WILLIAMSTON COMMUNITY SCHOOLS

WILLIAMSTON HIGH SCHOOL SECURE ENTRANCE

WILLIAMSTON, MICHIGAN
PROJECT NO. 2019-003

03/25/2019 BIDS

FRENCH associates

architects planners interiors

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ELECTRICAL

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0000.00 XYZ PROJECT

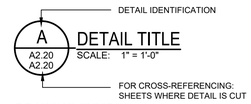
MATERIAL LEGEND

- SOIL
- ASPHALT AGGREGATE
- GRANULAR FILL
- STONE/GRAVEL
- CONCRETE
- CONCRETE MASONRY UNIT
- BRICK
- GLAZED HOLLOW CMU
- STRUCTURAL GLAZED TILE
- LIMESTONE
- MARBLE
- FINISH WOOD
- COMPOSITION/PLYWOOD
- CONTINUOUS WOOD BLOCKING
- INTERRUPTED WOOD BLOCKING OR SHIMS
- BATT INSULATION
- RIGID INSULATION
- PREMOLDED EXPANSION JOINT OR COMPRESSIBLE FILLER STRIP
- PLASTER OR GYPSUM BOARD
- CERAMIC OR QUARRY TILE
- TERRAZZO
- ACOUSTICAL PANEL OR ACOUSTICAL TILE
- EXISTING MATERIAL (IN SECTION)
- EXISTING MATERIAL (IN PLAN)
- DEMOLITION - TO BE REMOVED

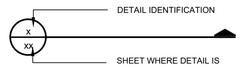
ABBREVIATIONS

AC	AIR CONDITIONING
ACOUST	ACOUSTICAL
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AGG	AGGREGATE
ALT	ALTERNATE
AL/ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT
AV	AUDIOVISUAL
L	ANGLE
BIT	BITUMINOUS
BD	BOARD
BF	BARRIER FREE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BENCH MARK/BEAM
BOT	BOTTOM
BRG	BEARING
BUR	BUILT-UP ROOF
CAB	CABINET
CUH	CABINET UNIT HEATER
CB	CHALKBOARD/CATCH BASIN
CER	CERAMIC
CFM	CUBIC FEET PER MINUTE
CEM	CEMENT
CJ	CONTROL JOINT
CL	CENTERLINE
CLR	CLEAR
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COMP	COMPACTED
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS/CONTINUE
CONTR	CONTRACTOR
CORR	CORRUGATED
CPT	CARPET
CT	CERAMIC TILE
CU	CONDENSING UNIT
CUSP	CUSPIDOR
D	DEPTH/DEEP
°	DEGREE
DC	DISPLAY CASE
DEMO	DEMOLISH/DEMOLITION
DTL	DETAIL
DF	DRINKING FOUNTAIN
DIA/ ϕ	DIAMETER
DIM	DIMENSION
DIV	DIVISION
DMB	DRY MARKER BOARD
DWG	DRAWING
DS	DOWNSPOUT
EA	EACH
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC(AL)
ELEV	ELEVATOR
EP	ELECTRICAL PANELBOARD
EQ	EQUAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EXH	EXHAUST
EX/EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FD	FLOOR DRAIN
FF	FORCED FLOW CABINET HEATER
FHC	FIRE HOSE CABINET
FIN	FINISH
FIN FL	FINISH FLOOR
FLR	FLOOR
FOUND	FOUNDATION
FT/ '	FEET
FTG	FOOTING
FEC	FIRE EXTINGUISHER CABINET
GA	GAUGE
GALV	GALVANIZE(D)
GB	GRAB BARS
GHT	GLAZED HOLLOW TILE
GL	GLASS
GLZD	GLAZED
GYP	GYPSUM
H/HGT	HEIGHT
HB	HOSE BIB
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT
HR	HOUR
HVAC	HEATING/VENTILATING/ AIR CONDITIONING
ID	INSIDE DIAMETER
IN/"	INCH
INCL	INCLUDE(D),(ING)
INSUL	INSULATION/INSULATE
INT	INTERIOR
KIT	KITCHEN
JST	JOIST
JT	JOINT
L	LENGTH
LAM	LAMINATE(D)
LAV	LAVATORY
LB/#	POUND
LKR	LOCKER
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION(S)
LP	LOW POINT
MANUF	MANUFACTURER
MAR	MARBLE THRESHOLD
MB	MARKER BOARD
MAS	MASONRY
MAT	MATERIAL
MAU	MAKE UP AIR UNIT
MAX	MAXIMUM
MECH	MECHANICAL
MEZZ	MEZZANINE
MIN	MINIMUM / MINUTE
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MET/MTL	METAL
MT	METAL THRESHOLD
NIC	NOT IN CONTRACT
NO/#	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OHD	OVERHEAD DOOR
OPNG	OPENING
OPP	OPPOSITE
PART	PARTICLE
PL	PLATE/PROPERITY LINE
PLAS	PLASTER
PLAM	PLASTIC LAM
PLYWD	PLYWOOD
PREFAB	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PTD	PAINTED
PVC	POLYVINYL CHLORIDE
R	RISER/RADIUS
RC	RAIN CONDUCTOR
RES	RESILIENT
RS	ROOF SUMP
REF	REFERENCE
REFR	REFRIGERATOR
REINF	REINFORCING
REQ'D	REQUIRED
REV	REVISION(S)
RF	ROOF EXHAUST FAN
RM	REMOVABLE MULLION/ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RTU	ROOF TOP UNIT
RV	ROOF VENT
S	SINK
SCHED	SCHEDULE
SEC	SECTION
SHT	SHEET
SIM	SIMILAR
SPEC(S)	SPECIFICATION(S)
SPKR	SPEAKER
SQ	SQUARE
SS	SERVICE SINK/STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SCHED	SCHEDULE
T	TREAD
T&B	TOP AND BOTTOM
TB	TACK BOARD
TC	TOP OF CURB
TEMP	TEMPERED
TER	TERRAZZO
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TV	TELEVISION
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UV	UNIT VENTILATOR
VCT	VINYL COMPOSITION TILE
VCG	VINYL COVERED GYPSUM BOARD
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WH	WATER HEATER
WP	WORKING POINT
WWF	WELDED WIRE FABRIC

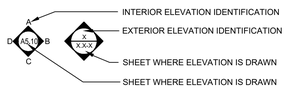
SYMBOL LEGEND



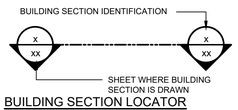
DRAWING SYMBOL



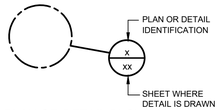
DETAIL LOCATOR



ELEVATION SYMBOL



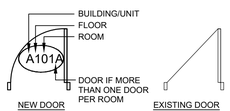
BUILDING SECTION LOCATOR



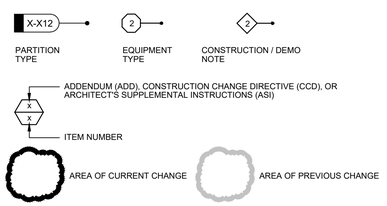
PLAN OR DETAIL BLOW-UP

COLUMN GRID

ROOM NAME AND NUMBER

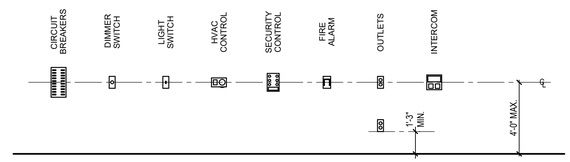


DOOR NUMBER AND SYMBOLS

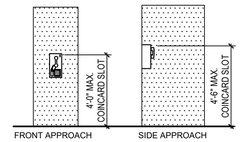


MISCELLANEOUS SYMBOLS

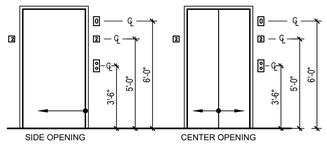
MOUNTING HEIGHTS



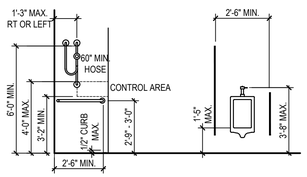
CONVENIENCE CONTROLS AND OUTLETS



TELEPHONES

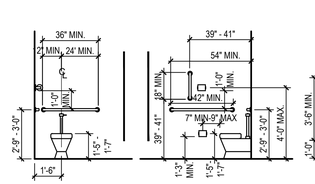


ELEVATORS



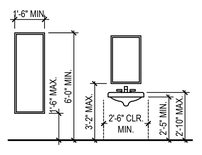
SHOWER UNIT

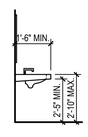
BARRIER FREE URINAL

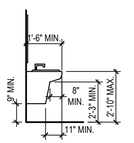


BARRIER FREE WATER CLOSET

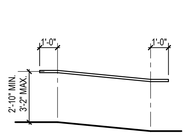
STALL LAYOUT



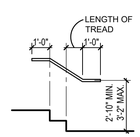




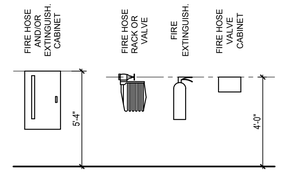
BARRIER FREE LAVATORIES AND MIRRORS



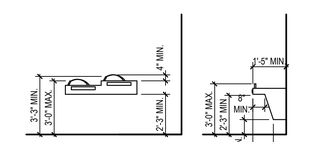
RAMP HANDRAIL



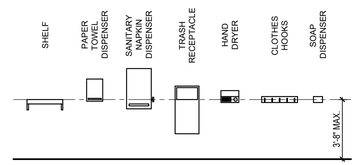
STAIR HANDRAIL



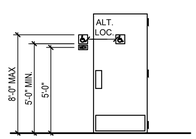
FIRE EXTINGUISHER EQUIPMENT



DRINKING FOUNTAIN/ ELECTRIC WATER COOLER

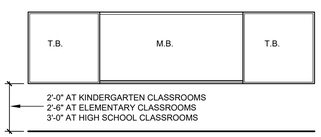


TOILET ROOM ACCESSORIES

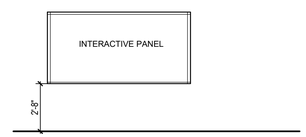


TOILET ROOM SIGNAGE

NOTE: HEIGHT ABOVE FLOOR TO BASELINE OF CHARACTER TO COMPLY WITH ICC/ANSI A117.1-2009 TABLE 703.2.4



TACK BOARDS AND MARKER BOARDS



INTERACTIVE PANEL MOUNTING

ISSUE DATE	ISSUED FOR
03/25/2019	BIDS
DRAWN	FA
CHECKED	FA
APPROVED	FA

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PROJECT

Williamston Community Schools
Williamston High School
Secure Entrance

WILLIAMSTON, MICHIGAN

SHEET

ARCHITECTURAL REFERENCE SHEET

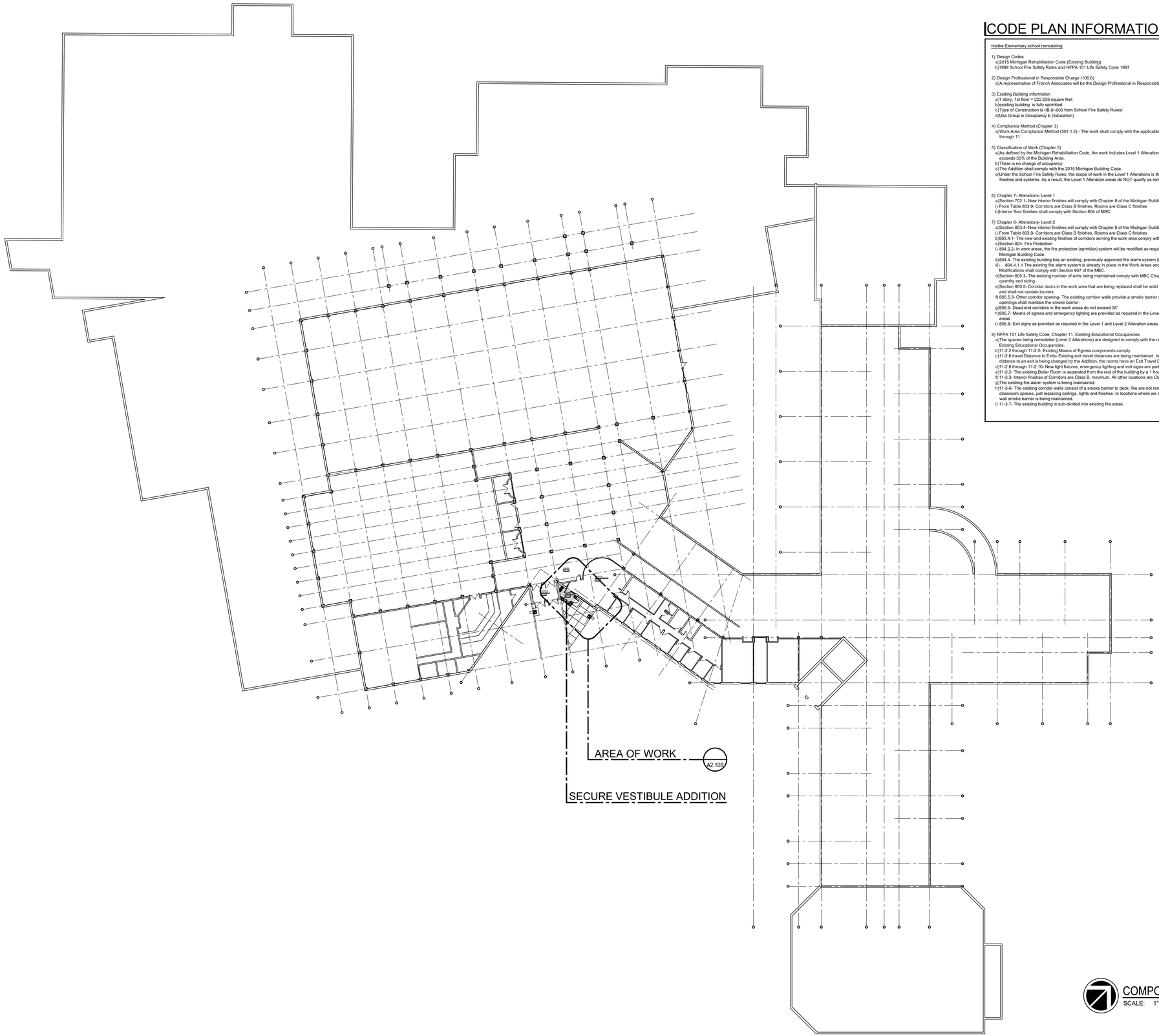
PROJECT NUMBER

2019-003

SHEET NUMBER

A0.01

2019/03 XYZ PROJECT



COMPOSITE CODE PLAN
SCALE: 1" = 30'-0"

CODE PLAN INFORMATION

Hedke Elementary school remodeling

1) Design Codes
a)2015 Michigan Rehabilitation Code (Existing Building)
b)1999 School Fire Safety Rules and NFPA 101 Life Safety Code 1997

2) Design Professional in Responsible Charge (106.6)
a)A representative of French Associates will be the Design Professional in Responsible Charge.

3) Existing Building information
a)1 story, 1st floor = 222,639 square feet
b)existing building is fully sprinkled
c)Type of Construction is IIB (II-000 from School Fire Safety Rules)
d)Use Group is Occupancy E (Education)

4) Compliance Method (Chapter 3)
a)Work Area Compliance Method (301.1.2) - The work shall comply with the applicable requirements of Chapters 5 through 11.

5) Classification of Work (Chapter 5)
a)As defined by the Michigan Rehabilitation Code, the work includes Level 1 Alterations . The Work Area does not exceeds 50% of the Building Area.
b)There is no change of occupancy.
c)The Addition shall comply with the 2015 Michigan Building Code.
d)Under the School Fire Safety Rules, the scope of work in the Level 1 Alterations is the replacement of existing finishes and systems. As a result, the Level 1 Alteration areas do NOT qualify as remodeling.

6) Chapter 7- Alterations- Level 1
a)Section 702.1- New interior finishes will comply with Chapter 8 of the Michigan Building Code.
i) From Table 803.9- Corridors are Class B finishes, Rooms are Class C finishes
b)Interior floor finishes shall comply with Section 804 of MBC.

7) Chapter 8- Alterations- Level 2
a)Section 803.4- New interior finishes will comply with Chapter 8 of the Michigan Building Code.
i) From Table 803.9- Corridors are Class B finishes, Rooms are Class C finishes
b)803.4.1- The new and existing finishes of corridors serving the work area comply with Section 804 of MBC.
c)Section 804- Fire Protection
i) 804.2.2- In work areas, the fire protection (sprinkler) system will be modified as required to comply with the Michigan Building Code.
ii)804.4- The existing building has an existing, previously approved fire alarm system (Exception 1).
iii) 804.4.1.1 The existing fire alarm system is already in place in the Work Areas and shall be maintained. Modifications shall comply with Section 907 of the MBC.
d)Section 805.3- The existing number of exits being maintained comply with MBC Chapter 10 requirements for quantity and sizing.
e)Section 805,5- Corridor doors in the work area that are being replaced shall be solid core wood or hollow metal and shall not contain louvers.
f) 805.5.3- Other corridor opening- The existing corridor walls provide a smoke barrier separation. New corridor openings shall maintain the smoke barrier.
g)805.6- Dead end corridors in the work areas do not exceed 35'
h)805.7- Means of egress and emergency lighting are provided as required in the Level 1 and Level 2 Alteration areas.
i) 805.8- Exit signs as provided as required in the Level 1 and Level 2 Alteration areas.

9) NFPA 101 Life Safety Code, Chapter 11, Existing Educational Occupancies
a)The spaces being remodeled (Level 2 Alterations) are designed to comply with the requirements of Chapter 11, Existing Educational Occupancies.
b)11-2.2 through 11-2.5- Existing Means of Egress components comply.
c)11-2.6 travel Distance to Exits- Existing exit travel distances are being maintained. In locations where the travel distance to an exit is being changed by the Addition, the rooms have an Exit Travel Distance of less than 200'.
d)11-2.8 through 11-2.10- New light fixtures, emergency lighting and exit signs are part of the work and will comply.
e)11-3.2- The existing Boiler Room is separated from the rest of the building by a 1 hour fire barrier.
f) 11-3.3- Interior finishes of Corridors are Class B, minimum. All other locations are Class C, minimum.
g)The existing fire alarm system is being maintained.
h)11-3-6- The existing corridor walls consist of a smoke barrier to deck. We are not remodeling the corridors or most classroom spaces, just replacing ceilings, lights and finishes. In locations where we are remodeling, the corridor wall smoke barrier is being maintained.
i) 11-3.7- The existing building is sub-divided into existing fire areas.

Secure Vestibule Addition (Unit B)

1) Design Codes
a)2015 Michigan Building Code
b)1999 School Fire Safety Rules and NFPA 101 Life Safety Code 1997

2) Design Professional in Responsible Charge (107.3.4)
a)A representative of French Associates will be the Design Professional in Responsible Charge.
b)Deferred submittals-
i) Modifications and adds to the existing Fire Alarm System.

3) Addition information
a)1 story = 85 square feet
b)Fully sprinkled
c) Type of Construction is IIB (II-000 from School Fire Safety Rules)
d)Use Group is Business E.

4) General Heights and Building Areas (Chapter 5)
a)The addition and existing building are not sprinkled.
b)The addition is occupancy type E, construction type IIB.
i) Allowable height and area is 2-story, 14,500 square feet (table 504 & 506)
ii) Actual height and area is 1 story (23'-0") and 85 square feet

6) Types of Construction (Chapter 6)
a)Type IIB (unprotected)
b)Fire resistance rating requirements for building elements (Table 601)
i) Structural Frame- 0
ii)Bearing Walls- 0
iii) Non-bearing Walls and partitions (Greater than 30' separation distance)- 0
iv) Floor Construction- 0
v)Roof Construction- 0

7) Fire resistance rated Construction (Chapter 7)
a)Exterior walls in accordance with Section 705. The addition exterior walls are more than 30' from any existing parallel exterior walls.
b)The addition is separated from the existing building by a fire wall in accordance with Section 706.
i) Fire wall rating is 2-hours to comply with Table 706.4 for use group E, footnote a (2 hour rated for type 2 construction).
ii)706.5 Horizontal Continuity- The fire wall is continuous from outside wall to outside wall and extends more than 18" beyond the exterior surface of the exterior walls of the addition.
iii) Vertical Continuity (706.6) - We have a stepped roof condition. The fire wall extends more than 30" above the low roof .
iv) Openings (706.8) - The aggregate width of openings is less than 25% of the length of the wall.
v)Penetrations of the fire wall will comply with Section 714.
c)The fire wall also acts as a 2-hour rated fire/smoke barrier to comply with NFPA 101 Life Safety Code.

8) Interior Finishes (Chapter 8)
a)From Table 803.9
i) Interior wall and ceiling finishes for exit enclosures and exit passageways shall be minimum Class A.
ii)Interior wall and ceiling finishes for corridors shall be minimum Class A.
iii) Interior wall and ceiling finishes for rooms and enclosed spaces shall be Class C.

9) Fire Protection Systems (Chapter 9)
a)The addition is not sprinkled.

10) Means of Egress (Chapter 10)
a)Occupant Load (Section 1004)-The addition has an occupant load of 50 occupants.
b)Required minimum egress width for egress components is 0.15" per occupant served (Section 1005).

BUILDING INFORMATION

EXISTING BUILDING AREA IS 222,639 SF.

STUDENT POPULATION IS NOT CHANGING

WORK AREA COMPLIANCE METHOD: LEVEL 1 ALTERATIONS

NO CHANGE OF USE

THE BUILDING IS FULLY SPRINKLED.

ALTERATION DESCRIPTION:

FINISHES UPGRADE, PAINT AND ONE DOOR REPLACEMENT IN THE MAIN OFFICE

ADDITION:

SECURE VESTIBULE ADDITION - 85 SF - SPRINKLED

KEY PLAN

ISSUE DATE	ISSUED FOR
03/25/2019	BIDS
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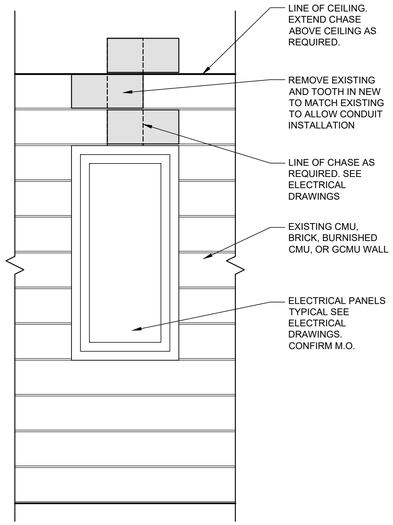
PROJECT
Williamston Community Schools
Williamston High School
Secure Entrance
WILLIAMSTON, MICHIGAN

SHEET
COMPOSITE PLAN & CODE PLAN INFORMATION

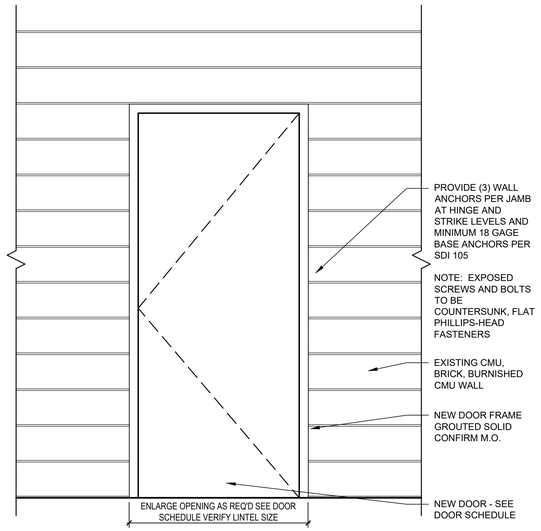
PROJECT NUMBER
2019-003

SHEET NUMBER
A0.02

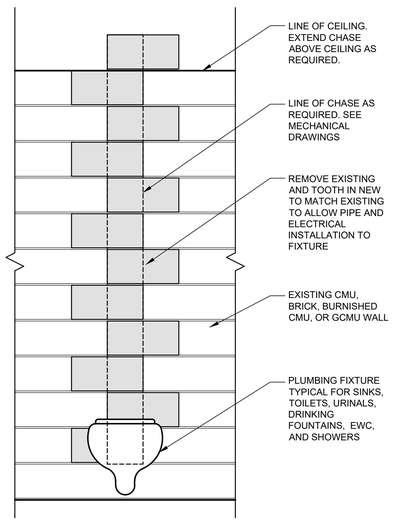
2019.003 XYZ PROJECT



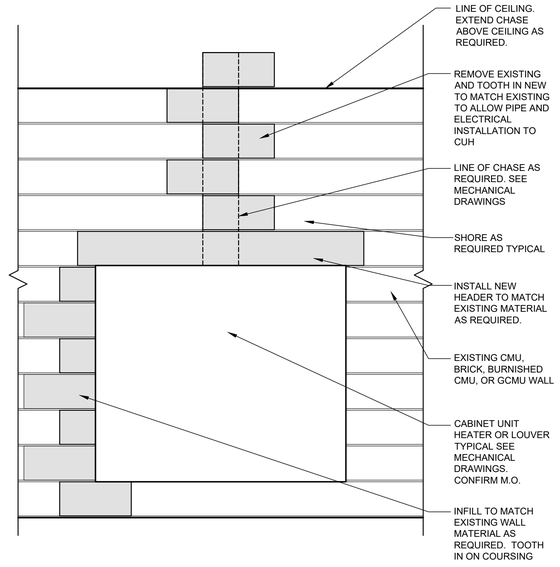
D D9.00 TYPICAL ELECTRICAL DEVICE INSTALLATION IN EXISTING WALL
SCALE: 1/2" = 1'-0"



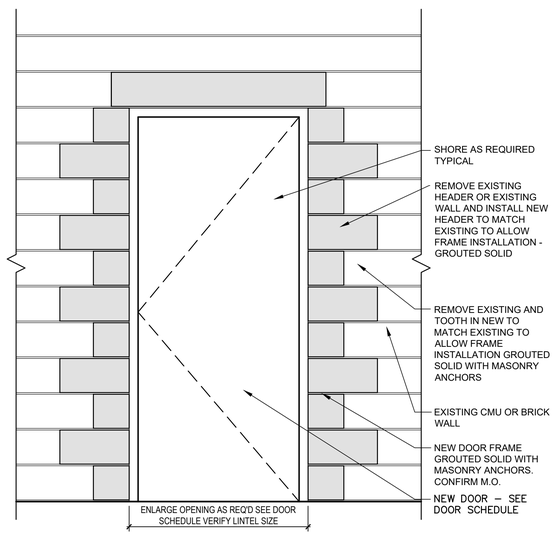
B D9.00 TYPICAL DOOR INSTALLATION IN EXISTING MASONRY OPENING
SCALE: 1/2" = 1'-0"



E D9.00 TYPICAL PLUMBING FIXTURE INSTALLATION IN EXISTING WALL
SCALE: 1/2" = 1'-0"



C D9.00 TYPICAL CABINET UNIT HEATER LOUVER INSTALLATION IN EXISTING WALL
SCALE: 1/2" = 1'-0"



A D9.00 TYPICAL DOOR INSTALLATION IN EXISTING MASONRY WALL
SCALE: 1/2" = 1'-0"

DEMOLITION GENERAL NOTES

1. REFER TO PROJECT SPECIFICATION MANUAL FOR DEMOLITION CRITERIA BEFORE REMOVING ANY ITEMS.
2. REMOVE AND REPLACE EXISTING CONSTRUCTION AS REQUIRED FOR THE EXECUTION OF NEW WORK.
3. PROTECT EXISTING CONSTRUCTION TO REMAIN AS REQUIRED DURING DEMOLITION.
4. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS AND FOR COORDINATION OF WORK.
5. DISCONNECT ALL MISCELLANEOUS FEATURES (I.E. ELECTRICAL, MECHANICAL, PLUMBING, ETC.) ASSOCIATED WITH ITEMS TO BE DEMOLISHED (I.E. PARTITIONS, WALLS, CEILINGS, CABINETS ETC.).
6. REMOVAL OF ANY MECHANICAL, ELECTRICAL AND MISCELLANEOUS ITEMS WILL REQUIRE PATCH AND REPAIR OF ADJACENT MATERIALS TO REMAIN.
7. REMOVE EXISTING UNUSED NAILS, SCREWS AND OTHER WALL PROTRUSIONS FROM EXISTING SURFACES TO REMAIN. PATCH AND REPAIR TO MATCH EXISTING ADJACENT SURFACES AS REQUIRED TO RECEIVE NEW FINISHES.
8. PATCH AND REPAIR ALL SURFACES TO REMAIN TO MATCH EXISTING ADJACENT SURFACES AS REQUIRED TO RECEIVE NEW FINISHES - SEE ROOM FINISH SCHEDULE.
9. CONTRACTOR SHALL PLACE ANY ITEMS OR MATERIALS TO BE RETAINED AS DIRECTED BY OWNER.

