EMS ISD AGRICULTURAL SCIENCE COMPLEX

EAGLE MOUNTAIN-SAGINAW ISD

FORT WORTH, TEXAS

EMS ISD PROJECT NUMBER: 2425-012-0

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

LAUREN V. BROWN
REGISTERED ARCHITECT
STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

24-057.00

SHEET TITLE

COVER

SHEET NO.

COVER

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ABBREVIATIONS

A

A.F.F.	ABOVE FINISH FLOOR
A.C.T.	ACOUSTICAL CEILING TILE
ADDL.	ADDITIONAL
A.B.	AIR BARRIER
A.C.M.	ALUMINUM COMPOSITE PANEL
A.D.A.	AMERICANS WITH DISABILITIES ACT
AL/ALUM.	ALUMINUM
APPROX.	APPROXIMATE OR APPROXIMATELY
ARCH.	ARCHITECT OR ARCHITECTURAL

B

BD.	BOARD
B.O.W.	BOTTOM OF WALL
B.U.R.	BUILT-UP ROOFING
BLDG.	BUILDING

C

℄	CENTER LINE
C.R.	CLASSROOM
C.F.S.	COLD-FORMED STEEL
CONC.	CONCRETE
CMU	CONCRETE MASONRY UNIT
C.M.	CONSTRUCTION MANAGER
CONT.	CONTINUOUS
C.I.	CONTINUOUS INSULATION
C.J.	CONTROL JOINT
COORD.	COORDINATE
CORR.	CORRIDOR

D

DIA.	DIAMETER
D.O.	DOOR OPENING
DN.	DOWN
DS.	DOWNSPOUT

E

EA.	EACH
E.W.	EACH WAY
ELEC.	ELECTRICAL
E.W.C.	ELECTRIC WATER COOLER
ELEV.	ELEVATION
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXIST.	EXISTING
E.J.	EXPANSION JOINT
EXT.	EXTERIOR
EIFS	EXTERIOR INSULATION & FINISH SYSTEM

F

FT.	FEET or FOOT
F.R.P.	FIBERGLASS REINFORCED PLASTIC
F.V.	FIELD-VERIFY
FIN.	FINISH
F.F.	FINISH FLOOR
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER & CABINET
F.H.C.	FIRE HOSE CABINET
F.H.C.S.	FLAT-HEAD COUNTERSUNK
FLR.	FLOOR
F.D.	FLOOR DRAIN
FLUOR.	FLUORESCENT

G / H

GALV.	GALVANIZED
GA.	GAGE
G.C.	GENERAL CONTRACTOR
G.O.	GLAZED OPENING
GYP	GYPSUM
HT.	HEIGHT
H.P.	HIGH POINT
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
H.B.	HORIZONTAL BLINDS
H.D.G.	HOT-DIP GALVANIZED
HR.	HOUR

I / J / K

I.D.	INSIDE DIAMETER
INSUL.	INSULATION
INT.	INTERIOR
I.B.C.	INTERNATIONAL BUILDING CODE

L

LAV.	LAVATORY
L.L.H.	LONG LEG HORIZONTAL
L.L.V.	LONG LEG VERTICAL
L.P.	LOW POINT
L.V.T.	LUXURY VINYL TILE

M

MFR.	MANUFACTURER
MFG.	MANUFACTURING
M.B.	MARKER BOARD
M.O.	MASONRY OPENING
MAX.	MAXIMUM
MECH.	MECHANICAL

M (CONT.)

MOD BIT	MODIFIED BITUMEN
MULL.	MULLION
M.E.P.	MECHANICAL-ELECTRICAL-PLUMBING
M.C.M.	METAL COMPOSITE MATERIAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS

N

NOM.	NOMINAL
N/A	NOT APPLICABLE
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NO./#	NUMBER

O

O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.H.	OPPOSITE HAND
OHD.	OVERHEAD
O.F.C.I.	OWNER-FURNISHED, CONTRACTOR-INSTALLED
O.F.O.I.	OWNER-FURNISHED, OWNER INSTALLED

P / Q

PR.	PAIR
P.LAM.	PLASTIC LAMINATE
PL.	PLATE
PLUMB.	PLUMBING
PT.	POINT
P.C.F.	POUNDS PER CUBIC FOOT
P.S.F.	POUNDS PER SQUARE FOOT
P.S.I.	POUNDS PER SQUARE INCH
PREFAB.	PREFABRICATED
PROJ.	PROJECTOR or PROJECTION
Q.T.	QUARRY TILE

R

R.	RADIUS
REBAR	REINFORCING BAR
REF.	REFERENCE or REFER TO
R.C.P	REFLECTED CEILING PLAN
RE:	REGARDING
REFG.	REFRIGERATOR
REINF.	REINFORCE or REINFORCING
REQD.	REQUIRED
R.	RISER (STAIR)
R.D.	ROOF DRAIN
R.O.	ROUGH OPENING

S

SIM.	SIMILAR
S.C.	SOLID CORE
S.A.B.	SOUND ATTENUATION BLANKET
S.A.F.B.	SOUND ATTENUATION FIRE BLANKET
S.T.C.	SOUND TRANSMISSION CLASS
SPEC.	SPECIFICATION
SQ.	SQUARE
S.F.	SQUARE FOOT
S.S.	STAINLESS STEEL
STRUC.	STRUCTURAL
SUSP.	SUSPENDED

T

T.B.	TACKBOARD
T.W.	TACK WALL
T.C.	TEACHER'S CABINET
T.A.S.	TEXAS ACCESSIBILITY STANDARDS
T.	TREAD (STAIR)
T&B	TOP & BOTTOM
T.O.	TOP OF
T.C.	TOP OF CURB
T.O.D.	TOP OF DECK
T.O.J.	TOP OF JOIST
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
TYP.	TYPICAL

U / V

U/C	UNDER COUNTER
U.L.	UNDERWRITERS LABORATORY
U.N.O.	UNLESS NOTED OTHERWISE
V.I.F.	VERIFY IN FIELD
VERT.	VERTICAL
V.C.T.	VINYL COMPOSITION TILE
V.W.C	VINYL WALL COVERING

W / X / Y / Z

W.C.	WATER CLOSET
W.R.B.	WATER-RESISTIVE BARRIER
WT.	WEIGHT
W.	WIDE
W/	WITH
W/O	WITHOUT
W.P.	WORKING POINT
W.W.F.	WELDED WIRE FABRIC

MATERIAL INDICATIONS

- EARTH
- POROUS FILL
- CONCRETE/ GROUT
- BRICK
- CMU (LARGE SCALE)
- MARBLE
- METAL (LARGE SCALE)
- METAL (SMALL SCALE)
- RESILIENT FLOORING
- ACOUSTICAL TILE
- TERRAZZO
- PLASTER, SAND, GROUT
- CERAMIC TILE
- GLASS (LARGE SCALE)
- INSULATION (RIGID FOAM BOARD)
- INSULATION (EPS FOAM BOARD)
- INSULATION (BATT/ BLANKET)
- INSULATION (SEMI-RIGID BOARD)
- WOOD, ROUGH (CONTINUOUS)
- WOOD, ROUGH (BLOCKING)
- WOOD, FINISH
- PLYWOOD (LARGE SCALE)
- FIBER CEMENT PANEL
- METAL LATH
- GYPSUM BOARD

SYMBOLS LEGEND

- CLASSROOM A201 — ROOM NAME & NUMBER
- A203 — DOOR NUMBER
- A — ALUMINUM-FRAMED GLAZED OPENING SYSTEM
- G.S. 2 — HOLLOW METAL-FRAMED GLAZED OPENING SYSTEM
- P1 — PARTITION TYPE
- ABC-01 — BUILDING ASSEMBLY TYPE
- SHEET NO. / DWG. NO. — BUILDING ELEVATION
- DWG. NO. / SHEET NO. — BUILDING SECTION
- DWG. NO. / SHEET NO. — WALL SECTION
- LOUVER
- KEYED NOTE
- NORTH ARROW
- HORIZONTAL BLINDS
- DWG. NO. 3/A8.01 SHEET NO. — INTERIOR ELEVATION
- DWG. NO. 6/A4.05 SHEET NO. — SECTION DETAIL
- ACCESS CONTROL
- DATUM ELEVATION

PROJECT INFORMATION

PROJECT IDENTIFICATION

PROJECT NAME - EMS ISD AGRICULTURAL SCIENCE COMPLEX

OWNER - EAGLE MOUNTAIN SAGINAW I.S.D.

PROJECT LOCATION - 1600 MUSTANG ROCK FORT WORTH, TEXAS 76179

TDLR PROJECT REGISTRATION NUMBER - TABS2025016811

APPROXIMATE BUILDING AREAS

GROUND LEVEL AREA.:

BUILDING A SHOW ARENA:	21,804 S.F.
MEZZANINE LEVEL AREA:	1,108 S.F.
BUILDING B BARN:	17,942 S.F.
TOTAL BLDG AREA.:	40,854 S.F.

LEGAL DESCRIPTION:

LOT 1

BLOCK 1

BUILDING CONSTRUCTION INFORMATION

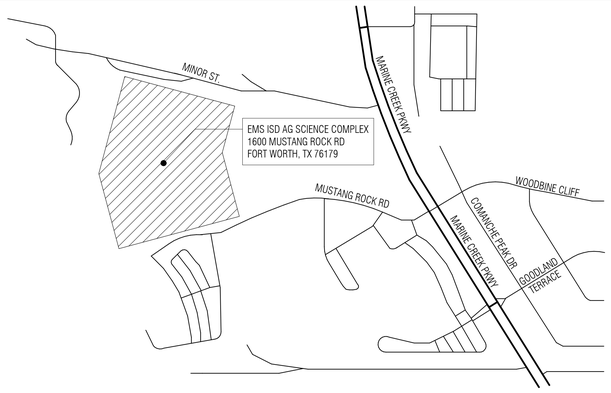
TYPE OF CONSTRUCTION (TABLE 601 - IBC): TYPE II-B

FIRE PROTECTION SYSTEM: AUTOMATIC SPRINKLER SYSTEM THROUGHOUT

GENERAL NOTES

1. Refer to the CODE-series sheets for Code Information, Design Criteria and Fire Protection Requirements.
2. Verify and document existing dimensions and conditions at the site before beginning construction. Notify the Architect of conflicts or variations prior to commencement of construction.
3. Based on the applicable design criteria, submit Shop Drawings of the proposed pattern of control joints in masonry veneer, CMU, gypsum board, plaster and stucco to the Architect for review and approval prior to construction.
4. In case of discrepancies in or between the Contract Documents, the greater quantity or better quality shall be bid. Clarifications regarding the discrepancies shall be requested from the Architect prior to construction, and the resulting interpretations implemented in accordance with the Contract Documents.

SITE LOCATION MAP



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VLK

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT — LAUREN V. BROWN — 23211 — STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

24-057.00

SHEET TITLE

INDEX TO DRAWINGS
GENERAL NOTES
ABBREVIATIONS

SHEET NO.

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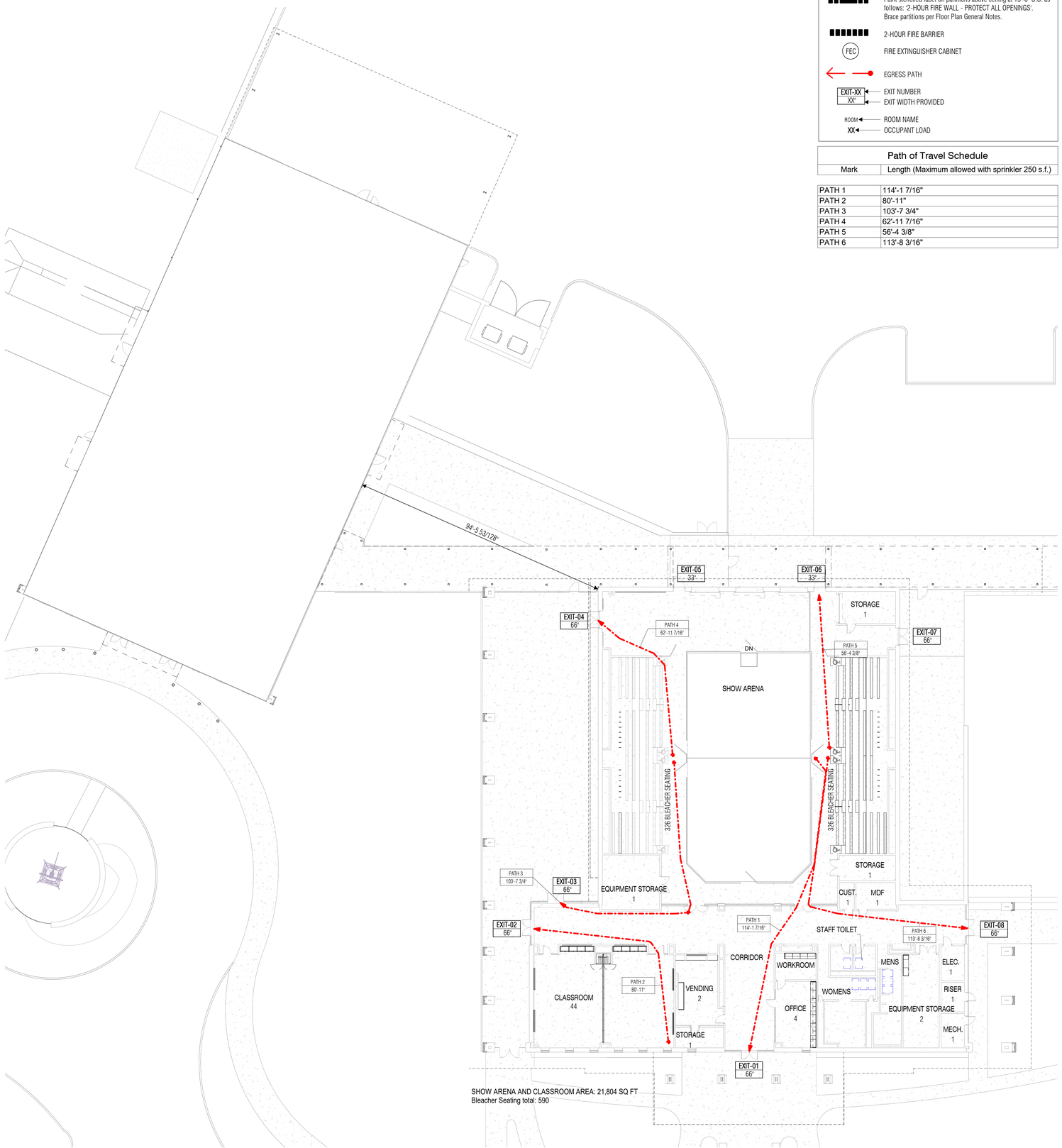

SHOW ARENA AND CLASSROOM AREA: 21,804 SQ FT
Bleacher Seating total: 590

1 CODE REVIEW PLAN - UNIT A
SCALE: 1/16" = 1'-0"

BUILDING DESIGN LEGEND

- 2-HOUR FIRE WALL. Extend partition to deck above and seal with firestopping sealant as required for fire-resistance requirements. Paint stenciled label on partitions above ceiling at 15'-0" O.C. as follows: '2-HOUR FIRE WALL - PROTECT ALL OPENINGS'. Brace partitions per Floor Plan General Notes.
- 2-HOUR FIRE BARRIER
- FEC — FIRE EXTINGUISHER CABINET
- EGRESS PATH
- EXIT-XX / XX' — EXIT NUMBER / EXIT WIDTH PROVIDED
- ROOM — ROOM NAME
- XX — OCCUPANT LOAD

Path of Travel Schedule

Mark	Length (Maximum allowed with sprinkler 250 s.f.)
PATH 1	114'-1 7/16"
PATH 2	80'-11"
PATH 3	103'-7 3/4"
PATH 4	62'-11 7/16"
PATH 5	56'-4 3/8"
PATH 6	113'-8 3/16"

DESIGN CRITERIA - BUILDING

APPLICABLE CODES
2021 International Building Codes (with City of Fort Worth Local Amendments)
2021 International Fire Codes (with City of Fort Worth Local Amendments)
2021 International Plumbing Codes (with City of Fort Worth Local Amendments)
2021 International Mechanical Codes (with City of Fort Worth Local Amendments)
2023 National Electric Code (with City of Fort Worth Local Amendments)
2015 International Energy Conservation Code (with City of Fort Worth Local Amendments)
2012 Texas Accessibility Standards
2018 Tarrant County Fire Code

Building Code: 2021 International Building Code

BUILDING CODE REFERENCE	ALLOWABLE/ REQUIRED	PROVIDED
CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS		
Section 504 - BUILDING HEIGHTS AND NUMBER OF STORIES		
Table 504.3 - Height in Feet	75 feet (max.)	36 feet
Table 504.4 - Number of Stories	3 stories (max.)	1 stories
		Classification: A-4 - Show Arena
		Type IIB - Sprinkled
Section 506 - BUILDING AREA		
Table 506.2 - Allowable Area Factor (At)	A-4 CLASSIFICATION 34,000 SF (max.)	
CHAPTER 6 - TYPES OF CONSTRUCTION		
Section 601 - GENERAL	TYPE II-B UNPROTECTED, FIRE SPRINKLERED	
Table 601 - Fire Resistance Rating Requirements for Building Elements	Type II-B	
Primary Structural Frame	0-hours	0-hours
Bearing Walls - Exterior	0-hours	0-hours
Bearing Walls - Interior	0-hours	0-hours
Non-bearing Walls and Partitions - Exterior (see Table 705.5)	0-hours	0-hours
Non-bearing Walls and Partitions - Interior	0-hours	0-hours
Floor Construction and Associated Secondary Structural Members	0-hours	0-hours
Roof Construction and Associated Secondary Structural Members	0-hours	0-hours
CHAPTER 10 - MEANS OF EGRESS		
Section 1004 - OCCUPANT LOAD		

ROOM NUMBER	ROOM NAME	OCCUPANCY	FLOOR AREA	AREA PER OCCUPANT	OCCUPANT LOAD
104	OFFICE	BUSINESS	362 SF	100	4 OCCUPANTS
108	EQUIPMENT STORAGE	STOR/MECH	456 SF	300	2 OCCUPANTS
109	MECH.	STOR/MECH	110 SF	300	1 OCCUPANTS
110	RISER	STOR/MECH	94 SF	300	1 OCCUPANTS
111	ELEC.	STOR/MECH	111 SF	300	1 OCCUPANTS
113	MDF	STOR/MECH	143 SF	300	1 OCCUPANTS
114	CUST.	STOR/MECH	54 SF	300	1 OCCUPANTS
115	STORAGE	STOR/MECH	195 SF	300	1 OCCUPANTS
116	SHOW ARENA	ASSEMBY, FIXED SEATING	6384 SF	SEE A2.51	590 OCCUPANTS
118	STORAGE	STOR/MECH	249 SF	300	1 OCCUPANTS
121	EQUIPMENT STORAGE	STOR/MECH	261 SF	300	1 OCCUPANTS
122	CLASSROOM	ED, CLASSROOM	1838 SF	20	44 OCCUPANTS
123	VENDING	KITCHEN	398 SF	200	2 OCCUPANTS
124	STORAGE	STOR/MECH	133 SF	300	1 OCCUPANTS

BUILDING A LEVEL ONE:
TOTAL OCCUPANT LOAD PER IBC: 651 OCCUPANTS

Section 1005 - MEANS OF EGRESS SIZING	A Classification: 250' Max Travel Distance	
With Sprinkler System		
Level One (715 Occupants x 0.15 Egress Factor)	107.25" (min.)	462"
CHAPTER 29 - PLUMBING SYSTEMS		
Table 2902.1 - Minimum Number of Required Plumbing Fixtures		
Total Occupancy of Show Arena Building A:	TOTAL COUNT: 651	
Male Occupants	326/75 = 5	
Water Closets	1 per 75 for the first 1,500 and 1 per 120 for the remander exceeding 1,500	3 W.C. + 2 Urinals
Lavatories	1 per 200	3
Female Occupants	326/ 40 = 9	
Water Closets	1 per 40 for the first 1,520 and 1 per 60 for the remainder exceeding 1,520	10
Lavatories	1 per 150	3
Drinking Fountains	1 per 1,000	2
Service Sinks	1	1

DESIGN CRITERIA - BUILDING ENVELOPE

Energy Code: 2015 IECC	Climate Zone: 3	Building Group: Non-Residential
LOCATION	REQUIRED	PROVIDED
OPAQUE BUILDING ENVELOPE		
ROOFS		
Insulated Entirely Above Deck	R-25ci (min.)	R-25ci
WALLS - ABOVE GRADE		
Mass (CMU)	R-7.6ci (min.)	R-8.4ci (Mineral Wool)
Mass (Metal Building)	R-13 + R-6.5ci (min.)	R-8.4ci (Mineral Wool)
Metal Framed (Studs)	R-13 + R-7.5ci (min.)	R-19 + 8.4ci (Fiberglass + Mineral Wool-ci)
FLOORS		
Mass (Concrete)	R-10ci (min.)	R-10ci
DOORS - OPAQUE		
Swinging	U-0.61 (max.)	U-0.29
FENESTRATION		
VERTICAL FENESTRATION - TYPE		
Fixed (Storefront)	U-0.46 (max.)	U-0.29
VERTICAL FENESTRATION - ORIENTATION		
South/ East/ West (PF < 0.2)	SHGC-0.25 (max.)	SHGC-0.25
South/ East/ West (0.2 < PF < 0.5)	SHGC-0.30 (max.)	SHGC-0.25
South/ East/ West (PF > 0.5)	SHGC-0.40 (max.)	SHGC-0.25
North (PF < 0.2)	SHGC-0.33 (max.)	SHGC-0.25
North (0.2 < PF < 0.5)	SHGC-0.37 (max.)	SHGC-0.25
North (PF > 0.5)	SHGC-0.40 (max.)	SHGC-0.25
ABBREVIATIONS		
CMU = Concrete Masonry Units	R = R-Value	SHGC = Solar Heat Gain Coefficient
PF = Projection Factor	U = U=Value	ci = Continuous Insulation

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT — KAMREN V. BROWN — 33711 — STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control QC
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
CODE REVIEW, BUILDING DESIGN CRITERIA & DIAGRAMS UNIT A

SHEET NO.
CODE.1

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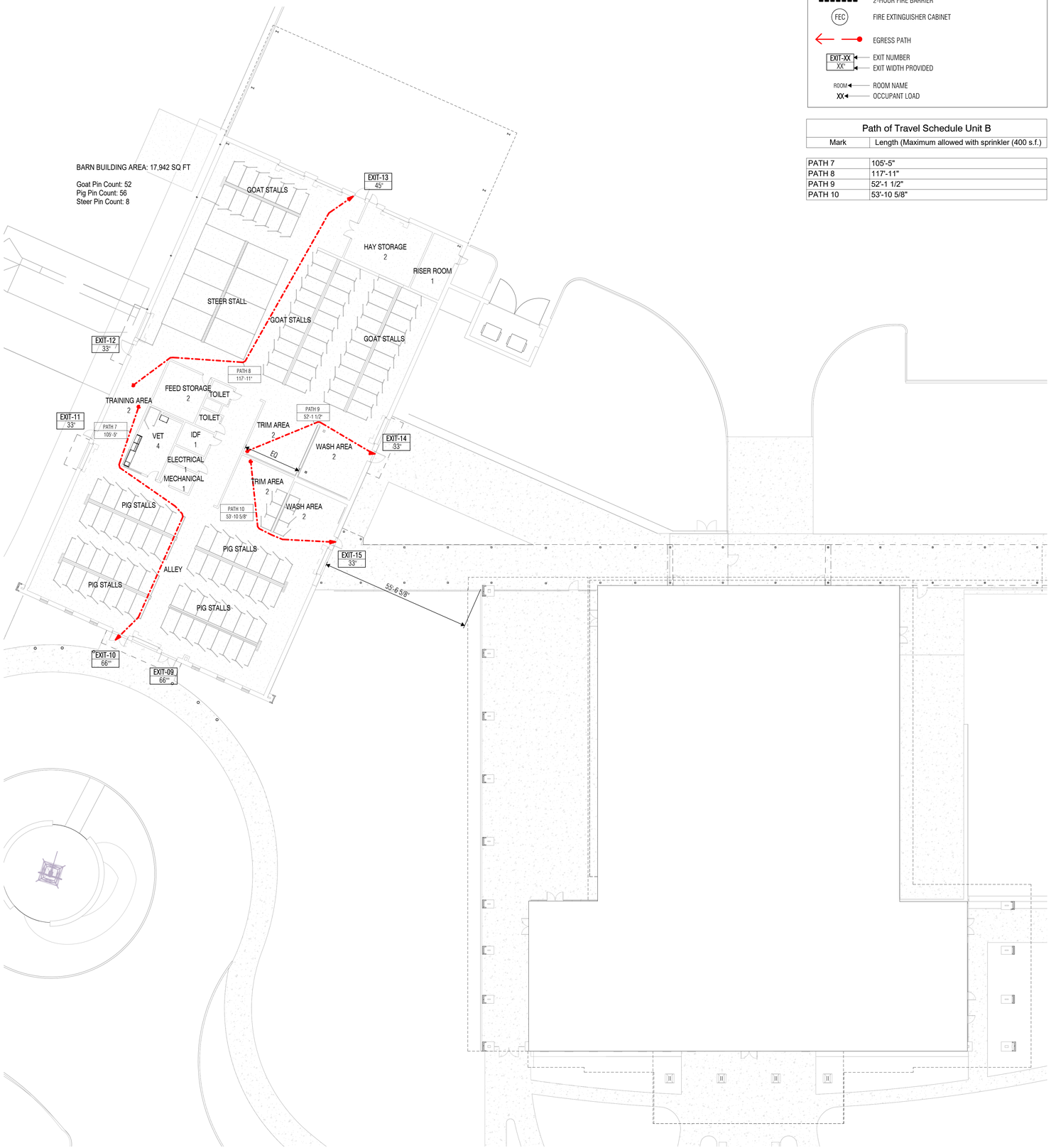

1 CODE REVIEW PLAN - UNIT B
SCALE: 1/16" = 1'-0"

BUILDING DESIGN LEGEND

- 2-HOUR FIRE WALL. Extend partition to deck above and seal with firestopping sealant as required for fire-resistance requirements. Paint stenciled label on partitions above ceiling at 15'-0" O.C. as follows: '2-HOUR FIRE WALL - PROTECT ALL OPENINGS'. Brace partitions per Floor Plan General Notes.
- 2-HOUR FIRE BARRIER
- FEC — FIRE EXTINGUISHER CABINET
- EGRESS PATH
- EXIT-XX / XX' — EXIT NUMBER / EXIT WIDTH PROVIDED
- ROOM — ROOM NAME
- XX — OCCUPANT LOAD

Path of Travel Schedule Unit B

Mark	Length (Maximum allowed with sprinkler (400 s.f.)
PATH 7	105'-5"
PATH 8	117'-11"
PATH 9	52'-1 1/2"
PATH 10	53'-10 5/8"

DESIGN CRITERIA - BUILDING

APPLICABLE CODES

2021 International Building Codes (with City of Fort Worth Local Amendments)
2021 International Fire Codes (with City of Fort Worth Local Amendments)
2021 International Plumbing Codes (with City of Fort Worth Local Amendments)
2021 International Mechanical Codes (with City of Fort Worth Local Amendments)
2023 National Electric Code (with City of Fort Worth Local Amendments)
2015 International Energy Conservation Code (with City of Fort Worth Local Amendments)
2012 Texas Accessibility Standards
2018 Tarrant County Fire Code

Building Code: 2021 International Building Code

BUILDING CODE REFERENCE	ALLOWABLE/ REQUIRED	PROVIDED
CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS		
Section 504 - BUILDING HEIGHTS AND NUMBER OF STORIES		
Table 504.3 - Height in Feet	75 feet (max.)	36 feet
Table 504.4 - Number of Stories	3 stories (max.)	1 stories
		Classification: U - Barn
		Type IIB - Sprinkled
Section 506 - BUILDING AREA		
Table 506.2 - Allowable Area Factor (At)	U CLASSIFICATION 38,000 SF (max.)	
CHAPTER 6 - TYPES OF CONSTRUCTION		
Section 601 - GENERAL	TYPE II-B UNPROTECTED, FIRE SPRINKLERED	
Table 601 - Fire Resistance Rating Requirements for Building Elements	Type II-B	
Primary Structural Frame	0-hours	0-hours
Bearing Walls - Exterior	0-hours	0-hours
Bearing Walls - Interior	0-hours	0-hours
Non-bearing Walls and Partitions - Exterior (see Table 705.5)	0-hours	0-hours
Non-bearing Walls and Partitions - Interior	0-hours	0-hours
Floor Construction and Associated Secondary Structural Members	0-hours	0-hours
Roof Construction and Associated Secondary Structural Members	0-hours	0-hours
CHAPTER 10 - MEANS OF EGRESS		
Section 1004 - OCCUPANT LOAD		

ROOM NUMBER	ROOM NAME	OCCUPANCY	FLOOR AREA	AREA PER OCCUPANT	OCCUPANT LOAD
134	WASH AREA	STOR/MECH	431 SF	300	2 OCCUPANTS
135	TRIM AREA	STOR/MECH	454 SF	300	2 OCCUPANTS
136	TRIM AREA	STOR/MECH	439 SF	300	2 OCCUPANTS
137	WASH AREA	STOR/MECH	441 SF	300	2 OCCUPANTS
145	HAY STORAGE	STOR/MECH	575 SF	300	2 OCCUPANTS
146	RISER ROOM	STOR/MECH	250 SF	300	1 OCCUPANTS
152	IDF	STOR/MECH	102 SF	300	1 OCCUPANTS
153	VET	BUSINESS	313 SF	100	4 OCCUPANTS
154	ELECTRICAL	STOR/MECH	67 SF	300	1 OCCUPANTS
155	MECHANICAL	STOR/MECH	89 SF	300	1 OCCUPANTS

BUILDING B LEVEL ONE:
TOTAL OCCUPANT LOAD PER IBC: 18 OCCUPANTS

Section 1005 - MEANS OF EGRESS SIZING	U Classification 400' Max Travel Distance	
With Sprinkler System		
Level One (17 Occupants x 0.15 Egress Factor)	114.75" (min.)	309"
CHAPTER 29 - PLUMBING SYSTEMS		
Table 2902.1 - Minimum Number of Required Plumbing Fixtures		
Total Occupancy of Agriculture Barn Building B:	TOTAL COUNT: 18	
Male Occupants	9/75 = 1	
Water Closets	1 per 75 for the first 1,500 and 1 per 120 for the remander exceeding 1,500	1 W.C.
Lavatories	1 per 200	1
Female Occupants	9/ 40 = 1	
Water Closets	1 per 40 for the first 1,520 and 1 per 60 for the remainder exceeding 1,520	1
Lavatories	1 per 150	1
Drinking Fountains	1 per 1,000	1
Service Sinks	1	0

DESIGN CRITERIA - BUILDING ENVELOPE

Energy Code: 2015 IECC	Climate Zone: 3	Building Group: Non-Residential
LOCATION	REQUIRED	PROVIDED
OPAQUE BUILDING ENVELOPE		
ROOFS		
Insulated Entirely Above Deck	R-25ci (min.)	R-25ci
WALLS - ABOVE GRADE		
Mass (CMU)	R-7.6ci (min.)	R-8.4ci (Mineral Wool)
Mass (Metal Building)	R-13 + R-6.5ci (min.)	R-8.4ci (Mineral Wool)
Metal Framed (Studs)	R-13 + R-7.5ci (min.)	R-19 + 8.4ci (Fiberglass + Mineral Wool-ci)
FLOORS		
Mass (Concrete)	R-10ci (min.)	R-10ci
DOORS - OPAQUE		
Swinging	U-0.61 (max.)	U-0.29
FENESTRATION		
VERTICAL FENESTRATION - TYPE		
Fixed (Storefront)	U-0.46 (max.)	U-0.29
VERTICAL FENESTRATION - ORIENTATION		
South/ East/ West (PF < 0.2)	SHGC-0.25 (max.)	SHGC-0.25
South/ East/ West (0.2 < PF < 0.5)	SHGC-0.30 (max.)	SHGC-0.25
South/ East/ West (PF > 0.5)	SHGC-0.40 (max.)	SHGC-0.25
North (PF < 0.2)	SHGC-0.33 (max.)	SHGC-0.25
North (0.2 < PF < 0.5)	SHGC-0.37 (max.)	SHGC-0.25
North (PF > 0.5)	SHGC-0.40 (max.)	SHGC-0.25
ABBREVIATIONS		
CMU = Concrete Masonry Units	R = R-Value	SHGC = Solar Heat Gain Coefficient
PF = Projection Factor	U = U=Value	ci = Continuous Insulation

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

LAUREN V. BROWN — REGISTERED ARCHITECT — 23211 — STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
CODE REVIEW, BUILDING DESIGN CRITERIA & DIAGRAMS UNIT B

SHEET NO.
CODE.2

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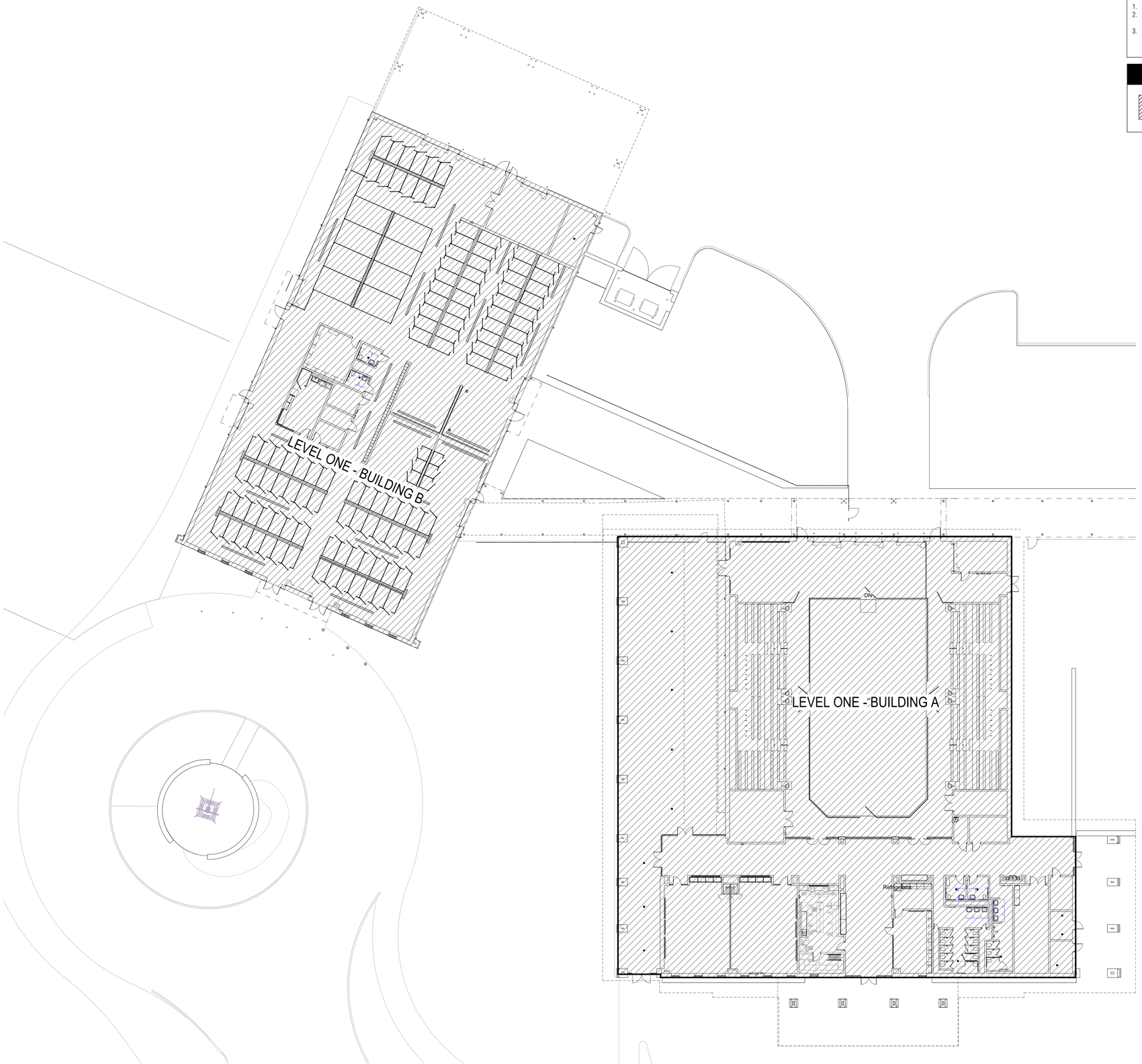
FIRE RESISTANCE NOTES

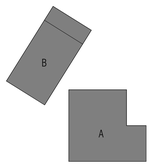
1. Provide Fire Protection at various building areas per the Fire Resistance Legend.
2. Construct partitions to achieve the fire-resistive requirements indicated on this plan and as indicated on the Reflective Ceiling Plans.
3. Provide firestopping as required to achieve the required fire-resistive rating at every penetration, perimeter joint, gap and other opening through rated floor, roof or wall.

FIRE RESISTANCE LEGEND

TYPE II-B - ZERO HOUR (SPRINKLERED) PER TABLE 601
ALL COMPONENTS ARE ZERO HOUR RATED



1 CODE REVIEW PLAN - LEVEL ONE
SCALE: 1/16" = 1'-0"



KEY PLAN

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#30111
STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
FIRE RESISTANCE - MAIN BUILDING - LEVEL ONE

SHEET NO.
CODE.3

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CONTROL POINTS	
CP-2 (5/8"CIRS) N: 6991706.97 E: 2309531.06 ELEV.=760.11	CP-7 (XST) N: 6992189.84 E: 2309310.15 ELEV.=761.60
CP-4 (XFD) N: 6991725.73 E: 2308866.05 ELEV.=752.04	CP-8 (XST) N: 6991678.28 E: 2309234.67 ELEV.=760.63
CP-5 (5/8"CIRS) N: 6991605.47 E: 2308358.22 ELEV.=731.31	CP-9 (XST) N: 6991658.61 E: 2308653.35 ELEV.=742.73

BENCHMARKS

BM#1: A "X-SET" ON THE WESTERN SIDE WALK ALONG MARINE CREEK PKWY. IT IS APPROX. 19.10 NORTHEAST OF THE EASTERN FENCE CORNER AT THE GAS UTILITIES SITE. IT IS APPROX. 45.40' SOUTHEAST OF A SIGN.

ELEV.=761.60'

BM#2: A "X-SET" ON THE NORTHERN SIDE WALK ALONG MUSTANG ROCK ROAD. IT IS APPROX. 12 NORTH OF A FIRE HYDRANT BEHIND THE BACK OF CURB. IT IS APPROX. 5', 3" NORTH OF THE MOST NORTHERLY WATER VALVE.

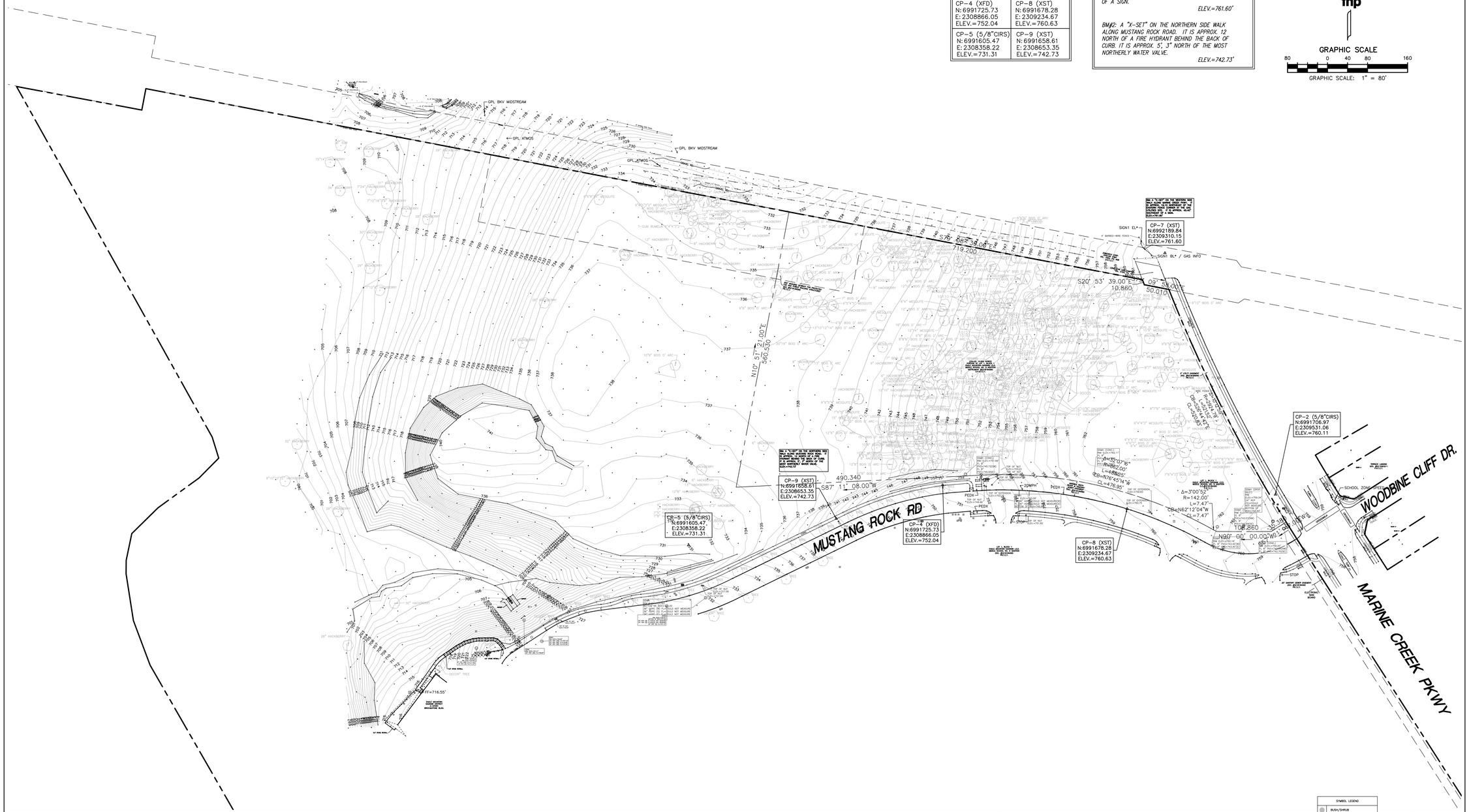
ELEV.=742.73'

tnp

GRAPHIC SCALE

80 0 40 80 160

GRAPHIC SCALE: 1" = 80'



SYMBOL LEGEND
BUSH/SHRUB
CONTROL POINT
ELECTRIC PULL BOX
FINISH FLOOR
FIRE HYDRANT
GAS METER
GAS VALVE
IRRIGATION CONTROL
LIGHTPOLE
SANITARY SEWER MANHOLE
SIGN/UTILITY MARKER
STORM DRAIN MANHOLE
TELEPHONE PEDESTAL
TELEPHONE VAULT
TRAFFIC SIGNAL
TREE
UNKNOWN VAULT
WATER METER
WATER VALVE

EXISTING TOPOGRAPHY PLAN

THIS TOPOGRAPHIC SURVEY WAS PREPARED BY TEAGUE, NALL AND PERKINS APRIL 23, 2024

BASIS OF BEARINGS:
Bearings of lines shown hereon refer to Grid North of the Texas Coordinate System of 1983 (North Central Zone; NAD83(2011) 2010.00) as derived locally from Allterra Central's Continuously Operating Reference Stations (CORS) via Real Time Kinematic (RTK) methods.

The elevations shown are NAVD88 and were derived from the above RTK observations. Orthometric heights were calculated by applying the Geoid12B model to the ellipsoid heights. This drawing is in grid.

Utility information shown hereon represents above ground visible evidence only. The existence or location of underground utilities has not been identified or designated. Additional utilities may affect this tract that are not shown hereon.

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LANDSCAPE / IRRIGATION

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

THIS SHEET IS FOR INFORMATION ONLY

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.

24-057.00

SHEET TITLE

EXISTING TOPOGRAPHY PLAN

SHEET NO.

C1.01

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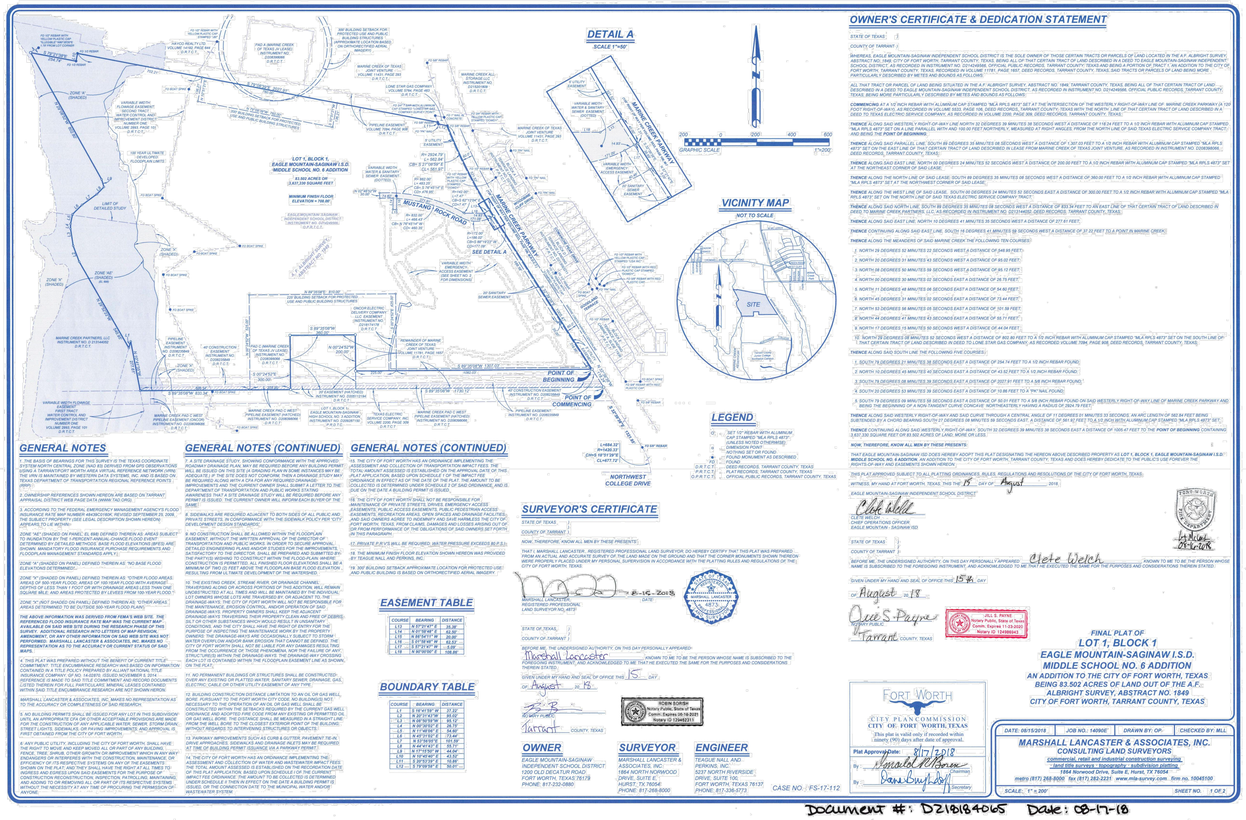


GENERAL NOTES

1. THE BASIS OF BEARINGS FOR THIS SURVEY IS THE TEXAS COORDINATE SYSTEM NORTH CENTRAL ZONE (4202) BEING DERIVED FROM GPS OBSERVATIONS AND HOLDING GRID DISTANCES. THE GRID COORDINATES SHOWN HEREON ARE THE NAD 83 (NA2011) EPOCH 2010.00 AND IS BASED ON THE TEXAS DEPARTMENT OF TRANSPORTATION REGIONAL REFERENCE POINTS (RRP).

2. OWNERSHIP REFERENCES SHOWN HEREON ARE BASED ON TARRANT APPRAISAL DISTRICT WEB PAGE DATA (WWW.TAD.ORG).

3. ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP NUMBER 48439C0315K, REVISED SEPTEMBER 25, 2009, THE SUBJECT PROPERTY (SEE LEGAL DESCRIPTION SHOWN HEREON) DEPICTED TO BE AS FOLLOWS:

ZONE "AE" (SHADED) ON PANEL: EL 690 DEFINED THEREON AS: AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD EVENT (100-YEAR) DETERMINED BY DETAILED METHODS. BASE FLOOD ELEVATIONS (BFE) ARE SHOWN. MANDATORY FLOOD INSURANCE PURCHASE REQUIREMENTS AND FLOODPLAIN MANAGEMENT STANDARDS APPLY.

ZONE "A" (SHADED ON PANEL) DEFINED THEREON AS: "NO BASE FLOOD ELEVATIONS DETERMINED."

ZONE "X" (SHADED ON PANEL) DEFINED THEREON AS: "OTHER FLOOD AREAS: AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN ONE SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 100-YEAR FLOOD."

ZONE "X" (SHADED ON PANEL) DEFINED THEREON AS: "OTHER AREAS": AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOOD PLAIN."

THE ABOVE INFORMATION WAS DERIVED FROM FEMA'S WEB SITE. THE REFERENCED FLOOD INSURANCE RATE MAP WAS THE CURRENT MAP AVAILABLE ON SAID WEB SITE DURING THE RESEARCH PHASE OF THIS SURVEY. ADDITIONAL RESEARCH INTO LETTERS OF MAP REVISION, REVISED FLOOD INSURANCE RATE MAPS, ETC. WAS BEYOND THE SCOPE PERFORMED. MARSHALL LANCASTER & ASSOCIATES, INC. MAKES NO REPRESENTATION AS TO THE ACCURACY OR CURRENT STATUS OF SAID MAPS.

4. THIS PLAT WAS PREPARED WITHOUT THE BENEFIT OF CURRENT TITLE WORK. ALL RECORDED EASEMENTS AND RIGHTS-OF-WAY SHOWN HEREON ARE CONTAINED IN A TITLE POLICY PREPARED BY ALLIANT NATIONAL TITLE INSURANCE COMPANY, GF NO. 14-02870, ISSUED NOVEMBER 3, 2014. MARSHALL LANCASTER & ASSOCIATES, INC. MAKES NO REPRESENTATIONS CITED THEREIN FOR FULL PARTICULARS. MINERAL LEASES CONTAINED WITHIN SAID TITLE ENCUMBRANCE RESEARCH ARE NOT SHOWN HEREON.

MARSHALL LANCASTER & ASSOCIATES, INC. MAKES NO REPRESENTATION AS TO THE ACCURACY OR COMPLETENESS OF SAID RESEARCH.

5. NO BUILDING PERMITS SHALL BE ISSUED FOR ANY LOT IN THIS SUBDIVISION UNTIL AN APPROPRIATE CFA OR OTHER ACCEPTABLE PROVISIONS ARE MADE FOR THE CONSTRUCTION OF WATER, SANITARY SEWER, STORM DRAIN, AND/OR PAVING FACILITIES NECESSARY TO PROVIDE ADEQUATE, ALL-WEATHER, FIRST DRAINAGE FROM THE CITY OF FORT WORTH.

6. ANY PUBLIC UTILITY, INCLUDING THE CITY OF FORT WORTH, SHALL HAVE THE RIGHT TO REMOVE AND KEEP REMOVED ALL OR PART OF ANY BUILDINGS, FENCE, TREE, SHRUB, OTHER GROWTH OR IMPROVEMENT WHICH IN ANY WAY ENDANGERS OR INTERFERES WITH THE CONSTRUCTION, MAINTENANCE, OR EFFICIENCY OF ITS RESPECTIVE SYSTEMS ON ANY OF THESE EASEMENTS SHOWN ON THE PLAT; AND THEY SHALL HAVE THE RIGHT AT ALL TIMES TO INGRESS AND EGRESS UPON SAID EASEMENTS FOR THE PURPOSE OF CONSTRUCTION, RECONSTRUCTION, INSPECTING, PATROLLING, MAINTAINING, AND ADDING TO OR REMOVING ALL OR PART OF ITS RESPECTIVE SYSTEMS WITHOUT THE NECESSITY AT ANY TIME OF PROCURING THE PERMISSION OF ANYONE.

GENERAL NOTES (CONTINUED)

7. A SITE DRAINAGE STUDY, DESIGNED CONFORMANCE WITH THE APPROVED ROADWAY DRAINAGE PLAN, MAY BE REQUIRED BEFORE ANY BUILDING PERMIT IS ISSUED. THE PURPOSE OF THE SITE DRAINAGE STUDY IS TO DETERMINE IF THE PROPOSED LOT THAT DOES NOT CONFORM, THEN A DRAINAGE STUDY MAY BE REQUIRED ALONG WITH A CFA FOR ANY REQUIRED DRAINAGE IMPROVEMENTS. FOR MORE INFORMATION ON THIS REQUIREMENT, REFER TO THE DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS STATING "AWARENESS THAT A SITE DRAINAGE STUDY WILL BE REQUIRED BEFORE ANY PERMIT IS ISSUED. THE CURRENT OWNER WILL INFORM EACH BUYER OF THE SAME."

8. SIDEWALKS ARE REQUIRED ADJACENT TO BOTH SIDES OF ALL PUBLIC AND PRIVATE STREETS. IN CONFORMANCE WITH THE SIDEWALK POLICY PER "CITY OF FORT WORTH STANDARDS".

9. NO CONSTRUCTION SHALL BE ALLOWED WITHIN THE FLOODPLAIN EASEMENT UNTIL A DEVELOPMENT PLAT APPLICATION IS SUBMITTED TO TRANSPORTATION AND PUBLIC WORKS. IN ORDER TO SECURE APPROVAL, DETAILED ENGINEERING PLANS AND/OR STUDIES FOR THE IMPROVEMENTS MUST BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO ANY PARTY(S) AGREEING TO CONSTRUCT WITHIN THE FLOODPLAIN. WHERE CONSTRUCTION IS PERMITTED, ALL FINISHED FLOOR ELEVATIONS SHALL BE A MINIMUM OF TWO FEET ABOVE THE 100-YEAR WATER SURFACE ELEVATION RESULTING FROM ULTIMATE DEVELOPMENT OF THE WATERSHED.

10. THE EXISTING CREEK, STREAM, RIVER, OR DRAINAGE CHANNEL TRAVERSING ALONG OR ACROSS PORTIONS OF THIS ADDITION, WILL REMAIN UNOBSTRUCTED AT ALL TIMES AND WILL BE MAINTAINED BY THE INDIVIDUAL OWNER(S) OF THE LOT(S) THAT ARE TRAVERSED BY OR ADJACENT TO THE DRAINAGE WAYS. THE CITY OF FORT WORTH WILL NOT BE RESPONSIBLE FOR THE MAINTENANCE, EROSION CONTROL, AND/OR OPERATION OF SAID DRAINAGE WAYS. PROPERTY OWNERS SHALL KEEP THE ADJACENT DRAINAGE WAYS TRAVERSING THEIR PROPERTY CLEAN AND FREE OF DEBRIS, SILT OR OTHER SUBSTANCES WHICH WOULD RESULT IN UNSANITARY CONDITIONS. AND THE CITY SHALL HAVE THE RIGHT OF ENTRY FOR THE PURPOSE OF INSPECTING THE MAINTENANCE WORK BY THE PROPERTY OWNER(S). IT SHALL BE THE RESPONSIBILITY OF THE OWNER(S) OF THE LOT(S) WHERE WATER OVERFLOW AND/OR BANK EROSION THAT CANNOT BE DEFINED. THE CITY OF FORT WORTH SHALL NOT BE LIABLE FOR ANY DAMAGES RESULTING FROM THE FLOW OF WATER ALONG SAID DRAINAGE WAYS, OR FOR THE CONDITION OF STRUCTURES WITHIN THE DRAINAGE WAYS. THE DRAINAGE WAY CROSSING EACH LOT IS CONTAINED WITHIN THE FLOODPLAIN EASEMENT (OR AS SHOWN, ON THE PLAT).

11. NO PERMANENT BUILDINGS OR STRUCTURES SHALL BE CONSTRUCTED OR PLACED UPON, OVER, OR ACROSS THE DRAINAGE EASEMENTS, EXCEPT ELECTRIC CABLE OR OTHER UTILITY EASEMENT (IF ANY) TYPE.

12. BUILDING CONSTRUCTION DISTANCE LIMITATION TO AN OIL OR GAS WELL BORE. PURSUANT TO THE FORT WORTH CITY CODE, NO BUILDING(S) NOT NECESSARY TO THE OPERATION OF AN OIL OR GAS WELL SHALL BE CONSTRUCTED WITHIN 300 FEET OF THE WELL BORE OF AN OIL OR GAS WELL. ORDINANCE AND ADOPTED FIRE CODE PRIOR ANY EXISTING OR PERMITTED OIL OR GAS WELL BORE. THE DISTANCE SHALL BE MEASURED IN A STRAIGHT LINE FROM THE WELL BORE TO THE NEAREST POINT OF THE BUILDING. WITHOUT REGARDED TO INTERVENING STRUCTURES OR OBJECTS.

13. FAIRWAY IMPROVEMENTS SUCH AS CURB & GUTTER, PAVEMENT TIE-IN, DRIVE APPROACHES, SIDEWALKS AND DRAINAGE INLETS MAY BE REQUIRED AT TIME OF BUILDING PERMIT ISSUANCE VIA A PERIMIT PERMIT.

14. THE CITY OF FORT WORTH HAS AN ORDINANCE IMPLEMENTING THE ASSESSMENT AND COLLECTION OF TRANSPORTATION IMPACT FEES. THE TOTAL AMOUNT ASSESSED IS ESTABLISHED ON THE RECORDATION DATE OF THIS PLAT APPLICATION, BASED UPON SCHEDULE "I" OF THE IMPACT FEE ORDINANCE IN EFFECT AS OF THE DATE OF THE PLAT. THE AMOUNT TO BE PAID IS BASED UPON SCHEDULE "II" OF THE IMPACT FEE ORDINANCE, AND IS DUE ON THE DATE A BUILDING PERMIT IS ISSUED.

15. THE CITY OF FORT WORTH SHALL NOT BE RESPONSIBLE FOR MAINTENANCE OF PRIVATE STREETS, DRIVES, EMERGENCY ACCESS EASEMENTS, PUBLIC ACCESS EASEMENTS, PUBLIC PEDESTRIAN ACCESS EASEMENTS, RECREATION AREAS, OPEN SPACES AND DRAINAGE FACILITIES, AND SAID OWNERS AGREE TO INDEMNIFY AND SAVE HARMLESS THE CITY OF FORT WORTH FROM ANY AND ALL CLAIMS FOR DAMAGES TO PERSONS OR PROPERTY OF FOR PERFORMANCE OF THE OBLIGATIONS OF SAID OWNERS SET FORTH IN THIS PARAGRAPH.

17. PRIVATE P.R.V.S WILL BE REQUIRED. WATER PRESSURE EXCEEDS 80 P.S.I.

18. THE MINIMUM FINISH FLOOR ELEVATION SHOWN HEREON WAS PROVIDED BY EAGLE NALL AND PERKINS, INC.

19. 300' BUILDING SETBACK APPROXIMATE LOCATION FOR PROTECTED USE AND PUBLIC BUILDING IS BASED ON ORTHORECTIFIED AERIAL IMAGERY.

GENERAL NOTES (CONTINUED)

16. THE CITY OF FORT WORTH HAS AN ORDINANCE IMPLEMENTING THE ASSESSMENT AND COLLECTION OF TRANSPORTATION IMPACT FEES. THE TOTAL AMOUNT ASSESSED IS ESTABLISHED ON THE RECORDATION DATE OF THIS PLAT APPLICATION, BASED UPON SCHEDULE "I" OF THE IMPACT FEE ORDINANCE IN EFFECT AS OF THE DATE OF THE PLAT. THE AMOUNT TO BE PAID IS BASED UPON SCHEDULE "II" OF THE IMPACT FEE ORDINANCE, AND IS DUE ON THE DATE A BUILDING PERMIT IS ISSUED.

EASEMENT TABLE

COURSE	BEARING	DISTANCE
L10	N 87°49'39" E	35.36'
L11	N 87°49'39" E	83.35'
L12	N 87°49'39" E	83.35'
L13	S 37°39'47" E	24.73'
L14	N 41°49'56" E	64.80'
L15	N 41°49'56" E	64.80'
L16	N 48°41'43" E	101.83'
L17	S 87°49'39" E	35.71'
L18	S 87°49'39" E	83.35'
L19	N 41°49'56" E	43.52'
L20	S 37°39'47" E	52.89'
L21	S 37°39'47" E	56.61'

BOUNDARY TABLE

COURSE	BEARING	DISTANCE
L1	S 87°49'39" E	57.93'
L2	S 87°49'39" E	83.02'
L3	S 87°49'39" E	83.35'
L4	S 37°39'47" E	24.73'
L5	N 41°49'56" E	64.80'
L6	N 41°49'56" E	64.80'
L7	N 48°41'43" E	101.83'
L8	N 87°49'39" W	35.71'
L9	N 87°49'39" W	83.35'
L10	N 87°49'39" W	43.52'
L11	S 37°39'47" E	52.89'
L12	S 37°39'47" E	56.61'

SURVEYOR'S CERTIFICATE

STATE OF TEXAS }
COUNTY OF TARRANT }

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

THAT I, MARSHALL LANCASTER, REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM AN ACTUAL AND ACCURATE SURVEY OF THE LAND AND ON THE GROUND AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY PERSONAL SUPERVISION IN ACCORDANCE WITH THE PLATTING RULES AND REGULATIONS OF THE CITY OF FORT WORTH, TEXAS.

