAL PROTECTION DEVICE SHALL BE INSTALLED IN THE PIPE BETWEEN THE FLOOR DRAIN STRAINER AND THE FIXTURE TRAP TO PREVENT THE EVAPORATION OF THE TRAP SEAL AND THE ESCAPE OF SEWER GASES. THE TRAP SEAL SHALL BE MADE FROM A MOLDED CHEMICALLY RESISTANT ELASTOMER. DEVICE SHALL COMPLY WITH ASSE 1072. ACCEPTABLE: J.R. SMITH, SURE-SEAL, SIOUX CHIEF, ZURN,
LAV-1 LAVATORY	KOHLER K-2005 KINGSTON	FIXTURE: WALL-MOUNT LAVATORY SHALL BE MADE OF VITREOUS CHINA. LAVATORY SHALL HAVE FRONT OVERFLOW. LAVATORY SHALL BE 21-1/4" X 18-1/8" WITH 16" X 10" BOWL. LAVATORY SHALL BE FOR 4" CENTERS AND DRILLED FOR CONCEALED ARM CARRIER. REAR DECK AREA SHALL INCLUDE FLAT AREA FOR SOAP AND 5" BACKSPLASH. LAVATORY SHALL COMPLY WITH ADA, ANSI A117.1, ASME A112.19.2/CSA B45.1, ICC, IAPMO. ACCEPTABLE: KOHLER OR APPROVED EQUAL BY AMERICAN STANDARD, MANSFIELD, SLOAN, OR ZURN. TRIM:1-1/4" CHROMIUM PLATED BRASS TUBING P TRAP, FLEXIBLE BRASS SUPPLIES WITH SCREWDRIVER STOPS. PROVIDE TRUEBRO "LAV-SHIELD" COVER OVER TRAP, SUPPLY PIPING & VALVES FITTED TO MATCH LAV MODEL PROVIDED. PROVIDE WALL ESCUTCHEONS ON SUPPLY AND WASTE CONNECTIONS THROUGH WALL. PROVIDE WALL HANGER.	ZURN ZURN ZG6955-W2-N	FAUCET: DECK MOUNTED SENSOR FAUCET WITH MOTOR GEAR-DRIVEN CERAMIC CARTRIDGE THAT IS LESS SUSCEPTIBLE TO DEBRIS AND EASY MAINTENANCE. PROVIDE WITH 0.5 GPM LAMINAR FLOW OUTLET (SPRAY NOT ALLOWED). BATTERY POWERED SENSOR ACTIVATION WITH HYDRO TURBINE RECHARGING DELIVERS SUSTAINABLE PERFORMANCE BY PROVIDING RENEWABLE, UNINTERRUPTED HYDROPOWER DESIGNED TO LAST THE LIFE OF A COMMERCIAL RESTROOM. NO-DELAY TOUCHLESS SENSOR WATER ACTIVATION. UNIT TO FEATURE BLUETOOTH-ENABLED FOR POINT-OF-USE WIRELESS ADJUSTABILITY: ADJUSTABLE TIME OUT FEATURE (30-SECOND DEFAULT TIME OUT), HYGIENIC LINE FLUSHING (ON-DEMAND OR PROGRAMMED), SENSING MODES (ON-DEMAND OR METERING), SENSOR RANGE ADJUSTMENT, BATTERY STATUS. SOFT-CLOSE TECHNOLOGY THAT ELIMINATES WATER HAMMER. FAUCET BODY SHALL BE HIGH QUALITY BRASS MANUFACTURED TO COMPLY WITH SECTION 1417 OF THE SAFE DRINKING WATER ACT (SDWA) WHICH MANDATES THE WEIGHTED AVERAGE LEAD CONTENT OF NO MORE THAN 0.25% OF THE WETTED SURFACE.PROVIDE WITH POLISHED CHROME STANDARD FINISH. UNIT SHALL COMPLY WITH A112.18.1 / CSA B125.1, ADA, UPC LEAD FREE. ACCEPTABLE: ZURN OR APPROVED EQUAL BY AMERICAN STANDARD, CHICAGO FAUCETS, KOHLER, OR SLOAN. POINT OF USE TEMPERING VALVE: A THERMOSTATIC MIXING VALVE SHALL BE INSTALLED ON THE HOT WATER SUPPLY TO FIXTURE. THE VALVE SHALL BE ASSE 1017, ASSE 1069, AND ASSE 1070 CERTIFIED AND IAPMO CUPC CERTIFIED AND APPROVED TO CSA B125.3 AND CSA B125.70. IT SHALL HAVE A LEAD FREE (WETTED SURFACE CONTAINS LESS THAN 0.25% LEAD BY WEIGHT) CAST COPPER SILICON ALLOY BODY. LEAD FREE THERMOSTATIC VALVES SHALL COMPLY WITH STATE CODES AND STANDARDS, WHERE APPLICABLE, REQUIRING REDUCED LEAD CONTENT. THE VALVE SHALL INCLUDE INTEGRAL FILTER WASHERS AND CHECK VALVES AND AN ADJUSTMENT CAP WITH LOCKING FEATURE. ACCEPTABLE: WATTS SERIES LFMMVM1 OR APPROVED EQUAL BY LEONARD, POWERS, OR ZURN.
SF-1 SERVICE FAUCET	CHICAGO FAUCETS 835-SFBRCF	SERVICE SINK FAUCET FOR HOT AND COLD WATER, EXPOSED WALL-MOUNT WITH EXPOSED SUPPLY PIPES, ROUGH CHROME PLATED. TOP-MOUNTED SUPPLIES WITH 6" FIXED CENTERS. RIGID SPOUT WITH VACUUM BREAKER, PAIL HOOK, GARDEN HOSE THREADED OUTLET, AND WALL BRACE, 5-3/4" CENTER-TO-CENTER. 3" METAL CROSS HANDLES WITH EIGHT-POINT, TAPERED BROACH AND SECURED BLUE AND RED INDEX BUTTONS. CERAMIC QUARTER-TURN CARTRIDGE WITH INTEGRATED CHECK VALVE, FEATURES SQUARE, TAPERED STEM. 1/2" NPSM SUPPLY INLETS AND COUPLING NUT FOR 3/8" OR 1/2" FLEXIBLE RISER. NOTE: ATMOSPHERIC VACUUM BREAKER IS NOT INTENDED FOR CONTINUOUS PRESSURE APPLICATIONS. ACCEPTABLE: CHICAGO FAUCETS OR APPROVED EQUAL BY AMERICAN STANDARD, FIAT, KOHLER, OR ZURN.	-	-
WC-1 WALL HUNG WATER CLOSET	KOHLER K-84325 KINGSTON ULTRA	FIXTURE: HIGH EFFICIENCY TOILET, ELONGATED BOWL, SIPHON JET ACTION, WHITE VITREOUS CHINA FINISH, FLOOR MOUNTED, 1.28 US GAL PER FLUSH, 2-1/8" FULLY GLAZED INTERNAL TRAPWAY, 10"x7" WATER SURFACE AREA, 1-1/2" TOP SPUD CONNECTION, BACK OUTLET, BOLT CAPS. SEE ARCHITECTURAL PLANS FOR MOUNTING HEIGHT FOR ADA INSTALLATION. MINIMUM MAP TEST RATING: 800 GRAMS. ACCEPTABLE: KOHLER, OR APPROVED EQUAL BY AMERICAN STANDARD, MANSFIELD, SLOAN, TOTO, OR ZURN. SEAT: HEAVY DUTY TOILET SEAT, FOR ELONGATED BOWL OPEN FRONT, WHITE SOLID PLASTIC, LESS COVER, REINFORCED STAINLESS STEEL CHECK HINGES, METAL FLAT WASHERS STAINLESS STEEL POSTS AND NUTS. BASED ON CENTOCO. ACCEPTABLE: BY SAME MANUFACTURER AS FIXTURE OR APPROVED EQUAL BY BEAMIS, CENTOCO, OR CHURCH.	ZURN ZER6000AV-SM -HET	FLUSH VALVE: EXPOSED, QUIET DIAPHRAGM-TYPE, CHROME-PLATED FLUSHOMETER VALVE WITH A POLISHED EXTERIOR. 1.28 GPF FLUSH VOLUME. COMPLETE WITH CHLORAMINE RESISTANT, DUAL SEAL DIAPHRAGM WITH A CLOG RESISTANT, TRIPLE FILTERED BY-PASS. THE VALVE SHALL INCORPORATE A 6VDC GEAR DRIVEN MOTOR ACTUATOR, A BATTERY POWERED AUTOMATIC SENSOR, CHROME-PLATED METAL COVER WITH MANUAL OVERRIDE PUSH BUTTON AND 10 DEGREE ANGLED SENSOR. CONTROL STOP SHALL HAVE INTERNAL SIPHON-GUARD PROTECTION, SWEAT SOLDER KIT, WALL FLANGE WITH SET SCREW. UNIT SHALL INCLUDE HIGH BACK PRESSURE VACUUM BREAKER WITH ONE PIECE HEX COUPLING NUT, ADJUSTABLE TAILPIECE, SPUD COUPLING AND FLANGE FOR TOP SPUD CONNECTION, AND TRUE MECHANICAL OVERRIDE BUTTON. UNIT SHALL COMPLY WITH ASSE 1037 / ASME A112.1037 / CSA B125.37 AND ADA. ACCEPTABLE: ZURN OR APPROVED EQUAL BY AMERICAN STANDARD, KOHLER, SLOAN, OR TOTO. CARRIER: NARROW WALL VERTICAL OFFSET SIPHON JET WATER CLOSET "RIGID SYSTEM" WITH 4" SIZE NO-HUB CONNECTIONS AND 2" VENT COMPLETE WITH DURA-COATED CAST IRON MAIN FITTING, SEPARABLE FACE PLATE RIGIDLY MOUNTED ON FITTING, UNIVERSAL FLOOR MOUNTED SUPPORTS, CORROSION RESISTANT ADJUSTABLE ABS COUPLING WITH INTEGRAL TEST CAP, FIXTURE BOLTS, TRIM, STUD PROTECTORS, REAR ANCHOR TIE DOWN, AND BONDED "NEO-SEAL" GASKET. ACCEPTABLE: ZURN, J.R. SMITH, OR SIOUX CHIEF.
WH-1 WALL HYDRANT - FROST PROOF	PRIER C-634	HEAVY COMMERCIAL WALL HYDRANT. HYDRANT SHALL BE SURFACE MOUNT AND INSTALLED THROUGH 1 3/8" ROUND OPENING. HYDRANT SHALL HAVE AUTOMATIC DRAINING CAPABILITIES WITH INTEGRAL VACUUM BREAKER/DOUBLE BACKFLOW PREVENTOR. HYDRANT SHALL FLOW 16 GALLONS PER MINUTE MINIMUM AT 25 PSI DIFFERENTIAL AND BE AT FULL FLOW IN 2 HANDLE ROTATIONS. HYDRANT SHAFT SHALL BE BRASS WITH CONNECTIONS. HYDRANT SHALL HAVE 3/4" GARDEN HOSE CONNECTION WITH FREEZELESS WATER FLOW AND SELF-DRAINING FUNCTIONS, ONE PIECE VALVE PLUNGER, SATIN NICKEL FINISH, BRASS OPERATING ROD WITH POSITIVE TRIPLE SEAL SHUTOFF MECHANISM. HYDRANT SHALL BE APPROVED UNDER ASSE 1052 STANDARD. OPERATING KEY & WALL CLAMPING RING TO BE FURNISHED WITH EACH HYDRANT. VERIFY HYDRANT INSERTION LENGTH WITH ARCHITECTURAL WALL DETAILS AND FIELD VERIFICATION.	PRIER C-364BX	FURNISH AND INSTALL FLUSH-MOUNT HYDRANT BOX FOR EACH VALVE. HYDRANT BOX SHALL BE MANUFACTURED OF SOLID CAST BRASS OR ALUMINUM WITH A ROUGH BRASS, SATIN NICKEL PLATED BRASS FINISH. BOX SHAPE TO BE SQUARE. BOX MAY BE INSTALLED SEPARATELY AND HYDRANT BE INSERTABLE AND REMOVABLE FROM FRONT OF THE BOX. ACCESS TO THE HYDRANT BOX SHALL BE PROVIDED BY THE SAME OPERATING KEY AS THE VALVE. A GASKET SHALL BE INSTALLED BETWEEN THE BOX AND HYDRANT TO PREVENT WATER INTRUSION INTO THE STRUCTURE.