DEMOLITION PLAN KEY NOTES

NOTES BELOW ARE INDICATED ON THE DRAWING BY THIS SYMBOL: ◇

2.1 REMOVE EXISTING SHRUBBERY AS REQUIRED FOR NEW CONSTRUCTION.

2.2 RESHAPE EXISTING FLOWER BEDS AS NECESSARY FOR NEW CONSTRUCTION. PATCH ADJACENT SURROUNDINGS AS NECESSARY.

2.3 REMOVE EXISTING SOD AS NECESSARY FOR NEW CONSTRUCTION. PATCH ADJACENT SURROUNDINGS AS NECESSARY.

2.4 REMOVE AND RELOCATE EXISTING HARDSCAPE AS NECESSARY FOR NEW CONSTRUCTION. COORDINATE WITH OWNER FOR RELOCATION.

2.5 REMOVE EXISTING SIGNAGE IN ITS ENTIRETY. SALVAGE AND RETURN TO OWNER. COORDINATE WITH OWNER FOR RELOCATION.

3.1 SAW CUT EXISTING CONCRETE SLAB AS REQUIRED FOR CANOPY COLUMN FOOTING.

4.1 REMOVE PORTION OF EXISTING MASONRY WALL AS REQUIRED BY NEW CONSTRUCTION. REMOVE TO 8" BELOW FLOOR SLAB.

8.1 REMOVE EXISTING INTERIOR DOOR AS REQUIRED FOR INSTALLATION OF NEW DOOR. EXISTING FRAME TO REMAIN. PATCH AND REPAIR ALL SURFACES TO REMAIN AS REQUIRED TO RECEIVE NEW FINISHES.

9.1 REMOVE EXISTING WALL BASE ALONG (EXTERIOR WALL ONLY). PATCH AND REPAIR ALL SURFACES TO REMAIN AS REQUIRED TO RECEIVE NEW FINISHES.

KEY PLAN

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Williamston Community Schools
Williamston High School
Secure Entrance
WILLIAMSTON, MICHIGAN

SHEET
DEMOLITION NOTES AND DETAILS

PROJECT NUMBER
2019-003

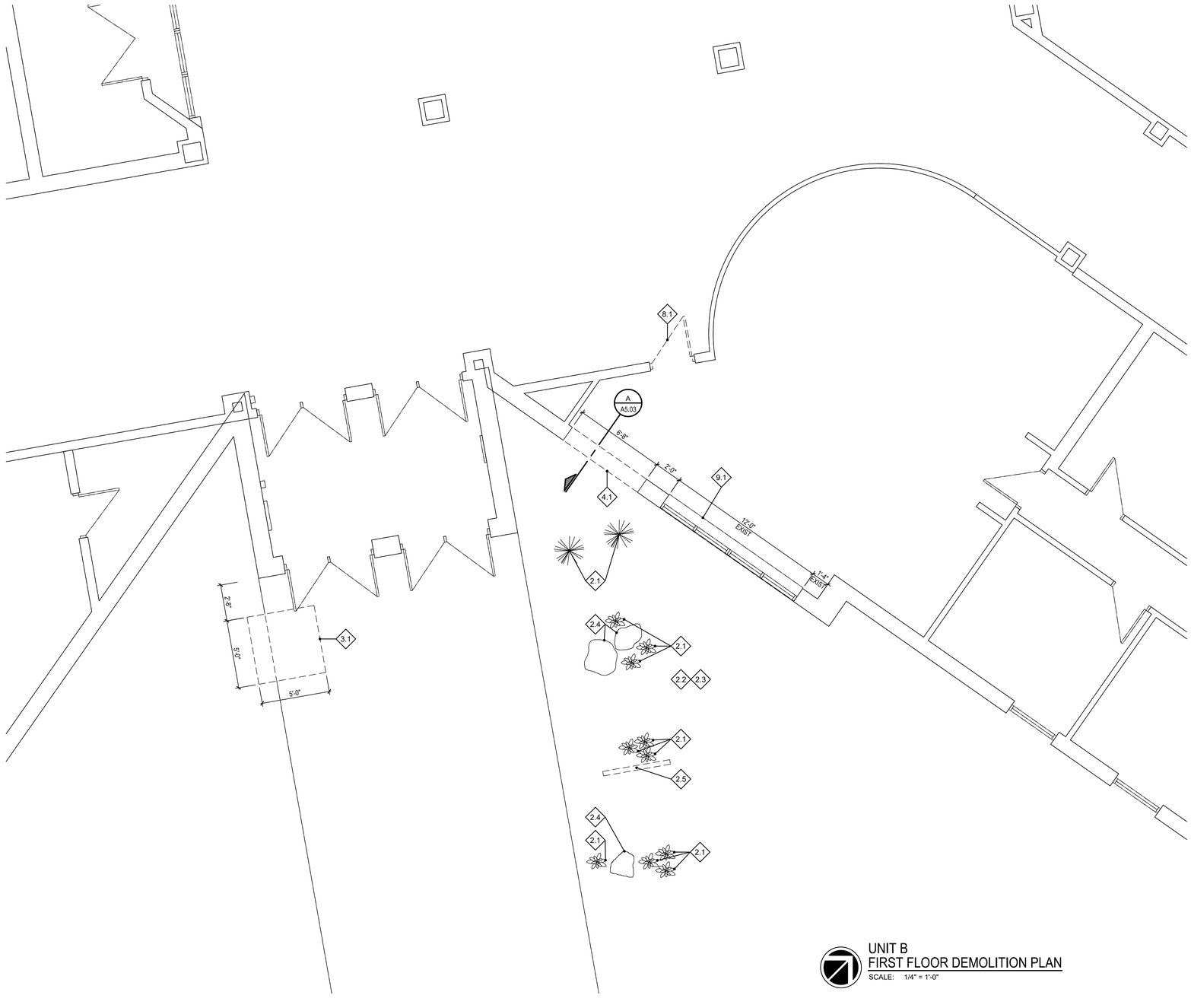
SHEET NUMBER
AD2.00

2019-003 XYZ PROJECT

DEMOLITION PLAN NOTES

1. REFER TO SHEET AD2.00 FOR DEMOLITION GENERAL NOTES AND KEY NOTES.
2. ----- DASHED LINES REPRESENTS DEMOLITION

REFER TO BUILDING AND WALL SECTIONS FOR ADDITIONAL INFORMATION



UNIT B
FIRST FLOOR DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

KEY PLAN

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WILLIAMSTON, MICHIGAN

SHEET
UNIT B
FIRST FLOOR
DEMOLITION PLAN

PROJECT NUMBER
2019-003

SHEET NUMBER
AD2.10B

2019-003 XYZ PROJECT

PAVING CONSTRUCTION NOTES

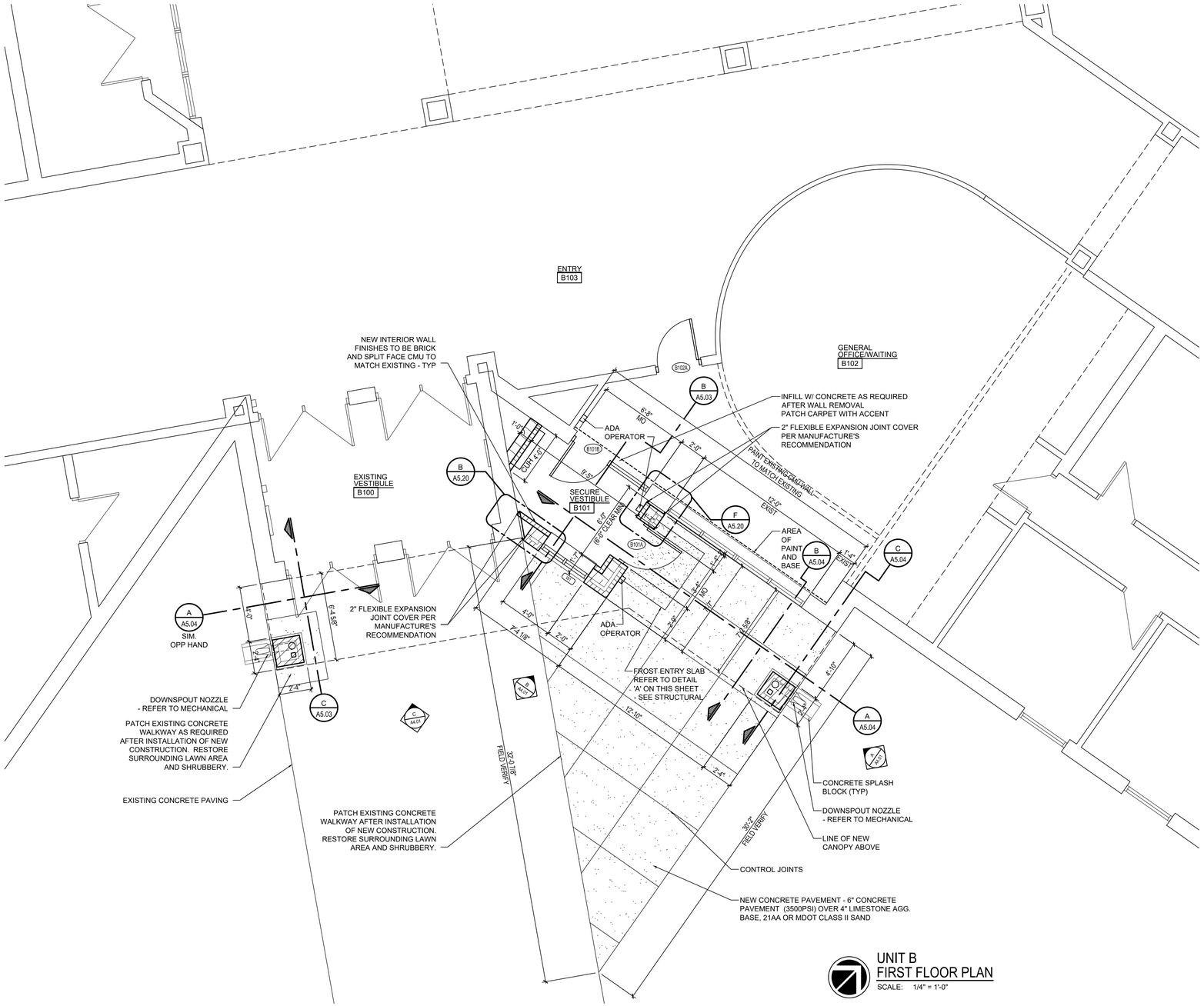
1. EARTHWORK AND PAVEMENT CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION
2. REMOVE ANY EXISTING TOPSOIL, VEGETATION, TREES AND OTHER DELETERIOUS MATERIALS TO EXPOSE TO THE SUBGRADE SOIL. TREE ROOTS SHALL BE COMPLETELY REMOVED.
3. EXCAVATE TO THE DEPTH OF THE FINAL SUBGRADE ELEVATION TO ALLOW FOR GRADE CHANGES AND THE PLACEMENT OF THE RECOMMENDED PAVEMENT SYSTEM.
4. THE TOP 12" OF THE EXPOSED SUBGRADE SHALL BE COMPACTED TO A DENSITY NOT LESS THAN 95% OF THE MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR (ASTM D 1557-91)
5. THE FINAL SUBGRADE SHALL BE THOROUGHLY PROOF ROLLED UNDER THE OBSERVATION OF A GEOTECHNICAL/PAVEMENT ENGINEER. LOOSE OR YIELDING AREAS WHICH CANNOT BE MECHANICALLY STABILIZED SHALL BE REMOVED AND REPLACED WITH ENGINEERED FILL OR AS INDICATED BY FIELD CONDITIONS,
6. THE AGGREGATE BASE SHALL BE COMPACTED TO A DENSITY NOT LESS THAN 95% OF THE MAX. DENSITY AS DETERMINED BY THE MODIFIED PROCTOR (ASTM D 1557-91). THE BASE SHALL EXTEND A MIN. OF 1 FOOT BEYOND THE PAVED BASE.
7. PLACE EXPANSION JOINTS WHERE NEW CONCRETE PAVEMENT OR WALKS ABUT BUILDING WALLS, CURB, OR EXISTING CONCRETE PAVEMENT. PLACE JOINT SEALANT ON ALL EXPANSION JOINTS.
8. CONTRACTOR TO CONSTRUCT CONTRACTION AND EXPANSION JOINTS IN ALL NEW CONCRETE PAVEMENT. CONTRACTION JOINTS SHALL BE TOOLED WHERE SIDEWALKS WIDTH IS 8' OR LESS, AND SHALL BE SPACED EQUAL TO THE WIDTH OF THE PAVEMENT, BUT NOT MORE THAN 10' APART. PLACE EXPANSION JOINTS WITH JOINT SEALANT AT MAX. 50" SPACING. CONTRACTOR SHALL GENERALLY MATCH THE JOINT PATTERNS FOR CONCRETE PAVEMENT WHEN SHOWN ON THE PLANS.
9. CONCRETE PAVEMENT SHALL MEET THE REQUIREMENTS FOR MDOT GRADE P1 CONCRETE PER THE CURRENT MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

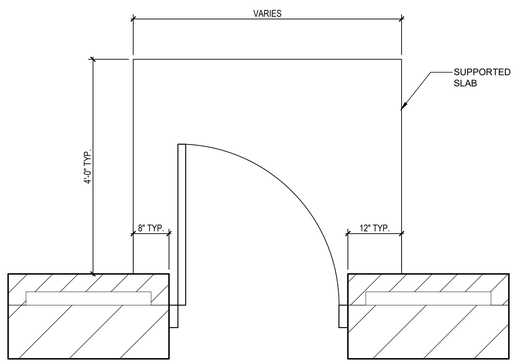
FLOOR PLAN LEGEND

- EXTERIOR WALLS TO BE 4" NOMINAL BRICK ON CONCRETE BLOCK WALL WITH 2" RIGID CAVITY INSULATION
- C.M.U. PARTITION AS DIMENSIONED

LAWN RESTORATION NOTE

RESTORE ALL NON-PAVED AREAS WITH 3" OF CLEAN TOPSOIL AND SEED MIX (30% KENTUCKY BLUEGRASS, 20% PERENNIAL RYE GRASS, 50% CREEPING RED FESCUE). PLACE MULCH IN ALL SEEDED AREAS ON SLOPES IN EXCESS OF 10 HORIZONTAL TO 1 VERTICAL PLACE NORTH AMERICAN GREEN DS150 MULCH BLANKET IMMEDIATELY AFTER SEEDING. USE METAL STAPLES PER MANUFACTURERS RECOMMENDATIONS TO HOLD MATTING IN PLACE





A A2.10B
TYPICAL SUPPORTED SLAB ENLARGED PLAN DETAIL
SCALE: 3/4" = 1'-0"

UNIT B FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

KEY PLAN

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Williamston Community Schools
Williamston High School
Secure Entrance
WILLIAMSTON, MICHIGAN

SHEET
UNIT B
FIRST FLOOR PLAN

PROJECT NUMBER
2019-003

SHEET NUMBER
A2.10B

2019-003 XYZ PROJECT

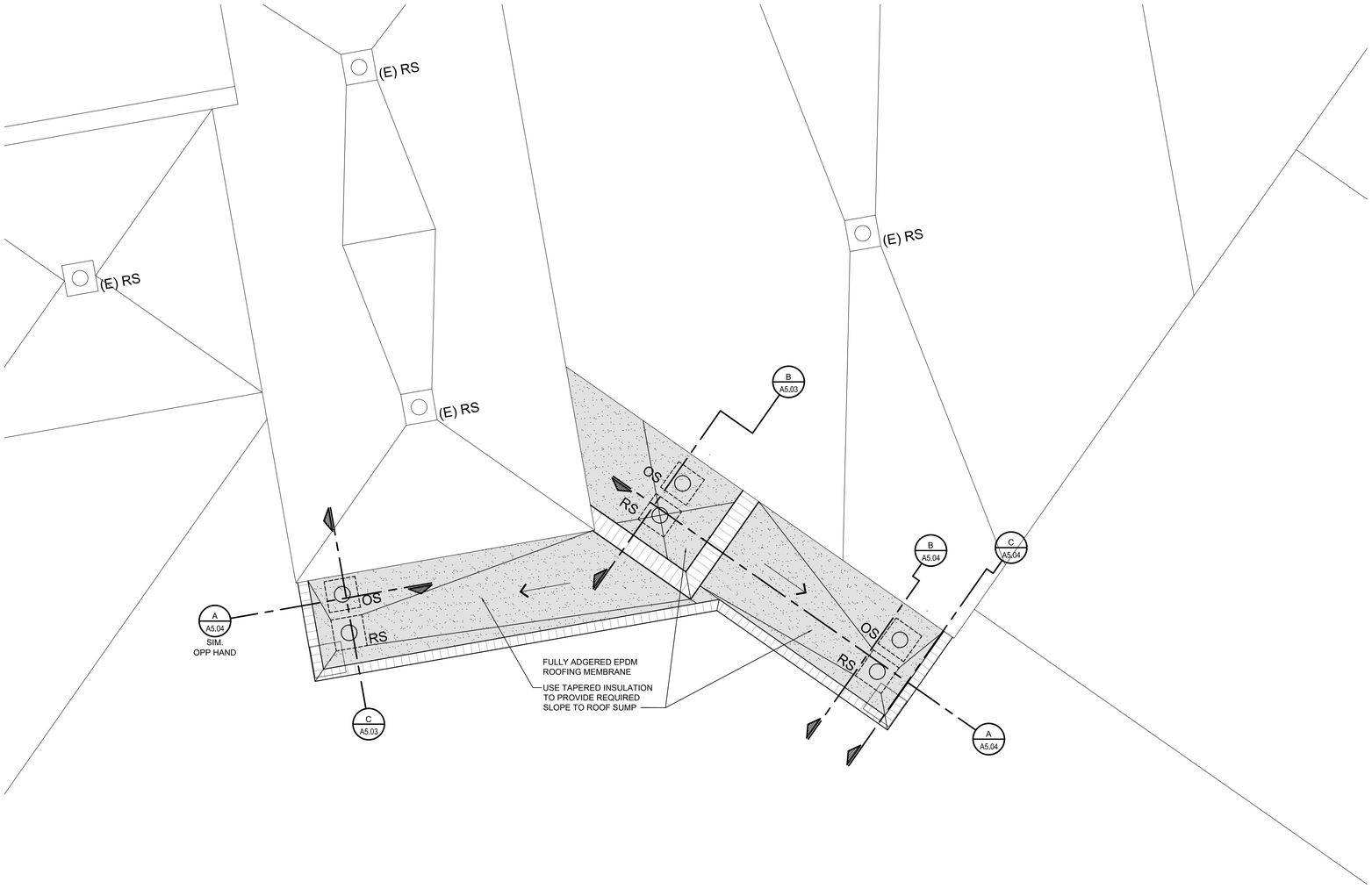
ROOF PLAN LEGEND

- NEW ROOF AREA
- EXISTING ROOFING TO REMAIN. REPAIR AS REQUIRED FOR WORK BY OTHER TRADES.
- TAPERED INSULATION
- ⟵ INDICATES DIRECTION OF SLOPE

D.S.	DOWN SPOUT
(E)	EXISTING
O.S.	OVERFLOW SUMP
R.S.	ROOF SUMP

ROOF PLAN GENERAL NOTES

1. NEW FLEXIBLE SHEET ROOFING (FSR) SHALL BE FULLY ADHERED EPDM MEMBRANE SYSTEM.
2. STEEL ELEVATIONS PROVIDE GENERAL SLOPE DIRECTION. ROOFING CONTRACTOR TO PROVIDE A MINIMUM OF 1/4" PER FOOT SLOPE TO SUMPS IN ALL DIRECTIONS UTILIZING TAPERED INSULATION AS REQUIRED. PROVIDE INSULATION FORMED SADDLES OR CRICKETS BETWEEN ROOF SUMPS TO INSURE PROPER DRAINAGE.
3. VERIFY ROOF OPENING/EQUIPMENT SIZES AT LOCATIONS WITH MECHANICAL. MAINTAIN PROPER FLASHINGS AND DRAINAGE AROUND CURBS AT OPENINGS AS REQUIRED.
4. SEE SPECIFICATIONS FOR ROOFING INSULATION. PROVIDE TAPERED AREAS AS REQUIRED FOR PROPER DRAINAGE. ROOFING CONTRACTOR SHALL VERIFY COMPATIBILITY OF ALL INSULATION MATERIALS WITH MEMBRANE SUPPLIER.
5. ROOF DETAILS ARE SHOWN FOR REFERENCE ONLY. ROOFING CONTRACTOR TO PROVIDE APPROPRIATE DETAIL/ASSEMBLY AS PER MANUFACTURE'S REQUIREMENTS FOR APPROVED ROOFING INSTALLATION WARRANTY.
6. REFER TO SHEET A5.01 FOR TYPICAL ROOFING DETAILS. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS ON THE PREMISES.



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

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SHEET
UNIT B
ROOF PLAN

PROJECT NUMBER
2019-003

SHEET NUMBER
A2.30B

2019-003 XYZ PROJECT

ROOM FINISH SCHEDULE

RM. NO.	ROOM NAME	FLOOR		BASE		WALLS								DOOR FRAME	CEILING			MILLWORK/ CASEWORK		REMARKS
						NORTH		EAST		SOUTH		WEST								
		MAT.	FINISH	MAT.	FINISH	MAT.	FINISH	MAT.	FINISH	MAT.	FINISH	MAT.	FINISH		MAT.	FINISH	HGT.	M/C	FINISH	
	B101 SECURE VESTIBULE	CPT	C1	-	-	BRICK, SP CMU	BRICK, SP CMU	BRICK, SP CMU	BRICK, SP CMU	BRICK, SP CMU	BRICK, SP CMU	BRICK, SP CMU	BRICK, SP CMU	P1SGD	ACT	AT1	11'-3"	SS1	SSM	4, 5
	B102 GENERAL OFFICE/WAITING	EXIST	CPT / C2	EXIST	RB / B1	EXIST	EXIST	EXIST	EXIST	EXIST	P1E-A & P1E-B	EXIST	EXIST	P1SGD	EXIST	EXIST	VARIES	-	-	1, 2, 3

ROOM FINISH SCHEDULE ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	EXIST	EXISTING	PLAM	PLASTIC LAMINATE	SS	STAINLESS STEEL
ANOD	ANODIZED	EXPO	EXPOSED	PLAS	VENEER PLASTER	SSM	SOLID SURFACE MATERIAL
B CMU	BURNISHED CMU	GL	GLASS	PT	PORCELAIN TILE	SP CMU	SPLIT FACE CMU
BRICK	BRICK	GCMU	GLAZED CMU	PTD	PAINTED	SPI	SPORTS IMPACT
CMU	CONCRETE MASONRY UNIT	GYP	GYPSUM BOARD	QT	QUARRY TILE	SV	SHEET VINYL
CONC	CONCRETE	LMC	LINEAR METAL CEILING	RBF	RUBBER TILE	TER	TERRAZZO
CPL	CEMENT PLASTER	MP	METAL PANEL	RB	RESILIENT WALL BASE	VCT	VINYL COMPOSITION TILE
CPT	CARPET	NSF	NON-SLIP FINISH	SAAC	SPRAY-APPLIED ACOUSTICAL COATING	WP	WATERPROOF
CT	CERAMIC TILE	PART'N	MOVEABLE PARTITION	SEAL	CONCRETE SEALER		

ROOM FINISH SCHEDULE GENERAL NOTES

A. SEE THE A7 SERIES SHEETS FOR CEILING PAINT DESIGNATIONS.

B. SEE THE A8 SERIES SHEETS FOR FLOOR PATTERNS.

ROOM FINISH SCHEDULE REMARKS

1. PATCH CARPET AS REQUIRED WITH ACCENT AT NEW ENTRY INTO EXISTING GENERAL OFFICE/WAITING.
2. PAINT EXISTING WALL FIELD P1E-A. LOCATION OF FILED TO REMAIN SAME. DO NOT PAINT ABOVE CEILING.
3. PAINT ACCENT STRIP ON THE WALL P1E-B. LOCATION OF ACCENT STRIP TO REMAIN SAME.
4. NEW BRICK AND SPLIT FACE CMU TO MATCH EXISTING COURSING/LOCATION.
5. PAINT STEEL PLATE P10F-A.

MATERIAL AND COLOR SCHEDULE

	KEY	MANUFACTURER	STYLE	COLOR	SPECS	NOTES
CEILING TILE	AT1	ARMSTRONG	TUNDRA	WHITE	2'-0"x2'-0"	15/16" ANGLED TEGULAR FINE TEXTURE 303
BASE	B1	JOHNSONITE	TBD	MATCH EXISTING	ROLLED RUBBER GOODS	
FLOORING	C1	SHAW	TBD	TBD	TBD	WALK-OFF CARPET
	C2	SHAW	TBD	TBD	TBD	CARPET TRANSITION ACCENT
PAINTS	P1E-A	SHERWIN WILLIAMS	EGGSHELL	MATCH EXISTING	SINGLE COMPONENT EPOXY	FIELD
	P1E-B	SHERWIN WILLIAMS	EGGSHELL	MATCH EXISTING	SINGLE COMPONENT EPOXY	ACCENT STRIP
	P1SG-D	SHERWIN WILLIAMS	SEMI-GLOSS	MATCH EXISTING	SINGLE COMPONENT EPOXY	INTERIOR DOOR AND WINDOW FRAMES
	P10F-A	SHERWIN WILLIAMS	FLAT	TBD	EPOXY	LINTELS
	P31F-A	SHERWIN WILLIAMS	TBD	TBD	TBD	DIRECT APPLIED EIFS
SOLID SURF.	SS1	CORIAN	SOLID SURFACE	LINEN (GROUP B) OR MATCH EXISTING	1/2" THICK	SILLS

DOOR SCHEDULE

DOOR NO.	DOOR SIZE	DOOR			FRAME					H.W. NO.	MIN./ LABEL	LINTEL MAT.	REMARKS
		TYPE	MAT.	FIN.	TYPE	MAT.	FIN.	JAMB *	HEAD *				
B101A	3'-0" x 7'-2"	FG1	FRP	PREF	1	AL	PREF	F/A5.20	A/A5.04	01	-	STL	4, 6, 8
B101B	3'-0" x 7'-2"	FG1	HM	P1SGD	2	HM	P1SGD	A	B/A5.03	02	-	STL	2, 5, 7, 8
B102A	3'-0" x 7'-0"	FG1	HM	P1SGD	EXIST	EXIST	P1SGD	EXIST	EXIST	03	20	EXIST	1, 3

DOOR SCHEDULE ABBREVIATIONS

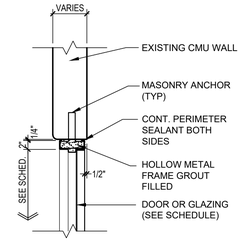
AL	ALUMINUM	PC	PRECAST CONCRETE
ANOD	ANODIZED	PLAM	PLASTIC LAMINATE
APC	ARCHITECTURAL PRECAST LINTEL	PREF	PREFINISHED
CWF	CURTAINWALL FRAMING	PTD	PAINTED
EXIST	EXISTING	SIM	SIMILAR
FRP	FIBERGLASS REINFORCED POLYESTER	SS	STAINLESS STEEL
GL	GLASS	STL	STEEL
HM	HOLLOW METAL	SFF	STOREFRONT FRAMING
LGF	LIGHT GAUGE FRAMING	TS	TUBE STEEL
ML	MASONRY LINTEL	WD	WOOD
MSF	METAL STUD FRAMING	WDSC	WOOD - SOUND CONTROL

DOOR SCHEDULE GENERAL NOTES

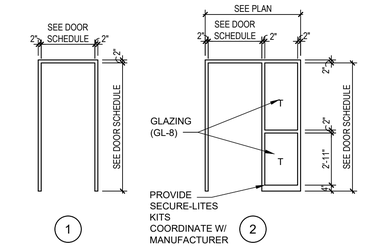
1. FIRE RATED DOORS AND FRAMES ARE LISTED IN MINUTES.
2. ALL FIRE RATED HOLLOW METAL DOOR FRAMES SHALL BE CEMENT GROUTED SOLID UNLESS SPECIFICALLY NOTED OTHERWISE. COORDINATE CAVITY LOCATIONS FOR SCHEDULED HARDWARE.