REGISTERED PROFESSIONAL LAND SURVEYOR NO. 4873

STATE OF TEXAS }
COUNTY OF TARRANT }

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED Marshall Lancaster KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS 15 DAY OF August A.D. 18

NOTARY PUBLIC IN AND FOR Tarrant COUNTY, TEXAS

JOHN BOSH
Notary Public, State of Texas
Comm. Expires 04-18-2021
Notary ID 129495311

OWNER

EAGLE MOUNTAIN-SAGINAW INDEPENDENT SCHOOL DISTRICT
1200 OLD DECATUR ROAD
FORT WORTH, TEXAS 76179
PHONE: 817-232-0880

SURVEYOR

MARSHALL LANCASTER & ASSOCIATES, INC.
1884 NORTH NORWOOD
ROAD, SUITE C
HURST, TX 76054
PHONE: 817-268-6000

ENGINEER

TEAGUE NALL AND PERKINS, INC.
5237 NORTH RIVERSIDE
DRIVE, SUITE 100
FORT WORTH, TEXAS 76137
PHONE: 817-336-5773

CASE NO.: FS-17-112

OWNER'S CERTIFICATE & DEDICATION STATEMENT

STATE OF TEXAS }
COUNTY OF TARRANT }

WHEREAS, EAGLE MOUNTAIN-SAGINAW INDEPENDENT SCHOOL DISTRICT IS THE SOLE OWNER OF THOSE CERTAIN TRACTS OR PARCELS OF LAND LOCATED IN THE A.F. ALBRIGHT SURVEY, ABSTRACT NO. 1849, CITY OF FORT WORTH, TARRANT COUNTY, TEXAS, BEING ALL OF THAT CERTAIN TRACT OF LAND DESCRIBED IN A DEED TO EAGLE MOUNTAIN-SAGINAW INDEPENDENT SCHOOL DISTRICT, AS RECORDED IN INSTRUMENT NO. D214149856, OFFICIAL PUBLIC RECORDS, TARRANT COUNTY, TEXAS, BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS: BEGINNING AT A 1/2 INCH REBAR WITH ALUMINUM CAP STAMPED "MLA RPLS #873" SET AT THE INTERSECTION OF THE WESTERLY RIGHT-OF-WAY LINE OF MARINE CREEK PARKWAY (A 120 FOOT RIGHT-OF-WAY), AS RECORDED IN VOLUME 6333, PAGE 106, DEED RECORDS, TARRANT COUNTY, TEXAS WITH THE NORTH LINE OF THAT CERTAIN TRACT OF LAND DESCRIBED IN A DEED TO TEXAS ELECTRIC SERVICE COMPANY, AS RECORDED IN VOLUME 2200, PAGE 268, DEED RECORDS, TARRANT COUNTY, TEXAS;

THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE NORTH 30 DEGREES 39 MINUTES 36 SECONDS WEST A DISTANCE OF 1674.69 FEET TO A 1/2 INCH REBAR WITH ALUMINUM CAP STAMPED "MLA RPLS #873" SET ON A LINE PARALLEL WITH AND 100.00 FEET NORTHERLY, MEASURED AT RIGHT ANGLES, FROM THE NORTH LINE OF SAID TEXAS ELECTRIC SERVICE COMPANY TRACT, AND BEING THE **POINT OF BEGINNING**;

THENCE ALONG SAID PARALLEL LINE, SOUTH 89 DEGREES 35 MINUTES 08 SECONDS WEST A DISTANCE OF 1301.93 FEET TO A 1/2 INCH REBAR WITH ALUMINUM CAP STAMPED "MLA RPLS #873" SET AT THE NORTHWEST CORNER OF SAID TRACT OF LAND DESCRIBED IN LEASE FROM MARINE CREEK OF TEXAS JOINT VENTURE, AS RECORDED IN INSTRUMENT NO. D208099856, DEED RECORDS, TARRANT COUNTY, TEXAS;

THENCE ALONG SAID EAST LINE, NORTH 00 DEGREES 24 MINUTES 52 SECONDS WEST A DISTANCE OF 200.00 FEET TO A 1/2 INCH REBAR WITH ALUMINUM CAP STAMPED "MLA RPLS #873" SET AT THE NORTHEAST CORNER OF SAID LEASE;

THENCE ALONG THE NORTH LINE OF SAID LEASE, SOUTH 89 DEGREES 35 MINUTES 08 SECONDS WEST A DISTANCE OF 380.00 FEET TO A 1/2 INCH REBAR WITH ALUMINUM CAP STAMPED "MLA RPLS #873" SET AT THE NORTHWEST CORNER OF SAID LEASE;

THENCE ALONG THE WEST LINE OF SAID LEASE, SOUTH 00 DEGREES 24 MINUTES 52 SECONDS EAST A DISTANCE OF 300.00 FEET TO A 1/2 INCH REBAR WITH ALUMINUM CAP STAMPED "MLA RPLS #873" SET ON THE NORTH LINE OF SAID TEXAS ELECTRIC SERVICE COMPANY TRACT;

THENCE ALONG SAID NORTH LINE, SOUTH 89 DEGREES 35 MINUTES 08 SECONDS WEST A DISTANCE OF 833.34 FEET TO AN EAST LINE OF THAT CERTAIN TRACT OF LAND DESCRIBED IN DEED TO MARINE CREEK PARTNERS, LLC, AS RECORDED IN INSTRUMENT NO. D212156532, DEED RECORDS, TARRANT COUNTY, TEXAS;

THENCE ALONG SAID EAST LINE, NORTH 10 DEGREES 41 MINUTES 39 SECONDS WEST A DISTANCE OF 277.81 FEET;

THENCE CONTINUING ALONG SAID EAST LINE, SOUTH 18 DEGREES 43 MINUTES 39 SECONDS WEST A DISTANCE OF 31.72 FEET TO A POINT IN MARINE CREEK;

THENCE ALONG THE MEANDERS OF SAID MARINE CREEK THE FOLLOWING TEN COURSES:

1. NORTH 28 DEGREES 50 MINUTES 22 SECONDS WEST A DISTANCE OF 248.84 FEET;
2. NORTH 39 DEGREES 31 MINUTES 43 SECONDS WEST A DISTANCE OF 85.82 FEET;
3. NORTH 39 DEGREES 36 MINUTES 59 SECONDS WEST A DISTANCE OF 95.10 FEET;
4. NORTH 40 DEGREES 49 MINUTES 50 SECONDS EAST A DISTANCE OF 28.76 FEET;
5. NORTH 11 DEGREES 48 MINUTES 06 SECONDS EAST A DISTANCE OF 54.46 FEET;
6. NORTH 43 DEGREES 31 MINUTES 50 SECONDS EAST A DISTANCE OF 73.44 FEET;
7. NORTH 53 DEGREES 46 MINUTES 09 SECONDS EAST A DISTANCE OF 191.38 FEET;
8. NORTH 44 DEGREES 47 MINUTES 43 SECONDS EAST A DISTANCE OF 95.71 FEET;
9. NORTH 17 DEGREES 19 MINUTES 59 SECONDS WEST A DISTANCE OF 44.09 FEET;
10. NORTH 39 DEGREES 36 MINUTES 59 SECONDS WEST A DISTANCE OF 465.84 FEET TO A 1/2 INCH REBAR WITH ALUMINUM CAP STAMPED "MLA RPLS #873" SET ON THE SOUTH LINE OF THAT CERTAIN TRACT OF LAND DESCRIBED IN DEED TO LONE STAR GAS COMPANY, AS RECORDED VOLUME 788, PAGE 666, DEED RECORDS, TARRANT COUNTY, TEXAS;

THENCE ALONG SAID SOUTH LINE THE FOLLOWING FIVE COURSES:

1. SOUTH 76 DEGREES 21 MINUTES 38 SECONDS EAST A DISTANCE OF 264.74 FEET TO A 1/2 INCH REBAR FOUND;
2. NORTH 10 DEGREES 41 MINUTES 43 SECONDS EAST A DISTANCE OF 43.92 FEET TO A 1/2 INCH REBAR FOUND;
3. SOUTH 79 DEGREES 08 MINUTES 39 SECONDS EAST A DISTANCE OF 2037.91 FEET TO A 5/8 INCH REBAR FOUND;
4. SOUTH 79 DEGREES 23 MINUTES 39 SECONDS EAST A DISTANCE OF 19.96 FEET TO A "PK" NAIL FOUND;
5. SOUTH 79 DEGREES 08 MINUTES 39 SECONDS EAST A DISTANCE OF 80.91 FEET TO A 5/8 INCH REBAR FOUND ON SAID WESTERLY RIGHT-OF-WAY LINE OF MARINE CREEK PARKWAY AND BEING THE BEGINNING OF A NON-TANGENT CURVE CONCAVE NORTHEASTERLY HAVING A RADIUS OF 2824.79 FEET;

THENCE ALONG SAID WESTERLY RIGHT-OF-WAY AND SAID CURVE THROUGH A CENTRAL ANGLE OF 11 DEGREES 51 MINUTES 33 SECONDS, AN ARC LENGTH OF 582.09 FEET BEING SUBTENDED BY A CHORD BEARING SOUTH 21 DEGREES 56 MINUTES 56 SECONDS EAST, A DISTANCE OF 581.02 FEET TO A 5/8 INCH REBAR WITH ALUMINUM CAP STAMPED "MLA RPLS #873" SET;

THENCE CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 30 DEGREES 39 MINUTES 36 SECONDS EAST A DISTANCE OF 1005.47 FEET TO THE **POINT OF BEGINNING** CONTAINING 3,637,230 SQUARE FEET OR 83.502 ACRES OF LAND, MORE OR LESS.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

THAT EAGLE MOUNTAIN-SAGINAW ISD DOES HEREBY ADOPT THIS PLAT DESIGNATING THE HEREON ABOVE DESCRIBED PROPERTY AS **LOT 1, BLOCK 1, EAGLE MOUNTAIN-SAGINAW I.S.D. MIDDLE SCHOOL NO. 6 ADDITION**, AN ADDITION TO THE CITY OF FORT WORTH, TARRANT COUNTY, TEXAS AND DOES HEREBY DEDICATE TO THE PUBLIC USE FOREVER THE RIGHTS-OF-WAY AND EASEMENTS SHOWN HEREON;

THIS PLAT APPROVED SUBJECT TO ALL PLATTING ORDINANCES, RULES, REGULATIONS AND RESOLUTIONS OF THE CITY OF FORT WORTH, TEXAS.

WITNESS, MY HAND AT FORT WORTH, TEXAS, THIS THE 15 DAY OF August 2018.

EAGLE MOUNTAIN-SAGINAW INDEPENDENT SCHOOL DISTRICT

Clete Welch
CHIEF OPERATIONS OFFICER
EAGLE MOUNTAIN - SAGINAW ISD

STATE OF TEXAS }
COUNTY OF TARRANT }

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED Clete Welch KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS 15 DAY OF August A.D. 18

NOTARY PUBLIC IN AND FOR Tarrant COUNTY, TEXAS

JILL S. PAYNE
Notary Public, State of Texas
Comm. Expires 11-29-2021
Notary ID 131695041

FORT WORTH
CITY PLAN COMMISSION
CITY OF FORT WORTH, TEXAS
This plat is valid only if recorded within ninety (90) days after date of approval.
Plat Approval Date: 8/7/2018
By: Jeanette E. Brown, Secretary
By: Diana Burgess, Secretary

LEGEND

- ○ — SET 1/2" REBAR WITH ALUMINUM CAP STAMPED "MLA RPLS #873" (UNLESS NOTED OTHERWISE)
- "X" — NOTHING SET OR FOUND
- ● — FOUND MONUMENT AS DESCRIBED
- D.R.T.C.T. — DEED RECORDS, TARRANT COUNTY, TEXAS
- P.R.T.C.T. — PLAT RECORDS, TARRANT COUNTY, TEXAS
- O.P.R.T.C.T. — OFFICIAL PUBLIC RECORDS, TARRANT COUNTY, TEXAS

EMERGENCY ACCESS EASEMENT LINE TABLE

COURSE	BEARING	DISTANCE
L1	S 37°39'39" E	54.69'
L2	S 37°37'57" W	3.46'
L3	N 37°39'39" W	76.15'

EMERGENCY ACCESS EASEMENT CURVE TABLE

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	CHORD DISTANCE	CHORD BEARING
C1	22.00'	31.09'	81°00'14"	28.58'	S 06°50'54" W
C2	25.00'	12.95'	31°07'54"	12.72'	S 51°37'57" W
C3	25.00'	8.14'	18°39'00"	8.10'	S 87°49'39" W
C4	11.00'	4.53'	024°39'54"	4.51'	N 81°54'24" E
C5	25.00'	10.71'	17°58'35"	10.70'	N 71°13'31" E
C6	25.00'	8.14'	18°39'00"	8.10'	N 87°49'39" E
C7	22.00'	6.97'	18°09'21"	6.94'	N 46°14'19" W
C8	5.98'	9.33'	164°58'53"	11.83'	S 89°39'39" E
C9	22.00'	31.09'	90°00'00"	28.00'	S 72°20'24" W
C10	22.00'	31.42'	90°00'00"	28.28'	S 17°39'36" E

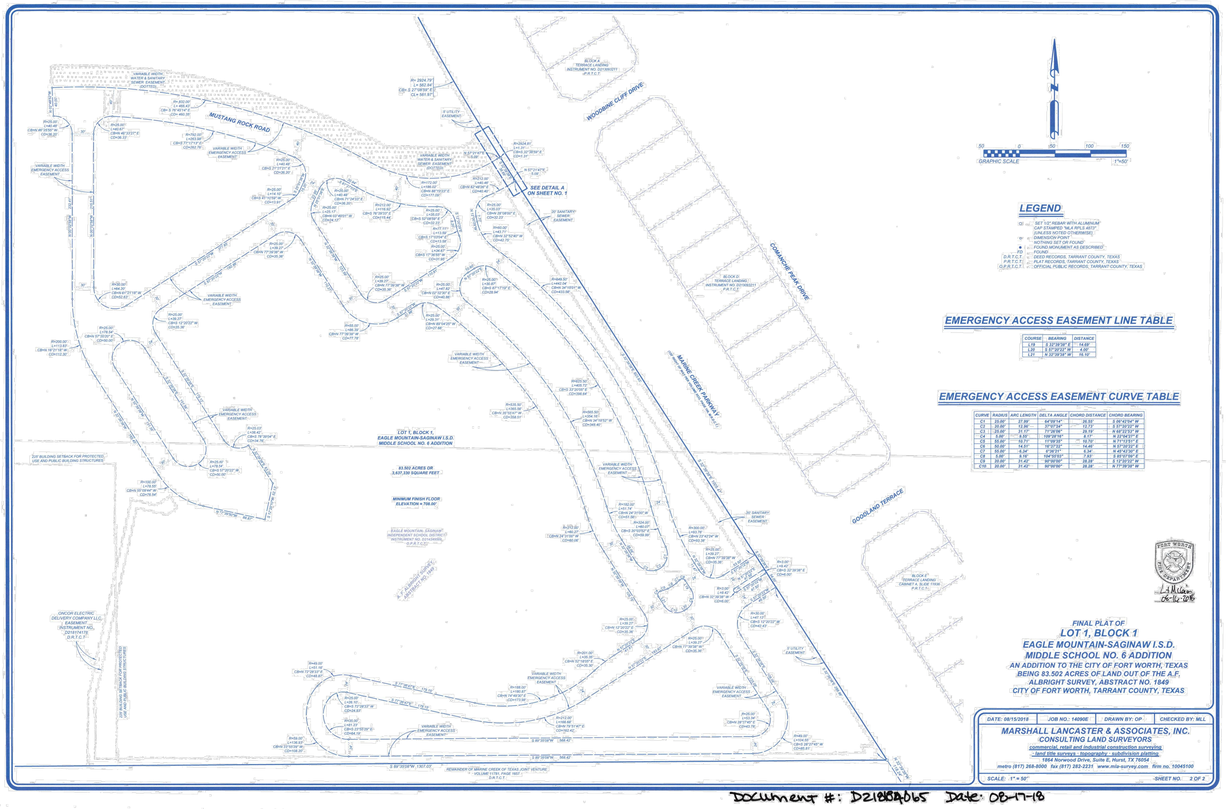
FINAL PLAT OF
LOT 1, BLOCK 1
EAGLE MOUNTAIN-SAGINAW I.S.D.
MIDDLE SCHOOL NO. 6 ADDITION
AN ADDITION TO THE CITY OF FORT WORTH, TEXAS
BEING 83.502 ACRES OF LAND OUT OF THE A.F.
ALBRIGHT SURVEY, ABSTRACT NO. 1849
CITY OF FORT WORTH, TARRANT COUNTY, TEXAS

DATE: 08/15/2018	JOB NO.: 140906	DRAWN BY: GP	CHECKED BY: MLL

MARSHALL LANCASTER & ASSOCIATES, INC.
CONSULTING LAND SURVEYORS
commercial, retail and industrial construction surveying
land title surveys - topographic - subdivision platting
1884 Norwood Drive, Suite E, Hurst, TX 76054
metro (817) 268-6000 fax (817) 283-2231 www.mla-survey.com firm no. 10045100

SCALE: 1" = 50' — SHEET NO.: 2 OF 2

Document #: D218184065 Date: 08-17-18



LEGEND

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C4	11.00'	4.53'	024°39'54"	4.51'	N 81°54'24" E
C5	25.00'	10.71'	17°58'35"	10.70'	N 71°13'31" E
C6	25.00'	8.14'	18°39'00"	8.10'	N 87°49'39" E
C7	22.00'	6.97'	18°09'21"	6.94'	N 46°14'19" W
C8	5.98'	9.33'	164°58'53"	11.83'	S 89°39'39" E
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FINAL PLAT OF
LOT 1, BLOCK 1
EAGLE MOUNTAIN-SAGINAW I.S.D.
MIDDLE SCHOOL NO. 6 ADDITION
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Document #: D218184065 Date: 08-17-18

VLK

ARCHITECT

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LANDSCAPE / IRRIGATION

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

THIS SHEET IS FOR INFORMATION ONLY

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
EXISTING PLAT

SHEET NO.
C1.02

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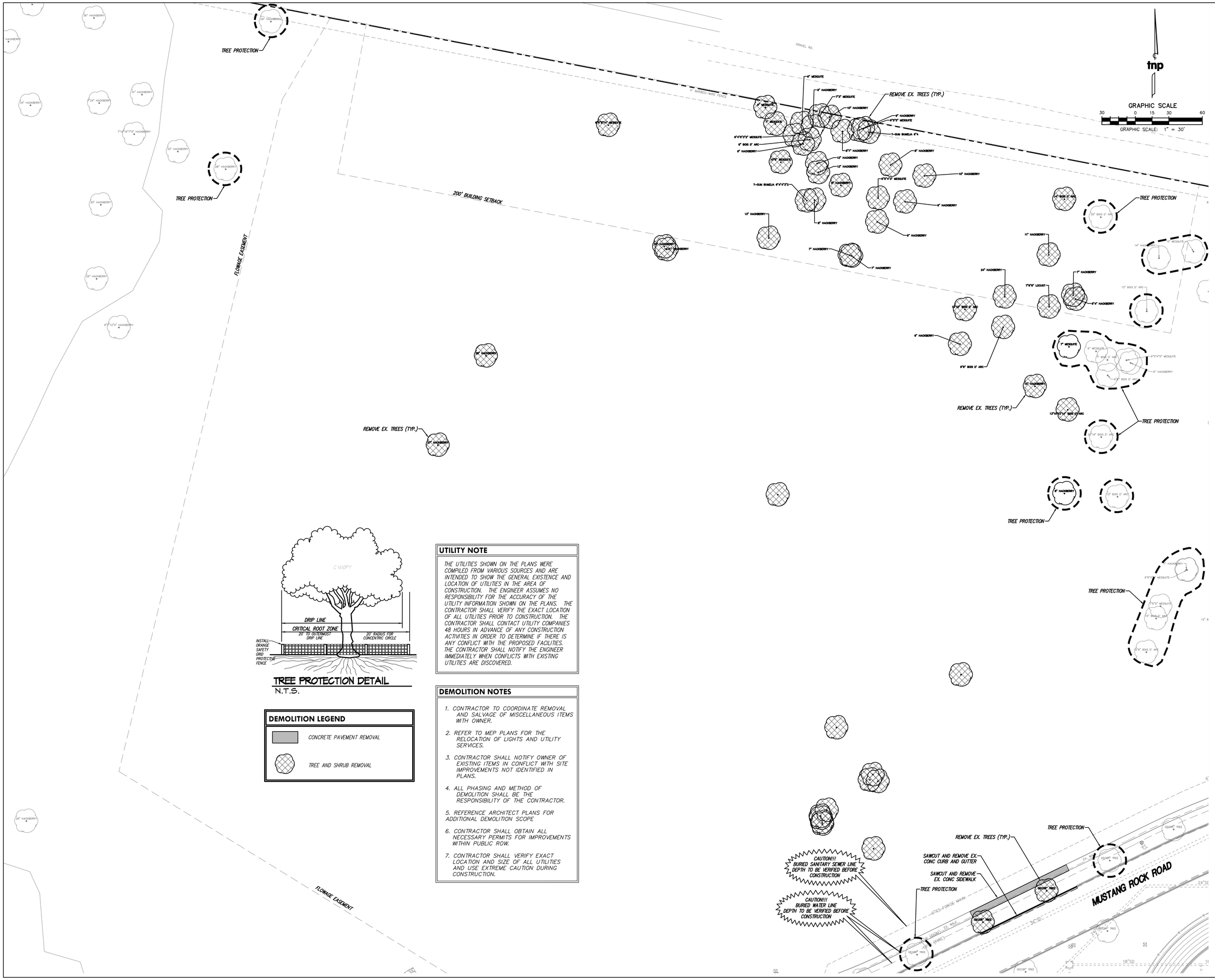

TREE PROTECTION DETAIL
N.T.S.

DEMOLITION LEGEND

- CONCRETE PAVEMENT REMOVAL
- TREE AND SHRUB REMOVAL

UTILITY NOTE

THE UTILITIES SHOWN ON THE PLANS WERE COMPILED FROM VARIOUS SOURCES AND ARE INTENDED TO SHOW THE GENERAL EXISTENCE AND LOCATION OF UTILITIES IN THE AREA OF CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITY INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES IN ORDER TO DETERMINE IF THERE IS ANY CONFLICT WITH THE PROPOSED FACILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS WITH EXISTING UTILITIES ARE DISCOVERED.

DEMOLITION NOTES

1. CONTRACTOR TO COORDINATE REMOVAL AND SALVAGE OF MISCELLANEOUS ITEMS WITH OWNER.
2. REFER TO MEP PLANS FOR THE RELOCATION OF LIGHTS AND UTILITY SERVICES.
3. CONTRACTOR SHALL NOTIFY OWNER OF EXISTING ITEMS IN CONFLICT WITH SITE IMPROVEMENTS NOT IDENTIFIED IN PLANS.
4. ALL PHASING AND METHOD OF DEMOLITION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. REFERENCE ARCHITECT PLANS FOR ADDITIONAL DEMOLITION SCOPE
6. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR IMPROVEMENTS WITHIN PUBLIC ROW.
7. CONTRACTOR SHALL VERIFY EXACT LOCATION AND SIZE OF ALL UTILITIES AND USE EXTREME CAUTION DURING CONSTRUCTION.

tnp

GRAPHIC SCALE
30 0 15 30 60
GRAPHIC SCALE: 1" = 30'

ARCHITECT
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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
MATTHEW G. MANTONG
146154
LICENSED
PROFESSIONAL ENGINEER
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
DEMOLITION PLAN

SHEET NO.
C1.03

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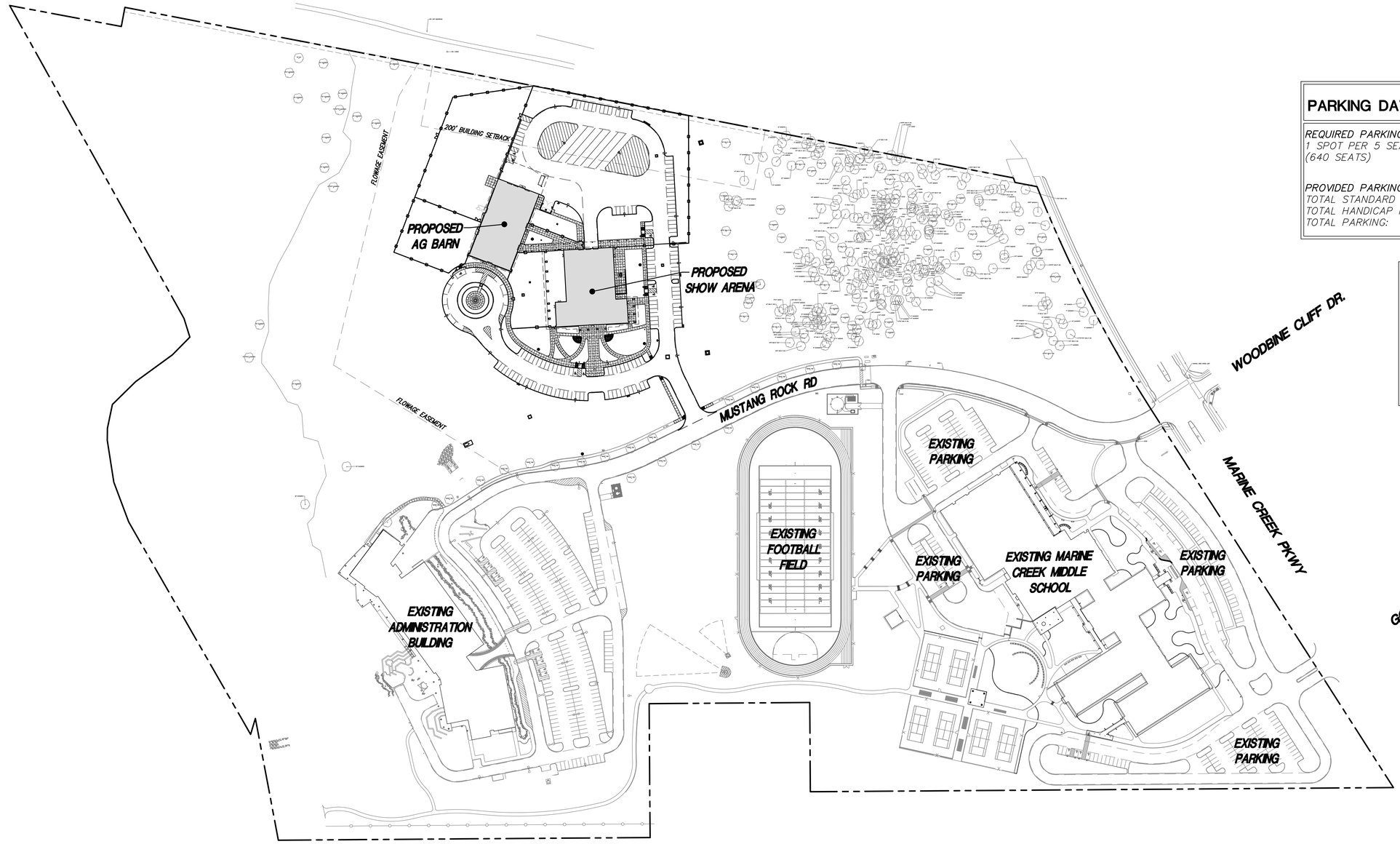

tnp

GRAPHIC SCALE

100 0 50 100 200

GRAPHIC SCALE: 1" = 100'

LEGEND

- 5" CONCRETE FLATWORK
- 4" CONCRETE FLATWORK
- PAINTED DIRECTIONAL ARROWS

PARKING DATA (AG BARN)

REQUIRED PARKING (ARENA):
1 SPOT PER 5 SEATS: 128 SPACES
(640 SEATS)

PROVIDED PARKING:
TOTAL STANDARD PARKING: 155 SPACES
TOTAL HANDICAP PARKING: 7 SPACES
TOTAL PARKING: 162 SPACES

ZONING CF

FRONT YARD:
20' FRONT YARD
20' BLDG SETBACK

REAR YARD:
5' REAR YARD
5' BLDG SETBACK

OWNER/APPLICANT:
EMS I.S.D.
1600 MUSTANG ROCK ROAD
FORT WORTH, TEXAS 76179
817.232.0880

PREPARED BY:
TEAGUE NALL & PERKINS, INC.
5237 N. RIVERSIDE DRIVE, SUITE 100
FORT WORTH, TEXAS 76137
817.336.5773
CONTACT: MATTHEW G. MANTONG

DATE PREPARED:
MAY 2025

OVERALL SITE PLAN

FOR
AGRICULTURAL SCIENCE COMPLEX
EAGLE MOUNTAIN-SAGINAW
INDEPENDENT SCHOOL DISTRICT

VLK

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

MATTHEW G. MANTONG
146154
LICENSED
PROFESSIONAL ENGINEER
05/28/2025

ISSUED: MAY 28, 2025

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Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
OVERALL SITE PLAN

SHEET NO.
C1.04

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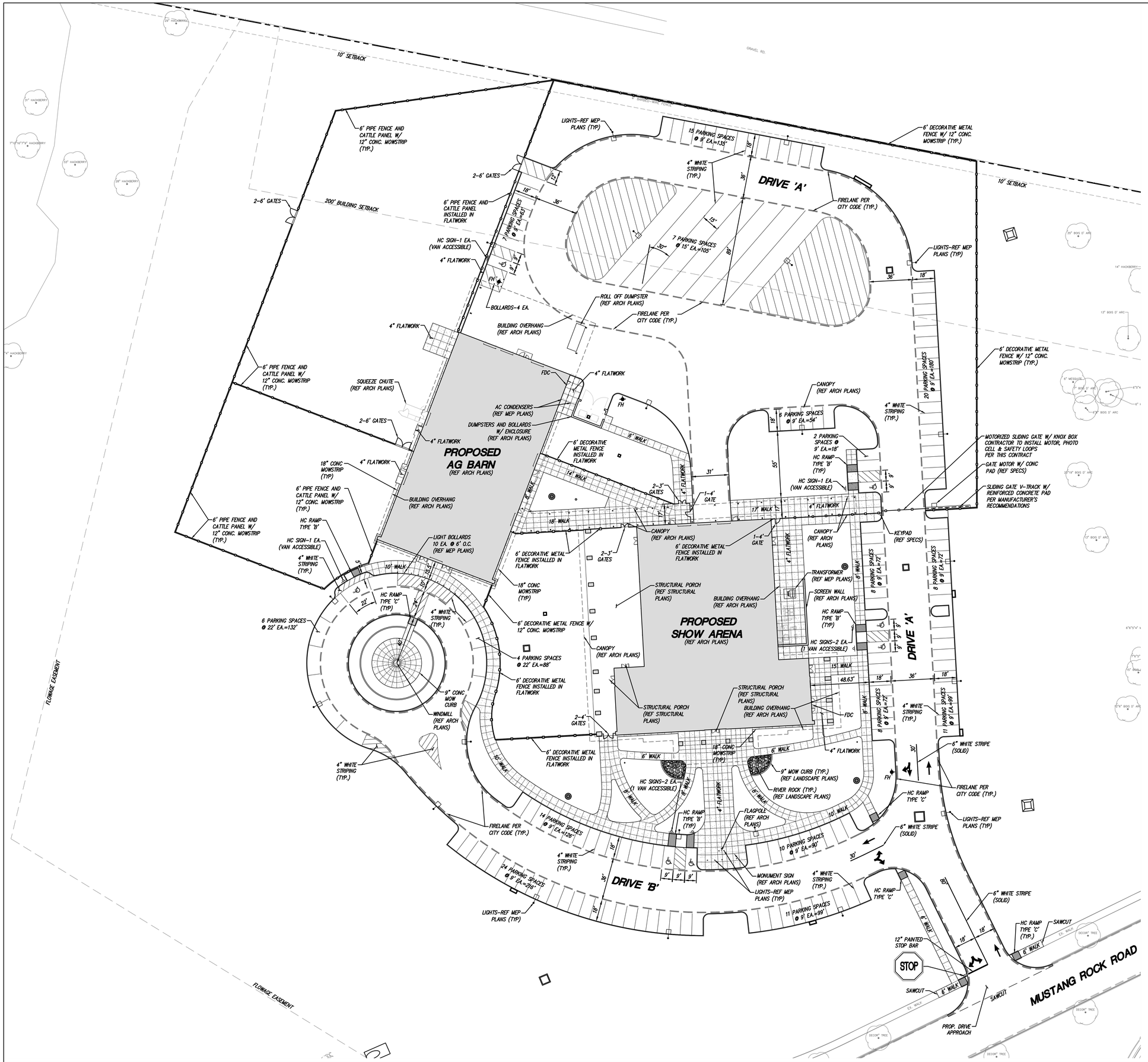

tnp

GRAPHIC SCALE

30 0 15 30 60

GRAPHIC SCALE: 1" = 30'

LEGEND

- 4" CONCRETE FLATWORK
- PAINTED DIRECTIONAL ARROWS

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

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STATE OF TEXAS
MATTHEW G. MANTONG
146154
LICENSED
PROFESSIONAL ENGINEER
05/28/2025

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PROJECT NO.

24-057.00

SHEET TITLE

SITE PLAN

SHEET NO.

C1.05

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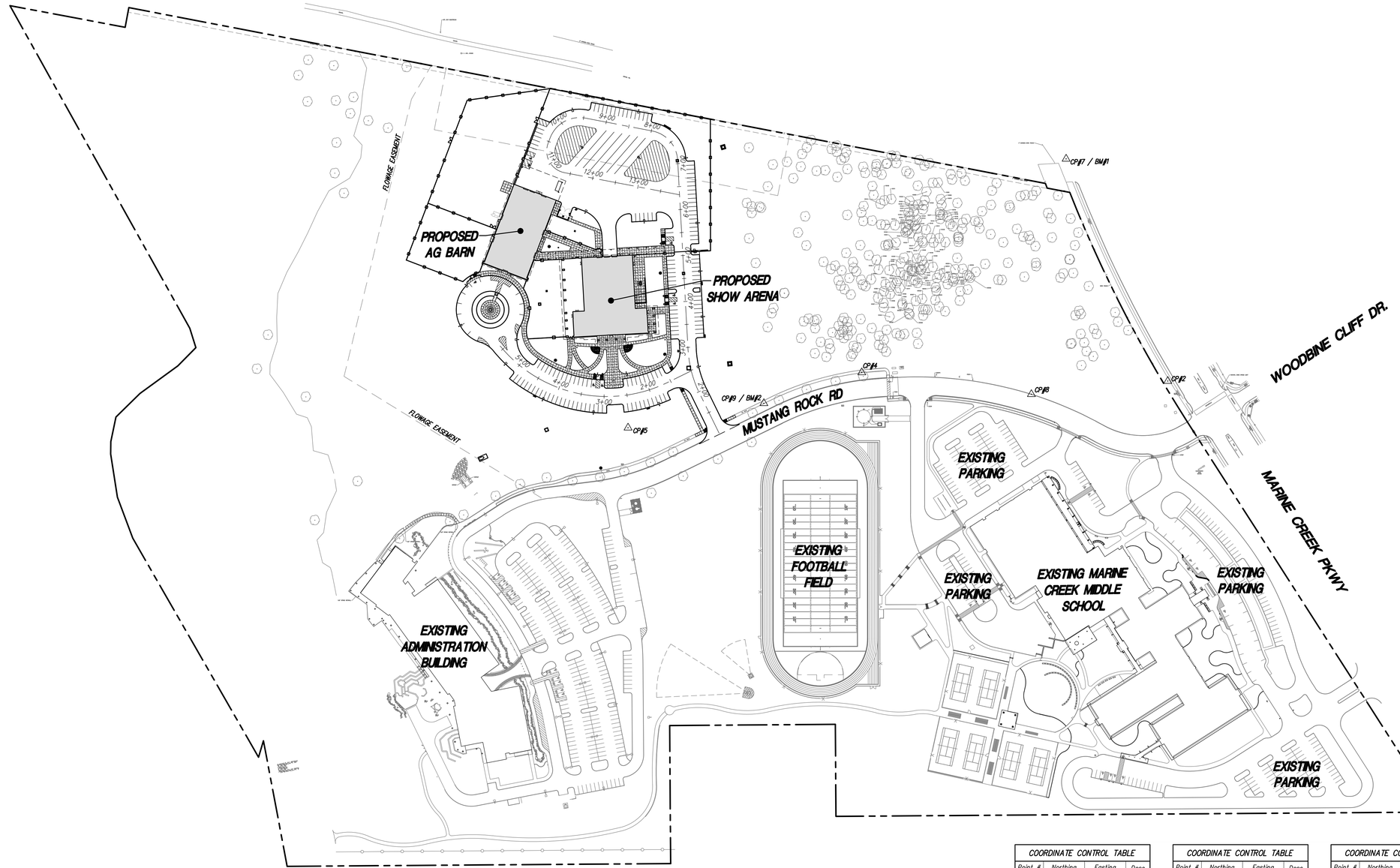

tnp

GRAPHIC SCALE

100 0 50 100 200

GRAPHIC SCALE: 1" = 100'

NOTES

1. THIS PLAN SHALL BE USED TO CONTROL THE GEOMETRICS OF THE SITE LAYOUT. DIMENSIONAL TIES AND COORDINATES ARE PROVIDED TO ASSIST IN THE LAYOUT OF THE SITE IMPROVEMENTS. THE CONTRACTOR SHALL VERIFY THE COORDINATE TIES WITH THE DIMENSIONS PROVIDED ON THE PLANS.
2. ALL DIMENSIONS AND COORDINATES ARE TO THE FACE OF CURB AND BUILDING.
3. ALL BUILDING TIES AND DIMENSIONS SHALL BE COORDINATED AND VERIFIED WITH THE ARCHITECT'S PLANS. ALL DIMENSIONS TO BUILDINGS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
4. ALL CURB RADII ARE 5' UNLESS OTHERWISE NOTED.

BENCHMARKS

BM#1: A "X-SET" ON THE WESTERN SIDE WALK ALONG MARINE CREEK PKWY. IT IS APPROX. 19.10 NORTHEAST OF THE EASTERN FENCE CORNER AT THE GAS UTILITIES SITE. IT IS APPROX. 45.40" SOUTHEAST OF A SIGN.

ELEV.=761.60'

BM#2: A "X-SET" ON THE NORTHERN SIDE WALK ALONG MUSTANG ROCK ROAD. IT IS APPROX. 12 NORTH OF A FIRE HYDRANT BEHIND THE BACK OF CURB. IT IS APPROX. 5', 3" NORTH OF THE MOST NORTHERLY WATER VALVE.

ELEV.=742.73'

CONTROL POINTS

CP-2 (5/8"CIRS) N: 6991706.97 E: 2309531.06 ELEV.=760.11	CP-7 (XST) N: 6992189.84 E: 2309310.15 ELEV.=761.60
CP-4 (XFD) N: 6991725.73 E: 2308866.05 ELEV.=752.04	CP-8 (XST) N: 6991678.28 E: 2309234.67 ELEV.=760.63
CP-5 (5/8"CIRS) N: 6991605.47 E: 2308358.22 ELEV.=731.31	CP-9 (XST) N: 6991658.61 E: 2308653.35 ELEV.=742.73

COORDINATE CONTROL TABLE

Point #	Northing	Easting	Desc
1	6992134.64	2308110.52	BLDG
2	6991963.98	2308042.74	BLDG
3	6991927.19	2308139.28	BLDG
4	6992099.73	2308202.13	BLDG
5	6991974.77	2308256.81	BLDG
6	6991859.16	2308263.16	BLDG
7	6991857.79	2308238.17	BLDG
8	6991802.56	2308239.55	BLDG
9	6991811.57	2308403.61	BLDG
10	6991866.07	2308398.66	BLDG
11	6991864.71	2308373.99	BLDG
12	6991980.85	2308367.61	BLDG
13	6991571.79	2308513.25	PC
14	6991613.84	2308599.50	PT
15	6991666.97	2308450.12	PI
16	6991639.47	2308349.63	PI
17	6991738.19	2308432.18	PI
18	6991711.64	2308346.65	PI
19	6991709.45	2308306.75	PI
20	6991755.57	2308163.10	PI

COORDINATE CONTROL TABLE

Point #	Northing	Easting	Desc
21	6991637.39	2308311.67	PI
22	6991744.79	2308066.03	PI
23	6991861.95	2308059.16	CENTER
24	6991798.16	2308451.25	PI
25	6991802.10	2308523.14	PI
26	6991900.95	2308517.72	PI
27	6991897.01	2308445.83	PI
28	6991905.99	2308445.33	PI
29	6991909.94	2308517.22	PI
30	6991981.83	2308513.28	PI
31	6991977.89	2308441.39	PI
32	6992005.80	2308511.96	PI
33	6992002.35	2308440.05	PI
34	6992037.80	2308438.10	PI
35	6992055.84	2308420.19	PI
36	6992052.88	2308366.27	PI
37	6992185.52	2308502.10	PI
38	6992287.07	2308411.20	PI
39	6992312.51	2308278.62	PI
40	6992278.70	2308164.19	PI

COORDINATE CONTROL TABLE

Point #	Northing	Easting	Desc
41	6992267.48	2308159.91	PI
42	6992266.59	2308162.25	PI
43	6992134.15	2308111.78	PI
44	6992127.77	2308128.61	PI
45	6992079.78	2308208.97	PI
46	6992070.70	2308232.82	PI
47	6992023.80	2308301.50	PI
48	6992032.17	2308332.08	PI
49	6991977.36	2308304.04	PI
50	6991979.06	2308335.00	PI
51	6991804.15	2308239.47	FENCE
52	6991803.53	2308228.18	FENCE
53	6991803.29	2308223.85	FENCE
54	6991798.70	2308140.18	FENCE
55	6991908.04	2308130.57	FENCE
56	6991927.66	2308138.05	FENCE
57	6991931.32	2308394.92	FENCE
58	6991982.19	2308392.13	FENCE
59	6991980.85	2308367.61	FENCE
60	6991989.66	2308537.39	FENCE

COORDINATE CONTROL TABLE

Point #	Northing	Easting	Desc
61	6992275.67	2308537.01	FENCE
62	6992342.52	2308188.51	FENCE
63	6992317.27	2308008.69	FENCE
64	6991969.92	2307876.34	FENCE
65	6991923.05	2307999.36	FENCE
66	6991944.17	2308035.72	FENCE
67	6991963.80	2308043.20	FENCE
68	6992036.44	2308073.11	FENCE
69	6992093.48	2307923.42	FENCE
70	6991974.31	2308256.84	FENCE
71	6991968.82	2308157.59	FENCE
72	6991970.60	2308152.92	FENCE
73	6991977.22	2308301.55	FENCE
74	6991993.70	2308300.64	FENCE
75	6991992.96	2308287.26	FENCE
76	6992034.83	2308177.40	FENCE
77	6992135.04	2308109.45	FENCE

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STATE OF TEXAS
MATTHEW G. MANTONG
146154
LICENSED LANDSCAPE ARCHITECT
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.

24-057.00

SHEET TITLE

OVERALL DIMENSIONAL CONTROL PLAN

SHEET NO.

C1.06

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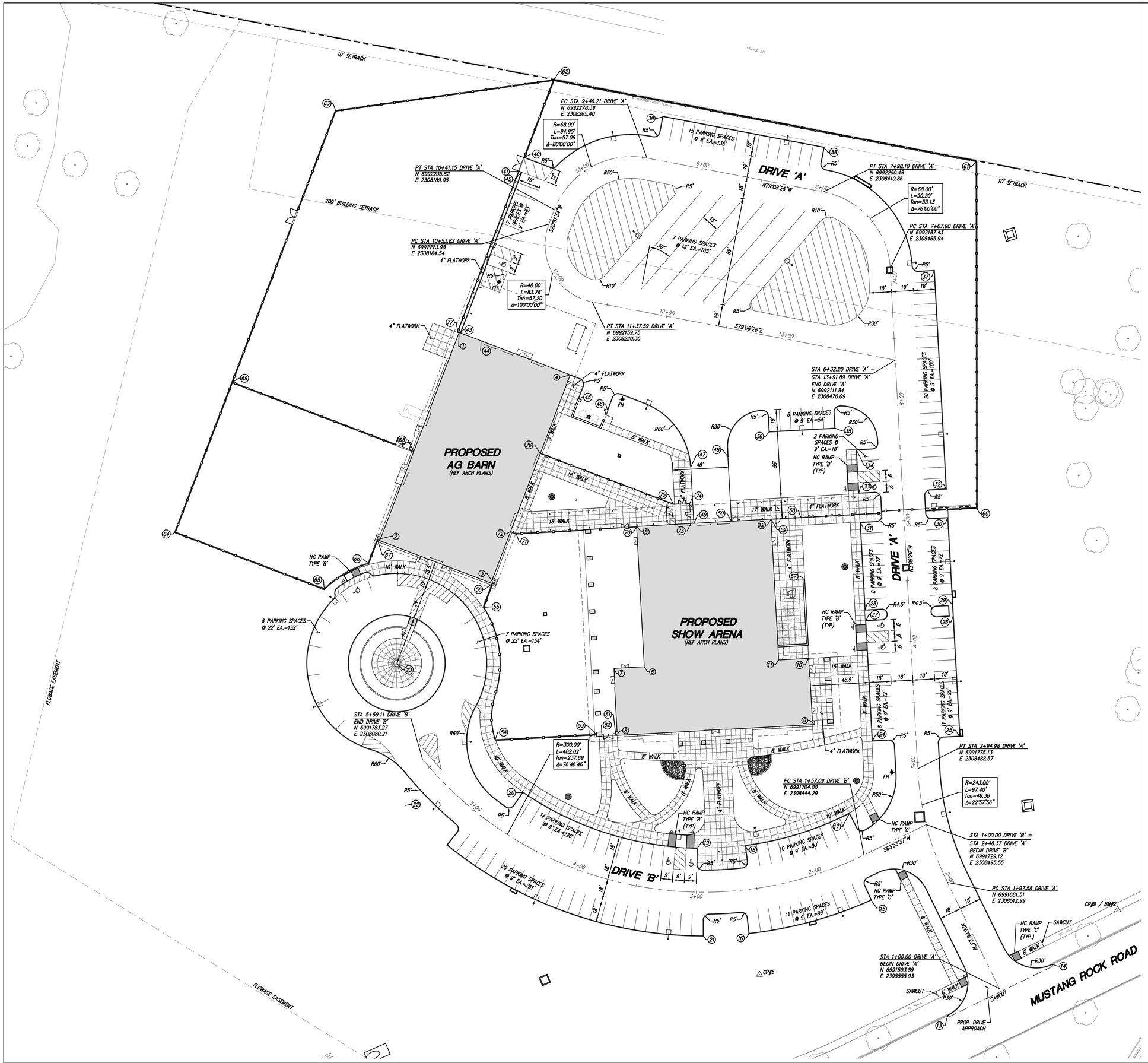

tnp

GRAPHIC SCALE

30 0 15 30 60

GRAPHIC SCALE: 1" = 30'

NOTES

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4. ALL CURB RADII ARE 5' UNLESS OTHERWISE NOTED.

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FORT WORTH, TEXAS

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STATE OF TEXAS
MATTHEW G. MANTONG
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PROFESSIONAL ENGINEER
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

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Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.

24-057.00

SHEET TITLE

DIMENSIONAL CONTROL PLAN

SHEET NO.

C1.07

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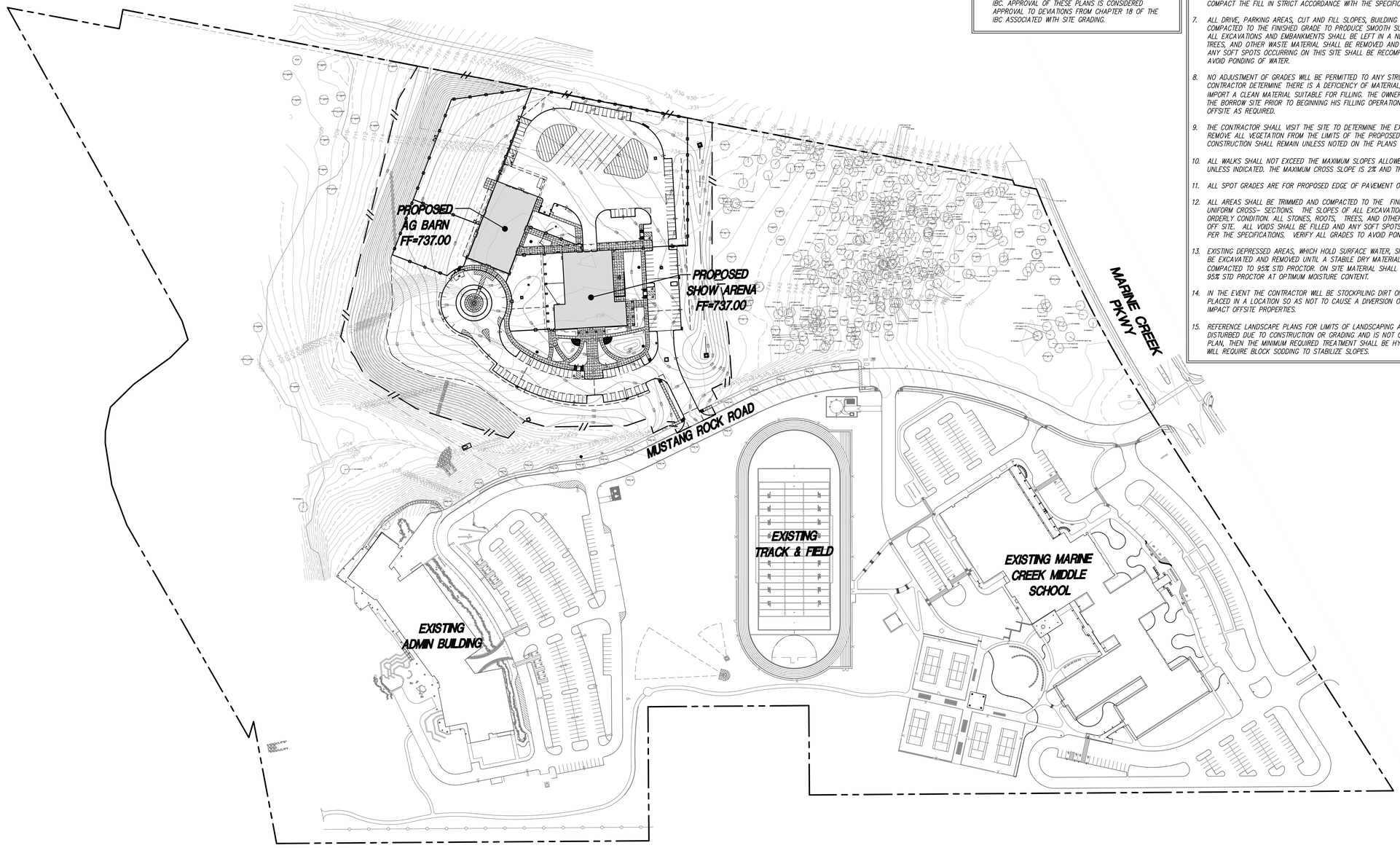

GRADING CONSIDERATIONS

1. TEXAS ACCESSIBILITY STANDARDS (TAS) REQUIRE ACCESSIBLE ROUTES SLOPE NO MORE THAN 5% IN THE DIRECTION OF TRAVEL WITH A MAXIMUM OF 2% CROSS-SLOPE. CHAPTER 18 OF THE INTERNATIONAL BUILDING CODE (IBC) REQUIRES PERVIOUS GROUND IMMEDIATELY ADJACENT TO THE FOUNDATION SLOPE AWAY FROM THE BUILDING AT 5% MINIMUM SLOPE AND IMPERVIOUS GROUND AT MINIMUM OF 2% GRADING AS SHOWN ON THIS PLAN IS PROVIDED TO MEET THESE REQUIREMENTS WHERE TECHNICALLY FEASIBLE.
2. FLATWORK ON SITE MAY BE SUBJECT TO POTENTIAL VERTICAL MOVEMENT AS DESCRIBED IN THE GEOTECHNICAL REPORT FOR THE PROJECT. MAINTENANCE MAY BE REQUIRED TO ADDRESS FLATWORK CHANGES DUE TO POTENTIAL VERTICAL MOVEMENT.
3. GRADING PLANS ARE SUBMITTED IN ACCORDANCE WITH INDUSTRY STANDARD OF CARE HOWEVER, DUE TO ABOVE THE ABOVE TAS RESTRICTIONS, MAY NOT COMPLY WITH ALL PROVISIONS OF CHAPTER 18 OF THE IBC. APPROVAL OF THESE PLANS IS CONSIDERED APPROVAL TO DEVIATIONS FROM CHAPTER 18 OF THE IBC ASSOCIATED WITH SITE GRADING.

NOTES

1. THE GRADING OF THE DIFFERENT AREAS SHOWN ON THE SITE SHALL BE COMPACTED IN STRICT ACCORDANCE WITH THE SPECIFICATIONS WHICH SHALL BE CONSIDERED AS PART OF THESE DRAWINGS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING TO THE SUBGRADE OF ALL PAVED AREAS TO ALLOW FOR THE PAVEMENT SECTIONS. CONTRACTOR SHALL GRADE AND COMPACT ALL AREAS UNDER PAVEMENT TO ALLOW FOR THE RESPECTIVE PAVING SECTIONS AND SHALL MAINTAIN THESE FINISHED GRADES AS SHOWN UNTIL FINAL ACCEPTANCE.
3. CONTRACTOR IS REQUIRED TO INSTALL AND MAINTAIN EROSION CONTROL AT ALL TIMES THROUGHOUT THE PROJECT.
4. THE SPREADING AND COMPACTION OF ANY WASTE OR EXCESS MATERIAL NOT SUITABLE FOR FILLING, SUCH AS LARGE ROCK, CONCRETE, TREES, TRASH AND VEGETATION, SHALL BE DISPOSED OFFSITE AT THE CONTRACTOR'S EXPENSE ONLY IN THOSE AREAS APPROVED FOR DISPOSING OF WASTE MATERIAL. THE CONTRACTOR SHALL NOT DISPOSE OF ANY WASTE MATERIAL ON ADJACENT PROPERTY OWNER'S OR OTHER AREAS WHICH ARE NOT LEGALLY ACCEPTED BY THE CITY. NO BURNING OF ANY MATERIAL AT ANY TIME SHALL BE ALLOWED ON THIS SITE UNLESS PERMITTED BY CITY ORDINANCES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SAFETY LAWS IN ACCORDANCE WITH THE CITY, STATE AND FEDERAL LAWS WHICH GOVERN CONSTRUCTION.
6. ALL AREAS TO BE FILLED SHALL BE FILLED IN STRICT ACCORDANCE WITH THE SPECIFICATIONS. ALL VEGETATION, TREES, ROCKS AND OBJECTIONABLE MATERIALS SHALL BE REMOVED BY THE CONTRACTOR FROM THE SURFACE OF WHICH THE FILL IS PLACED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE, SPREAD, WATER AND COMPACT THE FILL IN STRICT ACCORDANCE WITH THE SPECIFICATIONS FOR THIS PROJECT.
7. ALL DRIVE, PARKING AREAS, CUT AND FILL SLOPES, BUILDING PADS AND OPEN SPACE AREAS SHALL BE TRIMMED AND COMPACTED TO THE FINISHED GRADE TO PRODUCE SMOOTH SURFACES AND UNIFORM CROSS-SECTIONS. THE SLOPES OF ALL EXCAVATIONS AND EMBANKMENTS SHALL BE LEFT IN A NEAT AND ORDERLY CONDITION. ALL STONES, ROOTS, TREES, AND OTHER WASTE MATERIAL SHALL BE REMOVED AND DISPOSED OFF SITE. ALL VOIDS SHALL BE FILLED AND ANY SOFT SPOTS OCCURRING ON THIS SITE SHALL BE RECOMPACTED PER THE SPECIFICATIONS. VERIFY ALL GRADES TO AVOID PONDING OF WATER.
8. NO ADJUSTMENT OF GRADES WILL BE PERMITTED TO ANY STRUCTURES, PAVEMENT OR WALK SURFACES. SHOULD THE CONTRACTOR DETERMINE THERE IS A DEFICIENCY OF MATERIAL, THEN ALLOWANCE WILL MADE IN THE CONTRACT TO IMPORT A CLEAN MATERIAL SUITABLE FOR FILLING. THE OWNER'S LABORATORY WILL BE ALLOWED TO TEST AND INSPECT THE BORROW SITE PRIOR TO BEGINNING HIS FILLING OPERATIONS. EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OFFSITE AS REQUIRED.
9. THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE EXACT SCOPE OF WORK. THE CONTRACTOR SHALL REMOVE ALL VEGETATION FROM THE LIMITS OF THE PROPOSED IMPROVEMENTS. ALL TREES OUTSIDE THE LIMITS OF CONSTRUCTION SHALL REMAIN UNLESS NOTED ON THE PLANS TO BE REMOVED OR APPROVED BY THE OWNER.
10. ALL WALKS SHALL NOT EXCEED THE MAXIMUM SLOPES ALLOWED BY THE TEXAS ACCECCIBILITY STANDARDS (TAS), UNLESS INDICATED. THE MAXIMUM CROSS SLOPE IS 2% AND THE MAXIMUM DIRECTIONAL SLOPE IS 5%.
11. ALL SPOT GRADES ARE FOR PROPOSED EDGE OF PAVEMENT OR GUTTER ELEVATIONS, UNLESS INDICATED OTHERWISE.
12. ALL AREAS SHALL BE TRIMMED AND COMPACTED TO THE FINISHED GRADE TO PRODUCE SMOOTH SURFACES AND UNIFORM CROSS- SECTIONS. THE SLOPES OF ALL EXCAVATIONS AND EMBANKMENTS SHALL BE LEFT IN A NEAT AND ORDERLY CONDITION. ALL STONES, ROOTS, TREES, AND OTHER WASTE MATERIAL SHALL BE REMOVED AND DISPOSED OFF SITE. ALL VOIDS SHALL BE FILLED AND ANY SOFT SPOTS OCCURRING ON THIS SITE SHALL BE RECOMPACTED PER THE SPECIFICATIONS. VERIFY ALL GRADES TO AVOID PONDING OF WATER.
13. EXISTING DEPRESSED AREAS, WHICH HOLD SURFACE WATER, SHALL BE PUMPED DRY. EXISTING SOGGY MATERIALS SHALL BE EXCAVATED AND REMOVED UNTIL A STABILE DRY MATERIAL IS AVAILABLE. THIS EXPOSED MATERIAL SHALL BE COMPACTED TO 95% STD PROCTOR. ON SITE MATERIAL SHALL BE PLACED IN 8" MAX LIFTS AND COMPACTED TO MAX 95% STD PROCTOR AT OPTIMUM MOISTURE CONTENT.
14. IN THE EVENT THE CONTRACTOR WILL BE STOCKPILING DIRT ON SITE, THE LOCATION OF THE STOCKPILE SHALL BE PLACED IN A LOCATION SO AS NOT TO CAUSE A DIVERSION OR CHANGE OF THE DRAINAGE PATTERNS THAT WILL IMPACT OFFSITE PROPERTIES.
15. REFERENCE LANDSCAPE PLANS FOR LIMITS OF LANDSCAPING AND SEEDING/SODDING. IN THE EVENT AN AREA IS DISTURBED DUE TO CONSTRUCTION OR GRADING AND IS NOT CALLED OUT FOR TREATMENT UNDER THE LANDSCAPE PLAN, THEN THE MINIMUM REQUIRED TREATMENT SHALL BE HYDRO MULCH SEEDING. IN SOME INSTANCES, THE PLANS WILL REQUIRE BLOCK SODDING TO STABILIZE SLOPES.

LEGEND

(79.20) •	EXISTING SPOT ELEVATION
79.20 •	PROPOSED SPOT ELEVATION
5%	PROPOSED PERCENT OF GRADE
655	PROPOSED CONTOUR
	GRADE BREAK/RIDGE LINE
	PROPOSED SWALE LINE
	PROPOSED DAYLIGHT LINE
5:1	PROPOSED SLOPE RATIO
X 79.20	EXISTING SPOT GRADE
653	EXISTING CONTOURS

NOTE:
CONTRACTOR SHALL VERIFY EXACT LOCATION AND SIZE OF ALL UTILITIES AND USE EXTREME CAUTION DURING CONSTRUCTION.

NOTE:
MAXIMUM SLOPE IS 4:1.