NOTE: LABELS SHALL COMPLY WITH ANSI/ASME A13.1-2007.

SIZE OF LEGEND LABELS

PIPE COVERING O.D. (IN.)	LENGTH OF COLOR FIELD (IN.)	HEIGHT OF LETTERS (IN.)
3/4" TO 1-1/4"	8"	1/2"
1-1/2" TO 2"	8"	3/4"
2-1/2" TO 6"	12"	1-1/4"
8" TO 10"	24"	2-1/2"
OVER 10"	32"	3-1/2"

COLOR OF LEGEND LABELS

SERVICE	BACKGROUND COLOR	LETTERS
DOMESTIC COLD WATER	SAFETY GREEN	WHITE
DOMESTIC HOT WATER	SAFETY GREEN	WHITE
SANITARY DRAIN	SAFETY GREEN	WHITE

NOTE: PROVIDE VALVE TAG CHART TO INCLUDE TAG #, SERVICE, LOCATION, SIZE, N.O./N.C., AND EQUIP./ AREA SERVED.

1 P601 PIPE MARKING & VALVE TAG DETAILS
NOT TO SCALE

THE COLLABORATIVE +ACOCK

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KTS PROJECT NO. KTS PROJ

PROJECT TITLE

OSCODA ATHLETIC RESTROOMS

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11.21.2025	BID/PERMIT

TC JOB NO. 107348

OWNER JOB NO.

SHEET TITLE
PLUMBING SCHEDULES

SHEET NO.
P601

MECHANICAL NOTES

1. MECHANICAL PLANS ARE DIAGRAMMATIC IN NATURE, INTENDED TO INDICATE DESIGN INTENT ONLY. THE MECHANICAL CONTRACTOR IS EXCLUSIVELY RESPONSIBLE TO COORDINATE SPECIFIC LOCATIONS OF ITEMS AND ADJUST AS REQUIRED TO ACCOMMODATE EXISTING CONDITIONS (IF RENOVATION PROJECT), BUILDING STRUCTURE, SPRINKLER PIPING (IF ANY), LIGHTS, PLUMBING, ELECTRICAL WORK, AND THE WORK OF ALL OTHER TRADES. DIMENSIONS SHALL BE FIELD-VERIFIED AND COORDINATED PRIOR TO PROCUREMENT OR FABRICATION. FIELD MODIFICATIONS (SUCH AS OFFSETS IN PIPING OR DUCTWORK (INCLUDING DIVIDED DUCTWORK) NEEDED DUE TO OBSTRUCTIONS OR INTERFERENCES SHALL BE PROVIDED AT NO ADDITIONAL COST.

2. ALL OF THE MECHANICAL INFORMATION IS PRESENTED ON A REFERENCED BACKGROUND FLOOR PLAN. IN CASE OF CONFLICT BETWEEN BACKGROUND PLAN AND ARCHITECTURAL FLOOR PLAN, ARCHITECTURAL FLOOR PLAN SHALL GOVERN.

3. THE HVAC CONTRACTOR SHALL PROVIDE ALL ITEMS, ARTICLES, MATERIALS, OPERATIONS OR METHODS MENTIONED, LISTED OR SCHEDULED ON THE DRAWINGS AND IN THESE SPECIFICATIONS, INCLUDING ALL LABOR, MATERIALS, EQUIPMENT AND ALL INCIDENTALS NECESSARY REQUIRED FOR THE COMPLETION AND OPERATION OF ALL SYSTEMS.

4. THE ENGINEER WILL NOT HAVE CONTROL OR CHARGE OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES AND IS NOT RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, AND WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THOSE DOCUMENTS PREPARED BY THE ENGINEER.

5. IF BIDDING CONTRACTOR WOULD LIKE TO SUBSTITUTE ANY SPECIFIED MECHANICAL DEVICES, HVAC EQUIPMENT, THERMOSTATS, COILS, FANS, INSULATION, HANGERS, PIPING, VFDs, ETC., THEY MUST PROVIDE SUBMITTAL TYPE DRAWINGS TO THE ENGINEER A MINIMUM OF 7 DAYS PRIOR TO BIDDING THE PROJECT. IF THESE APPROVAL DRAWINGS ARE NOT SUBMITTED AND ACCEPTED, THE SPECIFIED EQUIPMENT MUST BE USED - NO EXCEPTIONS.

6. THE INSTALLATION SHALL BE MADE SO THAT ALL COMPONENT PARTS FUNCTION TOGETHER AS A WORKABLE SYSTEM; IT SHALL BE COMPLETE WITH ALL ACCESSORIES NECESSARY FOR PROPER OPERATION. WHEN THE INSTALLATION IS COMPLETE, ALL EQUIPMENT SHALL BE EXECUTED IN CONFORMITY WITH THE BEST PRACTICE SO AS TO CONTRIBUTE TO EFFICIENCY OF OPERATION, MINIMUM MAINTENANCE, ACCESSIBILITY AND SIGHTLINESS.

7. TO ACCOMPLISH THESE RESULTS, THE HVAC CONTRACTOR SHALL CONSULT THE ARCHITECT'S FIELD LAYOUTS OF THE CONTRACTORS FOR THESE TRADES AND THEIR SHOP DRAWINGS. HE/SHE SHALL COORDINATE THEIR WORK ACCORDINGLY.

8. DRAWINGS ARE INTENDED TO SHOW THE GENERAL ARRANGEMENT, DESIGN AND EXTENT OF THE WORK AND ARE PARTLY DIAGRAMMATIC. THEY ARE NOT INTENDED TO BE SCALED FOR ROUGHING-IN MEASUREMENTS OR TO SERVE AS SHOP DRAWINGS.THE ARCHITECTURAL DRAWINGS AND DETAILS SHALL BE EXAMINED FOR EXACT LOCATION OF FIXTURES AND EQUIPMENT. WHERE THEY ARE NOT DEFINITELY LOCATED, THIS INFORMATION SHALL BE OBTAINED FROM THE ENGINEER.

9. MINOR ITEMS AND ACCESSORIES OR DEVICES REASONABLY INFERABLE AS NECESSARY TO THE COMPLETE AND PROPER OPERATION OF ANY SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR OR SUB-CONTRACTOR FOR SUCH SYSTEM WHETHER OR NOT THEY ARE SPECIFICALLY CALLED FOR BY THE SPECIFICATIONS OR DRAWINGS.

10. WHERE WORK OF THE CONTRACTOR CONNECTS TO THAT OF ANOTHER TRADE, OR TO PIPING OR EQUIPMENT IN PLACE, THE CONTRACTOR SHALL TAKE SUCH MEASUREMENTS IN THE FIELD AS MAY BE NECESSARY TO MAKE HIS WORK COME TRUE OR LINE UP WITH THAT WORK.

11. HVAC CONTRACTOR SHALL FURNISH TO THE ARCHITECTURAL TRADES CONTRACTOR INFORMATION SUCH AS SIZE AND LOCATION CONCERNING ALL FRAMED OPENINGS AND EQUIPMENT BASES REQUIRED.

12. UNLESS OTHERWISE INDICATED, ALL MOTORS SHALL BE FURNISHED AND INSTALLED BY THE HVAC CONTRACTOR. UNLESS OTHERWISE INDICATED, THE ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL AND WIRE ALL STARTERS, SAFETY LINE SWITCHES AND CONTROLLERS.

13. ALL CONSTRUCTION SHALL BE DONE IN COMPLIANCE WITH CURRENT CODES, INCLUDING BUT NOT LIMITED TO:
    A. MICHIGAN BUILDING CODES
    B. MICHIGAN PLUMBING CODE
    C. MICHIGAN MECHANICAL & ENERGY CODES
    D. NATIONAL ELEC. CODE
    E. APPLICABLE NFPA CODES (INCLUDING LIFE SAFETY CODE - IF/AS APPLICABLE)
    F. STATE OF MICHIGAN PUBLIC HEALTH CODES - IF/AS APPLICABLE
    G. MICHIGAN REHABILITATION - IF/AS APPLICABLE
    H. MICHIGAN BARRIER FREE CODES
    I. OSHA REQUIREMENTS
    ALL CODES SHALL BE THE STATE OF MICHIGAN LATEST ADOPTED EDITIONS AT THE TIME OF PLAN REVIEW.

14. HVAC WORK SHALL BE DONE IN ACCORDANCE WITH THE MECHANICAL CODE AS LOCALLY ADOPTED, LOCAL REGULATIONS AND OTHER CODES OR REGULATIONS HAVING LEGAL JURISDICTION IN THE AREA. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND CERTIFICATES OF INSPECTIONS AS MAY BE REQUIRED. PROVIDE FINAL CERTIFICATES OF INSPECTION TO THE GC UPON COMPLETION.

15. ANY CHANGES IN THE WORK TO SECURE CERTIFICATES SHALL BE MADE BY THIS CONTRACTOR AT HIS OWN EXPENSE. IN THE EVENT PLANS AND SPECIFICATIONS CONFLICT WITH ANY RULES, REGULATIONS OR CODES APPLYING, SAID RULES, REGULATIONS AND CODES SHALL GOVERN THE CONTRACTOR.

16. ALL HEATING AND COOLING WORK SHALL BE DONE IN FULL ACCORD WITH ASME, SMACNA AND ALL STATE, FEDERAL AND LOCAL CODES OR ORDINANCES WHICH MAY APPLY IN THE AREA.

17. COMPLY WITH THE RULES OF THE LOCAL UTILITY COMPANIES. PLUMBING CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. CONTACT ENGINEER IMMEDIATELY IF CONFLICTS ARISE.

18. IT IS THE INTENT OF THESE SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY. THE CONTRACTOR MUST SELECT ONE OF THE SPECIFIED MANUFACTURERS FOR EACH PIECE OF EQUIPMENT AND, WHERE ONLY ONE MANUFACTURER IS SPECIFIED, THAT MAKE MUST BE USED. THESE ITEMS MAY NOT BE CHANGED EXCEPT BY PERMISSION OF THE ENGINEER.

19. CONTRACTOR SHALL FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACES IN WHICH WORK WILL BE INSTALLED. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH INSTALLATION. CONTRACTOR MAY CHANGE SHAPE OF DUCTS AS LONG AS THE FREE AREA NOTED ON PLANS IS RETAINED.

20. IF DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES FOR PROPER EXECUTION OF THE WORK.

21. FURNISH TO THE GC, FOR THE OWNER, TWO BOUND OPERATION MANUALS CONSISTING OF THE FOLLOWING:
    A. ONE COPY OF SHOP DRAWINGS OF EACH PIECE OF EQUIPMENT.
    B. INSTALLATION, OPERATING AND TROUBLESHOOTING MANUALS.
    C. PARTS LIST.
    D. USB DRIVE WITH ALL THE ABOVE IN PDF FORMAT.

22. THE CONTRACTOR SHALL FURNISH A COMPETENT INSTRUCTOR TO ADVISE THE OWNER IN SERVICING, OPERATING, SEASONAL CHANGE OVER, TEMPERATURE CONTROLS, ETC., OF MAIN PIECES OF EQUIPMENT.

23. CONTRACTOR SHALL GUARANTEE ALL WORK INSTALLED BY HIM OR SUB-CONTRACTORS TO BE FREE FROM DEFECT IN MATERIAL OR WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF THE WORK, AND HE SHALL REPAIR OR REPLACE AT NO ADDITIONAL COST TO THE OWNER ANY MATERIAL OR EQUIPMENT DEVELOPING DEFECTS AND SHALL ALSO MAKE GOOD ANY DAMAGE CAUSED BY SUCH DEFECTS OR THE CORRECTION OF DEFECTS. THIS REQUIREMENT SHALL BE BINDING EVEN THOUGH IT WILL EXCEED PRODUCTS GUARANTEES NORMALLY FURNISHED BY SOME MANUFACTURERS.