DOOR SCHEDULE REMARKS

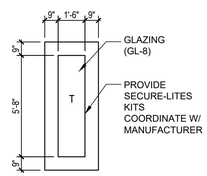
1. PAINTING TO INCLUDE BOTH SIDES OF FRAME.
2. PAINTING TO INCLUDE BOTH SIDES OF FRAME AND SIDELITE FRAMING.
3. NEW DOOR LEAF TO MATCH EXISTING DOOR LEAF, CONTRACTOR TO VERIFY EXISTING SIZE PRIOR TO FABRICATION.
4. DOOR TO HAVE ADA OPERATOR, CARD ACCESS AND TO BE ABLE TO BE BUZZED OPEN BY THE SECRETARY.
5. PROVIDE ADA OPERATOR.
6. EXTERIOR ADA OPERATOR OPENS DOOR 'B101A'.
7. INSIDE SECURE VESTIBULE B101 ADA OPERATOR OPENS DOOR 'B101B'.
8. INSIDE EXISTING GENERAL OFFICE/WAITING B102 ADA OPERATOR OPENS DOORS 'B101B' AND 'B101A' TO EXIT.



A A3.01A JAMB DETAIL
SCALE: 3/4" = 1'-0"



FRAME TYPES

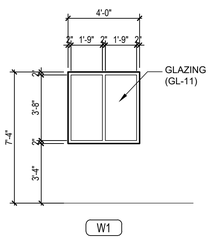


DOOR TYPES

GENERAL NOTES

1. NOT ALL DOOR STYLES ARE USED. REFER TO DOOR SCHEDULE.
2. NOT ALL FRAME STYLES ARE USED. REFER TO DOOR SCHEDULE.
3. REFER TO THE GLAZING SCHEDULE IN THE SPECIFICATIONS FOR THE GLAZING TYPES

* MANUFACTURE'S NOTE: FOR WOOD DOORS WITH MORTIS LOCKS - PROVIDE THE MINIMUM SIZE STILL AVAILABLE WHILE MAINTAINING WARRANTY



WINDOW TYPES

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PROJECT

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WILLIAMSTON, MICHIGAN

SHEET

DOOR SCHEDULE, ROOM FINISH SCHEDULE AND MATERIAL AND COLOR SCHEDULE

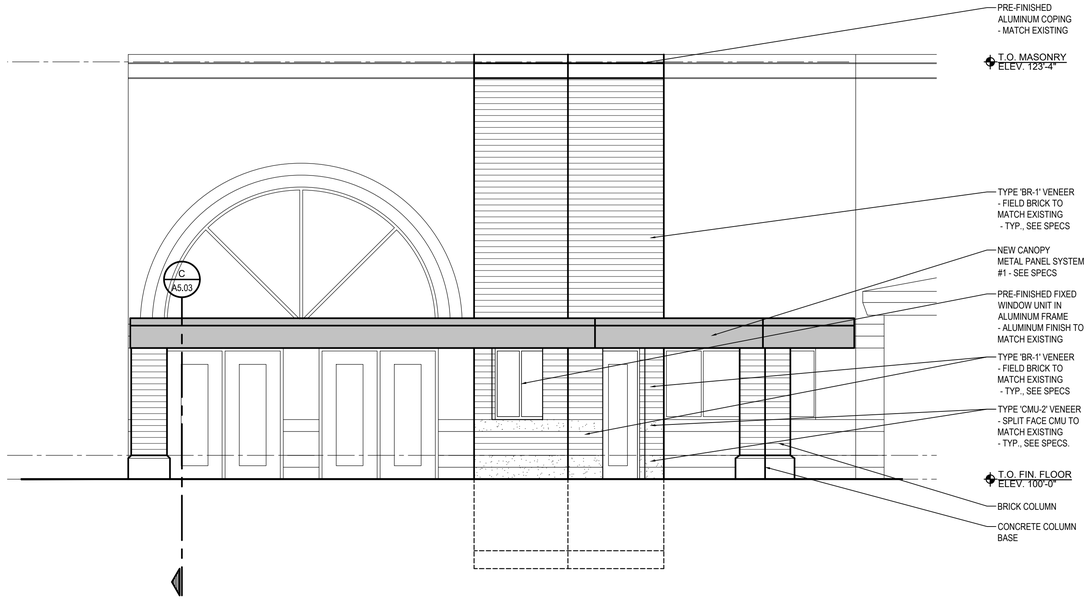
PROJECT NUMBER

2019-003

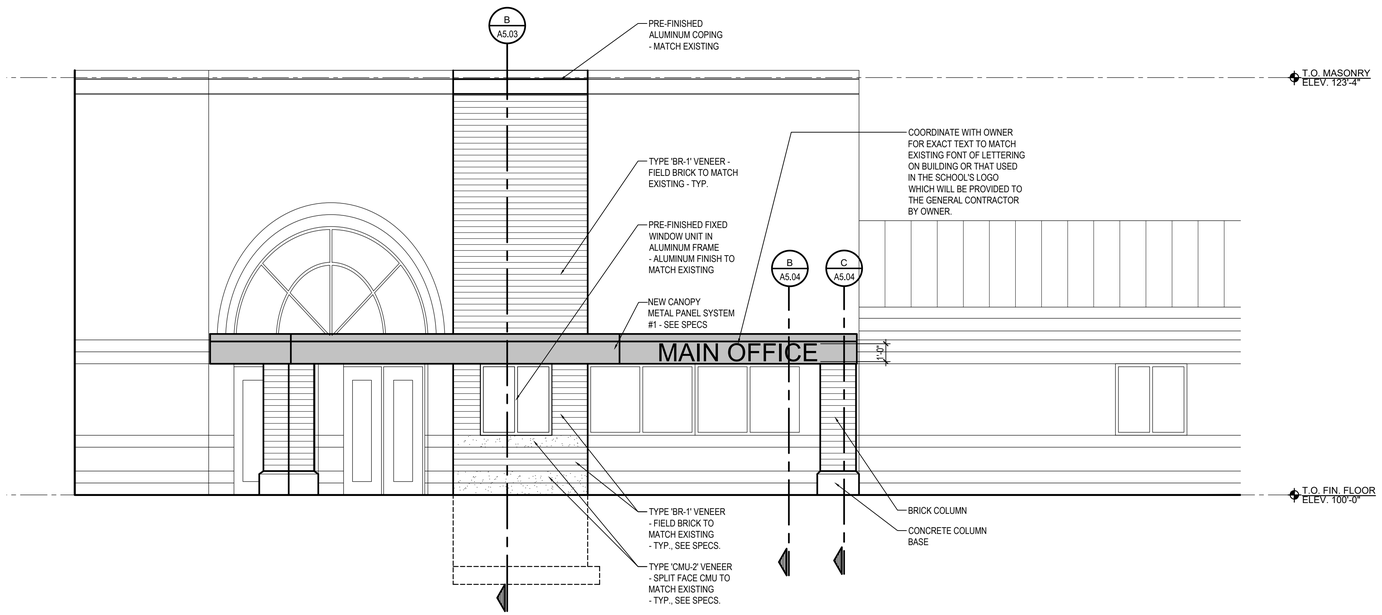
SHEET NUMBER

A3.01A

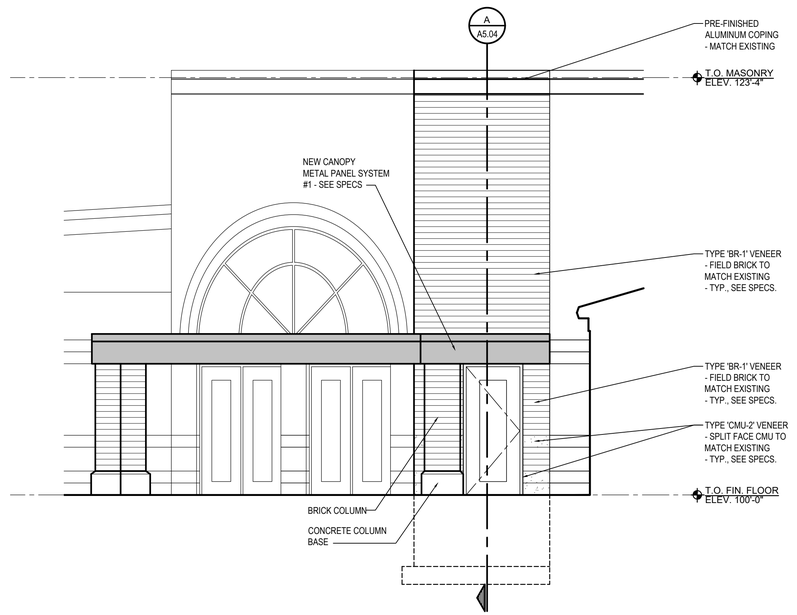
2019-003 XYZ PROJECT



C A2.10B ENLARGED PARTIAL NORTHWEST ELEVATION
SCALE: 1/4" = 1'-0"



B A2.10B ENLARGED PARTIAL NORTH ELEVATION
SCALE: 1/4" = 1'-0"



A A2.10B ENLARGED PARTIAL WEST ELEVATION
SCALE: 1/4" = 1'-0"

KEY PLAN

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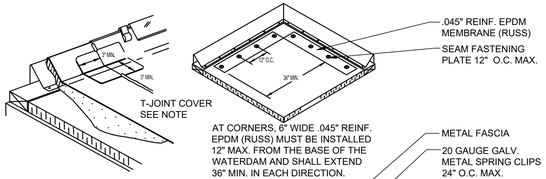
PROJECT
Williamston Community Schools
Williamston High School
Secure Entrance
WILLIAMSTON, MICHIGAN

SHEET
ENLARGED PARTIAL EXTERIOR ELEVATIONS

PROJECT NUMBER
2019-003

SHEET NUMBER
A4.01

2019-003 XYZ PROJECT



NOTES:

TREATED WOOD NAILER MUST EXTEND PAST TOTAL WIDTH OF GRAVEL STOP DECK FLANGE.

6" WIDE UNCURED ELASTOFORM FLASHING OR PRESSURE-SENSITIVE FLASHING MAY ALSO BE CENTERED OVER FIELD SPLICE AT ANGLE CHANGE.

AT GUTTER EDGES, SCUPPERS MUST BE PROVIDED FOR DRAINAGE.

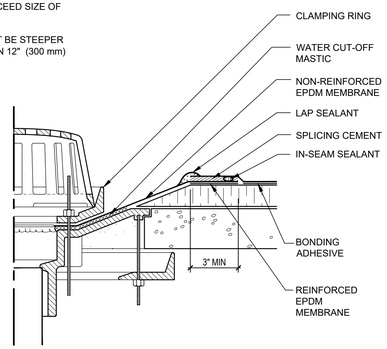
L ROOF EDGE
SCALE: N.T.S.

ALL BOLTS AND CLAMPS MUST BE IN PLACE TO PROVIDE CONSTANT COMPRESSION ON WATER CUT-OFF MASTIC.

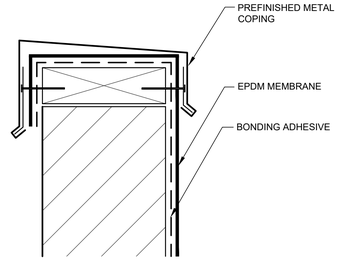
CUT THE MEMBRANE SO IT EXTENDS A MINIMUM OF 1/2" (13 mm) FROM THE ATTACHMENT POINTS OF THE DRAIN CLAMPING RING.

HOLE IN MEMBRANE MUST EXCEED SIZE OF DRAIN PIPE.

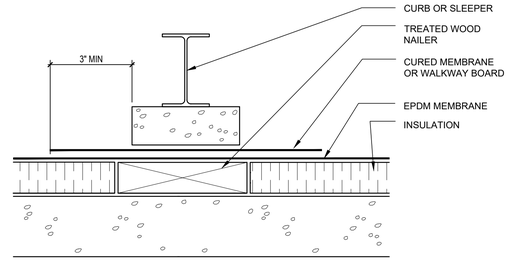
INSULATION TAPER SHALL NOT BE STEEPER THAN 6" (150 mm) (VERTICAL) IN 12" (300 mm) (HORIZONTAL).



H ROOF DRAIN
SCALE: N.T.S.



E LIGHT METAL PARAPET CAP
SCALE: N.T.S.



B EQUIPMENT SUPPORT
SCALE: N.T.S.

KEY PLAN

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03/25/2019	BIDS
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CHECKED	FA
APPROVED	FA

K STONE COPING
SCALE: N.T.S.

NOTES:

REMOVE ALL LEAD AND OTHER FLASHING.

PIPE SEAL MUST HAVE INTACT RIB AT TOP EDGE, REGARDLESS OF PIPE DIAMETER.

DECK FLANGES OF THE PRE-MOLDED PIPE SEAL SHALL NOT BE OVERLAPPED, CUT OR APPLIED OVER ANY ANGLE CHANGE.

ON MECH-FASTENED ROOFING SYSTEMS, ADDITIONAL MEMBRANE SECUREMENT IS REQUIRED

G PREMOLDED PIPE FLASHING
SCALE: N.T.S.

NOTES:

REMOVE ALL LEAD AND OTHER FLASHING BEFORE INSTALLING FIELD- FABRICATED PIPE SEAL.

SECUREMENT REQUIRED AROUND ALL PIPES GREATER THAN 18 INCHES (500 mm) IN DIAMETER.

UNCURED ELASTOFORM FLASHING WRAPPED AROUND THE PIPE SHALL HAVE 3" (75 mm) MINIMUM SPLICE.

A HEAT GUN MUST BE USED WHEN FORMING FLASHING.

ON MECH-FASTENED ROOFING SYSTEMS, ADDITIONAL MEMBRANE SECUREMENT IS REQUIRED.

PRESSURE-SENSITIVE UNCURED FLASHING IN CONJUNCTION WITH PRIMER CAN BE USED IN LIEU OF ELASTOFORM FLASHING.

APPLY LAP SEALANT WHERE PRESSURE-SENSITIVE PIPE FLASHING INTERSECTS A FIELD SPLICE.

D PLUMBING VENT FLASHING
SCALE: N.T.S.

FLASH ALL OUTSIDE CORNERS WITH TWO (2) PIECES OF UNCURED ELASTOFORM FLASHING AS PER DETAIL U-15-C OR WITH SURE-SEAL OUTSIDE CORNER, AS PER DETAIL PS-15-F (SEE NOTE 2)

NOTES:

FASTEN MEMBRANE FLASHING 12" (300 mm) ON CENTER. IF FASTENER PENETRATES METAL COUNTERFLASHING, USE EPDM WASHER, APPLY WATER CUT-OFF MASTIC OR CAULK FASTENER HEAD.

IF VERTICAL SPLICE IS NOT LOCATED AT CORNER, 6" (150 mm) WIDE UNCURED ELASTOFORM FLASHING OR PRESSURE-SENSITIVE FLASHING MUST BE CENTERED OVER FIELD SPLICE AT ANGLE CHANGE.

FASTENING PLATES MAY BE INSTALLED HORIZONTALLY.

A CURB FOR MECHANICAL UNIT
SCALE: N.T.S.

NOTES:

REMOVE ALL LEAD AND OTHER FLASHING BEFORE INSTALLING FIELD FABRICATED PIPE SEAL.

UNCURED ELASTOFORM FLASHING WRAPPED AROUND THE PIPE SHALL HAVE 3" (75 mm) MINIMUM MEMBRANE SPLICE.

TEMPERATURE OF METAL COLLAR MUST NOT EXCEED 180° F (82° C).

A HEAT GUN MUST BE USED WHEN FORMING FLASHING.

PRESSURE–SENSITIVE UNCURED FLASHING IN CONJUNCTION WITH PRIMER CAN BE USED IN LIEU OF ELASTOFORM FLASHING.

F STACK FLASHING
SCALE: N.T.S.

NOTES:

APPLY ON HARD SMOOTH SURFACE ONLY, NOT FOR USE ON WOOD.

WATER CUT-OFF MASTIC MUST BE HELD UNDER CONSTANT COMPRESSION.

DO NOT WRAP COMPRESSION TERMINATION AROUND CORNERS.

C WALL FLASHINGS FOR CONCRETE WALLS AND PARAPETS
SCALE: N.T.S.

TYPICAL ROOF NOTES

1. NOT ALL DETAILS ON THIS SHEET WILL BE USED ON THIS PROJECT. DETAILS ARE TYPICAL AND SHALL ONLY APPLY WHERE CONSTRUCTION CONDITION EXISTS.
2. THESE DRAWINGS ARE ONLY A GRAPHIC REPRESENTATION AND ARE NOT INTENDED TO BE SCALED.
3. THESE DETAILS MAY BE SUPERSEDED BY THE SELECTED MANUFACTURERS STANDARD DETAILS AS ACCEPTABLE TO THE ARCHITECT.
4. THESE DETAILS ARE IN REFERENCE TO APPLICATION OF MEMBRANE ROOFING SYSTEMS (& RELATED CONSTRUCTION) ONLY. ALL OTHER SURROUNDING MATERIALS AND SUBSTRATES ARE TO BE VIEWED AS "REFERENCE ONLY" AND ARE SUPERSEDED BY DETAILS AS INDICATED ON OTHER ARCHITECTURAL/ STRUCTURAL SHEETS. (EX. WOOD BLOCKING, INSULATION, STRUCTURAL ELEMENTS ETC...).
5. SPECIFIED ARCHITECTURAL & MECHANICAL ELEMENTS MAY NOT BE GRAPHICALLY CORRECT IN THESE DETAILS. WRITTEN SPECIFICATIONS SUPERSEDE GRAPHIC MATERIAL IN THESE DETAILS.

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PROJECT

Williamston Community Schools
Williamston High School
Secure Entrance

WILLIAMSTON, MICHIGAN

SHEET

EPDM ROOFING DETAILS

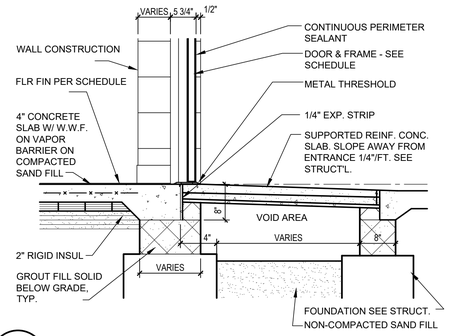
PROJECT NUMBER

2019-003

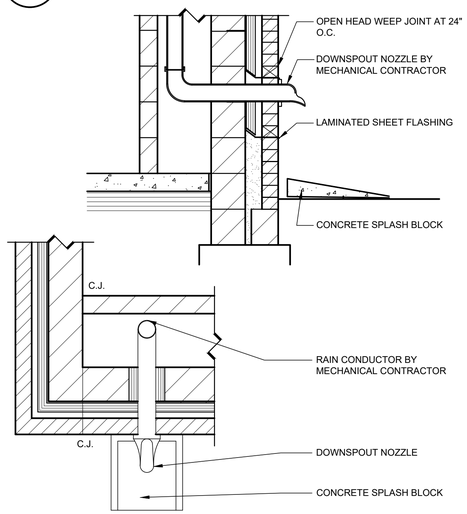
SHEET NUMBER

A5.01

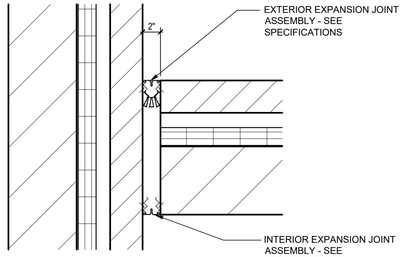
2019-003 XYZ PROJECT



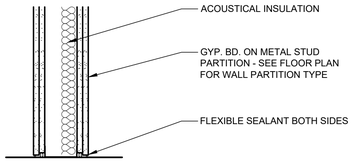
R SUPPORTED SLAB DETAIL
SCALE: N.T.S.



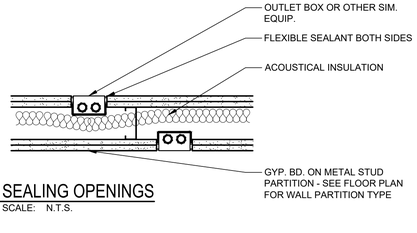
Q DOWNSPOUT NOZZE AND SPLASHBLOCK
SCALE: N.T.S.



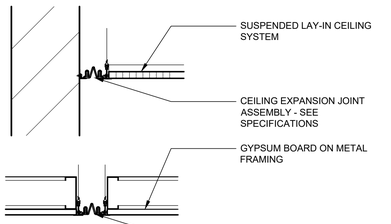
N EXTERIOR AND INTERIOR EXPANSION JOINT
SCALE: N.T.S.



M SEALING PARTITIONS
SCALE: N.T.S.



L SEALING OPENINGS
SCALE: N.T.S.



K CEILING EXPANSION JOINT
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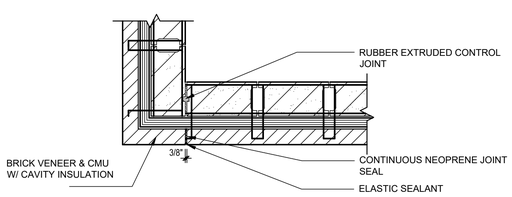

J EXTERIOR EXPANSION JOINT
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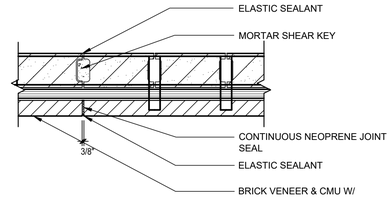

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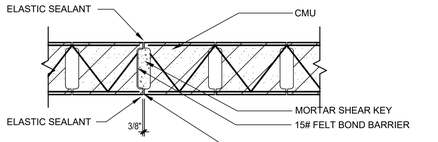

G INTERIOR CONTROL JOINT
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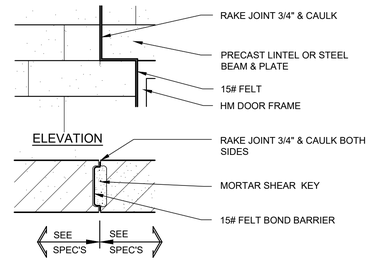
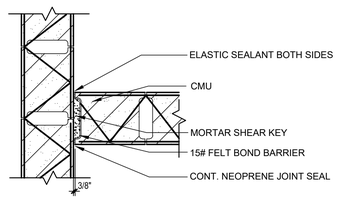
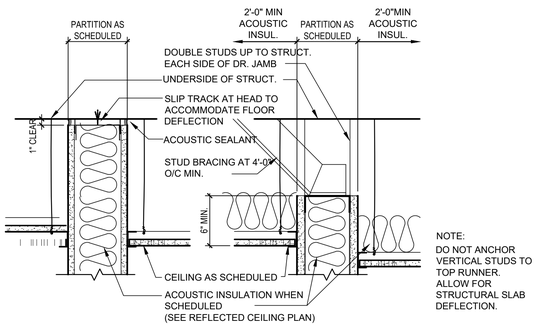


PLAN

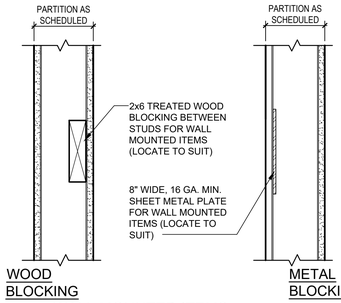
F CONTROL JOINT
SCALE: N.T.S.



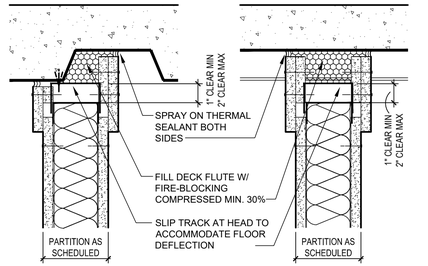
E INTERIOR CONTROL JOINT
SCALE: N.T.S.



D TYPICAL NON-RATED PARTITION CONSTRUCTION
SCALE: N.T.S.

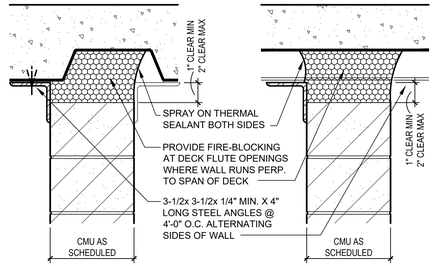


C WALL MOUNTED ITEMS TYPICAL BLOCKING DETAIL
SCALE: N.T.S.



NOTE:
1. PROVIDE FIRE-BLOCKING @ DECK FLUTE OPENINGS WHERE WALL RUNS PERP. TO SPAN OF DECK
2. ONE (1) OR TWO (2) HOUR RATING: UL DESIGN No. HW-0009 - SEE SPECIFICATION SECTION PENETRATION FIRESTOPPING.

B TYPICAL FIRE-RATED STUD PARTITION CONSTRUCTION
SCALE: N.T.S.



NOTE:
1. PROVIDE FIRE-BLOCKING @ DECK FLUTE OPENINGS WHERE WALL RUNS PERP. TO SPAN OF DECK.
2. DO NOT ANCHOR VERTICAL STUDS TO TOP RUNNER. ALLOW FOR STRUCTURAL SLAB DEFLECTION.
3. ONE (1) HOUR RATING: UL DESIGN No. HW-D-0001 - SEE SPECIFICATION SECTION PENETRATION FIRESTOPPING.
4. TWO (2) HOUR RATING: UL DESIGN No. HW-D-0002 - SEE SPECIFICATION SECTION PENETRATION FIRESTOPPING.

A TYPICAL FIRE-RATED CMU PARTITION CONSTRUCTION
SCALE: N.T.S.

GENERAL NOTES

1. INTERIOR WALL PARTITION TYPE CODE:

   INTERIOR WALL PARTITION CONSTRUCTION AS DETAILED:

   A) IN A NON RATED PARTITION, CARRY GYP. BD. MIN. 6" ABOVE SCHEDULED CEILING HEIGHT UNLESS NOTED OTHERWISE.