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GRAPHIC SCALE
100 0 50 100 200
GRAPHIC SCALE: 1" = 100'

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

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PROFESSIONAL ENGINEER
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
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Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
OVERALL GRADING PLAN

SHEET NO.
C1.08

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GRAPHIC SCALE

30 0 15 30 60

GRAPHIC SCALE: 1" = 30'

LEGEND

AREA OF MODIFED SUBGRADE PREPARATION

MODIFIED SUBGRADE PREPARATION

1. REMOVE ALL EXISTING PAVEMENTS, SURFACE VEGETATION, TREES AND ASSOCIATED ROOT MATS, ORGANIC TOPSOIL AND ANY OTHER DELETERIOUS MATERIAL.
2. EXCAVATE TO 3'FT BELOW THE NON-EXPANSIVE FILL CAP OR TO THE TOP SURFACE OF LIMESTONE, WHICHEVER IS ENCOUNTERED FIRST, AS APPROVED BY THE ONSITE GEOTECHNICAL REPRESENTATIVE.
3. PROOF-ROLL THE EXPOSED SUBGRADE USING HEAVY PNEUMATIC EQUIPMENT WEIGHING A MINIMUM 20 TONS.
4. PRIOR TO PLACEMENT OF ANY FILL, THE EXPOSED SOIL SUBGRADE SHOULD THEN BE SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES.
5. RECOMPACT THE EXPOSED SOILS AS DESCRIBED BELOW. WHERE MASS FILLS ARE DEEPER THAN 10FT, THE FILL/BACKFILL BELOW 10FT SHOULD BE COMPACTED TO AT LEAST 100 PERCENT OF STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698) AND WITHIN 2 PERCENTAGE POINTS OF THE MATERIAL'S OPTIMUM MOISTURE CONTENT.
   - 5.1. CLAY SOILS USED FOR GENERAL FILL WITH A PLASTICITY INDEX EQUAL TO OR GREATER THAN 25 SHOULD BE COMPACTED TO A DRY DENSITY BETWEEN 93 AND 98 PERCENT OF STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698). THE COMPACTED MOISTURE CONTENT OF THE CLAYS DURING PLACEMENT SHOULD BE WITHIN THE RANGE OF +2 TO +6 PERCENTAGE POINTS OF THE MATERIAL'S OPTIMUM MOISTURE. CLAYEY FILL SHOULD BE PROCESSED, AND THE LARGEST PARTICLE OR CLOD SHOULD BE LESS THAN 6 INCHES PRIOR TO COMPACTION.
   - 5.2. PROCESSED LIMESTONE USED AS FILL SHOULD BE COMPACTED TO AT LEAST 95 PERCENT OF STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698). THE COMPACTED MOISTURE CONTENT OF THE PROCESSED LIMESTONE IS NOT CONSIDERED CRUCIAL TO PROPER PERFORMANCE. HOWEVER, IF THE MATERIAL'S MOISTURE CONTENT DURING PLACEMENT IS WITHIN 3 PERCENTAGE POINTS OF OPTIMUM, THE COMPACTIVE EFFORT REQUIRED TO ACHIEVE THE MINIMUM COMPACTION CRITERIA MAY BE MINIMIZED. INDIVIDUAL ROCK PIECES LARGER THAN 6 INCHES SHOULD NOT BE USED AS FILL. PROCESSED LIMESTONE USED AS FILL SHOULD INCORPORATE SUFFICIENT FINES TO PREVENT THE PRESENCE OF VOIDS AROUND LARGER DIAMETER ROCK PIECES. A GRADATION OF AT LEAST 40 PERCENT PASSING STANDARD NO. 4 SIEVE IS RECOMMENDED.
6. COMPLETE PAD FILL BY PLACING AT LEAST 3FT OF SELECT FILL BETWEEN THE BOTTOM OF THE FLATWORK AND THE TOP SURFACE OF MOISTURE CONDITIONED SOIL. SELECT FILL SHOULD HAVE A LIQUID LIMIT LESS THAN 35, A PLASTICITY INDEX (PI) NOT LESS THAN 4 NOR GREATER THAN 15. SELECT FILL SHOULD NOT CONTAIN DELETERIOUS MATERIAL AND DEBRIS. SELECT FILL SHOULD BE COMPACTED TO A DRY DENSITY OF AT LEAST 95 PERCENT OF STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698) AND WITHIN THE RANGE OF -1 TO +3 PERCENTAGE POINTS OF THE MATERIAL'S OPTIMUM MOISTURE CONTENT.

NOTE:
ALL SOIL SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH GEOTECHNICAL REPORT NO. W251074-REV1 BY UES.

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FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
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146154
LICENSED
PROFESSIONAL ENGINEER
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
MODIFIED SUBGRADE PLAN

SHEET NO.
C1.09

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MSW	TNP
Designer	Quality Control
PCV	TNP
Proj. Arch.	
VLK	

PROJECT NO.
24-057.00

SHEET TITLE
GRADING PLAN

SHEET NO.
C1.10

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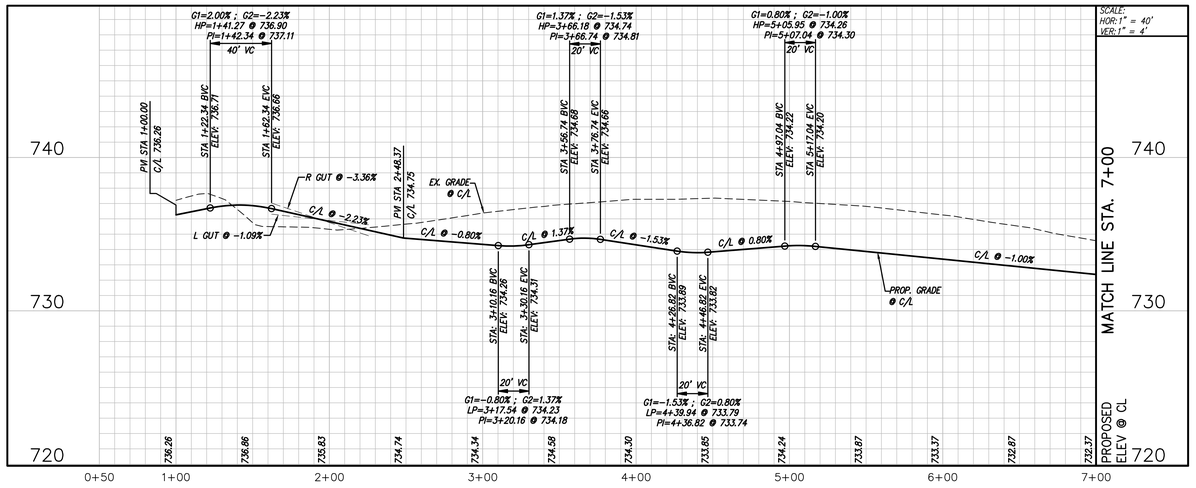
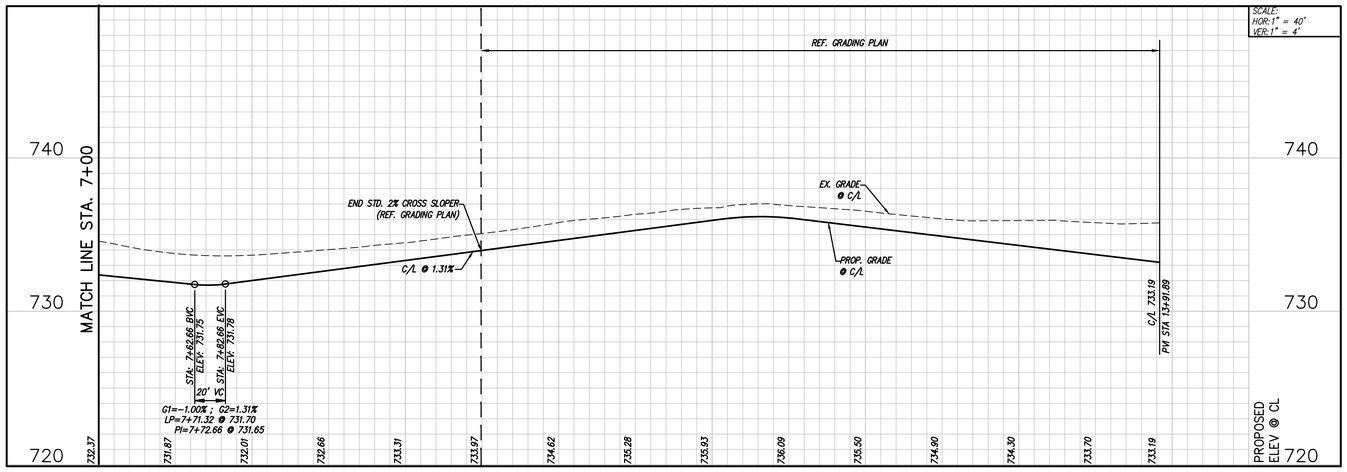
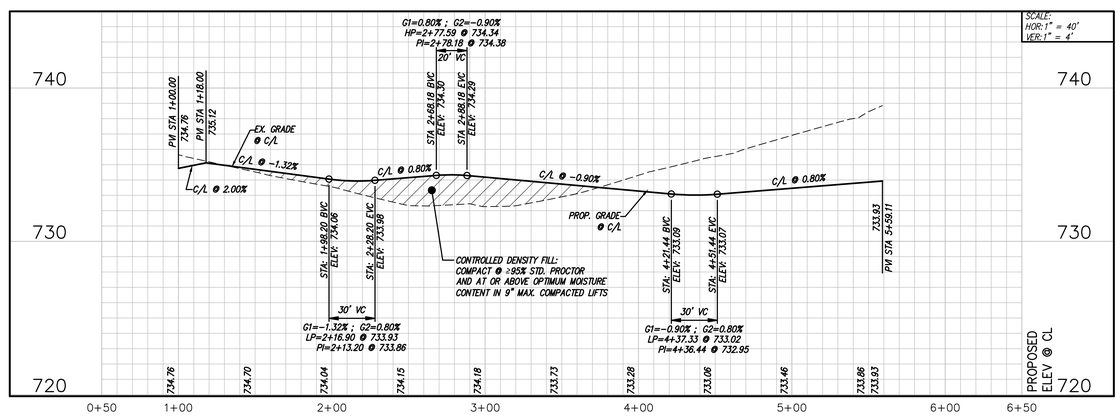


DRIVE 'A'



DRIVE 'A'



DRIVE 'B'

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MSW	TNP
Designer	Quality Control
PCV	TNP
Proj. Arch.	
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PROJECT NO.
24-057.00

SHEET TITLE
DRIVE PROFILES

SHEET NO.
C1.11

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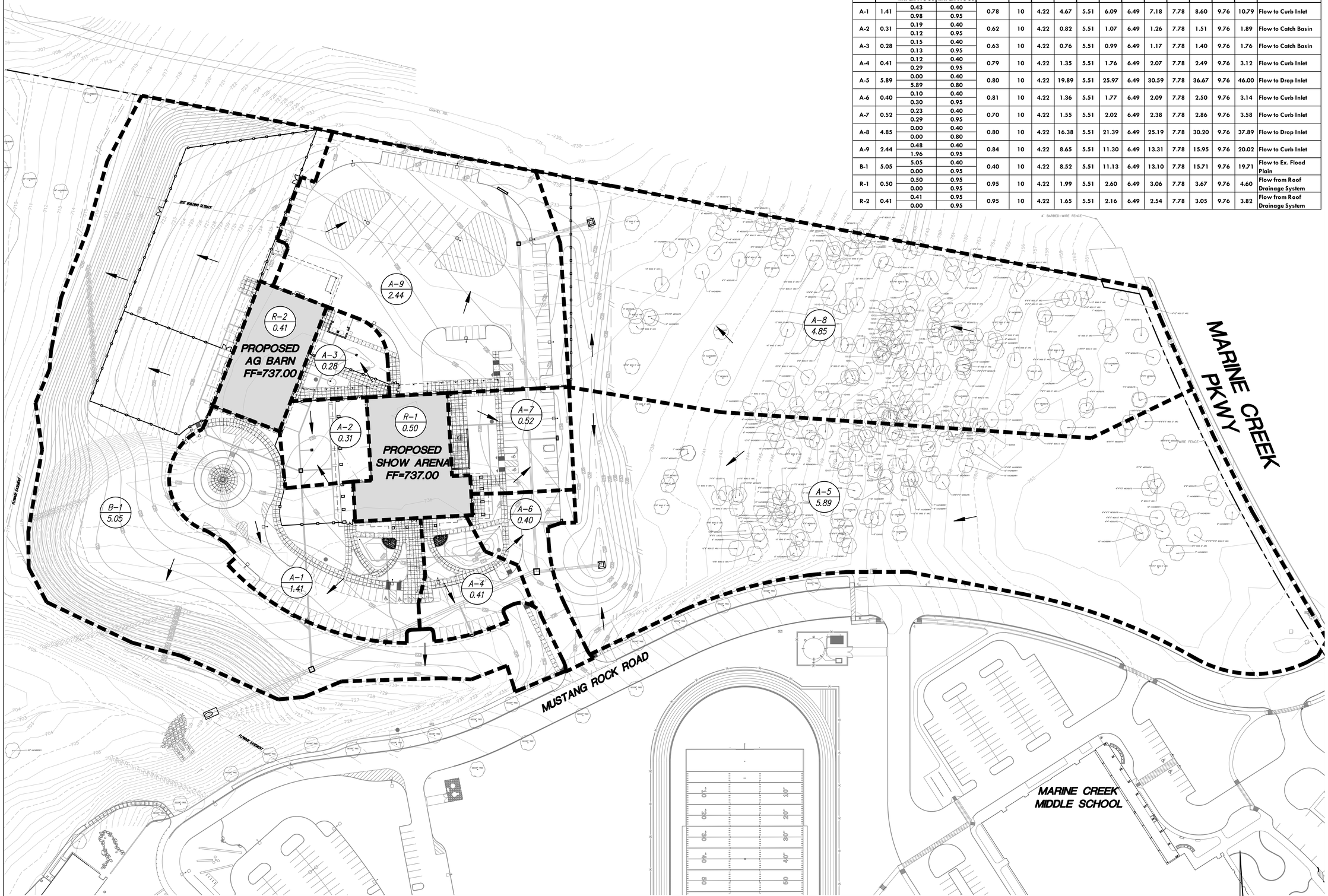
PROPOSED DRAINAGE AREA DATA

AREA	ACRES TOTAL	ACRES PERVIOUS	ACRES IMPERVIOUS	'C' PERVIOUS	'C' IMPERVIOUS	'C' WEIGHTED	T_c	I_2	Q_2	I_5	Q_5	I_{10}	Q_{10}	I_{25}	Q_{25}	I_{100}	Q_{100}	DESCRIPTION
A-1	1.41	0.43		0.40		0.78	10	4.22	4.67	5.51	6.09	6.49	7.18	7.78	8.60	9.76	10.79	Flow to Curb Inlet
		0.98			0.95													
A-2	0.31	0.19		0.40		0.62	10	4.22	0.82	5.51	1.07	6.49	1.26	7.78	1.51	9.76	1.89	Flow to Catch Basin
		0.12			0.95													
A-3	0.28	0.15		0.40		0.63	10	4.22	0.76	5.51	0.99	6.49	1.17	7.78	1.40	9.76	1.76	Flow to Catch Basin
		0.13			0.95													
A-4	0.41	0.12		0.40		0.79	10	4.22	1.35	5.51	1.76	6.49	2.07	7.78	2.49	9.76	3.12	Flow to Curb Inlet
		0.29			0.95													
A-5	5.89	0.00		0.40		0.80	10	4.22	19.89	5.51	25.97	6.49	30.59	7.78	36.67	9.76	46.00	Flow to Drop Inlet
		5.89			0.80													
A-6	0.40	0.10		0.40		0.81	10	4.22	1.36	5.51	1.77	6.49	2.09	7.78	2.50	9.76	3.14	Flow to Curb Inlet
		0.30			0.95													
A-7	0.52	0.23		0.40		0.70	10	4.22	1.55	5.51	2.02	6.49	2.38	7.78	2.86	9.76	3.58	Flow to Curb Inlet
		0.29			0.95													
A-8	4.85	0.00		0.40		0.80	10	4.22	16.38	5.51	21.39	6.49	25.19	7.78	30.20	9.76	37.89	Flow to Drop Inlet
		0.00			0.80													
A-9	2.44	0.48		0.40		0.84	10	4.22	8.65	5.51	11.30	6.49	13.31	7.78	15.95	9.76	20.02	Flow to Curb Inlet
		1.96			0.95													
B-1	5.05	5.05		0.40		0.40	10	4.22	8.52	5.51	11.13	6.49	13.10	7.78	15.71	9.76	19.71	Flow to Ex. Flood Plain
		0.00			0.95													
R-1	0.50	0.50		0.95		0.95	10	4.22	1.99	5.51	2.60	6.49	3.06	7.78	3.67	9.76	4.60	Flow from Roof Drainage System
		0.00			0.95													
R-2	0.41	0.41		0.95		0.95	10	4.22	1.65	5.51	2.16	6.49	2.54	7.78	3.05	9.76	3.82	Flow from Roof Drainage System
		0.00			0.95													



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05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
DRAINAGE AREA MAP

SHEET NO.
C1.12

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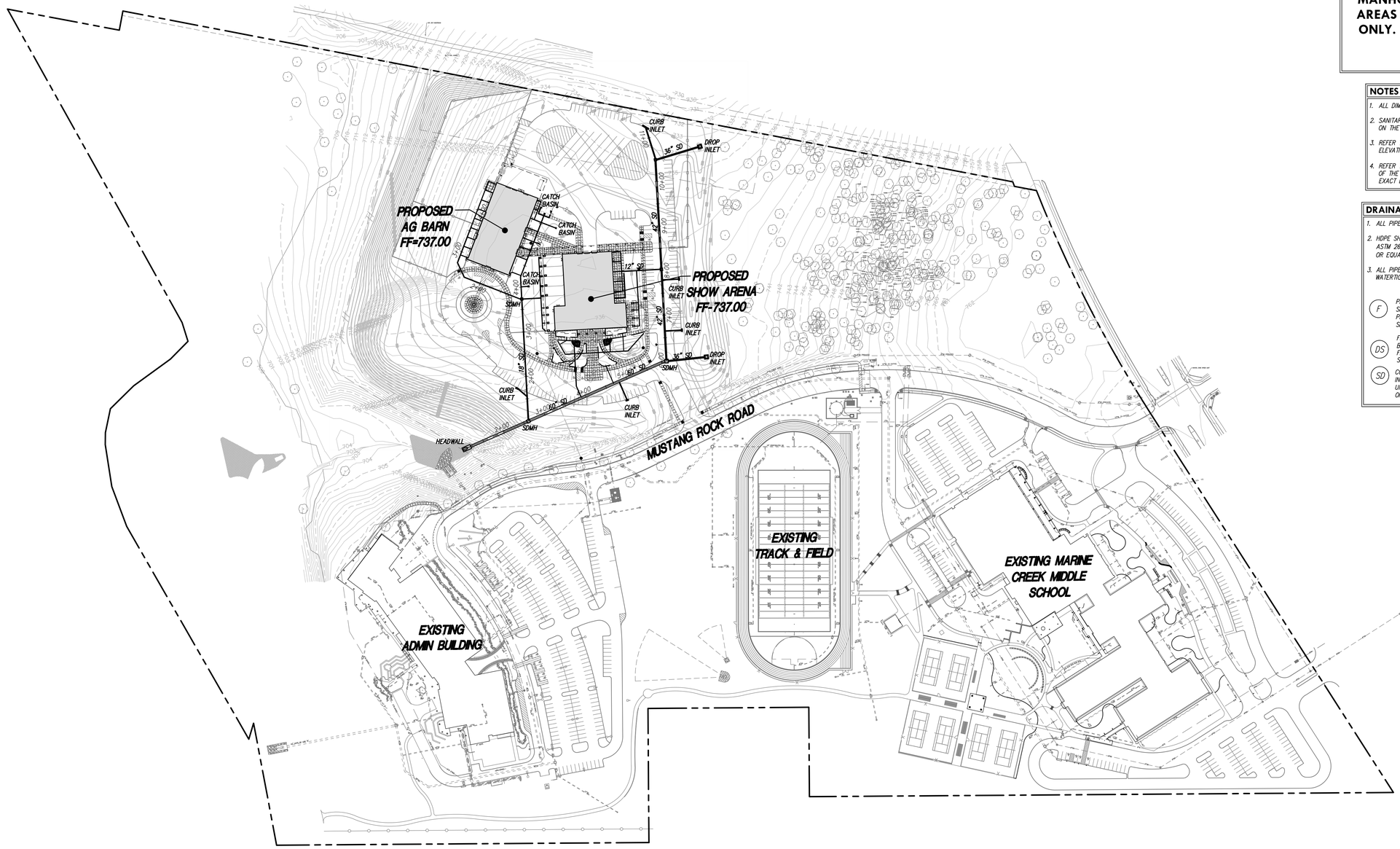

UTILITY NOTE

THE UTILITIES SHOWN ON THE PLANS WERE COMPILED FROM VARIOUS SOURCES AND ARE INTENDED TO SHOW THE GENERAL EXISTENCE AND LOCATION OF UTILITIES IN THE AREA OF CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITY INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES IN ORDER TO DETERMINE IF THERE IS ANY CONFLICT WITH THE PROPOSED FACILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS WITH EXISTING UTILITIES ARE DISCOVERED.

ALL CURB INLETS TOPS AND MANHOLES TOPS IN PAVEMENT AREAS SHALL BE CAST-IN-PLACE ONLY. PRECAST BOTTOMS ARE ALLOWED IN PAVED AREAS.

NOTES

1. *ALL DIMENSIONS ARE TO FACE OF BUILDING.*
2. *SANITARY SEWER AND STORM LINE CROSSINGS ARE INDICATED ON THE UTILITY PLAN.*
3. *REFER TO THE GRADING PLAN FOR THE FINISH FLOOR ELEVATIONS AND THE PERIMETER GRADES.*
4. *REFER TO THE ARCHITECTS' PLANS FOR THE EXACT LOCATIONS OF THE DOWN SPOUTS. REFER TO THE MEP PLANS FOR THE EXACT LOCATIONS OF THE ROOF DRAINS.*

DRAINAGE SPECIFICATIONS

1. *ALL PIPES SHALL BE HDPE UNLESS OTHERWISE NOTED.*
2. *HDPE SHALL BE HEAVY WALL MEETING THE REQUIREMENTS OF ASTM 2648 AND ASTM F477. HDPE SHALL BE ADS N-12 (WT) OR EQUAL, CORRUGATED EXTERIOR W/ SMOOTH LINED INTERIOR.*
3. *ALL PIPE, COUPLINGS, TEES, & BENDS SHALL BE HDPE WATERTIGHT SEWER GRADE GASKETED PVC FITTINGS.*

(F) *PROVIDE ALL NECESSARY FITTINGS TO CONNECT DOWN SPOUTS/ CANOPY DRAINS TO THE STORM DRAIN SYSTEM. PIPES SHALL BE A MINIMUM OF 6" AND HAVE A MINIMUM SLOPE OF 1%*

(DS) *FLOWLINES OF DOWNSPOUTS/ CANOPY DRAINS ARE 3" BELOW FINISHED FLOOR. PROVIDE ALL NECESSARY FITTINGS TO CONNECT DOWNSPOUTS TO STORM DRAIN SYSTEM*

(SD) *CONNECT SUBDRAINS TO THE STORM DRAIN SYSTEM AS INDICATED. SUBDRAINS SHALL BE A MINIMUM OF 4" UNLESS OTHERWISE NOTED AND HAVE MINIMUM SLOPE OF 1%*

NOTE:
CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR IMPROVEMENTS WITHIN PUBLIC ROW.

NOTE:
ALL TRAFFIC CONTROL SIGNS, BARRICADES, AND FLAGGING SHALL BE IN ACCORDANCE WITH THE CURRENT TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND PHASING.

NOTE:
CONTRACTOR SHALL VERIFY EXACT LOCATION AND SIZE OF ALL UTILITIES AND USE EXTREME CAUTION DURING CONSTRUCTION.

tnp

GRAPHIC SCALE
100 0 50 100 200
GRAPHIC SCALE: 1" = 100'

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05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
OVERALL STORM DRAIN PLAN

SHEET NO.
C1.13

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CHANNEL HYDRAULICS
n = 0.035
v = 6.10 fps

EXISTING GRADE

100-YR WSEL = 709.77

18" ROCK RIP-RAP BOTTOM

1.77' MAX HEIGHT

SECTION A–A XS 800
N.T.S.

CHANNEL HYDRAULICS
n = 0.050
v = 6.52 fps

EXISTING GRADE

100-YR WSEL = 706.24

18" ROCK RIP-RAP BOTTOM

1.54' MAX HEIGHT

SECTION B–B XS 700
N.T.S.

CHANNEL HYDRAULICS
n = 0.035
v = 4.68 fps

100-YR WSEL = 704.50

EXISTING GRADE

1.50' MAX HEIGHT

SECTION C–C XS 600
N.T.S.

Outfall Line 'A'

$D_{50} = \sqrt{V/[1.8\sqrt{(2g(\Upsilon s-\Upsilon w)/\Upsilon w)}]}$

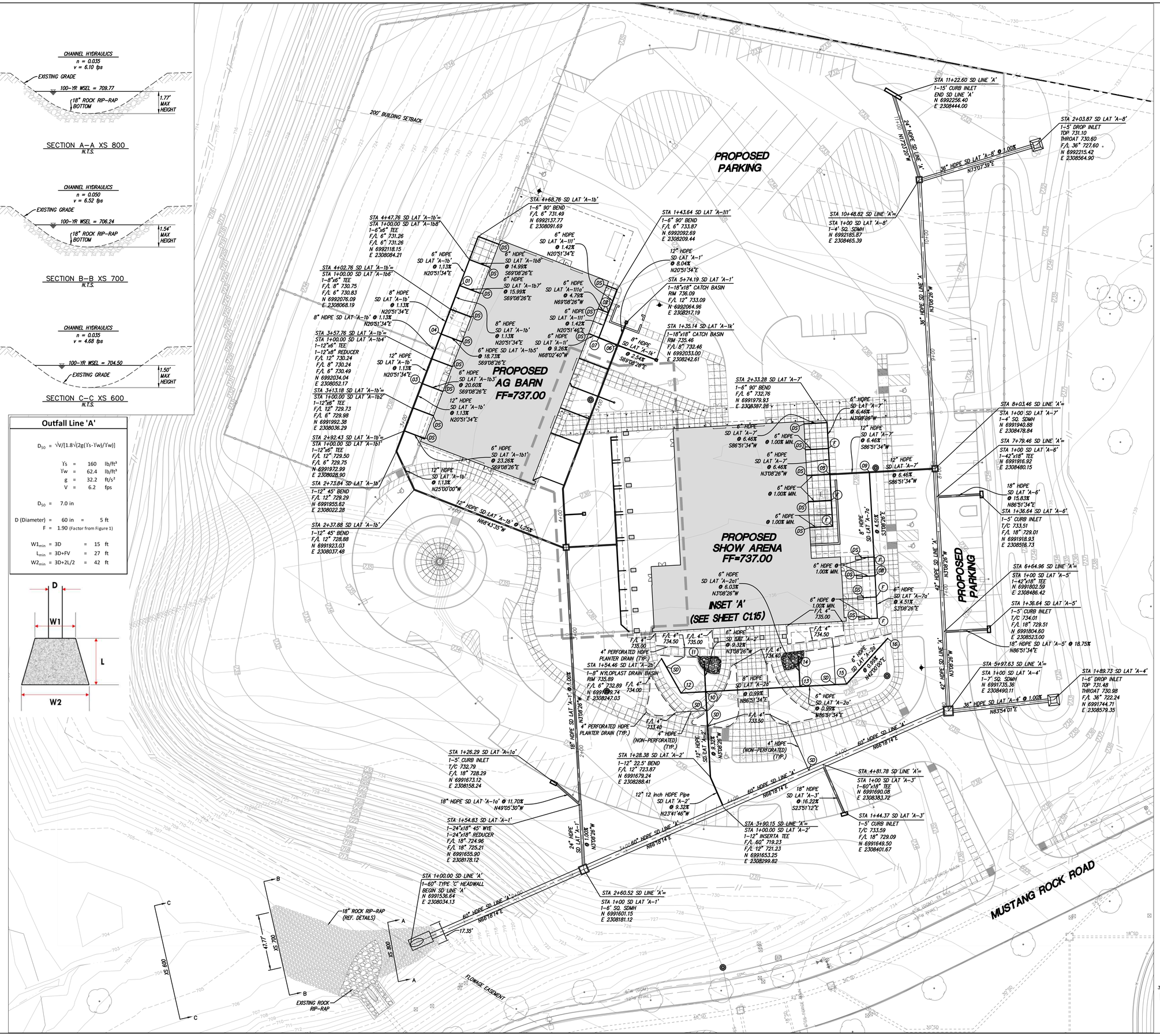
Υs	=	160	lb/ft³
Υw	=	62.4	lb/ft³
g	=	32.2	ft/s²
V	=	6.2	fps

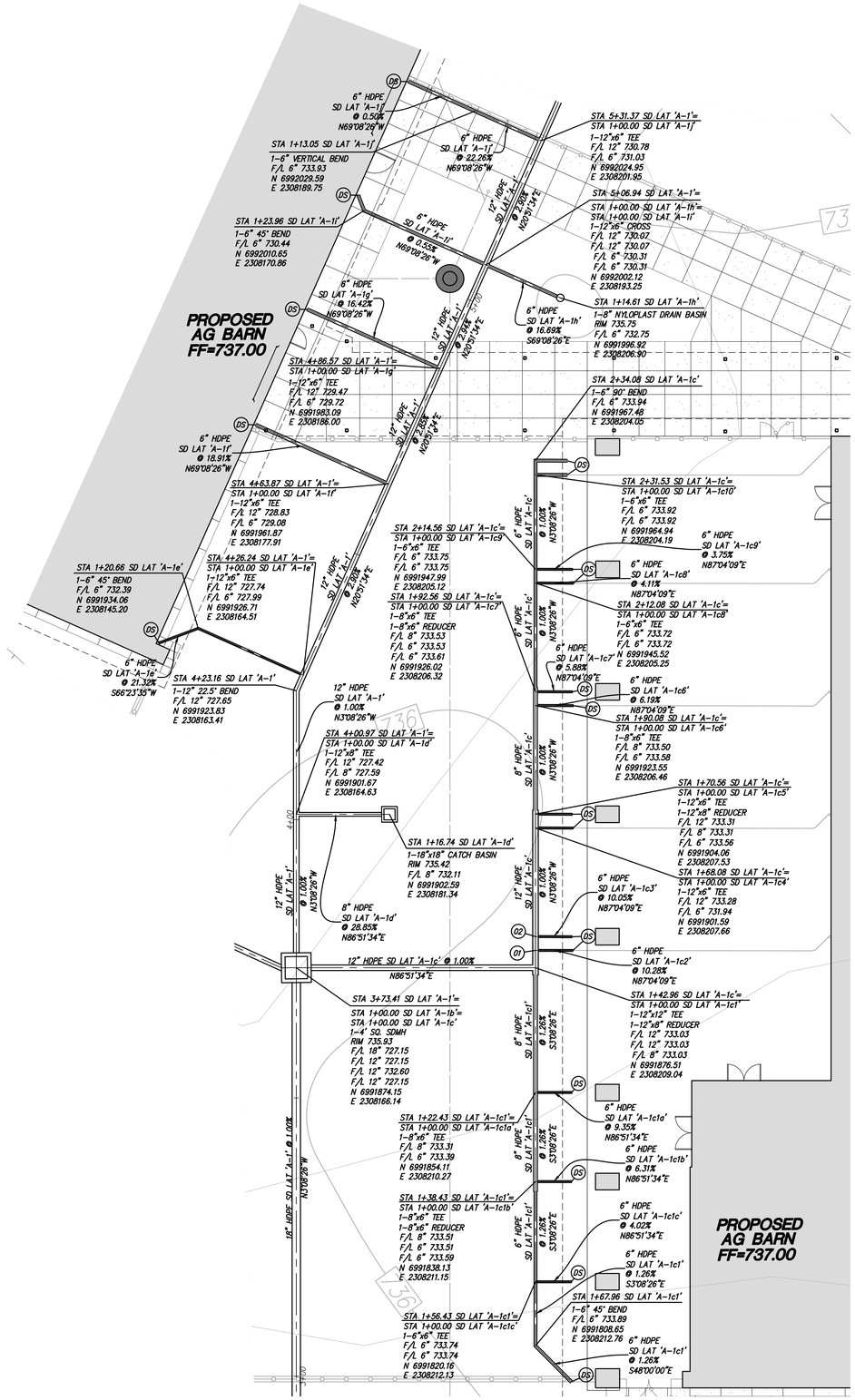
D_{50} = 7.0 in

D (Diameter) = 60 in = 5 ft

F = 1.90 (Factor from Figure 1)

$W1_{min}$	= 3D	=	15 ft
L_{min}	= 3D+FV	=	27 ft
$W2_{min}$	= 3D+2L/2	=	42 ft


PROPOSED PARKING
PROPOSED AG BARN FF=737.00
PROPOSED SHOW ARENA FF=737.00
INSET 'A' (SEE SHEET C1.15)
PROPOSED PARKING
200' BUILDING SETBACK
MUSTANG ROCK ROAD
STA 11+22.60 SD LINE 'A'
1–15' CURB INLET
END SD LINE 'A'
N 6992256.40
E 2308444.00
STA 2+03.87 SD LAT 'A–8'
1–5' DROP INLET
TOP 731.10
THROAT 730.60
F/L 36" 727.60
N 6992215.42
E 2308564.90
STA 10+48.82 SD LINE 'A'=
STA 1+00 SD LAT 'A–8'
1–4' SQ. SDMH
N 6992185.87
E 2308465.39
STA 8+03.46 SD LINE 'A'=
STA 1+00 SD LAT 'A–7'
1–4' SQ. SDMH
N 6991940.88
E 2308478.84
STA 7+79.46 SD LINE 'A'=
STA 1+00 SD LAT 'A–6'
1–42"x18" TEE
N 6991916.92
E 2308480.15
STA 6+64.96 SD LINE 'A'=
STA 1+00 SD LAT 'A–5'
1–42"x18" TEE
N 6991802.59
E 2308486.42
STA 5+97.63 SD LINE 'A'=
STA 1+00 SD LAT 'A–4'
1–7' SQ. SDMH
N 6991735.36
E 2308490.11
STA 4+81.78 SD LINE 'A'=
STA 1+00 SD LAT 'A–3'
1–60"x18" TEE
N 6991690.08
E 2308383.72
STA 4+44.37 SD LAT 'A–3'
1–5' CURB INLET
T/C 733.59
F/L 18" 729.09
N 6991649.50
E 2308401.67
STA 3+90.15 SD LINE 'A'=
STA 1+00.00 SD LAT 'A–2'
1–12" INSERTA TEE
F/L 60" 719.23
F/L 12" 721.23
N 6991653.25
E 2308299.82
STA 2+60.52 SD LINE 'A'=
STA 1+00 SD LAT 'A–1'
1–6' SQ. SDMH
N 6991601.15
E 2308181.12
STA 1+00.00 SD LINE 'A'
1–60" TYPE 'C' HEADWALL
BEGIN SD LINE 'A'
N 6991536.64
E 2308034.13
STA 4+68.76 SD LAT 'A–1b'
1–6" 90° BEND
F/L 6" 731.49
N 6992137.77
E 2308091.69
STA 4+47.76 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b8'
1–6"x6" TEE
F/L 6" 731.26
F/L 6" 731.26
N 6992118.15
E 2308084.21
STA 4+02.76 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b6'
1–8"x6" TEE
F/L 8" 730.75
F/L 6" 730.83
N 6992076.09
E 2308068.19
STA 3+57.76 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b4'
1–12"x6" TEE
1–12"x8" REDUCER
F/L 12" 730.24
F/L 8" 730.24
F/L 6" 730.49
N 6992034.04
E 2308052.17
STA 3+13.18 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b2'
1–12"x8" TEE
F/L 12" 729.73
F/L 8" 729.98
N 6991992.38
E 2308036.29
STA 2+92.43 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b1'
1–12"x6" TEE
F/L 12" 729.50
F/L 6" 729.75
N 6991972.99
E 2308028.90
STA 2+73.84 SD LAT 'A–1b'
1–12" 45° BEND
F/L 12" 729.29
N 6991955.82
E 2308022.28
STA 2+37.88 SD LAT 'A–1b'
1–12" 45° BEND
F/L 12" 728.88
N 6991923.03
E 2308037.48
STA 1+43.64 SD LAT 'A–111'
1–6" 90° BEND
F/L 6" 733.87
N 6992092.69
E 2308209.44
STA 5+74.19 SD LAT 'A–1'
1–18"x18" CATCH BASIN
RIM 736.09
F/L 12" 733.09
N 6992064.96
E 2308217.19
STA 1+35.14 SD LAT 'A–1k'
1–18"x18" CATCH BASIN
RIM 735.46
F/L 8" 732.46
N 6992033.00
E 2308242.61
STA 2+33.28 SD LAT 'A–7'
1–6" 90° BEND
F/L 6" 732.76
N 6991979.93
E 2308387.26
STA 1+26.29 SD LAT 'A–1a'
1–5' CURB INLET
T/C 732.79
F/L 18" 728.29
N 6991673.12
E 2308158.24
STA 1+28.38 SD LAT 'A–2'
1–12" 22.5° BEND
F/L 12" 723.87
N 6991679.24
E 2308288.41
STA 1+54.83 SD LAT 'A–1'
1–24"x18" 45° WYE
1–24"x18" REDUCER
F/L 18" 724.96
F/L 18" 725.21
N 6991655.90
E 2308178.12
STA 1+54.46 SD LAT 'A–2a'
1–8" NYLOPLAST DRAIN BASIN
RIM 735.89
F/L 6" 732.89
N 6991729.74
E 2308247.03
STA 1+00 SD LAT 'A–8'
N 6992185.87
E 2308465.39
STA 1+00 SD LAT 'A–4'
N 6991735.36
E 2308490.11
STA 1+89.73 SD LAT 'A–4'
1–6" DROP INLET
TOP 731.48
THROAT 730.98
F/L 36" 722.24
N 6991744.71
E 2308579.35
STA 1+00 SD LAT 'A–5'
1–5' CURB INLET
T/C 734.01
F/L 18" 729.51
N 6991804.60
E 2308523.00
STA 1+36.64 SD LAT 'A–5'
1–5' CURB INLET
T/C 733.51
F/L 18" 729.01
N 6991918.93
E 2308516.73
STA 1+36.64 SD LAT 'A–6'
1–5' CURB INLET
T/C 733.51
F/L 18" 729.01
N 6991937.83
E 2308423.15
STA 1+00 SD LAT 'A–7'
1–42"x18" TEE
F/L 8" 731.89
F/L 6" 731.89
F/L 6" 731.97
N 6991850.00
E 2308427.97
STA 1+00 SD LAT 'A–8'
1–7' SQ. SDMH
N 6991940.88
E 2308478.84
STA 1+00.00 SD LAT 'A–1'
1–24"x18" TEE
F/L 18" 724.96
F/L 18" 725.21
N 6991655.90
E 2308178.12
STA 1+00.00 SD LAT 'A–1b'
1–12"x6" TEE
F/L 12" 729.50
F/L 6" 729.75
N 6991972.99
E 2308028.90
STA 1+00.00 SD LAT 'A–1b'
1–12"x6" TEE
F/L 12" 729.73
F/L 6" 729.98
N 6991992.38
E 2308036.29
STA 1+00.00 SD LAT 'A–1b'
1–6"x6" TEE
F/L 6" 731.26
F/L 6" 731.26
N 6992118.15
E 2308084.21
STA 1+00.00 SD LAT 'A–1b'
1–8"x6" TEE
F/L 8" 730.75
F/L 6" 730.83
N 6992076.09
E 2308068.19
STA 1+00.00 SD LAT 'A–1b'
1–12"x6" TEE
1–12"x8" REDUCER
F/L 12" 730.24
F/L 8" 730.24
F/L 6" 730.49
N 6992034.04
E 2308052.17
STA 1+00.00 SD LAT 'A–1b'
1–12"x8" TEE
F/L 12" 729.73
F/L 8" 729.98
N 6991992.38
E 2308036.29
STA 1+00.00 SD LAT 'A–1b'
1–12"x6" TEE
F/L 12" 729.50
F/L 6" 729.75
N 6991972.99
E 2308028.90
STA 1+00.00 SD LAT 'A–1b'
1–12" 45° BEND
F/L 12" 729.29
N 6991955.82
E 2308022.28
STA 1+00.00 SD LAT 'A–1b'
1–12" 45° BEND
F/L 12" 728.88
N 6991923.03
E 2308037.48
STA 1+00.00 SD LAT 'A–1'
1–6" SQ. SDMH
N 6991601.15
E 2308181.12
STA 1+00.00 SD LAT 'A–2'
1–12" INSERTA TEE
F/L 60" 719.23
F/L 12" 721.23
N 6991653.25
E 2308299.82
STA 1+00 SD LAT 'A–3'
1–60"x18" TEE
N 6991690.08
E 2308383.72
STA 1+00 SD LAT 'A–7'
1–4' SQ. SDMH
N 6991940.88
E 2308478.84
STA 1+00 SD LAT 'A–8'
1–7' SQ. SDMH
N 6991940.88
E 2308478.84
STA 1+00 SD LAT 'A–1'
1–4' SQ. SDMH
N 6991601.15
E 2308181.12
STA 1+00 SD LAT 'A–2'
1–12" INSERTA TEE
F/L 60" 719.23
F/L 12" 721.23
N 6991653.25
E 2308299.82
STA 1+00 SD LAT 'A–3'
1–60"x18" TEE
N 6991690.08
E 2308383.72
STA 1+00 SD LAT 'A–4'
1–7' SQ. SDMH
N 6991735.36
E 2308490.11
STA 1+00 SD LAT 'A–5'
1–42"x18" TEE
N 6991802.59
E 2308486.42
STA 1+00 SD LAT 'A–6'
1–42"x18" TEE
N 6991916.92
E 2308480.15
STA 1+00 SD LAT 'A–7'
1–42"x18" TEE
N 6991931.92
E 2308480.15
STA 1+00 SD LAT 'A–8'
1–7' SQ. SDMH
N 6991940.88
E 2308478.84
STA 1+00.00 SD LAT 'A–1b'
1–6" 90° BEND
F/L 6" 731.49
N 6992137.77
E 2308091.69
STA 1+00.00 SD LAT 'A–1b8'
1–6"x6" TEE
F/L 6" 731.26
F/L 6" 731.26
N 6992118.15
E 2308084.21
STA 1+00.00 SD LAT 'A–1b6'
1–8"x6" TEE
F/L 8" 730.75
F/L 6" 730.83
N 6992076.09
E 2308068.19
STA 1+00.00 SD LAT 'A–1b4'
1–12"x6" TEE
1–12"x8" REDUCER
F/L 12" 730.24
F/L 8" 730.24
F/L 6" 730.49
N 6992034.04
E 2308052.17
STA 1+00.00 SD LAT 'A–1b2'
1–12"x8" TEE
F/L 12" 729.73
F/L 8" 729.98
N 6991992.38
E 2308036.29
STA 1+00.00 SD LAT 'A–1b1'
1–12"x6" TEE
F/L 12" 729.50
F/L 6" 729.75
N 6991972.99
E 2308028.90
STA 1+00.00 SD LAT 'A–1b'
1–12" 45° BEND
F/L 12" 729.29
N 6991955.82
E 2308022.28
STA 1+00.00 SD LAT 'A–1b'
1–12" 45° BEND
F/L 12" 728.88
N 6991923.03
E 2308037.48
STA 1+00.00 SD LAT 'A–1'
1–24"x18" 45° WYE
1–24"x18" REDUCER
F/L 18" 724.96
F/L 18" 725.21
N 6991655.90
E 2308178.12
STA 1+00.00 SD LAT 'A–1'
1–6" SQ. SDMH
N 6991601.15
E 2308181.12
STA 1+00.00 SD LAT 'A–2'
1–12" INSERTA TEE
F/L 60" 719.23
F/L 12" 721.23
N 6991653.25
E 2308299.82
STA 1+00.00 SD LAT 'A–3'
1–60"x18" TEE
N 6991690.08
E 2308383.72
STA 1+00.00 SD LAT 'A–4'
1–7' SQ. SDMH
N 6991735.36
E 2308490.11
STA 1+00.00 SD LAT 'A–5'
1–42"x18" TEE
N 6991802.59
E 2308486.42
STA 1+00.00 SD LAT 'A–6'
1–42"x18" TEE
N 6991916.92
E 2308480.15
STA 1+00.00 SD LAT 'A–7'
1–42"x18" TEE
N 6991931.92
E 2308480.15
STA 1+00.00 SD LAT 'A–8'
1–7' SQ. SDMH
N 6991940.88
E 2308478.84
STA 1+00.00 SD LINE 'A'
1–60" TYPE 'C' HEADWALL
BEGIN SD LINE 'A'
N 6991536.64
E 2308034.13
STA 2+60.52 SD LINE 'A'=
STA 1+00 SD LAT 'A–1'
1–6' SQ. SDMH
N 6991601.15
E 2308181.12
STA 3+90.15 SD LINE 'A'=
STA 1+00.00 SD LAT 'A–2'
1–12" INSERTA TEE
F/L 60" 719.23
F/L 12" 721.23
N 6991653.25
E 2308299.82
STA 4+81.78 SD LINE 'A'=
STA 1+00 SD LAT 'A–3'
1–60"x18" TEE
N 6991690.08
E 2308383.72
STA 5+97.63 SD LINE 'A'=
STA 1+00 SD LAT 'A–4'
1–7' SQ. SDMH
N 6991735.36
E 2308490.11
STA 6+64.96 SD LINE 'A'=
STA 1+00 SD LAT 'A–5'
1–42"x18" TEE
N 6991802.59
E 2308486.42
STA 7+79.46 SD LINE 'A'=
STA 1+00 SD LAT 'A–6'
1–42"x18" TEE
N 6991916.92
E 2308480.15
STA 8+03.46 SD LINE 'A'=
STA 1+00 SD LAT 'A–7'
1–4' SQ. SDMH
N 6991940.88
E 2308478.84
STA 10+48.82 SD LINE 'A'=
STA 1+00 SD LAT 'A–8'
1–4' SQ. SDMH
N 6992185.87
E 2308465.39
STA 11+22.60 SD LINE 'A'
1–15' CURB INLET
END SD LINE 'A'
N 6992256.40
E 2308444.00
STA 1+00.00 SD LAT 'A–1'
1–6" SQ. SDMH
N 6991601.15
E 2308181.12
STA 1+00.00 SD LAT 'A–2'
1–12" INSERTA TEE
F/L 60" 719.23
F/L 12" 721.23
N 6991653.25
E 2308299.82
STA 1+00.00 SD LAT 'A–3'
1–60"x18" TEE
N 6991690.08
E 2308383.72
STA 1+00.00 SD LAT 'A–4'
1–7' SQ. SDMH
N 6991735.36
E 2308490.11
STA 1+00.00 SD LAT 'A–5'
1–42"x18" TEE
N 6991802.59
E 2308486.42
STA 1+00.00 SD LAT 'A–6'
1–42"x18" TEE
N 6991916.92
E 2308480.15
STA 1+00.00 SD LAT 'A–7'
1–42"x18" TEE
N 6991931.92
E 2308480.15
STA 1+00.00 SD LAT 'A–8'
1–7' SQ. SDMH
N 6991940.88
E 2308478.84
STA 1+00.00 SD LINE 'A'
1–60" TYPE 'C' HEADWALL
BEGIN SD LINE 'A'
N 6991536.64
E 2308034.13
STA 1+26.29 SD LAT 'A–1a'
1–5' CURB INLET
T/C 732.79
F/L 18" 728.29
N 6991673.12
E 2308158.24
STA 1+28.38 SD LAT 'A–2'
1–12" 22.5° BEND
F/L 12" 723.87
N 6991679.24
E 2308288.41
STA 1+54.83 SD LAT 'A–1'
1–24"x18" 45° WYE
1–24"x18" REDUCER
F/L 18" 724.96
F/L 18" 725.21
N 6991655.90
E 2308178.12
STA 1+54.46 SD LAT 'A–2a'
1–8" NYLOPLAST DRAIN BASIN
RIM 735.89
F/L 6" 732.89
N 6991729.74
E 2308247.03
STA 2+03.87 SD LAT 'A–8'
1–5" DROP INLET
TOP 731.10
THROAT 730.60
F/L 36" 727.60
N 6992215.42
E 2308564.90
STA 2+26.54 SD LAT 'A–2'
1–8" NYLOPLAST DRAIN BASIN
RIM 736.02
F/L 6" 733.02
N 6991777.25
E 2308283.03
STA 1+20.96 SD LAT 'A–2b'
1–6" 60° BEND
F/L 6" 731.50
N 6991750.59
E 2308263.50
STA 1+80.04 SD LAT 'A–2a'=
STA 1+00.00 SD LAT 'A–2a1'
1–8"x6" TEE
1–8"x6" REDUCERS
F/L 8" 731.43
F/L 6" 731.43
F/L 6" 731.52
N 6991756.12
E 2308364.35
STA 1+25.79 SD LAT 'A–2a1'
1–8" NYLOPLAST DRAIN BASIN
RIM 736.07
F/L 6" 733.07
N 6991781.87
E 2308362.94
STA 2+19.62 SD LAT 'A–2a'
1–6" 45° BEND
F/L 6" 731.82
N 6991798.29
E 2308403.88
STA 2+71.59 SD LAT 'A–2a'
1–8" NYLOPLAST DRAIN BASIN
RIM 735.34
F/L 6" 732.34
N 6991796.90
E 2308438.65
STA 1+00.00 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b7'
1–8"x6" TEE
1–8"x6" REDUCER
F/L 8" 730.99
F/L 6" 730.99
F/L 6" 731.07
N 6992096.18
E 2308075.84
STA 1+22.67 SD LAT 'A–1l1'=
STA 1+00.00 SD LAT 'A–1l1a'
1–6"x6" TEE
F/L 6" 733.57
F/L 6" 733.57
N 6992073.09
E 2308201.98
STA 3+35.26 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b3'
1–12"x6" TEE
F/L 12" 729.98
F/L 6" 730.23
N 6992013.02
E 2308044.15
STA 3+80.26 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b5'
1–8"x6" TEE
F/L 8" 730.49
F/L 6" 730.57
N 6992055.07
E 2308060.18
STA 1+89.28 SD LAT 'A–7'=
STA 1+00.00 SD LAT 'A–7b'=
STA 1+00.00 SD LAT 'A–7c'
1–12"x12" CROSS
3–12"x6" REDUCERS
F/L 12" 729.92
F/L 6" 729.92
F/L 6" 729.92
F/L 6" 729.92
N 6991935.99
E 2308389.69
STA 5+53.37 SD LAT 'A–1'=
STA 1+00.00 SD LAT 'A–1k'
1–12"x8" CROSS
F/L 12" 731.42
F/L 12" 731.42
F/L 8" 731.57
F/L 8" 731.58
N 6992045.51
E 2308209.78
STA 1+17.12 SD LAT 'A–11'=
STA 1+00.00 SD LAT 'A–111'
1–6"x6" TEE
F/L 6" 733.17
F/L 6" 733.25
N 6992051.91
E 2308193.90
STA 1+87.95 SD LAT 'A–7a'=
STA 1+00.00 SD LAT 'A–7a1'
1–8"x6" TEE
1–8"x6" REDUCER
F/L 8" 731.89
F/L 6" 731.89
F/L 6" 731.97
N 6991850.00
E 2308427.97
STA 1+55.77 SD LAT 'A–7'=
STA 1+00.00 SD LAT 'A–7a'
1–12"x8" TEE
F/L 12" 727.76
F/L 8" 727.92
N 6991937.83
E 2308423.15
STA 2+00.98 SD LAT 'A–2'=
STA 1+00.00 SD LAT 'A–2a'
1–12"x12" CROSS
2–12"x6" REDUCERS
1–12"x8" REDUCER
F/L 12" 730.64
F/L 8" 730.64
F/L 6" 730.64
F/L 6" 730.64
N 6991751.73
E 2308284.43
STA 2+26.54 SD LAT 'A–2'
1–8" NYLOPLAST DRAIN BASIN
RIM 736.02
F/L 6" 733.02
N 6991777.25
E 2308283.03
STA 1+20.96 SD LAT 'A–2b'
1–6" 60° BEND
F/L 6" 731.50
N 6991750.59
E 2308263.50
STA 1+80.04 SD LAT 'A–2a'=
STA 1+00.00 SD LAT 'A–2a1'
1–8"x6" TEE
1–8"x6" REDUCERS
F/L 8" 731.43
F/L 6" 731.43
F/L 6" 731.52
N 6991756.12
E 2308364.35
STA 1+25.79 SD LAT 'A–2a1'
1–8" NYLOPLAST DRAIN BASIN
RIM 736.07
F/L 6" 733.07
N 6991781.87
E 2308362.94
STA 2+19.62 SD LAT 'A–2a'
1–6" 45° BEND
F/L 6" 731.82
N 6991798.29
E 2308403.88
STA 2+71.59 SD LAT 'A–2a'
1–8" NYLOPLAST DRAIN BASIN
RIM 735.34
F/L 6" 732.34
N 6991796.90
E 2308438.65
STA 1+00.00 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b7'
1–8"x6" TEE
1–8"x6" REDUCER
F/L 8" 730.99
F/L 6" 730.99
F/L 6" 731.07
N 6992096.18
E 2308075.84
STA 1+22.67 SD LAT 'A–1l1'=
STA 1+00.00 SD LAT 'A–1l1a'
1–6"x6" TEE
F/L 6" 733.57
F/L 6" 733.57
N 6992073.09
E 2308201.98
STA 3+35.26 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b3'
1–12"x6" TEE
F/L 12" 729.98
F/L 6" 730.23
N 6992013.02
E 2308044.15
STA 3+80.26 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b5'
1–8"x6" TEE
F/L 8" 730.49
F/L 6" 730.57
N 6992055.07
E 2308060.18
STA 1+89.28 SD LAT 'A–7'=
STA 1+00.00 SD LAT 'A–7b'=
STA 1+00.00 SD LAT 'A–7c'
1–12"x12" CROSS
3–12"x6" REDUCERS
F/L 12" 729.92
F/L 6" 729.92
F/L 6" 729.92
F/L 6" 729.92
N 6991935.99
E 2308389.69
STA 5+53.37 SD LAT 'A–1'=
STA 1+00.00 SD LAT 'A–1k'
1–12"x8" CROSS
F/L 12" 731.42
F/L 12" 731.42
F/L 8" 731.57
F/L 8" 731.58
N 6992045.51
E 2308209.78
STA 1+17.12 SD LAT 'A–11'=
STA 1+00.00 SD LAT 'A–111'
1–6"x6" TEE
F/L 6" 733.17
F/L 6" 733.25
N 6992051.91
E 2308193.90
STA 1+87.95 SD LAT 'A–7a'=
STA 1+00.00 SD LAT 'A–7a1'
1–8"x6" TEE
1–8"x6" REDUCER
F/L 8" 731.89
F/L 6" 731.89
F/L 6" 731.97
N 6991850.00
E 2308427.97
STA 1+55.77 SD LAT 'A–7'=
STA 1+00.00 SD LAT 'A–7a'
1–12"x8" TEE
F/L 12" 727.76
F/L 8" 727.92
N 6991937.83
E 2308423.15
STA 2+00.98 SD LAT 'A–2'=
STA 1+00.00 SD LAT 'A–2a'
1–12"x12" CROSS
2–12"x6" REDUCERS
1–12"x8" REDUCER
F/L 12" 730.64
F/L 8" 730.64
F/L 6" 730.64
F/L 6" 730.64
N 6991751.73
E 2308284.43
STA 2+26.54 SD LAT 'A–2'
1–8" NYLOPLAST DRAIN BASIN
RIM 736.02
F/L 6" 733.02
N 6991777.25
E 2308283.03
STA 1+20.96 SD LAT 'A–2b'
1–6" 60° BEND
F/L 6" 731.50
N 6991750.59
E 2308263.50
STA 1+80.04 SD LAT 'A–2a'=
STA 1+00.00 SD LAT 'A–2a1'
1–8"x6" TEE
1–8"x6" REDUCERS
F/L 8" 731.43
F/L 6" 731.43
F/L 6" 731.52
N 6991756.12
E 2308364.35
STA 1+25.79 SD LAT 'A–2a1'
1–8" NYLOPLAST DRAIN BASIN
RIM 736.07
F/L 6" 733.07
N 6991781.87
E 2308362.94
STA 2+19.62 SD LAT 'A–2a'
1–6" 45° BEND
F/L 6" 731.82
N 6991798.29
E 2308403.88
STA 2+71.59 SD LAT 'A–2a'
1–8" NYLOPLAST DRAIN BASIN
RIM 735.34
F/L 6" 732.34
N 6991796.90
E 2308438.65
STA 1+00.00 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b8'
1–6"x6" TEE
F/L 6" 731.26
F/L 6" 731.26
N 6992118.15
E 2308084.21
STA 1+00.00 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b6'
1–8"x6" TEE
F/L 8" 730.75
F/L 6" 730.83
N 6992076.09
E 2308068.19
STA 1+00.00 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b4'
1–12"x6" TEE
1–12"x8" REDUCER
F/L 12" 730.24
F/L 8" 730.24
F/L 6" 730.49
N 6992034.04
E 2308052.17
STA 1+00.00 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b2'
1–12"x8" TEE
F/L 12" 729.73
F/L 8" 729.98
N 6991992.38
E 2308036.29
STA 1+00.00 SD LAT 'A–1b'=
STA 1+00.00 SD LAT 'A–1b1'
1–12"x6" TEE
F/L 12" 729.50
F/L 6" 729.75
N 6991972.99
E 2308028.90
STA 1+00.00 SD LAT 'A–1b'
1–12" 45° BEND
F/L 12" 729.29
N 6991955.82
E 2308022.28
STA 1+00.00 SD LAT 'A–1b'
1–12" 45° BEND
F/L 12" 728.88
N 6991923.03
E 2308037.48
STA 1+00.00 SD LAT 'A–1'
1–24"x18" 45° WYE
1–24"x18" REDUCER
F/L 18" 724.96
F/L 18" 725.21
N 6991655.90
E 2308178.12
STA 1+00.00 SD LAT 'A–1'
1–6" SQ. SDMH
N 6991601.15
E 2308181.12
STA 1+00.00 SD LAT 'A–2'
1–12" INSERTA TEE
F/L 60" 719.23
F/L 12" 721.23
N 6991653.25
E 2308299.82
STA 1+00.00 SD LAT 'A–3'
1–60"x18" TEE
N 6991690.08
E 2308383.72
STA 1+00.00 SD LAT 'A–4'
1–7' SQ. SDMH
N 6991735.36
E 2308490.11
STA 1+00.00 SD LAT 'A–5'
1–42"x18" TEE
N 6991802.59
E 2308486.42
STA 1+00.00 SD LAT 'A–6'
1–42"x18" TEE
N 6991916.92
E 2308480.15
STA 1+00.00 SD LAT 'A–7'
1–42"x18" TEE
N 6991931.92
E 2308480.15
STA 1+00.00 SD LAT 'A–8'
1–7' SQ. SDMH
N 6991940.88
E 2308478.84
STA 1+00.00 SD LINE 'A'
1–60" TYPE 'C' HEADWALL
BEGIN SD LINE 'A'
N 6991536.64
E 2308034.13
STA 2+60.52 SD LINE 'A'=
STA 1+00 SD LAT 'A–1'
1–6" SQ. SDMH
N 6991601.15
E 2308181.12
STA 3+90.15 SD LINE 'A'=
STA 1+00.00 SD LAT 'A–2'
1–12" INSERTA TEE
F/L 60" 719.23
F/L 12" 721.23
N 6991653.25
E 2308299.82
STA 4+81.78 SD LINE 'A'=
STA 1+00 SD LAT 'A–3'
1–60"x18" TEE
N 6991690.08
E 2308383.72
STA 5+97.63 SD LINE 'A'=
STA 1+00 SD LAT 'A–4'
1–7' SQ. SDMH
N 6991735.36
E 2308490.11
STA 6+64.96 SD LINE 'A'=
STA 1+00 SD LAT 'A–5'
1–42"x18" TEE
N 6991802.59
E 2308486.42
STA 7+79.46 SD LINE 'A'=
STA 1+00 SD LAT 'A–6'
1–42"x18" TEE
N 6991916.92
E 2308480.15
STA 8+03.46 SD LINE 'A'=
STA 1+00 SD LAT 'A–7'
1–4' SQ. SDMH
N 6991940.88
E 2308478.84
STA 10+48.82 SD LINE 'A'=
STA 1+00 SD LAT 'A–8'
1–4' SQ. SDMH
N 6992185.87
E 2308465.39
STA 11+22.60 SD LINE 'A'
1–15' CURB INLET
END SD LINE 'A'
N 6992256.40
E 2308444.00
24" HDPE SD LINE 'A'
N73°23'20"W
36" HDPE SD LAT 'A–8' @ 1.00%
N73°07'39"E
36" HDPE SD LINE 'A'
N73°08'26"W
42" HDPE SD LINE 'A'
N73°08'26"W
60" HDPE SD LINE 'A'
N66°18'14"E
18" HDPE SD LINE 'A'
N73°08'26"W
24" HDPE SD LAT 'A–1'
N73°08'26"W
18" HDPE SD LAT 'A–1a' @ 11.70%
N49°05'30"W
12" HDPE SD LAT 'A–1b' @ 1.25%
N68°43'35"W
8" HDPE SD LAT 'A–1b' @ 1.13%
N20°51'34"E
8" HDPE SD LAT 'A–1b' @ 1.13%
N20°51'34"E
6" HDPE SD LAT 'A–1b' @ 1.13%
N20°51'34"E
6" HDPE SD LAT 'A–1b8' @ 14.99%
S69°08'26"E
6" HDPE SD LAT 'A–1b7' @ 15.99%
S69°08'26"E
6" HDPE SD LAT 'A–1b5' @ 18.73%
S69°08'26"E
6" HDPE SD LAT 'A–1b3' @ 20.60%
S69°08'26"E
12" HDPE SD LAT 'A–1b' @ 1.13%
N20°51'34"E
6" HDPE SD LAT 'A–1b1' @ 23.26%
S69°08'26"E
12" HDPE SD LAT 'A–1b' @ 1.13%
N25°00'00"W
6" HDPE SD LAT 'A–111' @ 1.42%
N20°51'34"E
6" HDPE SD LAT 'A–111a' @ 4.79%
N69°08'26"W
6" HDPE SD LAT 'A–111' @ 1.42%
N20°51'46"E
6" HDPE SD LAT 'A–11' @ 9.26%
N68°02'40"W
8" HDPE SD LAT 'A–1k' @ 2.54%
S69°08'26"E
12" HDPE SD LAT 'A–1' @ 11.00%
N73°08'26"W
12" HDPE SD LAT 'A–1' @ 9.32%
N73°08'26"W
12" 12 inch HDPE Pipe SD LAT 'A–2' @ 9.32%
N23°41'46"W
6" HDPE SD LAT 'A–7' @ 6.46%
S86°51'34"W
6" HDPE @ 1.00% MIN.
12" HDPE SD LAT 'A–7' @ 6.46%
S86°51'34"W
6" HDPE @ 1.00% MIN.
6" HDPE @ 1.00% MIN.
6" HDPE SD LAT 'A–7' @ 6.46%
N3°08'26"W
6" HDPE @ 1.00% MIN.
6" HDPE @ 1.00% MIN.
6" HDPE SD LAT 'A–2a1' @ 6.03%
N3°08'26"W
6" HDPE SD LAT 'A–7a' @ 4.51%
S3°08'26"E
6" HDPE @ 1.00% MIN.
6" HDPE SD LAT 'A–7a' @ 4.51%
S3°08'26"E
6" HDPE SD LAT 'A–2' @ 9.32%
N3°08'26"W
6" HDPE SD LAT 'A–20' @ 0.99%
N4°20'00"E
8" HDPE SD LAT 'A–2a' @ 0.99%
N86°51'34"E
6" HDPE SD LAT 'A–2a' @ 0.99%
N86°51'34"E
12" HDPE SD LAT 'A–2' @ 9.32%
N3°08'26"W
18" HDPE SD LAT 'A–2' @ 16.22%
S23°51'12"E
18" HDPE SD LAT 'A–6' @ 15.83%
N86°51'34"E
36" HDPE SD LAT 'A–4' @ 1.00%
N83°54'01"E
F/L 4" 735.00
F/L 4" 734.50
F/L 4" 735.00
F/L 4" 734.40
F/L 4" 734.50
F/L 4" 733.40
F/L 4" 733.50
4" PERFORATED HDPE PLANTER DRAIN (TYP.)
4" HDPE (NON-PERFORATED) (TYP.)
4" HDPE (NON-PERFORATED) (TYP.)
8" HDPE SD LAT 'A–1b' @ 1.13%
N20°51'34"E
8" HDPE SD LAT 'A–1b' @ 1.13%
N20°51'34"E
8" HDPE SD LAT 'A–1b' @ 1.13%
N20°51'34"E
12" HDPE SD LAT 'A–1b' @ 1.13%
N20°51'34"E
6" HDPE SD LAT 'A–1b' @ 1.13%
N20°51'34"E
6" HDPE SD LAT 'A–1b' @ 14.99%
S69°08'26"E
6" HDPE SD LAT 'A–1b7' @ 15.99%
S69°08'26"E
6" HDPE SD LAT 'A–1b5' @ 18.73%
S69°08'26"E
6" HDPE SD LAT 'A–1b3' @ 20.60%
S69°08'26"E
12" HDPE SD LAT 'A–1b' @ 1.13%
N20°51'34"E
6" HDPE SD LAT 'A–1b1' @ 23.26%
S69°08'26"E
12" HDPE SD LAT 'A–1b' @ 1.13%
N25°00'00"W
6" HDPE SD LAT 'A–111' @ 1.42%
N20°51'34"E
6" HDPE SD LAT 'A–111a' @ 4.79%
N69°08'26"W
6" HDPE SD LAT 'A–111' @ 1.42%
N20°51'46"E
6" HDPE SD LAT 'A–11' @ 9.26%
N68°02'40"W
8" HDPE SD LAT 'A–1k' @ 2.54%
S69°08'26"E
12" HDPE SD LAT 'A–1' @ 11.00%
N73°08'26"W
12" HDPE SD LAT 'A–1' @ 9.32%
N73°08'26"W
12" 12 inch HDPE Pipe SD LAT 'A–2' @ 9.32%
N23°41'46"W
6" HDPE SD LAT 'A–7' @ 6.46%
S86°51'34"W
6" HDPE @ 1.00% MIN.
12" HDPE SD LAT 'A–7' @ 6.46%
S86°51'34"W
6" HDPE @ 1.00% MIN.
6" HDPE @ 1.00% MIN.
6" HDPE SD LAT 'A–7' @ 6.46%
N3°08'26"W
6" HDPE @ 1.00% MIN.
6" HDPE @ 1.00% MIN.
6" HDPE SD LAT 'A–2a1' @ 6.03%
N3°08'26"W
6" HDPE SD LAT 'A–7a' @ 4.51%
S3°08'26"E
6" HDPE @ 1.00% MIN.
6" HDPE SD LAT 'A–7a' @ 4.51%
S3°08'26"E
6" HDPE SD LAT 'A–2' @ 9.32%
N3°08'26"W
6" HDPE SD LAT 'A–20' @ 0.99%
N4°20'00"E
8" HDPE SD LAT 'A–2a' @ 0.99%
N86°51'34"E
6" HDPE SD LAT 'A–2a' @ 0.99%
N86°51'34"E
12" HDPE SD LAT 'A–2' @ 9.32%
N3°08'26"W
18" HDPE SD LAT 'A–6' @ 15.83%
N86°51'34"E
36" HDPE SD LAT 'A–4' @ 1.00%
N83°54'01"E
F/L 4" 735.00
F/L 4" 734.50
F/L 4" 735.00
F/L 4" 734.40
F/L 4" 734.50
F/L 4" 733.40
F/L 4" 733.50
4" PERFORATED HDPE PLANTER DRAIN (TYP.)
4" HDPE (NON-PERFORATED) (TYP.)
4" HDPE (NON-PERFORATED) (TYP.)
STA 1+26.29 SD LAT 'A–1a'
1–5' CURB INLET
T/C 732.79
F/L 18" 728.29
N 6991673.12
E 2308158.24
STA 1+28