24. CONTRACTOR SHALL SUBMIT HIS OWN AND EACH EQUIPMENT MANUFACTURER'S WRITTEN CERTIFICATES, WARRANTING THAT EACH ITEM OR EQUIPMENT FURNISHED COMPLIES WITH ALL REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. NOTE THAT GUARANTEE SHALL RUN FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK, NOT FROM THE DATE OF INSTALLATION OF A DEVICE OR PIECE OF EQUIPMENT.

25. ALL WORK AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST STANDARDS PRESCRIBED BY LOCAL AND/OR STATE CODES AND/OR ORDINANCES INCLUDING THE LATEST RULES OF THE N.F.P.A.

26. ALL EQUIPMENT SHALL BE INSTALLED TO MANUFACTURER'S INSTALLATION INSTRUCTIONS. IN ALL CASES WHERE THE MANUFACTURERS OF ARTICLES USED IN THIS CONTRACT FURNISH DIRECTIONS COVERING POINTS NOT SHOWN ON THE DRAWINGS OR HEREIN SPECIFIED, SUCH DIRECTIONS SHALL BE FOLLOWED. CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR EXACT EQUIPMENT FURNISHED.

27. UNTIL FINAL ACCEPTANCE OF THE WORK, THE CONTRACTOR SHALL PROTECT ALL MATERIALS.

28. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE EQUAL IN QUALITY AND CAPACITY TO THAT SPECIFIED AND HARMONIOUS IN DESIGN AS DETERMINED BY THE ENGINEER.

29. HVAC WORK SHALL BE CAREFULLY EXECUTED BY SKILLED MECHANICS WELL VERSED IN THEIR PARTICULAR TRADES. IT SHALL ALSO HAVE A CLEAN, NEAT, WELL ARRANGED AND FINISHED APPEARANCE TO THE COMPLETE SATISFACTION OF THE OWNER AND THE ARCHITECT/ENGINEER.

30. THE HVAC INSTALLATION SHALL BE MADE SO THAT THEIR SEVERAL COMPONENT PARTS IN THE BUILDING WILL FUNCTION TOGETHER AS WORKABLE SYSTEMS, COMPLETE WITH ALL ACCESSORIES NECESSARY FOR THEIR OPERATION AND ALL COMPLETED IN WORKING ORDER.

31. ALL CONDENSING GAS FIRED EQUIPMENT SHALL BE PROVIDED WITH CONDENSATE TRAPS AND NEUTRALIZATION KITS PER THE MICHIGAN PLUMBING CODE. PROVIDE SMALL CONDENSATE SUMP/PUMP SETS IF/AS REQUIRED AND DISCHARGE WITH 3" AIR GAP INTO NEARBY SERVICE SINK OR FLOOR DRAIN. ONLY PUMP CONDENSATE WHEN GRAVITY IS NOT POSSIBLE.

32. ALL OPENINGS IN CONSTRUCTION, THROUGH WHICH PIPING AND/OR DUCTWORK PASS SHALL BE SEALED UP AIR TIGHT AFTER INSTALLATION OF PIPING/DUCTWORK. PENETRATIONS OF FLOOR/CEILING ASSEMBLIES REQUIRED TO HAVE A FIRE-RESISTANCE RATING SHALL BE PROTECTED IN ACCORDANCE WITH THE MICHIGAN BUILDING CODE, LATEST ADOPTED EDITION.

33. LOCATE THERMOSTATS, TEMPERATURE SENSORS, HUMIDISTATS AND HUMIDITY SENSORS (IF ANY) AT HEIGHTS AS NOTED ON THE ARCHITECTURAL DRAWINGS. IF NOT NOTED ON THE ARCHITECTURAL DRAWINGS, THEY SHALL BE LOCATED AT A HEIGHT PER A.D.A. AND MICHIGAN BARRIER FREE CODES (UNLESS SPECIFICALLY NOTED OTHERWISE ON DRAWINGS). COORDINATE LOCATIONS WITH OTHER EQUIPMENT, FURNITURE, AND DOOR SWINGS.

34. ALL LOW VOLTAGE TEMPERATURE CONTROL WIRING SHALL BE PROVIDED BY THE HVAC CONTRACTOR UNLESS OTHERWISE NOTED. ELECTRICAL CONTRACTOR SHALL PROVIDE ANY 120/240/208/480 VOLT POWER WIRING FOR TEMPERATURE CONTROLS IF/AS REQUIRED - CONSULT W/ MC PRIOR TO BIDDING PROJECT.

35. ALL OUTSIDE AIR INTAKES MUST BE INSTALLED A MINIMUM OF TEN FEET (10'-0") FROM ANY EXHAUST AIR DISCHARGE, GAS METER, OR PLUMBING VENT.

36. IF AN ARCHITECTURAL REFLECTIVE CEILING PLAN IS PROVIDED WITH THIS PROJECT, ROUGH IN THE DIFFUSERS, GRILLES, AND REGISTERS PER THAT PLAN.

37. COORDINATE ALL PIPE AND DUCT RISERS IN CHASES WITH ALL OTHER TRADES.

38. REFER TO THE ARCHITECTURAL PLANS FOR ALL BUILDING SECTIONS, INTERIOR, AND EXTERIOR ELEVATIONS. EQUIPMENT AND INSTALLATION METHODS SHOWN ON ARCHITECTURAL SECTIONS/DETAILS ARE CONSIDERED PART OF THE HVAC DOCUMENTS .

39. INTERRUPTIONS TO EXISTING SERVICES SHALL BE SCHEDULED FOR TIMES OTHER THAN NORMAL OPERATING HOURS. SUCH INTERRUPTIONS TO SERVICES SHALL NOT BE MADE WITHOUT THE PRIOR WRITTEN CONSENT OF THE OWNER'S REPRESENTATIVE AND PROPER COORDINATION WITH OTHER TRADES. PRE-WORK SHALL BE PERFORMED TO MAKE THE SHUTDOWN PERIOD AS BRIEF AS POSSIBLE.

40. SLEEVE AND SEAL ALL PIPING PENETRATIONS THRU WALLS/CEILINGS, ETC. PENETRATIONS THRU FIRE AND/OR FIRE/SMOKE RELATED BARRIERS SHALL HAVE SEALANT RATED FOR SAME AS FIRE AND/OR FIRE/SMOKE RATINGS.

41. ALL ROOFTOP MECHANICAL EQUIPMENT SHALL MAINTAIN A MINIMUM DISTANCE OF 10'-0" FROM ROOF EDGE. WHERE REQUIRED, A 42" GUARDRAIL OR STRUCTURALLY DESIGN TIE-OFF POINT FOR FALL PROTECTION CAN BE PROVIDED IN ACCORDANCE WITH MICHIGAN MECHANICAL/ BUILDING CODES.

42. THE CONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH THE CONDITIONS WHICH WILL AFFECT THE WORK HE IS TO PERFORM. THE SUBMISSION OF A PROPOSAL BY THIS CONTRACTOR SHALL BE CONCLUSIVE EVIDENCE THAT THIS CONTRACTOR HAS VISITED THE SITE AND HAS GIVEN PROPER CONSIDERATION AND EVALUATION OF THESE CONDITIONS IN THE PREPARATION OF HIS PROPOSAL. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE IN HIS BEHALF FOR EXTRA EXPENSE INCURRED DUE TO FAILURE OF NEGLECT ON HIS PART TO MAKE THIS VISIT AND EXAMINATION.

43. PROVIDE AND INSTALL ONE (1) COMPLETE SET OF NEW AIR FILTERS UPON TURNOVER OF BUILDING TO OWNER. PROVIDE (1) SET OF SPARE FILTERS TO THE OWNER AT THE SAME TIME.

44. PROVIDE AND INSTALL TEMPERATURE CONTROLS AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.

45. CHECK THE FINAL LOCATION OF GRILLES, REGISTERS AND DIFFUSERS AGAINST THE ARCHITECTURAL DRAWINGS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO FABRICATION AND INSTALLATION OF THE DUCTWORK AND AIR OUTLETS.

46. ADJUST ALL MOTORS AS REQUIRED TO PROVIDE THE MOST EFFICIENT OPERATION WHILE MEETING DESIGN REQUIREMENTS.

47. DO NOT SUPPORT CEILINGS, OR OTHER BUILDING STRUCTURES, OR CONDUITS FROM DUCTWORK, PIPES OR CONDUIT. DO NOT ALLOW DUCTS OR PIPES OR CONDUITS TO DIRECTLY TOUCH BUILDING WALLS, FLOORS, OR STRUCTURE AT ANY LOCATION.

48. PROVIDE FLEXIBLE DUCTWORK CONNECTIONS ON ALL DUCTWORK CONNECTING TO FANS, AIR HANDLING UNITS, ENERGY RECOVERY UNITS, AND FAN COIL UNITS.

49. ALL EQUIPMENT, DUCTWORK, ETC. SHALL BE SUPPORTED AS DETAILED AND/OR SPECIFIED. PROVIDE ADDITIONAL SUPPORTS AS REQUIRED TO PROVIDE A VIBRATION-FREE, RIGID INSTALLATION.

50. ALL DUCTWORK DIMENSION NOTED ON DRAWINGS ARE INSIDE, CLEAR DIMENSIONS, UNLESS NOTED OTHERWISE. FOR INTERIOR LINED DUCTWORK, OVERSIZE DUCTWORK DURING FABRICATION AS REQUIRED TO MAINTAIN INSIDE CLEAR DIMENSIONS.

51. ALL DUCTWORK AND PIPING IS SHOWN SCHEMATICALLY. PROVIDE ALL TRANSITIONS, TURNING VANES, ELBOWS, FITTINGS, ETC., TO ALLOW SMOOTH FLOW. ALL SPLIT DUCTWORK FITTINGS SHALL TRANSITION TO FULL SIZE OF THE SUM OF BOTH BRANCHES, UPSTREAM OF SPLIT.

52. ALL EQUIPMENT EXPOSED IN A FINISHED SPACE SHALL HAVE CUSTOM FINISH COLOR AS SELECTED BY THE ARCHITECT IF NOTED TO BE PAINTED. (PAINTING SHALL BE BY OTHERS UNLESS NOTED OTHERWISE ON DRAWINGS)

53. DUCTWORK CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA HVAC DUCTWORK CONSTRUCTION STANDARD. IF THESE DRAWINGS OR SPECIFICATIONS LIST REQUIREMENTS THAT EXCEED SMACNA CONSTRUCTION STANDARDS, EXCEEDED DIRECTION SHALL BE FOLLOWED.

54. HVAC TRADES TO ENSURE THAT ALL DUCT PENETRATIONS THRU CMU WALLS HAVE PROPER LINTELS. SEE ARCHITECTURAL DRAWINGS FOR LINTEL SIZES. ALL LINTELS ARE PROVIDED AND INSTALLED BY OTHERS UNLESS NOTED OTHERWISE ON DRAWINGS.

55. MAINTAIN CLEARANCE OF A MINIMUM OF 6" BETWEEN DUCTWORK, PIPING, EQUIPMENT, ETC. AND ALL FIRE RATED AND/OR FIRE/SMOKE RATED PARTITIONS/WALLS/CEILNGS, TO ALLOW FOR INSPECTIONS OF RATED WALLS.

56. ACCESS PANELS IN DUCTWORK AND CEILINGS SHALL BE PROVIDED WHERE REQUIRED FOR FIRE AND/OR SMOKE DAMPERS, OPERATION, BALANCING, OR MAINTENANCE OF ALL MECHANICAL EQUIPMENT.

57. FAILURE TO DETECT INFERIOR WORK, OR WORK NOT IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND APPLICABLE CODES SHALL NOT BE CONSTRUED AS ACCEPTANCE OF SUCH WORK.

58. THE HVAC CONTRACTOR SHALL REMOVE FROM THE SITE ALL DEBRIS AND RUBBISH ACCUMULATING AS A RESULT OF THE HVAC INSTALLATION. REMOVE WEEKLY. UPON COMPLETION OF THE WORK, HE/SHE SHALL LEAVE ALL AREAS CLEAN INCLUDING BUT NOT LIMITED TO THE MECHANICAL ROOMS AND THE HVAC EQUIPMENT IN SAID ROOM.