   B) ALL FIRE-RATED PARTITIONS ARE TO GO TO UNDERSIDE OF STRUCTURE.

   INTERIOR WALL PARTITION CONSTRUCTION WITH ACOUSTIC INSULATION AS DETAILED:

   A) IN A NON RATED PARTITION, CARRY GYP. BD. AND INSULATION MIN. 6" ABOVE SCHEDULED CEILING HEIGHT (UNLESS NOTED OTHERWISE) AND PROVIDE BATT SOUND INSULATION 2'-0" MIN. ON EACH SIDE OF PARTITION (SEE REFLECTED CEILING PLAN)

   B) IN A PARTITION NOTED TO GO TO THE UNDERSIDE OF STRUCTURE PROVIDE BATT SOUND INSULATION FULL HEIGHT OF PARTITION.

   C) PROVIDE / INSTALL SEALANT UNDER PARTITION FLOOR TRACK BOTH EDGES WHEN ACOUSTIC INSULATION IS INDICATED AND AT ALL FIRE-RATED PARTITIONS.

   D) ACOUSTIC INSULATION IS TO HAVE A MIN. STC RATING OF 50.

2. NOT ALL DETAILS ON THIS SHEET WILL BE USED ON THIS PROJECT. DETAILS ARE TYPICAL AND SHALL APPLY WHEN CONSTRUCTION CONDITION EXISTS.

3. REFER TO STANDARD DETAILS THIS SHEET FOR TYPICAL INTERIOR PARTITION CONSTRUCTION INFORMATION. REFER TO DETAIL PLANS AND PLAN DETAILS FOR SPECIAL PARTITION CONSTRUCTION INFORMATION.

4. ADDITIONAL SURFACE FINISHES ON FACING MATERIAL ARE NOTED ON ROOM FINISH SCHEDULE & DETAILS.

5. REFER TO REFLECTED CEILING PLAN FOR LOCATION OF ACOUSTIC INSULATION ABOVE CEILING.

KEY PLAN

ISSUE DATE	ISSUED FOR
03/25/2019	BIDS
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CHECKED	FA
APPROVED	FA

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PROJECT
Williamston Community Schools
Williamston High School
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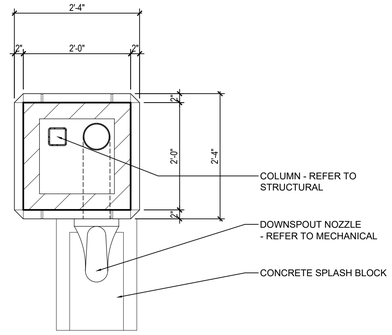
WILLIAMSTON, MICHIGAN

SHEET
TYPICAL CONSTRUCTION DETAILS

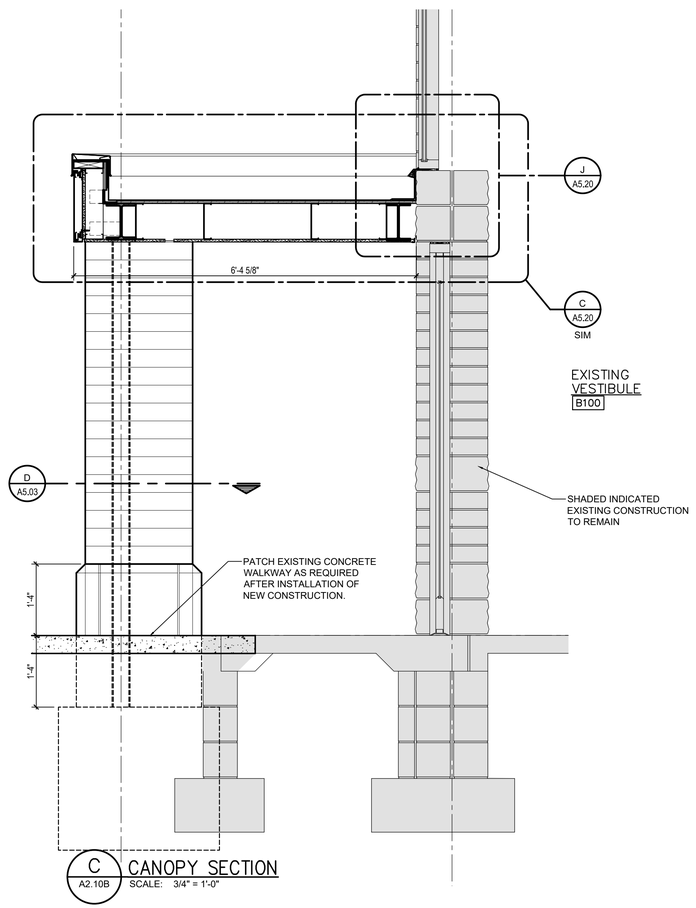
PROJECT NUMBER
2019-003

SHEET NUMBER
A5.02

2019-003 XYZ PROJECT



D A5.03 CANOPY COLUMN DETAIL
SCALE: 3/4" = 1'-0"



C A2.10B CANOPY SECTION
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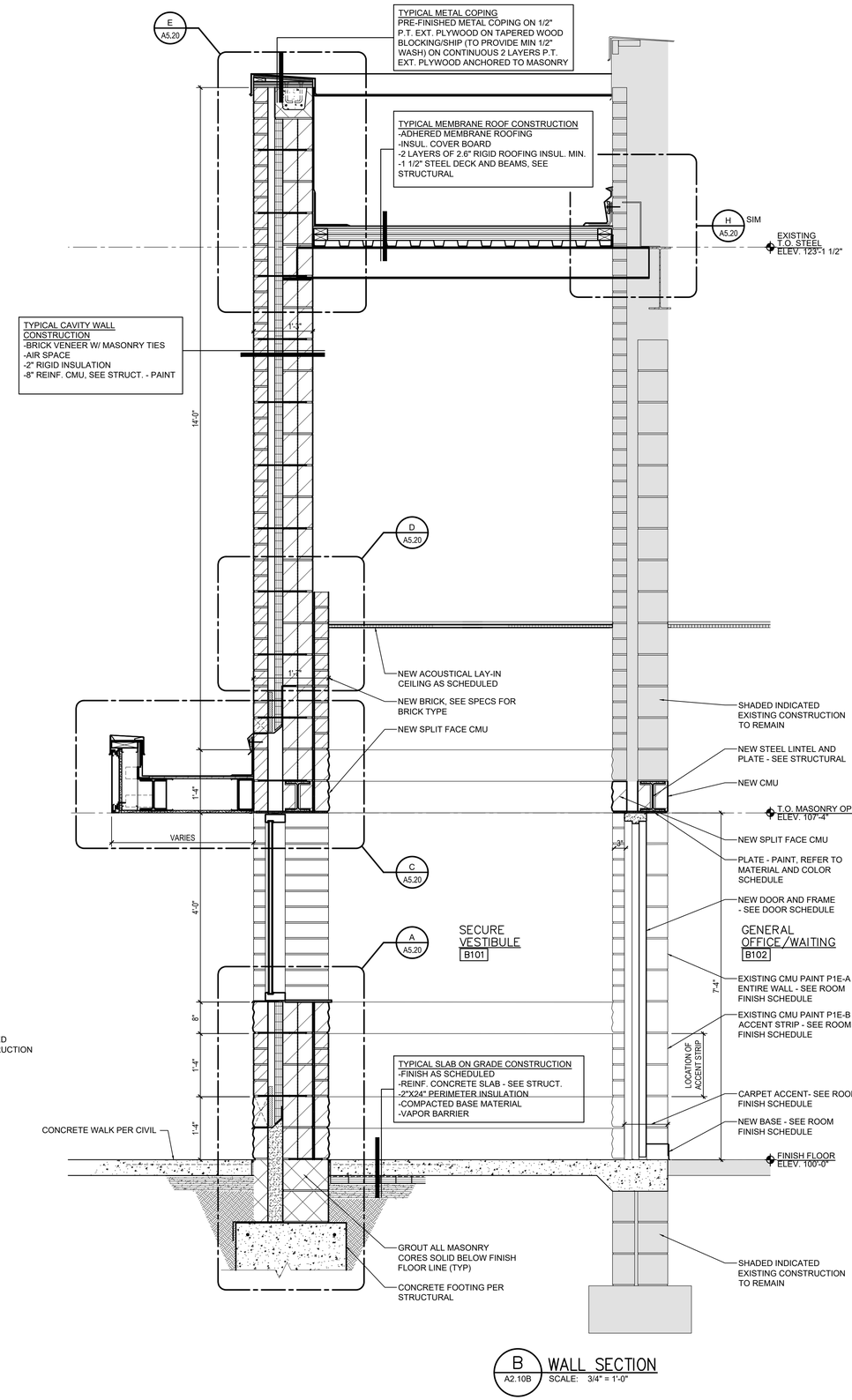

B A2.10B WALL SECTION
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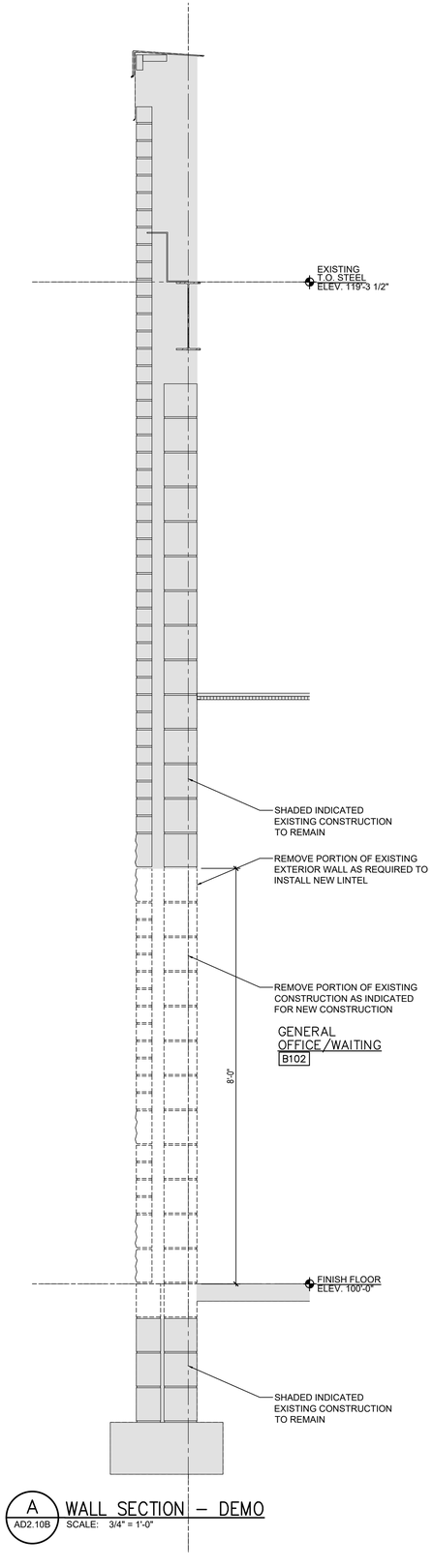

A AD2.10B WALL SECTION – DEMO
SCALE: 3/4" = 1'-0"

KEY PLAN

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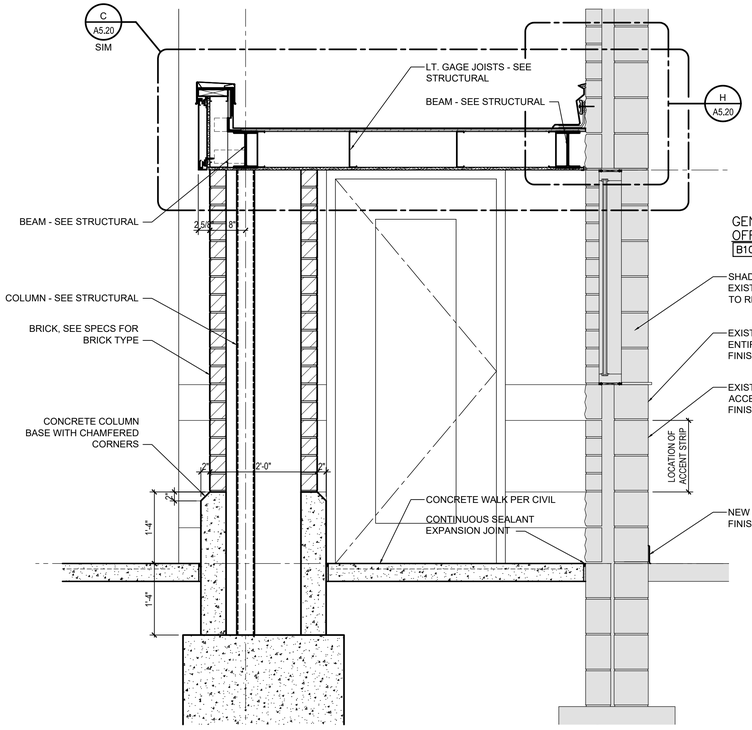
WALL SECTIONS

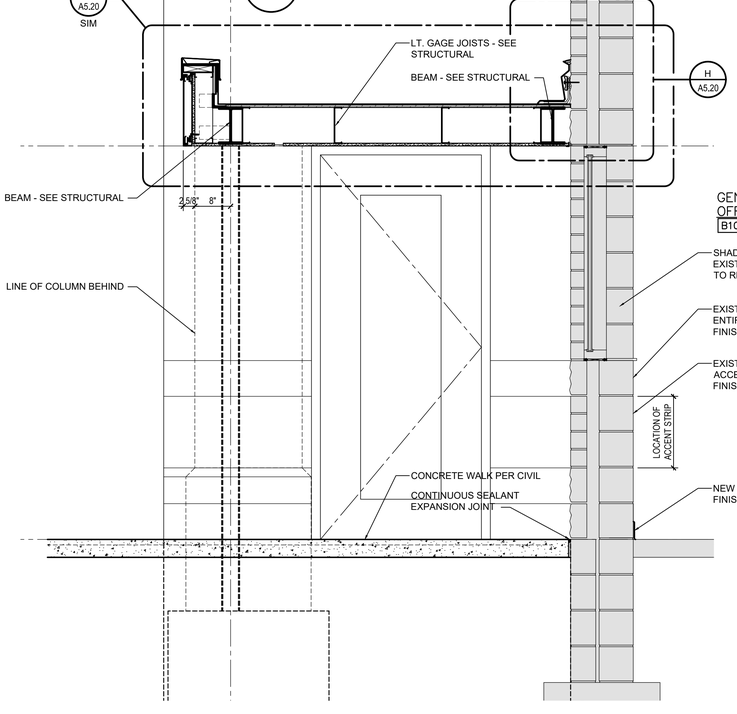
PROJECT NUMBER
2019-003

SHEET NUMBER
A5.03

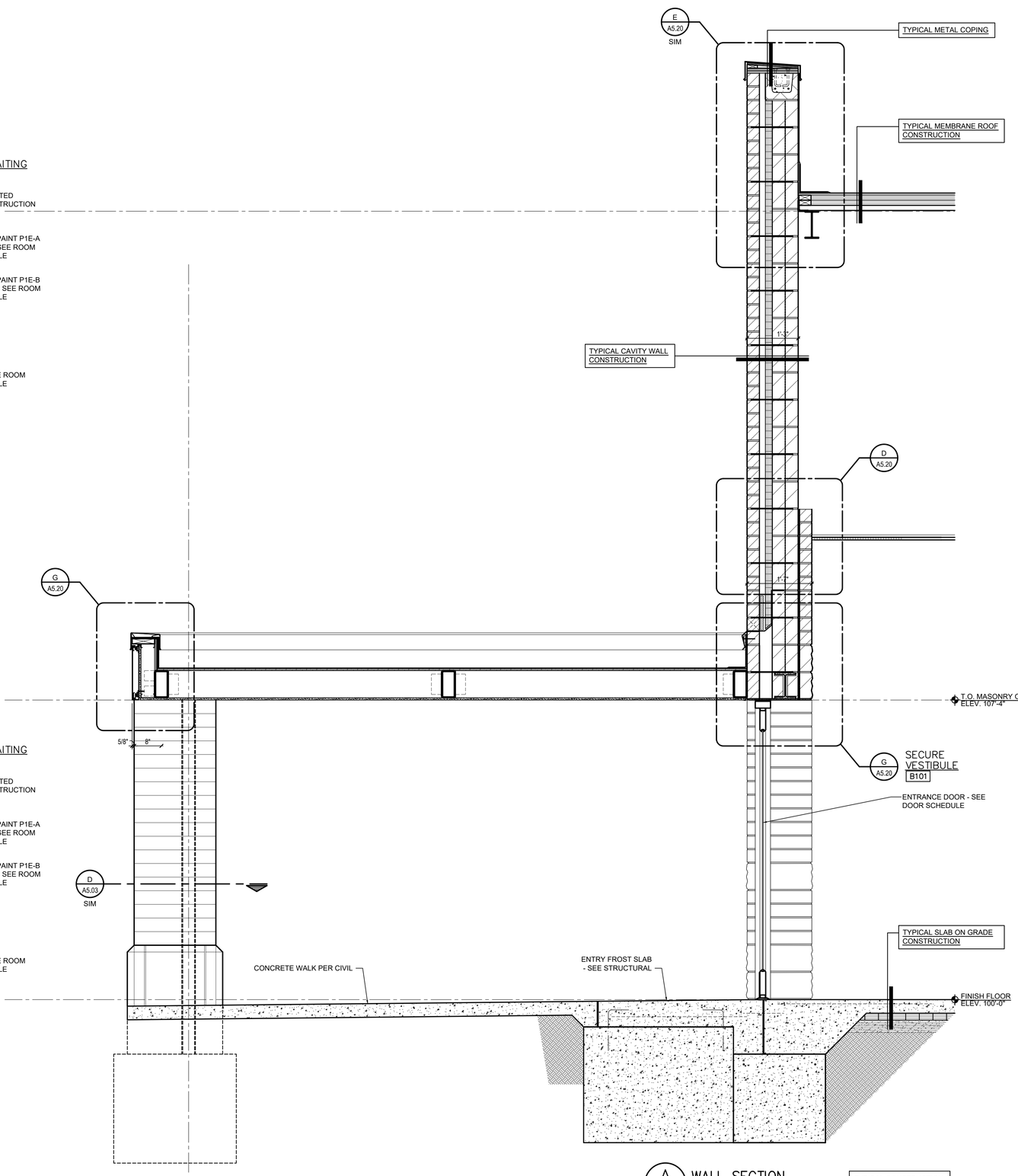
2019-03 XYZ PROJECT



C A2.10B **COLUMN SECTION**
SCALE: 3/4" = 1'-0"



B A2.10B **CANOPY SECTION**
SCALE: 3/4" = 1'-0"



A A2.10B **WALL SECTION**
SCALE: 3/4" = 1'-0"

TYPICAL CONSTRUCTION NOTES SEE B/A5.03

KEY PLAN

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WILLIAMSTON, MICHIGAN

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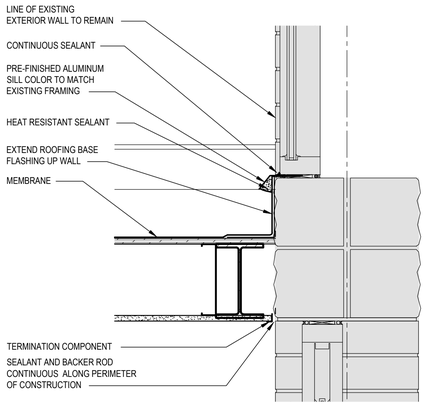
WALL SECTIONS

PROJECT NUMBER

2019-003

SHEET NUMBER

A5.04



J A5.03 DETAIL AT EXIST. CONSTRUCTION
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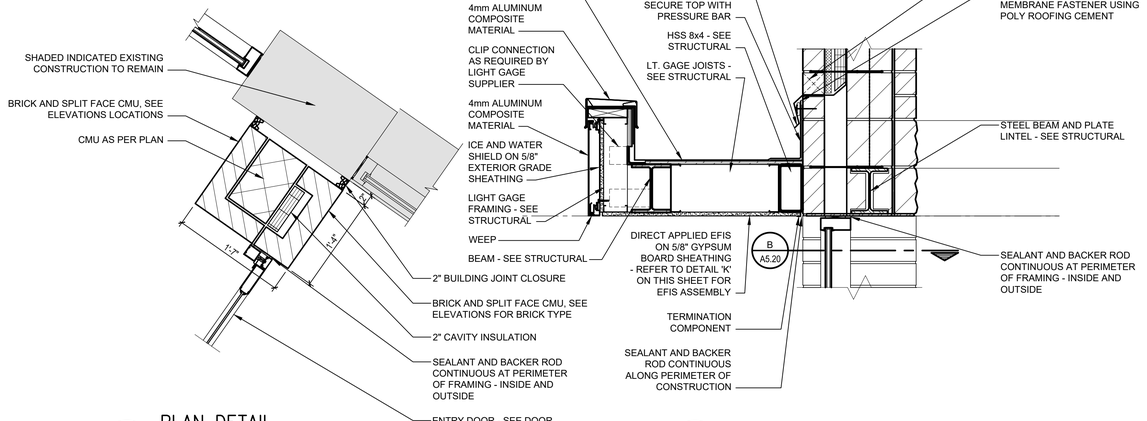

F A2.10B PLAN DETAIL ALUM. DOOR JAMB DETAIL
SCALE: 1" = 1'-0"

C A5.04 SECTION DETAIL
SCALE: 1" = 1'-0"

TYPICAL NOTES SEE DETAIL 'A' ON THIS SHEET

KEY PLAN

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03/25/2019	BIDS
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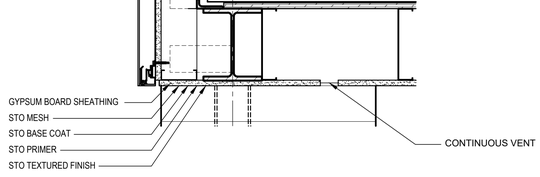
APPROVED	DCJ



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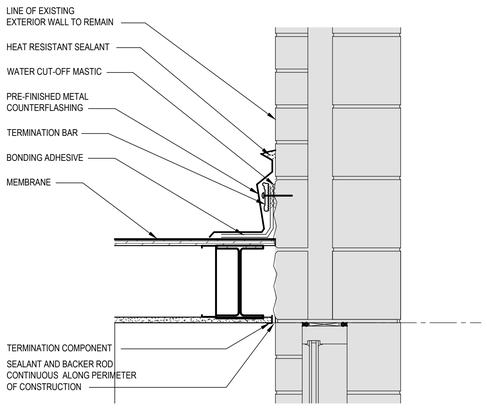
TYPICAL NOTES SEE DETAIL 'C' ON THIS SHEET



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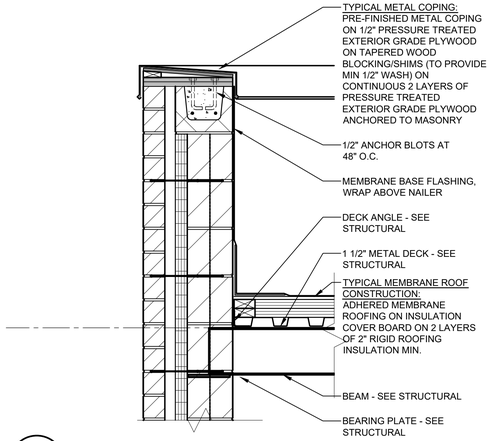

E A5.03 A5.04 SECTION DETAIL
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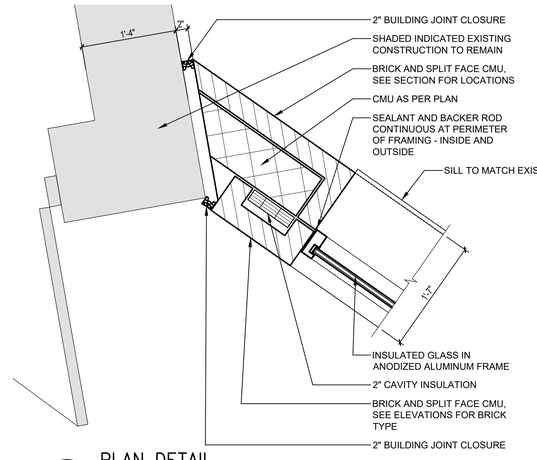
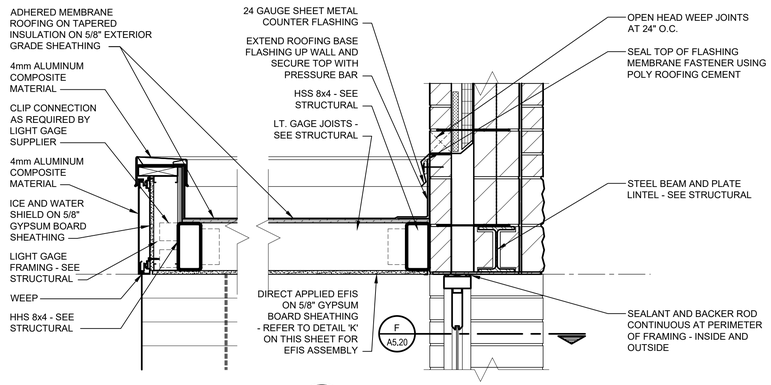
TYPICAL NOTES SEE DETAIL 'A' ON THIS SHEET

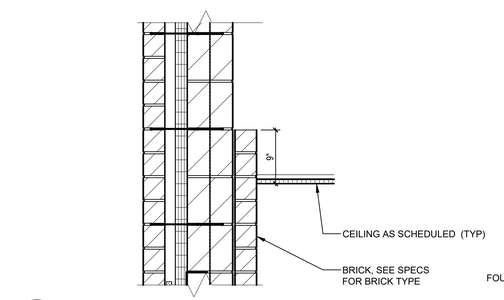


B A2.10B PLAN DETAIL WINDOW JAMB DETAIL
SCALE: 1" = 1'-0"



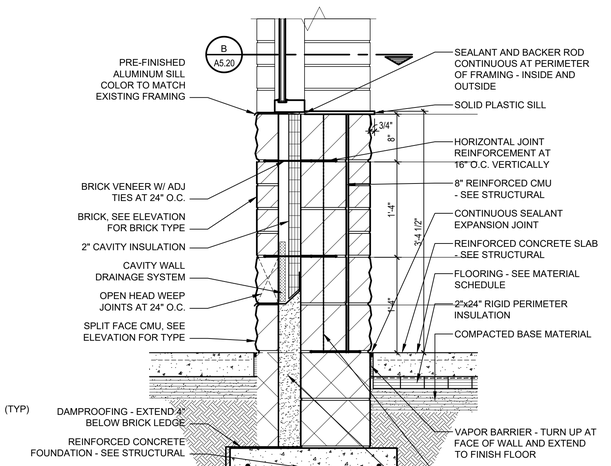
G A5.04 SECTION DETAIL
SCALE: 1" = 1'-0"

TYPICAL NOTES SEE DETAIL 'A' AND 'C' ON THIS SHEET



D A5.03 A5.04 SECTION DETAIL
SCALE: 1" = 1'-0"

TYPICAL NOTES SEE DETAIL 'A' ON THIS SHEET



A A5.03 SECTION DETAIL
SCALE: 1" = 1'-0"

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PROJECT
Williamston Community Schools
Williamston High School
Secure Entrance
WILLIAMSTON, MICHIGAN

SHEET
DETAILS

PROJECT NUMBER
2019-003

SHEET NUMBER
A5.20

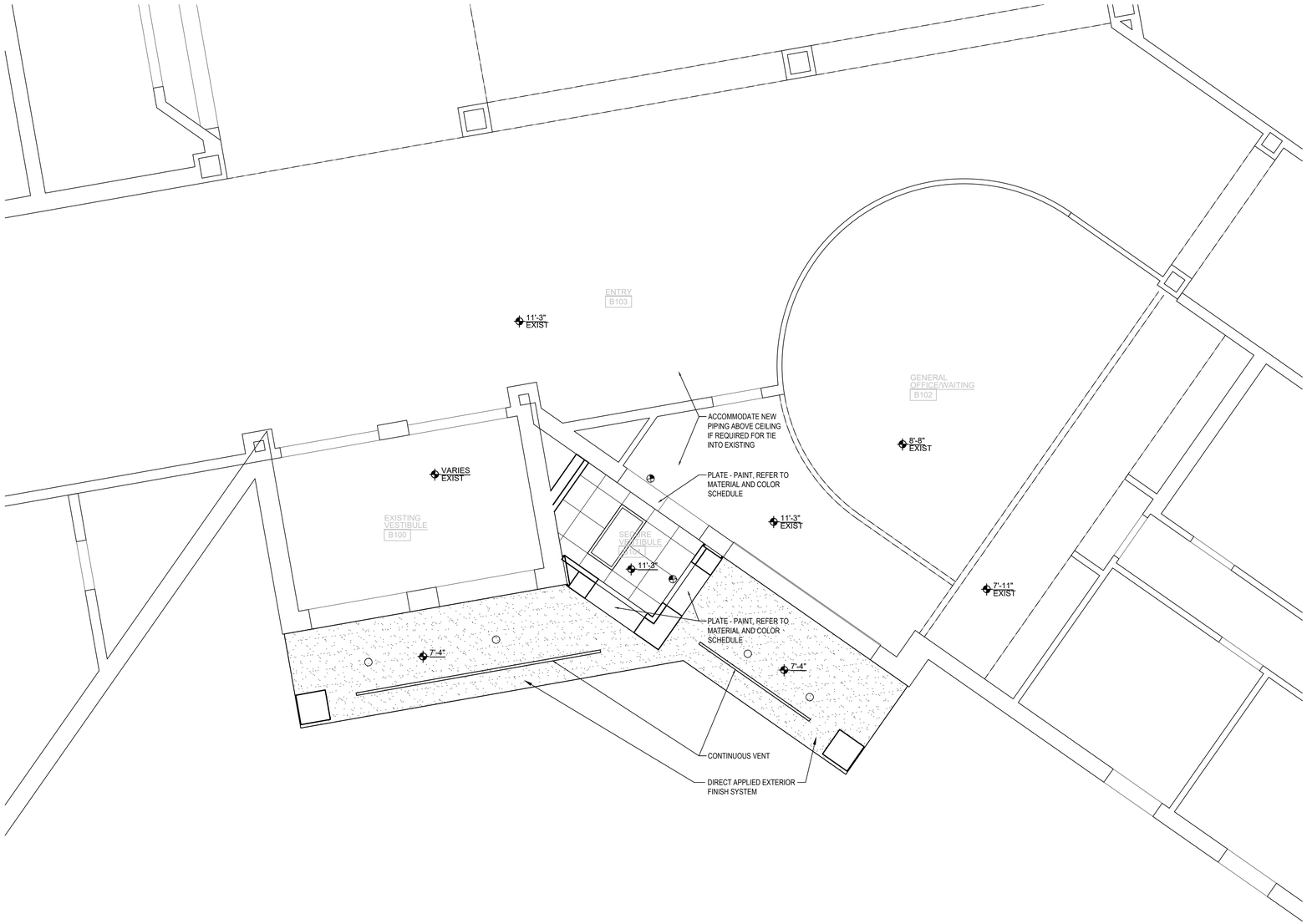
2019.003 XYZ PROJECT

REFLECTED CEILING PLAN NOTES

1. ALL INTERIOR PARTITIONS SHALL EXTEND UP TO UNDERSIDE OF ROOF DECK UNLESS OTHERWISE INDICATED.
2. THE ELEVATION OF NEW CEILING HEIGHTS OF EXISTING ROOMS ARE GIVEN FROM EXISTING FINISH FLOOR.
3. COORDINATE INSTALLATION OF NEW SPEAKERS WITH ELECTRICAL AND TECHNOLOGY.