INSET 'A'

SCALE: 1"=10'

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STATE OF TEXAS
MATTHEW G. MANTONG
146154
LICENSED
PROFESSIONAL ENGINEER
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
STORM DRAIN INSET

SHEET NO.
C1.15

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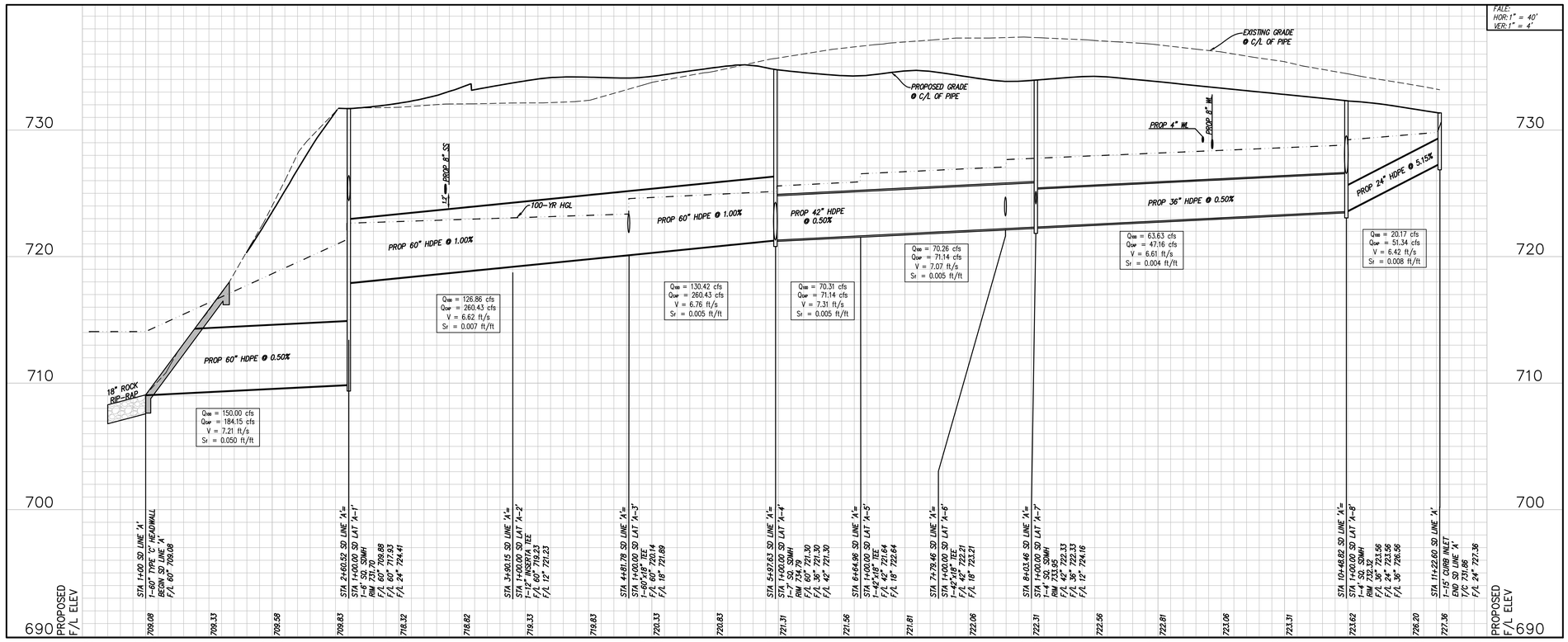

SD LINE 'A'

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ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
STORM DRAIN PROFILE

SHEET NO.
C1.16

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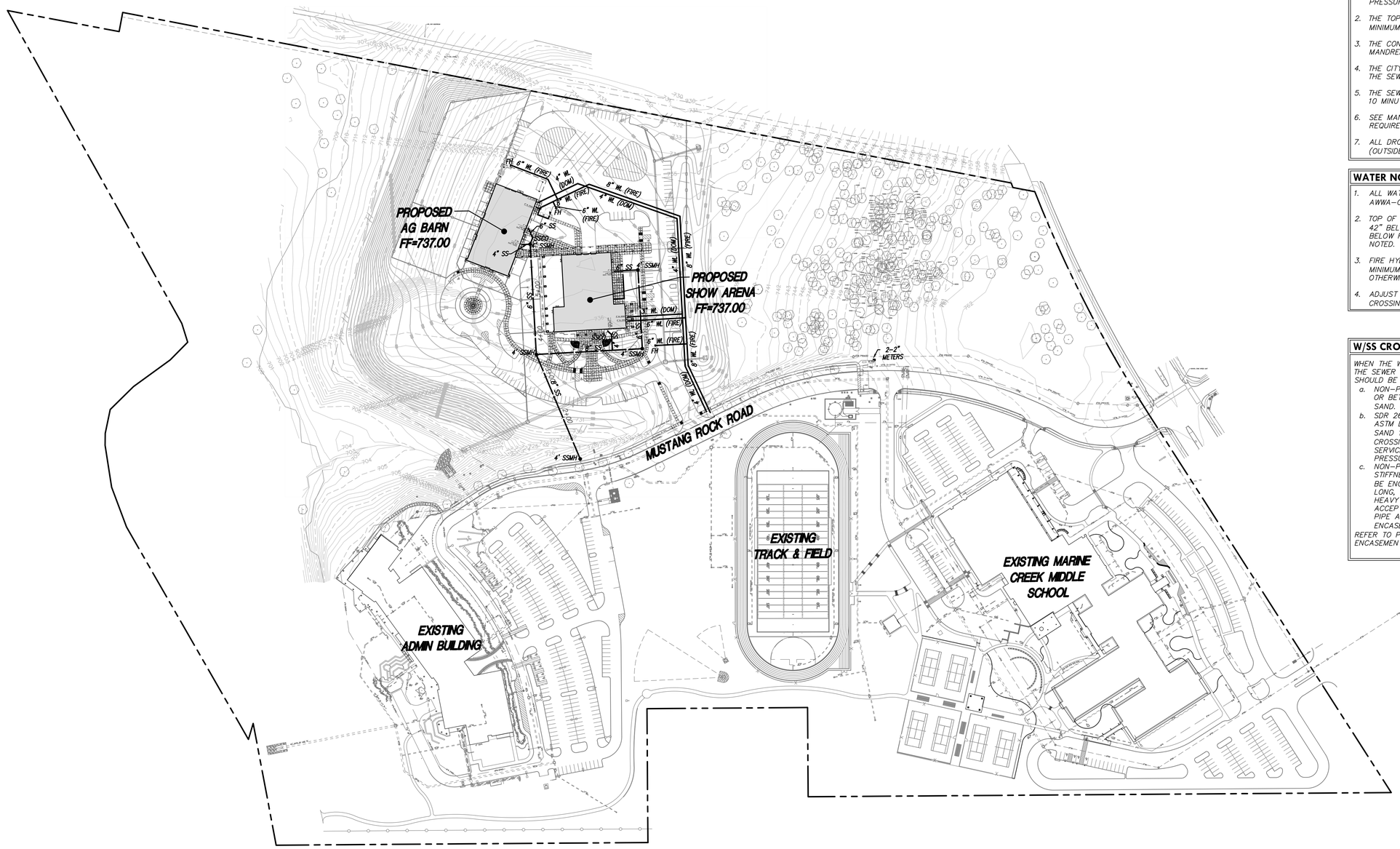

UTILITY NOTE

THE UTILITIES SHOWN ON THE PLANS WERE COMPILED FROM VARIOUS SOURCES AND ARE INTENDED TO SHOW THE GENERAL EXISTENCE AND LOCATION OF UTILITIES IN THE AREA OF CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITY INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES IN ORDER TO DETERMINE IF THERE IS ANY CONFLICT WITH THE PROPOSED FACILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS WITH EXISTING UTILITIES ARE DISCOVERED.

SANITARY SEWER NOTES

1. SERVICE LINES SHALL BE PLUGGED AND PRESSURE TESTED WITH THE MAIN LINES
2. THE TOP OF THE SEWER PIPE SHALL BE A MINIMUM OF 48" BELOW FINISHED GRADE.
3. THE CONTRACTOR IS REQUIRED TO PULL A MANDREL THROUGH SEWER PIPE.
4. THE CITY RESERVES THE RIGHT TO TV INSPECT THE SEWER PIPE.
5. THE SEWER PIPE WILL BE TESTED TO 5 PSI FOR 10 MINUTES WITH NO PRESSURE LOSS.
6. SEE MANHOLE DETAIL FOR ADDITIONAL TESTING REQUIREMENTS.
7. ALL DROP MANHOLES SHALL BE EXTERNAL (OUTSIDE) DROP MANHOLES.

WATER NOTES

1. ALL WATER MAINS UP TO 12" SHALL BE AWWA-C900 DR 14 (CLASS 200).
2. TOP OF WATER MAIN SHALL BE A MINIMUM OF 42" BELOW THE TOP OF THE CURB OR 42" BELOW FINISHED GRADE UNLESS OTHERWISE NOTED.
3. FIRE HYDRANTS SHALL BE LOCATED, AT A MINIMUM 3' BEHIND THE BACK OF CURB, UNLESS OTHERWISE SHOWN.
4. ADJUST WATER LINES AT STORM DRAIN CROSSINGS TO PROVIDE 12" MINIMUM CLEARANCE.

W/SS CROSSING NOTE

WHEN THE WATER LINE IS WITHIN 9' VERTICAL OF THE SEWER LINE, ONE OF THE BELOW OPTIONS SHOULD BE FOLLOWED FOR INSTALLATION:

a. NON-PRESSURE SDR 35 PIPE (GREEN IN COLOR) OR BETTER ENCASED IN CEMENT STABILIZED SAND. MAINTAIN A MINIMUM OF 2' CLEAR.
b. SDR 26 PRESSURE PIPE (GREEN IN COLOR) ASTM D-2241EMBED IN CEMENT STABILIZED SAND 12" PAST THE JOINT CENTERED AT THE CROSSING. MAINTAIN 6" SEPARATION. NO SERVICE LATERALS ARE ALLOWED ON THE PRESSURE PIPE.
c. NON-PRESSURE PIPE WITH A MINIMUM STIFFNESS OF 115 PSI AT 5% DEFLECTION CAN BE ENCASED IN PRESSURE PIPE, AT LEAST 18' LONG, AND SEALED AT BOTH ENDS. SDR 26 HEAVY WALL PIPE ASTM D-3034 IS ACCEPTABLE AS CARRIER PIPE AND SDR 26 PIPE ASTM D-2241 IS ACCEPTABLE AS ENCASEMENT. MAINTAIN 6" SEPERATION.

REFER TO PLAN/PROFILES FOR PIPE MATERIAL AND ENCASEMENT AREAS.

NOTE:
CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR IMPROVEMENTS WITHIN PUBLIC ROW.

NOTE:
ALL TRAFFIC CONTROL SIGNS, BARRICADES, AND FLAGGING SHALL BE IN ACCORDANCE WITH THE CURRENT TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND PHASING.

NOTE:
CONTRACTOR SHALL VERIFY EXACT LOCATION AND SIZE OF ALL UTILITIES AND USE EXTREME CAUTION DURING CONSTRUCTION.

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GRAPHIC SCALE
100 0 50 100 200
GRAPHIC SCALE: 1" = 100'

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STATE OF TEXAS
MATTHEW G. MANTONG
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05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
OVERALL WATER & SANITARY SEWER PLAN

SHEET NO.
C1.17

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01 6" WL 'A-2' (FIRE)
S86°51'34"W

02 STA 2+29.35 WL 'A-2' (FIRE)
END 6" WL
(REF MEP PLANS FOR CONNECTION @ BLDG)
N 6991827.18
E 2308406.09

03 STA 2+22.56 WL 'B-1' (DOM)
1-4"x3" REDUCER
END 3" WL
(REF MEP PLANS FOR CONNECTION @ BLDG)
N 6991836.33
E 2308405.38

04 STA 8+98.67 WL 'A' (FIRE)
1-8"x6" REDUCER
END 6" WL
(REF MEP PLANS FOR CONNECTION @ BLDG)
N 6992081.49
E 2308200.53

05 STA 8+77.87 WL 'B' (DOM)
1-4" 45° BEND
1-4"x2" REDUCER
END 2" WL
(REF MEP PLANS FOR CONNECTION @ BLDG)
N 6992092.58
E 2308204.80

06 STA 8+45.89 WL 'A' (FIRE) =
STA 1+00.00 WL 'A-3' (FIRE)
1-8"x6" TEE
1-8" GATE VALVE
1-6" GATE VALVE
N 6992099.60
E 2308248.31

07 STA 8+92.68 WL 'A' (FIRE)
1-8" 45° BEND
N 6992079.36
E 2308206.13

N 6992092.58
E 2308204.80

GRAPHIC SCALE
30 0 15 30 60
GRAPHIC SCALE: 1" = 30'

PROPOSED PARKING

STA 2+39.11 WL 'A-3' (FIRE)
1-STD FH ASSEMBLY
N 6992176.37
E 2308143.39

STA 1+49.93 WL 'A-3' (FIRE)
1-8" 45° BEND
N 6992144.62
E 2308226.71

6" WL 'A-3' (FIRE)
N25°38'00"W

4" WL 'B' (DOM)
S64°22'00"W

STA 7+79.59 WL 'B' (DOM)
1-4" 45° BEND
N 6992135.10
E 2308293.41

STA 7+67.47 WL 'A' (FIRE)
1-8" 45° BEND
N 6992133.52
E 2308319.01

216" WL 'A-3' (FIRE)
N69°08'26"W

STA 8+60.80 WL 'B' (DOM)
1-4" GATE VALVE
N 6992099.96
E 2308220.19

STA 6+40.41 SS LINE 'A'
1-6" 45° BEND
1-6"x4" REDUCER
END 4" SS
(REF MEP PLANS FOR CONNECTION @ BLDG)
N 6992035.02
E 2308182.82

PROPOSED AG BARN FF=737.00

8" WL 'A' (FIRE)
S64°22'00"W

WATERLINES DO NOT CONNECT

STA 8+57.28 WL 'A' (FIRE) =
STA 1+00.00 WL 'A-4' (FIRE)
1-8"x6" TEE
1-8" GATE VALVE
1-6" GATE VALVE
N 6992094.67
E 2308238.04

6" WL 'B-2' (FIRE)
S25°39'16"E

FH

6" WL 'A' (FIRE)
N70°08'26"W

STA 5+51.52 WL 'A' (FIRE)
1-8" 45° BEND
1-8" 22.5° BEND
N 6992061.93
E 2308522.76

4" WL 'B' (DOM)
N70°08'26"W

STA 5+43.63 WL 'B' (DOM)
1-4" 45° BEND
1-4" 22.5° BEND
N 6992056.88
E 2308516.02

4" WL 'B' (DOM)
N3°08'26"W

8" WL 'A' (FIRE)
N3°08'26"W

6" PVC (SDR-26) SS LINE 'A'
N24°08'26"W

STA 6+17.00 SS LINE 'A'
1-6" 45° BEND
1-6" SSCO
N 6992013.66
E 2308192.39

STA 1+16.81 WL 'A-4' (FIRE)
1-STD FH ASSEMBLY
N 6992079.51
E 2308245.32

6" PVC (SDR-26) SS LINE 'B'
S86°51'34"W

6" PVC (SDR-26) SS LINE 'A'
S86°51'34"W

STA 1+18.08 SS LAT 'A-1'
1-6"x4" REDUCER
1-4" 22.5° BEND
END 4" SS
(REF MEP PLANS FOR CONNECTION @ BLDG)
N 6991998.30
E 2308168.86

STA 5+68.41 SS LINE 'B'
1-6"x4" REDUCER
END 4" SS
(REF MEP PLANS FOR CONNECTION @ BLDG)
N 6991938.62
E 2308374.94

PROPOSED SHOW ARENA FF=737.00

STA 5+14.74 SS LINE 'B'
1-4" SSMH NO. 5
N 6991941.56
E 2308428.53

PROPOSED PARKING

6" PVC (SDR-26) SS LINE 'B'
N3°08'26"W

STA 6+01.62 SS LINE 'A'=
STA 1+00.00 SS LAT 'A-1'
1-4' SSMH NO. 4
N 6991999.29
E 2308186.92

6" PVC (SDR-26) SS LINE 'A'
N2°29'17"W

STA 3+29.48 WL 'B' (DOM) =
STA 1+00.00 WL 'B-1' (DOM)
1-4"x4" TEE
2-4" GATE VALVES
N 6991843.04
E 2308527.76

4" WL 'B-1' (DOM)
S86°51'34"W

WATERLINES DO NOT CONNECT

STA 3+23.51 WL 'A' (FIRE) =
STA 1+00.00 WL 'A-2' (FIRE)
1-8"x6" TEE
1-8" GATE VALVE
1-6" GATE VALVE
N 6991834.27
E 2308535.25

STA 2+65.16 WL 'A' (FIRE) =
STA 1+00.00 WL 'A-1' (FIRE)
1-8"x6" TEE
1-8" GATE VALVE
1-6" GATE VALVE
N 6991776.01
E 2308538.44

STA 2+17.02 WL 'A' (FIRE)
1-8" 22.5° BEND
N 6991727.94
E 2308541.08

4" WL 'B-1' (DOM)
N3°08'26"W

8" WL 'A' (FIRE)
N3°08'26"W

4" PVC (SDR-26) SS LAT 'B-1'
N48°08'26"W

STA 1+46.51 SS LAT 'B-1'
END 4" SS
(REF MEP PLANS FOR CONNECTION @ BLDG)
N 6991804.18
E 2308360.81

STA 3+54.09 SS LINE 'A'=
STA 1+00.00 SS LINE 'B'
1-4' SSMH NO. 2
N 6991752.13
E 2308200.48

4" PVC (SDR-26) SS LAT 'B-1'
N3°08'26"W

STA 1+35.17 SS LAT 'B-1'
1-4" 45° BEND
1-4" SSCO
N 6991706.62
E 2308369.26

6" WL 'A-1' (FIRE)
S86°51'34"W

8" PVC (SDR-26) SS LINE 'B'
N86°51'34"E

STA 2+70.96 SS LINE 'B'=
STA 1+00.00 SS LAT 'B-1'
1-6"x4" TEE
N 6991761.50
E 2308377.18

STA 3+38.09 SS LINE 'B'
1-4' SSMH NO. 3
N 6991765.18
E 2308438.21

8" WL 'A' (FIRE)
N25°03'51"W

WATERLINES DO NOT CONNECT

STA 1+71.35 WL 'A-1' (FIRE)
1-STD FH ASSEMBLY
N 6991772.10
E 2308467.20

STA 2+12.46 WL 'B' (DOM)
1-4" 22.5° BEND
N 6991726.21
E 2308534.17

4" WL 'B' (DOM)
N25°03'51"W

PROPOSED PARKING

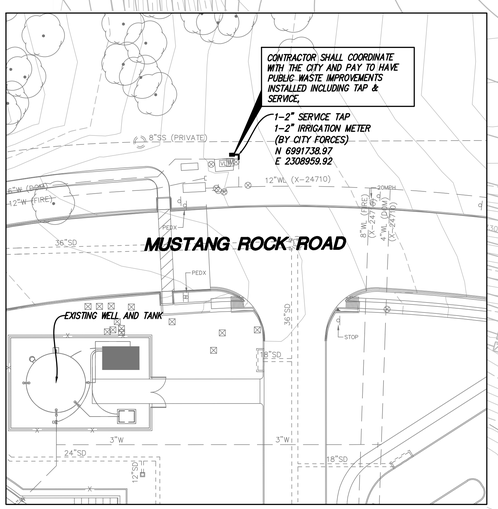
STA 1+00.00 WL 'A' (FIRE)
CONNECT TO EX. 12" WL
1-12"x8" TAPPING SLEEVE AND VALVE
CONTRATOR SHALL FIELD VERIFY SIZE, LOCATION, AND DEPTH OF EX. 12" WL PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY CONFLICTS.
N 6991621.94
E 2308560.66

STA 1+00.00 SS LINE 'A'
REMOVE 8" PLUG
CONNECT TO EX. 8" SS STUB
1-4' DROP SSMH NO. 1
CONTRACTOR SHALL FIELD VERIFY SIZE, LOCATION, AND DEPTH OF EX. 8" SS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF AND CONFLICTS
N 6991517.93
E 2308299.02

CAUTION!!!
UNDERGROUND SEWER IN THIS AREA. CONTRACTOR TO VERIFY LOCATION AND DEPTH PRIOR TO COMMENCING WORK.

STA 1+00.00 WL 'B' (DOM)
CONNECT TO EX. 6" WL
1-6"x4" TAPPING SLEEVE AND VALVE
CONTRACTOR SHALL FIELD VERIFY SIZE, LOCATION, AND DEPTH OF EX. 6" WL PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY CONFLICTS.
N 6991624.33
E 2308581.81

MUSTANG ROCK ROAD



IRRIGATION METERS

SCALE: 1"=30'

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
MATTHEW G. MANTONG
146154
LICENSED ENGINEER
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
WATER & SANITARY SEWER PLAN

SHEET NO.
C1.18

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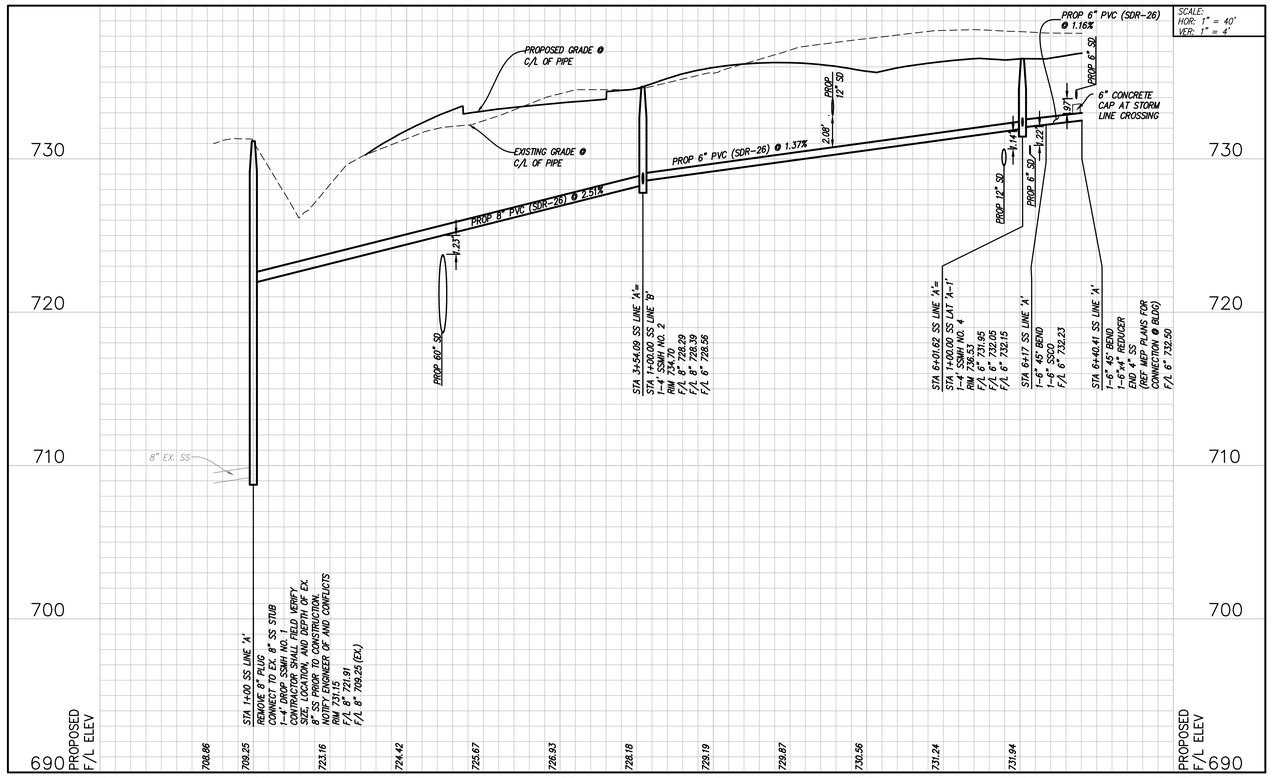
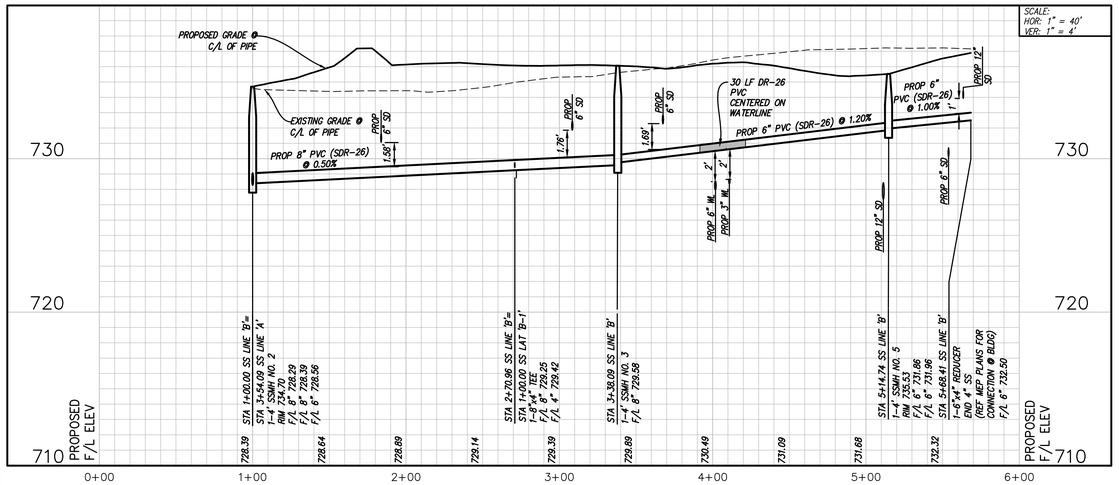


SS LINE 'A'



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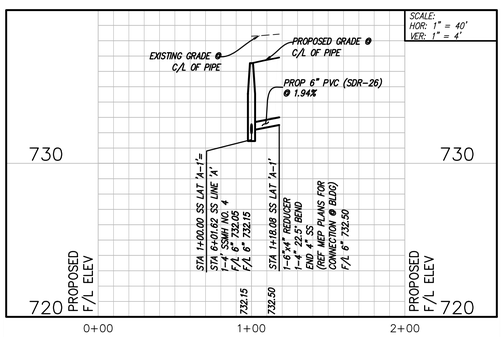

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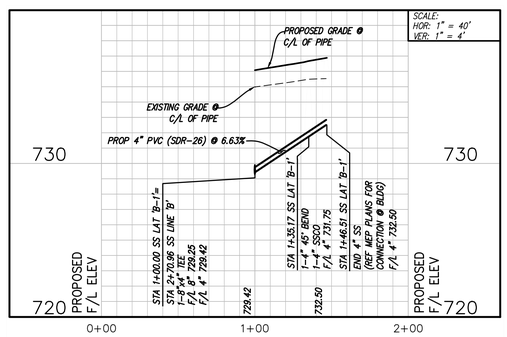

SS LAT 'B-1'

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STATE OF TEXAS
MATTHEW G. MANTONG
146154
LICENSED
PROFESSIONAL ENGINEER
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
SANITARY SEWER PROFILES

SHEET NO.
C1.19

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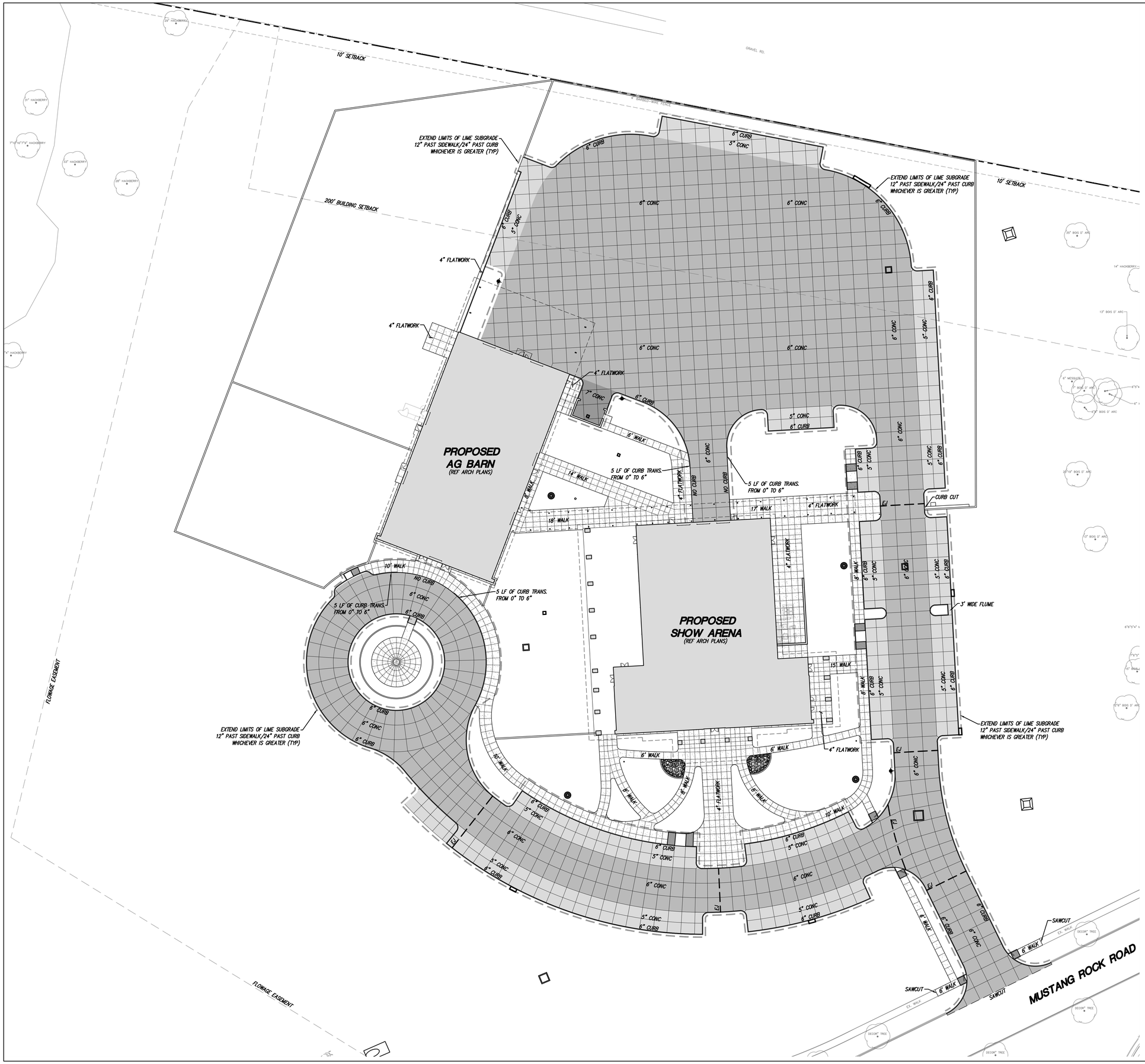

tnp

GRAPHIC SCALE

30 0 15 30 60

GRAPHIC SCALE: 1" = 30'

LEGEND

- 7" CONCRETE PAVEMENT
- 6" CONCRETE PAVEMENT
- 5" CONCRETE PAVEMENT
- 4" CONCRETE FLATWORK
- EJ — EXPANSION JOINT
- SAWED DUMMY JOINT

PAVING NOTES

1. ALL CONCRETE PAVING SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. MISC. CONCRETE FLATWORK SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.

2. CONCRETE PAVING SHALL BE PLACED ON 6" LIME STABILIZED SUBGRADE USING 7% MINIMUM LIME. RECOMPACT SUBGRADE TO AT LEAST 95% STANDARD PROCTOR AT A MOISTURE CONTENT OF OPTIMUM OR BETTER.

3. ALL CONCRETE SAWCUT JOINTS SHALL BE SPACED AT 12' MAXIMUM CENTERS EACH WAY, UNLESS NOTED OTHERWISE. SAWCUTTING SHALL BE ACCOMPLISHED WITHIN 4 TO 12 HOURS OF PLACING CONCRETE PAVEMENT. CONTRACTOR SHALL MAKE NECESSARY PROVISIONS FOR LIGHTING, EQUIPMENT AND LABOR TO MEET THE SAWCUT SPECIFICATIONS. NO TOLERANCE IS PERMITTED IN THE SAWCUTTING TIME.

4. CONTRACTOR SHALL TAKE NOTE OF DIFFERENT TYPES OF EDGE OF PAVEMENTS TO BE USED ON THIS PROJECT.

5. CONCRETE SHALL BE PLACED USING A WALK BEHIND SCREED MACHINE (MAGIC SCREED). IN ADDITION, A BACKPACK VIBRATOR SHALL BE USED. A MINIMUM OF TWO (2) SCREED MACHINES AND BACKPACK VIBRATORS SHALL BE PRESENT DURING ALL CONCRETE POURS.

6. ALL TRAFFIC CONTROL DEVICES AND PROCEDURES SHALL CONFORM TO THE LATEST VERSION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).

7. CONTRACTOR IS RESPONSIBLE FOR REMOVING DIRT, MUD, AND SPOILS TRACKED ONTO PUBLIC ROADS RESULTING FROM CONSTRUCTION ACTIVITIES. SEE EROSION CONTROL PLAN FOR REQUIREMENTS TO INSTALL A WHEEL-WASH STATION AT THE CONSTRUCTION EXIT.

8. CONTRACTOR SHALL VERIFY SLEEVE SIZE AND LOCATIONS WITH IRRIGATION PLANS AND MEP PLANS

9. CONTRACTOR SHALL STAMP CURBS INDICATING SIZE, LOCATION, AND TYPE OF SLEEVE.

LIMITS OF LIME NOTES

1. EXTEND LIMITS OF LIME SUBGRADE 12" PAST SIDEWALK WHERE SIDEWALK ABUTS BACK OF CURB. (REFER TO DETAILS)
2. EXTEND LIMITS OF LIME SUBGRADE 24" PAST CURB WHERE NO SIDEWALK ABUTS BACK OF CURB. (REFER TO DETAILS)

CONTRACTOR SHALL COORDINATE & OBTAIN ALL NECESSARY PERMITS FOR PUBLIC SIDEWALK & DRIVEWAY INSTALLATIONS.

NOTE: CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR IMPROVEMENTS WITHIN PUBLIC ROW.

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STATE OF TEXAS
MATTHEW G. MANTONG
146154
LICENSED LANDSCAPE ARCHITECT
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
PAVING PLAN

SHEET NO.
C1.20

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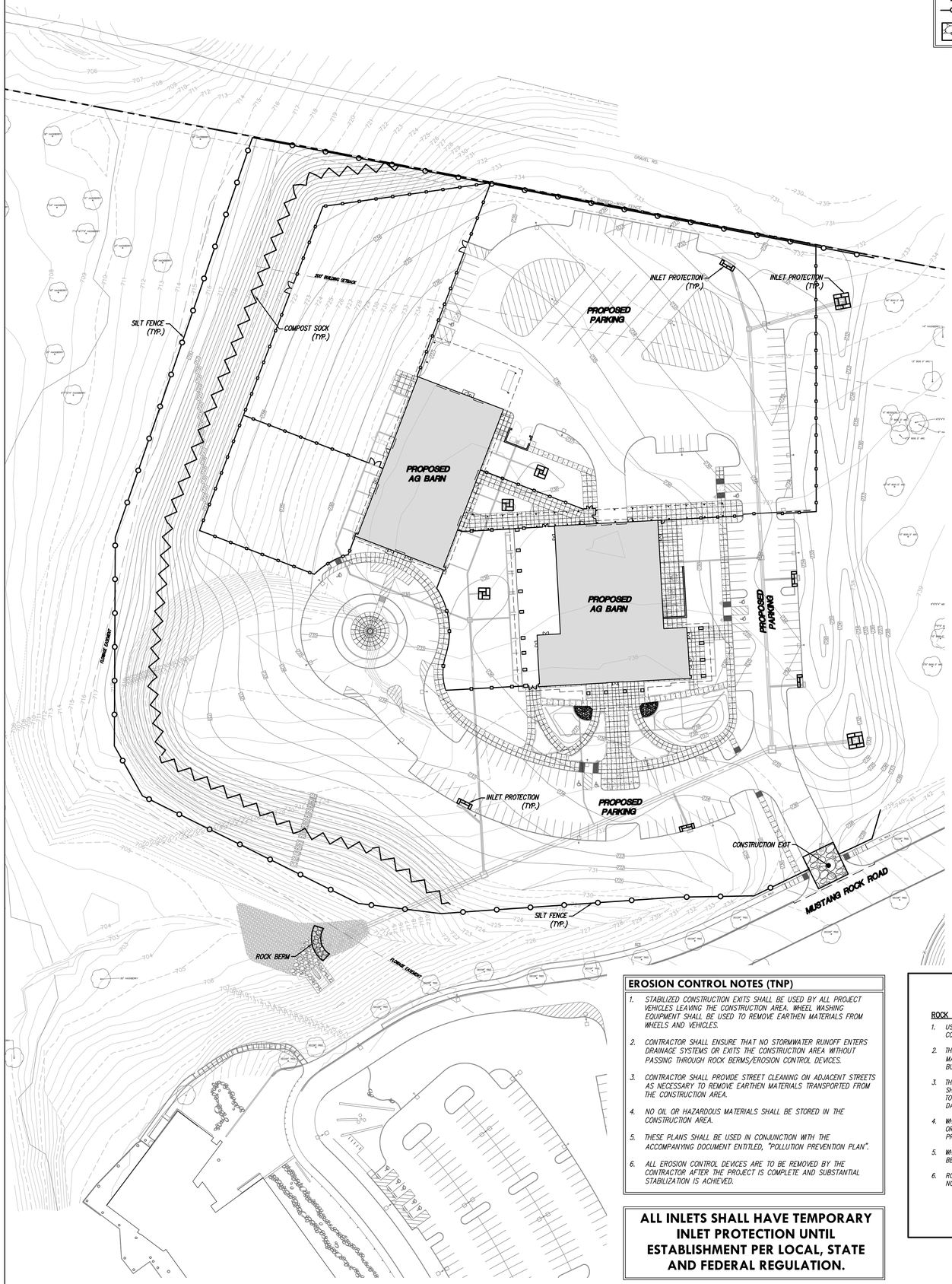
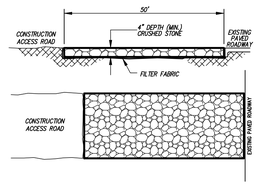


LEGEND

- INLET PROTECTION
- SILT FENCE
- CONSTRUCTION ENTRANCE/EXIT

CONSTRUCTION EXIT NOTES

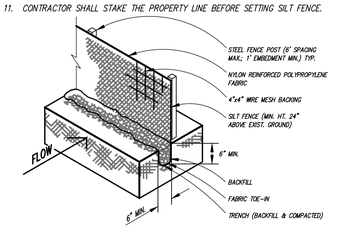
1. A STABILIZED CONSTRUCTION ENTRANCE APPLIES TO POINTS OF CONSTRUCTION INGRESS AND EGRESS WHERE SEDIMENT MAY TRACKED OR FLOW OFF THE CONSTRUCTION SITE.
2. THE ENTRANCE SHALL BE MAINTAINED IN CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.



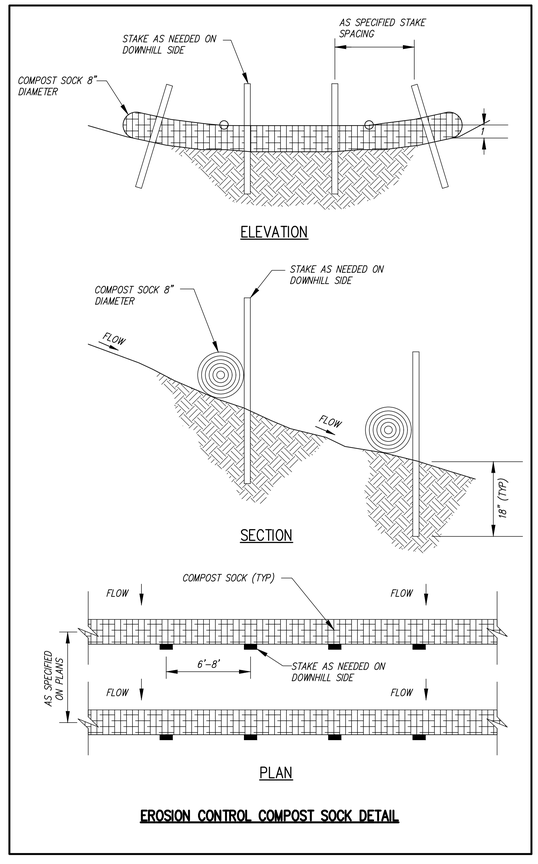
STABILIZED CONSTRUCTION EXIT

SILT FENCE NOTES

1. SILT FENCE MAY BE USED WHERE THE GROUND SLOPES ACROSS A DITCH OR SWALE.
2. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. THE POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
3. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF THE FLOW.
4. THE TRENCH MUST BE A MINIMUM OF 6" DEEP AND 6" WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
5. THE SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST. ALTERNATIVELY, SILT FENCE SHALL BE FASTENED TO WOVEN WIRE WHICH IS FASTENED TO THE STEEL POST. THE ENDS OF FABRIC SHALL OVERLAP THREE FEET.
6. INSPECTION SHALL BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
7. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO THAT NATURAL DRAINAGE IS NOT BLOCKED OR IMPEDED.
8. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE EIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT A SITE APPROVED BY THE OWNER AND IN SUCH A MANNER AS TO PREVENT ADDITIONAL SILTATION.
9. CONTRACTOR TO MAINTAIN SILT FENCING AND ALL OTHER EROSION CONTROL MEASURES AT ALL TIMES DURING THE DURATION OF THE PROJECT.
10. THE SILT FENCE LOCATION SHOWN IS APPROXIMATE. CONTRACTOR SHALL INSTALL SILT FENCE AS NECESSARY TO PRESERVE AND PROTECT EXISTING TREES, FENCES, AND VEGETATION ALONG PROPERTY LINES.
11. CONTRACTOR SHALL STAKE THE PROPERTY LINE BEFORE SETTING SILT FENCE.



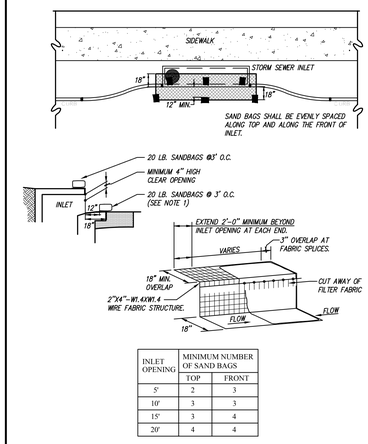
SILT FENCE



EROSION CONTROL COMPOST SOCK DETAIL

INLET PROTECTION NOTES

1. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL TO PROVIDE A 4" MINIMUM CLEAR OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
2. INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM-WATER BEGINS TO OVERTOP THE CURB.
4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.



INLET OPENING	MINIMUM NUMBER OF SAND BAGS	
	TOP	FRONT
5'	2	3
10'	3	3
15'	3	4
20'	4	4

CURB INLET PROTECTION DETAIL

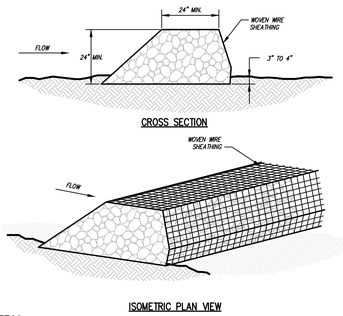
EROSION CONTROL NOTES (TNP)

1. STABILIZED CONSTRUCTION EXITS SHALL BE USED BY ALL PROJECT VEHICLES LEAVING THE CONSTRUCTION AREA. WHEEL WASHING EQUIPMENT SHALL BE USED TO REMOVE EARTHEN MATERIALS FROM WHEELS AND VEHICLES.
2. CONTRACTOR SHALL ENSURE THAT NO STORMWATER RUNOFF ENTERS DRAINAGE SYSTEMS OR EXITS THE CONSTRUCTION AREA WITHOUT PASSING THROUGH ROCK BERMS/EROSION CONTROL DEVICES.
3. CONTRACTOR SHALL PROVIDE STREET CLEANING ON ADJACENT STREETS AS NECESSARY TO REMOVE EARTHEN MATERIALS TRANSPORTED FROM THE CONSTRUCTION AREA.
4. NO OIL OR HAZARDOUS MATERIALS SHALL BE STORED IN THE CONSTRUCTION AREA.
5. THESE PLANS SHALL BE USED IN CONJUNCTION WITH THE ACCOMPANYING DOCUMENT ENTITLED, "POLLUTION PREVENTION PLAN".
6. ALL EROSION CONTROL DEVICES ARE TO BE REMOVED BY THE CONTRACTOR AFTER THE PROJECT IS COMPLETE AND SUBSTANTIAL STABILIZATION IS ACHIEVED.

ALL INLETS SHALL HAVE TEMPORARY INLET PROTECTION UNTIL ESTABLISHMENT PER LOCAL, STATE AND FEDERAL REGULATION.

ROCK BERM NOTES

1. USE ONLY OPEN GRADED ROCK 4-8 INCHES IN DIAMETER FOR STREAM FLOW CONDITION.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING A MAXIMUM OPENING OF 1" AND A MINIMUM WIRE SIZE OF 20 GAUGE AND SHALL BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP.
3. THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN EVENT AND SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD OF THE HEIGHT OF THE BERM OR ONE FOOT, WHICH EVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF PROPERLY.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.
6. ROCK BERM SHOULD BE USED AS CHECK DAMS FOR CONCENTRATED FLOW AND ARE NOT INTENDED FOR USE IN PERIMETER PROTECTION.



ROCK BERM

NOTE:
CONTRACTOR SHALL PROVIDE STABILIZED CONSTRUCTION EXIT AS NECESSARY BASED ON SITE CONSTRAINTS AND SEQUENCING OF CONSTRUCTION.

NOTE:
AREA OF DISTURBANCE = 13.1 AC.

tnp

GRAPHIC SCALE
50 0 25 50 100
GRAPHIC SCALE: 1" = 50'

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05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
EROSION CONTROL PLAN

SHEET NO.
C1.21

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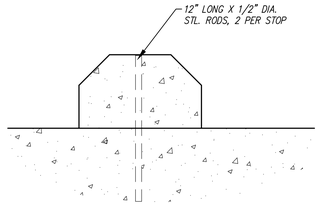

WHEEL STOP DETAIL
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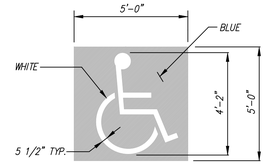
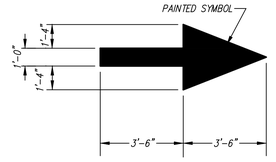


PAINTED HANDICAP PARKING LOGO
N.T.S.



ARROW DETAIL
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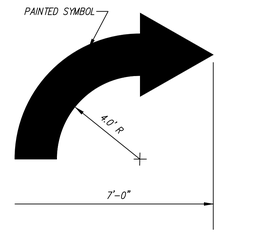

TRAFFIC FLOW ARROW
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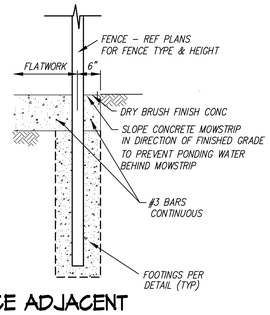
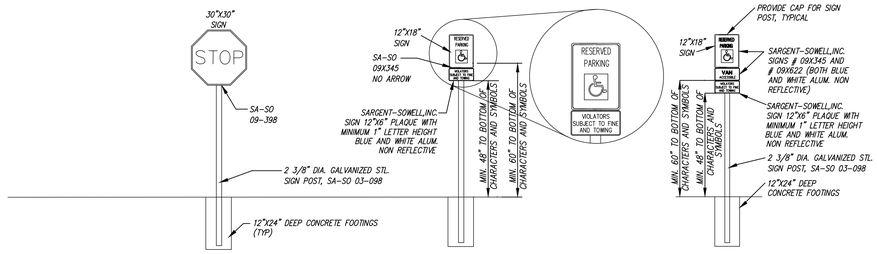
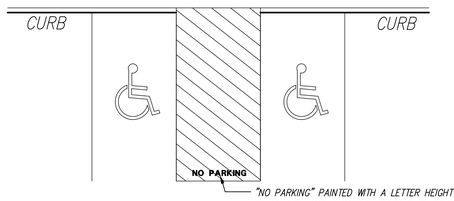


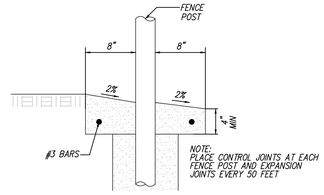
FENCE ADJACENT TO FLATWORK
N.T.S.



TRAFFIC SIGN DETAILS
N.T.S.

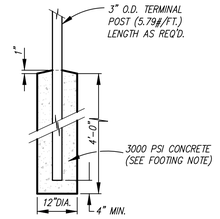


HANDICAP LOADING ZONE STRIPING DETAIL
N.T.S.



MOW STRIP SECTION
N.T.S.

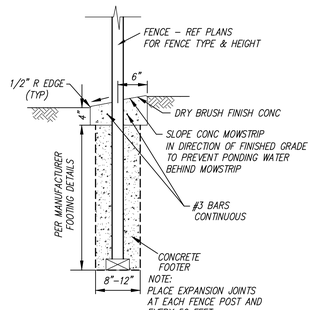
NOTE: MOW STRIP TO BE PROVIDED ON ALL FENCE TYPES.



CORNER, GATE OR LINE
POST FOOTING

FOOTING DETAILS
N.T.S.

FOOTING NOTE: THE CORNER, GATE & LINE POST FOOTINGS SHALL BE CONSIDERED SUBSIDIARY TO THE RESPECTIVE FENCE CONSTRUCTION. NO SEPARATE PAY.



FENCE W/ MOWSTRIP
N.T.S.

ARCHITECT

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05/28/2025

ISSUED: MAY 28, 2025

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Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
SITE DETAILS (1 OF 2)

SHEET NO.
C1.22

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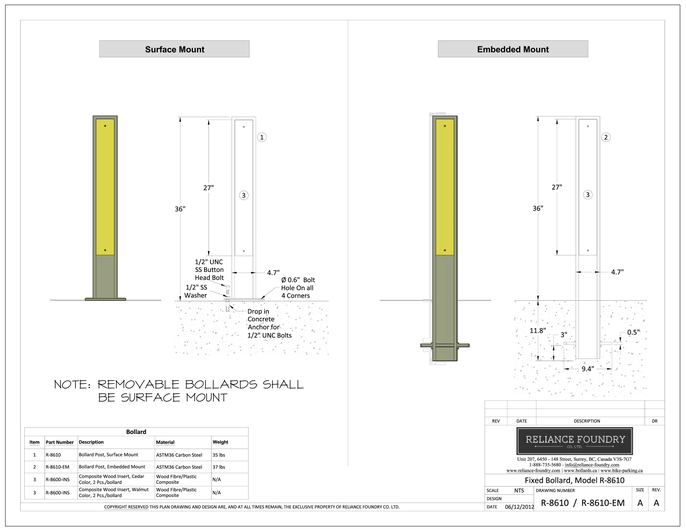
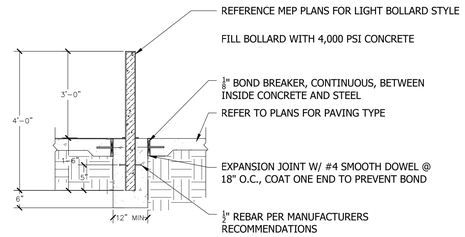


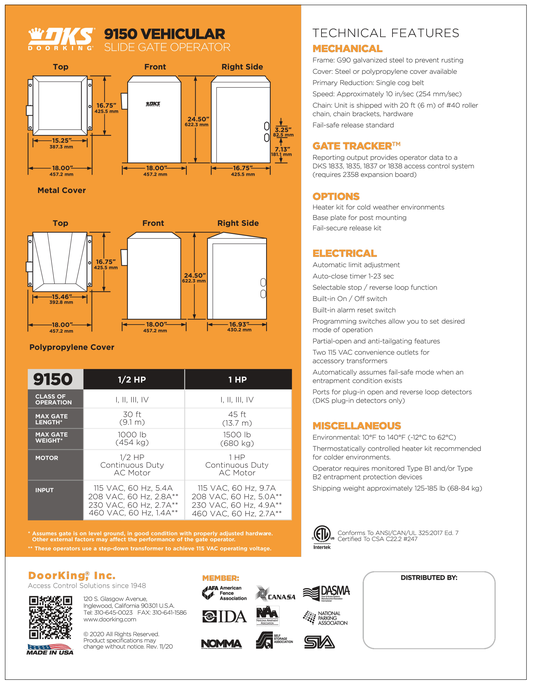
BOLLARD DETAIL

N.T.S.



LIGHT BOLLARD DETAIL

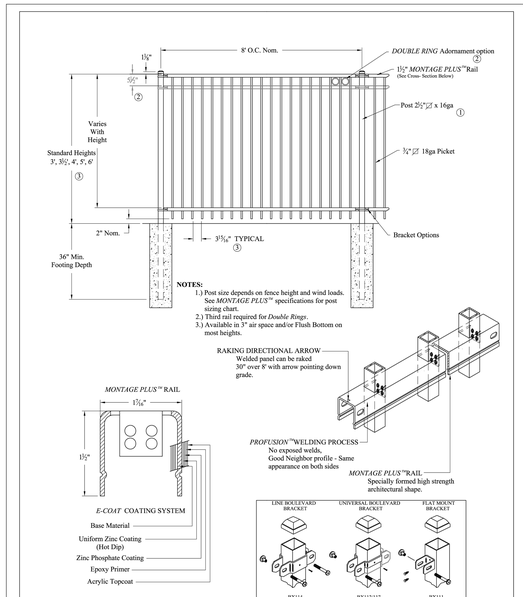
N.T.S.

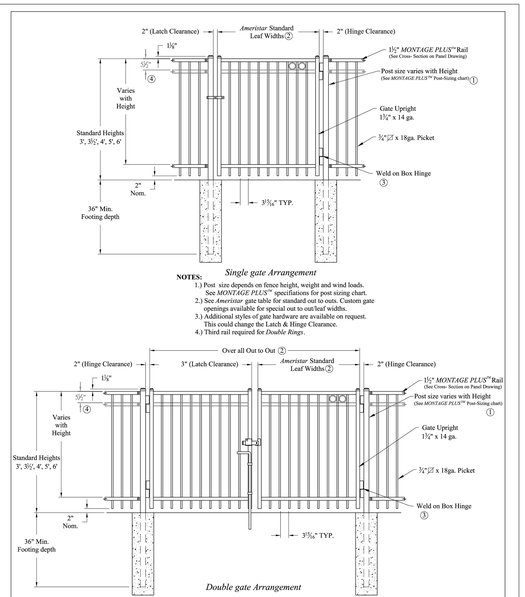


GATE MOTOR

N.T.S.