59. RUN ALL PIPING, CONDUIT, ETC. CONCEALED IN WALLS WHENEVER POSSIBLE. AVOID EXPOSED INSTALLATION UNLESS SPECIFICALLY REQUIRED AND/OR NOTED ON DRAWINGS. (TYPICAL UNLESS NOTED OTHERWISE). ANY EXPOSED INSTALLATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

60. COORDINATE SIZE REQUIREMENTS OF ALL CONCRETE HOUSEKEEPING PADS UNDER ALL FLOOR/GROUND MOUNTED EQUIPMENT. REFER TO ARCHITECTURAL DETAILS AND SPECIFICATIONS FOR PAD REQUIREMENTS.

61. ALL CUTTING AND PATCHING IS THE RESPONSIBILITY OF THE TRADE REQUIRING THE WORK UNLESS NOTED OTHERWISE ON ARCHITECTURAL DRAWINGS/SPECIFICATIONS.

62. SLEEVE AND SEAL ALL PIPING PENETRATIONS THRU BUILDING PARTITIONS. IF PARTITIONS/CEILINGS/WALLS ARE FIRE RATED AND/OR SMOKE RATED, SEAL WITH MATERIAL EQUAL IN RATING AS THE MATERIAL THAT IT IS PENETRATING.

63. PROVIDE MANUAL AIR VENTS AT ALL HIGH POINTS IN HEATING HOT WATER PIPING SYSTEMS.

64. IF THERE IS A POWER GENERATOR ON THIS PROJECT, GAS IS TO BE RUN AT 2 PSI TO EACH PIECE OF EQUIPMENT, AND CONTRACTOR TO PROVIDE A PRESSURE REDUCING VALVE FOR ALL THAT IS 2 PSI TO 7-11" WC. PRESSURE REDUCING VALVE SHALL BE "ITRON", MODEL B-42R, WITH INTERNAL RELIEF.

65. GAS PIPING SHALL HAVE DROPS AT BOTTOM OF GAS RISERS. BRANCHES SHALL BE TAKEN FROM TOP OR SIDE OF HORIZONTAL PIPE. PROVIDE SHUTOFF VALVES FOR EACH PIECE OF GAS BURNING EQUIPMENT. CAP ALL GAS PIPE OUTLETS AT ALL CONNECTIONS UNTIL CONNECTED TO GAS APPLIANCES.

66. ANY GAS FIRED EQUIPMENT (FURNACES/UNIT HEATERS/DOMESTIC WATER HEATERS, ETC.) THAT HAVE POWER COMBUSTION AIR INTAKES AND POWER FLUE GAS EXHAUSTS ARE TO BE PROVIDED WITH VENTS MADE OF MATERIALS APPROVED BY THE MFGR. ROUTE INTAKES AND EXHAUSTS TO WALLS/ROOFS (WALLS ALWAYS PREFERRED UNLESS NOTED OTHERWISE), AND PROVIDE CONCENTRIC CAPS. PIPING SHALL BE CONCEALED WHEN RUNNING IN ANY ROOMS OTHER THAN STORAGE/MECHANICAL/JANITOR CLOSET SPACES. TERMINATIONS OUTDOORS SHALL BE A MINIMUM OF 10'-0" FROM OPERABLE WINDOWS, DOORS, AND OUTSIDE AIR INTAKE LOUVERS/GRILLES. INTAKE CAN NOT COME FROM NOR TERMINATE IN VENTILATED ATTIC SPACES. DO NOT EXCEED THE MAXIMUM EQUIVALENT LENGTH AS DETERMINED BY THE MFGR.

67. ALL REQUIRED INSURANCE SHALL BE CARRIED BY THE CONTRACTOR FOR THE PROTECTION AGAINST PUBLIC LIABILITY OR PROPERTY DAMAGE FOR THE DURATION OF THE WORK.

MECHANICAL SYMBOL SCHEDULE

AC	AIR CONDITIONING UNIT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
ASR	AUTOMATIC SPRINKLER RISER
B	BOILER
BC	BLOWER COIL OR BALANCE COCK
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BTVA	BUTTERFLY VALVE
BV	BALL VALVE
CF	CIRCULATING FAN
CH	CHILLER
CHVA	CHECK VALVE
CO	CLEANOUT
CP	CIRCULATING PUMP
CUH	CABINET UNIT HEATER
CV	CONTROL VALVE
DMPR	DAMPER
DWH	DOMESTIC WATER HEATER
EA	EXHAUST AIR
E.A.T.	ENTERING AIR TEMPERATURE
EWT	ENTERING WATER TEMPERATURE
EF	EXHAUST FAN
ERV	ENERGY RECOVERY VENTILATOR
ETR	EXISTING TO REMAIN
EWH	ELECTRIC WATER HEATER
F	FURNACE
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FS	FLOOR SINK
FTR	FINNED TUBE RADIATION
FUT	FUTURE
GR	GRADE
IE	INVERT ELEVATION
IFR	INFRARED RADIANT TUBE HEATER
IV	INTAKE VENT
L.A.T.	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAU	MAKE-UP AIR UNIT
MAN	MANUAL
MMC	MICHIGAN MECHANICAL CODE
OA	OUTSIDE AIR
OAI	OUTSIDE AIR INTAKE
PB	PUSH BUTTON
PONC	POINT OF NEW CONNECTION
RA	RETURN AIR
RF	RELIEF FAN
RH	RADIANT HEATER
RI	ROUGH-IN
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
SCCV	SELF-CONTAINED CONTROL VALVE
TYP	TYPICAL
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UV	UNIT VENTILATOR
V	VENT
VE	VEHICLE EXHAUST SYSTEM
VIF	VERIFY IN FIELD
WPD	WATER PRESSURE DROP
XE	EXISTING EXHAUST AIR
XFL	TRANSFER AIR LOUVER
XR	EXISTING RETURN AIR
XS	EXISTING SUPPLY AIR

SA1 — 400 CFM — AIR FLOW

CU-1 — EQUIPMENT TAG

24x12 — DUCT SIZE. SIZE SHOWN IS INTERNAL CLEAR DIMENSION INCREASE SIZE AS REQUIRED FOR INTERNAL LINER OR INSULATION

24V ZONE DAMPER — MANUAL BALANCING DAMPER

T — THERMOSTAT

POINT OF NEW CONNECTION

COND — CONDENSATE PIPING

HR — HEATING WATER RETURN PIPING

HS — HEATING WATER SUPPLY PIPING

G — NATURAL GAS PIPING (7-11" WC)

PD — PUMP DISCHARGE PIPING

ELBOW UP

ELBOW DOWN

CAP

TEE UP

TEE DOWN

MECHANICAL SHEET INDEX

COORDINATION NOTE:

H.V.A.C. AND PLUMBING CONTRACTORS, AS WELL AS FIRE SUPRESSION CONTRACTORS ARE TO COORDINATE THE LOCATIONS OF THE WATER LINES, VENT LINES, DUCTWORK, H.V.A.C. EQUIPMENT, GAS LINES, FIRE SUPPRESSION LINES, ETC. AS REQUIRED SO THAT CLEARANCES ABOVE ALL ELECTRICAL PANELS FOR 6 FT. ABOVE PANELS ARE MAINTAINED PER 2017 N.E.C. REFERENCE ELECTRICAL DRAWINGS FOR PANEL LOCATIONS.

THE COLLABORATIVE +ACOCK

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11.21.2025	BID/PERMIT

TC JOB NO. 107348

OWNER JOB NO.

SHEET TITLE

MECHANICAL COVER SHEET

SHEET NO.

M001

EXHAUST FAN SCHEDULE

COMMENTS:
1. PROVIDE WITH FACTORY DISCONNECT.
2. PROVIDE WITH INTEGRAL BACKDRAFT DAMPER AND BRICK VENT DISCHARGE.

TAG	BASIS OF DESIGN		CFM	E.S.P. (in-wg)	FAN SPEED (RPM)		DRIVE TYPE	SONES	ELECTRICAL DATA		DISCONNECT BY		VFD	CONTROL	COMMENTS
	MANUFACTURER	MODEL			DESIGN	MAX			WATTS	VOLTAGE	M.T.C.	E.T.C.			
EF-1	Greenheck	CSP-A200	150	0.3	699		DIRECT	0.3	78	120V / 1Ø	X		No	SWITCH WITH LIGHTS FROM EITHER ROOM. SEE ELEC FOR DIAGRAM.	1, 2

ELECTRIC CABINET UNIT HEATER SCHEDULE

COMMENTS:
1. UNIT SHALL BE RECESS MOUNTED IN CEILING. PROVIDE MOUNTING EQUIPMENT.
2. UNIT SHALL BE SURFACE MOUNTED LOW ON WALL. PROVIDE WITH SURFACE MOUNT KIT. COORDINATE LOCATION WITH PIPING TO ALLOW SERVICE ACCESS.
3. PROVIDE REMOTE WALL MOUNTED THERMOSTAT. PROVIDE HEAVY-DUTY METAL COVER.
4. UNIT MOUNTED THERMOSTAT.

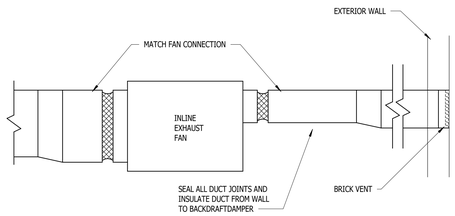
TAG	BASIS OF DESIGN		DESCRIPTION	MOUNTING	TOTAL HEATING CAPACITY		ELECTRICAL DATA		COMMENTS
	MANUFACTURER	MODEL NO			BTU/H	WATTS	VOLTAGE	AMPS	
ECUH-1	QMARK	EFF4008	Ceiling Mounted Fan-Forced Heaters	CEILING RECESSED	6,826	2000	208 V / 1Ø	9.8	1, 3
ECUH-2	QMARK	EFF4008	Ceiling Mounted Fan-Forced Heaters	CEILING RECESSED	6,826	2000	208 V / 1Ø	9.8	1, 3
ECUH-3	QMARK	LFK204F	Wall Heaters	WALL SURFACE	5,118	1500	208 V / 1Ø	7.2	2, 4

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

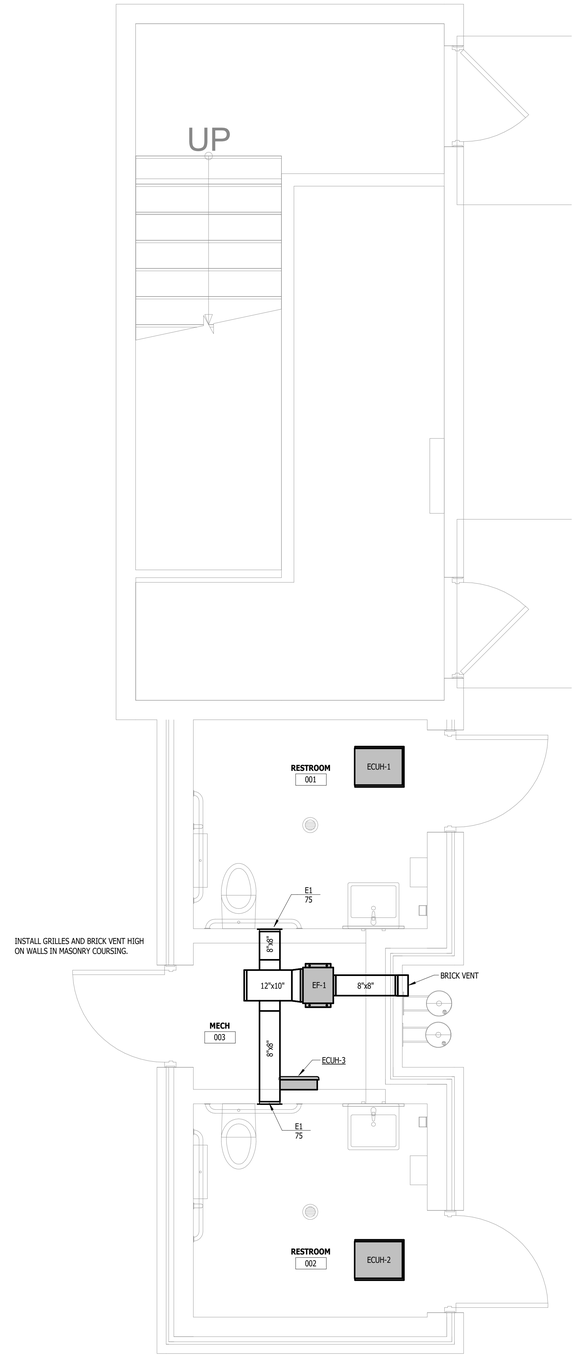
GENERAL SCHEDULE NOTES:
A. ALL SCREWED FITTINGS THAT ARE WITHIN VIEW SHALL HAVE COUNTERSUNK SCREWHOLES AND FLAT HEAD SCREWS.
B. ACCEPTABLE MANUFACTURERS WITH DIMENSIONS AND PERFORMANCE EQUAL TO SCHEDULED ITEM: PRICE, TITUS, KRUEGER.