REFLECTED CEILING PLAN LEGEND

- LAY-IN CEILING IN SUSPENDED METAL GRID 2x2 OR 2x4, SEE CEILING PLAN
- DIRECT APPLIED EIFS
- ELEVATION OF CEILING ABOVE FINISH FLOOR
- RECESSED INCANDESCENT LIGHT FIXTURE
- FLUORESCENT LIGHT FIXTURE
- EXIT LIGHT FIXTURE
- SUPPLY AIR DIFFUSER
- RETURN AIR GRILLE



UNIT B
FIRST FLOOR REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

KEY PLAN

ISSUE DATE	ISSUED FOR
03/25/2019	BIDS
DRAWN	JNH
CHECKED	KRM
APPROVED	DCJ

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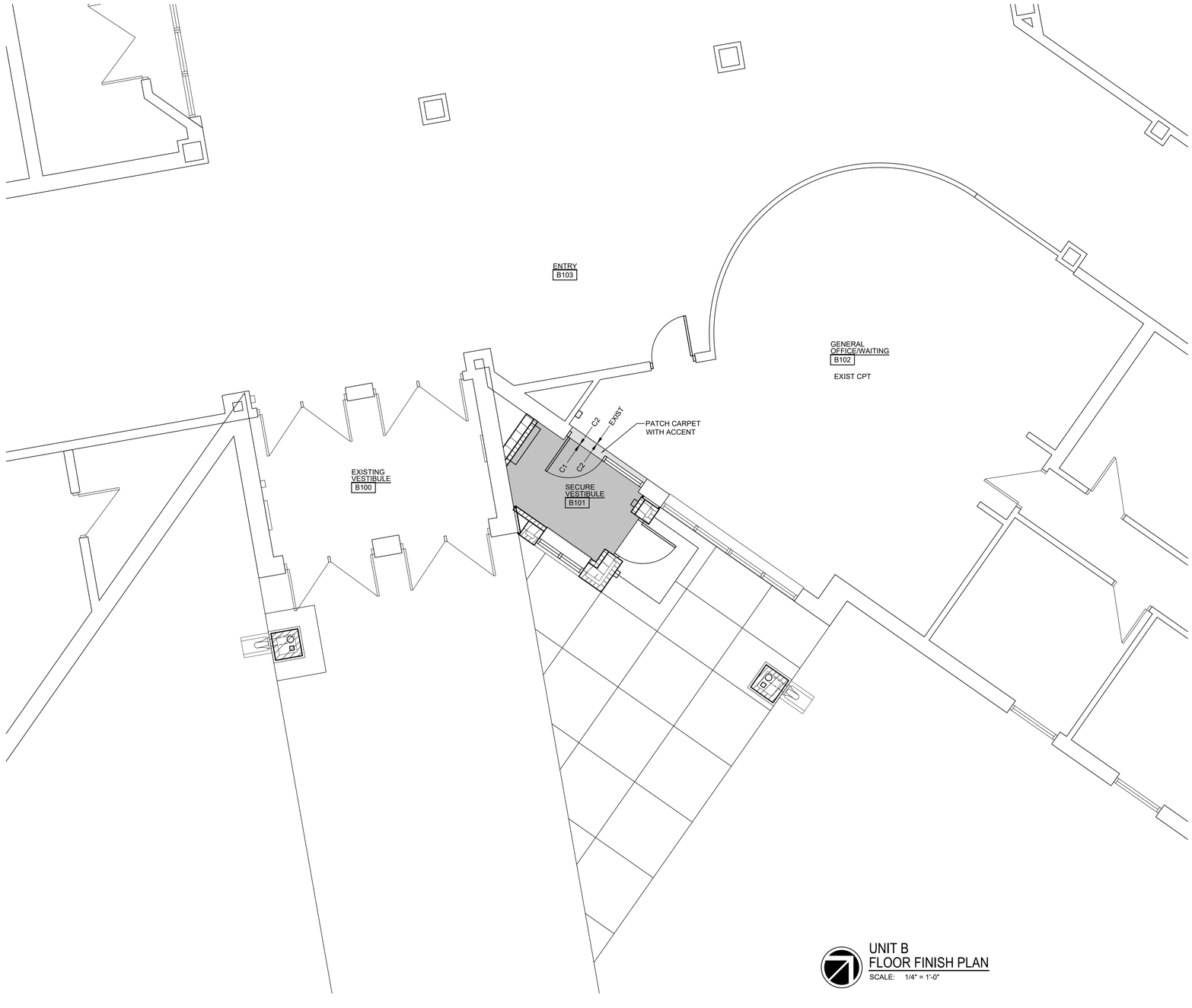
WILLIAMSTON, MICHIGAN

SHEET
UNIT B
FIRST FLOOR REFLECTED CEILING PLAN

PROJECT NUMBER
2019-003

SHEET NUMBER
A7.10B

2019-003 XYZ PROJECT



UNIT B
FLOOR FINISH PLAN
SCALE: 1/4" = 1'-0"

KEY PLAN

ISSUE DATE	ISSUED FOR
03/25/2019	BIDS

DRAWN	JNH
CHECKED	KRM
APPROVED	DCJ

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PROJECT

Williamston Community Schools
Williamston High School
Secure Entrance

WILLIAMSTON,
MICHIGAN

SHEET

UNIT B
FLOOR FINISH PLAN

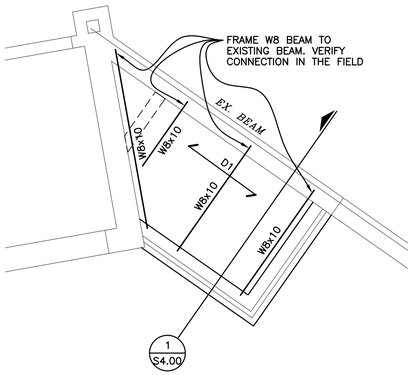
PROJECT NUMBER

2019-003

SHEET NUMBER

A8.10B

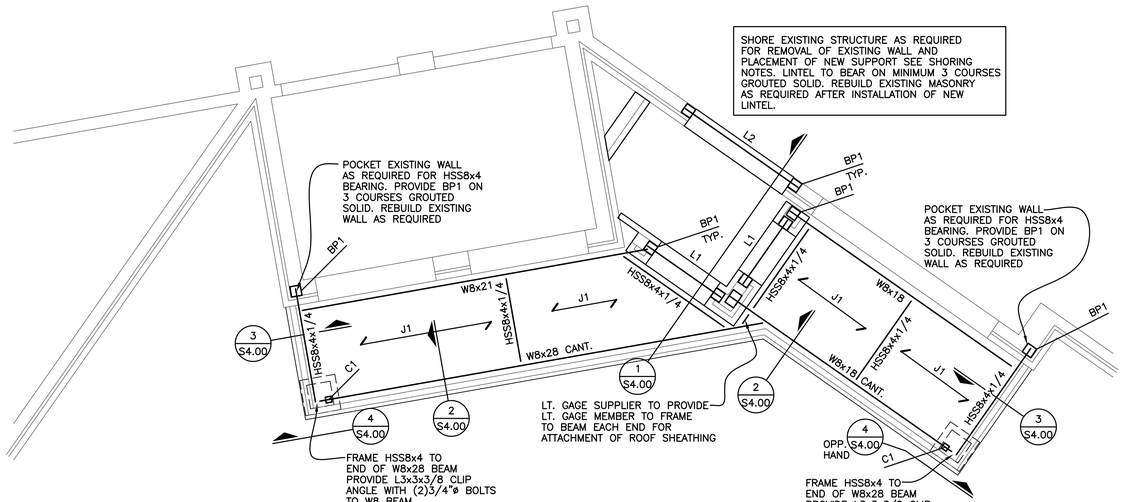
2019-003 XYZ PROJECT



HIGH ROOF FRAMING PLAN

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

D1 — 1 1/2-22 GA. GALVANIZED WIDE RIB METAL DECK (3 SPAN MINIMUM)



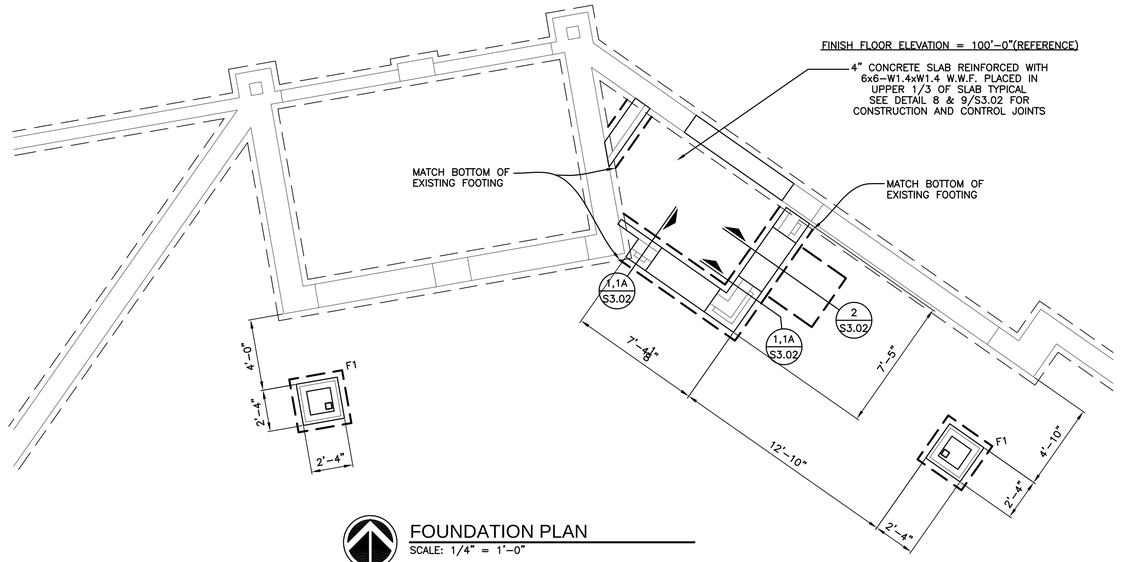
CANOPY FRAMING PLAN

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

J1: 800S162-43 LT. GAGE JOISTS @ 24" O.C. BY LT. GAGE SUPPLIER

TYPICAL ROOF SHEATHING IS 5/8" PLYWOOD. PROVIDE ROOF CLIPS TYPICAL AT PANEL EDGES BETWEEN TRUSSES. STAGGER PLYWOOD JOINTS BETWEEN ROWS OF SHEATHING (OFFSET 4'-0" EACH ROW) ATTACH TO LT. GAGE TRUSSES WITH #10 TEK SCREWS 6" O.C. AT EDGES AND 12" O.C. IN THE FIELD

C1: HSS4x4x1/4 COLUMN WITH 10"x3/4"x0'-10" BASE PLATE WITH (4)3/4"ø HILTI HAS THREADED RODS WITH HILTI HIT HY-200 ADHESIVE. PROVIDE 6 3/4" MINIMUM EMBEDMENT



FOUNDATION PLAN

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

BOTTOM OF EXTERIOR FOOTING ELEVATION = 96'-0" UNLESS OTHERWISE NOTED

NOTE: REINFORCE ALL MASONRY WALLS WITH #5 @ 32" O.C. FULL HEIGHT VERTICAL, UNLESS OTHERWISE NOTED GROUT REINFORCED CORES SOLID, DOWEL TO FOOTING. PLACE BARS AT CORNERS AND FACE OF OPENINGS AND EACH SIDE OF CONTROL JOINTS. SEE DETAILS 4, 5, 6, 7, & 8/S3.02

F1: 3'-0"x3'-0"x32" THICK FOOTING

ISSUE DATE	ISSUED FOR
03/25/2019	BIDS
DRAWN	
CHECKED	
APPROVED	

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PROJECT

Williamston Community Schools
Williamston High School
Secure Entrance

WILLIAMSTON, MICHIGAN

SHEET

FOUNDATION PLAN AND CANOPY FRAMING PLAN AND HIGH ROOF FRAMING PLAN

PROJECT NUMBER

2019-003

SHEET NUMBER

S2.00

2019-003 XYZ PROJECT

G E N E R A L N O T E S

GENERAL CONDITIONS

1. IF ANY GENERAL NOTE CONFLICTS WITH ANY DETAIL OR NOTE ON THE PLANS OR IN THE SPECIFICATIONS, THE STRICTEST PROVISION SHALL GOVERN.

2. THE STRUCTURAL DRAWINGS ARE FOR THE PLACEMENT AND SIZE OF STRUCTURAL COMPONENTS ONLY. O.S.H.A., LOCAL GOVERNMENT CODES AND SAFETY CODE REQUIREMENTS SHALL BE ADHERED TO BY THE CONTRACTOR.

3. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER IT IS FULLY COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES PROVIDING TEMPORARY BRACING, SHORING, GUYS OR TIE- DOWNS. THESE TEMPORARY SUPPORTS WILL REMAIN IN PLACE UNTIL ALL STRUCTURAL COMPONENTS ARE IN PLACE AND COMPLETED.

4. USE OF ENGINEERING DRAWINGS AS ERECTION DRAWINGS BY THE CONTRACTOR IS STRICTLY PROHIBITED. DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE FOR REFERENCE ONLY AND SHOULD NOT BE USED FOR BUILDING LAYOUT AND LOCATION. SEE ARCHITECTURAL DRAWINGS AND SITE PLAN FOR THESE PURPOSES.

5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AT THE RATE OF NO MORE THAN 80 DRAWINGS PER WEEK. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF SHOP DRAWINGS PRIOR TO SUBMITTAL. THE CONTRACTOR SHALL CHECK SHOP DRAWINGS PRIOR TO SUBMITTAL AND IS SOLELY RESPONSIBLE FOR ERRORS & OMISSION IN THE PREPARATION OF SHOP DRAWINGS TO CONFORM TO THE DESIGN DRAWINGS. SUBMIT NO MORE THAN ONE REPRODUCIBLE AND TWO PRINTS OF SHOP DRAWINGS FOR ENGINEER REVIEW. TWO COPIES WILL BE RETURNED TO THE ARCHITECT.

6. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL RELEVANT DIMENSIONS AND ELEVATIONS FOR EQUIPMENT INSTALLATIONS AGAINST PURCHASED MANUFACTURER'S CERTIFIED EQUIPMENT DRAWINGS. DIMENSIONS THAT DEPEND UPON SPECIFIC EQUIPMENT SUCH AS ELEVATOR OPENINGS, MECHANICAL EQUIPMENT SUPPORTS, ETC. SHALL BE COORDINATED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. SUCH DIMENSIONS SHALL BE PROVIDED ON THE SHOP DRAWINGS BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER.

7. PRE-MANUFACTURED ITEMS SUCH AS CANOPIES, AWNINGS, SUNSHADES, ETC. SHALL BE DESIGNED BY SUPPLIER. SUPPLIER SHALL SUBMIT SIGNED AND SEALED SHOP DRAWINGS AND CALCULATIONS BY A REGISTERED ENGINEER IN THE STATE OF MICHIGAN FOR RECORD TO ARCHITECT. SHOP DRAWINGS SHALL INDICATE ALL DESIGN LOADS AND INCLUDE ALL CONNECTIONS AND MATERIAL NECESSARY FOR INSTALLATION OF PRE-MANUFACTURED ITEMS.

EXISTING CONDITIONS

1. VERIFY ALL EXISTING ASSUMED DIMENSIONS AND CONDITIONS (I.E. EXISTING MATERIALS; FRAMING MEMBER SIZES AND LOCATIONS; METHODS OF CONSTRUCTION; ETC.) AT THE SITE PRIOR TO CONSTRUCTION AND FABRICATION. IF DISCREPANCIES ARE FOUND, NOTIFY ARCHITECT BEFORE PROCEEDING WITH WORK.

FOUNDATIONS

1. FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL WITH AN ASSUMED SAFE BEARING CAPACITY OF 3000 P.S.F. IF SOIL OF THIS CAPACITY IS NOT FOUND AT THE ELEVATIONS INDICATED, FOOTINGS SHALL BE ENLARGED OR LOWERED AT THE DIRECTION OF THE ARCHITECT. VERIFY FOUNDATION SOIL BEARING PRESSURE IN FIELD BY SOILS ENGINEER.

2. WHERE NEW FOOTINGS ABUT EXISTING FOUNDATIONS, CAREFULLY HAND EXCAVATE AND PLACE BOTTOM OF NEW FOOTING AT THE SAME ELEVATION AS THE EXISTING.

3. PROVIDE NECESSARY SHEETING SHORING BRACING, ETC. AS REQUIRED DURING EXCAVATIONS TO PROTECT SIDES OF EXCAVATIONS.

4. COMPLY FULLY WITH REQUIREMENTS OF OSHA AND OTHER REGULATORY AGENCIES FOR SAFETY PROVISIONS.

CONCRETE

1. MINIMUM CONCRETE STRENGTH TO BE 3000 P.S.I. @ 28 DAYS, U.O.N.; SLABS SHALL BE 3500 P.S.I. MIN. U.O.N. EXPOSED CONCRETE SHALL BE 4000 PSI WITH 6% + 1% ENTRAINED AIR U.O.N.

   A. PROVIDE 3000 P.S.I. 28-DAY COMPRESSIVE STRENGTH; W/C RATIO, 0.58 MAXIMUM (NON-AIR-ENTRAINED), 5.0 BAG CEMENT MIX FOR ALL FOUNDATION WORK UNLESS NOTED OTHERWISE.

   B. PROVIDE 3500 P.S.I. 28-DAY COMPRESSIVE STRENGTH; W/C RATIO, 0.53 MAXIMUM (NON-AIR-ENTRAINED), 5.5 BAG CEMENT MIX FOR ALL INTERIOR SLABS UNLESS NOTED OTHERWISE.

   C. PROVIDE 4000 P.S.I. 28-DAY COMPRESSIVE STRENGTH; W/C RATIO, 0.45 MAXIMUM (AIR-ENTRAINED), 6.0 BAG CEMENT MIX FOR ALL EXTERIOR CONCRETE UNLESS NOTED OTHERWISE.

2. FLYASH OR GROUND GRANULATED BLAST FURNACE SLAG MAY BE SUBSTITUTED UP TO 25% MAXIMUM OF MIX DESIGN CEMENT CONTENT IN NON-EXPOSED CONCRETE MIXES. DO NOT USE IN EXPOSED MIX DESIGNS.

3. ALL CONCRETE WORK AND PLACEMENT SHALL CONFORM TO THE LATEST RECOMMENDATIONS OF A.C.I.

4. ALL REINFORCING BARS, DOWELS AND TIES SHALL CONFORM TO A.S.T.M. A615 GRADE 60. REINFORCING STEEL SHALL BE CONTINUOUS AND SHALL HAVE MINIMUM 36 BAR DIAMETER LAP AND BE FABRICATED AND PLACED IN ACCORDANCE WITH A.C.I. - 315 LATEST EDITION.

5. REINFORCED FOOTINGS SHALL HAVE CORNER BARS AT ALL INTERSECTIONS OF THE SAME SIZE AND SPACING AS THE MAIN HORIZONTAL REINFORCING.

6. ALL SLABS ON GROUND SHALL BE 4" THICK AND HAVE 6" X 6" W1.4 X W1.4 WELDED WIRE FABRIC IN THE TOP 1/3 OF THE SLAB, UNLESS OTHERWISE NOTED.

7. CONCRETE CONTRACTOR SHALL INCLUDE IN HIS COST ADDITIONAL CONCRETE QUANTITY AS REQUIRED TO COMPENSATE FOR DEFLECTIONS OF METAL DECK AND UNSHORED COMPOSITE BEAMS AND TO PROVIDE A LEVEL CONCRETE SURFACE.

8. FIELD AND SHOP TESTING OF CONCRETE WORK SHALL INCLUDE INSPECTION OF REINFORCING STEEL PLACEMENT, REBARS, NUMBER, LOCATION, AND LAP SPLICE LENGTH.

9. PROVIDE DOWELS INTO FOUNDATION TO MATCH SIZE AND SPACING OF VERTICAL REINFORCEMENT AT ALL COLUMNS AND WALLS, UNLESS OTHERWISE NOTED.

10. UNLESS OTHERWISE SHOWN, PROVIDE THE FOLLOWING COVER FOR REINFORCING STEEL:

A.	UNFORMED SURFACES IN CONTACT WITH EARTH	-3 IN.
B.	UNFORMED SURFACES OVER MOISTURE BARRIERS	-2 IN.
C.	FORMED SURFACES EXPOSED TO EARTH OR WEATHER OR WATER PROOFING/DAMP PROOFING	
	#6 OR LARGER	-2 IN.
	#5 OR SMALLER	-1 1/2 IN.
D.	FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER	
	SLABS AND WALLS	-3/4 IN.
	COLUMNS	-1 1/2 IN.
	BEAMS AND GIRDERS	-1 1/2 IN.

MASONRY

1. THE MASONRY PORTIONS OF THIS STRUCTURE ARE DESIGNED ACCORDING TO THE LATEST ALLOWABLE STRESS DESIGN PROVISIONS OF THE MASONRY STANDARDS JOINT COMMITTEE (MSJC) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530/ASCE 602) INCLUDING SECTIONS 2106 AND 2107 OF CHAPTER 21 IN THE MICHIGAN BUILDING CODE. MASONRY COMPONENTS HAVE BEEN DESIGNED ACCORDING TO THE PROVISIONS FOR SEISMIC DESIGN CATEGORY B.

2. ALL STRUCTURAL MASONRY IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST MASONRY STANDARDS JOINT COMMITTEE (MSJC) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402/ACI 530/ASCE 5) AND SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602/ACI 530.1/ASCE 6) MASONRY SUBMITTALS ARE REQUIRED BY ACI 530.1/ASCE 6/TMS 602. SECTION 1.5 MASONRY TESTING AND INSPECTIONS ARE REQUIRED BY ACI 530.1/ASCE 6/TMS 602 SECTION 1.6, TABLE 5.

3. ALL STRUCTURAL MASONRY HAS BEEN ENGINEERED IN ACCORDANCE WITH CHAPTER 2 ALLOWABLE STRENGTH DESIGN. COMPRESSION STRENGTH SHALL BE DETERMINED ACCORDING TO THE UNIT STRENGTH METHOD FOR CONCRETE MASONRY MSJC SECTION 1.4. B.2.b.

4. ALL BLOCK SHALL CONFORM TO ASTM C90, TYPE I, WITH A MINIMUM UNIT NET AREA COMPRESSIVE STRENGTH OF 2800 PSI.

5. MASONRY COMPRESSIVE STRENGTH f'm = 2000 PSI MINIMUM.

6. MORTAR SHALL BE TYPE "S" (1800 PSI) CONFORMING TO ASTM C-270. USE MORTAR CEMENT WHERE EXTERIOR WALLS ARE UNREINFORCED.

7. PROVIDE HORIZONTAL WIRE TYPE REINFORCING WITH 9 GAUGE SIDE AND CROSS MEMBERS IN EVERY SECOND COURSE (16" O.C.), IN ALL MASONRY WALLS. WALLS WITH VERTICAL REINFORCING SHALL ONLY HAVE "LADDER" TYPE REINFORCING.

8. ALL REINFORCING BARS, DOWELS AND TIES SHALL CONFORM TO A.S.T.M. A615 GRADE 60. REINFORCING STEEL SHALL BE CONTINUOUS, FABRICATED AND PLACED IN ACCORDANCE WITH A.C.I. - 315 LATEST EDITION AND HAVE THE FOLLOWING MINIMUM LAP LENGTHS:

BAR SIZE	8" CMU	12" CMU
#3	18"	18"
#4	24"	24"
#5	30"	30"
#6	38"	36"
#7		42"
#8		50"

9. ALL MASONRY BEARING STEEL BEAMS AND LINTELS TO BEAR 8" MINIMUM ON 3 COURSES SOLID MASONRY, WITH 2-3/4" DIAMETER BOLTS EACH END, UNLESS OTHERWISE NOTED.