NOTES:
1. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER TO ENSURE THAT THE GATE (SOUTH GATE) WILL BE THE MINIMUM WEIGHT TO BE OPERATED BY GATE MOTOR SPECIFIED. COORDINATE AND VERIFY WITH ENGINEER PRIOR TO PRODUCTION OF THE GATE AND IF GATE MOTOR NEEDS TO UPSIZED.
2. CONTRACTOR SHALL COORDINATE WITH OWNER AND PROVIDE A KEY PAD & A MINIMUM OF 5 REMOTES FOR THE GATE MOTOR OPERATION.
3. PROVIDE CONCRETE PAD, REQUIRED ELECTRICAL, KEY PADS, PHOTO CELL AND SAFETY LOOPS AND OTHER APPURTENANCES TO PROVIDE FULL FUNCTIONING SYSTEM.

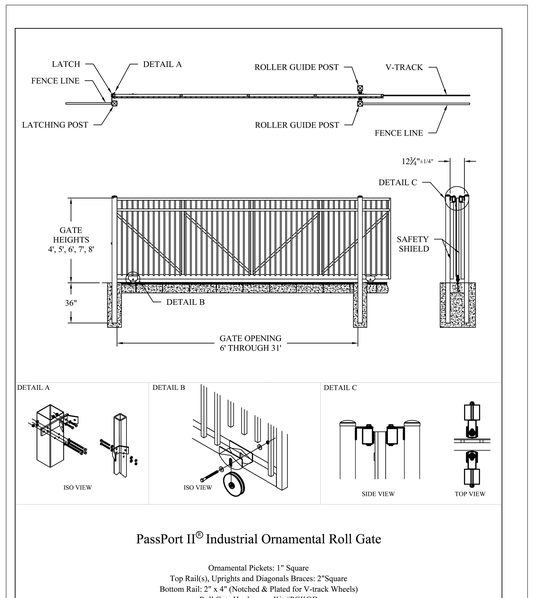




DECORATIVE METAL FENCE & GATES (1 RAIL TOP, 1 RAIL BOTTOM)

N.T.S.

- ALL FENCING SHALL HAVE MOWSTRIP OR BE INSTALLED IN CONC. SIDEWALK.
- ALL GATE HARDWARE INCLUDING HINGES AND LATCHES SHALL BE METAL NO PLASTIC ALLOWED.



DECORATIVE METAL SLIDING GATE

N.T.S.

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
MATTHEW G. MANTONG
146154
LICENSED
PROFESSIONAL ENGINEER
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No. | Revision Date

Director MSW | Drawn By TNP
Designer PCV | Quality Control TNP
Proj. Arch. VLK

PROJECT NO.

24-057.00

SHEET TITLE

SITE DETAILS (2 OF 2)

SHEET NO.

C1.23

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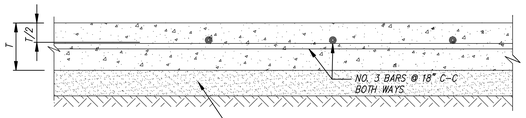
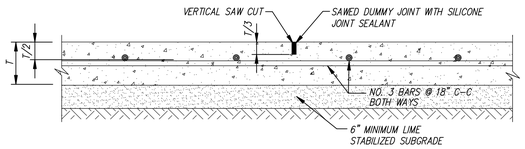


T = CONCRETE SECTION THICKNESS.
REFER TO PAVING PLAN.

NOTE: CONTRACTOR TO COORDINATE WITH GEOTECHNICAL LAB TESTING REPRESENTATIVE TO DETERMINE AREAS OF MODIFIED OR ELIMINATED SUBGRADE PREPARATION DUE TO EXISTING LIMESTONE.

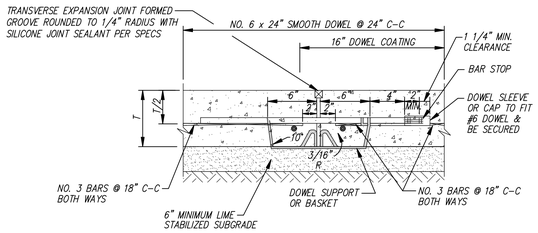
TYPICAL CONCRETE SECTION

N.T.S.



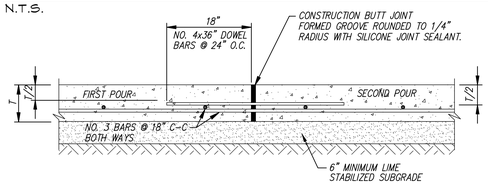
SAWED DUMMY JOINT

N.T.S.



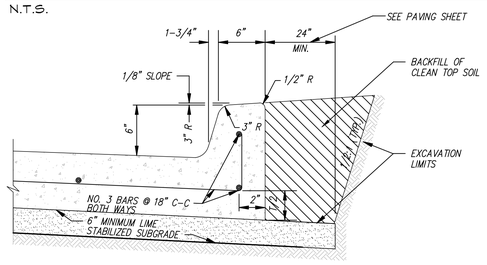
TRANSVERSE EXPANSION JOINT

N.T.S.



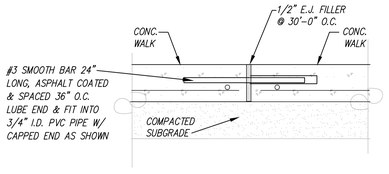
CONSTRUCTION BUTT JOINT

N.T.S.



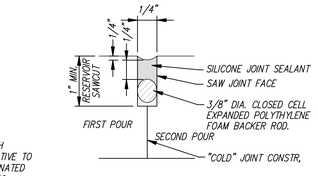
MONOLITHIC CURB

N.T.S.



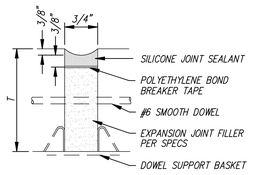
TYPICAL CONC. WALK EXPANSION JOINT

N.T.S.



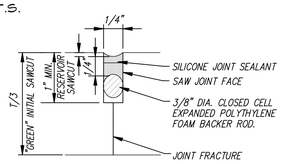
CONSTRUCTION BUTT JOINT SEAL

N.T.S.



EXPANSION JOINT SEAL

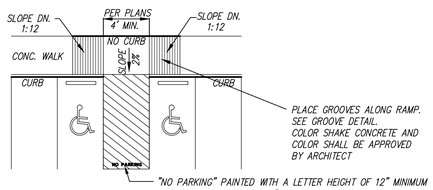
N.T.S.



NOTE:
1. POLYETHYLENE FOAM BACKER ROD DOES NOT SIT ON BOTTOM OF SAW
2. SILICONE BEAD HAS GENERAL WIDTH TO DEPTH RATIO OF 2:1.

SAWED DUMMY JOINT SEAL

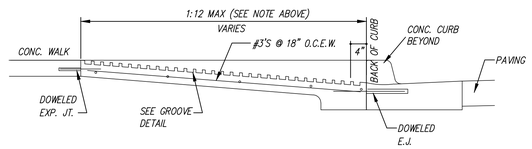
N.T.S.



"NO PARKING" PAINTED WITH A LETTER HEIGHT OF 12" MINIMUM AND A STROKE WIDTH OF 2" MINIMUM, CENTERED WITHIN EACH ACCESS AISLE ADJACENT TO THE HANDICAP SPACE

TYPE 'B'

N.T.S.

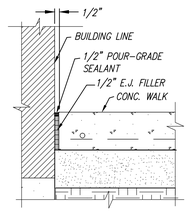


SIDEWALK RAMP SECTION

N.T.S.

HANDICAP GENERAL NOTES:

1. HANDICAP RAMPS AND WALKWAYS SHALL CONFORM TO THE LATEST STANDARDS OF THE "TEXAS ACCESSIBILITY STANDARDS (TAS)" AND THE "UNIFORM FEDERAL ACCESSIBILITY STANDARDS" ESTABLISHED BY THE AMERICANS WITH DISABILITIES ACT (ADA) OF 2010.



1/2" EXPAN. JOINT @ BLDG. & WALK

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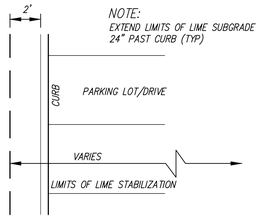
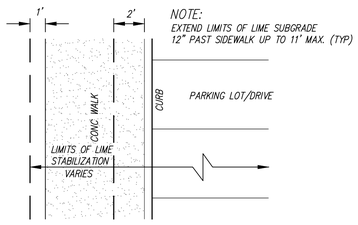


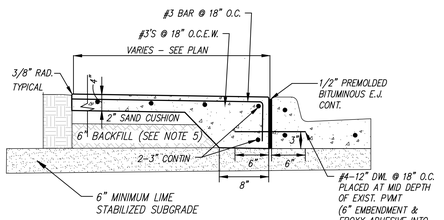
LIMITS OF LIME ADJACENT TO BACK OF CURB

N.T.S.



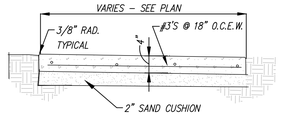
LIMITS OF LIME ADJACENT TO SIDEWALK & BACK OF CURB

N.T.S.



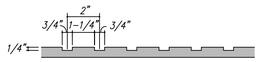
SIDEWALK W/ THICKENED EDGE (ADJACENT TO BACK OF CURB)

N.T.S.



TYPICAL SIDEWALK

N.T.S.



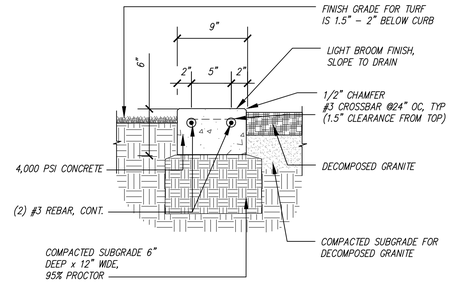
GROOVES DETAIL

N.T.S.

NOTE:
CONTRACTOR SHALL NOTE GRADE ELEVATIONS OF ALL CURB RAMPS ON THE GRADING PLAN.

SIDEWALK GENERAL NOTES:

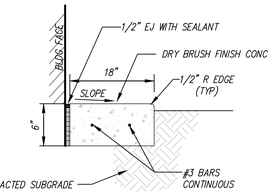
1. ALL CONSTRUCTION MATERIALS, METHODS AND PLACEMENT NOT DETAILED BELOW SHALL MEET OR EXCEED THE STANDARD SPECIFICATIONS OF THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS UNLESS SUPERCEDED BY CITY STANDARD SPECIFICATIONS.
2. REINFORCED CONCRETE SIDEWALK SHALL BE A MINIMUM 4 FEET WIDE, A MINIMUM OF 4 INCHES THICK AND SHALL BE CLASS "A" CONTAINING A MINIMUM OF 5 SACKS OF TYPE I CEMENT PER YARD. AGGREGATE SHALL CONSIST OF A MINIMUM OF 50% CRUSHED STONE. ALL CONCRETE PLACED SHALL CONTAIN SUFFICIENT AIR ENTRAINING AGENT TO YIELD 5% ± 1% AIR CONTENT.
3. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/8 INCH.
4. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A-615 GRADE 60. REINFORCING STEEL SHALL BE PLACED WITH A MINIMUM OF 1-1/2" OF COVER FOR #5 BARS OR SMALLER. WHERE REINFORCING BARS ARE SPLICED, A 30 DIAMETER LAP SHALL BE USED.
5. SUBGRADE SHALL CONSIST OF NATIVE SOIL COMPACTED TO A DENSITY NOT LESS THAN 95% ASTM D698 WITHIN 0 TO +4% OF OPTIMUM.
6. SIDEWALKS SHALL BE FINISHED BY LIGHTLY BROOMING SURFACE TRANSVERSELY TO DIRECTION OF MAIN TRAFFIC OR WHERE ADJACENT SIDEWALKS DIFFER FROM FROM THIS STANDARD, NEW SIDEWALKS SHALL CONFORM TO ADJACENT SIDEWALK (E.G. EXPOSED AGGREGATE).
7. AN APPROVED CURING COMPOUND SHALL BE APPLIED TO THE SURFACE OF THE PAVEMENT AS SOON AS IT HAS BEEN PLACED AND FINISHED.



NOTE:
1. MOW CURBS SHALL HAVE EXPANSION AND CONTROL JOINTS. EXPANSION JOINTS SHALL BE LOCATED EVERY 50' O.C. AND TOOLED CONTROL JOINTS SHALL BE LOCATED EVERY 10' O.C.
2. PROVIDE POSITIVE DRAINAGE FROM DECOMPOSED GRANITE WITH MAX. 0.5% CROSS SLOPE, TYP.

MOW BAND DETAIL

N.T.S.



CONCRETE MOW STRIP @ BUILDING

N.T.S.

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STATE OF TEXAS
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146154
LICENSED
PROFESSIONAL ENGINEER
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
MSW	TNP
Designer	Quality Control
PCV	TNP
Proj. Arch.	
VLK	

PROJECT NO.
24-057.00

SHEET TITLE
PAVING DETAILS

SHEET NO.
C1.24

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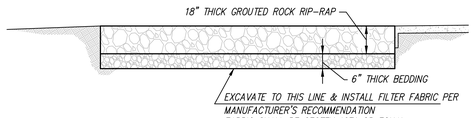
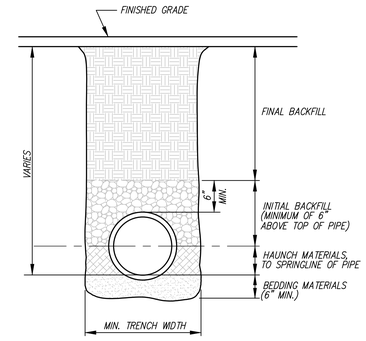


BEDDING GRADATION	
6" THICKNESS OF BEDDING	
SIEVE SIZE – SQUARE MESH	% PASSING
3"	100
1.5"	55 – 100
3/4"	25 – 60
3/8"	5 – 30
No. 4	0 – 10

ROCK RIP-RAP GRADATION	
18" THICKNESS OF RIPRAP	
SIEVE SIZE – SQUARE MESH	% PASSING
21"	100
18"	65 – 100
12"	35-65
8"	15-40
6"	5-25
4"	0 – 15

ROCK RIP RAP DETAIL
N.T.S.

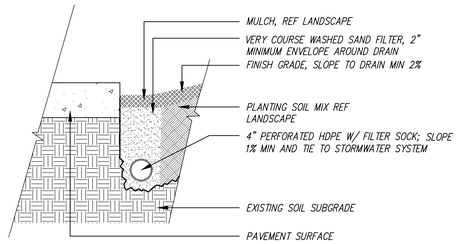


NOTES:
1. BEDDING MATERIALS SHALL BE CLASS 1B (1/2" – 3/4" CRUSHED STONE) MATERIALS AS DEFINED IN TABLE 1, ASTM D-2321. INSTALLATION OF THESE MATERIALS SHALL BE AS PER TABLE 2.
2. HAUNCH MATERIALS SHALL BE CLASS 1B (1/2" – 3/4" CRUSHED STONE) MATERIALS AS REQUIRED ABOVE, RESTRICTED AS PER D-2321, TABLE 2.
3. INITIAL BACKFILL MATERIALS SHALL BE CLASS 1B (1/2" – 3/4" CRUSHED STONE) MATERIALS AS REQUIRED ABOVE, RESTRICTED AS PER D-2321, TABLE 2.
4. MIMMUM TRENCH WIDTHS (AS REQUIRED BY ASTM D-2321) ARE AS FOLLOWS

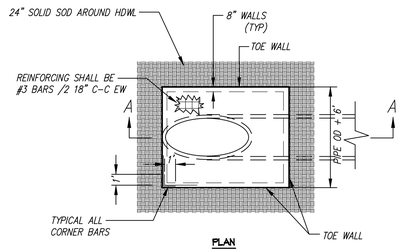
PIPE DIAMETER	MIN. TRENCH WIDTH
8"	25"
10"	27"
12"	30"
15"	34"
18"	38"
24"	48"
30"	52"
36"	65"

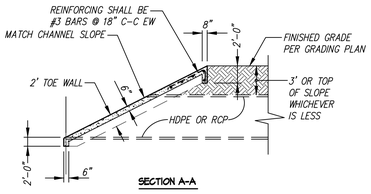
* A LESSER TRENCH WIDTH WILL BE PERMITTED ONLY WHERE IT IS DETERMINED THE CONTRACTOR CAN UTILIZE EQUIPMENT CAPABLE OF MEETING THE REQUIRED INSTALLED DENSITIES.
5. WHERE THE TRENCH BOTTOM IS UNSTABLE, CONTRACTOR SHALL EXCAVATE TO A DEPTH AS REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIALS, AS AN ALTERNATIVE. TRENCH BOTTOM MAY BE STABILIZED USING A GEOFABRIC.
6. FINAL BACKFILL SHALL BE NATIVE TRENCH MATERIAL (NO ROCKS OVER 3" IN DIA.) PLACE IN 12" MAX. LIFTS TO THE FINAL GRADE WITH EACH LIFT. COMPACT TO A MIN. 95% OF STANDARD PROCTOR DENSITY AT A MOISTURE CONTENT BETWEEN 2% BELOW TO 4% ABOVE (-2 TO +4) OPTIMUM MOISTURE CONTENT.
7. ALL STORM DRAIN PIPE EMBEDMENT UNDER THE FIRE LANE SHALL BE PER CITY OF SAGINAW STANDARD DETAIL SD-08.

STORM DRAIN PIPE (PE OR PVC) EMBEDMENT & TRENCH BACKFILL DETAILS
N.T.S.



LANDSCAPE SUB-SOIL DRAIN
N.T.S.

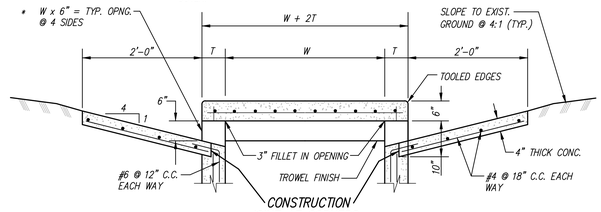


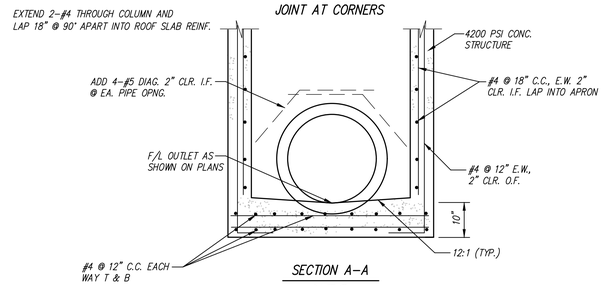


TYPE 'C' HEADWALL DETAIL
N.T.S.

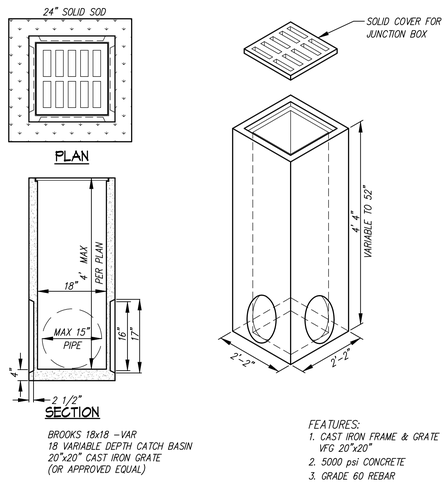
INLET SIZE	T	W
2' SQUARE	7"	2'-0"
4' SQUARE	7"	4'-0"
5' SQUARE	8"	5'-0"
6' SQUARE	9"	6'-0"
7' SQUARE	9"	7'-0"
8' SQUARE	9"	8'-0"

FOR LOWER PORTION OF 2' SQUARE DROP INLET USE REINF. STEEL DETAILS OF 4' SQUARE MANHOLE AND ELIMINATE INLET RING AND COVER.





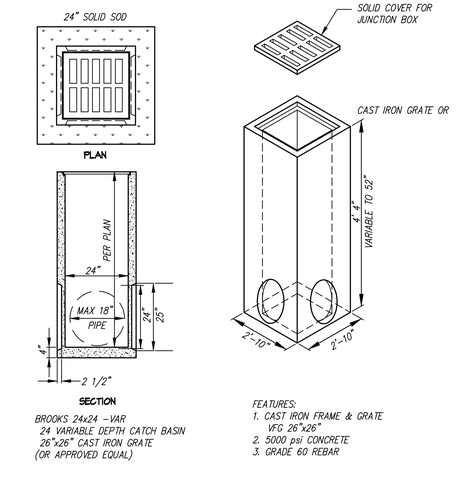
SECTION A-A
N.T.S.



BROOKS 18x18 -VAR
18 VARIABLE DEPTH CATCH BASIN
20"x20" CAST IRON GRATE
(OR APPROVED EQUAL)

FEATURES:
1. CAST IRON FRAME & GRATE VFG 20"x20"
2. 5000 psi CONCRETE
3. GRADE 60 REBAR

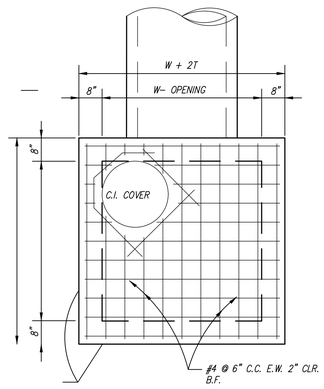
18"x18" JUNCTION BOX/ CATCH BASIN
N.T.S.



BROOKS 24x24 -VAR
24 VARIABLE DEPTH CATCH BASIN
26"x26" CAST IRON GRATE
(OR APPROVED EQUAL)

FEATURES:
1. CAST IRON FRAME & GRATE VFG 26"x26"
2. 5000 psi CONCRETE
3. GRADE 60 REBAR

24"x24" JUNCTION BOX/ CATCH BASIN
N.T.S.



GENERAL NOTES:
1. MATERIAL AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR CONCRETE MANHOLES.
2. LAYERS OF REINFORCED STEEL NEAREST THE INTERIOR AND EXTERIOR SURFACES SHALL HAVE A COVER OF 2" TO THE CENTER OF BARS, UNLESS OTHERWISE NOTED.
3. EXCAVATION FOR MANHOLE TO BE INCLUDED IN THE UNIT PRICE BID FOR MANHOLE.
4. FOR DETAILS OF REINFORCING OF LOWER PORTIONS OF INLET SEE APPROPRIATE SQUARE MANHOLE DETAILS.
5. DEPTH OF DROP INLET FROM FINISHED GRADE TO FLOW LINE OF INLET IS VARIABLE. APPROXIMATE DEPTH WILL BE SHOWN ON PLANS AT LOCATION OF INLET.
6. ALL STANDARD DROP INLETS SHALL HAVE ONE OPENING ON EACH SIDE UNLESS SHOWN ON PLANS.

STANDARD DROP INLET
N.T.S.

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
MATTHEW G. MANTONG
146154
LICENSED PROFESSIONAL ENGINEER
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
STORM DRAIN DETAILS (1 OF 2)

SHEET NO.
C1.25

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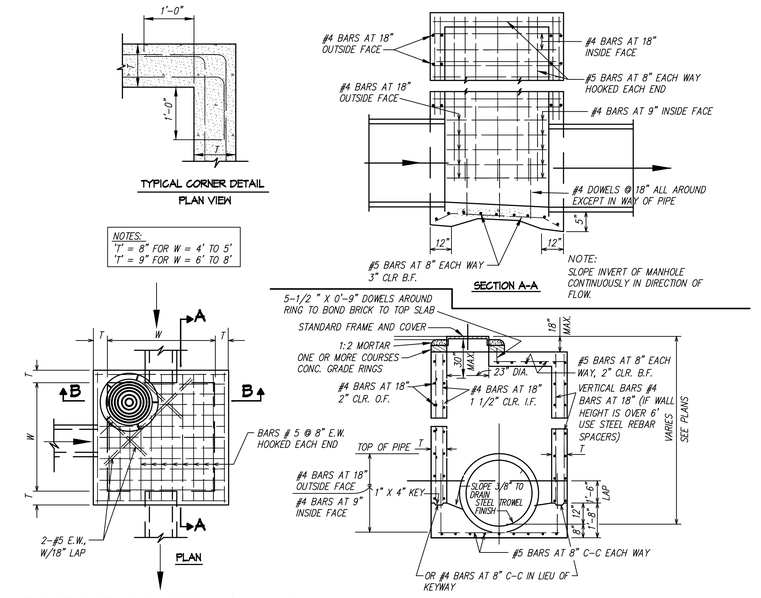
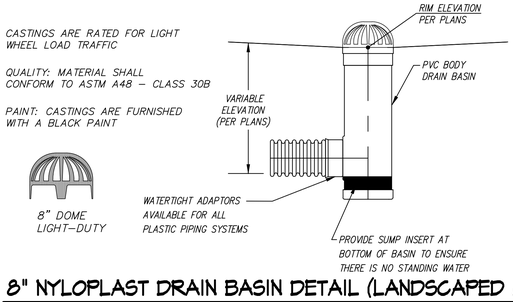
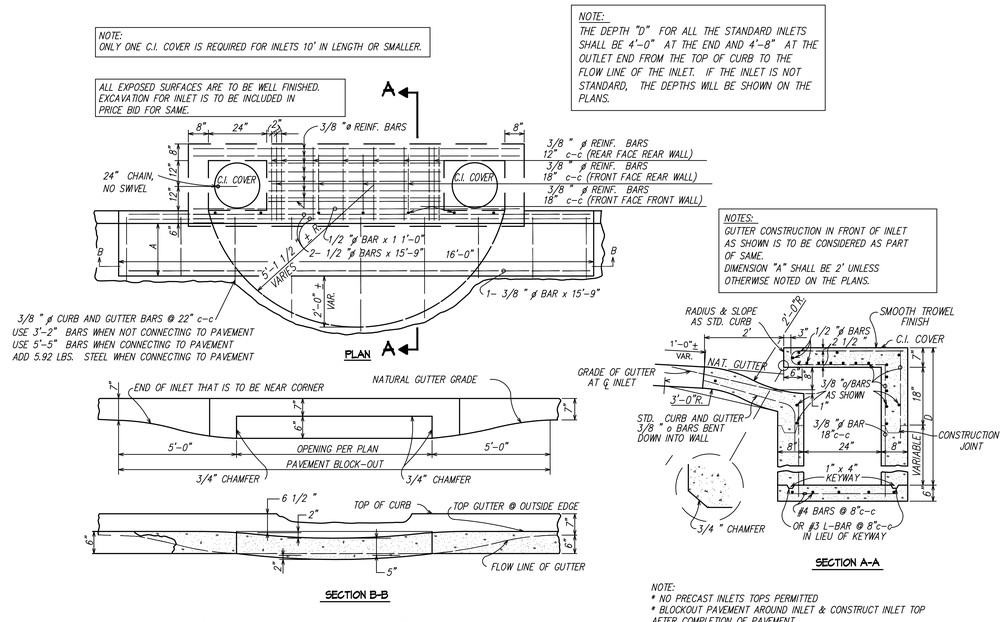




8" NYLOPLAST DRAIN BASIN DETAIL (LANDSCAPED AREAS)

N.T.S.



STANDARD STORM DRAIN CURB INLET

N.T.S.

NOTE: NO PRECAST INLETS TOPS WILL BE ALLOWED

ARCHITECT

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05/28/2025

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PROJECT NO.

24-057.00

SHEET TITLE

STORM DRAIN DETAILS (2 OF 2)

SHEET NO.

C1.26

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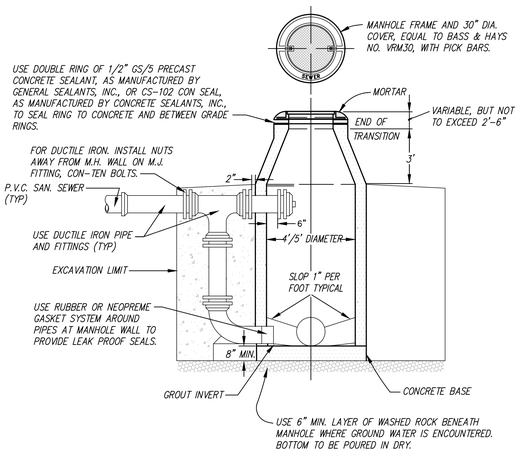
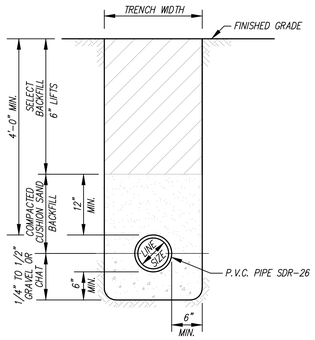


CONC DROP MAHHOLE

N.T.S.

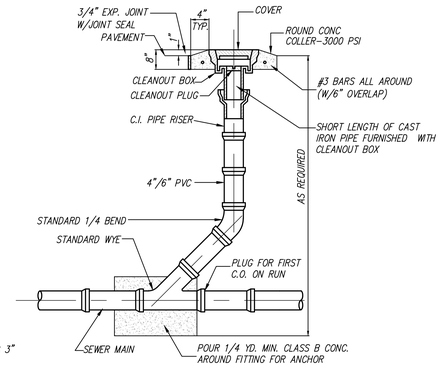


NOTES

1. SDR-26 PVC PIPE UNLESS NOTED OTHERWISE.
2. CUSHION SAND MUST PASS NO. 8 SIEVE.
3. SELECT BACKFILL IS NATIVE TRENCH MATERIAL WITH NO ROCKS OVER 3" IN DIAMETER.
4. COMPACT BACKFILL IN 6" LIFTS TO 95% PROCTOR DENSITY WITHIN RIGHT-OF-WAY AND 90% IN EASEMENTS.
5. SEE SEPARATION OF NEW WATER AND SEWER LINES DETAIL FOR ADDITIONAL INFORMATION.

SEWER PVC PIPE BEDDING & BACKFILL

N.T.S.

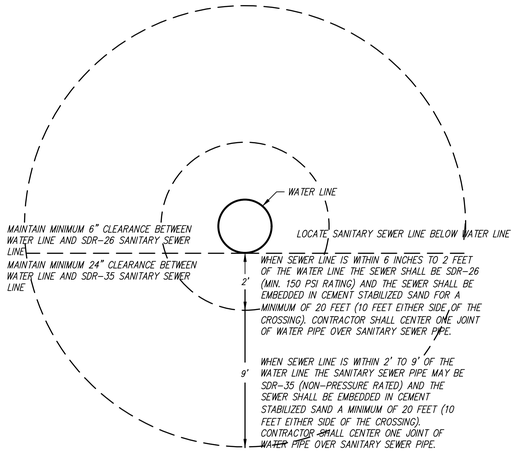


SANITARY SEWER CLEAN-OUT

N.T.S.

GENERAL CONSTRUCTION NOTES

1. CONTRACTOR'S PERSONNEL SHALL WEAR IDENTIFYING CLOTHING OR HATS AT ALL TIMES.
2. NEW MANHOLES SHALL BE CONSTRUCTED SUCH THAT THE MANHOLE COVER IS AT FINISHED SURFACE GRADE, OR AS NOTED ON THE PLANS. CONCRETE COLLARS AND MANHOLE INSERTS SHALL BE PROVIDED WITH ALL NEW MANHOLES IN THIS PROJECT.
3. CONTRACTOR SHALL VERIFY THE ELEVATION, CONFIGURATION, AND ANGULATION OF EXISTING LINES PRIOR TO CONSTRUCTION OR ACQUIRING OF MATERIALS. SUCH VERIFICATION SHALL BE CONSIDERED AS SUBSIDIARY TO THE COST OF PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
4. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF FORT WORTH STANDARD SPECIFICATIONS AND DETAILS, EXCEPT WHERE MODIFIED IN THESE PLANS OR IN THE SPECIAL CONDITIONS OF THE CONTRACT DOCUMENTS.
5. THE CONTRACTOR SHALL REMOVE FROM THE PROJECT AREA ALL SURPLUS MATERIAL. THIS SHALL BE INCIDENTAL AND NOT A SEPARATE PAY ITEM. SURPLUS MATERIALS FROM EXCAVATION INCLUDING DIRT, TRASH, ETC. SHALL BE PROPERLY DISPOSED OF AT A SITE ACCEPTABLE TO THE ENGINEER.
6. CONTRACTOR SHALL SAWCUT EXISTING CURB AND GUTTER, PAVEMENT, DRIVEWAYS, AND SIDEWALKS AT AREAS WHERE PAVEMENT OR CONCRETE IS TO BE REMOVED. SAWCUTS WILL BE CONSIDERED SUBSIDIARY TO THE PRICE BID FOR LINEAR FOOT OF PIPE. CONTRACTOR SHALL PROVIDE COMPACTED SELECT MATERIAL AS NEEDED TO REPAIR DAMAGED DRIVES, STREETS, WALKS, AND PATIOS.
7. THE CONTRACTOR SHALL PRESERVE AND PROTECT OR REMOVE AND REPLACE (WITH PRIOR APPROVAL OF AFFECTED PROPERTY OWNER) ANY TREES, SHRUBS, HEDGES, RETAINING WALLS, LANDSCAPING, BUILDINGS, WALKS, ETC. IN OR NEAR PROPOSED CONSTRUCTION AREA. THIS WORK SHALL BE CONSIDERED INCIDENTAL AND NOT A SEPARATE PAY ITEM.
8. ALL GRASS AREAS DAMAGED BY CONSTRUCTION SHALL RECEIVE 4" OF TOPSOIL AND SOLID SODDING OR SEEDING. REMOVE SOD, GRASS, ROOTS, WEEDS, STICKS, STONES OVER TWO INCHES IN DIAMETER, AND OTHER FOREIGN MATERIAL FROM THE TOPSOIL.
9. ALL EMBEDMENT AND BACKFILL UNDER EXISTING PAVEMENT, WITHIN RIGHT OF WAY, OR UNDER GRAVEL OR OTHER TRAVEL SURFACES SHALL BE PER FIG. A, CASE 2. EMBEDMENT AND BACKFILL FOR SEWER LINES AND SERVICES OUTSIDE OF THESE AREAS SHALL BE IN ACCORDANCE WITH FORT WORTH WATER DEPARTMENT STANDARDS. ALL EMBEDMENT AND BACKFILL COSTS SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FEET OF SANITARY SEWER PIPE AND SERVICE RE-CONNECTIONS.
10. THE PROPOSED SANITARY SEWER LINES AT TIMES WILL BE LAID CLOSE TO OTHER EXISTING UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW GROUND. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS FOR THE SUPPORT AND PROTECTION OF ALL UTILITY POLES, GAS MAINS, TELEPHONE CABLES, SANITARY SEWER LINES, TU CABLES, DRAINAGE PIPES, UTILITY SERVICES, AND ALL OTHER UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW GROUND DURING CONSTRUCTION. THE CONTRACTOR IS LIABLE FOR ALL DAMAGES DONE TO SUCH EXISTING FACILITIES AS A RESULT OF THE CONTRACTOR'S OPERATIONS.
11. VERTICAL DEFLECTIONS AND SLOPES OF EXISTING PIPES SHOWN ON THE PLANS WERE OBTAINED FROM RECORD DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED. SOME PIPE SLOPES WERE ADJUSTED TO MATCH SURVEYED MANHOLE FLOWLINES. RIM ELEVATIONS, FLOWLINES AND HORIZONTAL LOCATIONS OF EXISTING MANHOLES WERE DETERMINED FROM FIELD SURVEY. THE CONTRACTOR SHALL VERIFY THE LOCATION OF CONNECTIONS OF MAINS OR LATERALS TO SEWER LINES WHERE NO MANHOLE EXISTS PRIOR TO CONSTRUCTION TO DETERMINE IF LINES AND GRADES AS SHOWN ON THE PLANS WILL FUNCTION AND NOTIFY ENGINEER OF CONFLICTS.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING GENERAL SAFETY AT AND ADJACENT TO THE PROJECT AREA, INCLUDING THE PERSONAL SAFETY OF THE CONSTRUCTION CREW AND GENERAL PUBLIC AND THE SAFETY OF PUBLIC AND PRIVATE PROPERTY.
13. ALL BARRICADES, WARNING SIGNS, LIGHT DEVICES, ETC. FOR THE GUIDANCE AND PROTECTION OF TRAFFIC AND PEDESTRIANS MUST CONFORM TO THE INSTALLATION SHOWN IN THE 1980 TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AS CURRENTLY AMENDED, TEXAS STATE DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION.
14. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND SIDEWALKS ADJACENT TO PROJECT FREE OF MUD AND DEBRIS FROM THE CONSTRUCTION.
15. TWO-WAY TRAFFIC MUST BE MAINTAINED AT ALL TIMES. ONE LANE OF TRAVELWAY AROUND CONSTRUCTION OPERATIONS IN PROGRESS WITH ADEQUATE SAFEGUARDS WILL BE ACCEPTABLE.
16. THE LOCATION OF DRIVEWAYS, STEPS, RETAINING WALLS, ETC. AND ALL WATER, SANITARY SEWER, STORM SEWER, TELEPHONE, GAS, ELECTRIC AND CABLE TELEVISION UTILITIES, AS SHOWN ON THESE PLANS ARE APPROXIMATE. ACCURATE LOCATIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AFTER CONSULTATION WITH THE PROPERTY OWNERS AND THE RESPECTIVE UTILITY COMPANIES.
17. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
18. THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED WORK UTILIZING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER FOR THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR ALL TRENCH SAFETY.
19. CONTRACTOR SHALL VERIFY THAT ALL CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE FOR SANITARY SEWER ONLY.
20. CONTRACTOR SHALL INSTALL 1 JOINT (18' MINIMUM JOINT LENGTH) OF DUCTILE IRON PIPE AT LOCATIONS WHERE PROPOSED SEWER SERVICES CROSS EXISTING OR PROPOSED WATER WATER LINES, EXCEPT WHERE OTHERWISE AUTHORIZED BY ENGINEER.
21. IN THE EVENT A STREET IS TO BE CLOSED AND/OR TRAFFIC IS TO BE REROUTED DURING CONSTRUCTION OF THE PROJECT, THE CONTRACTOR WILL HAVE THE SOLE RESPONSIBILITY OF SUBMITTING A TRAFFIC CONTROL PLAN DIRECTLY TO THE CITY TRAFFIC ENGINEER FOR APPROVAL.

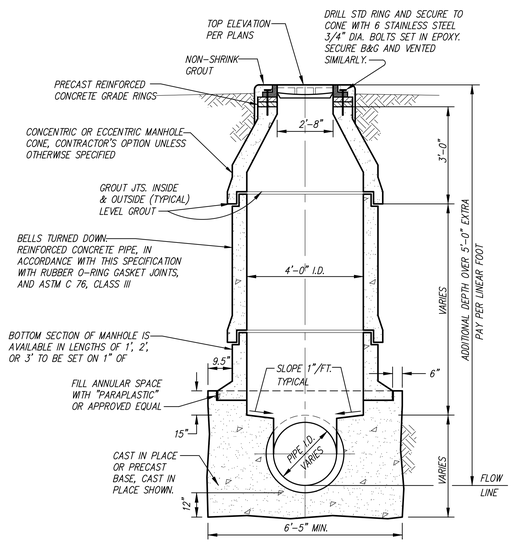


NOTES

1. THE SANITARY SEWER LINE SHALL BE LOCATED BELOW THE WATER LINE AND NO CLOSER THAN 6 INCHES.
2. ONE WATER PIPE SEGMENT SHALL BE CENTERED OVER THE SANITARY SEWER PIPE SUCH THAT THE JOINTS OF THE WATER PIPE ARE EQUIDISTANT AND AT LEAST 9' HORIZONTALLY FROM THE CENTERLINE OF THE SANITARY SEWER PIPE.
3. WHERE CEMENT STABILIZED SAND BEDDING IS REQUIRED, THE CEMENT STABILIZED SAND SHALL HAVE A MINIMUM OF 10% CEMENT PER CUBIC YARD OF CEMENT STABILIZED SAND MIXTURE BASED ON LOOSE DRY WEIGHT VOLUME (AT LEAST 2.5 BAGS OF CEMENT PER CUBIC YARD OF MIXTURE). THE CEMENT STABILIZED SAND BEDDING SHALL BE A MINIMUM OF SIX INCHES ABOVE AND FOUR INCHES BELOW THE SANITARY SEWER PIPE.
4. MAINTAIN 9' SEPARATION BETWEEN FIRE HYDRANTS AND SANITARY SEWER LINES.
5. MAINTAIN 9' SEPARATION BETWEEN SANITARY SEWER MANHOLES AND WATER LINES.

SEPARATION OF NEW WATER AND SEWER LINES

N.T.S.

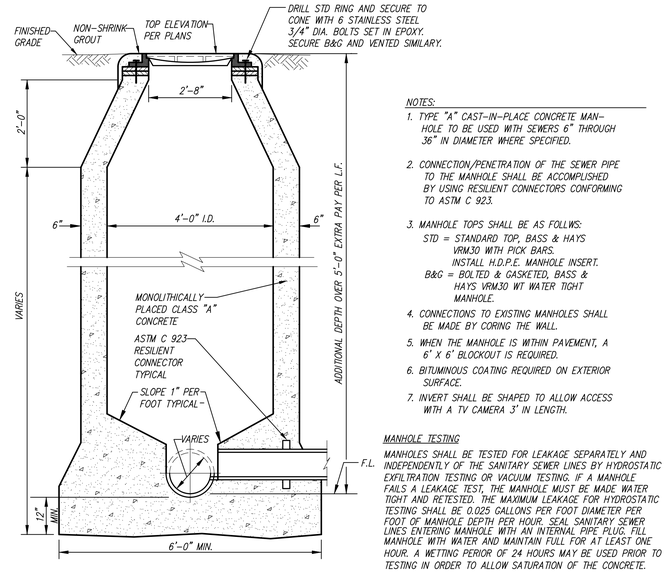


SECTION A-A
N.T.S.

NOTE:
ALL MANHOLES IN YARD AREAS SHALL HAVE A CONCRETE COLLAR

PRECAST MANHOLE

N.T.S.



NOTES:

1. TYPE "A" CAST-IN-PLACE CONCRETE MANHOLE TO BE USED WITH SEWERS 6" THROUGH 36" IN DIAMETER WHERE SPECIFIED.
2. CONNECTION/PENETRATION OF THE SEWER PIPE TO THE MANHOLE SHALL BE ACCOMPLISHED BY USING RESILIENT CONNECTORS CONFORMING TO ASTM C 923.
3. MANHOLE TOPS SHALL BE AS FOLLWS:
   STD = STANDARD TOP, BASS & HAYS VRM30 WITH PICK BARS. INSTALL H.D.P.E. MANHOLE INSERT.
   B&G = BOLTED & GASKETED, BASS & HAYS VRM30 WT WATER TIGHT MANHOLE.
4. CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE BY CORING THE WALL.
5. WHEN THE MANHOLE IS WITHIN PAVEMENT, A 6' X 6' BLOCKOUT IS REQUIRED.
6. BITUMINOUS COATING REQUIRED ON EXTERIOR SURFACE.
7. INVERT SHALL BE SHAPED TO ALLOW ACCESS WITH A TV CAMERA 3' IN LENGTH.

MANHOLE TESTING

MANHOLES SHALL BE TESTED FOR LEAKAGE SEPARATELY AND INDEPENDENTLY OF THE SANITARY SEWER LINES BY HYDROSTATIC EXFILTRATION TESTING OR VACUUM TESTING. IF A MANHOLE FAILS A LEAKAGE TEST, THE MANHOLE MUST BE MADE WATER TIGHT AND RETESTED. THE MAXIMUM LEAKAGE FOR HYDROSTATIC TESTING SHALL BE 0.025 GALLONS PER FOOT DIAMETER PER FOOT OF MANHOLE DEPTH PER HOUR. SEAL SANITARY SEWER LINES ENTERING MANHOLE WITH AN INTERNAL PIPE PLUG. FILL MANHOLE WITH WATER AND MAINTAIN FULL FOR AT LEAST ONE HOUR. A WETTING PERIOR OF 24 HOURS MAY BE USED PRIOR TO TESTING IN ORDER TO ALLOW SATURATION OF THE CONCRETE.

NOTE:
ALL MANHOLES IN YARD AREAS SHALL HAVE A CONCRETE COLLAR

CAST-IN-PLACE MAHHOLE

N.T.S.

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SHEET TITLE
SANITARY SEWER DETAILS

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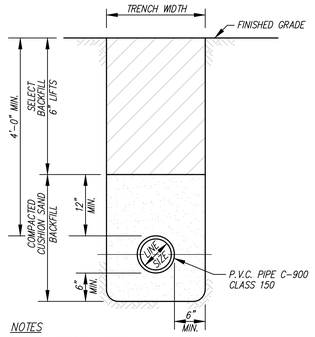
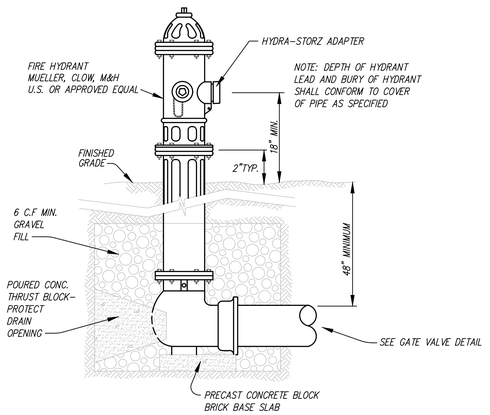


NOTES

1. NO A.C. PIPE ALLOWED.
2. WATER LINE SIZES 6" (INCHES) AND LESS SHALL BE C-900 CLASS 200. WATER LINE SIZES GREATER THAN 6" SHALL BE C-900 CLASS 150 (DR-18) PVC.
3. ALL FLUSHING VALVES AND GATE VALVES TO BE A.W.W.A. STANDARD COUNTERCLOCKWISE OPENING.
4. COMPACT BACKFILL IN 6" LIFTS TO 95% PROCTOR DENSITY WITHIN RIGHT-OF-WAY AND 90% IN OTHER AREAS.
5. CUSHION SAND MUST PASS NO. 8 SIEVE.
6. SELECT BACKFILL IS NATIVE TRENCH MATERIAL WITH NO ROCKS OVER 3" IN DIAMETER.

WATER PVC PIPE BEDDING & BACKFILL

N.T.S.

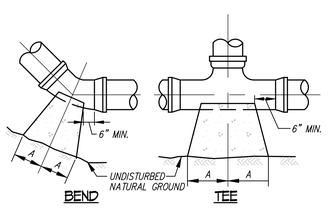


NOTE

1. CONCRETE SHALL BE PLACED OR POURED AGAINST UNDISTURBED SOIL.
2. NO SEPERATE PAY FOR EXTENSIONS TO FINISHED GRADE.
3. FIRE HYDRANTS SHALL BE PRIMED AND PAINTED REFLECTIVE SILVER MEETING THE REQUIREMENTS SET FORTH IN N.C.T.C.O.G. STANDARDS AND SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, ITEM 8.9 PAINTING. VERIFY WITH CITY, THE PRIVATE FIRE HYDRANT COLOR PRIOR TO PAINTING.
4. HYDRANT STEAMER NOZZLES SHALL BE EQUIPPED WITH A 4-1/2" NST X 5" "HYDRA-STORZ" STORZ ADAPTER COMPLETE WITH A SELF CLOSING BUTTERFLY VALVE ASSEMBLY OR APPROVED EQUAL.
5. FIRE HYDRANT LEADS GREATER THAN 2' REQUIRE JOINT THRUST RETAINERS.

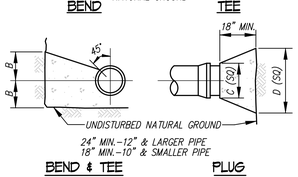
FIRE HYDRANT

N.T.S.



NOTE: THRUST BLOCKS AT TRENCH FACE MUST HAVE A MINIMUM BEARING SURFACE OF 10 SQ. FEET AND THE LEAST DIMENSION SHALL BE NO SMALLER THAN 1.5 TIMES PIPE DIAMETER, BUT NOT LESS THAN 10 FT. ALL CONCRETE SHALL BE MIN. 5SK, 3000 P.S.I.

MEGALUG REQUIRED ON ALL BENDS.



SIZE	90° BEND		45° BEND		22 1/2° BEND		TEE'S		PLUGS	
	A	B	A	B	A	B	A	B	A	B
2 1/2"	12"	7"	6"	7"	6"	6"	7"	8"	8"	14"
6"	16"	10"	9"	10"	6"	12"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
10"	26"	17"	14"	17"	10"	13"	16"	20"	14"	36"
12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"

THRUST BLOCK DETAIL

N.T.S.

GENERAL WATER NOTES

1. CONTRACTOR'S PERSONNEL SHALL WEAR IDENTIFYING CLOTHING OR HATS AT ALL TIMES.
2. THE PROPOSED WATER MAINS AT TIMES WILL BE LAID CLOSE TO OTHER EXISTING UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW THE GROUND. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS FOR THE SUPPORT AND PROTECTION OF ALL UTILITY POLES, FENCES, TREES, SHRUBS, GAS MAINS, TELEPHONE CABLES, TU ELECTRIC CABLES, DRAINAGE PIPES, UTILITY SERVICES, AND ALL OTHER UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW THE GROUND DURING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL UTILITY OWNERS PRIOR TO ANY CONSTRUCTION IN THE AREA AND VERIFY THE ACTUAL LOCATION OF ALL BURIED UTILITIES THAT MAY OR MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL UNDERGROUND AND OVERHEAD FACILITIES AND BE RESPONSIBLE FOR ANY DAMAGE HE MAY CAUSE TO THEM.

   THE CONTRACTOR SHALL CONTACT THE FOLLOWING AT LEAST 48 HOURS PRIOR TO EXCAVATING AT EACH LOCATION:

FORT WORTH WATER DEPARTMENT	(817)-392-4477
TARRANT COUNTY TRANSPORTATION	(817)-884-1250
LIGHTS & SIGNAL DIVISION	(817)-392-8100
CHARTER CABLE	509-6282
* TXU GAS	336-2328
* TXU ELECTRIC	(817) 336-2328
* SOUTHWESTERN BELL TELEPHONE COMPANY	ENTERPRISE 9800
* WESTERN UNION CABLE DIVISION	(214) 939-1930
* AT&T FIBER OPTIC	878-8711
* MCI FIBER OPTIC	1-800-624-9675

   * THESE UTILITIES SHALL BE NOTIFIED BY CALLING 1-800-DIG-TESS (1-800-344-8377) AND GIVING MAPSCO LOCATIONS INVOLVED. CONTRACTOR SHALL MAINTAIN CONFIRMATION NUMBERS AND PROVIDE TO THE CITY ON DEMAND.
3. CONTRACTOR SHALL VERIFY THE ELEVATION, CONFIGURATION, AND ANGULATION OF EXISTING LINES PRIOR TO CONSTRUCTION OF TIE-IN MATERIALS. SUCH VERIFICATION SHALL BE CONSIDERED AS SUBSIDIARY TO COST OF PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
4. NO EXCAVATED MATERIALS, BACKFILL MATERIALS, EQUIPMENT, OR SUPPLIES SHALL BE STORED WITHIN FLOODWAYS OR DRAINAGE EASEMENTS. (REFERENCE C6-6.6 GCD)
5. TRENCHES WHICH LAY OUTSIDE EXISTING OR FUTURE PAVEMENTS SHALL BE BACKFILLED ABOVE THE TOP OF THE EMBEDMENT WITH TYPE "C" BACKFILL MATERIAL. WHEN TYPE "C" BACKFILL MATERIAL IS NOT SUITABLE, AT THE DIRECTION OF THE ENGINEER, TYPE "B" MATERIAL SHALL BE USED. ALL BACKFILL MATERIAL FOR TRENCHES LOCATED OUTSIDE EXISTING OR FUTURE PAVEMENTS SHALL BE COMPACTED TO A MINIMUM OF 90% PROCTOR DENSITY BY MEANS OF TAMPING ONLY. TRENCHES WHICH CROSS UNDER EXISTING OR FUTURE PAVEMENT SHALL BE BACKFILLED PER FIG. "A" WITH 95% PROCTOR DENSITY BY TAMPING.
6. ALL EXISTING IMPROVEMENTS NOT SCHEDULED FOR REPLACEMENT DURING CONSTRUCTION WHICH ARE DAMAGED OR DESTROYED BY THE CONTRACTOR SHALL BE RESTORED TO EQUAL OR BETTER CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY OR THE AFFECTED OWNER.
7. THE TOP OF THE WATER LINES SHALL BE A MINIMUM OF 3'-6" BELOW THE TOP OF THE CURB OR FINISHED GRADE FOR 10" AND SMALLER MAINS EXCEPT WHERE OTHERWISE SHOWN ON THESE PLANS.
8. CONCRETE BLOCKING SHALL BE INSTALLED ON ALL WATER LINE BENDS, FIRE HYDRANTS, FITTINGS AND VALVES. ALL HORIZONTAL BLOCKING, CRADLE BLOCKING, AND VERTICAL TIE-DOWN BLOCKING TO BE IN ACCORDANCE WITH FIG.(S) 9, 10, AND 11 OF THE GCD. BLOCKING TO BE SUBSIDIARY TO WATER LINE CONSTRUCTION AND NO EXTRA PAY WILL BE ALLOWED.
9. FIRE HYDRANTS SHALL BE LOCATED AS SHOWN ON PLAN.
10. ALL GATE VALVE INSTALLATIONS FOR SIZES UP TO 12" ARE TO BE PER CITY OF FORT WORTH
11. ELEVATION ADJUSTMENTS OF WATER LINE AT CONNECTIONS MAY BE MADE WITH BENDS, OFFSETS, OR JOINT DEFLECTIONS. ALL NONSTANDARD BENDS SHALL BE MADE USING THE CLOSEST STANDARD M.J. FITTINGS WITH THE REQUIRED JOINT DEFLECTIONS. (DEFLECTIONS NOT TO EXCEED MANUFACTURER'S RECOMMENDED DEFLECTION PER JOINT.)
12. PROPOSED WATER EXCAVATION AND BACKFILL REPAIR SHALL BE IN ACCORDANCE WITH CITY OF FORT WORTH STANDARDS.
13. THE UTILITIES SHOWN ON THE PLANS WERE COMPILED FROM VARIOUS SOURCES AND ARE INTENDED TO SHOW THE GENERAL EXISTENCE AND LOCATION OF UTILITIES IN THE AREA OF CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITY INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES IN ORDER TO DETERMINE IF THERE IS ANY CONFLICT WITH THE PROPOSED FACILITIES. THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY WHEN CONFLICTS WITH EXISTING UTILITIES ARE DISCOVERED.

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
MATTHEW G. MANTONG
146154
LICENSED PROFESSIONAL ENGINEER
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.

24-057.00

SHEET TITLE

WATER DETAILS

SHEET NO.

C1.28

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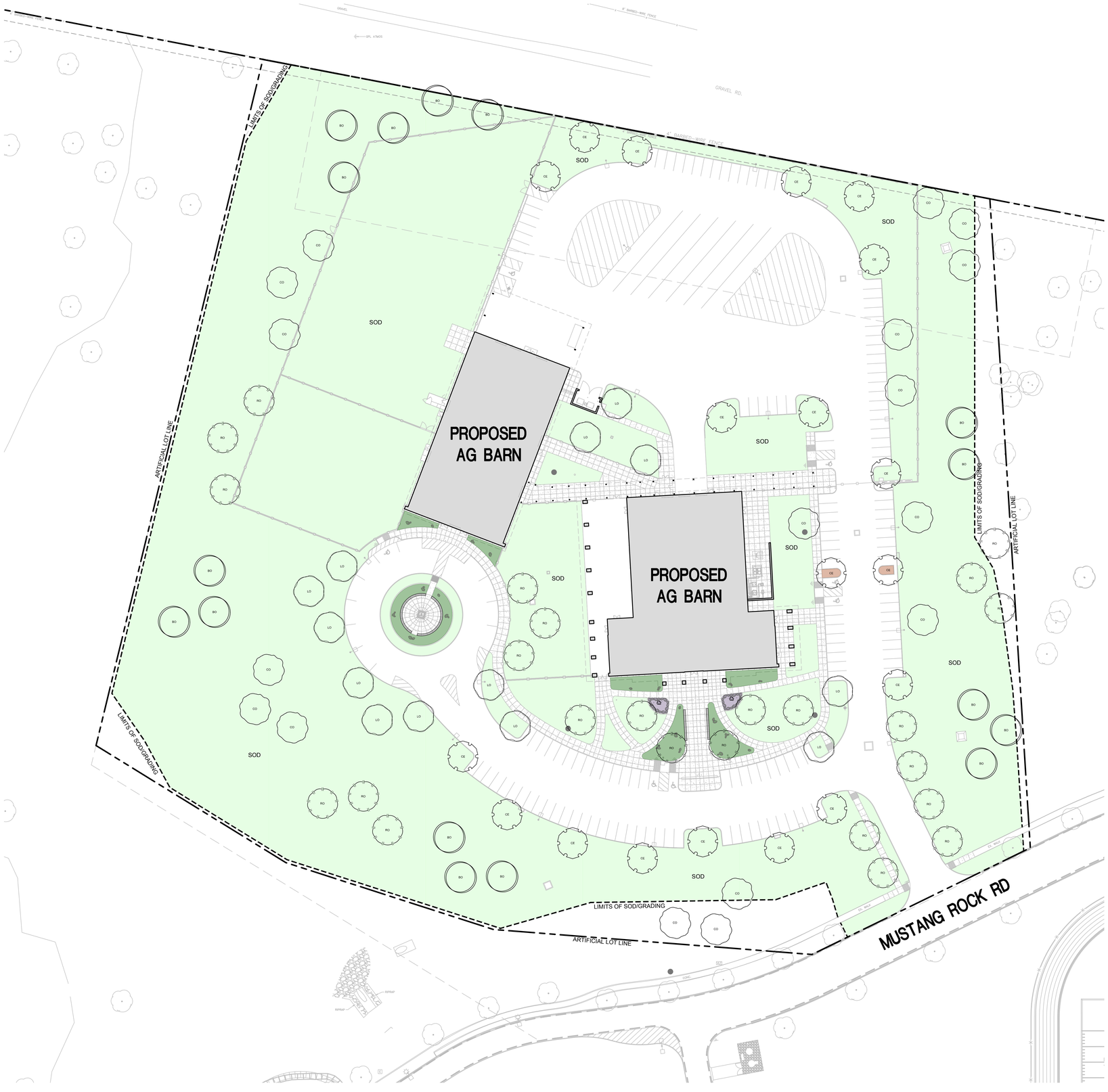


tnp

GRAPHIC SCALE

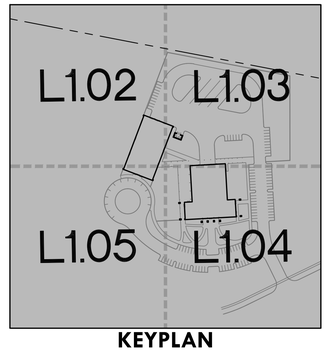
40 0 20 40 80

GRAPHIC SCALE: 1" = 40'

LEGEND

- SOD
- SHRUB BED
- DECOMPOSED GRANITE
- RIVER ROCK

CITY OF FORT WORTH NORTHWEST ISD HIGH SCHOOL #4	
ARTIFICIAL LOT LINE	606,680 SF
BUILDING AREA	39,753 SF
NET LANDSCAPE AREA	566,927 SF
TOTAL LANDSCAPE AREA (10% OF TOTAL NET LANDSCAPE AREA)	56,693 SF
SHRUB REQUIREMENT ONE 3 GALLON NATIVE SHRUB PER 75 SQUARE FEET	756 EA
75% OF SHRUBS REQUIRED IN FRONT YARD	567 EA
SHRUBS PROVIDED IN FRONT YARD	1,686 EA
TOTAL SHRUBS PROVIDED	1,686 EA
GREEN SPACE REQUIREMENT	56,693 SF
GREEN SPACE REQUIRED IN FRONT YARD (75%)	42,520 SF
GREEN SPACE PROVIDED IN FRONT YARD	197,557 SF
TOTAL GREEN SPACE PROVIDED	379,176 SF



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FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED LANDSCAPE ARCHITECT
JOE L. MARTIN
3207
STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
MSW	TNP
Designer	Quality Control
PCV	TNP
Proj. Arch.	
VLK	

PROJECT NO.

24-057.00

SHEET TITLE

OVERALL LANDSCAPE PLAN

SHEET NO.