SPECIFIC TAG NOTES:
1. VOLUME DAMPER IN DUCT BRANCH.
2. BLADES PARALLEL TO LONG DIMENSION.
3. WHITE POWDER COAT FINISH.
4. INSTALL WITH BLADES POINTING UP.

TAG	MANUFACTURER	MODEL/SERIES	NECK SIZE	NOM. FACE SIZE	DESCRIPTION	BORDER TYPE	MATERIAL	COLOR	SYSTEM	NOTES
E1	Price Industries	91 Series	8"x8"	10"x10"	HEAVY DUTY GRILLE, 3/8" SPACING, 45° BLADES	SURFACE MOUNT	STEEL	WHITE	EXHAUST	1, 2, 3, 4



1 / M101 INLINE EXHAUST FAN DETAIL
NOT TO SCALE



FIRST FLOOR PLAN - HVAC
1/2" = 1'-0"

THE COLLAB ORATIVE +ACOCK

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PROJECT TITLE

OSCODA ATHLETIC RESTROOMS

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11.21.2025	BID/PERMIT

TC JOB NO. 107348

OWNER JOB NO.

SHEET TITLE
MECHANICAL PLANS

SHEET NO.
M101

GENERAL ELECTRICAL NOTES:

1. EXECUTE THE WORK REQUIRED IN A MANNER EVIDENCE BY THE "BEST TRADE PRACTICES" CONTRIBUTING TO EFFICIENCY OF OPERATION, MINIMUM MAINTENANCE, ACCESSIBILITY AND AESTHETICS OF THE INSTALLATION.

2. MECHANICAL AND ELECTRICAL PLANS ARE DIAGRAMMATIC IN NATURE, INTENDED TO INDICATE DESIGN INTENT ONLY. CONTRACTOR IS RESPONSIBLE TO COORDINATE SPECIFIC LOCATIONS OF ITEMS AND ADJUST AS REQUIRED TO ACCOMMODATE CODE REQUIREMENTS, MANUFACTURER'S INSTALLATION REQUIREMENTS, AND THE WORK OF OTHER TRADES.

3. MECHANICAL AND ELECTRICAL INFORMATION IS PRESENTED ON AN X-REFERENCED BACKGROUND FLOOR PLAN. IN CASE OF CONFLICT BETWEEN BACKGROUND PLAN AND ARCHITECTURAL FLOOR PLAN, ARCHITECTURAL FLOOR PLAN SHALL GOVERN.

4. RUN ALL PIPING, CONDUIT, ETC. CONCEALED IN WALLS WHENEVER POSSIBLE.

5. AVOID EXPOSED INSTALLATION UNLESS SPECIFICALLY REQUIRED (TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS).

6. THE ENGINEER WILL NOT HAVE CONTROL OR CHARGE OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES. ENGINEER IS NOT RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK; AND WILL NOT BE RESPONSIBLE FOR CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THOSE DOCUMENTS PREPARED BY THE ENGINEER.

7. ALL CONSTRUCTION SHALL BE DONE IN COMPLIANCE WITH CURRENT CODES, INCLUDING: MICHIGAN BUILDING CODES, MICHIGAN PLUMBING CODE, MICHIGAN MECHANICAL CODE, NATIONAL ELECTRICAL CODE, MICHIGAN BUILDING REHABILITATION CODE (WHEN APPLICABLE), NFPA CODES, LIFE SAFETY CODE (WHEN APPLICABLE), AMERICANS WITH DISABILITIES ACT (A.D.A.) AND MICHIGAN BARRIER FREE CODES, DEPARTMENT OF PUBLIC HEALTH CODES (WHEN APPLICABLE), AND ALL OTHER LOCAL, STATE, AND FEDERAL APPLICABLE CODES. CONTRACTOR SHALL UTILIZE THE LATEST ADOPTED EDITIONS OF ALL CODES.

8. IF BIDDING CONTRACTOR WOULD LIKE TO SUBSTITUTE ANY SPECIFIED ELECTRICAL DEVICES, LIGHT FIXTURES, CONTROLLERS, PANELS, DISCONNECTS, VFD'S, ELEC. GEAR, ETC., THEY MUST PROVIDE SUBMITTAL TYPE DRAWINGS TO THE ENGINEER A MINIMUM OF 7 DAYS PRIOR TO BIDDING THE PROJECT. IF THESE APPROVAL DRAWINGS ARE NOT SUBMITTED AND ACCEPTED, THE SPECIFIED EQUIPMENT MUST BE USED - NO EXCEPTIONS.

9. EQUIPMENT AND MATERIALS SHALL BE U.L. APPROVED.

10. SECURE PERMITS AND INSPECTIONS REQUIRED BY STATE AND LOCAL LAWS AND ORDINANCES AND PAY ALL FEES AND EXPENSES IN CONNECTION THEREWITH AS A PART OF THEIR WORK UNDER THIS CONTRACT.

11. UPON COMPLETION OF WORK, FURNISH OWNER CERTIFICATES OF FINAL INSPECTION AND APPROVAL FROM AUTHORITIES HAVING JURISDICTION.

12. ALL CONDUCTORS SHALL BEAR IDENTIFICATION AS TO SIZE AND TYPE OF INSULATION, AND SHALL BE EQUIPPED WITH WIRE MARKERS INDICATING THE CIRCUIT NUMBER, WIRE NUMBER AND/OR PHASE LETTER.

13. IDENTIFY ELECTRICAL EQUIPMENT WITH THE NAME OF THE EQUIPMENT, THE EQUIPMENT CONTROLLED, OR THE SYSTEM INVOLVED. DISCONNECT SWITCHES AND MOTOR STARTERS SHALL HAVE NAMEPLATES TO INDICATE THE EQUIPMENT THEY CONTROL.

14. EXISTING LIGHTING AND RE-USED RECEPTACLE PANELS SHALL HAVE NAMEPLATES DESIGNATING THEIR NAMES AND VOLTAGE RATING, SUCH AS LP-A, 120/208 VOLT, 3 PHASE, 4 WIRE. THE NAMEPLATES SHALL BE BLACK LAMINATED PLASTIC WITH WHITE CHARACTERS. THE CHARACTERS ON THE NAMEPLATES SHALL BE 1/4" HIGH, UNLESS OTHERWISE DIRECTED IN THE FIELD. THE CHARACTERS SHALL BE ENGRAVED ON THE NAMEPLATES.

15. THE CONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH CONDITIONS OF WHICH WILL AFFECT THE WORK HE IS TO PERFORM. THE SUBMISSION OF A PROPOSAL BY THIS CONTRACTOR SHALL BE CONCLUSIVE EVIDENCE THAT THIS CONTRACTOR HAS VISITED THE SITE AND HAS GIVEN PROPER CONSIDERATION AND EVALUATION OF THESE CONDITIONS IN THE PREPARATION OF HIS PROPOSAL. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE ON HIS BEHALF FOR EXTRA EXPENSE INCURRED DUE TO FAILURE OR NEGLECT ON HIS PART TO MAKE THIS VISIT AND EXAMINATION.

16. WHERE ACTIVE SEWERS, GAS, ELECTRIC, OR OTHER SERVICES ARE ENCOUNTERED DURING THE PERFORMANCE OF THIS CONTRACT, THE CONTRACTOR SHALL PROTECT, BRACE AND SUPPORT THEM AS REQUIRED. DO NOT PREVENT, INTERRUPT OR DISTURB OPERATION OF EXISTING SERVICES THAT ARE TO REMAIN. RELOCATE EXISTING SERVICES IF REQUIRED.

17. THE CONTRACTOR SHALL CHECK THE UTILITY COMPANIES AND MUNICIPAL AGENCIES FOR EXACT LOCATIONS OF SERVICES WHICH THEY MAY EXPECT TO ENCOUNTER.

18. IN GENERAL, MOUNTING HEIGHTS ABOVE FINISHED FLOOR TO THE CENTERLINE OF BOXES AND EQUIPMENT SHALL BE AS PER AMERICANS WITH DISABILITIES ACT, AND MICHIGAN BARRIER FREE CODES.

19. ALL WORK TO CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND LOCAL REQUIREMENTS. ALSO REFERENCE ARCHITECTURAL AND KITCHEN DWG'S.

20. WIRING TO BE MINIMUM #12 (FOR RUNS OVER 100 FEET, MINIMUM #10). ALL WIRING TO BE INSTALLED IN E.M.T. (THINWALL CONDUIT).

21. ALL DEVICES TO BE SPECIFICATION GRADE.

22. CONTRACTOR TO OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS.

23. ALL WORK AND MATERIALS SHALL BE GUARANTEED IN WRITING FOR (1) YEAR FROM PROJECT COMPLETION.

24. WORK SHALL BE PERFORMED BY SKILLED MECHANICS WELL VERSED IN THEIR PARTICULAR TRADES.

25. RESPONSIBILITY FOR CARE AND PROTECTION OF ELECTRICAL WORK RESTS WITH THE CONTRACTOR UNTIL IS HAS BEEN TESTED AND ACCEPTED.

26. CONTRACTOR IS TO CHECK DOOR SWINGS WITH ARCHITECTURAL PLANS AND MOUNT LIGHT SWITCHES, CONTROLS, ETC., ACCORDINGLY.

27. ELECTRICAL DEVICES SHALL BE SQUARE D, SIEMENS, EATON, G.E. OR MATCH EXISTING.

28. DISCONNECT SWITCHES SHALL BE NEMA HEAVY DUTY, FUSIBLE OR NON-FUSIBLE AS NOTED ON PLANS, WITH A NEMA 3R ENCLOSURE WHERE MOUNTED OUTDOORS.

29. THE NEUTRAL CONDUCTOR OF THE WIRING SYSTEM TOGETHER WITH THE CONDUIT SYSTEM AND SERVICE EQUIPMENT SHALL BE GROUNDED AND SIZED PER NEC ARTICLE 250.

30. HOLES THROUGH WALLS OR PARTITIONS REQUIRED FOR ELECTRICAL WORK SHALL BE NEATLY CUT TO SIZE. PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE FIRE-STOPPED BY APPROVED METHODS AND MATERIALS. NO BEAMS OR OTHER STRUCTURAL MEMBERS SHALL BE DRILLED, BURNED, OR CUT.

31. LOCATIONS OF WIRING DEVICES SUCH AS LIGHT SWITCHES, DUPLEX RECEPTACLES, THERMOSTATS, ETC., SHALL BE COORDINATED WITH OTHER TRADES.

32. IN GENERAL, ALL MOTORS ARE FURNISHED AND INSTALLED UNDER THE MECHANICAL SECTION OF THE SPECIFICATIONS. ALL STARTERS, FUSED SWITCHES, SAFETY SWITCHES, INCLUDING ALL POWER WIRING SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR.

33. OUTLET BOXES IN THE SAME WALL BUT SERVING DIFFERENT ROOMS SHALL BE AT LEAST 4" APART TO MINIMIZE NOISE TRANSMISSION. WHEN LOCATED ON FIRE WALLS, THEY SHALL BE 24" APART.

34. DEVICE PLATES FOR SWITCHES, RECEPTACLES, TELEPHONE, COMPUTER, ETC., SHALL MATCH EXISTING AS MANUFACTURED PASS AND SEYMOUR, HUBBELL, OR BRYANT.