10. ALL MASONRY BELOW GRADE SHALL BE GROUTED SOLID.

11. MASONRY GROUT SHALL CONFORM TO ASTM C 476, WITH PEA GRAVEL AGGREGATE AND A MINIMUM STRENGTH OF 2000 PSI, BUT NOT LESS THAN SPECIFIED f'm.

12. UNLESS OTHERWISE NOTED, AT ALL MASONRY WALLS PROVIDE THE FOLLOWING LINTELS:

    8" WALLS

    (2) L4x3 1/2 x 5/16 LLV FOR OPENINGS UP TO 4'-0"
    (2) L5x3 1/2 x 5/16 LLV FOR OPENINGS UP TO 5'-4"
    W8x18 + 3/8" PLATE FOR OPENINGS UP TO 8'-0"
    W8x28 + 3/8" PLATE FOR OPENINGS UP TO 12'-4"

    12" WALLS:

    (3) L4x3- 1/2 x 5/16 LLV FOR OPENINGS UP TO 4'-0"
    (3) L5x3-1/2 x 5/16 LLV FOR OPENINGS UP TO 5'-4"
    W8x18 + 3/8" PLATE FOR OPENINGS UP TO 8'-0"
    W8x28 + 3/8" PLATE FOR OPENINGS UP TO 12'-4"

13. ALL DOUBLE ANGLE LINTELS SHALL BE WELDED BACK TO BACK WITH A MINIMUM 2 INCH STITCH WELD EVERY 8 INCHES.

14. UNLESS OTHERWISE NOTED, PROVIDE L5 X 3-1/2 X 5/16 L.L.V. LINTEL FOR EACH 4" OF MASONRY FOR SPANS UP TO 5'-0" MAX.

15. PROVIDE DOWELS INTO FOUNDATION TO MATCH SIZE AND SPACING OF VERTICAL REINFORCEMENT AT ALL COLUMNS AND WALLS, UNLESS OTHERWISE NOTED.

STRUCTURAL STEEL

1. STEEL DESIGN, FABRICATION AND ERECTION TO BE IN ACCORDANCE WITH THE LATEST A.I.S.C. MANUAL AND SPECIFICATION FOR STRUCTURAL STEEL FOR BUILDINGS. ALL WIDE FLANGE BEAMS AND COLUMNS SHALL CONFORM TO THE LATEST ASTM. SERIAL DESIGNATION A992, GR50; ALL MISCELLANEOUS STEEL PLATES, BARS, ANGLES, ETC., SHALL CONFORM TO ASTM A36; STEEL TUBING TO BE ASTM A500, GRADE B; STEEL PIPE ASTM. A-53, GRADE B. ANCHOR BOLTS TO BE ASTM F1554 GRADE 36 KSI MINIMUM UNLESS OTHERWISE NOTED

2. UNLESS OTHERWISE NOTED OR SHOWN, ALL BEAM CONNECTIONS TO HSS 5 X 5 OR SMALLER COLUMN,5"Ø OR SMALLER COLUMN, OR ANY TUBE COLUMN REGARDLESS OF SIZE WITH A WALL THICKNESS LESS THAN 5/16" SHALL BE MADE WITH THRU PLATES WELDED TO BOTH WALLS OF COLUMN.

3. ALL WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE LATEST AWS CODE, E70XX ELECTRODES, WITH WELDING PERFORMED BY QUALIFIED WELDERS.

4. BOLTED CONNECTIONS SHALL BE MADE WITH A-325 OR A-490 BOLTS. ALL BOLTS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS FOR "STRUCTURAL JOINTS USING A.S.T.M. A-325 OR A-490 BOLTS." TYPICAL BOLTED CONNECTIONS ARE "BEARING TYPE" UNLESS NOTED OTHERWISE.

5. DESIGN CONNECTIONS FOR MINIMUM ONE-HALF THE TOTAL ALLOWABLE UNIFORM LOAD PER A.I.S.C. BEAM LOAD TABLES, UNLESS OTHERWISE NOTED. (MIN. 2 BOLTS EACH CONNECTION).

6. SINGLE PLATE SHEAR CONNECTIONS ARE ACCEPTABLE ONLY FOR BEAM TO GIRDER AND SKEWED CONNECTIONS LESS THAN 30 KPS. SHEAR PLATE OR SINGLE SHEAR ANGLES SHALL BE WELDED TO TOP FLANGE OF SUPPORTING GIRDERS.

7. THE DESIGN, CONFIGURATION & ERECTION SAFETY OF ALL STRUCTURAL STEEL CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE STRUCTURAL STEEL FABRICATOR. REVIEW AND ACCEPTANCE OF THE SHOP DRAWINGS BY THE ENGINEER SHALL CONSTITUTE APPROVAL OF THE LOAD CARRYING ADEQUACY ONLY.

8. TYPE OF CONSTRUCTION PER ASCE A2.2 IS TYPE 2 "SIMPLE FRAMING" UNLESS NOTED OTHERWISE.

9. TEMPORARY ERECTION SEATS SHALL BE PROVIDED AS RECOMMENDED ON PAGE 3-59 OF THE A.I.S.C. PUBLICATION "ENGINEERING FOR STEEL CONSTRUCTION".

STRUCTURAL STEEL (CONT.)

10. METAL DECK SHALL CONFORM TO ALL REQUIREMENTS OF "BASIC DESIGN SPECIFICATION" AS ADOPTED BY THE STEEL DECK INSTITUTE (S.D.I.). METAL ROOF DECK SHALL BE WIDE RIB WITH NESTING SIDE SEAMS OF DEPTH AND GAGE INDICATED ON THE DRAWINGS. DECK SHALL BE WELDED TO ALL SUPPORTING STEEL WITH PUDDLE WELDS (5/8" DIAMETER MINIMUM), AT 12" ON CENTER MAXIMUM SPACING AND 6" O/C (ALL FLUTES) AT END LAP SUPPORT POINTS AND BUILDING PERIMETER ATTACHMENTS. SIDE LAP CONNECTIONS SHALL BE MADE AT MAXIMUM 3'-0" CENTERS AT MIDPOINT OF SPAN WITH #10 TEK SCREW MIN. REFER TO SPECIFICATIONS FOR ADDITIONAL ERECTION PROCEDURES.

11. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL ANGLES, PLATES, BARS, CLIPS, ETC., ATTACHED TO STRUCTURAL STEEL.

12. UNLESS OTHERWISE NOTED, ROOF OPENINGS SHALL BE FRAMED WITH L 5 X 3-1/2 X 5/16 L.L.V. VERIFY EXACT SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND WITH CONTRACTOR INVOLVED.

13. THE ERECTION OF THE STEEL FRAME SHALL COMPLY WITH THE REQUIREMENTS CONTAINED IN AISC 303-10 AND IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE STEEL FRAME IS NOT SELF-SUPPORTING AND STABILITY OF THE COMPLETED STRUCTURE IS PROVIDED BY BRACED FRAMES. BRACED FRAMES SERVE AS HORIZONTAL DIAPHRAGMS THAT DISTRIBUTE THE LATERAL WIND AND SEISMIC FORCES HORIZONTALLY TO THE VERTICAL LATERAL LOAD RESISTING ELEMENTS. THE BRACED FRAMES, AND CONCRETE MASONRY SHEAR WALLS CARRY THE APPLIED LATERAL LOADS TO THE BUILDING FOUNDATION.

14. THE CONTRACTOR SHALL FURNISH ALL ACCESSORIES INCLUDING CLOSURES, "Z" CLOSURES, COLUMN CLOSURES, SCREED ANGLES AND GIRDER FILLERS AS REQUIRED.

15. ROOF DECK SHALL HAVE GALVANIZED COATING CONFORMING TO ASTM A653-COATING DESIGNATION G-60 OR AS NOTED.

16. NO LOADS SHALL BE PERMITTED TO BE HUNG FROM ANY ROOF DECK. ALL HANGERS FOR CEILINGS, DUCTWORK, ELECTRICAL CONDUIT, PIPING, ETC., SHALL BE HUNG DIRECTLY FROM STRUCTURAL STEEL WORK OR SUPPLEMENTARY MEMBERS.

17. MASONRY AND BRICK LINTELS SHALL BE GALVANIZED G90 PER ASTM A123.

18. PROVIDE L4X4X1/4 SEATS AT COLUMN WEBS WHERE REQUIRED FOR SUPPORT OF ROOF AND FLOOR DECKS. PROVIDE ANGLE OUTRIGGER FROM EXTERIOR COLUMNS FOR SLAB AND ROOF EDGE PLATE SUPPORT.

19. ALL BOLTED MOMENT CONNECTIONS REQUIRE SLIP CRITICAL BOLTS.

20. ALL WIDE FLANGE LINTELS TO HAVE MINIMUM 7"x3/8"xO'-7" BEARING PLATE, ALL WIDE FLANGE FLOOR OR ROOF BEAMS TO HAVE MINIMUM 7"x3/8"xO'-7" BEARING PLATE UNLESS OTHERWISE NOTED

LIGHT GAGE FRAMING

1. LIGHT GAGE FRAMING SUPPLIER SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN INDICATING ALL DESIGN LOADS AND MATERIALS INCLUDING VERIFYING ANY MEMBER SIZES SHOWN. DESIGN BY SUPPLIERS ENGINEER SHALL INCLUDE ALL CONNECTIONS AND MISCELLANEOUS MATERIALS NECESSARY FOR A COMPLETE STRUCTURE. THE FINAL MEMBER SIZES AND GAGES SHALL BE CALCULATED BY THE LIGHT GAGE ENGINEER. LIGHT GAGE SHOP DRAWINGS NOT SIGNED AND SEALED WILL BE REJECTED.

2. LIGHT GAGE MEMBERS SHALL BE DESIGNED, MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE AMERICAN IRON AND STEEL INSTITUTE (AISI) INCLUDING ANY REQUIRED CLIPS, STIFFENERS, AND BRACING.

3. MEMBER SIZES INDICATED ON DRAWINGS ARE MINIMUM DEPTH AND GAGE REQUIRED TO MEET THE DESIGN INTENT AND ARE BASED ON THE PROPERTIES AND MATERIALS LISTED IN THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) PRODUCT CATALOG. ALTERNATE MANUFACTURERS ARE ACCEPTABLE IF THE PHYSICAL PROPERTIES ARE EQUAL OR BETTER THAN THOSE LISTED ACCEPTABLE TO THE PROJECT ARCHITECT AND ENGINEER, AND MEET OR EXCEED PERFORMANCE CRITERIA.

4. LIGHT GAGE DOCUMENTS SUBMITTED BY THE LIGHT GAGE FRAMING SUPPLIER IS A "DEFERRED SUBMITTAL" PER SECTION 107.3.4.1 OF THE MBC 2015

5. ALL LIGHT GAGE BACK UP STUDS FOR BRICK VENEER TO BE 16 GA. MINIMUM (54) AND BE DESIGNED FOR L/600 MINIMUM LATERAL DEFLECTION REQUIREMENT.

SPECIAL INSPECTION

1. WORK CONSTRUCTED SHALL BE INSPECTED BY AN INDEPENDENT TESTING AGENCY TO ENSURE COMPLIANCE WITH THE REQUIREMENTS SHOWN ON THE DRAWINGS. INSPECTIONS REQUIRED BY CHAPTER 17 OF THE MICHIGAN BUILDING CODE; LOCAL BUILDING DEPARTMENTS AND THE CONTRACT DOCUMENTS SHALL BE PERFORMED BY AN INDEPENDENT TESTING AGENCY. SITE VISITS BY THE DESIGN ENGINEER DO NOT CONSTITUTE OR REPLACE INSPECTION

2. THE FOLLOWING ITEMS SHALL BE INSPECTED IN ACCORDANCE WITH MBC 2015 SEC. 1704 & 1705 BY A CERTIFIED SPECIAL INSPECTOR UNLESS NOTED OTHERWISE IN REMARKS COLUMN. ALL INSPECTION SHALL BE CONTINUOUS UNLESS OTHERWISE NOTED. ALL PRODUCTS WITH ICC APPROVALS SHALL BE INSTALLED PER THE APPROVAL AND PER MANUFACTURER'S RECOMMENDATIONS. FOR MATERIAL TESTING REQUIREMENTS, SEE SPECIFICATIONS AND/OR GENERAL NOTES. TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT.

INSPECTION OF FABRICATOR'S (SEC. 1704.2.5) *

FABRICATION AND IMPLEMENTATION PROCEDURES 1704.2.5.1

*SPECIAL INSPECTION IS NOT REQUIRED FOR FABRICATOR SHOP IF CERTIFICATE OF APPROVAL SUBMITTED BY FABRICATOR'S INSPECTION AGENCY PER EXCEPTION 1704.2.5.2

TABLE 1705.2.2
REQUIRED VERIFICATION AND
INSPECTION OF STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	NOT APPLICABLE	REFERENCED STANDARD
1. MATERIAL VERIFICATION OF COLD-FORMED STEEL DECK:				
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	-	X	-	APPLICABLE ASTM MATERIAL STANDARDS
b. MANUFACTURER'S CERTIFIED TEST REPORTS.	-	X	-	-
2. INSPECTION OF WELDING:				
a. COLD-FORMED STEEL DECK:				
1) FLOOR AND ROOF DECK WELDS.	-	X	-	AWS D1.3
b. REINFORCING STEEL:				
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706.	-	X	-	AWS D1.4 ACI 318: SECTION 3.5.2
2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT.	X	-	-	
3) SHEAR REINFORCEMENT.	X	-	-	
4) OTHER REINFORCING STEEL.	-	X	-	

TABLE N5.4-1
INSPECTION TASKS PRIOR TO WELDING

INSPECTION TASKS PRIOR TO WELDING	QC	QA	NOT APPLICABLE
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	P	P	-
MANUFACTURER CERTIFICATION FOR WELDING CONSUMABLES AVAILABLE	P	P	-
MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O	-
WELDER IDENTIFICATION SYSTEM†	O	O	-
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) • JOINT PREPARATION • DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION) • BACKING TYPE AND FIT (IF APPLICABLE)	O	O	-
CONFIGURATION AND FINISH OF ACCESS HOLES	O	O	-
FIT-UP OF FILLET WELDS • DIMENSIONS (ALIGNMENT, GAPS AT ROOF) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION)	O	O	-
CHECK WELDING EQUIPMENT	O	-	-

†THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.

TABLE N5.4-2
INSPECTION TASKS DURING WELDING

INSPECTION TASKS DURING TO WELDING	QC	QA	NOT APPLICABLE
USE OF QUALIFIED WELDERS	O	O	-
CONTROL AND HANDLING OF WELDING CONSUMABLES • PACKAGING • EXPOSURE CONTROL	O	O	-
NO WELDING OVER CRACKED TACK WELDS	O	O	-
ENVIRONMENTAL CONDITIONS • WIND SPEED WITHIN LIMITS • PRECIPITATION AND TEMPERATURE	O	O	-
WPS FOLLOWED • SETTINGS ON WELDING EQUIPMENT • TRAVEL SPEED • SELECTED WELDING MATERIALS • SHIELDING GAS TYPE/FLOW RATE • PREHEAT APPLIED • INTERPASS TEMPERATURE WAINTAINED (MIN./MAX.) • PROPER POSITION (F, V, H, OH)	O	O	-
WELDING TECHNIQUES • INTERPASS AND FINAL CLEANING • EACH PASS WITHIN PROFILE LIMITATIONS • EACH PASS MEETS QUALITY REQUIREMENTS	O	O	-

O - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.

P - PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER.

ISSUE DATE	ISSUED FOR
03/25/2019	BIDS
DRAWN	
CHECKED	
APPROVED	

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PROJECT
Williamston Community Schools
Williamston High School
Secure Entrance

WILLIAMSTON, MICHIGAN

SHEET
GENERAL NOTES

PROJECT NUMBER
2019-003

SHEET NUMBER
S3.00

2019-003 XYZ PROJECT

BEARING PLATE SCHEDULE

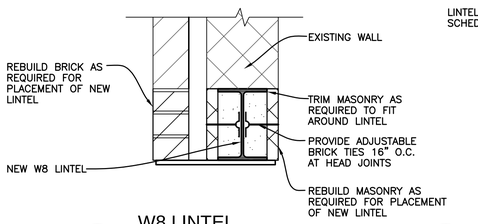
MARK	DESCRIPTION	REMARKS
BP1	7"x3/8"x0'-7"	
BP2	7"x3/8"x0'-10"	

LINTEL SCHEDULE

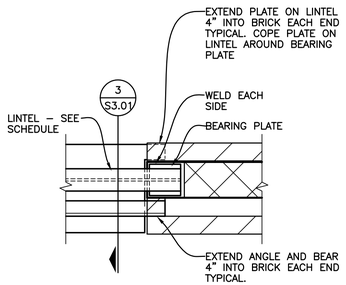
8" BEARING EACH END-U.N.O.

MARK	DESCRIPTION	
L1	W8x18 + 3/8" PLATE + L4x3 1/2x1/4	
L2	W8x24 + 3/8" PLATE	

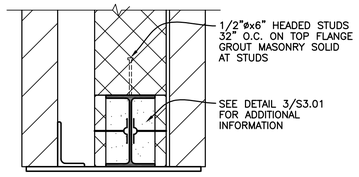
LINTEL NOTES:
1. PLATES ON LINTELS EXTEND WIDTH OF MASONRY OPENINGS ONLY. (SEE ARCH. DRAWINGS)
2. HOLD EDGE OF PLATE ON LINTEL BACK FROM EACH FACE OF MASONRY 1/4"
3. WELD 1/2"ø x8" HEADED STUDS 32" O.C. TO TOP FLANGE OF ALL WIDE FLANGE LINTELS
4. ALL EXTERIOR LINTELS TO BE GALVANIZED G90 PER ASTM 123



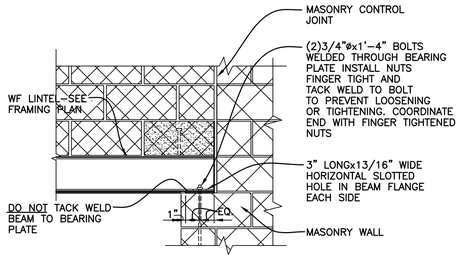
5 S3.01 W8 LINTEL DETAIL AT EXISTING WALL
SCALE : 1 1/2" = 1'-0"



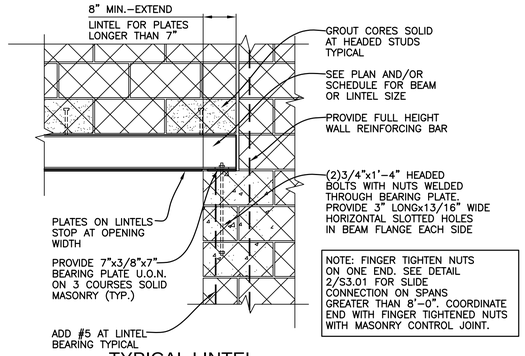
4 S3.01 TYPICAL PLAN DETAIL AT LINTEL BEARING WITH BRICK VENEER
SCALE : 3/4" = 1'-0"



3 S3.01 TYPICAL LINTEL DETAIL WITH BRICK
SCALE : 1 1/2" = 1'-0"



2 S3.01 TYPICAL SLIDE CONNECTION LINTEL DETAIL
SCALE : 3/4" = 1'-0"
PROVIDE ON ONE END OF LINTEL FOR LINTEL



1 S3.01 TYPICAL LINTEL BEARING ON MASONRY DETAIL
SCALE : 3/4" = 1'-0" (LINTEL PARALLEL TO WALL)
NOTE: PLACE LINTEL BEAMS CENTERED IN CMU WALLS UNLESS NOTED OTHERWISE

SPECIAL INSPECTION (CONT.)

TABLE N5.4-3
INSPECTION TASKS AFTER WELDING

INSPECTION TASKS AFTER WELDING	QC	QA	NOT APPLICABLE
WELDS CLEANED	O	O	-
SIZE, LENGTH AND LOCATION OF WELDS	P	P	-
WELDS MEET VISUAL ACCEPTANCE CRITERIA • CRACK PROHIBITION • WELD/BASE-METAL FUSION • CRATER CROSS SECTION • WELD PROFILES • WELD SIZE • UNDERCUT • POROSITY	P	P	-
ARC STRIKES	P	P	-
K-AREA[1]	P	P	-
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	P	-
REPAIR ACTIVITIES	P	P	-
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P	-

[1]WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OF STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 IN. (75MM) OF THE WELD.

TABLE N5.6-1
INSPECTION TASKS PRIOR TO BOLTING

INSPECTION TASKS PRIOR TO BOLTING	QC	QA	NOT APPLICABLE
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P	-
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O	-
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	O	O	-
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O	-
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O	-
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O	-
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTNER COMPONENTS	O	O	-

TABLE N5.6-2
INSPECTION TASKS DURING BOLTING

INSPECTION TASKS DURING BOLTING	QC	QA	NOT APPLICABLE
FASTENERS ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	O	O	-
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O	-
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O	-
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	O	O	-

TABLE N5.6-3
INSPECTION TASKS AFTER BOLTING

INSPECTION TASKS AFTER BOLTING	QC	QA	NOT APPLICABLE
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O	-

O - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.

P - PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER.

SPECIAL INSPECTION (CONT.)

REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION (LEVEL B QUALITY ASSURANCE)

MINIMUM TESTS
VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) AS DELIVERED TO THE PROJECT SITE IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.5 B.1.b.3 FOR SELF-CONSOLIDATING GROUT
VERIFICATION OF f'_m AND f'_{AAC} IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.4B PRIOR TO CONSTRUCTION, EXCEPT WHERE SPECIFICALLY EXEMPTED BY THIS CODE

MINIMUM INSPECTION						
INSPECTION TASK	FREQUENCY (a)			REFERENCE FOR CRITERIA		
	CONTINUOUS	PERIODIC	NOT APPLICABLE	IBC SECTION	TMS 402/ACI 530/ASCE 5	TMS 602/ACI 530.1/ASCE 6
1. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS		X				ART. 1.5
2. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:						
a. PROPORTIONS OF SITE-PREPARED MORTAR.		X				ART. 2.1, 2.6A
b. CONSTRUCTION OF MORTAR JOINTS.		X				ART. 3.3B
c. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES.		X				ART. 2.4B, 2.4H
d. LOCATION OF REINFORCEMENT, CONNECTORS, PRESTRESSING TENDONS AND ANCHORAGES.		X				ART. 3.4, 3.6A
e. PRESTRESSING TECHNIQUE.		X				ART. 3.6B
f. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	X(b)	X(c)				ART. 2.1C
3. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:						
a. GROUT SPACE		X				ART. 3.2D, 3.2F
b. GRADE, TYPE AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES		X		SEC. 1.16		ART. 2.4, 3.4
c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES		X		SEC. 1.16		ART. 3.2E, 3.4, 3.6A
d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS.						
e. CONSTRUCTION OF MORTAR JOINTS.		X				ART. 3.3B
4. VERIFY DURING CONSTRUCTION:						
a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS		X				ART. 3.3F
b. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION		X			SEC. 1.10.4.3, 1.17.1	
c. WELDING OF REINFORCEMENT	X				SEC. 2.1.7.7.2, 3.3.3.4(c), 8.3.3.4(b),	
d. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32.2°C)		X				ART. 1.8C, 1.8D
e. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	X					ART. 3.6B
f. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	X					ART. 3.5, 3.6C
g. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	x(b)	x(c)				ART. 3.3 B.8
5. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS		X				ART. 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4

(a). FREQUENCY REFERS TO THE FREQUENCY OF INSPECTION, WHICH MAY BE CONTINUOUS DURING THE TASK LISTED OR PERIODICALLY DURING THE LISTED TASK, AS DEFINED IN THE TABLE.

(b). REQUIRED FOR THE FIRST 5000 SQUARE FEET (465 SQUARE METERS) OF ACC MASONRY.

(c). REQUIRED AFTER THE FIRST 5000 SQUARE FEET (465 SQUARE METERS) OF ACC MASONRY.

TABLE 1705.3
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	NOT APPLICABLE	REFERENCED STANDARD(a)	IBC REFERENCED
1. INSPECTION OF REINFORCING STEEL INCLUDING PRESTRESSING TENDONS AND PLACEMENT.	-	X	-	ACI 318: 3.5, 7.1-7.7	1910.4
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1705.2.2, ITEM 2b	-	X	-	AWS D1.4 ACI 318: 3.5.2	-
3. INSPECTION OF ANCHORS CAST IN CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED	X	-	-	ACI 318 8.1.3,21.1.8	1908.5 1909.1
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. (b)	-	X	-	ACI 318 3.8.6,8.1.3,21.1.8	1909.1
5. VERIFYING USE OF REQUIRED DESIGN MIX.	-	X	-	ACI 318: CH.4,5.2-5.4	1904.2, 1910.2,1910.3
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	-	ASTN C 172 ASTM C 31 ACI 318: 5.6,5.8	1910.10
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	-	ACI 318: 5.9,5.10	1910.6, 1910.7,1910.8
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	-	ACI 318: 5.11-5.13	1910.9
9. INSPECTION OF PRESTRESSED CONCRETE					
a. APPLICATION OF PRESTRESSING FORCES	X	-	-	ACI 318: 18.20 ACI 318: 18.18.4	-
b. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC FORCE RESISTING SYSTEM.,	X	-	-		
10. ERECTION OF PRECAST CONCRETE MEMBERS.	-	X	-	ACI 318: CH.16	-
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POSTTENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS BEAMS AND STRUCTURAL SLABS.	-	X	-	ACI 318: 6.2	-
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X	-	ACI 318: 6.1.1	-

FOR SI: 1 INCH = 25.4 MM

(a) WHERE APPLICABLE, SEE ALSO SECTION 1705.11, SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE.

(b) SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH ACI 355.2 OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK.

TABLE 1705.6
REQUIRED VERIFICATION AND INSPECTION OF SOILS

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED	NOT APPLICABLE
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	X	
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X	
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X	
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-	
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X	

SPECIAL INSPECTION (CONT.)

DESIGN CRITERIA

CODE: MBC 2015 THE STRUCTURE IS DESIGNED FOR THE FOLLOWING LIVE LOADS, IN ADDITION TO THE LATERAL LOADS, SUPER-IMPOSED DEAD LOADS, & SELF WEIGHT OF THE STRUCTURE. WHERE APPLICABLE LIVE LOADS ARE REDUCED IN ACCORDANCE WITH THE PROVISIONS OF THE BUILDING CODE.