L1.01

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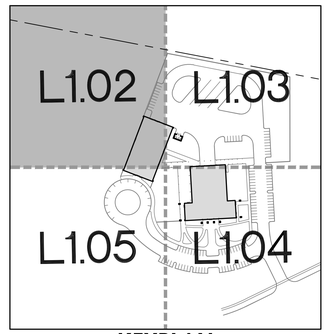
GRAPHIC SCALE

20 0 10 20 40

GRAPHIC SCALE: 1" = 20'

PLANT KEY

SYMBOL	COMMON NAME
LARGE CANOPY TREE	
BO	BUR OAK
CE	CEDAR ELM
CO	CHINQUAPIN OAK
LO	LIVE OAK
RO	RED OAK
SHRUBS	
	AUTUMN SAGE
	COLOR GUARD YUCCA
	DWARF YAUPON
	LINDHEIMER`S MUHLY
	RED YUCCA
	YELLOW YUCCA
	ZEXMENIA
SHRUB AREAS	
	MEXICAN FEATHER GRASS
GROUND COVERS	
	DECOMPOSED GRANITE
	RIVER ROCK
SOD/SEED	
	TIF 419 BERMUDA SOD



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JOE L. MADRID 3207 REGISTERED LANDSCAPE ARCHITECT STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L1.02

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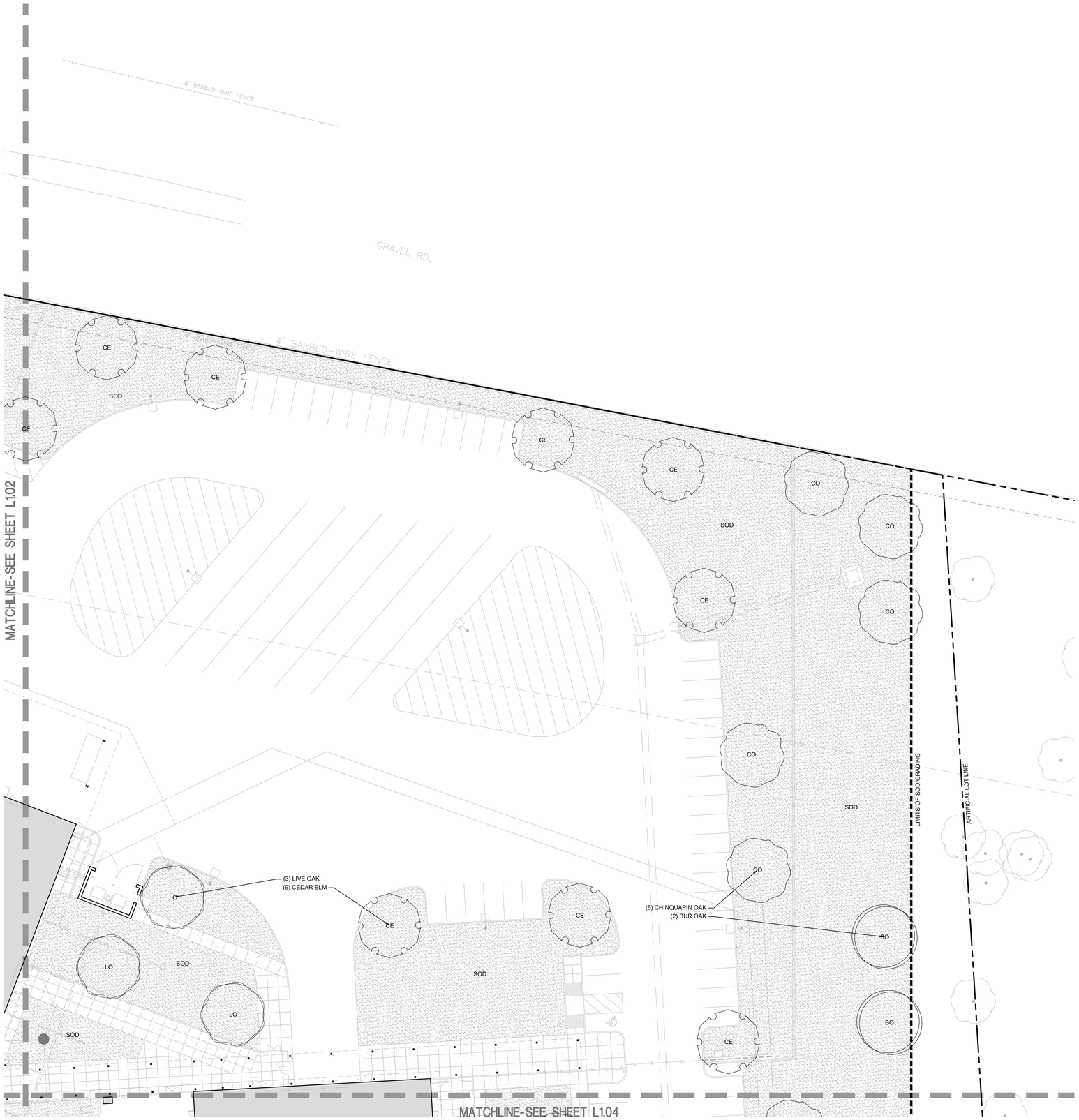
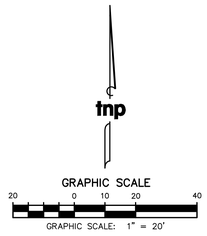
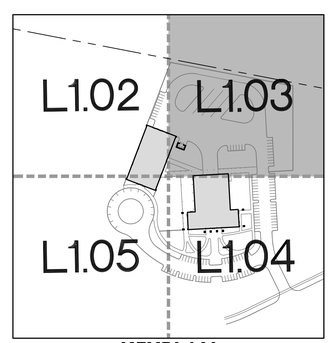




PLANT KEY

SYMBOL	COMMON NAME
LARGE CANOPY TREE	
BO	BUR OAK
CE	CEDAR ELM
CO	CHINQUAPIN OAK
LO	LIVE OAK
RO	RED OAK
SHRUBS	
	AUTUMN SAGE
	COLOR GUARD YUCCA
	DWARF YAUPON
	LINDHEIMER`S MUHLY
	RED YUCCA
	YELLOW YUCCA
	ZEXMENIA
SHRUB AREAS	
	MEXICAN FEATHER GRASS
GROUND COVERS	
	DECOMPOSED GRANITE
	RIVER ROCK
SOD/SEED	
	TIF 419 BERMUDA SOD



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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED LANDSCAPE ARCHITECT
JOSE L. MADRID
3207
STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L1.03

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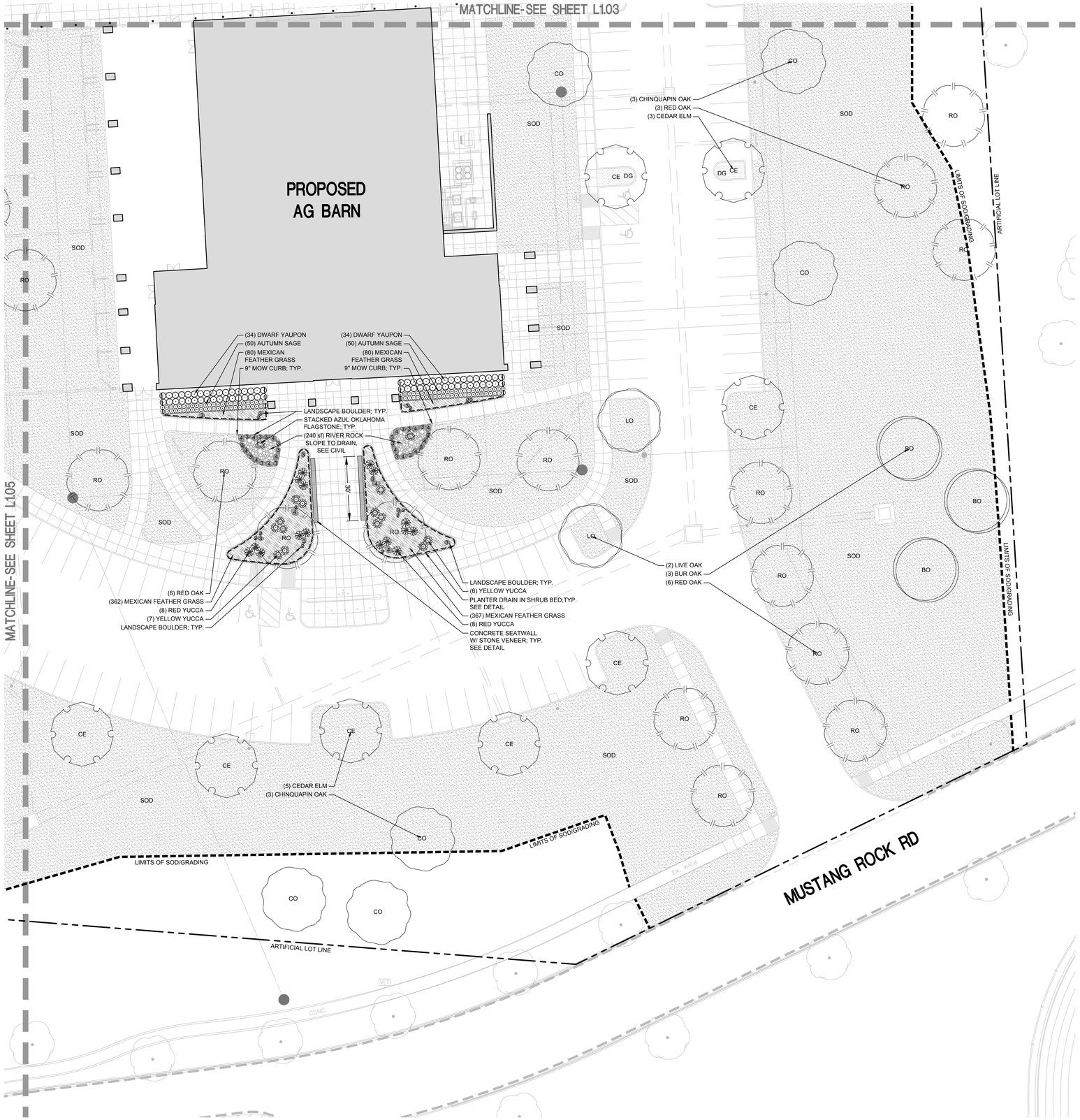

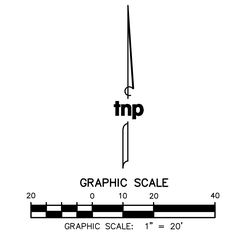

PLANT KEY

SYMBOL	COMMON NAME
LARGE CANOPY TREE	
BO	BUR OAK
CE	CEDAR ELM
CO	CHINQUAPIN OAK
LO	LIVE OAK
RO	RED OAK
SHRUBS	
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	DWARF YAUPON
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SHRUB AREAS	
	MEXICAN FEATHER GRASS
GROUND COVERS	
	DECOMPOSED GRANITE
	RIVER ROCK
SOD/SEED	
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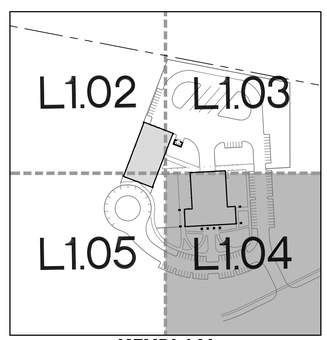

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REGISTERED LANDSCAPE ARCHITECT
JOE L. MADRID
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STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L1.04

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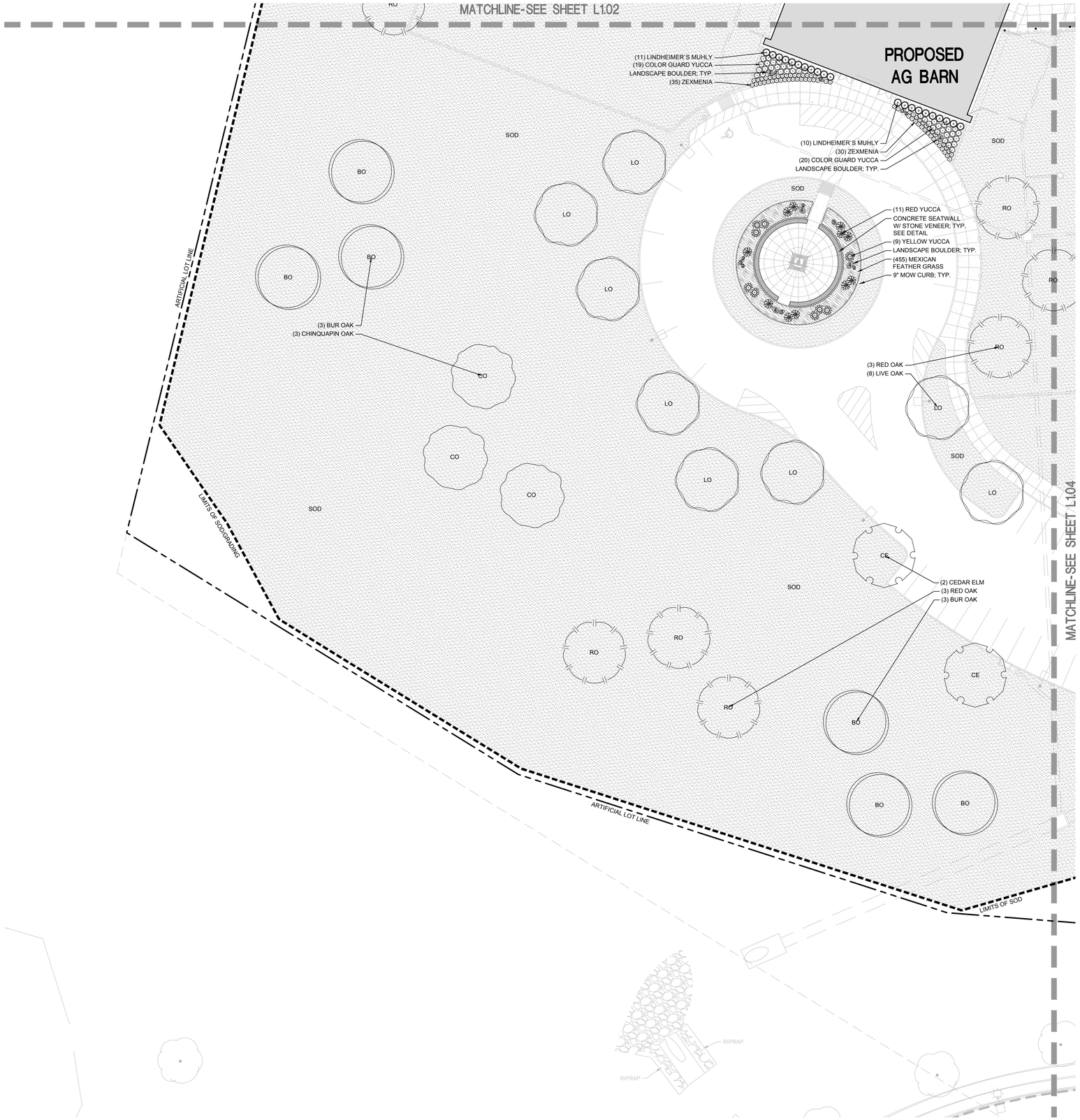
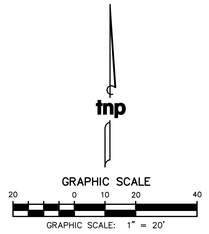
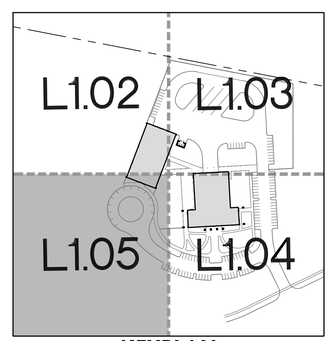




PLANT KEY

SYMBOL	COMMON NAME
LARGE CANOPY TREE	
BO	BUR OAK
CE	CEDAR ELM
CO	CHINQUAPIN OAK
LO	LIVE OAK
RO	RED OAK
SHRUBS	
	AUTUMN SAGE
	COLOR GUARD YUCCA
	DWARF YAUPON
	LINDHEIMER`S MUHLY
	RED YUCCA
	YELLOW YUCCA
	ZEXMENIA
SHRUB AREAS	
	MEXICAN FEATHER GRASS
GROUND COVERS	
	DECOMPOSED GRANITE
	RIVER ROCK
SOD/SEED	
	TIF 419 BERMUDA SOD



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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED LANDSCAPE ARCHITECT
JOE L. MADRID
3207
STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L1.05

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PLANTING NOTES

SECTION 1 - GENERAL

1. These notes are intended as a field reference for the Contractor. The Contractor will thoroughly review these notes, specifications and the drawings prior to start of any work. The Contractor shall visit the site prior to submitting his bid and prior to start of work to become completely familiar with site conditions.

2. It is the responsibility of the contractor to advise the Landscape Architect (hereinafter, LA) of any condition found on the site which prohibits installation as shown on these drawings.

3. Prior to submitting a bid, the Contractor shall verify any discrepancies between the notes, specifications, or the drawings with the LA for clarification. If there is a discrepancy between the quantity of materials shown on the plans and the quantity of materials shown in the materials legends, the greater quantity will take precedence for bidding purposes. All quantities listed are for information only. It is the contractor's responsibility to provide full coverage of materials in all areas.

4. Written dimensions prevail over scaled dimensions. Notify landscape architect of any discrepancies

5. The Contractor bears all responsibility for obtaining all licenses and permits required by federal, state, and local agencies to accomplish the work of this project.

6. Contractor shall complete soil test in all planting areas to determine soil amendment requirements and submit test results to LA for approval. Contractor shall adjust pH and fertility based upon these results. No addition to or placement of soil is to be done prior to initial soil test report approval. Testing shall be done by LA approved laboratory. No planting shall begin until results and proper adjustment have been made. It is the Contractor's responsibility to ensure proper drainage and fertility of all planting areas.

7. Coordinate all work with the project's building contractor or owner.

8. Warning! Call toll-free 811 *before* you dig! The contractor bears all responsibility for verifying all underground utilities, pipes, and structures in the field prior to construction. Any damage to utilities that are to remain shall be repaired immediately at no expense to the owner. The Contractor shall contact the building contractor and all utility authorities to mark location of site utilities. Install flags or stakes and maintain them in place throughout the project. Damage to utilities or other work shall be repaired at the expense of the contractor responsible for the damage. The locations of existing utilities as shown on these plans are approximate. There may be other underground utilities within the project area that are not shown. Landscape Architect and/or Engineer assumes no responsibility for any utilities not shown on plans.

9. Due to existing vegetation and other site conditions, the Contractor should anticipate field adjustments by the LA and should understand such adjustments are not a change order.

10. The Contractor shall give the LA 48 hours' notice of required inspections *upon completion* of each of the following phases:

A. Pre-Construction Conference after award of bid (on-site)
B. Construction debris/ weed clean-up (before *any* grading, fill, or irrigation)
C. Rough Grading (within 2" of finish grade), Utility Marking, and Tree Staking
D. Fine Grading and Tree Staking (before any tree pits are dug)
E. Tree Planting
F. Staking of Bedlines and/or Edging
G. Shrub Planting
H. Substantial Completion
I. Final Acceptance

11. Contractor shall guarantee all plant material for one (1) full year from date of final acceptance. The cutting off of water or electricity by other trades or persons shall not void the warranty.

12. It is the contractor's responsibility to insure the availability of water to the plants at all times until final acceptance. The contractor shall reject and replace all trees with tip-dieback of more than one (1) inch over the entire canopy of the tree and replace all shrubs or plants with any dieback. All rejected plant material shall be replaced with specified plant material within 14 calendar days at the contractor's expense.

13. LA assumes no responsibility for damages, liabilities, or cost resulting from changes or alterations made to the plan without the express written consent of LA.

14. All materials, locations, and workmanship are subject to approval or refusal by the LA. All materials, locations, and workmanship rejected by the LA shall be remedied at the Contractor's expense.

SECTION 2 - MATERIALS

15. The Contractor shall check all material for specified requirements, shipping damage, pests, and diseases and shall reject all unsatisfactory materials. All plant material is to be carefully handled by the root ball, not the trunk, branches, and/or foliage of the plant. Mishandled material will be rejected. B&B material shall be 'hardened off' after digging for at least 90 days and have at least 10" of rootball for every caliper inch. All material rejected by the LA shall be removed from the site and replaced with acceptable material at the Contractor's expense

16. Plants shall be well formed, vigorous, growing specimens with growth typical of variety specified and shall be free from injury, insects, and diseases. All plant material is to be well rooted, not root bound, such that the root ball remains intact throughout the planting process. The Contractor shall reject all cracked root balls. All plant material shall conform to the specifications and sizes shown in the plant list and shall be nursery grown in accordance with the latest edition (ANSI Z60.1) of "American Standard for Nursery Stock." Any plant substitution shall be approved by landscape architect prior to purchase. Trees with co-dominant stems shall be rejected.

17. Do not make substitutions. If specified material is not available, submit proof of non-availability to LA.

18. All planting areas shall have organic topsoil that is natural, well-drained, friable, fertile, sandy-loam. Sandy-loam is to be pH 6.5-7.5. Heavy clays, limestone, poorly drained bottomland soil, silt, or alluvial soils are not allowed in any planting areas. Topsoil shall be free of harmful insects or nematodes, soil-borne diseases, toxins, select fill, inorganic subsoils, heavy metals, trash, petroleum by-products, rocks over 1/2" in diameter, rubble, roots, and weeds or weed seeds. Contractor shall submit a 2-cup sample in a gallon-size baggie to Landscape Architect before delivery of any soil to the site or placement of any soil in planting areas.

19. Sod shall consist of live growing plants secured from sources which have dense, thickly matted root system throughout the soil of the sod for a minimum of one inch. Sod shall be free of weeds or other varieties of grasses.

20. Sod shall not be used where the roots are dried because of sun or wind. The landscape architect has the right to reject any or all of sod due to lack of care, improper cutting, or other agronomic problems.

SECTION 3 - EXECUTION

21. The Contractor shall *thoroughly* remove from the construction site all limestone larger than 1/2" in diameter and all heavy clay to these depths: 6" minimum in turf and seed areas, and 18" minimum in planting beds. The LA shall verify that this is complete before the Contractor is authorized to proceed with fill of specified topsoil or grading. Scarify subsoil after removal of rock or heavy clay before adding topsoil so as to break up any surface tension.

22. The Contractor shall thoroughly remove from the construction site all the following particles that are larger than 3/4" in diameter: inorganic select fill, heavy clay, limestone, and construction debris, mortar, concrete, paint, chemicals, weeds, plastic, paper, steel, mortar, masonry, construction debris, and other substances that are harmful to plant growth. Remove the above items to these depths: 6" minimum in turf and seed areas, and 18" minimum in planting beds. The LA shall verify that the above items are removed before the Contractor is authorized to proceed with fill with specified topsoil or grading. DO NOT PLACE ANY FILL ON CONSTRUCTION DEBRIS.

23. Mow curbs shall be used at all planting bed edges when they are adjacent to lawn (see detail). Unless otherwise shown on plans, mow curbs shall intersect curbs, sidewalks, and buildings at 90 degrees (square). Mow curbs shall have expansion joints every 50' and at all abutments to other hardscape elements. Construction joints shall be saw cut at 10' on center. Mow curbs shall have curves that are smooth, flowing, and consistent in nature. Mow curbs with straight lines shall be straight. All formwork shall be within a ¼" tolerance of drawings. No mow curb shall have a radius smaller than 72" unless specifically called out on drawings.

24. Contractor shall fine grade all areas for approval by LA. Contractor shall be responsible for providing 2% positive drainage in all planting areas. No planting or mulching will take place until all construction, clean-up, fine grading, and irrigation is complete in the immediate area. Final finish grading shall be reviewed by the LA before any planting takes place. Contractor shall be responsible for any additional topsoil required to create a smooth condition prior to planting.

25.All planting beds shall be amended as per plans details and specs.Submit trip tickets to L.A. for approval of quantity and type of materials.

26. All sod and seed areas shall be amended as per plans and specifications.

27. Scarify all rootballs (#1 and larger) to prevent plants from remaining pot-bound. This is to be done by hand or with a 3-prong cultivator but never with a shovel or machete.

28. Place shrubs and groundcovers so that the top of the rootball is ¼" to ¾" above finish grade Trees shall be set 1" above finish grade for each caliper inch of trunk. Example: A 3" tree shall be set 3" above finish grade.

29. Water in and compact planting backfill to prevent formation of air pockets.

30. Plants shall be set plumb, unless otherwise directed by LA.

31. Back row of shrubs shall be planted 36" from face of building wall, groundcovers shall be 12" from building or as required by conditions. Front row of shrubs shall be planted a minimum of 24" behind (12" for ground cover) bed lines at lawns or walks and minimum 36" back from curbs, driveways, and parking areas.

32. After planting, remove strapping, wire "ears" and string, cords, burlap, etc. from top of B&B rootballs.

33. All planting beds and trees shall be mulched with 3" of mulch (2.5" after settlement).

34. All trees are to be stabilized per detail and specs immediately after planting.

35. All sod areas shall be thoroughly graded and smoothed with at least 8 passes in different directions using a drag-behind system such as a bunker rake or other device until very smooth and within 1/4" of specified grade (see civil sheets for grading plans).

36. Prior to sod installation, a fertilizer shall be applied and tilled into the prepared soil. Application must be done no longer than 24 hours prior to installation of sod. Do not apply fertilizer when a possibility of rain might occur before sod is installed. Reference specifications for specific type of fertilizer to be used.

37. Lay sod in parallel rows with tight joints. All sod must be placed perpendicular to slopes and staggered no less than 12" on each row. Slopes greater than 4:1 must be held in place with galvanized sod pins, wood pegs, or other method approved by LA. All sod shall be rolled with a 5-ton mechanical roller in at least two directions within 24 hours of laying. All sod areas shall be barricaded with wood stakes and ribbon for no less than 7 days.

38. Plant material shall be pruned as necessary to control size but not to disrupt the natural growth pattern or characteristic form of the plant except as necessary to achieve height clearance for visibility and pedestrian passage or to achieve a continuous opaque hedge if required.

39. All plant material shall be fully-maintained in a healthy and growing condition until final acceptance, and must be replaced with plant material of same variety and size if damaged, destroyed, or removed. This includes mowing, pruning, watering, and weeding.

40. Landscaped areas shall be kept free of trash, weeds, debris, and dead plant material until final acceptance. Any damage to landscape areas shall be repaired at no cost to owner.

PLANT SCHEDULE

SYMBOL	COMMON NAME	BOTANICAL NAME	QTY	SIZE	HEIGHT	SPREAD	SPACING	REMARKS
LARGE CANOPY TREE								
BO	BUR OAK	Quercus macrocarpa	16	3" Cal.	12`-14`	5`-6`	As shown	CONTAINER GROWN, FULL DENSE HEAD, SYMMETRICAL, SINGLE, STRAIGHT TRUNK
CE	CEDAR ELM	Ulmus crassifolia	19	3" Cal.	12`-14`	5`-6`	As shown	CONTAINER GROWN, FULL DENSE HEAD, SYMMETRICAL, SINGLE, STRAIGHT TRUNK
CO	CHINQUAPIN OAK	Quercus muehlenbergii	17	3" Cal.	12`-14`	5`-6`	As shown	CONTAINER GROWN, FULL DENSE HEAD, SYMMETRICAL, SINGLE, STRAIGHT TRUNK
LO	LIVE OAK	Quercus virginiana	13	3" Cal.	14`-16`	6`-8`	As shown	CONTAINER GROWN, FULL DENSE HEAD, SYMMETRICAL, SINGLE, STRAIGHT TRUNK
RO	RED OAK	Quercus shumardii	24	3" Cal.	12`-14`	10`-12`	As shown	CONTAINER GROWN, FULL DENSE HEAD, SYMMETRICAL, SINGLE, STRAIGHT TRUNK
SHRUBS								
	AUTUMN SAGE	Salvia greggii	100	3 Gal.	12"-14"	8"-10"	24" O.C.	CONTAINER GROWN, MATURE ROOT SYSTEM BUT NOT ROOT BOUND. FULL BROAD TOP.
	COLOR GUARD YUCCA	Yucca filamentosa `Color Guard`	39	3 Gal.	12"-18"	12"-18"	36" O.C.	CONTAINER GROWN, MATURE ROOT SYSTEM BUT NOT ROOT BOUND. FULL TOP.
	DWARF YAUPON	Ilex vomitoria `Nana`	68	5 Gal.	18"-22"	20"-24"	36" O.C.	CONTAINER GROWN, MATURE ROOT SYSTEM BUT NOT ROOT BOUND. FULL BROAD TOP.
	LINDHEIMER`S MUHLY	Muhlenbergia lindheimeri	21	3 Gal.	24"-26"	18" - 24"	42" O.C.	CONTAINER GROWN, MATURE ROOT SYSTEM BUT NOT ROOT BOUND. FULL BOARD TOP.
	RED YUCCA	Hesperaloe parviflora	27	3 Gal.	18"-24"	12"-16"	42" O.C.	CONTAINER GROWN, MATURE ROOT SYSTEM BUT NOT ROOT BOUND. FULL BROAD TOP.
	YELLOW YUCCA	Hesperaloe parviflora 'Yellow'	22	3 Gal.	18"-24"	12"-16"	42" O.C.	CONTAINER GROWN, MATURE ROOT SYSTEM BUT NOT ROOT BOUND. FULL BROAD TOP.
	ZEXMENIA	Wedelia acapulcensis var. hispida	65	3 Gal.	12"-18"	8"-12"	24" O.C.	CONTAINER GROWN, MATURE ROOT SYSTEM BUT NOT ROOT BOUND. FULL BROAD TOP.
SHRUB AREAS								
	MEXICAN FEATHER GRASS	Nassella tenuissima	1,344	3 Gal.	8"-10"	4"-6"	18" O.C.	CONTAINER GROWN, MATURE ROOT SYSTEM BUT NOT ROOT BOUND. FULL BROAD TOP.
GROUND COVERS								
	DECOMPOSED GRANITE	Decomposed Granite	242 sf	1/4" Minus	n/a	n/a	n/a	4" THICK WITH WEED BARRIER FABRIC. REF DETAIL
	RIVER ROCK	Mexican Beach Pebbles	480 sf	3" - 5"	n/a	n/a	n/a	6" MORTARED, WITH FILTER FABRIC. SEE DETAIL.
SOD/SEED								
	TIF 419 BERMUDA SOD	Cynodon dactylon `TIF 419`	343,301 sf	Rolled sod	n/a	n/a	n/a	REF PLANTING NOTES AND SPECIFICATIONS

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED LANDSCAPE ARCHITECT
JOE L. MADRID
3207
STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
LANDSCAPE NOTES & SCHEDULE

SHEET NO.
L1.06

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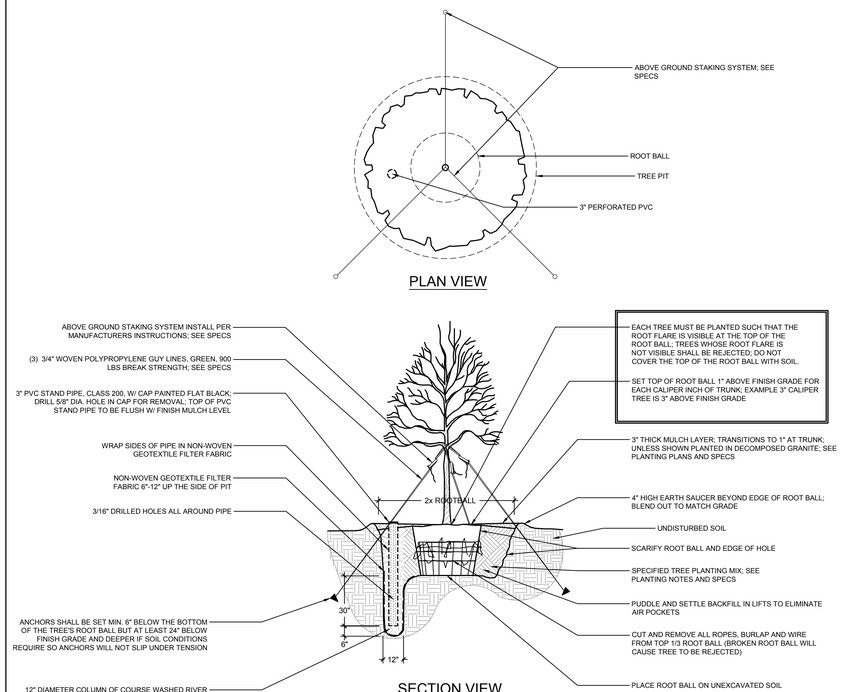
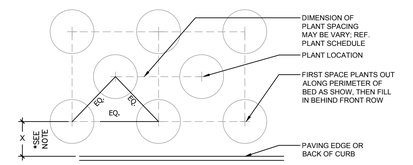
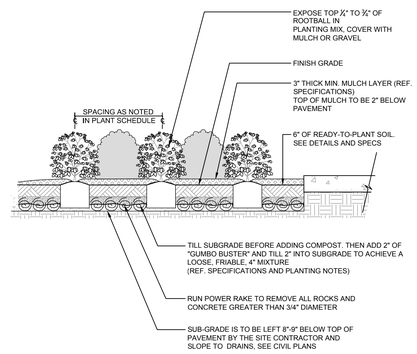


NOTES:
1. ROOT BALL SIZE SHALL CONFORM TO THE LATEST EDITION OF AMERICAN STANDARD FOR NURSERY STOCK.
2. ROOT BALL WIDTH SHOULD BE DETERMINED BY THE FOLLOWING; 10" OF ROOT BALL FOR EACH CALIPER INCH OF TREE TRUNK.
3. ROOT BALL DEPTH IS 2/3 OF DIAMETER.
4. DO NOT HEAVILY PRUNE THE TREE AT PLANTING; PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.

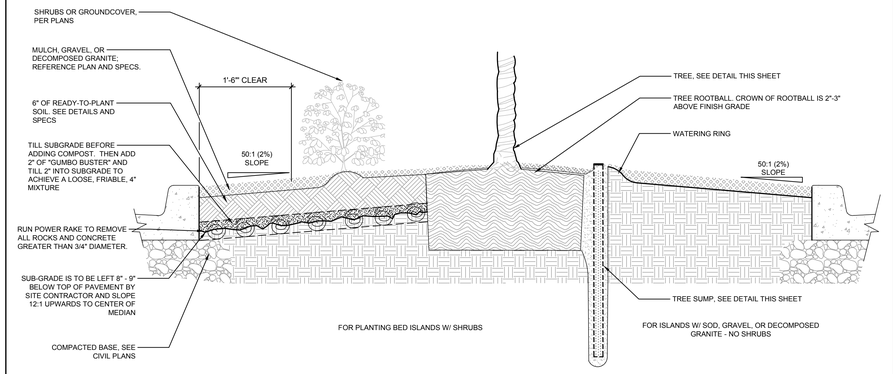
A TREE PLANTING
NTS — TNP-ST-01



*NOTES:
1. X = 12" MIN. FOR GROUNDCOVER
2. X = 24" MIN. FOR SHRUBS
3. SPACING DIAGRAM REFERS TO ALL PLANTING UNLESS OTHERWISE NOTED

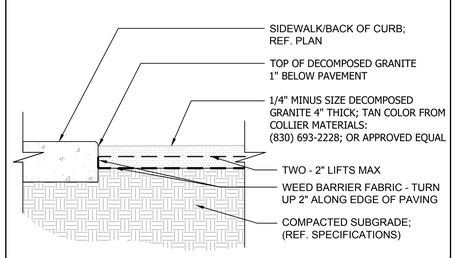


B SHRUB AND GROUNDCOVER PLANTING DETAIL
NTS — TNP-ST-07

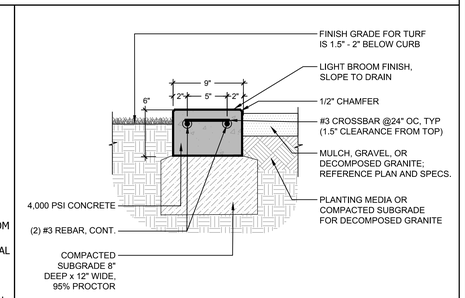


C PARKING LOT ISLAND WITH 2% SLOPE (APPLIES TO ALL PARKING LOT ISLANDS & MEDIANS)
NTS — TNP-ST-02

DG SHALL HAVE "STABILIZER SOLUTIONS" PRE-MIXED PRIOR TO DELIVERY TO SITE. INSTALL IN 2" LIFTS WHILE COMPACTING WITH WATER AND A ROLLER TO NOT LESS THAN 90% NOR MORE THAN 95% OF MAXIMUM DRY DENSITY. DO NOT COMPACT OVER THE ROOTS OF PLANTS OR TREES.

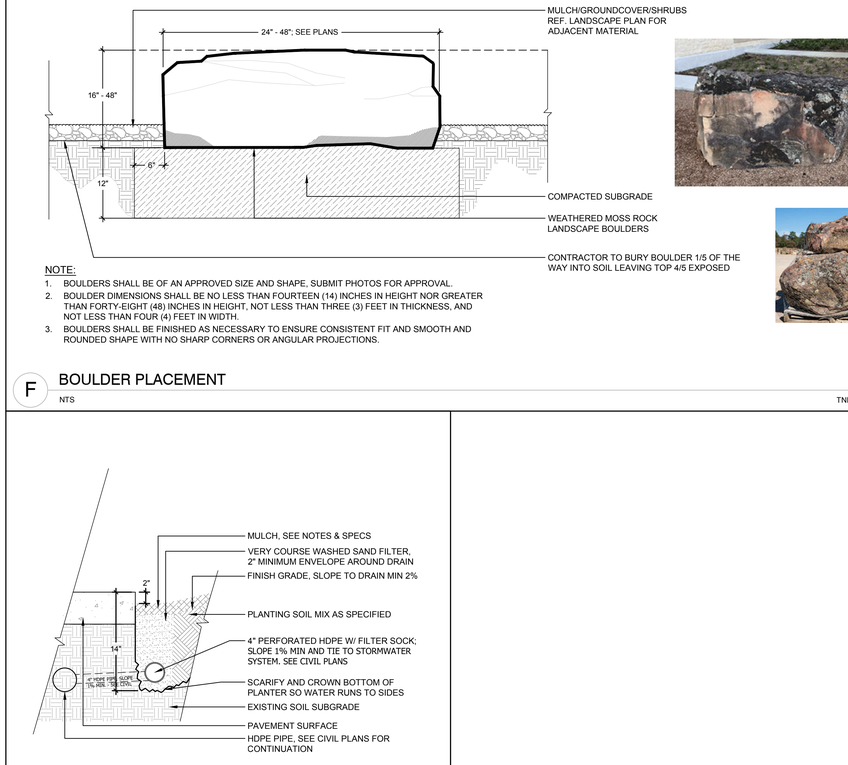


D DECOMPOSED GRANITE
NTS — TNP-ST-11



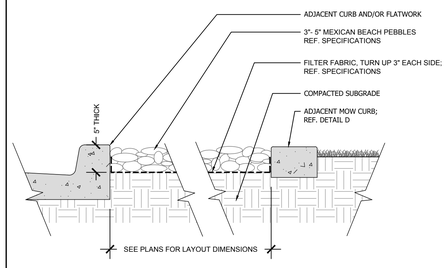
NOTE:
1. MOW CURBS SHALL HAVE EXPANSION AND CONTROL JOINTS. EXPANSION JOINTS SHALL BE LOCATED EVERY 50' O.C. AND TOOLED CONTROL JOINTS SHALL BE LOCATED EVERY 10' O.C.
2. PROVIDE POSITIVE DRAINAGE FROM PLANTING BED WITH MAX. 0.5% CROSS SLOPE, TYP.

E 9" WIDE CONCRETE MOW CURB
NTS — TNP-ST-06

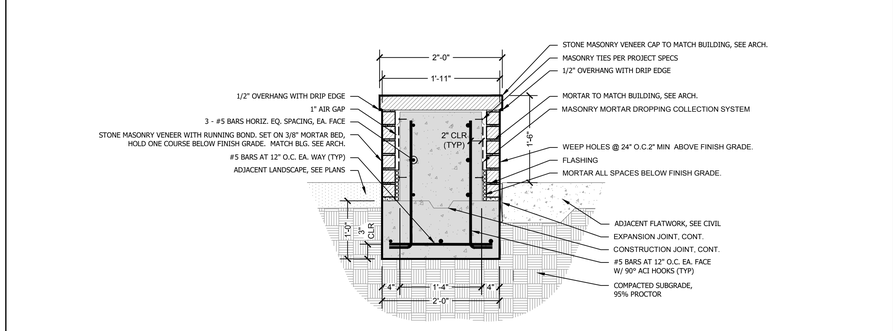


NOTE:
1. BOULDERS SHALL BE OF AN APPROVED SIZE AND SHAPE, SUBMIT PHOTOS FOR APPROVAL.
2. BOULDER DIMENSIONS SHALL BE NO LESS THAN FOURTEEN (14) INCHES IN HEIGHT NOR GREATER THAN FORTY-EIGHT (48) INCHES IN HEIGHT, NOT LESS THAN THREE (3) FEET IN THICKNESS, AND NOT LESS THAN FOUR (4) FEET IN WIDTH.
3. BOULDERS SHALL BE FINISHED AS NECESSARY TO ENSURE CONSISTENT FIT AND SMOOTH AND ROUNDED SHAPE WITH NO SHARP CORNERS OR ANGULAR PROJECTIONS.

F BOULDER PLACEMENT
NTS — TNP-ST1-01



G RIVER ROCK
NTS — TNP-ST1-06



H 24" WIDE SEATWALL W/ STONE VENEER
NTS — TNP-SE-51

I PLANTER DRAIN IN SHRUB BED
NTS — TNP-DR-FRE-03

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED LANDSCAPE ARCHITECT — JOE L. MARTINEZ — 3207 — STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
LANDSCAPE DETAILS

SHEET NO.
L1.07

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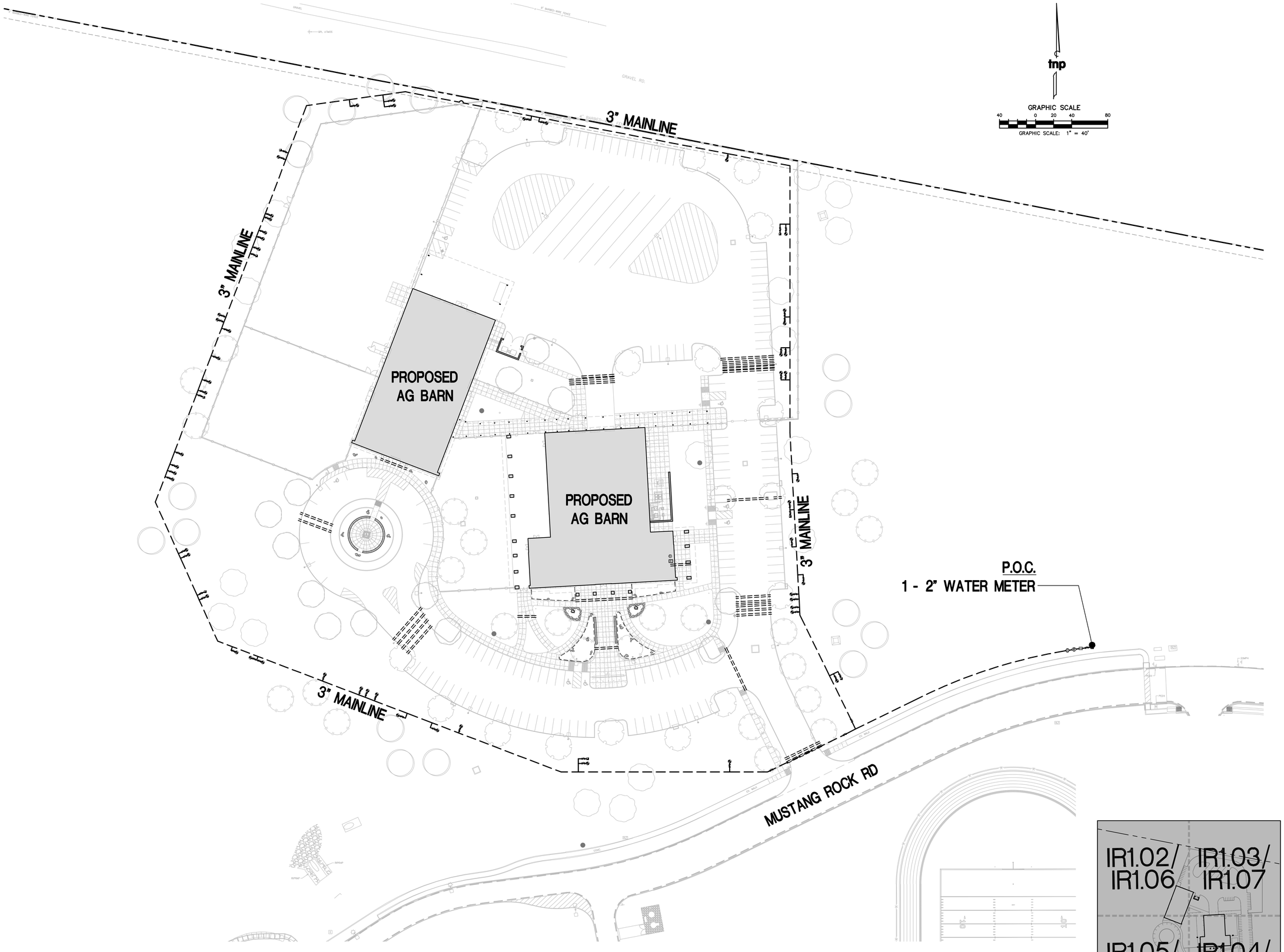

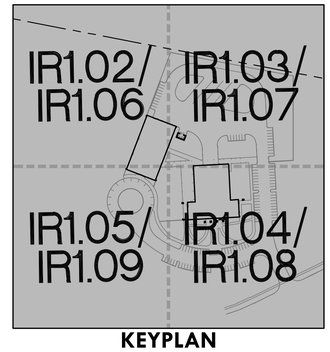

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FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
JOE L. MADRID
7812
LICENSED IRRIGATOR
05/28/2025

ISSUED: MAY 28, 2025

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Director	Drawn By
MSW	TNP
Designer	Quality Control
PCV	TNP
Proj. Arch.	
VLK	

PROJECT NO.
24-057.00

SHEET TITLE
OVERALL IRRIGATION PLAN

SHEET NO.
IR1.01

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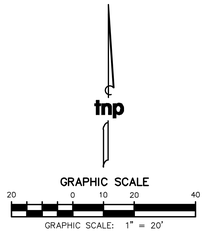


IRRIGATION KEY

SYMBOL	MANUFACTURER/MODEL
Q T H F	Hunter PROS-06-PRS30-CV 8' radius
Q T H F	Hunter PROS-06-PRS30-CV 10' radius
Q T H TT TQ F	Hunter PROS-06-PRS30-CV 12' radius
Q T H TT TQ F	Hunter PROS-06-PRS30-CV 15' radius
Q H	Hunter PROS-06-PRS30-CV 17' radius
4 6 8 10 12 15 17	Hunter PROS-06-PRS30-CV adjustable arc
Q T H F	Hunter PROS-12-PRS30-CV 8' radius
Q T H F	Hunter PROS-12-PRS30-CV 10' radius
Q T H TT TQ F	Hunter PROS-12-PRS30-CV 12' radius
Q T H TT TQ F	Hunter PROS-12-PRS30-CV 15' radius
4 6 8 10 12 15 17	Hunter PROS-12-PRS30-CV ADJ
25Q 50Q 50H 10H 10F 20F	Hunter PROS-PRS30-04-CV-MSBN

SYMBOL	MANUFACTURER/MODEL
2.0	Hunter I-20-06 2.0
3.0	Hunter I-20-06 3.0
4.0	Hunter I-20-06 4.0
6.0	Hunter I-20-06 6.0
8.0	Hunter I-20-06 8.0

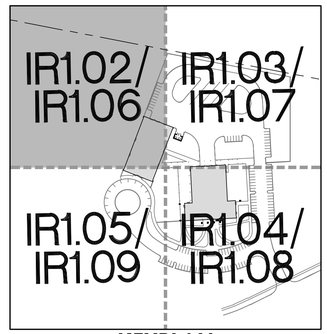
SYMBOL	MANUFACTURER/MODEL
	Rain Bird PEB
	Hunter HQ-5LRC-R
	Ball Valve
MV	3" Hydrometer/Master Valve
BF	WATTS Double Check Valve Assembly 2"
C	Motorola Irrigation Controller
R	Hunter RFC
YS	WATTS Wye-Pattern Bronze Strainer

Irrigation Lateral Line: PVC Class 200 SDR 21

Irrigation Mainline: PVC Class 200 SDR 21

Pipe Sleeve: PVC Schedule 40

Valve Callout
Valve Number
Valve Flow
Valve Size



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05/28/2025

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Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
IRRIGATION PLAN

SHEET NO.
IR1.02

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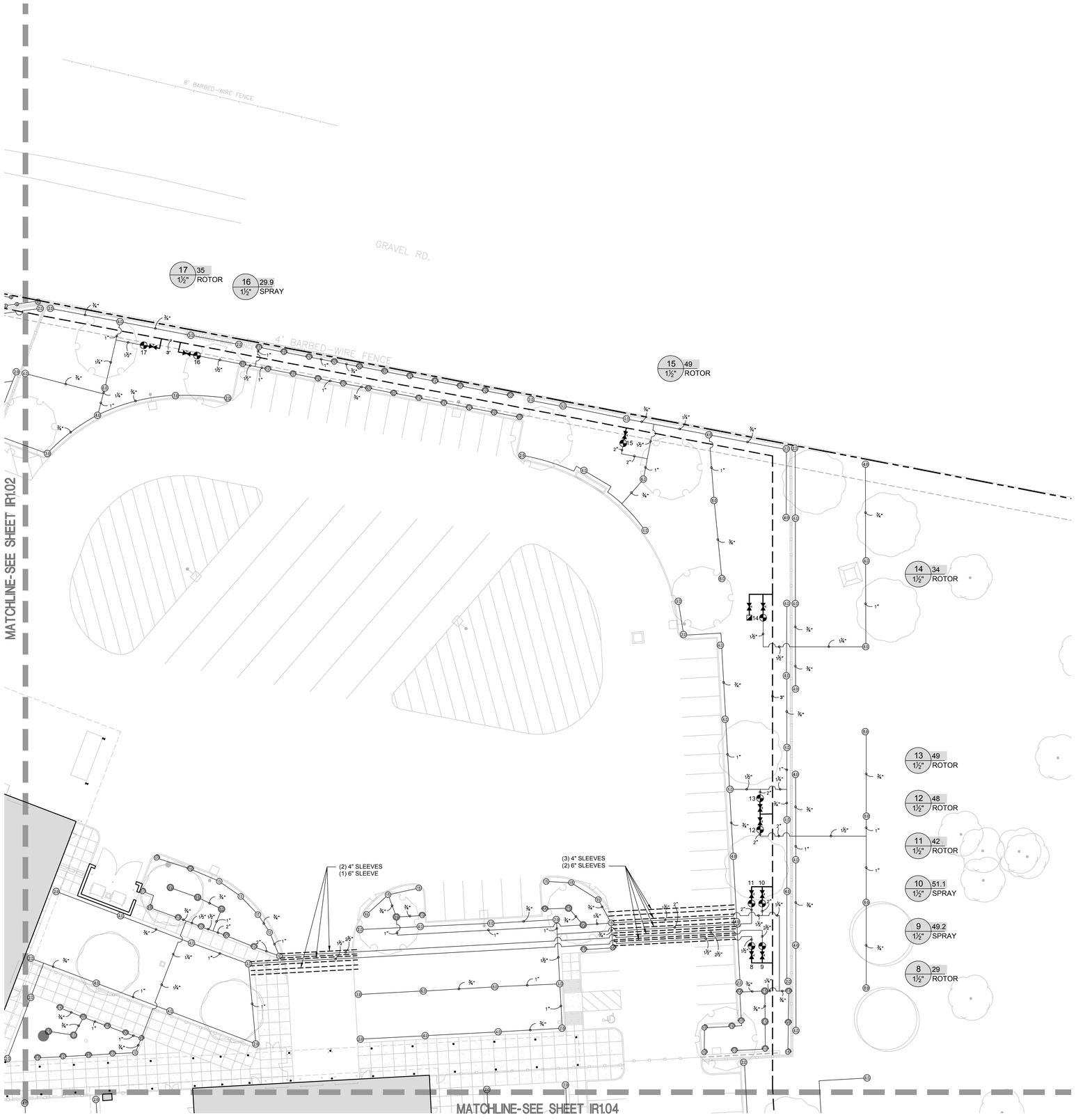

tnp

GRAPHIC SCALE

20 0 10 20 40

GRAPHIC SCALE: 1" = 20'

IRRIGATION KEY

SYMBOL	MANUFACTURER/MODEL
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Q T H TT TQ F	Hunter PROS-12-PRS30-CV 15' radius
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25Q 50Q 50H 10H 10F 20F	Hunter PROS-PRS30-04-CV-MSBN

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BF	WATTS Double Check Valve Assembly 2"
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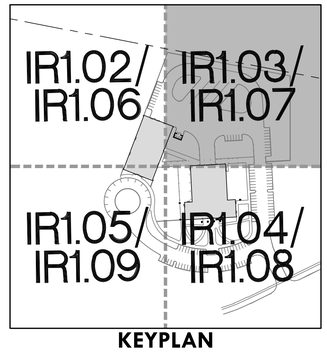
R	Hunter RFC
YS	WATTS Wye-Pattern Bronze Strainer
	Irrigation Lateral Line: PVC Class 200 SDR 21
	Irrigation Mainline: PVC Class 200 SDR 21
	Pipe Sleeve: PVC Schedule 40

Valve Callout
Valve Number
Valve Flow
Valve Size



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SHEET TITLE

IRRIGATION PLAN

SHEET NO.

IR1.03

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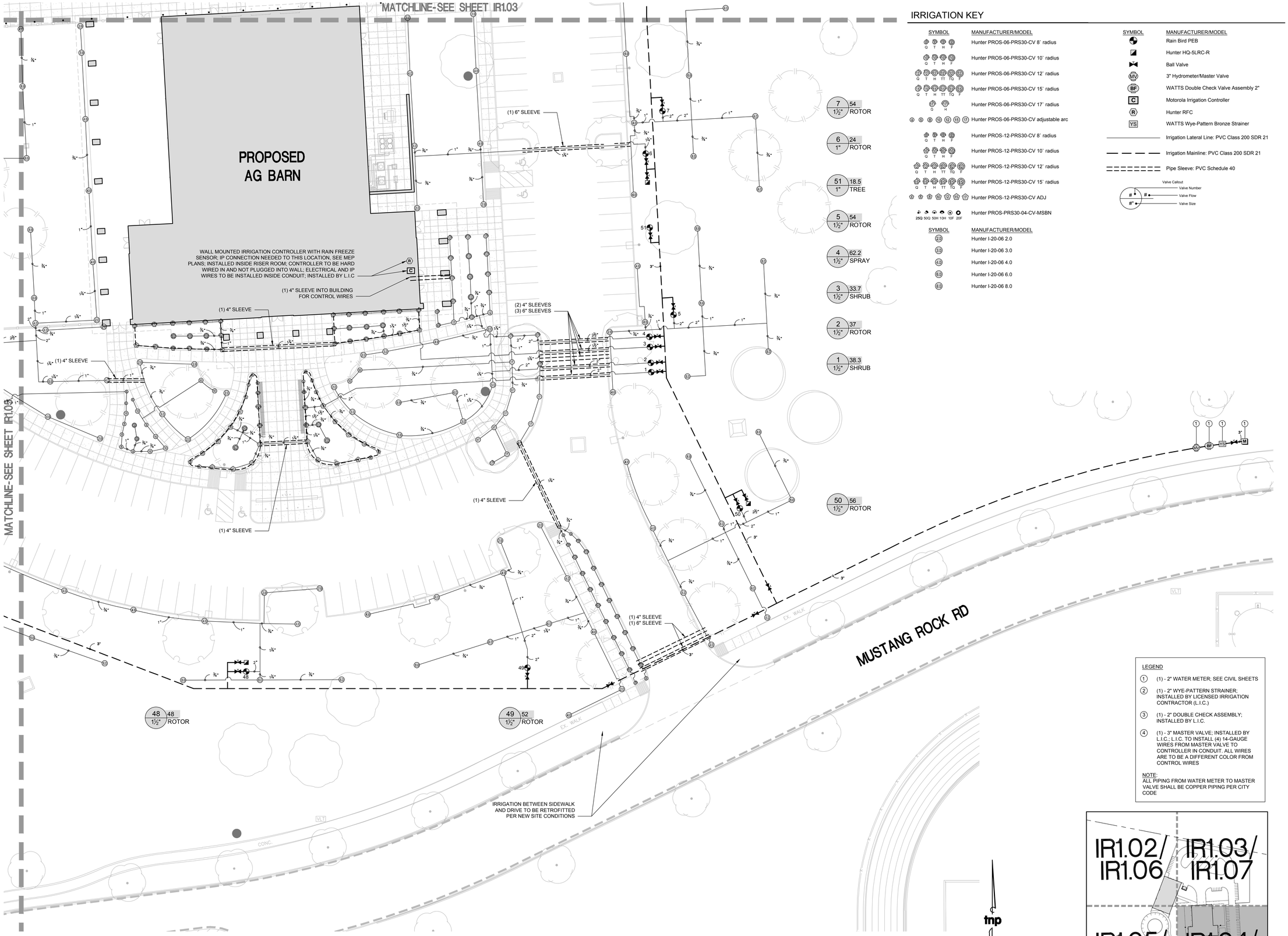

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Q T H TT TQ F	Hunter PROS-06-PRS30-CV 15' radius
Q H	Hunter PROS-06-PRS30-CV 17' radius
	Hunter PROS-06-PRS30-CV adjustable arc
Q T H F	Hunter PROS-12-PRS30-CV 8' radius
Q T H F	Hunter PROS-12-PRS30-CV 10' radius
Q T H TT TQ F	Hunter PROS-12-PRS30-CV 12' radius
Q T H TT TQ F	Hunter PROS-12-PRS30-CV 15' radius
	Hunter PROS-12-PRS30-CV ADJ
25Q 50Q 50H 10H 10F 20F	Hunter PROS-PRS30-04-CV-MSBN

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3.0	Hunter I-20-06 3.0
4.0	Hunter I-20-06 4.0
6.0	Hunter I-20-06 6.0
8.0	Hunter I-20-06 8.0

SYMBOL	MANUFACTURER/MODEL
	Rain Bird PEB
	Hunter HQ-5LRC-R
	Ball Valve
MV	3" Hydrometer/Master Valve
BF	WATTS Double Check Valve Assembly 2"
C	Motorola Irrigation Controller
R	Hunter RFC
YS	WATTS Wye-Pattern Bronze Strainer
	Irrigation Lateral Line: PVC Class 200 SDR 21
	Irrigation Mainline: PVC Class 200 SDR 21
	Pipe Sleeve: PVC Schedule 40

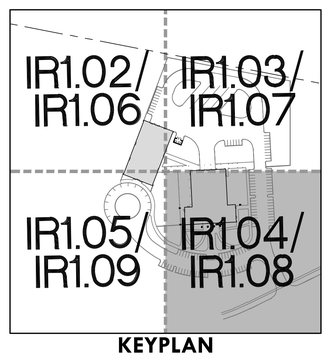
Valve Callout
Valve Number
Valve Flow
Valve Size

LEGEND

1. (1) - 2" WATER METER; SEE CIVIL SHEETS
2. (1) - 2" WYE-PATTERN STRAINER; INSTALLED BY LICENSED IRRIGATION CONTRACTOR (L.I.C.)
3. (1) - 2" DOUBLE CHECK ASSEMBLY; INSTALLED BY L.I.C.
4. (1) - 3" MASTER VALVE; INSTALLED BY L.I.C.; L.I.C. TO INSTALL (4) 14-GAUGE WIRES FROM MASTER VALVE TO CONTROLLER IN CONDUIT. ALL WIRES ARE TO BE A DIFFERENT COLOR FROM CONTROL WIRES

NOTE:
ALL PIPING FROM WATER METER TO MASTER VALVE SHALL BE COPPER PIPING PER CITY CODE

GRAPHIC SCALE
20 0 10 20 40
GRAPHIC SCALE: 1" = 20'



KEYPLAN

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
JOE T. MARONEY
78112
LICENSED IRRIGATOR

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
IRRIGATION PLAN

SHEET NO.
IR1.04

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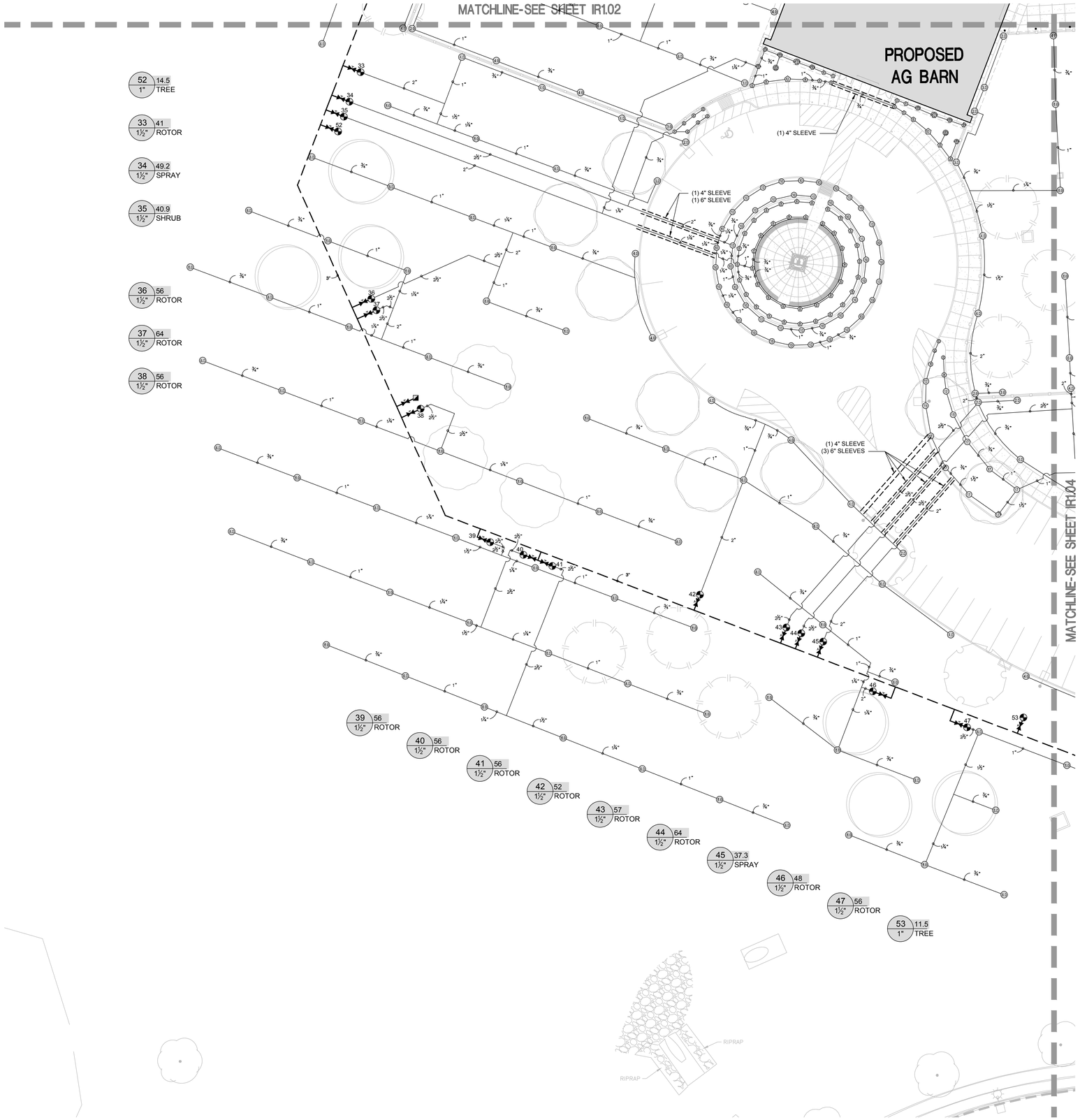

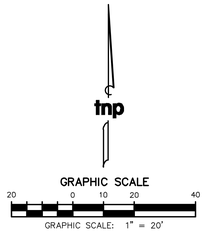

IRRIGATION KEY

SYMBOL	MANUFACTURER/MODEL
Q T H F	Hunter PROS-06-PRS30-CV 8' radius
Q T H F	Hunter PROS-06-PRS30-CV 10' radius
Q T H TT TQ F	Hunter PROS-06-PRS30-CV 12' radius
Q T H TT TQ F	Hunter PROS-06-PRS30-CV 15' radius
Q H	Hunter PROS-06-PRS30-CV 17' radius
4 6 8 10 12 15 17	Hunter PROS-06-PRS30-CV adjustable arc
Q T H F	Hunter PROS-12-PRS30-CV 8' radius
Q T H F	Hunter PROS-12-PRS30-CV 10' radius
Q T H TT TQ F	Hunter PROS-12-PRS30-CV 12' radius
Q T H TT TQ F	Hunter PROS-12-PRS30-CV 15' radius
4 6 8 10 12 15 17	Hunter PROS-12-PRS30-CV ADJ
25Q 50Q 50H 10H 10F 20F	Hunter PROS-PRS30-04-CV-MSBN

SYMBOL	MANUFACTURER/MODEL
2.0	Hunter I-20-06 2.0
3.0	Hunter I-20-06 3.0
4.0	Hunter I-20-06 4.0
6.0	Hunter I-20-06 6.0
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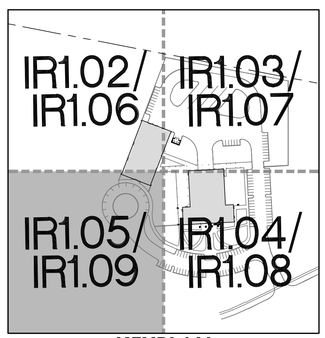
MV	3" Hydrometer/Master Valve
BF	WATTS Double Check Valve Assembly 2"
C	Motorola Irrigation Controller
R	Hunter RFC
YS	WATTS Wye-Pattern Bronze Strainer

Irrigation Lateral Line: PVC Class 200 SDR 21

Irrigation Mainline: PVC Class 200 SDR 21

Pipe Sleeve: PVC Schedule 40

Valve Callout
Valve Number
Valve Flow
Valve Size



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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
JOE L. MADRID
17812
LICENSED IRRIGATOR
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.