35. OCCUPANCY AND TOGGLE SWITCHES AS WELL AS RECEPTACLES SHALL BE SPECIFICATION GRADE, COLOR TO MATCH EXISTING.

36. LIGHTING AND CONTROL WIRING SHALL BE TESTED FOR SHORTS AND OPENS AND SHALL BE GIVEN A COMPLETE OPERATIONAL TEST.

37. THE CONTRACTOR SHALL TEST ALL CIRCUITS AS SOON AS CONDUCTORS ARE INSTALLED AND MAKE FINAL TESTS WHEN ALL WORK IS COMPLETE. IF CIRCUITS ARE NOT PROPERLY CONTROLLED AND INSULATED AT TIME OF EACH FINAL TEST, THE NECESSARY REPAIRS AND TESTS SHALL BE MADE AT THE CONTRACTORS EXPENSE.

38. NO PLUMBING LINES AND/OR DUCTWORK IS TO RUN ABOVE THE ELECTRICAL PANELS FOR 6' ABOVE THE PANELS PER 2023 N.E.C. KEEP PANEL AREAS CLEAR FOR 36" IN FRONT OF PANELS FROM FLOOR TO TOP OF PANELS FOR SERVICING PANELS PER N.E.C. COORDINATE LOCATIONS OF M.E.P. ITEMS WITH CONTRACTORS PRIOR TO CONSTRUCTION TO ASSURE THAT CLEARANCES ARE MET. LACK OF COORDINATION BETWEEN CONTRACTORS WILL NOT RESULT IN EXTRA MONEY AWARDED FOR RELOCATION OF M.E.P. ITEMS.

39. ALL BUSSING AND WIRING TO BE COPPER. NO ALUMINUM IS ALLOWED ON THIS PROJECT.

40. CHECK FINAL LOCATIONS OF LIGHT FIXTURES AND CEILING ELECTRICAL ITEMS WITH GRILLES AND REGISTERS, CAMERAS, FANS, SPRINKLER HEADS, ETC. COORDINATE WITH RESPECTIVE CONTRACTORS PRIOR TO INSTALLATION. NO MONEY WILL BE AWARDED TO CONTRACTORS HAVING TO RELOCATE ITEMS DUE TO LACK OF COORDINATION BETWEEN CONTRACTORS. MECHANICAL AND ELECTRICAL PLANS SHOW SCHEMATIC LOCATIONS ONLY.

41. ANY DISCREPANCIES BETWEEN ARCHITECTURAL DRAWINGS AND ELECTRICAL DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

42. CONTRACTOR SHALL MAINTAIN AND KEEP AN UP-TO-DATE SET OF DRAWINGS REFLECTING "AS BUILT" CONDITIONS OF THEIR WORK. CONTRACTOR SHALL INDICATE EXACT DIMENSIONS AND ELEVATIONS FOR ALL UNDERGROUND AND/OR CONCEALED WORK. UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL DELIVER TO THE C.M. OR GENERAL CONTRACTOR THE AS-BUILT DRAWINGS.

43. THE WIRING METHOD(S) USED SHALL BE SUITABLE FOR THE INSTALLATION AND USE IN CONFORMITY WITH THE PROVISIONS OF THE 2023 N.E.C. LISTED OR LABELED EQUIPMENT SHALL BE USED OR INSTALLED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING. REFER TO NEC, SECTION 110-3(a) AND (b).

44. ALL NEW ELECTRICAL DEVICES AND ASSOCIATED OUTLET BOXES SHALL BE FLUSH MOUNTED UNLESS NOTED OTHERWISE. ALL CONDUIT AND WIRING SHALL BE CONCEALED. SURFACE RACEWAY AND ASSOCIATED BOXES SHALL ONLY BE PERMITTED WHERE NOTED, AND SHALL BE DISCUSSED WITH G.C. PRIOR TO INSTALLATION.

45. THE MAIN SERVICE DISCONNECTS SHALL BE IDENTIFIED AS THE MAIN SERVICE DISCONNECTION MEANS PER N.E.C. 2023, ARTICLE 230-70B.

46. CONTRACTOR SHALL CHECK ELECTRICAL FLOOR PLANS FOR "ISLAND" TYPE ELECTRICAL OUTLETS AND INSTALL UNDER-FLOOR CONDUITS AND WIRING ACCORDINGLY. SEE PLANS.

47. FLASH PROTECTION WARNING SHALL BE PROVIDED AT ALL ELECTRICAL PANELS PER NEC 2023, SECTION 110.16

48. FIRST CLASS WORKABLE SYSTEMS SHALL BE PROVIDED BY THE CONTRACTOR. IF, IN THE OPINION OF THE CONTRACTOR, CHANGES IN THE DRAWINGS OR SPECIFICATIONS ARE REQUIRED TO PRODUCE FIRST-CLASS WORKABLE SYSTEMS, CONTRACTOR SHALL REQUEST AN INTERPRETATION FROM THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK. IT THE CONTRACTOR FAILS TO MAKE SUCH A REQUEST, NO EXCUSE WILL THEREAFTER BE ENTERTAINED FOR FAILURE TO PROVIDE FIRST-CLASS WORKABLE SYSTEMS.

49. SHOP DRAWINGS ARE TO BE THOROUGHLY CHECKED (AND NOTED SO ON FRONT COVER) BY THE CONTRACTOR PRIOR TO SUBMITTING THEM TO THE ARCHITECT/ENGINEER. REVIEW BY THE ENGINEER, SHALL NOT BE CONSTRUED AS A COMPLETE CHECK, BUT ONLY THAT THE GENERAL METHOD OF CONSTRUCTION AND DETAILING IS SATISFACTORY. REVIEW SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS WHICH MAY EXIST. SHOP DRAWINGS ARE TO BE SUBMITTED VIA INTERNET IN PDF FORM. NO HARD COPIES WILL BE ACCEPTED.

50. CONNECT ALL EMERGENCY AND EXIT BATTERY PACKS TO NEARBY LIGHTING CIRCUITS, AHEAD OF SWITCHES PER N.E.C. SO EMERGENCY/EXIT LIGHTS OPERATE ON LOSS OF POWER.

51. ELECTRICAL PLANS ARE DIAGRAMMATIC IN NATURE, INTENDED TO INDICATE DESIGN INTENT ONLY. CONTRACTOR IS RESPONSIBLE TO COORDINATE SPECIFIC LOCATIONS OF ITEMS AND ADJUST AS REQUIRED TO ACCOMMODATE CODE REQUIREMENTS, MANUFACTURER'S INSTALLATION REQUIREMENTS, AND THE WORK OF OTHER TRADES.

52. ELECTRICAL INFORMATION IS PRESENTED ON A X-REFERENCED BACKGROUND FLOOR PLAN. IN CASE OF CONFLICT BETWEEN BACKGROUND PLAN AND ARCHITECTURAL FLOOR PLAN, ARCHITECTURAL FLOOR PLAN SHALL GOVERN.

53. THE ENGINEER WILL NOT HAVE CONTROL OR CHARGE OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES: IS NOT RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK; AND WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THOSE DOCUMENTS PREPARED BY THE ENGINEER.

54. ALL CONSTRUCTION SHALL BE DONE IN COMPLIANCE WITH CURRENT CODES, INCLUDING: MICHIGAN BUILDING CODES, MICHIGAN PLUMBING CODE, MICHIGAN MECHANICAL CODE, NATIONAL ELECTRIC CODE, AND APPLICABLE NFPA CODES. ALL CODES SHALL BE THE LATEST ADOPTED EDITION.

55. ELECTRICAL CONTRACTOR IS TO REFER TO THE TEMPERATURE CONTROL SECTION OF THE SPECIFICATIONS AND THE MECHANICAL EQUIPMENT SCHEDULE FOR DEFINITION OF WHICH TRADES ARE RESPONSIBLE FOR HVAC INTERLOCKS AND OPERATIONAL SWITCHES.

56. ALL ROOF EQUIPMENT THAT HAS POWER TO IT MUST BE PROVIDED WITH A DUPLEX RECEPTACLE (WP AND GFI) WITHIN 25 FEET OF THE UNIT. MOUNT RECEPTACLES ON HOUSING, CIRCUIT WITH NEARBY RECEPTACLES BELOW, AND NOT WITH ROOF UNIT PER N.E.C. NOTE: ROOF RECEPTACLES MAY OR MAY NOT BE SHOWN ON PLANS

57. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO CHECK THE RELATED MECHANICAL/KITCHEN/REFRIGERATION/ELEVATOR/ETC. DRAWINGS TO SEE WHAT DISCONNECT SWITCHES/STARTERS/RELAYS/ETC. ARE PACKAGED IN BY THE SPECIFIC EQUIPMENT SUPPLIERS. IF NONE ARE SPECIFICALLY NOTED THE E.C. IS RESPONSIBLE TO PROVIDE AND INSTALL AS REQUIRED FOR SEQUENCES OF OPERATION. E.C. IS TO REVIEW MECHANICAL/KITCHEN/REFRIGERATION/ELEVATOR/ETC. SEQUENCES OF OPERATION, FOUND IN SECTIONS OF THE DRAWINGS AND SPECIFICATIONS OTHER THAN THE ELECTRICAL SECTIONS FOR SAID SEQUENCES. DISCONNECT SWITCHES/STARTERS/RELAYS/ETC. MAY OR MAY NOT BE SHOWN ON THE ELECTRICAL DRAWINGS.

58. MANUALS: PER ASHRAE 2013, 90.1 STANDARDS, CONSTRUCTION DOCUMENTS SHALL REQUIRE THAT AN OPERATING MANUAL AND MAINTENANCE MANUAL BE PROVIDED TO THE BUILDING OWNER. THE MANUALS SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:
   A. SUBMITTAL DATA FOR ALL ELECTRICAL EQUIPMENT CLEARLY STATING EQUIPMENT RATING , EXACTLY WHAT MODELS, ACCESSORIES, OPTIONS ARE INSTALLED.
   B. OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
   C. NAMES AND ADDRESSES AND PHONE NUMBERS/EMAIL ADDRESSES FOR AT LEAST ONE QUALIFIED SERVICE AGENCY FOR EACH PIECE OF EQUIPMENT.
   D. A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE.