A. AMERICAN CONCRETE INSTITUTE BUILDING CODE (ACI-318).

B. MANUAL OF STEEL CONSTRUCTION BY AMERICAN INSTITUTE OF STEEL CONSTRUCTION (LATEST EDITION).

C. LATEST MASONRY STANDARDS JOINT COMMITTEE (MSJC) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402/ACI 530/ASCE 5) AND SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602/ACI 530.1/ASCE 6)

D. AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) STANDARDS AND SPECIFICATIONS.

E. NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS) AS PUBLISHED BY AMERICAN FOREST AND PAPER ASSOCIATION.

		CODE REFERENCE
BUILDING OCCUPANCY CATEGORY	III	MBC-Table 1604.5 ASCE Table 1.5-1

SNOW LOADS/ROOF LIVE LOADS		
SNOW CRITERIA		CODE REFERENCE
GROUND SNOW LOAD	Pg = 25 PSF	MBC FIG. 1608.2 ASCE Fig. 7-1
FLAT ROOF SNOW LOAD	Pf = 20 PSF (MINIMUM)	ASCE Sec. 7.3
EXPOSURE FACTOR	Ce = 1.0	ASCE Table 7-2
IMPORTANCE FACTOR	I = 1.0	ASCE Table 1.5-2
THERMAL FACTOR	Ct = 1.0	ASCE Table 7-3
ROOF LIVE LOADS	Lr = 20 PSF	ASCE Table 4-1
NOTE: SNOW LOADS ADJACENT VERTICAL PROJECTIONS, ON LOWER ROOFS, ADJACENT TO HIGH ROOFS, OR SLOPED ROOFS ARE INCREASED FOR THE EFFECT OR DRIFTING		

WIND LOADS		
WIND CRITERIA		CODE REFERENCE
BASIC WIND SPEED (3 SEC. GUST)	V = 120 MPH	ASCE FIG. 26.5-1A, 26.5-1B, 26.5-1C
RISK FACTOR	III	ASCE Table 1.5-1
EXPOSURE CATEGORY	B	ASCE Sec. 26.7.3
INTERNAL PRESSURE COEFFICIENT	± 0.18 (ENCLOSED)	ASCE TABLE 26.11-1
MWFRS ANALYSIS PROCEDURE	DIRECTIONAL PROCEDURE	ASCE CHAP. 27
COMPONENTS AND CLADDING	± 33 PSF MINIMUM ULTIMATE AND PER CODE REQUIREMENTS BASED ON ABOVE INFORMATION	ASCE Sec. 30.2.2

SEISMIC LOADS		
SEISMIC CRITERIA		CODE REFERENCE
SEISMIC RISK CATEGORY	II	ASCE Table 1.5-1
SEISMIC IMPORTANCE FACTOR	I = 1.0	ASCE Table 1.5-2
-0.2 SEC MAPPED SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING) Ss	Ss = .089	ASCE Sec. 11.4
-1.0 SEC MAPPED SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING) S1	S1 = .045	ASCE Sec. 11.4
SOIL SITE CLASS	D	ASCE Sec. 11.4.2
SEISMIC DESIGN CATEGORY	B	ASCE Sec. 11.6
SEISMIC FORCE RESISTING SYSTEM	STEEL NOT SPECIFICALLY DETAILED FOR SEISMIC	ASCE Table 12.2-1
DESIGN BASE SHEAR		ASCE Sec. 12.8
SEISMIC RESPONSE COEFFICIENTS, Cs		ASCE Sec. 12.8
RESPONSE MODIFICATION FACTOR	R = 3.0	ASCE Table 12.2-1
DEFLECTION AMPLIFICATION FACTOR	Cd = 3.0	ASCE Table 12.2-1
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE	ASCE Sec. 12.8

ISSUE DATE	ISSUED FOR
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PROJECT
Williamston Community Schools
Williamston High School
Secure Entrance

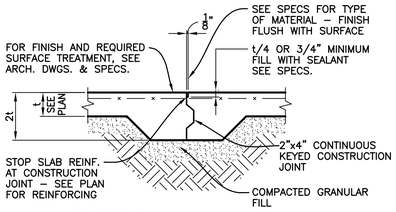
WILLIAMSTON, MICHIGAN

SHEET
GENERAL NOTES

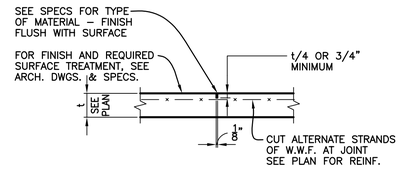
PROJECT NUMBER
2019-003

SHEET NUMBER
S3.01

2019-003 XYZ PROJECT

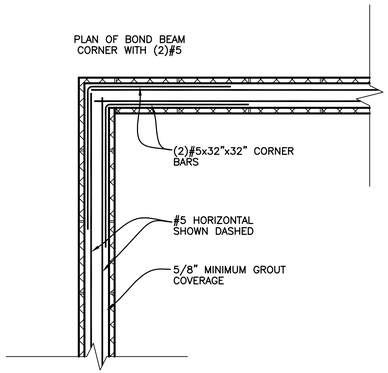


9 S3.02 TYPICAL FLOOR CONSTRUCTION JOINT
SCALE : 1" = 1'–0"

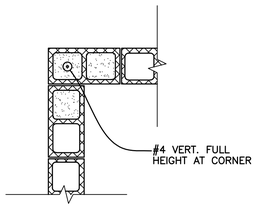


(15'-0" O.C. EACH WAY MAXIMUM)

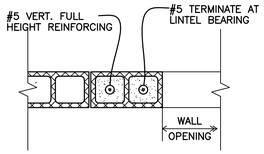
8 S3.02 TYPICAL FLOOR CONTROL JOINT
SCALE : 1" = 1'–0"



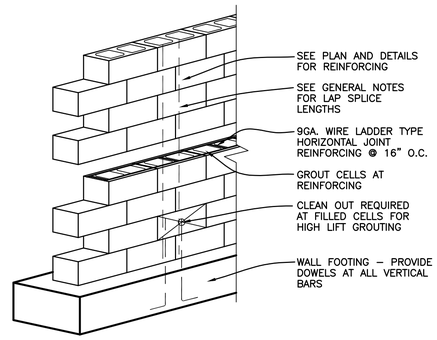
7 S3.02 TYPICAL BOND BEAM CORNER DETAIL
SCALE : 3/4" = 1'–0"



6 S3.02 TYPICAL REINFORCING AT CORNERS
SCALE : 3/4" = 1'–0"



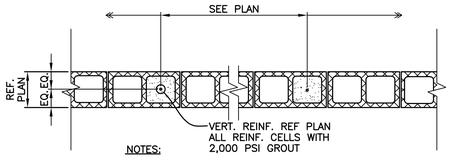
5 S3.02 TYPICAL REINFORCING ALONG SIDE OPENING
SCALE : 3/4" = 1'–0"



GROUT INSTRUCTIONS :

1. CONSTRUCT WALL TO HEIGHT OF 4'–0" – ALLOW MORTAR TO SET SUFFICIENTLY TO WITHSTAND GROUT PRESSURE.
2. INSPECT UNITS FOR ALIGNMENT, CLEAN OUT CELLS TO BE FILLED.
3. FILL CELLS TO 8" BELOW TOP COURSE WITH 2,000 PSI CONCRETE GROUT.
4. DELAY 3 – 5 MINUTES PRIOR TO CONSOLIDATING TO ALLOW WATER TO BE ABSORBED BY MASONRY.

4 S3.02 REINFORCED MASONRY CONSTRUCTION DETAIL
SCALE : NONE

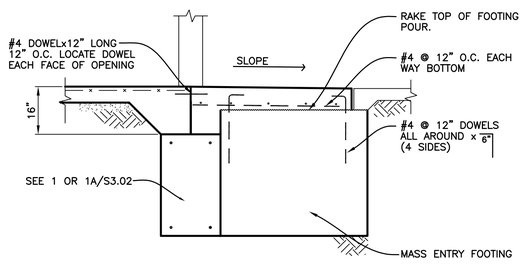


NOTES:

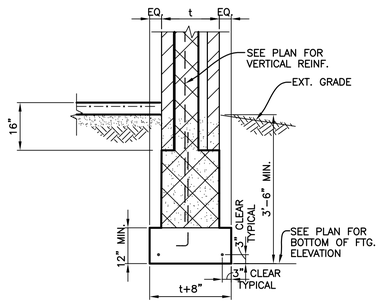
1. PROVIDE CLEANOUTS AT BOTTOM OF EACH REINFORCED CELL IN ACCORDANCE WITH THE SPECIFICATIONS
2. PROVIDE HORIZONTAL JOINT REINF. PER GENERAL NOTES @ 16" O.C. MAX. U.N.O.

MASONRY REINF. LAP LENGTH		
BAR SIZE	8" WALL	12" WALL
4	24"	24"
5	30"	30"
6	38"	36"
7		42"

3 S3.02 TYPICAL WALL REINFORCING DETAIL
SCALE : 3/4" = 1'–0"

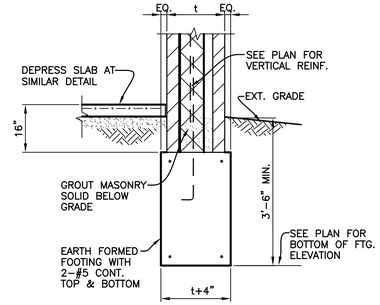


2 S3.02 TYPICAL ENTRANCE SLAB
SCALE : 1/2" = 1'–0"



1A S3.02 ALTERNATE EXTERIOR MASONRY WALL PAD FOOTING
SCALE : 1/2" = 1'–0" (CONTRACTOR OPTION)

NOTE : THIS DETAIL MAY BE NECESSARY IN LIEU OR DETAIL 1 IF FIELD CONDITIONS DO NOT ALLOW FOR THE PLACEMENT OF EARTH FORMED FOOTINGS.



1 S3.02 TYPICAL EXTERIOR MASONRY WALL FOOTING
SCALE : 1/2" = 1'–0"

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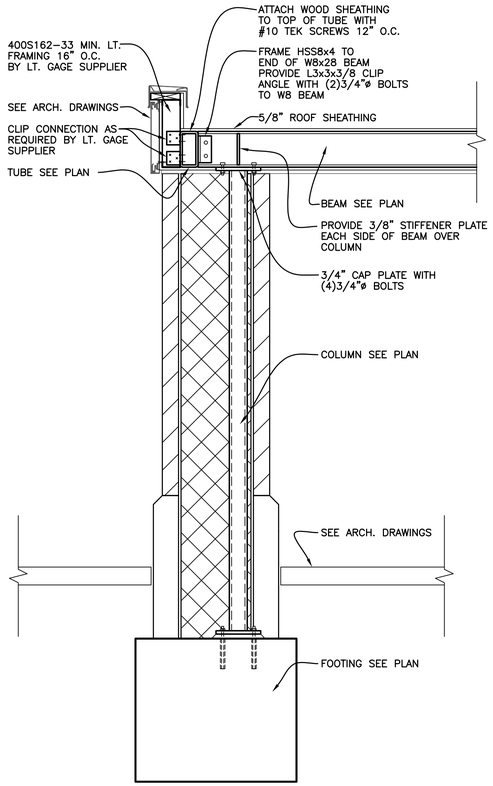
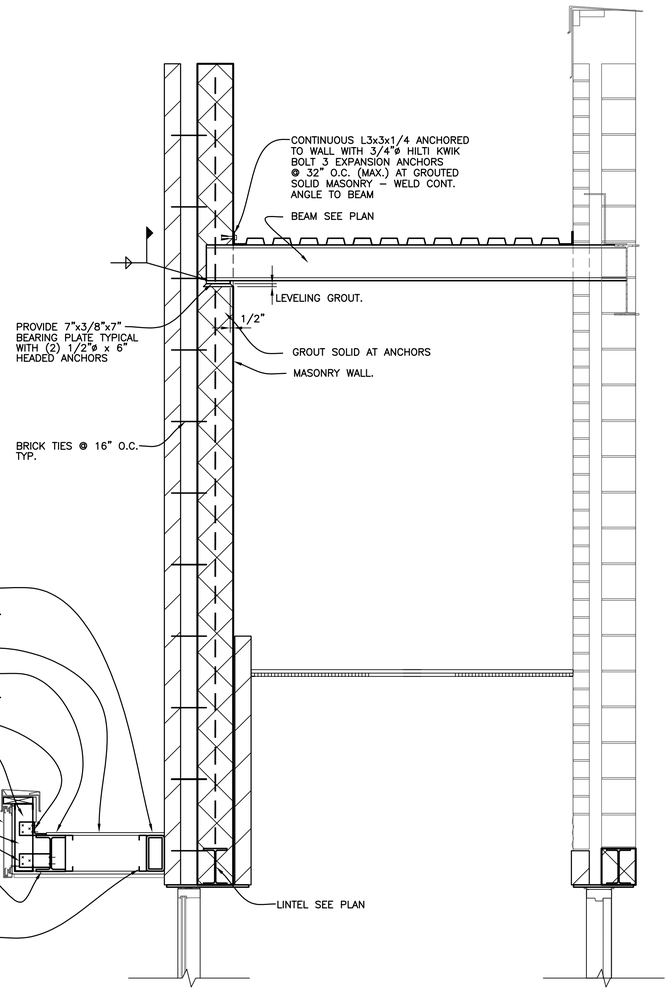
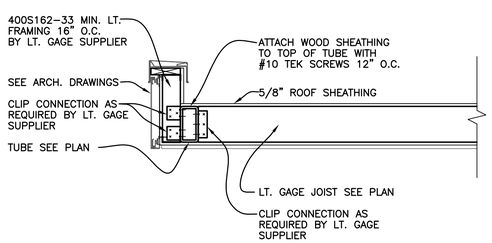
SHEET NUMBER
S3.02



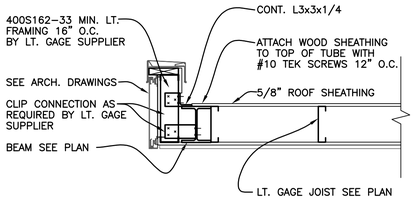
4 SECTION
S4.00 SCALE : 3/4" = 1'-0"



1 SECTION
S4.00 SCALE : 3/4" = 1'-0"



3 SECTION
S4.00 SCALE : 3/4" = 1'-0"



2 SECTION
S4.00 SCALE : 3/4" = 1'-0"

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WILLIAMSTON, MICHIGAN

SHEET
DETAILS

PROJECT NUMBER
2019-003

SHEET NUMBER
S4.00

MECHANICAL ABBREVIATIONS

ABBREV.	DESCRIPTION
AAV	AUTOMATIC AIR VENT / AIR ADMITTANCE VALVE
AD	ACCESS DOOR
AE	AIR EXTRACTOR
AFF	ABOVE FINISHED FLOOR
APD	AIR PRESSURE DROP
ASR	AUTOMATIC SPRINKLER RISER
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNITS PER HOUR
BWV	BACKWATER VALVE
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CIRC	CIRCULATING
CLG	COOLING
CO	CLEAN OUT
CONT	CONTINUATION OR CONTINUED
CONV	CONVECTOR
CUH	CABINET UNIT HEATER
CV	CONTROL VALVE
DB	DRY BULB TEMPERATURE
DEG	DEGREES
DDC	DIRECT DIGITAL CONTROL
DN	DOWN
DTC	DRAIN TILE CONNECTION
DWH	DOMESTIC WATER HEATER
(E)	EXISTING
EA/EXH	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB TEMPERATURE
EF	EXHAUST FAN
EJ	EXPANSION JOINT
EL	ELEVATION
ELECT	ELECTRICAL
EMS	ENERGY MANAGEMENT SYSTEM
ESP	EXTERNAL STATIC PRESSURE
EWB	ENTERING WET BULB TEMPERATURE
EWC	ELECTRIC WATER COOLER
°F	DEGREES FAHRENHEIT
FA	FACE AREA (COIL) / FREE AREA (LOUVER)
FC	FLEXIBLE CONNECTION
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FHV	FIRE HOSE VALVE
FLA	FULL LOAD AMPS
FLR	FLOOR
FPM	FEET PER MINUTE
FFD	FUNNEL FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATION
FS	FLOOR SINK
FT	FEET
FURN	FURNISHED
FV	FACE VELOCITY
FVC	FIRE VALVE CABINET
GAL	GALLON
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HO	HUB OUTLET
HP	HORSEPOWER

MECHANICAL ABBREVIATIONS

ABBREV.	DESCRIPTION
HR	HOUR
HTG	HEATING
HYD	HYDRANT
HZ	HERTZ
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCHES
INST	INSTALLED
INV	INVERT
ISP	INTERNAL STATIC PRESSURE
IW	INDIRECT WASTE
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LBS/HR	POUNDS PER HOUR
LDB	LEAVING DRY BULB TEMPERATURE
LRA	LOCKED ROTOR AMPS
LWB	LEAVING WET BULB TEMPERATURE
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MOD	MOTOR OPERATED DAMPER (AUTOMATIC)
MOP	MAXIMUM OVER-CURRENT PROTECTION
N.C.	NOISE CRITERIA
NIC	NOT IN CONTRACT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NOM	NOMINAL
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER / CENTER TO CENTER
OD	OUTSIDE DIAMETER
OED	OPEN ENDED DUCT
ORS	OVERFLOW ROOF SUMP
OS&Y	OUTSIDE SCREW AND YOKE
(O)	OVERHEAD
PD	PRESSURE DROP (FEET OF WATER)
PRV	PRESSURE REDUCING VALVE
PSIA	POUNDS PER SQUARE INCH - ABSOLUTE
PSIG	POUNDS PER SQUARE INCH - GAUGE
PT	PRESSURE / TEMPERATURE PORT
RA	RETURN AIR
RH	RELATIVE HUMIDITY
REQD	REQUIRED
REL.A	RELIEF AIR
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
RS	ROOF SUMP
SA	SUPPLY AIR
SH	SHOWER
SP	STATIC PRESSURE
SqFt / SF	SQUARE FOOT/SQUARE FEET
SS	SERVICE SINK
TC	TEMPERATURE CONTROL
T & P	TEMPERATURE AND PRESSURE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE

MECHANICAL ABBREVIATIONS

ABBREV.	DESCRIPTION
UR	URINAL
VD	VOLUME DAMPER (MANUALLY ADJUSTABLE)
VTR	VENT THRU ROOF
W	WASTE
W&V	WASTE AND VENT
WB	WET BULB TEMPERATURE
WC	WATER CLOSET
WG	WATER GAUGE
WH	WALL HYDRANT

MECHANICAL PIPING SYMBOLS

ABBREV.	DESCRIPTION
	PIPE ELBOW UP
	PIPE ELBOW DOWN
	PIPE TEE DOWN
	DIRECTION OF FLOW
	UNION
	STRAINER
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	EXPANSION JOINT
	FLEXIBLE CONNECTION
	PIPE ANCHOR
	PIPE GUIDE
	PIPE CAP OR PLUG
	ISOLATION VALVE
	CIRCULATING PUMP
	GLOBE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	ANGLE VALVE
	CHECK VALVE (SWING)
	CHECK VALVE (SPRING)
	PLUG VALVE
	NEEDLE VALVE
	OUTSIDE SCREW AND YOKE VALVE (OS&Y)
	PRESSURE REGULATING VALVE
	SOLENOID VALVE
	CONTROL VALVE (2-WAY / 3-WAY)
	CENTRIFUGAL FAN
	AUTOMATIC GAS SHUT-OFF VALVE
	TRAP (PLAN VIEW)
	FLOOR DRAIN / FUNNEL FLOOR DRAIN (PLAN VIEW)
	FLOOR DRAIN / FUNNEL FLOOR DRAIN (ELEVATION)
	ROOF SUMP
CO	CLEAN OUT (IN FLOOR)
CO	CLEAN OUT (IN LINE)
WCO	CLEAN OUT (WALL)
BFP	BACKFLOW PREVENTER
M	WATER METER ASSEMBLY
	HOSE BIBB, WALL HYDRANT
	DIRECTION OF PIPE PITCH
	SPRINKLER HEAD (UPRIGHT)
	SPRINKLER HEAD (SIDEWALL)
FS	FLOW SWITCH
	SIAMESE CONNECTION (YARD)
	SIAMESE CONNECTION (WALL MOUNTED)
	FIRE HYDRANT
	FLOW MEASURING DEVICE
	BALANCING VALVE
	COMBINATION FLOW MEASURING AND BALANCING DEVICE
AAV	AUTOMATIC AIR VALVE
MAV	MANUAL AIR VALVE

MECHANICAL SYMBOLS

ABBREV.	DESCRIPTION
	RECTANGULAR TAKE-OFF (SINGLE LINE)
	RECTANGULAR TAKE-OFF (DOUBLE LINE)
	ROUND TAKE-OFF (SINGLE LINE)
	ROUND TAKE-OFF (DOUBLE LINE)
	SPIN-IN FITTING (WITH VOLUME DAMPER)
	ELBOW (WITH TURNING VANES)
	RADIUS RECTANGULAR ELBOW
	RADIUS ROUND ELBOW
	RECTANGULAR ELBOW UP
	ROUND ELBOW UP
	RECTANGULAR ELBOW DOWN
	ROUND ELBOW DOWN
	CONCENTRIC TRANSITION (DOUBLE LINE)
	CONCENTRIC TRANSITION (SINGLE LINE)
	ECCENTRIC TRANSITION (DOUBLE LINE)
	ECCENTRIC TRANSITION (SINGLE LINE)
R	INCLINED RISE IN DIRECTION OF AIR FLOW (DOUBLE LINE)
R	INCLINED RISE IN DIRECTION OF AIR FLOW (SINGLE LINE)
D	INCLINED DROP IN DIRECTION OF AIR FLOW (DOUBLE LINE)
D	INCLINED DROP IN DIRECTION OF AIR FLOW (SINGLE LINE)
	FLEXIBLE CONNECTION
	FLEXIBLE DUCT CONNECTION TO SUPPLY DIFFUSER
	SUPPLY DIFFUSER
	LINEAR SLOT DIFFUSER
	RETURN OR EXHAUST GRILLE
	TRANSFER GRILLE
	CROSS SECTION OF SUPPLY AIR DUCT
	CROSS SECTION OF EXHAUST OR RETURN AIR DUCT
EXISTING / NEW	FIRE DAMPER (HORIZONTAL)
EXISTING / NEW	FIRE DAMPER (VERTICAL)
EXISTING / NEW	SMOKE DAMPER
EXISTING / NEW	COMBINATION FIRE/SMOKE DAMPER (VERTICAL)
EXISTING / NEW	COMBINATION FIRE/SMOKE DAMPER (HORIZONTAL)
	VOLUME DAMPER (MANUALLY ADJUSTABLE)
M	MOTORIZED DAMPER
SD	SMOKE DETECTOR
CO2	CO2 SENSOR
T	THERMOSTAT OR TEMPERATURE SENSOR
H	HUMIDISTAT OR HUMIDITY SENSOR
	RETURN OR EXHAUST / SUPPLY AIR FLOW

PIPING LEGEND

ABBREV.	DESCRIPTION
CA	COMPRESSED AIR PIPING
CD	CONDENSATE DRAIN PIPING
DT	DRAIN TILE
F	FIRE PROTECTION PIPING
FOR	FUEL OIL RETURN PIPING
FOS	FUEL OIL SUPPLY PIPING
G	NATURAL GAS PIPING
BCW	BOOSTED-DOMESTIC COLD WATER PIPING
BHW	BOOSTED-DOMESTIC HOT WATER PIPING
CW	DOMESTIC COLD WATER PIPING
NPCW	NON POTABLE COLD WATER PIPING
TW	TEMPERED WATER PIPING
HW	DOMESTIC HOT WATER PIPING
HW(140°F)	DOMESTIC 140°F HOT WATER PIPING
HWR	DOMESTIC HOT WATER RETURN PIPING
SAN	SANITARY WASTE PIPING
PSAN	PUMPED SANITARY PIPING
V	VENT PIPING
ST	STORM SEWER PIPING
PST	PUMPED STORM PIPING
RC	RAIN CONDUCTOR PIPING
ORC	OVERFLOW RAIN CONDUCTOR PIPING
CHWR	CHILLED WATER RETURN PIPING
CHWS	CHILLED WATER SUPPLY PIPING
CWR	CONDENSER WATER RETURN PIPING
CWS	CONDENSER WATER SUPPLY PIPING
HHWR	HEATING HOT WATER RETURN PIPING
HHWS	HEATING HOT WATER SUPPLY PIPING
HPLR	HEAT PUMP LOOP RETURN PIPING
HPLS	HEAT PUMP LOOP SUPPLY PIPING
RL	REFRIGERANT LIQUID PIPING
RS	REFRIGERANT SUCTION PIPING
HGB	HOT GAS BY-PASS PIPING
GXHR	GEO HEAT EXCHANGE RETURN
GXHS	GEO HEAT EXCHANGE SUPPLY
STM	STEAM PIPING
HPS	HIGH PRESSURE STEAM PIPING
LPS	LOW PRESSURE STEAM PIPING
CR	STEAM CONDENSATE RETURN PIPING
PCR	PUMPED STEAM CONDENSATE RETURN PIPING
LPC	LOW PRESSURE CONDENSATE PIPING
HPC	HIGH PRESSURE CONDENSATE PIPING
MA	MEDICAL AIR PIPING
N	NITROGEN GAS PIPING
O2	OXYGEN GAS PIPING
VAC	VACUUM PIPING

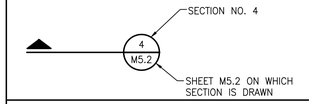
APPLICABLE CODES AND REGULATIONS

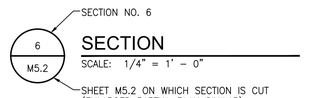
YEAR	CODE
2015	MICHIGAN BUILDING CODE
2015	MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS
2015	MICHIGAN PLUMBING CODE
2015	MICHIGAN MECHANICAL CODE
2015	MICHIGAN UNIFORM ENERGY CODE
2015	INTERNATIONAL FIRE CODE
2013	NFPA 13
2012	NFPA 101 WITH BFS AMENDMENTS
2009	ICC/ANSI ACCESSIBLE AND USABLE BUILDING & FACILITIES
-	AMERICANS WITH DISABILITIES ACT ACCESSIBILITIES GUIDELINE (ADA-AG)

DRAWING INDEX

DRAWING NOTATION

SYMBOL	DESCRIPTION
1	NEW WORK KEY NOTE NO. 1
1	DEMOLITION KEY NOTE NO. 1
EF 1	EQUIPMENT DESIGNATION, (IE: EXHAUST FAN NO. 1)
S-1 10x10 100-2	AIR TERMINAL TAG: IE: DIFFUSER TYPE = S-1 NECK SIZE = 10"x10" CFM = 100 (TYPICAL FOR 2) S = SUPPLY R = RETURN E = EXHAUST
	EXISTING DEVICES OR EQUIPMENT
	NEW OR MODIFIED DEVICES OR EQUIPMENT
	EXISTING SYSTEM COMPONENT TO BE REMOVED
	POINT OF NEW CONNECTION





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WILLIAMSTON, MICHIGAN

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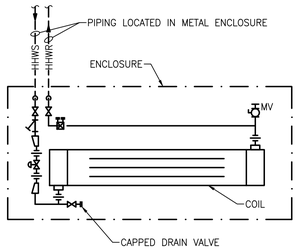
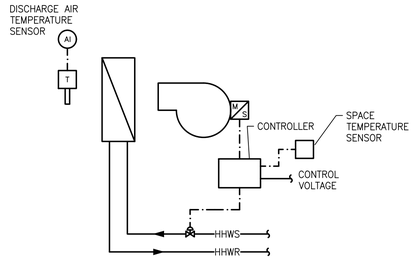


HOT WATER CABINET UNIT HEATER PIPING DIAGRAM

NO SCALE

NOTE:
ISOLATION VALVE AND COMBINATION FLOW MEASURING & BALANCING DEVICE MAY BE LOCATED ABOVE THE CEILING



TYPICAL CABINET UNIT HEATER CONTROL DIAGRAM

NO SCALE

CONTROL

1. UPON A CALL FOR HEATING, THE CONTROLLER SHALL MODULATE THE CONTROL VALVE AND ENERGIZE FAN TO MAINTAIN TEMPERATURE SET POINT.