24-057.00

SHEET TITLE

IRRIGATION PLAN

SHEET NO.

IR1.05

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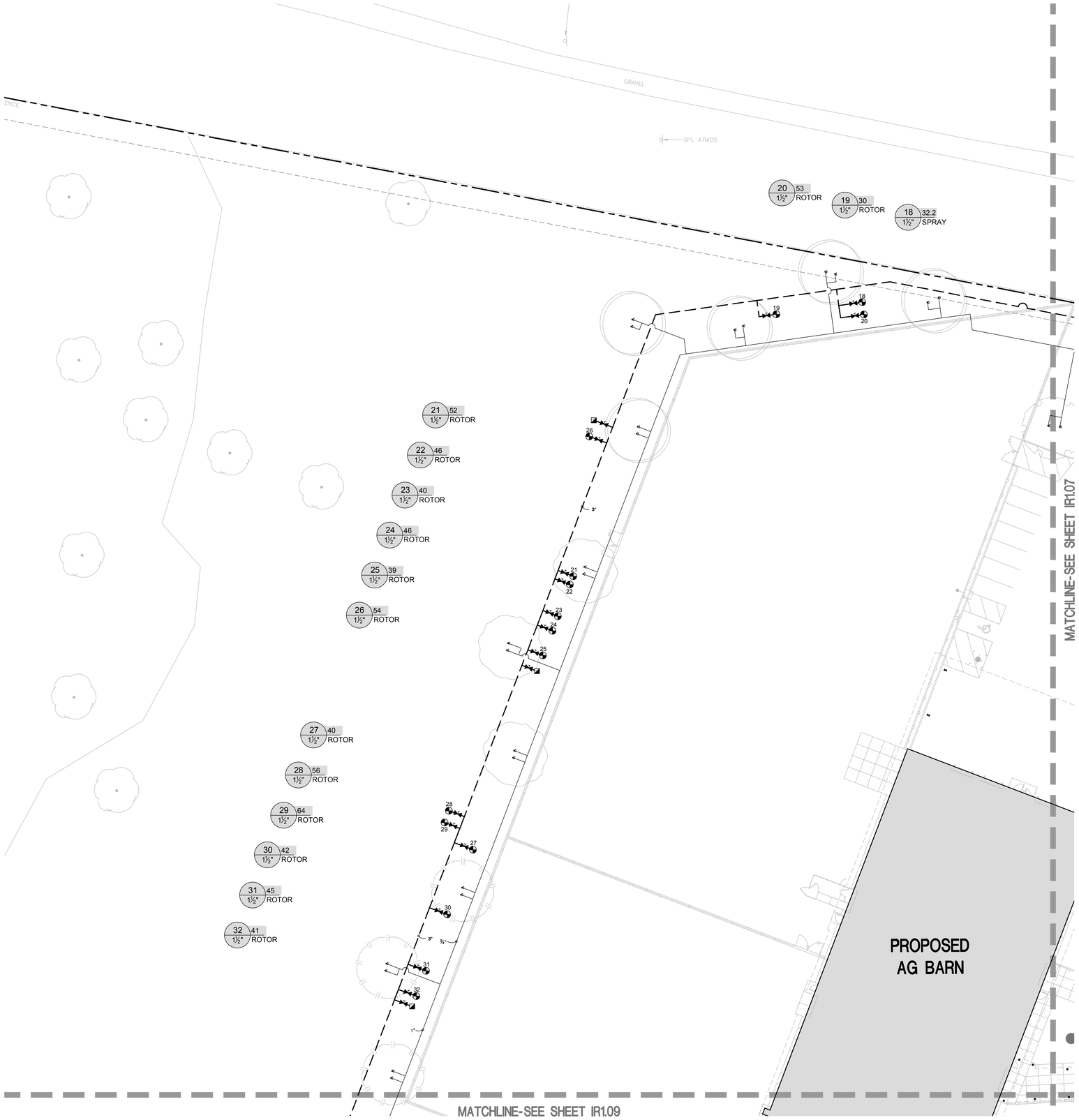

tnp

GRAPHIC SCALE

20 0 10 20 40

GRAPHIC SCALE: 1" = 20'

IRRIGATION KEY

SYMBOL	MANUFACTURER/MODEL
Q T H F	Hunter PROS-06-PRS30-CV 8' radius
Q T H F	Hunter PROS-06-PRS30-CV 10' radius
Q T H TT TQ F	Hunter PROS-06-PRS30-CV 12' radius
Q T H TT TQ F	Hunter PROS-06-PRS30-CV 15' radius
Q H	Hunter PROS-06-PRS30-CV 17' radius
Q T H F	Hunter PROS-06-PRS30-CV adjustable arc
Q T H F	Hunter PROS-12-PRS30-CV 8' radius
Q T H F	Hunter PROS-12-PRS30-CV 10' radius
Q T H TT TQ F	Hunter PROS-12-PRS30-CV 12' radius
Q T H TT TQ F	Hunter PROS-12-PRS30-CV 15' radius
	Hunter PROS-12-PRS30-CV ADJ
25Q 50Q 50H 10H 10F 20F	Hunter PROS-PRS30-04-CV-MSBN

SYMBOL	MANUFACTURER/MODEL
2.0	Hunter I-20-06 2.0
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	Irrigation Lateral Line: PVC Class 200 SDR 21
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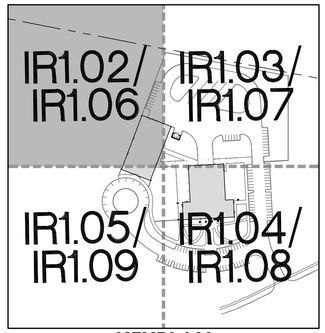
	Pipe Sleeve: PVC Schedule 40

Valve Callout
Valve Number
Valve Flow
Valve Size



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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

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STATE OF TEXAS
JOE L. MARSH
1918
LICENSED IRRIGATOR

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
TREE IRRIGATION PLAN

SHEET NO.
IR1.06

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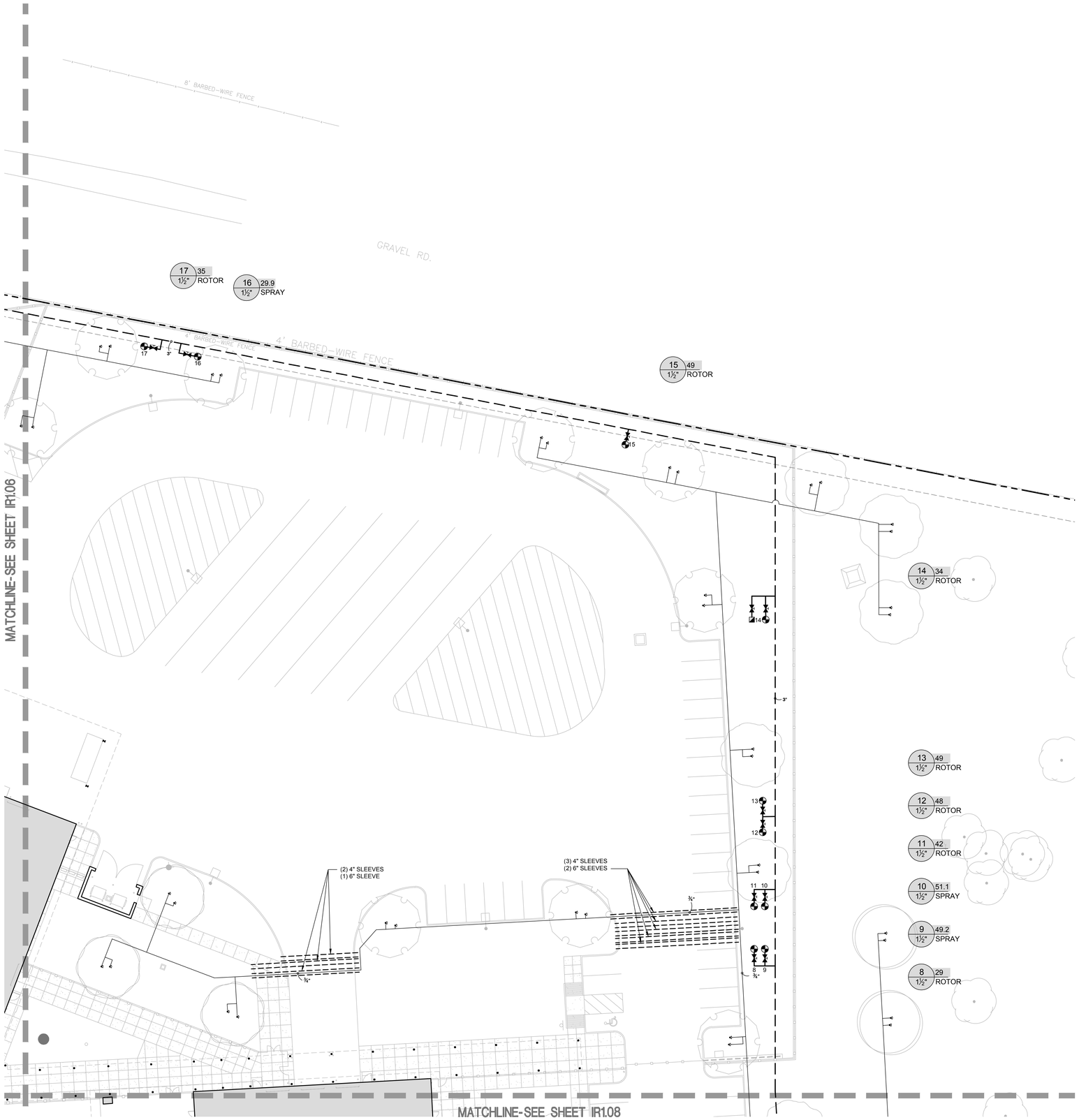

tnp

GRAPHIC SCALE

20 0 10 20 40

GRAPHIC SCALE: 1" = 20'

IRRIGATION KEY

SYMBOL	MANUFACTURER/MODEL
Q T H F	Hunter PROS-06-PRS30-CV 8' radius
Q T H F	Hunter PROS-06-PRS30-CV 10' radius
Q T H TT TQ F	Hunter PROS-06-PRS30-CV 12' radius
Q T H TT TQ F	Hunter PROS-06-PRS30-CV 15' radius
Q H	Hunter PROS-06-PRS30-CV 17' radius
	Hunter PROS-06-PRS30-CV adjustable arc
Q T H F	Hunter PROS-12-PRS30-CV 8' radius
Q T H F	Hunter PROS-12-PRS30-CV 10' radius
Q T H TT TQ F	Hunter PROS-12-PRS30-CV 12' radius
Q T H TT TQ F	Hunter PROS-12-PRS30-CV 15' radius
	Hunter PROS-12-PRS30-CV ADJ
25Q 50Q 50H 10H 10F 20F	Hunter PROS-PRS30-04-CV-MSBN

SYMBOL	MANUFACTURER/MODEL
2.0	Hunter I-20-06 2.0
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4.0	Hunter I-20-06 4.0
6.0	Hunter I-20-06 6.0
8.0	Hunter I-20-06 8.0

SYMBOL	MANUFACTURER/MODEL
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	Hunter HQ-5LRC-R
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BF	WATTS Double Check Valve Assembly 2"
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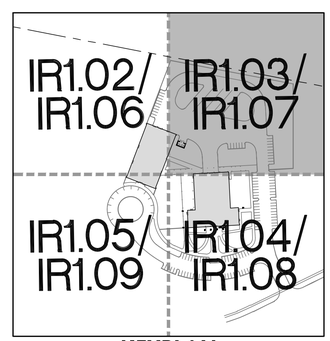
R	Hunter RFC
YS	WATTS Wye-Pattern Bronze Strainer
	Irrigation Lateral Line: PVC Class 200 SDR 21
	Irrigation Mainline: PVC Class 200 SDR 21
	Pipe Sleeve: PVC Schedule 40

Valve Callout
Valve Number
Valve Flow
Valve Size



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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
JOEL MADRID
LICENSED IRRIGATOR

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
TREE IRRIGATION PLAN

SHEET NO.
IR1.07

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MATCHLINE-SEE SHEET IR1.07

MATCHLINE-SEE SHEET IR1.09

PROPOSED
AG BARN

WALL MOUNTED IRRIGATION CONTROLLER WITH RAIN FREEZE SENSOR; IP CONNECTION NEEDED TO THIS LOCATION, SEE MEP PLANS; INSTALLED INSIDE RISER ROOM; CONTROLLER TO BE HARD WIRED IN AND NOT PLUGGED INTO WALL; ELECTRICAL AND IP WIRES TO BE INSTALLED INSIDE CONDUIT; INSTALLED BY L.I.C

(1) 4" SLEEVE INTO BUILDING FOR CONTROL WIRES

(1) 4" SLEEVE

(2) 4" SLEEVES
(3) 6" SLEEVES

(1) 6" SLEEVE

(1) 4" SLEEVE

(1) 4" SLEEVE

(1) 4" SLEEVE

(1) 4" SLEEVE
(1) 6" SLEEVE

IRRIGATION BETWEEN SIDEWALK AND DRIVE TO BE RETROFITTED PER NEW SITE CONDITIONS

MUSTANG ROCK RD

EX. WALK

CONC.

VLT

7 | 54 | 1½" | ROTOR
6 | 24 | 1" | ROTOR
51 | 18.5 | 1" | TREE
5 | 54 | 1½" | ROTOR
4 | 62.2 | 1½" | SPRAY
3 | 33.7 | 1½" | SHRUB
2 | 37 | 1½" | ROTOR
1 | 38.3 | 1½" | SHRUB
50 | 56 | 1½" | ROTOR
48 | 48 | 1½" | ROTOR
49 | 52 | 1½" | ROTOR

IRRIGATION KEY

SYMBOL	MANUFACTURER/MODEL
Q T H F	Hunter PROS-06-PRS30-CV 8' radius
Q T H F	Hunter PROS-06-PRS30-CV 10' radius
Q T H TT TQ F	Hunter PROS-06-PRS30-CV 12' radius
Q T H TT TQ F	Hunter PROS-06-PRS30-CV 15' radius
Q H	Hunter PROS-06-PRS30-CV 17' radius
	Hunter PROS-06-PRS30-CV adjustable arc
Q T H F	Hunter PROS-12-PRS30-CV 8' radius
Q T H F	Hunter PROS-12-PRS30-CV 10' radius
Q T H TT TQ F	Hunter PROS-12-PRS30-CV 12' radius
Q T H TT TQ F	Hunter PROS-12-PRS30-CV 15' radius
	Hunter PROS-12-PRS30-CV ADJ
25Q 50Q 50H 10H 10F 20F	Hunter PROS-PRS30-04-CV-MSBN

SYMBOL	MANUFACTURER/MODEL
2.0	Hunter I-20-06 2.0
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SYMBOL	MANUFACTURER/MODEL
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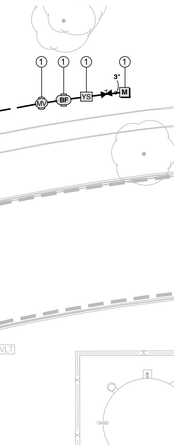
Valve Callout
- Valve Number
- Valve Flow
- Valve Size

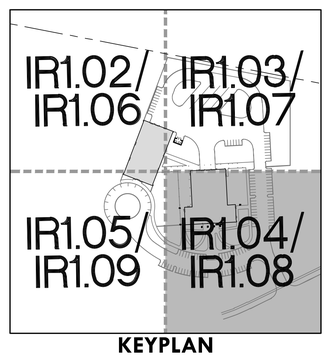


LEGEND

1. (1) - 2" WATER METER; SEE CIVIL SHEETS
2. (1) - 2" WYE-PATTERN STRAINER; INSTALLED BY LICENSED IRRIGATION CONTRACTOR (L.I.C.)
3. (1) - 2" DOUBLE CHECK ASSEMBLY; INSTALLED BY L.I.C.
4. (1) - 3" MASTER VALVE; INSTALLED BY L.I.C.; L.I.C. TO INSTALL (4) 14-GAUGE WIRES FROM MASTER VALVE TO CONTROLLER IN CONDUIT. ALL WIRES ARE TO BE A DIFFERENT COLOR FROM CONTROL WIRES

NOTE:
ALL PIPING FROM WATER METER TO MASTER VALVE SHALL BE COPPER PIPING PER CITY CODE

GRAPHIC SCALE
20 0 10 20 40
GRAPHIC SCALE: 1" = 20'



KEYPLAN

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
JOEL T. MARINO
78127
REGISTERED
LANDSCAPE ARCHITECT

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
MSW	TNP
Designer	Quality Control
PCV	TNP
Proj. Arch.	
VLK	

PROJECT NO.
24-057.00

SHEET TITLE
TREE IRRIGATION PLAN

SHEET NO.
IR1.08

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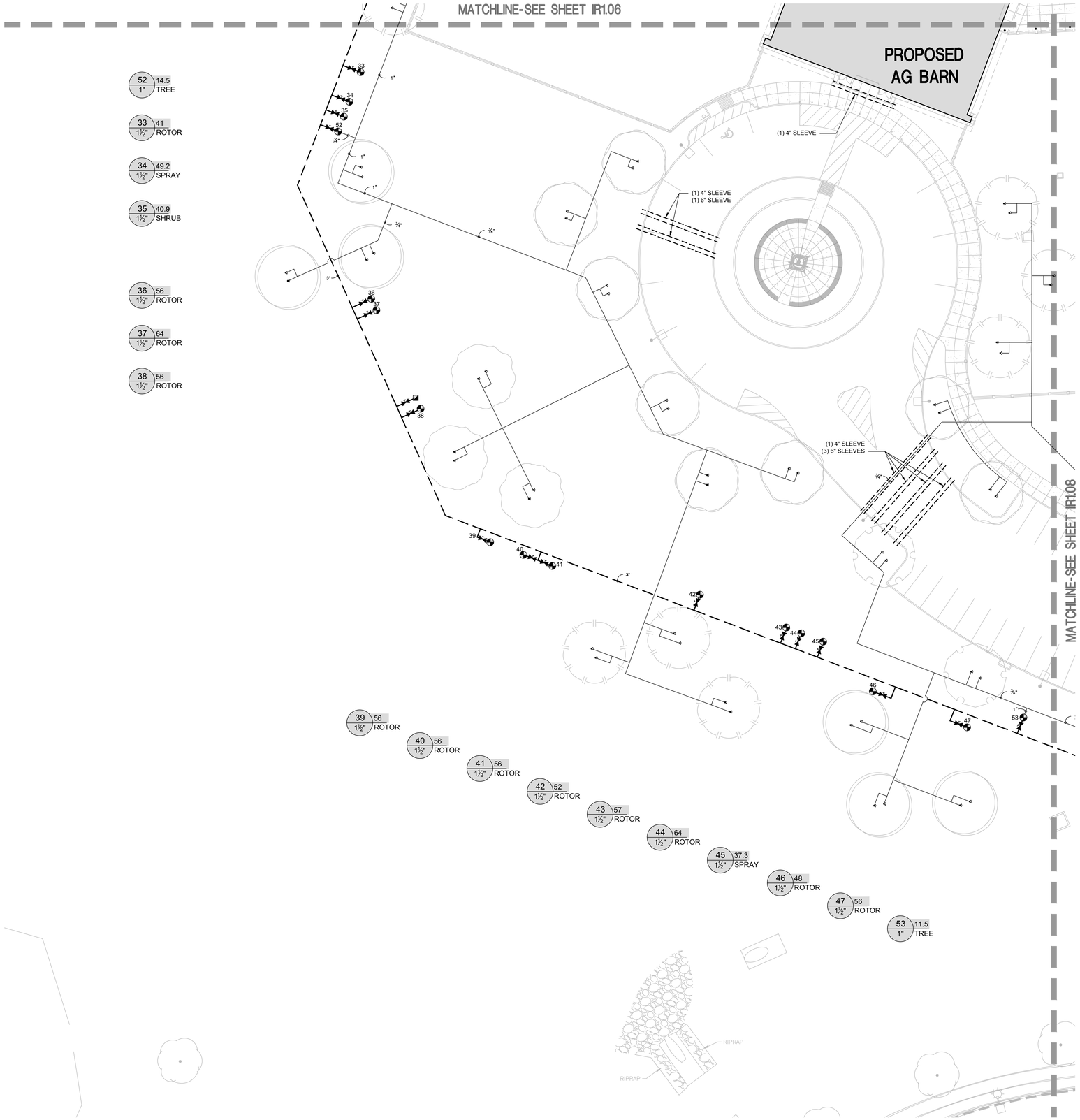

tnp

GRAPHIC SCALE

20 0 10 20 40

GRAPHIC SCALE: 1" = 20'

IRRIGATION KEY

SYMBOL	MANUFACTURER/MODEL
Q T H F	Hunter PROS-06-PRS30-CV 8` radius
Q T H F	Hunter PROS-06-PRS30-CV 10` radius
Q T H TT TQ F	Hunter PROS-06-PRS30-CV 12` radius
Q T H TT TQ F	Hunter PROS-06-PRS30-CV 15` radius
Q H	Hunter PROS-06-PRS30-CV 17` radius
8 9 10 12 15 17	Hunter PROS-06-PRS30-CV adjustable arc
Q T H F	Hunter PROS-12-PRS30-CV 8` radius
Q T H F	Hunter PROS-12-PRS30-CV 10` radius
Q T H TT TQ F	Hunter PROS-12-PRS30-CV 12` radius
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25Q 50Q 50H 10H 10F 20F	Hunter PROS-PRS30-04-CV-MSBN

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Valve Callout
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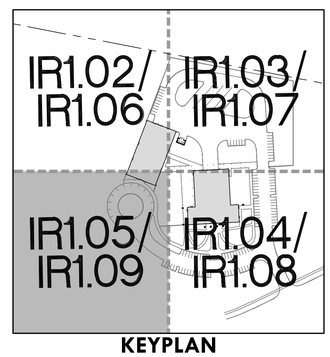
Valve Flow
Valve Size



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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
JOE T. MADRID
103
LICENSED IRRIGATOR

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
TREE IRRIGATION PLAN

SHEET NO.
IR1.09

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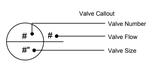
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI
Q T H F	Hunter PROS-06-PRS30-CV 8' radius Turf Spray, 30 psi regulated 6.0" Pop-Up. With factory installed Drain Check Valve. Co-molded wiper seal with UV Resistant Material.	30
Q T H F	Hunter PROS-06-PRS30-CV 10' radius Turf Spray, 30 psi regulated 6.0" Pop-Up. With factory installed Drain Check Valve. Co-molded wiper seal with UV Resistant Material.	30
Q T H TT TQ F	Hunter PROS-06-PRS30-CV 12' radius Turf Spray, 30 psi regulated 6.0" Pop-Up. With factory installed Drain Check Valve. Co-molded wiper seal with UV Resistant Material.	30
Q T H TT TQ F	Hunter PROS-06-PRS30-CV 15' radius Turf Spray, 30 psi regulated 6.0" Pop-Up. With factory installed Drain Check Valve. Co-molded wiper seal with UV Resistant Material.	30
Q H	Hunter PROS-06-PRS30-CV 17' radius Turf Spray, 30 psi regulated 6.0" Pop-Up. With factory installed Drain Check Valve. Co-molded wiper seal with UV Resistant Material.	30
	Hunter PROS-06-PRS30-CV adjustable arc Turf Spray, 30 psi regulated 6.0" Pop-Up. With factory installed Drain Check Valve. Co-molded wiper seal with UV Resistant Material.	30
Q T H F	Hunter PROS-12-PRS30-CV 8' radius Shrub Spray, 30 psi regulated 12.0" Pop-Up. With Factory Installed Drain Check Valve. Co-molded wiper seal with UV Resistant Material.	30
Q T H F	Hunter PROS-12-PRS30-CV 10' radius Shrub Spray, 30 psi regulated 12.0" Pop-Up. With Factory Installed Drain Check Valve. Co-molded wiper seal with UV Resistant Material.	30
Q T H TT TQ F	Hunter PROS-12-PRS30-CV 12' radius Shrub Spray, 30 psi regulated 12.0" Pop-Up. With Factory Installed Drain Check Valve. Co-molded wiper seal with UV Resistant Material.	30
Q T H TT TQ F	Hunter PROS-12-PRS30-CV 15' radius Shrub Spray, 30 psi regulated 12.0" Pop-Up. With Factory Installed Drain Check Valve. Co-molded wiper seal with UV Resistant Material.	30
	Hunter PROS-12-PRS30-CV ADJ Shrub Spray, 30 psi regulated 12.0" Pop-Up. With Factory Installed Drain Check Valve. Co-molded wiper seal with UV Resistant Material.	30
25Q 50Q 50H 10H 10F 20F	Hunter PROS-PRS30-04-CV-MSBN Multi-Stream Bubbler, 4" pop-up, factory installed drain check valve, 25=.25gpm, 50=0.5gpm, 10=1.0gpm, 20=2.0gpm.	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI	GPM	RADIUS
2.0	Hunter I-20-06 2.0 Turf Rotor, 6.0" Pop-Up. Adjustable and Full Circle. Plastic Riser. Drain Check Valve. Standard Nozzle.	45	2	34'
3.0	Hunter I-20-06 3.0 Turf Rotor, 6.0" Pop-Up. Adjustable and Full Circle. Plastic Riser. Drain Check Valve. Standard Nozzle.	45	3	38'
4.0	Hunter I-20-06 4.0 Turf Rotor, 6.0" Pop-Up. Adjustable and Full Circle. Plastic Riser. Drain Check Valve. Standard Nozzle.	45	4	40'
6.0	Hunter I-20-06 6.0 Turf Rotor, 6.0" Pop-Up. Adjustable and Full Circle. Plastic Riser. Drain Check Valve. Standard Nozzle.	45	6	43'
8.0	Hunter I-20-06 8.0 Turf Rotor, 6.0" Pop-Up. Adjustable and Full Circle. Plastic Riser. Drain Check Valve. Standard Nozzle.	45	8	44'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Rain Bird PEB 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration.
	Hunter HQ-5LRC-R Quick coupler valve, purple locking rubber cover for reclaimed water use, red brass and stainless steel, with 1" NPT inlet, 1-piece body.
	Ball Valve LASCO, Same size as mainline
MV	3" Hydrometer/Master Valve 3" Arad Meter AC 1 Pulse = 10 Gallons; (Part #: IS-BM-30-AC-10). Contact Matt Swor (214) 882-8731 for Ordering Equipment.
BF	WATTS Double Check Valve Assembly 2" Series 007
C	Motorola Irrigation Controller IRRInet ACE 64 Station Wall Mounted Controller (Part #: IS-A4A-IPU-RN-WS). Contact Matt Swor (214) 882-8731 for Ordering Equipment.
R	Hunter RFC Rain and freeze sensor, with conduit installation, mount as noted. Normally closed switch.
YS	WATTS Wye-Pattern Bronze Strainer 2", Series 777S
	Irrigation Lateral Line: PVC Class 200 SDR 21
	Irrigation Mainline: PVC Class 200 SDR 21
	Pipe Sleeve: PVC Schedule 40



VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	PSI	PSI @ POC	PRECIP
1	Rain Bird PEB	1-1/2"	Shrub Spray	38.27	37.0	44.2	1.71 in/h
2	Rain Bird PEB	1-1/2"	Turf Rotor	37	52.1	59.2	0.81 in/h
3	Rain Bird PEB	1-1/2"	Shrub Spray	33.7	39.4	46.2	1.82 in/h
4	Rain Bird PEB	1-1/2"	Turf Spray	62.24	38.5	48.8	1.55 in/h
5	Rain Bird PEB	1-1/2"	Turf Rotor	54	51.8	61.0	0.5 in/h
6	Rain Bird PEB	1"	Turf Rotor	24	53.5	59.2	0.6 in/h
7	Rain Bird PEB	1-1/2"	Turf Rotor	54	52.2	61.6	0.55 in/h
8	Rain Bird PEB	1-1/2"	Turf Rotor	29	57.1	63.5	0.71 in/h
9	Rain Bird PEB	1-1/2"	Turf Spray	49.2	37.5	46.5	1.63 in/h
10	Rain Bird PEB	1-1/2"	Turf Spray	51.11	36.7	46.0	1.47 in/h
11	Rain Bird PEB	1-1/2"	Turf Rotor	42	53.1	61.1	0.79 in/h
12	Rain Bird PEB	1-1/2"	Turf Rotor	48	52.2	61.0	0.57 in/h
13	Rain Bird PEB	1-1/2"	Turf Rotor	49	51.7	60.7	0.75 in/h
14	Rain Bird PEB	1-1/2"	Turf Rotor	34	51.2	58.3	0.55 in/h
15	Rain Bird PEB	1-1/2"	Turf Rotor	49	51.5	60.7	0.72 in/h
16	Rain Bird PEB	1-1/2"	Turf Spray	29.9	36.6	43.2	1.58 in/h
17	Rain Bird PEB	1-1/2"	Turf Rotor	35	50.3	57.5	0.75 in/h
18	Rain Bird PEB	1-1/2"	Turf Spray	32.19	35.6	42.5	1.58 in/h
19	Rain Bird PEB	1-1/2"	Turf Rotor	30	50.8	57.5	0.56 in/h
20	Rain Bird PEB	1-1/2"	Turf Rotor	53	52.7	62.5	0.65 in/h
21	Rain Bird PEB	1-1/2"	Turf Rotor	52	55.3	64.9	0.67 in/h
22	Rain Bird PEB	1-1/2"	Turf Rotor	46	53.6	62.3	0.5 in/h
23	Rain Bird PEB	1-1/2"	Turf Rotor	40	52.7	60.5	0.54 in/h
24	Rain Bird PEB	1-1/2"	Turf Rotor	46	53.2	61.9	0.5 in/h
25	Rain Bird PEB	1-1/2"	Turf Rotor	39	53.7	61.5	0.58 in/h
26	Rain Bird PEB	1-1/2"	Turf Rotor	54	51.6	61.5	0.57 in/h
27	Rain Bird PEB	1-1/2"	Turf Rotor	40	54.5	62.4	0.59 in/h
28	Rain Bird PEB	1-1/2"	Turf Rotor	56	53.7	63.9	0.53 in/h
29	Rain Bird PEB	1-1/2"	Turf Rotor	64	54.6	66.1	0.56 in/h
30	Rain Bird PEB	1-1/2"	Turf Rotor	42	51.4	59.6	0.57 in/h
31	Rain Bird PEB	1-1/2"	Turf Rotor	45	52.7	61.4	0.54 in/h
32	Rain Bird PEB	1-1/2"	Turf Rotor	41	55.1	63.2	0.61 in/h
33	Rain Bird PEB	1-1/2"	Turf Rotor	41	52.7	60.8	0.63 in/h
34	Rain Bird PEB	1-1/2"	Turf Spray	49.18	38.3	47.5	2.13 in/h
35	Rain Bird PEB	1-1/2"	Shrub Spray	40.88	39.3	47.4	1.77 in/h
36	Rain Bird PEB	1-1/2"	Turf Rotor	56	53.1	63.3	0.51 in/h
37	Rain Bird PEB	1-1/2"	Turf Rotor	64	53.1	64.6	0.55 in/h
38	Rain Bird PEB	1-1/2"	Turf Rotor	56	53.2	63.3	0.52 in/h
39	Rain Bird PEB	1-1/2"	Turf Rotor	56	53.4	63.6	0.54 in/h
40	Rain Bird PEB	1-1/2"	Turf Rotor	56	53.4	63.5	0.57 in/h
41	Rain Bird PEB	1-1/2"	Turf Rotor	56	53.9	64.0	0.57 in/h
42	Rain Bird PEB	1-1/2"	Turf Rotor	52	53.8	63.4	0.56 in/h
43	Rain Bird PEB	1-1/2"	Turf Rotor	57	54.1	64.3	0.79 in/h
44	Rain Bird PEB	1-1/2"	Turf Rotor	64	55.8	67.1	0.76 in/h
45	Rain Bird PEB	1-1/2"	Turf Spray	37.28	39.3	46.8	1.64 in/h
46	Rain Bird PEB	1-1/2"	Turf Rotor	48	51.4	60.4	0.51 in/h
47	Rain Bird PEB	1-1/2"	Turf Rotor	56	52.2	62.2	0.56 in/h
48	Rain Bird PEB	1-1/2"	Turf Rotor	48	53.3	62.0	0.58 in/h
49	Rain Bird PEB	1-1/2"	Turf Rotor	52	52.0	60.9	0.62 in/h
50	Rain Bird PEB	1-1/2"	Turf Rotor	56	51.6	60.9	0.51 in/h
51	Rain Bird PEB	1"	Bubbler	18.5	36.8		30.64 in/h
52	Rain Bird PEB	1"	Bubbler	14.5	38.1		30.64 in/h
53	Rain Bird PEB	1"	Bubbler	11.5	35.3		30.64 in/h

IRRIGATION NOTES

*The following notes are provided as a courtesy to the landscape contractor. Please note that the contractor should refer to all relevant sections provided in the plans.

SECTION 1 - GENERAL

1. These notes are intended as a field reference for the Contractor. The Contractor will thoroughly review these notes, as well as the specifications, and drawings prior to start of any work. The Contractor shall visit the site prior to submitting his bid and prior to start of work to become completely familiar with site conditions.

2. Contractor shall provide a complete, functioning automatic irrigation system. This includes all materials, labor, fees, taxes, equipment, and other costs incidental to accomplishing the end.

3. Contractor shall be a licensed irrigator/installer in the State of Texas.

4. It is the responsibility of the Contractor to advise the Licensed Irrigator (hereinafter, LI) of any condition found on the site which prohibits installation as shown on these drawings. The term of "Licensed Irrigator" shall refer to Teague Nall and Perkins, Inc., 5237 N. Riverside Drive, Suite 100, Fort Worth, Texas 76137

5. Prior to submitting a bid, the Contractor shall verify any discrepancies between the notes, specifications, or the drawings with the LI for clarification. If there is a discrepancy between the number or quality of materials shown on the plans and the number of materials shown in the materials legend, the greater number of and greater quality materials will take precedence for bidding purposes. All quantities listed are for information only.

6. Written dimensions prevail over scaled dimensions. Notify LI of any discrepancies.

7. The Contractor bears all responsibility and costs for obtaining all licenses and permits required by federal, state, and local agencies to accomplish the work of this project. All work shall be installed in accordance with applicable codes and ordinances.

8. Contractor shall be responsible for coordinating their work with project's building contractor, other trades, and owner.

9. Warning! Call toll-free **811** *before* you dig! The contractor bears all responsibility for verifying all underground utilities, pipes, and structures in the field prior to construction. Any damage to utilities that are to remain shall be repaired immediately at no expense to the owner. The Contractor shall contact the building contractor and all utility authorities to mark location of site utilities. Install flags or stakes and maintain them in place throughout the project. Damage to utilities or other work shall be repaired at the expense of the contractor responsible for the damage. The locations of existing utilities as shown on these plans are approximate. There may be other underground utilities within the project area that are not shown. LI and/or Engineer and/or Surveyor assumes no responsibility for any utilities not shown on plans.

10. The design water pressure necessary for this system's proper operation is 70 p.s.i. Contractor shall verify static water pressure prior to commencement of construction/installation. Should a discrepancy occur between the design pressure and the actual pressure contact the LI before proceeding with the work. Failure to do so should a discrepancy occur will result in the Contractor making necessary changes to the irrigation system to the satisfaction of the LI without additional cost to the Owner or LI.

11. Contractor shall operate the existing irrigation system prior to the commencement of installation of the proposed work. Existing heads and mainline shall be located, and the proposed system adjusted to insure adequate irrigation coverage between the two systems.

12. Due to existing vegetation, utilities, and other site conditions, the Contractor should anticipate field adjustments by the LI and should understand such adjustments are not eligible for a change order.

13. The irrigation system shall have 100% coverage of all planting areas, head-to-head spacing, and matched precipitation rates on each zone. Contractor shall be responsible for the supply and installation of additional heads needed to cover "dry spots" or slight variations from the plan.

14. The Contractor shall give the LI notice of required inspections upon completion of each of the following phases:

A. Pre-Job Conference - 7 days.
B. Pressure supply line installation & testing - 48 hours
C. Automatic controller installation - 48 hours
D. Control wire installation - 48 hours
E. Lateral line and irrigation installation - 48 hours
F. Coverage test - 48 hours
G. Final inspection - 7 days

15. The entire system shall be unconditionally guaranteed by the Contractor against defective work and materials for a period of one year after final acceptance. Damage to the irrigation system or cutting off of water or electricity by other trades or persons shall not void the warranty.

16. It is the contractor's responsibility to insure the availability of water to the plants at all times until final acceptance.

17. LI assumes no responsibility for damages, liabilities, or cost resulting from changes or alterations made to the plan without the express written consent of LI.

SECTION 2 - MATERIALS

18. All materials are subject to approval or refusal by the LI. All material rejected by the LI shall be removed from the site and replaced with acceptable material at the Contractor's expense. All material to be new and first quality. The Contactor shall check all material for specified requirements, shipping damage, manufacturing defects, and shall reject all unsatisfactory materials.

19. Contractor shall install anti-drain devices (check valves) where necessary to prevent low head drainage and shall install pressure compensating devices where necessary to prevent overspray or misting.

20. Do not make substitutions. If specified material is not available, submit proof of non-availability to LI. If contractor wishes to use substitute equipment he shall submit cut sheets and detailed calculations for the LI's approval or rejection. All substitutions shall have written approval form the LI 30 days prior to installation.

21. Contractor shall install one extra control wire, routed with the common wire to each control valve, with the installation of the pilot and common wires. (for bidding clarity, consider the extra control wire as a second common wire, different color. The length of the extra control wire is equal to the length of the common wire).

22. All control wire shall be direct burial, 600 volt, single conductor solid copper, plastic insulated cable, rated for direct burial applications, U.F., U.L. approved 12 gauge (minimum) pilot and common ground return wire.
- Pilot Wire: red (color)
- Common Ground Wire: white (color)
- Extra Control Wire: blue (color)

23. Install all wire connections to valves with wire nuts inside DBY weather-sealed connectors.

SECTION 3 - EXECUTION

24. All locations and workmanship are subject to approval or refusal by the LI. All locations and workmanship rejected by the LI shall be remedied at the Contractor's expense. All piping and head layout is shown diagrammatically and is to be located in planting areas where possible. Locate lines in such a way so as to cause the least conflict with other built and natural features.

25. The Irrigation Contractor shall be responsible for the final electrical connection of the controller. This shall include all necessary fuse boxes or other electrical requirements.

26. No installation (except sleeving) of any piping will take place until all clean-up and rough grading (to within 2" of finish grade) is complete in the immediate area.

27. If an irrigation pump is specified, the Contractor shall test the pump in presence of LI to verify it meets specified flow at the specified pressure and submit test results to LI for approval. No irrigation work shall begin until specified water quality, pressure, and flow is provided.

28. Installation of irrigation sleeves under paving as indicated on the drawings, shall be the responsibility of the Irrigation Contractor, unless otherwise noted. Provide 12" to top of sleeve from bottom of pavement when going under pavement. All sleeves shall be PVC schedule 40 with #12 pull wire wherever electrical conduit, lateral irrigation lines, or main irrigation lines pass through or go under masonry, paving, etc. It is the responsibility of the Irrigation Contractor to locate and mark the sleeve ends.

29. Contractor to provide minimum cover of 18" for pressure mainline and 12" for lateral lines. Lateral lines may be installed over mainlines.

30. Contractor shall hand trench through the root zone (within the dripline) of existing trees taking care not to cut any roots larger than one (1") inch Where possible contractor shall trench around trees to avoid cutting roots. Where possible contractor shall trench directly towards tree trunk rather than across the root zone to minimize damage to tree roots. Irrigation trenches shall be routed to avoid proposed tree locations by a minimum of 5'-0". See landscape planting plans prior to trenching and installation and coordinate work with Landscape Contractors.

31. All heads shall installed a minimum 4" away from all hardscape and be straight and plumb to grade and evenly spaced to provide for uniform distribution. All heads shall be adjusted to provide even coverage and to keep water in landscaped areas and off of walls and pavement.

32. Contractor shall flush all lines prior to nozzle installation for pop-up spray heads and prior to head installation for rotor heads and bubblers.

33. Prior to installation, the final location of the automatic controller shall be determined by the Owner and LI.

34. Provide the LI and Owner a reproducible, As-Built Record Drawings (same size as drawing) and a reduced, laminated copy for the inside of the controller. As-built drawings shall show valves, controller, and sleeves dimensionally located from two permanent points of reference. Contractor shall also provide all irrigation product information and controller operating manuals.

35. All limestone, rocks, and building materials dug up during trenching shall be removed from the site and not put back into trenches.

36. Contractor is to test water for staining potential and submit results to LI. Install LI approved filtration system to prevent staining.

37. Contractor shall make every effort to prevent staining of walls, walks, driveways, vehicles, or other structures. Contractor guarantees job against such staining for thirty (30) days. Contractor shall install a suitable rust prevention system if required to prevent staining.

38. The entire irrigation system shall be fully-maintained until final acceptance by continuously checking the system to ensure that plants are receiving the proper amount of water. Any broken or defective materials shall be immediately replaced with material originally specified.

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
JOE T. MADRID
17812
LICENSED IRRIGATOR

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
IRRIGATION NOTES & SCHEDULE

SHEET NO.
IR1.10

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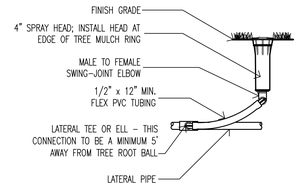
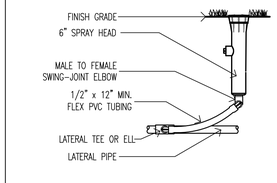


01 4" SPRAY HEAD FOR TREE BUBBLERS
NOT TO SCALE



02 6" SPRAY HEAD
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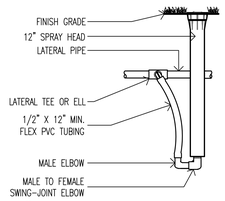

03 12" SPRAY HEAD
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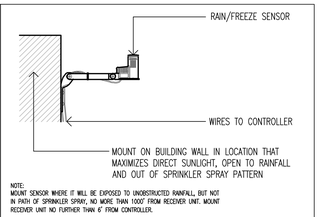
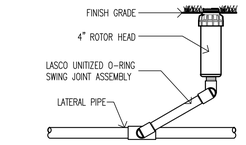
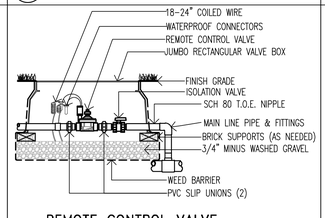


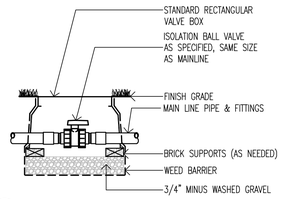
04 RAIN/FREEZE SENSOR
NOT TO SCALE



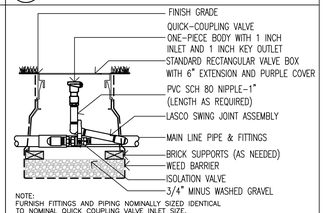
05 4" ROTOR HEAD
NOT TO SCALE



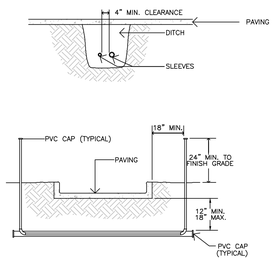
06 REMOTE CONTROL VALVE WITH ISOLATION VALVE
NOT TO SCALE



07 BALL ISOLATION VALVE
NOT TO SCALE



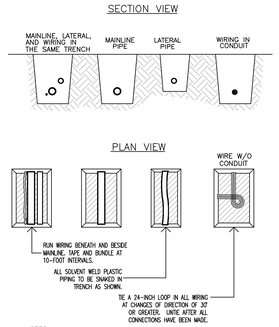
08 QUICK COUPLING VALVE
NOT TO SCALE



NOTES:

1. ALL PVC IRRIGATION SLEEVES TO BE SCHEDULE 40 PVC PIPE.
2. ALL JOINTS TO BE SOLVENT WELDED AND WATERTIGHT.
3. WHERE THERE IS MORE THAN ONE SLEEVE, EXTEND THE SMALLER SLEEVE TO 24-INCHES MINIMUM ABOVE FINISH GRADE.
4. MECHANICALLY TAMP TO 95% PROCTOR.

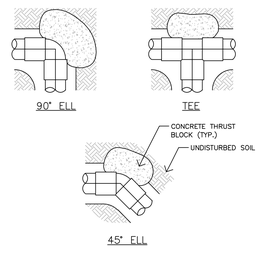
09 SLEEVING DETAIL
NOT TO SCALE



NOTES:

1. SCHEDULE 40 PVC SLEEVE BELOW ALL HARDSCAPE ELEMENTS SHALL BE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN, OR AS NOTED ON PLAN.
2. FOR PIPE AND WIRE BURIAL DEPTHS SEE SPECIFICATIONS.

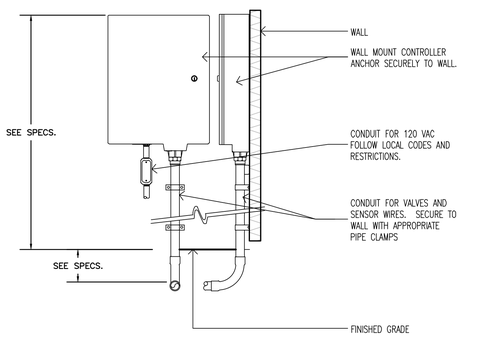
10 TRENCH DETAIL
NOT TO SCALE



NOTES:

1. THRUST BLOCK SHALL EXTEND INTO UNDISTURBED SOIL.

11 THRUST BLOCK DETAIL
NOT TO SCALE



12 MOTOROLA CONTROLLER WALL MOUNT DETAIL
NOT TO SCALE

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
JOEL T. MADRID
79813
LICENSED IRRIGATOR

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director MSW	Drawn By TNP
Designer PCV	Quality Control TNP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
IRRIGATION DETAILS

SHEET NO.
IR1.11

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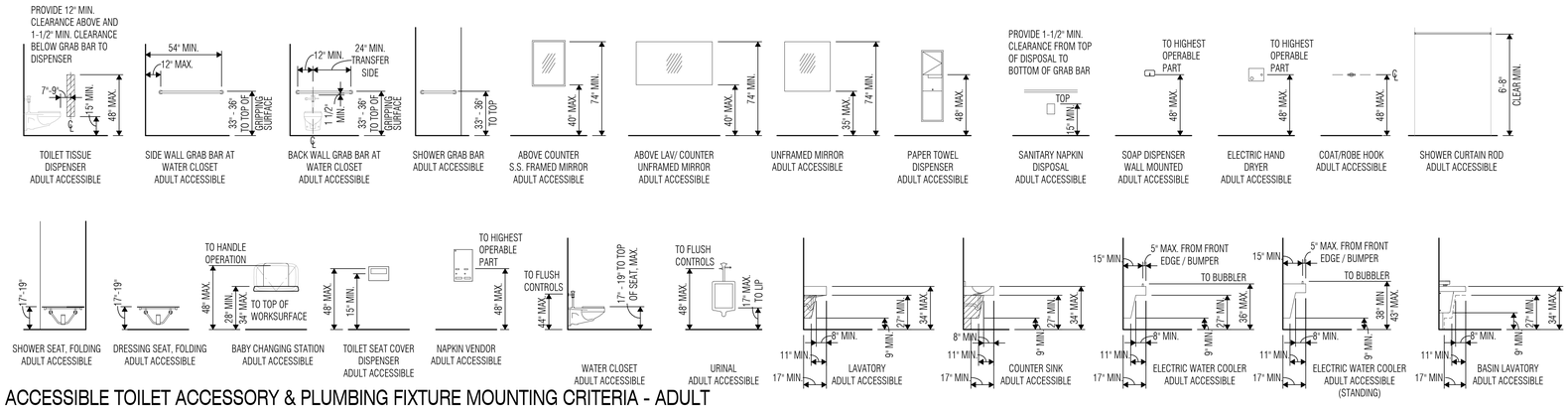
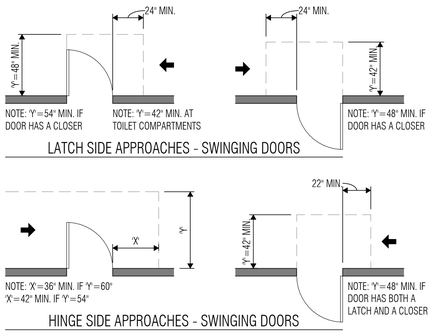


ACCESSIBLE TOILET ACCESSORY & PLUMBING FIXTURE MOUNTING CRITERIA - ADULT (AGES 13 & ABOVE)

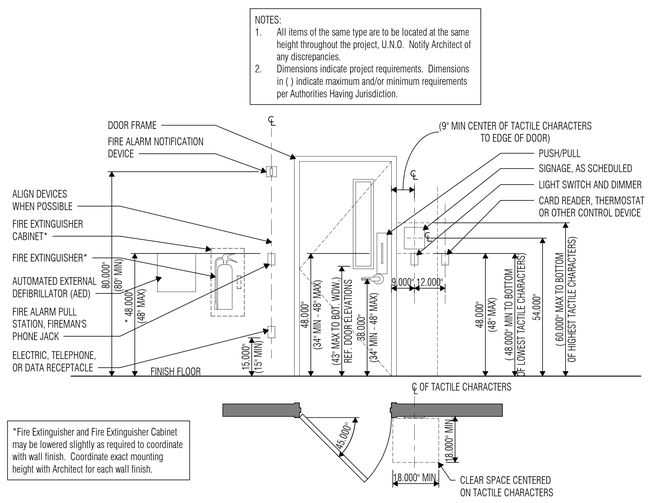
1 SCALE: 1/4" = 1'-0"



MINIMUM MANEUVERING CLEARANCES AT DOORS HC001

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

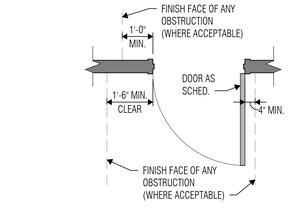
NOTES:
1. All items of the same type are to be located at the same height throughout the project, U.N.O. Notify Architect of any discrepancies.
2. Dimensions indicate project requirements. Dimensions in ( ) indicate maximum and/or minimum requirements per Authorities Having Jurisdiction.



*Fire Extinguisher and Fire Extinguisher Cabinet may be lowered slightly as required to coordinate with wall finish. Coordinate exact mounting height with Architect for each wall finish.

MISC ACCESSIBLE MOUNTING CRITERIA HC004

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



NOTES:
1. Confirm compliance of each door clearance prior to the layout or installation of any wall, door, casework or other item which may encroach into the required clearances.
2. Refer to Floor Plans for partition types. This detail applies to all new doors and all existing doors to remain within the areas containing work as defined by the construction documents.

TYPICAL DOOR CLEARANCES AT HINGE & STRIKE SIDE HC002

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

TEXAS ACCESSIBILITY STANDARDS

PROVISIONS FOR ADULTS AND CHILDREN	ADULTS AGES 13 & ABOVE
REACH RANGES	
UNOBSTRUCTED FRONTAL AND SIDE APPROACH	15" MIN. - 48" MAX.
OBSTRUCTED FRONT APPROACH ≤ 20" D. (OPEN UNDER)	48" MAX.
OBSTRUCTED FRONT APPROACH > 20" D. - 25" D. MAX (OPEN UNDER)	44" MAX.
OBSTRUCTED SIDE APPROACH ≤ 10" D. - 34" H. MAX	48" MAX.
OBSTRUCTED SIDE APPROACH > 10" D. - 24" D. MAX & 34" H. MAX	46" MAX.
RAMPS AND STAIRS	
TOP OF HANDRAIL GRIPPING SURFACE	34" - 38"
DRINKING FOUNTAINS AND WATER COOLERS	
FRONTAL APPROACH	
SPOUT HEIGHT (TO OUTLET)	36" MAX.
KNEE CLEARANCE	27" MIN.
SIDE APPROACH	
SPOUT HEIGHT (TO OUTLET)	USE FRONT APPROACH
KNEE CLEARANCE	
STANDING	
SPOUT HEIGHT (TO OUTLET)	38" MIN. - 43" MAX.
WATER CLOSETS	
CENTERLINE TO WALL OR PARTITION	16" - 18"
CENTERLINE TO WALL OR PARTITION AT AMBULATORY STALL	17" - 19"
TOP OF SEAT	17" - 19"
GRAB BARS (TO TOP OF GRIPPING SURFACE)	33" - 36"
TOILET TISSUE DISPENSER HEIGHT	15" - 48"
HAND-OPERATED FLUSH CONTROLS	44" MAX.
URINALS	
RIM OF BASIN	17" MAX.
HAND-OPERATED FLUSH CONTROLS	48" MAX.
LAVATORIES AND SINKS	
RIM OR COUNTER SURFACE	34" MAX.
KNEE CLEARANCE (LAVATORIES)	27" MIN.
KNEE CLEARANCE (SINKS)	27" MIN.
TO FAUCET HANDLES FROM FRONT EDGE	25" MAX.[2]
MIRRORS	
TO TOP OF REFLECTING SURFACE	74" MIN.
TO BOTTOM OF REFLECTING SURFACE AT LAVS & COUNTERS	40" MAX.
TO BOTTOM OF REFLECTING SURFACE	35" MAX.
CONTROLS AND OPERATING MECHANISMS	
HIGHEST OPERABLE PART	
UNOBSTRUCTED FRONTAL AND SIDE APPROACH	48" MAX.
OBSTRUCTED FRONT APPROACH ≤ 20" D. (OPEN UNDER)	48" MAX.
OBSTRUCTED FRONT APPROACH > 20" D. - 25" D. MAX. (OPEN UNDER)	44" MAX.
OBSTRUCTED SIDE APPROACH ≤ 10" D. - 34" D. MAX. & 34" H. MAX.	48" MAX.
OBSTRUCTED SIDE APPROACH > 10" D. - 24" D. MAX. & 34" H. MAX.	46" MAX.
FIXED OR BUILT-IN SEATING, TABLES, & WORK STATIONS	
HEIGHT OF TABLES OR COUNTERS	28" - 34"
KNEE CLEARANCES	27" MIN.
DRESSING, FITTING & LOCKER ROOMS	
TOP OF BENCH	17" - 19"
BACK SUPPORT 18" H MIN. OR AFFIX BENCH TO WALL	
FOOD SERVICE LINES	
TOP OF TRAY SLIDE	28" - 34"

[1] NOTE: Dimension for Children is not specifically addressed in 2012 T.A.S.
[2] NOTE: Faucet handle location cannot be past the back of the allowable toe space, and only 6" deep toe space from the bottom portion of the provided kneespace is allowable for consideration.
[3] NOTE: Where required knee clearance is not provided, spout shall be 30" maximum a.f.f. and no greater than 3 1/2" from front edge/bumper.

TEXAS ACCESSIBILITY STANDARDS NOTES

1. The dimensional ranges included for items on this sheet are the maximum and minimum dimensions allowed by the Texas Accessibility Standards (TAS). There are no tolerances allowed for these dimensions.
2. Mounting criteria for Toilet Accessories on this sheet is the allowable criteria per the TAS. Refer to Sheet A2.30 for project-specific mounting criteria (if different than the TAS requirements), as well as for non-accessible mounting criteria.

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT KAREN V. BROWN 23211 STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
TEXAS ACCESSIBILITY STANDARDS REQUIREMENTS

SHEET NO.
A0.31

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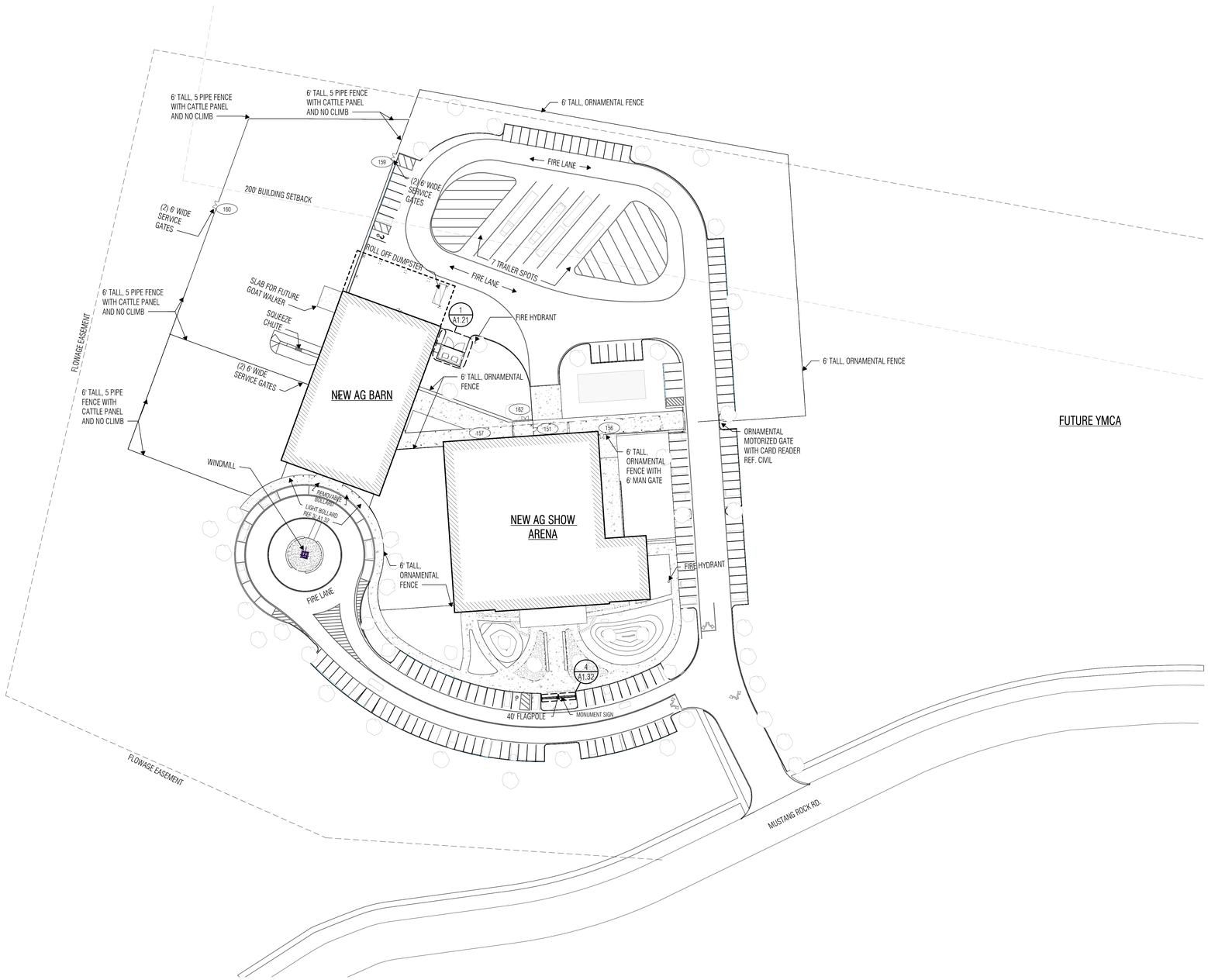
SITE PLAN LEGEND

- FIRE LANE (PER CITY STANDARDS)
- 5 PIPE FENCE, See Plan for Heights
- ORNAMENTAL FENCE, See Plan for Heights

SITE PLAN NOTES

1. Verify and document existing dimensions and conditions at the site before beginning construction. Notify the Architect of conflicts or variations prior to commencement of construction.
2. To prevent damage to existing trees and shrubs in proximity to the Work, provide and maintain protective barriers around those items in accordance with the specified procedures, or in the absence of those procedures, with recognized landscaping and horticultural practices.