ABBREVIATIONS

"	INCHES
#	NUMBER
'	FEET
1P	1 POLE (2P, 3P, 4P, ETC.)
@	AT
A	AMPERE
A.F.F.	ABOVE FINISHED FLOOR
ACLG	ABOVE CEILING
ACT	ABOVE COUNTER
ADO	AUTOMATIC DOOR OPENER
AF	AMP FRAME
AFCI	ARC FAULT COMBINATION CIRCUIT INTERRUPTER
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AL	ALUMINUM
ALT	ALTERNATE
AMP	AMPERE
AMPL	AMPLIFIER
ANNUN	ANNUNCIATOR
APPROX	APPROXIMATELY
AQ-STAT	AQUA-STAT
ARCH	ARCHITECT, ARCHITECTURAL
AS	AMP SWITCH
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
B.F.	BOTTLE FILLER
B.M.S.	BUILDING MANAGEMENT SYSTEM
BATT	BATTERY
BLDG	BUILDING
C.	CONDUIT
CAB	CABINET
CAT	CATALOG
CAT6	CATEGORY 6 CABLING
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CL	CONNECTED LOAD
COF	COFFEE MAKER
COMB	COMBINATION
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUATION, CONTINUOUS
CONTR	CONTRACTOR
CP	CIRCULATING PUMP
CT	CURRENT TRANSOFORMER
CTR	CENTER
CU	COPPER
DCP	DOMESTIC WATER CIRCULATING PUMP
DEPT	DEPARTMENT
DET	DETAIL
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DL	DEMAND LOAD
DN	DOWN
DPR	DAMPER
DS	DISCONNECT SWITCH
DWG	DRAWING
E.C.	ELECTRICAL CONTRACTOR
E.T.R.	EXISTING TO REMAIN
ELEC	ELECTRICAL
ELEV	ELEVATOR
ELU	EMERGENCY LIGHTING UNIT
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
EP	ELECTRIC PNEUMATIC
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPLOSION PROOF
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FABP	FIRE ALARM BOOSTER SUPPLY PANEL
FACP	FIRE ALARM CONTROL PANEL
FASP	FIRE ALARM SLAVE PANEL
FCU	FAN COIL UNIT
FIXT	FIXTURE
FLR	FLOOR
FU	FUSE
FUDS	FUSED DISCONNECT SWITCH
FUT	FUTURE PHASE OR INSTALLATION
G.C.	GENERAL CONTRACTOR
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GEN	GENERATOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
GRS	GALVANIZED RIGID STEEL (CONDUIT)
GYP	GYPSUM BOARD
H.V.A.C.	HEATING, VENTILATING & AIR CONDITIONING
HOA	HAND-OFF-AUTO SWITCH
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPF	HIGH POWER FACTOR
HT	HEIGHT
HTR	HEATER
HV	HIGH VOLTAGE
I/W	INTERLOCK WITH
IC	INTERRUPTING CAPACITY
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IR	INFRARED
J-BOX	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
KVAR	KILOVOLT- AMPERE RECTIVE
KW	KILOWATT
KWC	KILOWATT CONNECTED
KWD	KILOWATT DEMAND
KWH	KILOWATT HOUR
LOC	LOCATE OR LOCATION
LP	LIGHTNING PEOTECTION
LT	LIGHT
LTG	LIGHTING
LTNG	LIGHTNING
LV	LOW VOLTAGE
M.C.	MECHANICAL CONTRACTOR
M.E.P.	MECHANICAL ELECTRICAL PLUMBING
M/C	MOMENTARY CONTACT
MAGS	MAGNETIC STARTER
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MCP	MAIN CIRCUIT BREAKER
MDC	MAIN DISRIBUTION CENTER
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MFS	MAIN FUSED DISCONNECT SWITCH
MH	MANHOLE
MIC	MICROPHONE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MMS	MANUAL MOTOR STARTER
MOA	MULTIOUTLET ASSEMBLY
MSBD	MAIN SWITCHBOARD
MSP	MOTOR STARTER PANELBOARD
MT	MOUNT
MT.C	EMPTY CONDUIT
MTR	MOTOR, MOTORIZED
MTS	MANUAL TRANSFER SWITCH
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELEC MFGR'S ASSOCIATION
NFDS	NON-FUSED SAFETY DISCONNECT SWITCH
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NPF	NORMAL POWER FACTOR
NTS	NOT TO SCALE
OH	OVERHEAD
OL	OVERLOADS
P	PLATE
PA	PUBLIC ADDRESS
PB	PULL BOX OR PUSHBUTTON
PE	PNEUMATIC ELECTRIC
PED	PEDESTAL
PF	POWER FACTOR
PH	PHASE
PIV	POST INDICATING VALVE
PNL	PANEL
PP	POWER POLE
PR	PAIR
PRI	PRIMARY
PROJ	PROJECTION
PRV	POWER ROOF VENTILATOR
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE (CONDUIT)
PWR	POWER
QUAN	QUANTITY
RCPT	RECEPTACLE
REQD	REQUIRED
REX	REMOVE EXISTING
RM	ROOM
RSC	RIGID STEEL CONDUIT
RTU	ROOF TOP UNIT
S/N	SOLID NEUTRAL
S/S	STOP/START PUSHBUTTONS
SC	SURFACE CONDUIT
SEC	SECONDARY
SHT	SHEET
SIM	SIMILAR
SP	SPARE
SPEC	SPECIFICATION
SPKR	SPEAKER
SR	SURFACE RACEWAY
SS	STAINLESS STEEL
SSW	SELECTOR SWITCH
STA	STATION
STD	STANDARD
SURF	SURFACE MOUNTED
SW	SWITCH
SWBD	SWITCHBOARD
SWL	SWITCH WITH LIGHTS
SYM	SYMMETRICAL
SYS	SYSTEM
T-STAT	THERMOSTAT
TEL	TELEPHONE
TEL/DATA	TELEPHONE/DATA
TERM	TERMINAL
TL	TWIST LOCK
TR	TAMPER RESISTANT
TTC	TELEPHONE TERMINAL CABINET
TV	TELEVISION
TVTC	TELEVISION TERMINAL CABINET
TYP	TYPICAL
UC	UNDER COUNTER
UCR	UNDER COUNTER REFRIGERATOR
UE	UNDERGROUND ELECTRICAL
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES
UT	UNDERGROUND TELEPHONE
UTIL	UTILITY
UV	UNIT VENTILATOR
V	VOLT
VA	VOLT-AMPERES
VDT	VIDEO DISPLAY TERMINAL
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VIF	VERIFY IN FIELD
VOL	VOLUME
W	WATT
W.G.	WIRE GUARD
W/	WITH
W/O	WITHOUT
WH	WATER HEATER
WP	WEATHERPROOF
X	EXISTING
XFMR	TRANSFORMER
XFR	TRANSFER
℄	CENTER LINE
∠	ANGLE
▲	DELTA

ELECTRICAL SHEET INDEX

PHASE LINE TYPES

- NEW
- EXISTING
- DEMOLISHED

ELECTRICAL FIXTURE LEGEND

- DUPLEX RECEPTACLE AT 46" AFF
- DUPLEX RECEPTACLE AT 18" AFF
- NON-FUSED DISCONNECT SWITCH, SIZE AS NOTED ON PLAN.

LIGHTING DEVICE SCHEDULE

- ^{OC} WALL OCCUPANCY SENSOR SWITCH
- $ SWITCH
- TIME CLOCK

DISTRIBUTION LEGEND

- RECEPTACLE PANELBOARD (208Y/120V, 3Ø, 4W), REFER TO PANEL SCHEDULES FOR MORE INFORMATION.
- TRANSFORMER - REFER TO ONE-LINE/RISER DIAGRAM OR PANEL SCHEDULES FOR SIZING

THE COLLAB ORATIVE +ACOCK

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11.21.2025	BID/PERMIT

TC JOB NO. 107348

OWNER JOB NO.

SHEET TITLE

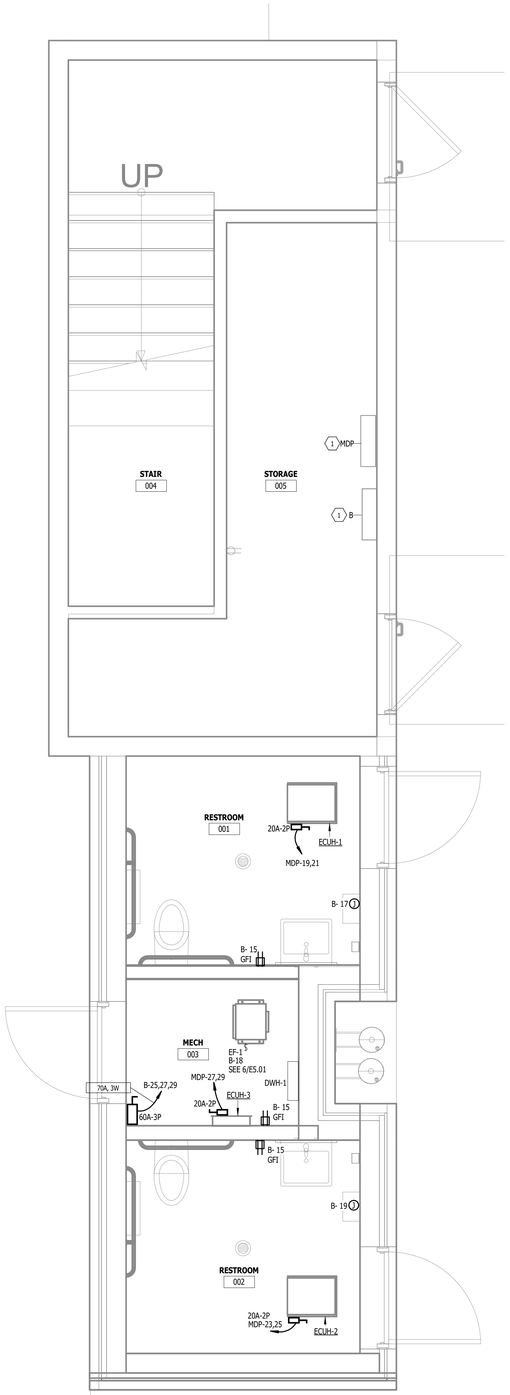
GENERAL ELECTRICAL NOTES, SYMBOLS & ABBREVIATIONS

SHEET NO.

E0.01

KEY NOTES:

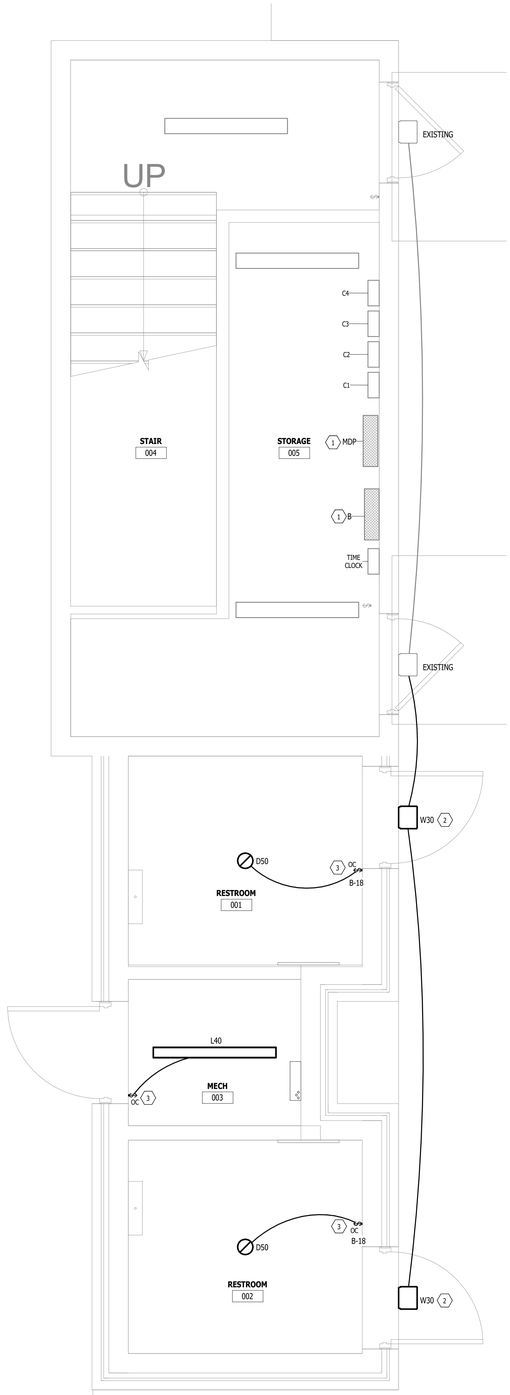
1 EXISTING PANEL FOR NEW LIGHTING AND POWER CIRCUITS.



FIRST FLOOR PLAN - POWER
1/2" = 1'-0"

KEY NOTES:

1 EXISTING PANEL FOR NEW LIGHTING AND POWER CIRCUITS.
2 MOUNT AT SAME ELEVATION AS EXISTING AND CONNECT TO EXISTING BUILDING WALL PACKS.
3 SEE DETAIL FOR MANUFACTURER AND WIRING.



FIRST FLOOR PLAN - LIGHTING
1/2" = 1'-0"

LIGHTING FIXTURE SCHEDULE

TYPE	MFR/MODEL	COLOR TEMP	DIMENSIONS	DIMMING	VOLTAGE	WATTAGE/(FOOT)	DESCRIPTION	COMMENTS
D50	GOTHAM EVO #EVO6VR-40/45-AR-LSS-WD-PCL-MVOLT-GZ10-ELR	4000K	6" DIAMETER X 7.31" DEEP	0-10V DIMMING	120-277V	47.3	RECESSED ROUND DOWNLIGHT	
L40	LITHONIA LIGHTING #2LIN-L48-5000LM-FST-MVOLT-40K-80CRI-WH	4000K	54.75"X4.5"X4.25"	0-10V	120-277V	34	SURFACE LINEAR	MOUNT TO CEILING STRUCTURE
W30	LSI GREENBRIAR #XGBWM3-WT-LED-2B-350-NW-BRZ-CWBB-TP-477974	4000K	11.38"X21.12"X13.5"	NONE	120-277V	33	SURFACE WALL PACK	MATCH MOUNTING HEIGHT OF EXISTING WALL MOUNTED LIGHT FIXTURES.