HOT WATER CABINET UNIT HEATER SCHEDULE

UNIT ID	CAPACITY MBH	AIRFLOW CFM @ LOW	FAN		WATER					CABINET SIZE			ELECTRICAL		DISCONNECT			STARTER			CONTROL VALVE WPD (FT HD)	MODEL NO.
			HP	RPM @ LOW	FLOW (GPM)	ROWS	EWT °F	LWT °F	WPD (FT)	LENGTH (IN)	HEIGHT (IN)	DEPTH (IN)	VOLTS	PHASE	FURN.	INST.	TYPE	FURN.	INST.	TYPE		
CUH-1	16.2	125	1/4	750	1.7	1	160	140	0.2	38 3/16	24	10	120	1	SWITCH	M	M	SWITCH	M	M	NOTE 4	RITTLING RRWI-330-02

NOTES:

1. MANUFACTURER TO PROVIDE STARTER AND DISCONNECT.
2. PERFORMANCE BASED ON WATER.
3. PROVIDE WITH EC MOTOR.
4. CONTROL VALVE PRESSURE DROP SHALL BE TWO TIMES THE DEVICE PRESSURE DROP (2'MIN.-15'MAX.)

PLUMBING FIXTURE SCHEDULE

TAG	BARRIER FREE	ITEM	PIPE CONNECTION SIZES				MANUFACTURER & MODEL NUMBER	ACCESSORIES
			WASTE	VENT	CW	HW		
DN-1	–	DOWNSPOUT NOZZLE	SEE PLANS	–	–	–	MIFAB: MODEL R1940	STAINLESS STEEL SCREEN
ORS-1	–	OVERFLOW ROOF SUMP	SEE PLANS	–	–	–	MIFAB: MODEL R1220	ADJUSTABLE EXTENSION, CAST IRON DOME, ADJUSTABLE WATER DAM, AND UNDERDECK CLAMP
RS-1	–	ROOF SUMP	SEE PLANS	–	–	–	MIFAB: MODEL R1220	ADJUSTABLE EXTENSION, CAST IRON DOME AND UNDERDECK CLAMP

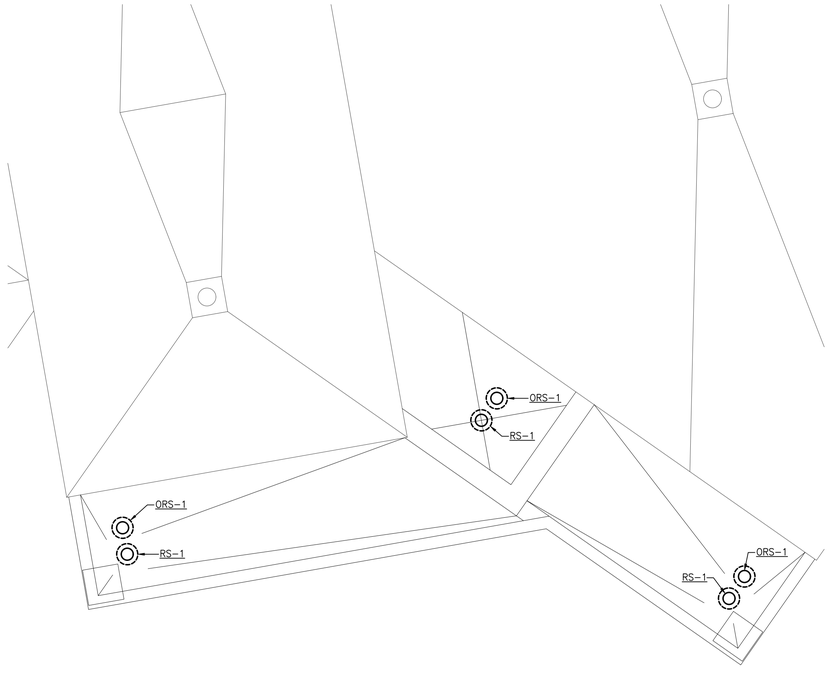
NOTES:
1. PROVIDE ALL SLEEVES, TEMPLATES, HARDWARE, ACCESSORIES, ETC. REQUIRED FOR A COMPLETE & OPERABLE INSTALLATION. VERIFY ALL COLORS & FINISHES WITH ARCHITECT & REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION & MOUNTING HEIGHT OF ALL FIXTURES.

HVAC GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. PROVIDE HVAC SYSTEMS COMPLETE PER SPECIFICATION, SMACNA STANDARDS, AND PER APPLICABLE CODES INCLUDING ALL NECESSARY OFFSETS, FITTINGS, SPECIAL RADIUS OR MITERED ELBOWS WHICH ARE REQUIRED DUE TO SPACE CONSTRAINTS OR STRUCTURAL CONDITIONS OR OTHER CONDITIONS.
2. CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE WORK OF ALL OTHER TRADES. PROVIDE ACCESS AROUND ALL NEW EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. VERIFY ALL CLEARANCES PRIOR TO THE FABRICATION OF ANY WORK.
3. PIPING SHALL BE ROUTED AS HIGH AS POSSIBLE AND SHALL NOT BE LOCATED OVER ELECTRICAL EQUIPMENT/PANELS. PROVIDE REQUIRED CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT. PIPING SHALL NOT INTERFERE WITH ELECTRICAL EQUIPMENT CLEARANCE.
4. PIPING SHALL NOT BE INSTALLED IN A LOCATION THAT RESTRICTS THE ACCESS TO MECHANICAL DEVICES REQUIRING ACCESS.
5. THE CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS SUPPORTING STEEL, ETC. FOR THE PROPER INSTALLATION OF ALL MECHANICAL SYSTEMS.
6. COORDINATE WALL PENETRATIONS WITH ARCHITECTURAL TRADES. SEAL ALL PIPING AND DUCT PENETRATIONS.
7. FOR EQUIPMENT VALVING, COMPONENT, AND PIPING ARRANGEMENT, REFER TO PIPING DIAGRAMS AND DETAILS.
8. PROVIDE CODE REQUIRED CLEARANCE/ACCESS DOORS FOR DAMPERS, VALVES, AND CLEANOUTS LOCATED IN WALLS OR ABOVE HARD CEILINGS. COORDINATE LOCATIONS WITH ARCHITECT. REFER TO ARCHITECTURAL PLANS FOR CEILING TYPES.
9. CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR EQUIPMENT FURNISHED.

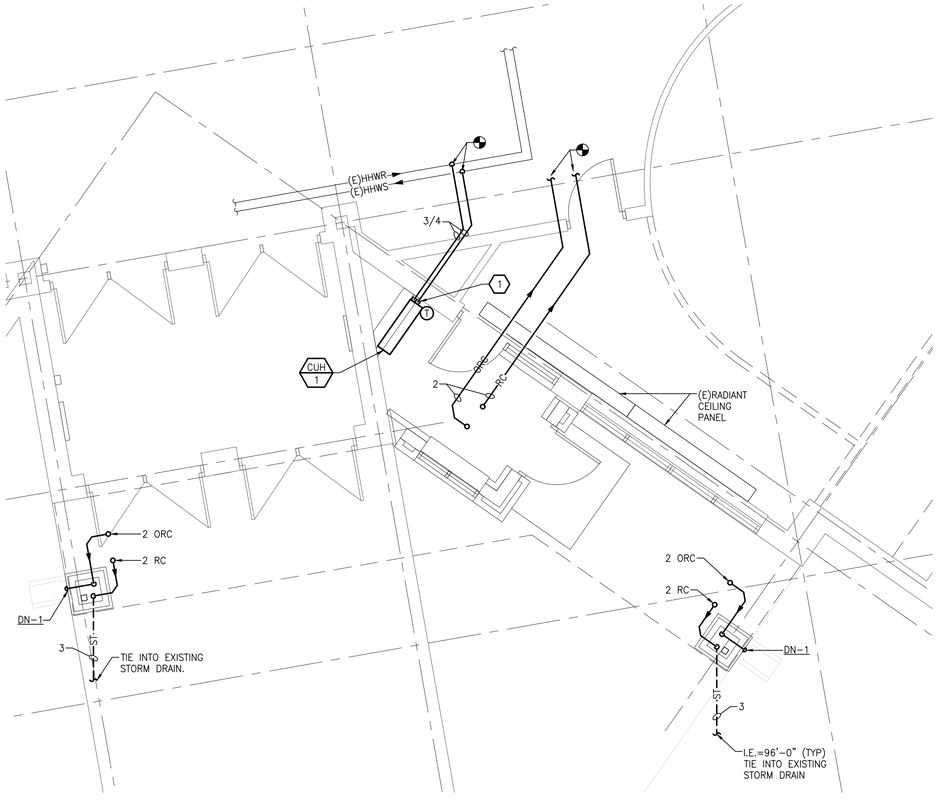
KEYED NOTES

1. PROVIDE METAL PIPE ENCLOSURE FOR HHWS/R.



MECHANICAL ROOF PLAN

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



MECHANICAL NEW WORK PLAN - UNIT B

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

0 1/2" 1" 2"
ACCURATE WHEN PRINTED TO SCALE

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03/25/19	BIDS
DRAWN	CRP
CHECKED	CRP
APPROVED	NCS

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PROJECT
Williamston Community Schools
Williamston High School
Secure Entrance

WILLIAMSTON, MICHIGAN

SHEET
MECHANICAL NEW WORK PLAN - UNIT B

PROJECT NUMBER
2019-003

SHEET NUMBER
M2.10B

2019-003 XYZ PROJECT

LIGHTING CONTROLS MATRIX

TAG NUMBER	SPACE TYPE	MANUAL ON/OFF	DIMMING SWITCH	OVERRIDE SWITCH	MULTI ZONE CONTROL	KEY SWITCH	TIMECLOCK	OCCUPANCY SENSOR	PHOTOCONTROL DIMMING	EXTERIOR PHOTOCELL	COLOR TUNING	RGB/RGBW	BACNET COMPATIBLE	SEQUENCE OF OPERATIONS
#		PARAMETERS												
1	EXTERIOR EGRESS/SECURITY LIGHTING		X	X			X			X			X	MANUAL OVERRIDE SWITCH WITH ON/OFF AND DIM FUNCTION. AUTOMATIC ON TO FULL VIA SCHEDULED TIME FUNCTION OR PHOTOCELL. AUTOMATIC LIGHT LEVEL REDUCTION TO 70% AFTER HOURS VIA SCHEDULED TIME FUNCTION. FULL SHUTOFF VIA SCHEDULED TIME FUNCTION OR PHOTOSENSOR.

Panel Designation: EX. BL-3
Panel Location: HOME ECONOMICS ROOM
Fed From: DPL-C
Feeder Size: EXISTING

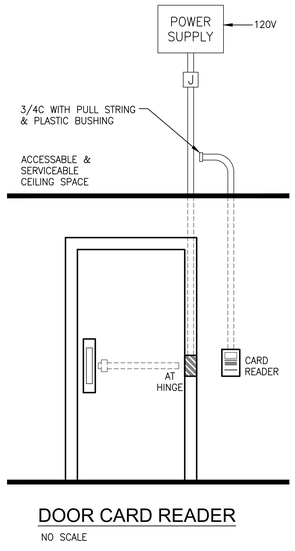
Main: MLO
Bussing: 225A
Ground Bus: STANDARD
Mounting: SURFACE
Neutral: 100%

P-P Voltage: 208
P-N Voltage: 120
Phase: 3
Wire: 4
Min SC Interrupting Rating: EXISTING

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
EXISTING LOAD		500			20	1	X			2	20	1000				ADA DOOR OPERATOR / CARD READER
EXISTING LOAD		500			20	3		X		4	20				92	EXTERIOR DOWN LIGHTS
EXISTING LOAD		500			20	5			X	6	20	696				CUH-1
EXISTING LOAD		500			20	7	X			8	20			500		EXISTING LOAD
EXISTING LOAD		500			20	9		X		10	20			500		EXISTING LOAD
EXISTING LOAD		500			20	11			X	12	20			500		EXISTING LOAD
EXISTING LOAD		500			20	13	X			14	20			500		EXISTING LOAD
EXISTING LOAD		500			20	15		X		16	20			500		EXISTING LOAD
EXISTING RANGE		4000			50	17			X	18	20			500		EXISTING LOAD
		4000				19	X			20	20			500		EXISTING LOAD
EXISTING RANGE		4000			50	21		X		22	20			500		EXISTING LOAD
		4000				23			X	24	20					SPARE
EXISTING RANGE		4000			50	25	X			26	20					SPARE
		4000				27		X		28	20					SPARE
EXISTING RANGE		4000			50	29			X	30	20					SPARE
		4000				31	X			32	20					SPARE
EXISTING RANGE		4000			50	33		X		34	20					SPARE
		4000				35			X	36	20					SPARE
EXISTING RANGE		4000			50	37	X			38	20					SPARE
		4000				39		X		40	20					SPARE
EXISTING LOAD		500			20	41			X	42	20					SPARE

Load Description	Connected Load ØA	Connected Load ØB	Connected Load ØC	Connected Load Total	Demand Factor	Demand Load ØA	Demand Load ØB	Demand Load ØC	Demand Load Total
Lighting or Continous Load (Volt-Amps)	0	92	0	92	1.00	0	92	0	92
180VA Receptacle Load (Volt-Amps)	19000	19000	18500	56500	1.00 First 10KVA	3363	3363	3274	10000
Amount over 10KVA	9000	9000	9000	45000	0.50 [> 10KVA]	7819	7819	7613	23250
Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Non-Continuous Load (Volt-Amps)	1000	0	696	1696	1.00	1000	0	696	1696
Total Load (kVA)	20.00	19.09	19.20	58.29	125% of Light/Cont and Recept (<10kVA) load plus other load	12.18	11.27	11.58	35.04
Total Ampacity (Amps)	166.5	159.0	159.8	161.8	<---- per NEC Article 215.2 ---->	101.4	93.9	96.5	97.3
Minimum Feeder Sizing (Amps)	173.5	166.2	166.7	168.8		106.4	101.1	103.3	104.3

Receptacle Demand Factor per Article 220.44 of the National Electrical Code.



DOOR CARD READER
NO SCALE

LIGHTING SYMBOL LIST

SYMBOL	DESCRIPTION
	LIGHT FIXTURE – CEILING/GRID MOUNT
T	LIGHT FIXTURE – INTERIOR WALL MOUNT LINEAR
	LIGHT FIXTURE – DOWNLIGHT WITH WALLWASH DIST.
	LIGHT FIXTURE – INTERIOR WALL SCONCE
	LIGHT FIXTURE – INTERIOR SURFACE MOUNT
	LIGHT FIXTURE – INTERIOR WALL MOUNTED
	LIGHT FIXTURE – INTERIOR PENDANT MOUNT
	LIGHT FIXTURE – INTERIOR PENDANT MOUNT CYLINDER
	TRACK AND TRACK MOUNTED LIGHT FIXTURES
	EXIT LIGHT – CEILING MOUNTED – ARROWS AS INDICATED ON PLAN (SHADED AREA INDICATES FACE(S) OF FIXTURE)
	EXIT LIGHT – WALL MOUNTED – ARROWS AS INDICATED ON PLAN (SHADED AREA INDICATES FACE(S) OF FIXTURE)
	EMERGENCY LIGHT FIXTURE – EMERGENCY BATTERY UNIT
	EMERGENCY LIGHT FIXTURE – BATTERY UNIT/EXIT SIGN
	LIGHT FIXTURE – EXTERIOR POLE MOUNT TYPE
	LIGHT FIXTURE – EXTERIOR WALL MOUNT TYPE
	LIGHT FIXTURE – EXTERIOR POST TOP TYPE
	LIGHT FIXTURE – EXTERIOR BOLLARD TYPE

NOTES:
1. LIGHTING SYMBOLS AS INDICATED ON PLANS ARE NOT DRAWN TO SCALE UNLESS NOTED OTHERWISE.

LIGHTING CONTROLS LEGEND

SYMBOL	DESCRIPTION
G	GENERATOR TRANSFER DEVICE
$	LIGHTING CONTROL – WALL TOGGLE TYPE SWITCH
$3	LIGHTING CONTROL – WALL TOGGLE SWITCH – 3 WAY
$P	LIGHTING CONTROL – PILOT LIGHT SWITCH
$L	LIGHTING CONTROL – LOW VOLTAGE CONTROL LOCATION

NOTES:
1. REFER TO SHEET X FOR LIGHTING CONTROLS INFORMATION.

FIRE ALARM SYMBOL LIST

SYMBOL	DESCRIPTION
S	DETECTION DEVICE
S	DETECTION DEVICE – DUCT MOUNTED
FS	DETECTION DEVICE – FLOW SWITCH
TS	DETECTION DEVICE – TAMPER SWITCH
FAA	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FD	FIRE DEPARTMENT COMMUNICATION OUTLET
F	MANUAL DEVICE – PULL STATION
F	NOTIFICATION DEVICE – WALL MOUNTED
F	NOTIFICATION DEVICE – CEILING MOUNTED

NOTES:
1. DRAWINGS INDICATE DESIGN INTENT ONLY, FINAL LOCATIONS AND DEVICE SPECIFICATIONS SHALL BE PROVIDED BY FIRE ALARM MANUFACTURER. REFER TO PROJECT SPECIFICATIONS FOR APPROVED MANUFACTURERS.

POWER SYMBOL LIST

SYMBOL	DESCRIPTION
	CONDUIT DOWN
	CONDUIT UP
C	CONTACTOR
	DISCONNECT SWITCH – NON FUSED
	DISCONNECT SWITCH – FUSED
	DISCONNECT SWITCH – COMB. MOTOR STARTER
	ELECTRICAL PANEL – 208/240 VOLTS
	ELECTRICAL PANEL – 480 VOLTS
	GROUNDING ROD
	GROUND
	GROUNDING BAR
J	JUNCTION BOX
J	JUNCTION BOX WITH HARDWIRED CONNECTION
M	METER
	MOTOR – SINGLE PHASE
	MOTOR – THREE PHASE
$M	MOTOR RATED SWITCH
	POWER RECEPTACLE – SIMPLEX TYPE
	POWER RECEPTACLE – DUPLEX TYPE
	POWER RECEPTACLE – DUPLEX 6" ABOVE COUNTER
USB	POWER RECEPTACLE – USB/DUPLEX COMBO. DEVICE
	POWER RECEPTACLE – QUADRUPLEX TYPE
	POWER RECEPTACLE – RECESSED FLOOR TYPE
	POWER RECEPTACLE – SPECIALTY TYPE
SPD	SURGE PROTECTION DEVICE
TC	TIME CLOCK
T	TRANSFORMER (REFER TO SCHEDULES FOR INFO)
VSD	VARIABLE SPEED DRIVE

NOTES:
1. ALL DEVICE RATINGS/SIZES SHALL BE COORDINATED WITH PLANS AND SCHEDULES.

AUXILIARY SYST. SYMBOL LIST

SYMBOL	DESCRIPTION
	CAMERA
CR	CARD READER
	COMMUNICATIONS DEVICE – 6" ABOVE COUNTER
	COMMUNICATIONS DEVICE – FLOOR
	COMMUNICATIONS DEVICE – WALL
DH	MAGNETIC DOOR HOLDER
	PUSH BUTTON
S	SPEAKER
	WALL CLOCK – SINGLE FACE
	WALL CLOCK – DOUBLE FACE
S	WALL CLOCK AND SPEAKER UNIT

NOTES:
1. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR BOX AND CONDUIT FOR ALL DEVICES INDICATED.
2. LOW VOLTAGE CONTRACTOR SHALL PROVIDE EXACT SPECIFICATIONS AND LOCATIONS OF ALL DEVICES.

ELECTRICAL ABBREVIATIONS

ABBREV.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
A	AMPERE
AF	AMPERE FUSE/AMPERE FRAME
AWG	AMERICAN WIRE GAUGE
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AIC	AVAILABLE INTERRUPTING CURRENT (AMPS)
C	CONDUIT OR CEILING MOUNTED
CB	CIRCUIT BREAKER
CU	COPPER
CT	CURRENT TRANSFORMER
DIA	DIAMETER
DISC	DISCONNECT
EMT	ELECTRICAL METALLIC TUBING
EWC	ELECTRIC WATER COOLER
EPO	EMERGENCY POWER OFF
(E)	EXISTING ELECTRICAL EQUIPMENT OR WORK
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
F	FUSE
G/GRD	GROUND
GFCI/GFI	GROUND FAULT CIRCUIT INTERRUPTER
HOA	HAND–OFF–AUTO
HP	HORSEPOWER
IG	ISOLATED GROUND
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LP	LIGHTING PANEL
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUG ONLY
MAX	MAXIMUM
MIN	MINIMUM
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N/NEU	NEUTRAL
NF	NON–FUSIBLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NIC	NOT IN CONTRACT
OF/CI	OWNER FURNISHED / CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED / OWNER INSTALLED
PH. OR ø	PHASE
P	POLE
PF	POWER FACTOR
PVC	POLYVINYL CHOLRIDE (PLASTIC)
(R)	RELOCATED EXISTING ELECTRICAL EQUIPMENT
(RR)	REMOVE AND REINSTALL
RMC	RIGID METALLIC CONDUIT
SPEC/SPECS	SPECIFICATIONS
TYP.	TYPICAL

DRAWING INDEX

DRAWING NOTATION

SYMBOL	DESCRIPTION
LA	LIGHTING FIXTURE TAG
1	CONSTRUCTION KEY NOTE NUMBER 1
1	DEMOLITION KEY NOTE NUMBER 1
1	FEEDER SIZE TAG (REFER TO FEEDER SCHEDULE ON THIS SHEET)
EF 1	EQUIPMENT DESIGNATION, (I.E. EXHAUST FAN NUMBER 1)
	EXISTING DEVICES OR EQUIPMENT
	NEW OR MODIFIED DEVICES OR EQUIPMENT
	NEW OR MODIFIED UNDERGROUND WIRING
	EXISTING SYSTEM COMPONENT TO BE REMOVED

SECTION NUMBER 4
4
E5.2
SHEET E5.2 ON WHICH SECTION IS DRAWN

SECTION NO. 6
6
E5.2
SECTION
SCALE: 1/4" = 1' – 0"
SHEET E5.2 ON WHICH SECTION IS CUT (ENLARGED PARTIAL PLAN SIMILAR)

LIGHTING CONTROL TAG
LIGHTING CONTROL SPACE TYPE '1'
Z1
1A
SCENE SCHEDULE ID 'A'
DAYLIGHTING CONTROL ZONE '1' (MAY NOT APPEAR ON EVERY TAG)

APPLICABLE CODES AND REGULATIONS

YEAR	CODE
2015	MICHIGAN BUILDING CODE
2015	MICHIGAN ENERGY CODE
2014	MICHIGAN ELECTRICAL CODE RULES, PART 8
2017	NATIONAL ELECTRICAL CODE (NFPA 70)
2013	NFPA 20
2013	NFPA 72
2012	NFPA 101
2013	NFPA 110
2009	ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS & FACILITIES

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	MODEL NUMBER	LIGHT ENGINE	WATTAGE	REMARKS	MODEL NUMBER #2	MODEL NUMBER #3
L1E	RECESSED 2X4 LED LENSED TROFFER WITH EM BATTERY	LITHONIA	2GTL-4-40L-A12125-EL14L	3500K CCT LED, 80 CRI	30W		LSI GA24-LED-SS-WW-UE-P12.125-EM	DAY-BRITE FSW450L835-UNV-DIM-FKR126-EMLED
L2	4" RECESSED DOWN LIGHT	LITHONIA	LDN4-40/-20-L04-AR-LSS-MVOLT-GZ1-WL	4000K CCT LED, 80 CRI	23W		HE WILLIAMS 4DR-TL-L20-8-40-DIM1-UNV-O-W-OF-CS-WET/CC-N-F1	LIGHTOLIER C4RN-C4L20840MZ10U-C4RDLCLP
L2E	SAME AS TYPE FC WITH EM BATTERY	LITHONIA	LDN4-40/-20-L04-AR-LSS-MVOLT-GZ1-WL-EL	4000K CCT LED, 80 CRI	23W		HE WILLIAMS 4DR-TL-L20-8-40-DIM1-UNV-EM/10W-O-W-OF-CS-WET/CC-N-F1	LIGHTOLIER C4RNEM-C4L20840MZ10U-C4RDLCLP
X1	SINGLE FACE EXIT SIGN	LITHONIA	LQM-S-W-3-R-120/277-EL-N	LED	1W		LSI EMS-LED-R-UNV-BB-WHT	CHLORIDE CLXNRW

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03/25/19	BIDS

DRAWN JWS
CHECKED RWC
APPROVED DAB

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PROJECT
Williamston Community Schools
Williamston High School
Secure Entrance
WILLIAMSTON, MICHIGAN

SHEET
ELECTRICAL GENERAL INFORMATION

PROJECT NUMBER
2019-003

SHEET NUMBER
E0.00

2019-XX3 XYZ PROJECT

ELECTRICAL NEW WORK PLAN - UNIT B
SCALE:1/4" = 1'-0"

ELECTRICAL GENERAL NOTES

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL LIGHTING FIXTURES UNLESS OTHERWISE NOTED.
2. SEE LUMINAIRE SCHEDULE ON ELECTRICAL GENERAL INFORMATION SHEET.
3. EXIT LIGHTS AND EMERGENCY BATTERY UNITS SHALL BE UNCONTROLLED AND TIED AHEAD OF LOCAL AREA LIGHTING SWITCH, UNLESS CIRCUITED OTHERWISE.
4. WHERE MORE THAN ONE LIGHT SWITCH IS INDICATED TO BE INSTALLED AT THE SAME LOCATION, THEY SHALL BE GROUPED UNDER ONE COMMON FACEPLATE.
5. ALL ELECTRICAL DEVICES SHOWN ON THIS PLAN SHALL BE NEW UNLESS OTHERWISE NOTED.
6. ANY 120 VOLT BRANCH CIRCUIT FEEDER LONGER THAN 75'-0" TO LAST DEVICE SHALL BE SIZED TO THE NEXT LARGER STANDARD AWG SIZE. E.C. SHALL FIELD VERIFY ALL LENGTHS OF FEEDERS.
7. ALL RECEPTACLES SHALL BE 20A. RATED.
8. ALL DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE.
9. ALL EXTERIOR RECEPTACLES AND RECEPTACLES WITHIN 6'-0" OF SINK OR OTHER WATER SUPPLY SHALL BE GFCI TYPE.
10. REFER TO ARCHITECTURAL FLOOR PLAN AND ELEVATIONS FOR EXACT LOCATION OF DEVICES.
11. ALL JUNCTION BOXES SERVING BRANCH CIRCUIT WIRING SHALL BE LABELED WITH CIRCUITS SERVED.
12. ALL 120 VOLT CIRCUITS SHALL UTILIZE A SEPARATE NEUTRAL.
13. ALL CONDUITS SERVING 120 VOLTS OR GREATER SHALL INCLUDE A GROUND WIRE.
14. ALL CONDUITS SHALL BE ROUTED CONCEALED UNLESS NOTED OTHERWISE.
15. ALL ELECTRICAL EQUIPMENT MOUNTED ON THE FLOOR SHALL BE MOUNTED ON A 4" CONCRETE HOUSE KEEPING PAD.
16. ALL BRANCH CIRCUIT WIRING SHALL BE 2#12 , 1#12 GND IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

(#) KEYED NOTES

1. PROVIDE 120V POWER FOR ADA DOOR OPERATOR, CARD READER AND ELECTRONIC DOOR RELEASE. CIRCUIT TO RP-BL-3-2.
2. PROVIDE 120V POWER FOR ADA DOOR OPERATOR. CIRCUIT TO RP-BL-3-2.
3. PROVIDE 120V POWER FOR CARD READER AND ELECTRONIC DOOR RELEASE. CIRCUIT TO RP-BL-3-2.
4. CONNECT NEW 2X4 LIGHT FIXTURE TO EXISTING BRANCH CIRCUIT AND SWITCH.
5. LOCATION OF ADA PUSH PAD ROUGH-IN,

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WILLIAMSTON, MICHIGAN

SHEET
ELECTRICAL NEW WORK PLAN - UNIT B

PROJECT NUMBER
2019-003

SHEET NUMBER
E2.10B

0 1/2" 1" 2"
ACCURATE WHEN PRINTED TO SCALE

2019-003 XYZ PROJECT