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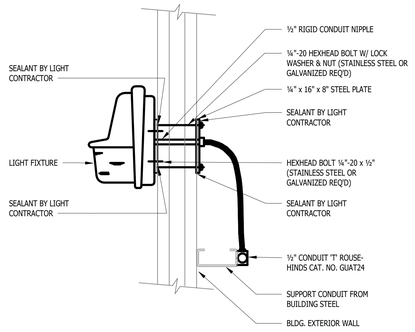
OWNER JOB NO.

SHEET TITLE
FIRST FLOOR PLAN

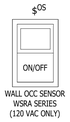
SHEET NO.
E1.10



1 E5.01 EXTERIOR BUILDING MOUNTED LIGHT DETAIL
NOT TO SCALE

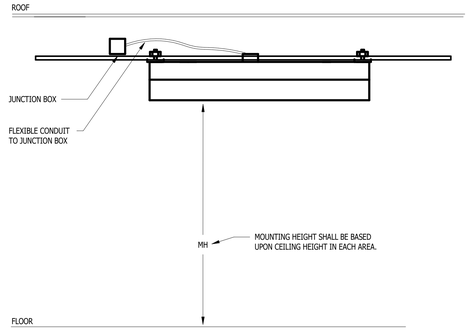
NOTES:

1. SENSOR SWITCH SHOWN IN THIS DIAGRAM ARE BASIS OF DESIGN. CONTRACTOR MAY PROVIDE APPROVED EQUAL COOPER, HUBBELL, LEVITON, LUTRON, WATTSTOPPER.
2. CONTROLS TO BE COMPLIANT WITH LOCAL AND CURRENT ENERGY CODES, BASED UPON ASHRAE 90.1
3. ALL SENSOR LOCATIONS ARE APPROXIMATE, REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS PRIOR TO INSTALLATION.
4. CONTRACTOR IS RESPONSIBLE FOR: PROPER SENSITIVITY & TIME DELAY SETTINGS (FOR NON-ADAPTIVE PRODUCTS) RECOMMENDED PLACEMENT, AND FIELD VERIFICATION OF CIRCUITS WITH IN RESPECT TO POWER PLACEMENT.
5. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SENSOR BILL OF MATERIALS COMPLIES WITH THE SENSOR DESIGN AND LAYOUT SPECIFICATIONS.

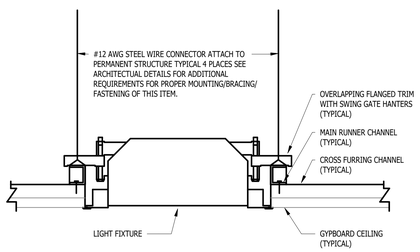


WALL OCC SENSOR
WSRA SERIES
(120 VAC ONLY)

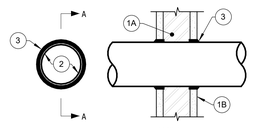
2 E5.01 LINE VOLTAGE LIGHTING CONTROL
NOT TO SCALE



3 E5.01 LIGHTING FIXTURE MOUNTING DETAIL
NOT TO SCALE



4 E5.01 RECESSED LIGHT FIXTURE SUPPORT DETAIL
NOT TO SCALE



SECTION A-A

KEYNOTES (X)

1. WALL ASSEMBLY - THE 1, 2, 3 OR 4 HR. FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES: STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAX 2 HR. FIRE RATED ASSEMBLIES) OR

   A. STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM. 2 BY 4 IN. LUMBER SPACED 16 IN. OC WITH NOM. 2 BY 4 IN. LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN. 3-5/8 IN. WIDE BY 1-3/8 IN. DEEP CHANNELS SPACED MAX. 24 IN. OC. WALLBOARD, GYPSUM* - NOM 1/2 OR 5/8 IN. THICK, 4 FT. WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX. DIAM. OF OPENING IS 13-1/2 IN.

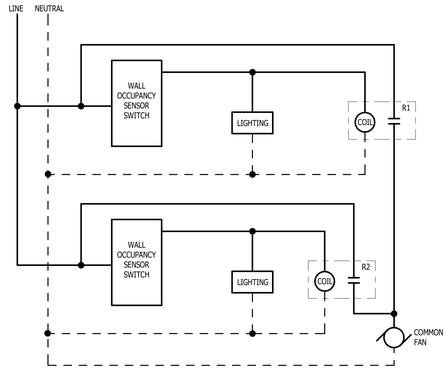
   B. CONDUIT - NOM. 6 IN. DIAM. (OR SMALLER) STEEL CONDUIT, NOM. 4 IN. DIAM. (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM. 1 IN. DIAM. (OR SMALLER) FLEXIBLE STEEL CONDUIT. STEEL PIPES CONDUIT LARGER THAN NOM. 4 IN. DIAM. MAY ONLY BE USED IN WALLS CONSTRUCTED USING STEEL CHANNEL STUDS. A MAX OF ONE PIPE OR CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM. CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.

2. FILL, VOID OR CAVITY MATERIAL* - CAULK - CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN. 1/4 IN. DIAM. BEAD OF CAULK APPLIED TO PERIMETER OF CONDUIT AT ITS EGRESS FROM THE WALL. CAULK INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED,AS TABULATED BELOW:

MAX. CONDUIT Ø, IN.	ANNULAR SPACE, IN.	*F RATING, HR.	T RATING,HR.
1	0 to 3/16	1 or 2	1 or 2
1	1/4 to 1/2	3 or 4	3 or 4
4	0 to 1/4	1 or 2	0
4	0 to 1-1/2	1 or 2	0

#0 TO 1-1/2 IN. ANNULAR SPACE APPLIES ONLY WHEN TYPE CP-25 WR+ CAULK IS USED AND ONLY WHEN THE MIN. THICKNESS OF THE GYPSUM WALLBOARD IS 5/8 IN. FOR 1 HR. RATED WALLS AND 1-1/4 IN. FOR 2 HR. RATED WALLS. MINNESOTA MINING & MFG. CO. - CP 25WB+.
*BEARING THE UL CLASSIFICATION MARKING

5 E5.01 CONDUIT WALL PENETRATION DETAIL
NOT TO SCALE



6 E5.01 COMMON FAN CONTROL DIAGRAM
NOT TO SCALE

THE COLLAB ORATIVE +ACOCK

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TC JOB NO. 107348

OWNER JOB NO.

SHEET TITLE
ELECTRICAL DETAILS

SHEET NO.
E5.01

Panel: MDP

Location: STORAGE 005
Supply From: UTILITY
Mounting: SURFACE
Enclosure: NEMA 1
Series: NQOD

Volts: 208Y/120 Wye
Phases: 3
Wires: 4

Sub-Feed Lugs:

A.I.C. Rating: EXISTING
Mains Type: MCB
Mains Rating: 600 A
Bus Rating: 600 A
Neutral Buss:
Ground Buss:

Notes:
* PROVIDE 20A-2P CIRCUIT BREAKER

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1				4.79	9.94					2
3	X-Lighting SOCCER FIELD	60	3		4.79	7.91	3	100	X-Equipment PANEL B	4
5						4.79	8.65			6
7				4.79	4.79					8
9	X-Lighting SOCCER FIELD	60	3		4.79	4.79	3	60	X-Lighting SOCCER FIELD	10
11						4.79	4.79			12
13				4.79	0.00					14
15	X-Lighting SOCCER FIELD	60	3		4.79	0.00	3	100	SPARE	16
17						4.79	0.00			18
19				1.02	--					20
21	* Equipment ECUH-1 RESTROOM 001	20	2		1.02	--	3	--	X-Equipment PANEL A (6P)	22
23						1.02	--			24
25	* Equipment ECUH-2 RESTROOM 002	20	2	1.02	8.98					26
27	* Equipment ECUH-3 MECH 003	20	2		0.75	8.98	3	150	X-Equipment PANEL A	28
29						0.75	8.98			30
31	X-SPACE	--	1	--	--		1	--	X-SPACE	32
33	X-SPACE	--	1		--	--	1	--	X-SPACE	34
35	X-SPACE	--	1			--	--	1	--	X-SPACE	36
37	X-SPACE	--	1	--	--			1	--	X-SPACE	38
39	X-SPACE	--	1		--	--		1	--	X-SPACE	40
41	X-SPACE	--	1				--	1	--	X-SPACE	42
		Total Load:		40 kW	38 kW	39 kW				
		Total Amps:		335 A	315 A	322 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	0 VA	0.00%	0 VA		
Lighting	45909 VA	125.00%	57386 VA	**Total Load:**	116.44 kW
Receptacle	1920 VA	100.00%	1920 VA	**Demand Load:**	127.92 kW
				Connected Amps:	323 A
				Demand Amps:	355 A

Notes:

Branch Panel: B

Location: STORAGE 005
Supply From: MDP
Mounting: SURFACE
Enclosure: NEMA 1

Volts: 208Y/120 Wye
Phases: 3
Wires: 4

A.I.C. Rating: EXISTING
Mains Type: MLO
Mains Rating: 100 A
MCB Rating: 0 A

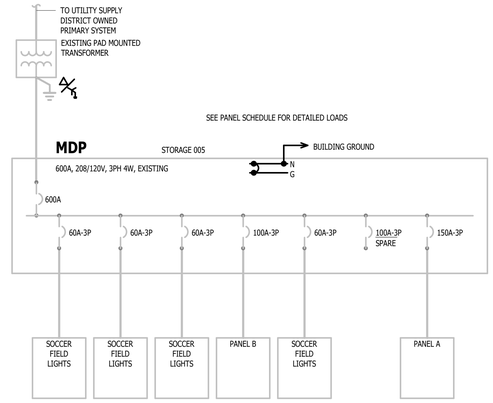
Notes:
* PROVIDE NEW 20A-1P CIRCUIT BREAKER
** PROVIDE NEW 70A-3P CIRCUIT BREAKER

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	X-Lighting	20 A	1	250 VA	240 VA		1	20 A	X-Lighting	2
3	X-Lighting	20 A	1		250 VA	500 VA	1	20 A	X-Lighting PARKING LOT	4
5	X-Lighting PARKING LOT	20 A	1			540 VA	360 VA	1	20 A	X-Receptacle	6
7	X-Receptacle	20 A	1	540 VA	360 VA			1	20 A	X-Receptacle EXTERIOR	8
9	X-Receptacle FIRST FLOOR	20 A	1		120 VA	0 VA		2	30 A	X-SPACE	10
11	X-Lighting OUTSIDE LTG	20 A	1			120 VA	0 VA				12
13	X-Lighting SCOREBOARD	20 A	1	750 VA	300 VA			1	20 A	X-Lighting SOCCER LTG CONTROL STOR 005	14
15	* Receptacle RMS 001-003	20 A	1		540 VA	500 VA		1	20 A	X-Lighting LITE KEEPER STORAGE 005	16
17	* Equipment HAND DRYER RESTROOM 001	20 A	1			1500...	129 VA	1	20 A	* Lighting RMS 001-003	18
19	* Equipment HAND DRYER RESTROOM 002	20 A	1	1500...	--			1	--	X-SPACE	20
21	X-SPACE	--	1		--	--		1	--	X-SPACE	22
23	X-SPACE	--	1			--	--	1	--	X-SPACE	24
25				6000...	--			1	--	X-SPACE	26
27	** Equipment DWH-1 MECH 003	70 A	3		6000...	--		1	--	X-SPACE	28
29						6000...	--	1	--	X-SPACE	30
		Total Load:		9940 VA	7910 VA	8649 VA				
		Total Amps:		84 A	66 A	73 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Equipment	3750 VA	100.00%	3750 VA		
Motor	0 VA	0.00%	0 VA	**Total Conn. Load:**	26499 VA
Receptacle	1920 VA	100.00%	1920 VA	**Total Est. Demand:**	27206 VA
Power	18000 VA	100.00%	18000 VA	**Total Conn.:**	74 A
Lighting	2829 VA	125.00%	3536 VA	**Total Est. Demand:**	76 A

Notes:



1 E7.01 ONE LINE DIAGRAM - REFERENCE
NOT TO SCALE

THE COLLABORATIVE +ACOCK

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TC JOB NO. 107348

OWNER JOB NO.

SHEET TITLE
ONE LINE DIAGRAM & SCHEDULES

SHEET NO.
E7.01