N
TRUE NORTH

1 SITE PLAN
SCALE: 1" = 50'-0"

VLK

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EAGLE MOUNTAIN-SAGINAW ISD
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EMS ISD AGRICULTURAL SCIENCE COMPLEX

LAUREN V. BROWN
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STATE OF TEXAS
REGISTERED ARCHITECT

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
SITE PLAN

SHEET NO.
A1.11

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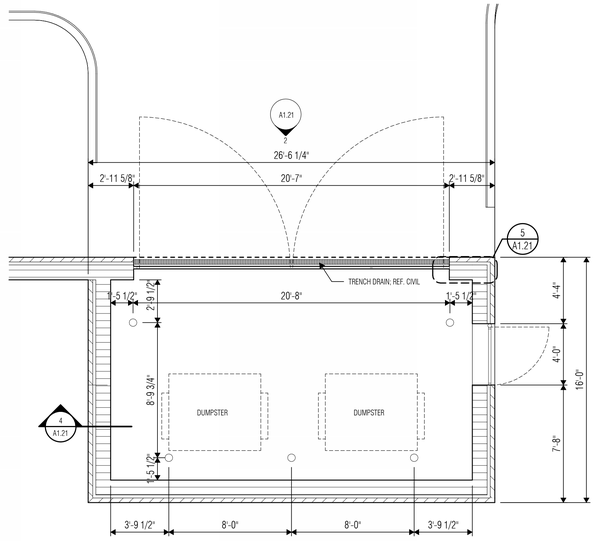
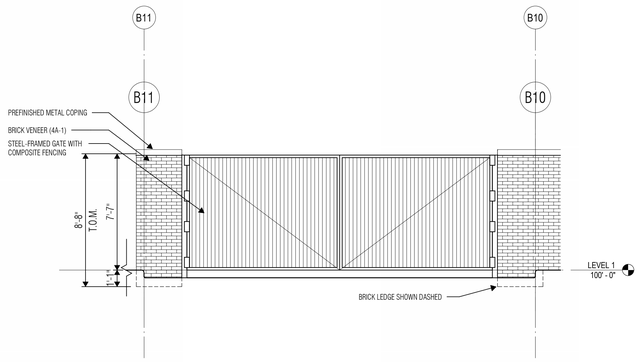
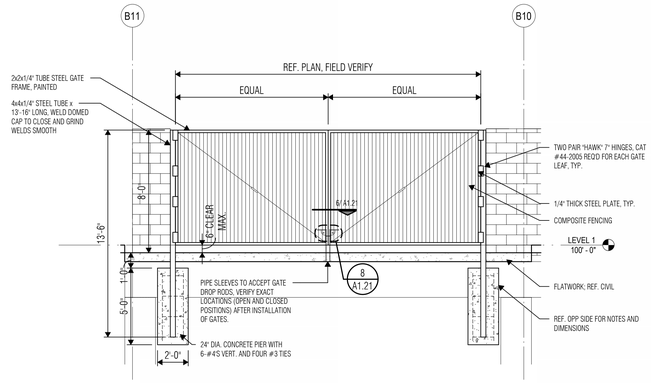


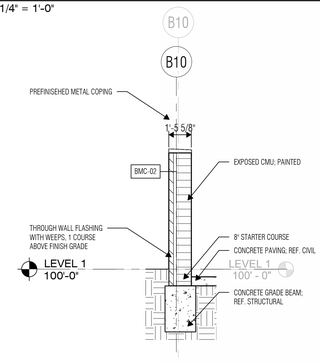
1 ENLARGED PLAN - DUMPSTER ENCLOSURE
SCALE: 1/4" = 1'-0"



2 DUMPSTER ENCLOSURE - NORTH ELEVATION
SCALE: 1/4" = 1'-0"



3 DUMPSTER ENCLOSURE GATE
SCALE: 1/4" = 1'-0"



4 DUMPSTER ENCLOSURE
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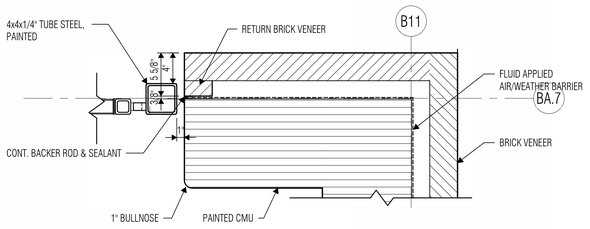
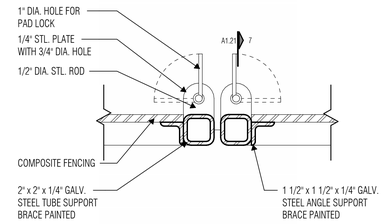
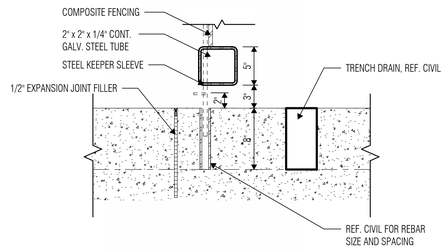


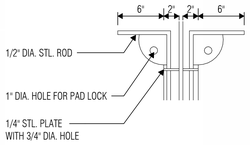
5 DUMPSTER ENCLOSURE PLAN DETAIL
SCALE: 1 1/2" = 1'-0"



6 GATE LATCH / KEEPER PLAN
SCALE: 3" = 1'-0"



7 GATE LATCH / KEEPER SILL SECTION
SCALE: 1 1/2" = 1'-0"



8 DUMPSTER ENCLOSURE GATE LOCK
SCALE: 1 1/2" = 1'-0"

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FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

LAUREN V. BROWN — REGISTERED ARCHITECT — #23211 — STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
LAH	VLK
Designer	Quality Control
ET	
Proj. Arch.	
KT	

PROJECT NO.
24-057.00

SHEET TITLE
ENLARGED ARCHITECTURAL SITE PLANS

SHEET NO.
A1.21

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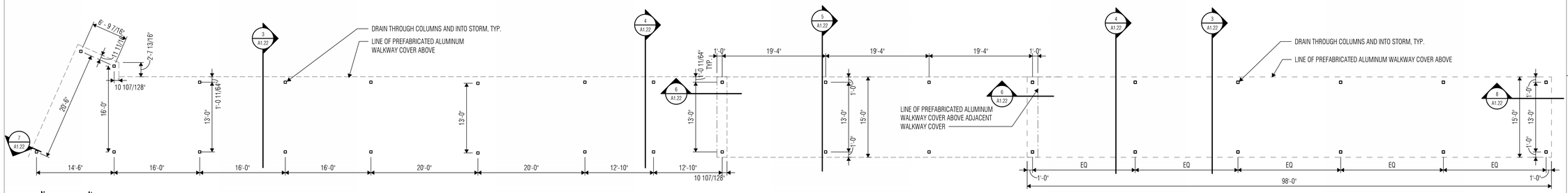
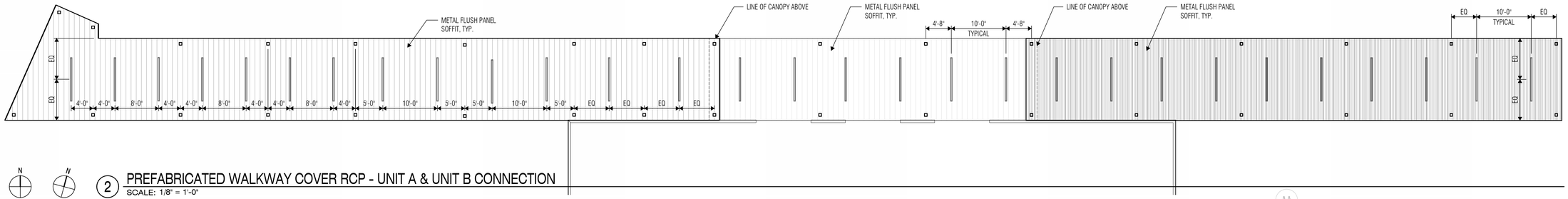


PLAN NORTH TRUE NORTH

1 PREFABRICATED WALKWAY COVER PLAN - UNIT A TO UNIT B CONNECTION

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



PLAN NORTH TRUE NORTH

2 PREFABRICATED WALKWAY COVER RCP - UNIT A & UNIT B CONNECTION

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

3 PREFABRICATED WALKWAY COVER - SECTION

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

4 PREFABRICATED WALKWAY COVER - SECTION

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

5 PREFABRICATED WALKWAY COVER - SECTION

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

6 PREFABRICATED WALKWAY COVER - SECTION

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

7 PREFABRICATED WALKWAY COVER - SECTION

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

8 PREFABRICATED WALKWAY COVER - SECTION

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

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EAGLE MOUNTAIN-SAGINAW ISD
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REGISTERED ARCHITECT KAMEN V. BROWN 23211 STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

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Director	Drawn By
LAH	VLK
Designer	Quality Control
ET	
Proj. Arch.	
KT	

PROJECT NO.

24-057.00

SHEET TITLE

ENLARGED CANOPY PLANS

SHEET NO.

A1.22

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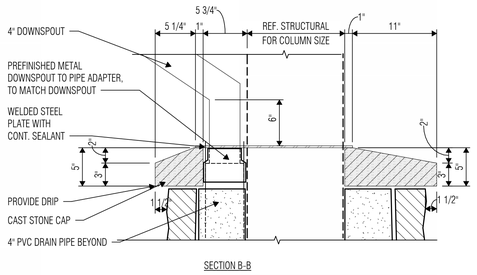
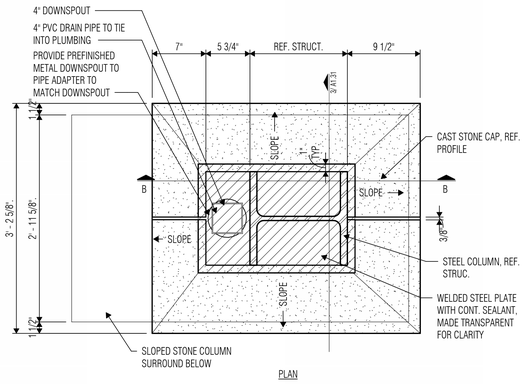
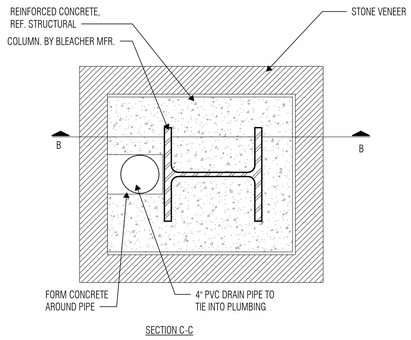


SECTION B-B



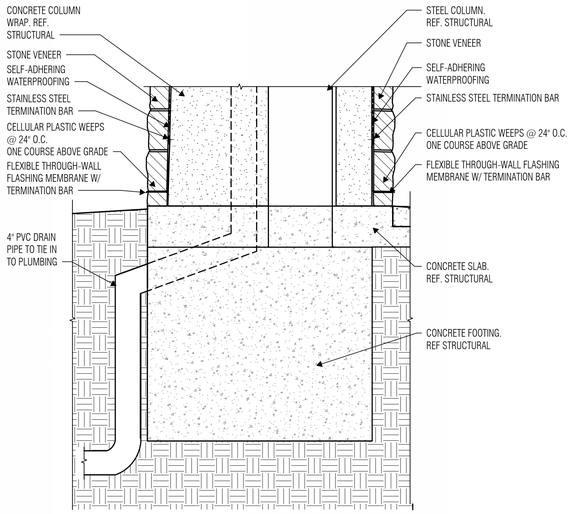
PLAN



SECTION C-C

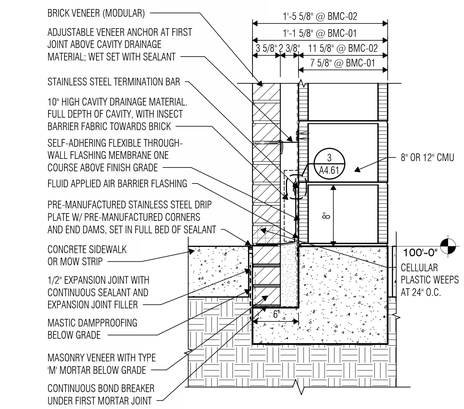
1 COLUMN WRAP CAST STONE CAP - DOWNSPOUT

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



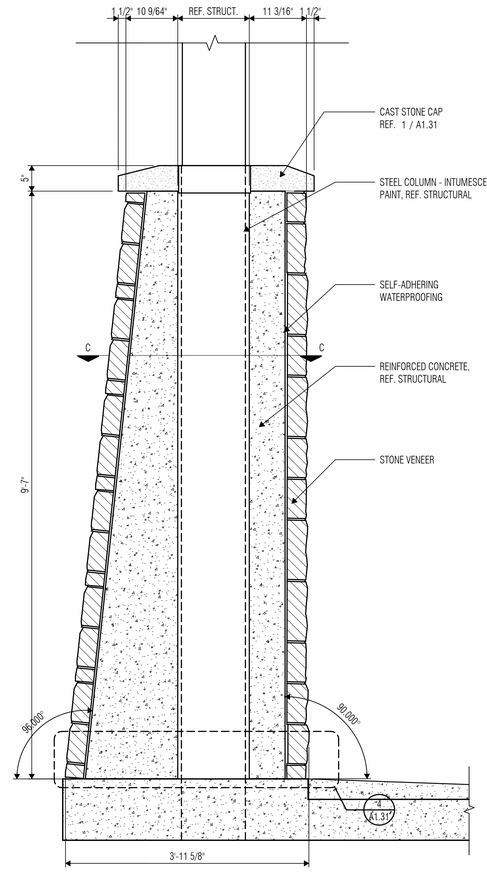
4 COLUMN WRAP BASE AT DOWNSPOUT

SCALE: 1" = 1'-0"



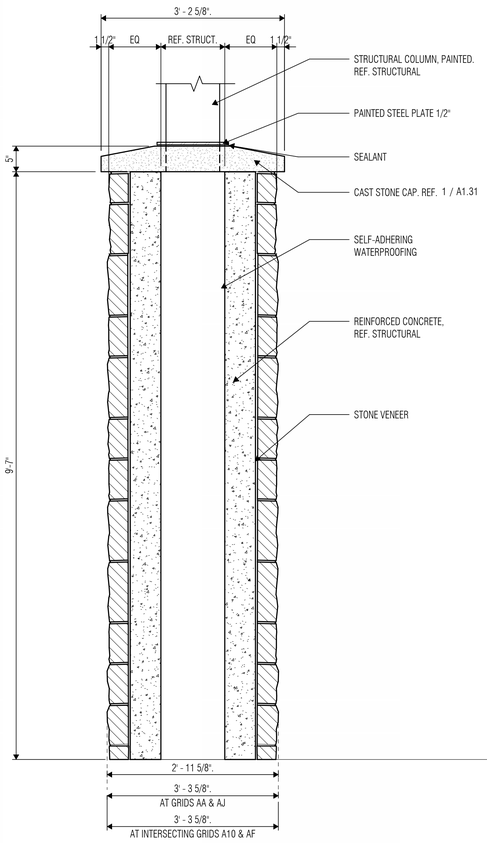
8 BMC-01 BASE DETAIL

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



2 COLUMN WRAP SECTION - AT DOWNSPOUT

SCALE: 1" = 1'-0"



3 COLUMN WRAP SECTION

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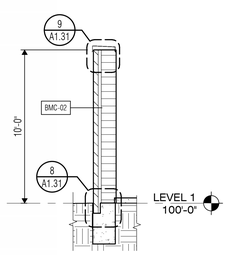
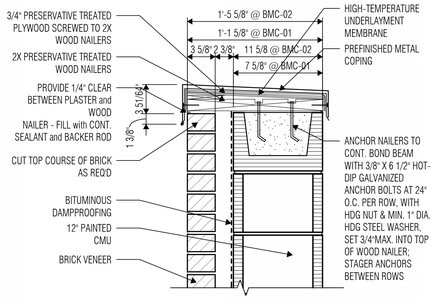


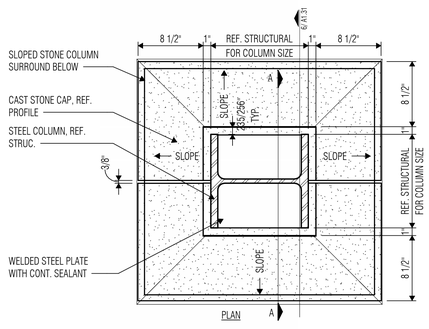
7 WALL SECTION - SCREEN WALL

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



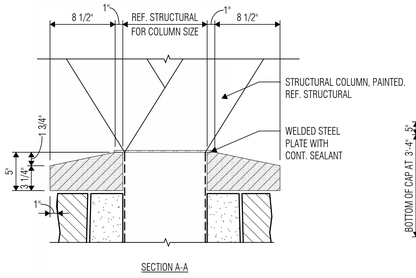
9 BMC-01 COPING DETAIL

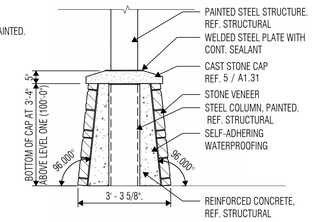
SCALE: 1 1/2" = 1'-0"



5 COLUMN WRAP CAST STONE CAP

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





6 COLUMN WRAP

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

ARCHITECT

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LAUREN N. BROWN 23211 REGISTERED ARCHITECT STATE OF TEXAS

05/28/2025

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REVISIONS

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Director	Drawn By
LAH	VLK
Designer	Quality Control
ET	QC
Proj. Arch.	
KT	

PROJECT NO.

24-057.00

SHEET TITLE

ARCHITECTURAL SITE PLAN DETAILS

SHEET NO.

A1.31

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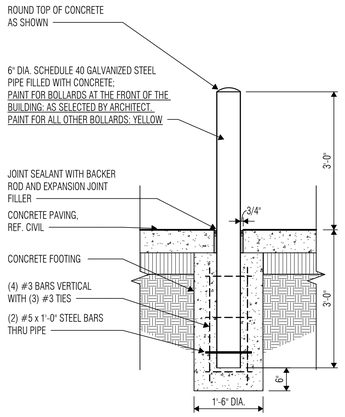
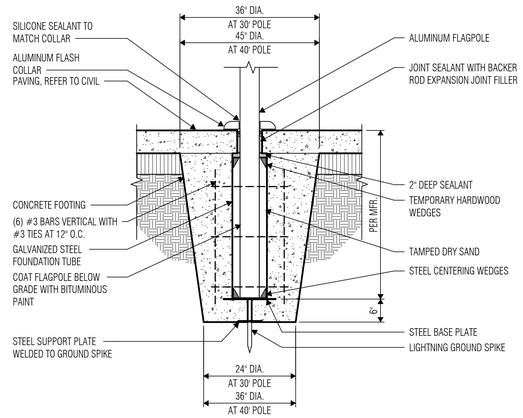


1 BOLLARD DETAIL

S500

SCALE: 3/4" = 1'-0"



2 FLAGPOLE FOUNDATION DETAIL AT PAVED AREAS

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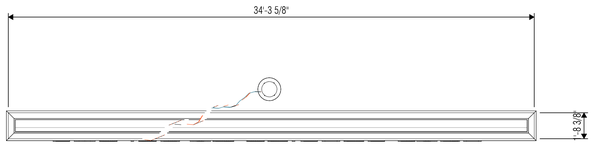
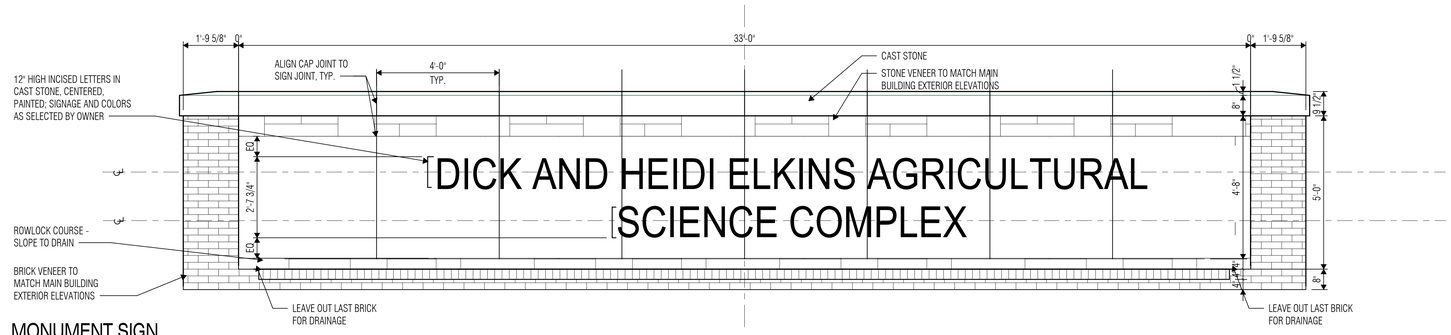


4 SITE PLAN - MONUMENT SIGN

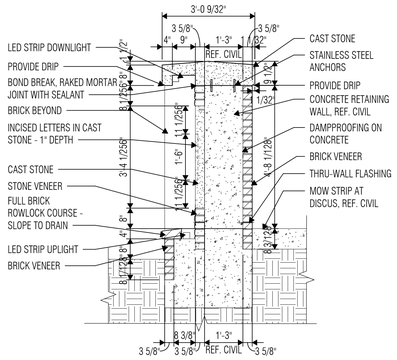
SCALE: 1/4" = 1'-0"



DICK AND HEIDI ELKINS AGRICULTURAL SCIENCE COMPLEX

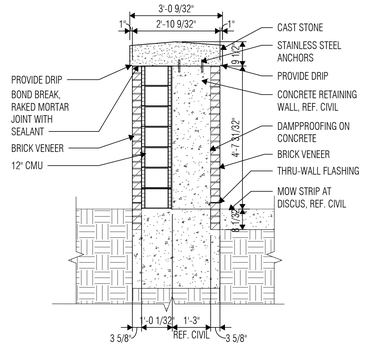
5 MONUMENT SIGN

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



6 MONUMENT SIGN SECTION

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



7 MONUMENT SIGN SECTION DETAIL

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

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

LAUREN V. BROWN 29211 REGISTERED ARCHITECT STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
LAH	VLK
Designer	Quality Control
ET	QC
Proj. Arch.	
KT	

PROJECT NO.

24-057.00

SHEET TITLE

ARCHITECTURAL SITE PLAN DETAILS

SHEET NO.

A1.32

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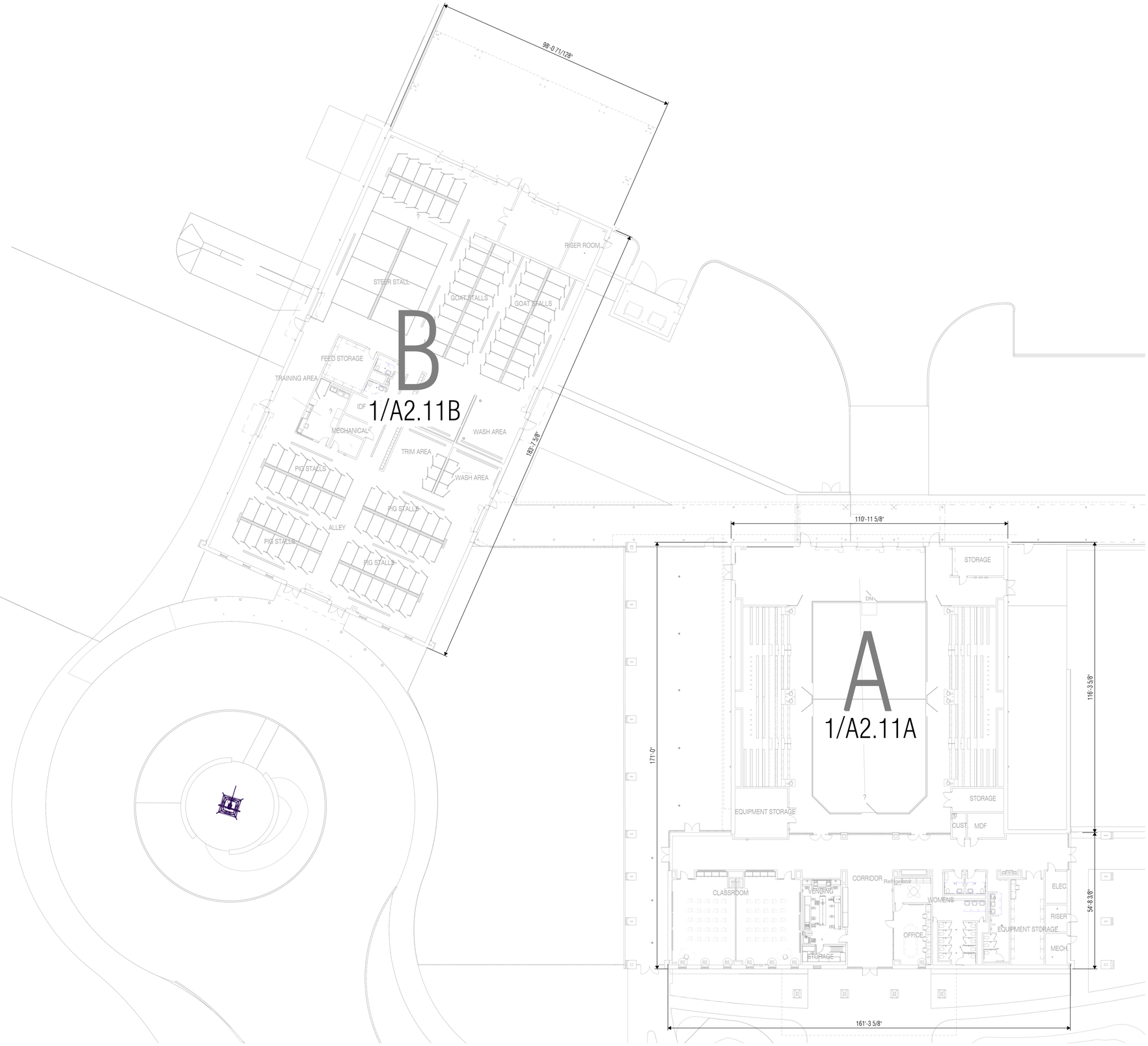
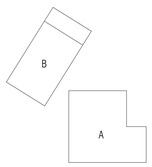


N
TRUE NORTH

1 ORIENTATION FLOOR PLAN - LEVEL ONE
SCALE: 1/16" = 1'-0"



KEY PLAN

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EAGLE MOUNTAIN-SAGINAW ISD
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REGISTERED ARCHITECT
LAUREN V. BROWN
23211
STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

24-057.00

SHEET TITLE

ORIENTATION PLAN - LEVEL ONE

SHEET NO.

A2.11

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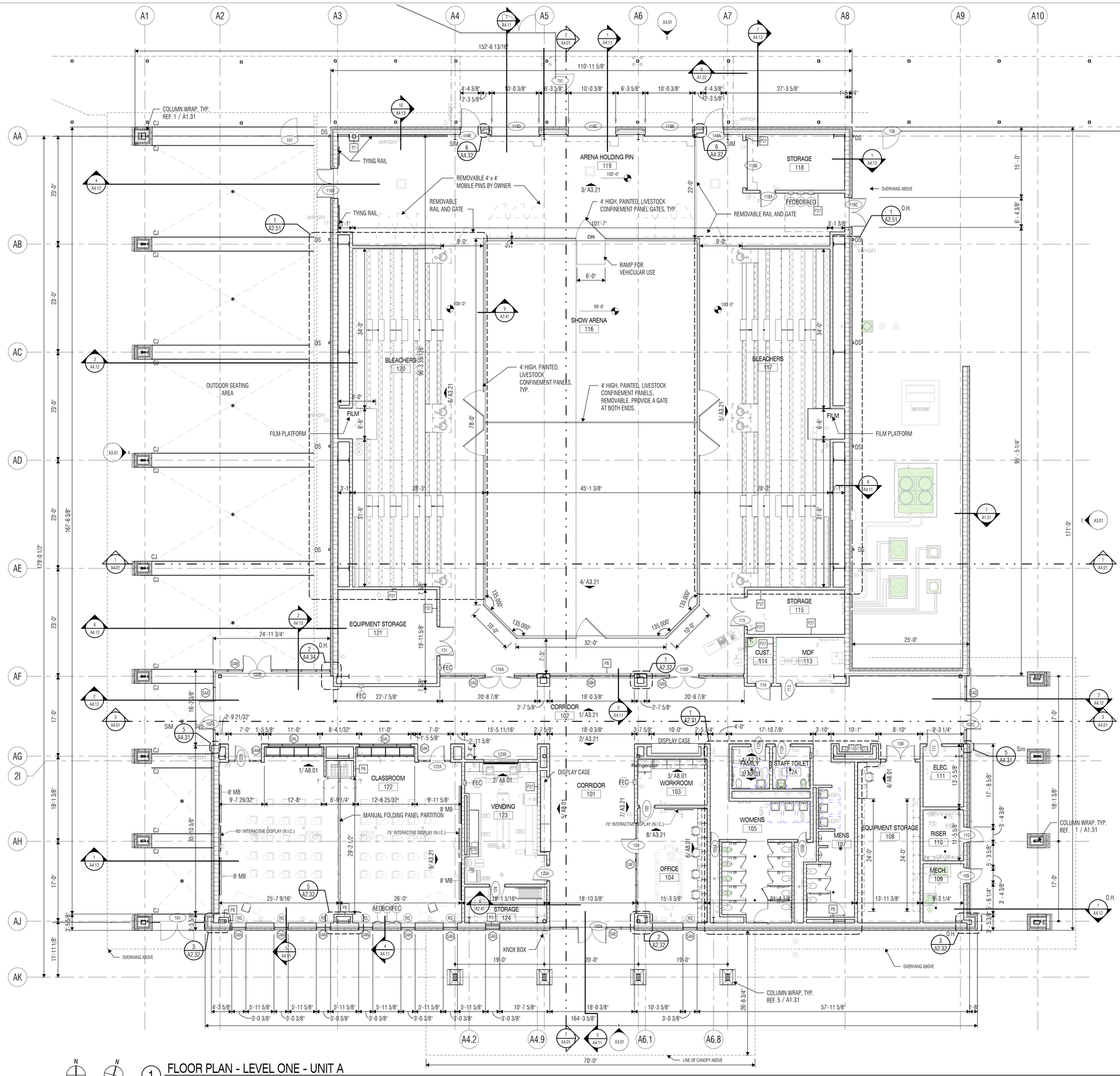

N PLAN NORTH

N TRUE NORTH

1 FLOOR PLAN - LEVEL ONE - UNIT A
SCALE: 1/8" = 1'-0"

FLOOR PLAN NOTES

1. Primary Ground Level floor elevation is 737.00' (Mean Sea Level), which equals to 100'-0" datum.
2. Dimensions on Floor Plans are to face of stud or CMU unless noted otherwise.
3. Coordinate the location of electrical devices with casework, millwork, lockers, etc. Any electrical device that is not properly coordinated shall be relocated at no additional cost.
4. Exterior wall construction is identified on the Wall Sections. Refer to the A4-series sheets for Wall Sections, and to Sheet A4.10 for Exterior Wall Assemblies.
5. Refer to Exterior Elevation Notes for control joint requirements at all inside corners of masonry veneer.
6. Refer to Sheet A2.21 for Partition Types.
7. Interior partitions are Type "P7" unless noted otherwise.
8. Refer to Detail 4/A0.31 for Typical Door Maneuvering Clearances. All new doors shall meet the requirements of that detail. If any door is found that does not comply with these requirements, request clarification from the Architect prior to construction.
9. Refer to Sheet A2.22 for Typical Gypsum Board Control Joint Details at all CFS and light-gage steel stud partition openings.
10. Refer to Sheet A2.22 for Typical Partition Penetration Details, including pipe, conduit and ductwork penetrations.
11. Refer to Sheet A2.22 for Typical Bracing at Non-Loadbearing CMU Partitions.
12. Refer to Exterior Elevations for exact locations of downspouts.
13. Provide factory bullnose units at all interior exposed vertical edges of CMU, except at starter course with applied base material where square-edge units shall be provided in lieu of bullnose units.
14. Provide 8" starter courses at all CMU walls and partitions unless noted otherwise.
15. Provide steel or masonry lintels over all openings in CMU walls, including those required for mechanical ductwork and dampers, whether specifically indicated on the drawings or not.
16. Provide minimum 20 gage light-gage steel studs at all interior partitions scheduled to receive ceramic tile or plaster.
17. Provide minimum 18 gage cold-formed steel studs at all interior partitions scheduled to receive anchored masonry or stone veneer as well as interior partitions with steel plate or steel sheet X-bracing.
18. Provide minimum 18 gage cold-formed steel studs as designed by stud engineer for all interior partitions scheduled to receive adhered masonry or stone veneer.
19. At light-gage steel stud partitions that extend above the ceiling, provide diagonal 20 gage stud braces at 4'-0" o.c. to structure above (not to steel deck) as required to provide rigid anchorage and support of partitions.
20. Provide minimum 2 X 6 fire-retardant treated wood blocking in both new and existing stud walls and partitions, at mounting locations for wall-mounted accessories, handrails, casework, markerboards, tackboards, folding partitions, toilet partitions, and all other wall-mounted items. Refer to Sheet A2.22 for typical blocking requirements at various conditions.
21. At Mechanical, Electrical and Boiler Room partitions, seal tightly around all penetrations. Utilize fire safing material at rated partitions.
22. Provide sealant and/or fire safing at all floor penetrations, as applicable.

FLOOR PLAN LEGEND

METAL STUD PARTITION. Extend 4" above highest ceiling plane and brace to structure above as noted in Floor Plan Notes. Refer to Reflected Ceiling Plan for fire, smoke and sound-conditioned partitions that extend to deck above.

CMU PARTITION. Extend 4" above highest ceiling plane and brace to structure above as detailed. Refer to Reflected Ceiling Plan for fire, smoke and sound-conditioned partitions that extend to deck above.

LOCKER TYPE (LKR-2) For locker types, ref. 9/A8.01
LOCKER QUANTITY

FURNITURE, FIXTURE OR EQUIPMENT BY OWNER. Coordinate with adjacent electrical devices, casework, etc.

MB	MARKERBOARD. Preceding number is length, in feet.
TB	TACKBOARD. Preceding number is length, in feet.
TS	TACK STRIP. Preceding number is length, in feet.
IM	INTERACTIVE MARKERBOARD
IFP	INTERACTIVE FLAT PANEL
FEC	FIRE EXTINGUISHER WITH CABINET AND BRACKET
FE	FIRE EXTINGUISHER WITH BRACKET
HB	HORIZONTAL BLINDS
RS	ROLLING WINDOW SHADES
DS	DOWNSPOUT WITH BOOT
AED	AUTOMATED EXTERNAL DEFIBRILLATOR
BCK	BLEED CONTROL KIT CABNIET

KEY PLAN

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

LAUREN V. BROWN 23211 STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control QC
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
FLOOR PLAN - LEVEL ONE - UNIT A

SHEET NO.
A2.11A

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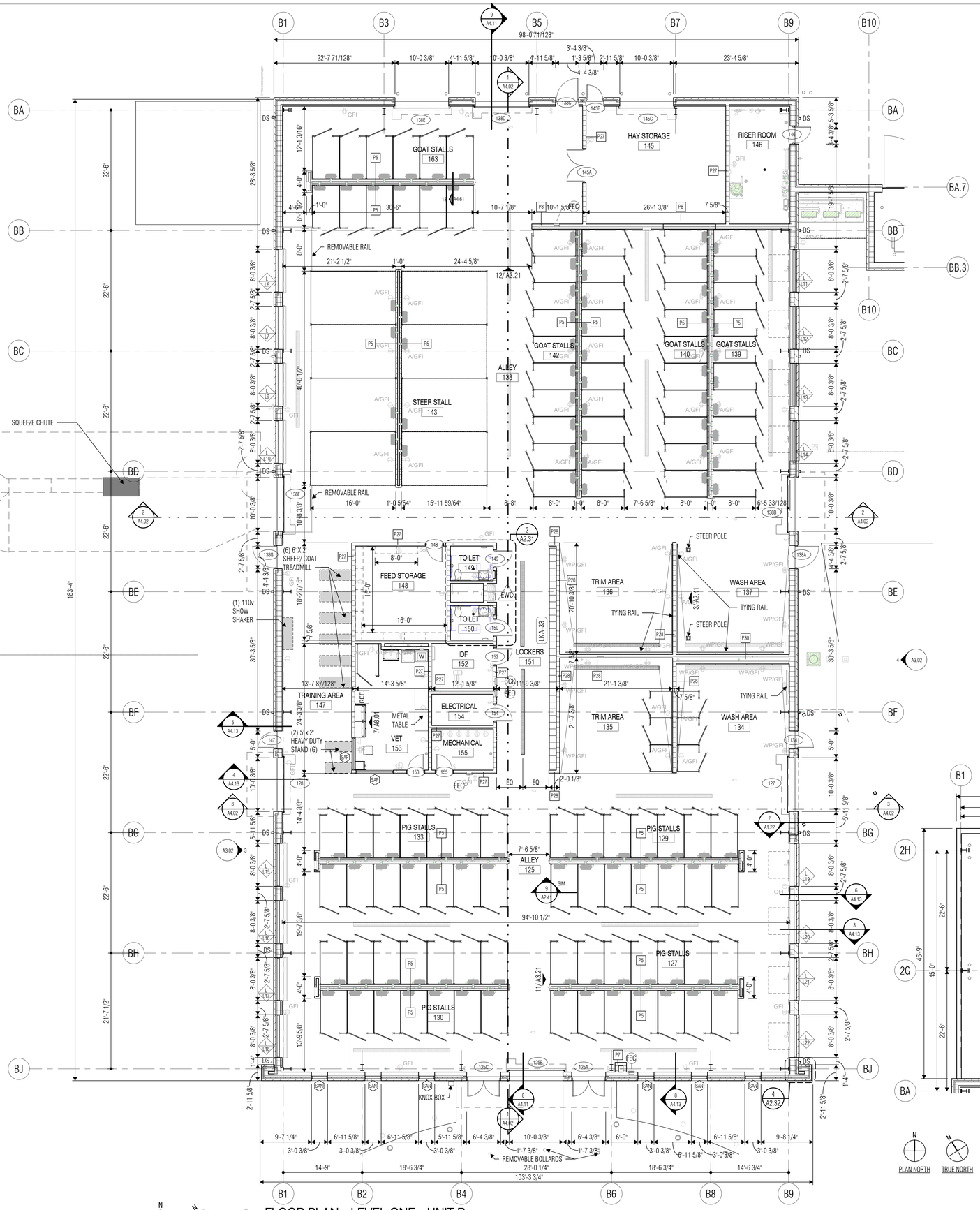
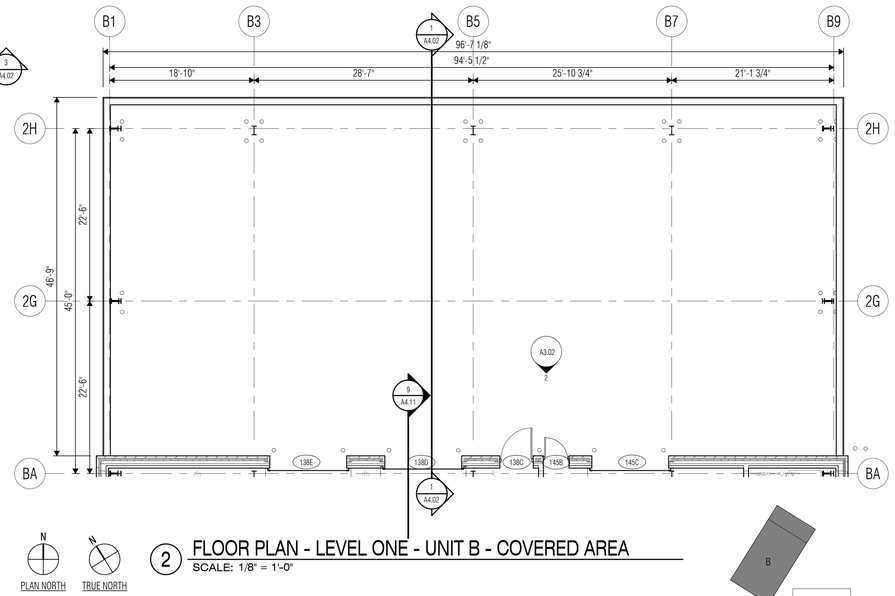




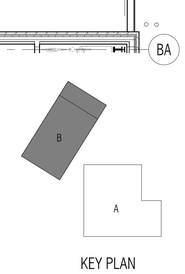
FLOOR PLAN NOTES

1. Primary Ground Level floor elevation is 737.00' (Mean Sea Level), which equals to 100'-0" datum.
2. Dimensions on Floor Plans are to face of stud or CMU unless noted otherwise.
3. Coordinate the location of electrical devices with casework, millwork, lockers, etc. Any electrical device that is not properly coordinated shall be relocated at no additional cost.
4. Exterior wall construction is identified on the Wall Sections. Refer to the A4-series sheets for Wall Sections, and to Sheet A4.10 for Exterior Wall Assemblies.
5. Refer to Exterior Elevation Notes for control joint requirements at all inside corners of masonry veneer.
6. Refer to Sheet A2.21 for Partition Types.
7. Interior partitions are Type "P7" unless noted otherwise.
8. Refer to Detail 4/A0.31 for Typical Door Maneuvering Clearances. All new doors shall meet the requirements of that detail. If any door is found that does not comply with these requirements, request clarification from the Architect prior to construction.
9. Refer to Sheet A2.22 for Typical Gypsum Board Control Joint Details at all CFS and light-gage steel stud partition openings.
10. Refer to Sheet A2.22 for Typical Partition Penetration Details, including pipe, conduit and ductwork penetrations.
11. Refer to Sheet A2.22 for Typical Bracing at Non-Loadbearing CMU Partitions.
12. Refer to Exterior Elevations for exact locations of downspouts.
13. Provide factory bullnose units at all interior exposed vertical edges of CMU, except at starter course with applied base material where square-edge units shall be provided in lieu of bullnose units.
14. Provide 8" starter courses at all CMU walls and partitions unless noted otherwise.
15. Provide steel or masonry lintels over all openings in CMU walls, including those required for mechanical ductwork and dampers, whether specifically indicated on the drawings or not.
16. Provide minimum 20 gage light-gage steel studs at all interior partitions scheduled to receive ceramic tile or plaster.
17. Provide minimum 18 gage cold-formed steel studs at all interior partitions scheduled to receive anchored masonry or stone veneer as well as interior partitions with steel plate or steel sheet X-bracing.
18. Provide minimum 18 gage cold-formed steel studs as designed by stud engineer for all interior partitions scheduled to receive adhered masonry or stone veneer.
19. At light-gage steel stud partitions that extend above the ceiling, provide diagonal 20 gage stud braces at 4'-0" o.c. to structure above (not to steel deck) as required to provide rigid anchorage and support of partitions.
20. Provide minimum 2 X 6 fire-retardant treated wood blocking in both new and existing stud walls and partitions, at mounting locations for wall-mounted accessories, handrails, casework, markerboards, tackboards, folding partitions, toilet partitions, and all other wall-mounted items. Refer to Sheet A2.22 for typical blocking requirements at various conditions.
21. At Mechanical, Electrical and Boiler Room partitions, seal tightly around all penetrations. Utilize fire safing material at rated partitions.
22. Provide sealant and/or fire safing at all floor penetrations, as applicable.

FLOOR PLAN LEGEND

- METAL STUD PARTITION. Extend 4" above highest ceiling plane and brace to structure above as noted in Floor Plan Notes. Refer to Reflected Ceiling Plan for fire, smoke and sound-conditioned partitions that extend to deck above.
- CMU PARTITION. Extend 4" above highest ceiling plane and brace to structure above as detailed. Refer to Reflected Ceiling Plan for fire, smoke and sound-conditioned partitions that extend to deck above.
- LOCKER TYPE (LKA-0) — For locker types, ref. 9/A8.01 — LOCKER QUANTITY
- FURNITURE, FIXTURE OR EQUIPMENT BY OWNER. Coordinate with adjacent electrical devices, casework, etc.

MB	MARKERBOARD. Preceding number is length, in feet.
TB	TACKBOARD. Preceding number is length, in feet.
TS	TACK STRIP. Preceding number is length, in feet.
IM	INTERACTIVE MARKERBOARD
IFP	INTERACTIVE FLAT PANEL
FEC	FIRE EXTINGUISHER WITH CABINET AND BRACKET
FE	FIRE EXTINGUISHER WITH BRACKET
HB	HORIZONTAL BLINDS
RS	ROLLING WINDOW SHADES
DS	DOWNSPOUT WITH BOOT
AED	AUTOMATED EXTERNAL DEFIBRILLATOR
BCK	BLEED CONTROL KIT CABNIET



KEY PLAN

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EAGLE MOUNTAIN-SAGINAW ISD
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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT — KAMEN V. BROWN — #30511 — STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

24-057.00

SHEET TITLE

FLOOR PLAN - LEVEL ONE- UNIT B

SHEET NO.

A2.11B

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N

TRUE NORTH

1 FLOOR PLAN - LEVEL TWO MEZZANINE

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

FLOOR PLAN NOTES

1. Primary Ground Level floor elevation is 737.00' (Mean Sea Level), which equals to 100'-0" datum.
2. Dimensions on Floor Plans are to face of stud or CMU unless noted otherwise.
3. Coordinate the location of electrical devices with casework, millwork, lockers, etc. Any electrical device that is not properly coordinated shall be relocated at no additional cost.
4. Exterior wall construction is identified on the Wall Sections. Refer to the A4-series sheets for Wall Sections, and to Sheet A4.10 for Exterior Wall Assemblies.
5. Refer to Exterior Elevation Notes for control joint requirements at all inside corners of masonry veneer.
6. Refer to Sheet A2.21 for Partition Types.
7. Interior partitions are Type "P7" unless noted otherwise.
8. Refer to Detail 4/A0.31 for Typical Door Maneuvering Clearances. All new doors shall meet the requirements of that detail. If any door is found that does not comply with these requirements, request clarification from the Architect prior to construction.
9. Refer to Sheet A2.22 for Typical Gypsum Board Control Joint Details at all CFS and light-gage steel stud partition openings.
10. Refer to Sheet A2.22 for Typical Partition Penetration Details, including pipe, conduit and ductwork penetrations.
11. Refer to Sheet A2.22 for Typical Bracing at Non-Loadbearing CMU Partitions.
12. Refer to Exterior Elevations for exact locations of downspouts.
13. Provide factory bullnose units at all interior exposed vertical edges of CMU, except at starter course with applied base material where square-edge units shall be provided in lieu of bullnose units.
14. Provide 8" starter courses at all CMU walls and partitions unless noted otherwise.
15. Provide steel or masonry lintels over all openings in CMU walls, including those required for mechanical ductwork and dampers, whether specifically indicated on the drawings or not.
16. Provide minimum 20 gage light-gage steel studs at all interior partitions scheduled to receive ceramic tile or plaster.
17. Provide minimum 18 gage cold-formed steel studs at all interior partitions scheduled to receive anchored masonry or stone veneer as well as interior partitions with steel plate or steel sheet X-bracing.
18. Provide minimum 18 gage cold-formed steel studs as designed by stud engineer for all interior partitions scheduled to receive adhered masonry or stone veneer.
19. At light-gage steel stud partitions that extend above the ceiling, provide diagonal 20 gage stud braces at 4'-0" o.c. to structure above (not to steel deck) as required to provide rigid anchorage and support of partitions.
20. Provide minimum 2 X 6 fire-retardant treated wood blocking in both new and existing stud walls and partitions, at mounting locations for wall-mounted accessories, handrails, casework, markerboards, tackboards, folding partitions, toilet partitions, and all other wall-mounted items. Refer to Sheet A2.22 for typical blocking requirements at various conditions.
21. At Mechanical, Electrical and Boiler Room partitions, seal tightly around all penetrations. Utilize fire safing material at rated partitions.
22. Provide sealant and/or fire safing at all floor penetrations, as applicable.

FLOOR PLAN LEGEND

- METAL STUD PARTITION. Extend 4" above highest ceiling plane and brace to structure above as noted in Floor Plan Notes. Refer to Reflected Ceiling Plan for fire, smoke and sound-conditioned partitions that extend to deck above.
- CMU PARTITION. Extend 4" above highest ceiling plane and brace to structure above as detailed. Refer to Reflected Ceiling Plan for fire, smoke and sound-conditioned partitions that extend to deck above.
- LOCKER TYPE (LT#-#) For locker types, ref. 9/A8.01 LOCKER QUANTITY
- FURNITURE, FIXTURE OR EQUIPMENT BY OWNER. Coordinate with adjacent electrical devices, casework, etc.

MB	MARKERBOARD. Preceding number is length, in feet.
TB	TACKBOARD. Preceding number is length, in feet.
TS	TACK STRIP. Preceding number is length, in feet.
IM	INTERACTIVE MARKERBOARD
IFP	INTERACTIVE FLAT PANEL
FEC	FIRE EXTINGUISHER WITH CABINET AND BRACKET
FE	FIRE EXTINGUISHER WITH BRACKET
HB	HORIZONTAL BLINDS
RS	ROLLING WINDOW SHADES
DS	DOWNSPOUT WITH BOOT
AED	AUTOMATED EXTERNAL DEFIBRILLATOR
BCK	BLEED CONTROL KIT CABNIET

B

A

KEY PLAN

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EAGLE MOUNTAIN-SAGINAW ISD
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EMS ISD AGRICULTURAL SCIENCE COMPLEX

LAUREN V. BROWN 23211 REGISTERED ARCHITECT STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

24-057.00

SHEET TITLE

FLOOR PLAN - LEVEL TWO - UNIT A MEZZANINE

SHEET NO.

A2.12A

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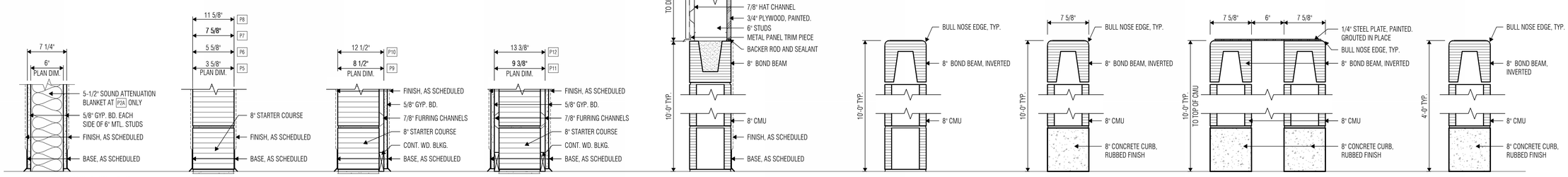
PARTITION NOTES

1. Refer to Floor Plan Notes for additional metal stud requirements at Ceramic Tile, Plaster, Anchored Masonry or Stone Veneer, and Adhered Masonry or Stone Veneer.
2. Refer to Floor Plan Notes for CMU starter course requirements.
3. Refer to Sheet A2.22 for typical partition details.
4. Refer to Reflected Ceiling Plans for location of fire rated partitions.
5. Refer to Reflected Ceiling Plans for location of non-rated partitions that extend to the structural deck above.
6. Provide firestopping as required to achieve the fire-resistive rating at all penetrations, gaps and other openings through or around rated floors, roofs, walls and partitions.
7. At all rated and acoustical partitions that extend to structural deck above, seal to the floor below and to the structure above. Provide firestopping at rated partitions, and acoustical sealant at acoustical and sound conditioned other partitions.
8. At all partitions that extend to structural deck above, provide gypsum board enclosure around beams, joists, ducts, etc. as required to maintain fire-resistive ratings and acoustical requirements.
9. Typical CMU notes, unless otherwise noted on structural drawings:
   A. Provide steel bracing as shown on Sheet A2.22.
   B. Provide continuous bond beam with (2) #4 reinforcing bars at top course of all 6" and 8" CMU partitions, whether indicated on details or not.
10. 4" CMU shall not be used for interior partitions, except at chase walls where specifically indicated.

STUD PARTITION SIZING SCHEDULE

STUD DEPTH	STUD SPACING	STUD GAGE	EQ STUD	MAX LENGTH	MAX LENGTH (at Tile/Plaster)
3-5/8"	16" O.C	25 (18 mils)	25EQ	15'-6"	N/A
3-5/8"	16" O.C	20 (30 mils)	20EQ	16'-0"	14'-0"
6"	16" O.C	25 (18 mils)	25EQ	21'-6"	N/A
6"	16" O.C	20 (30 mils)	20EQ	22'-6"	19'-6"

NOTES:
1. All doors shall have a minimum of 20 gage framing where required by specifications.
2. See Floor Plan Notes and Partition Notes for additional metal stud requirements at ceramic tile, plaster, anchored masonry/stone veneer, or adhered masonry/stone veneer.
3. Max. Lengths assume both sides of studs braced full-height of partition.
4. Max. Lengths are based on 5 psf lateral loading and L/240 deflection (L/360 at tile/plaster).
5. Equivalent (EQ) studs are not allowable at abuse-resistant or impact-resistant gyp board. Provide true 20 gage studs with minimum 0.0312 inches design thickness at these locations.



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EAGLE MOUNTAIN-SAGINAW ISD
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EMS ISD AGRICULTURAL SCIENCE COMPLEX

LAUREN V. BROWN — 23211 — REGISTERED ARCHITECT — STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
PARTITION TYPES

SHEET NO.
A2.21

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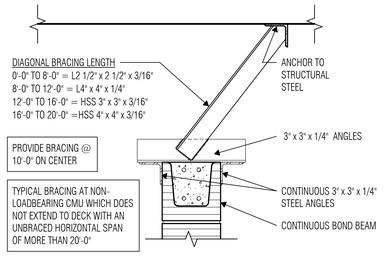
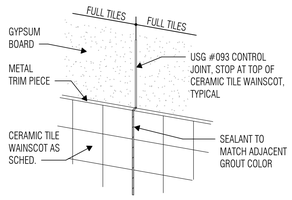


1 DETAIL MC022
SCALE: 1 1/2" = 1'-0"



2 MC006 - DETAIL OF GYP CONTROL JOINT MC006
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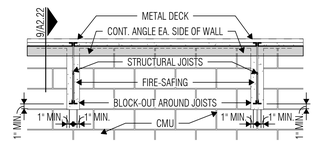

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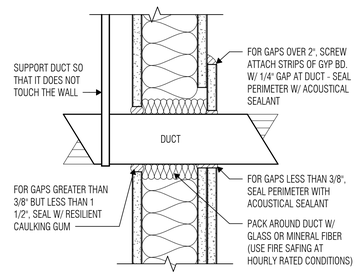

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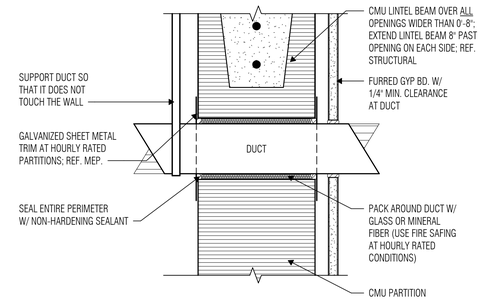

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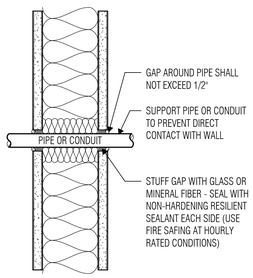
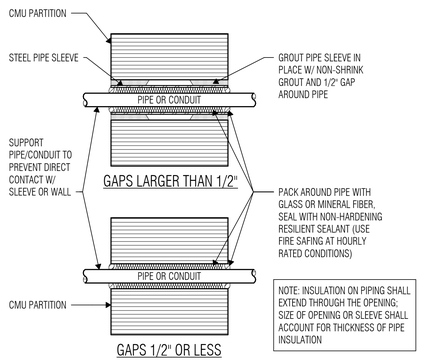
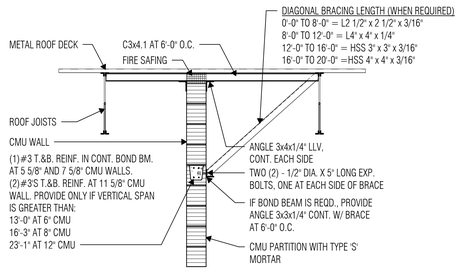


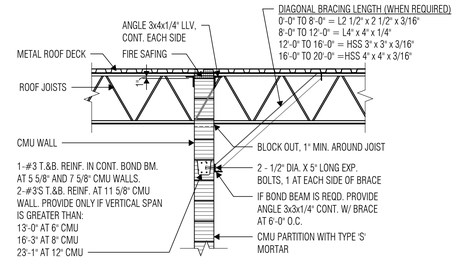
6 PARTITION DETAIL MC011
SCALE: 3" = 1'-0"



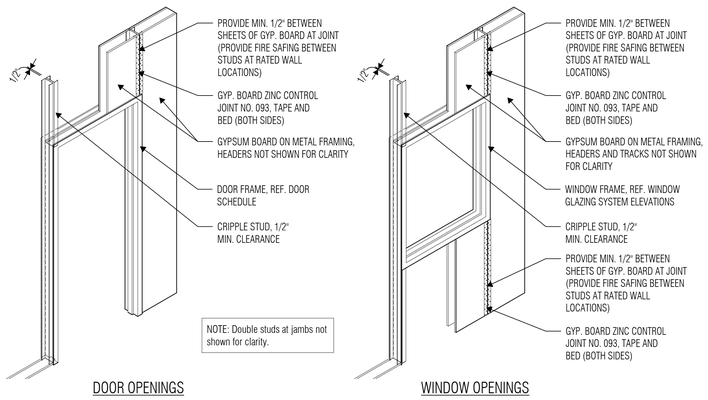
7 PARTITION DETAIL MC008
SCALE: 3" = 1'-0"



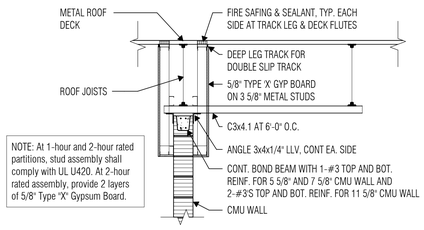
8 DETAIL MC009
SCALE: 1/2" = 1'-0"



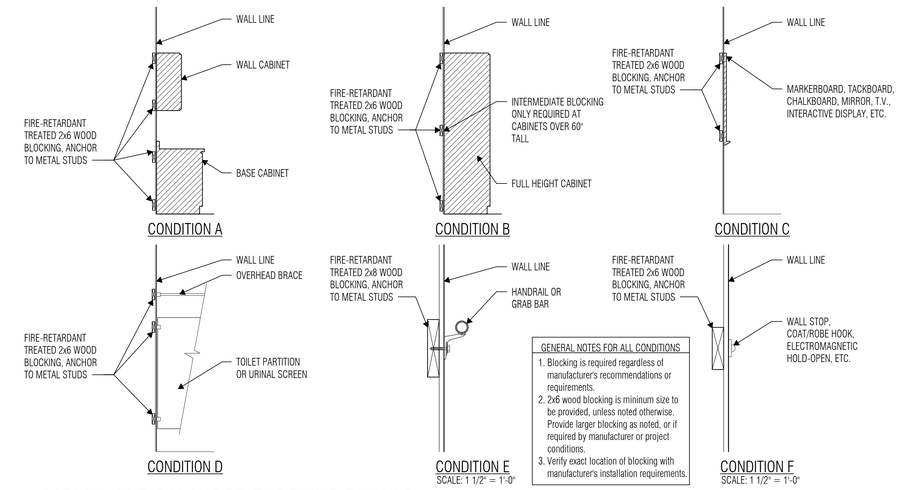
9 DETAIL MC013
SCALE: 1/2" = 1'-0"



10 MC007 - TYPICAL CONTROL JOINT DETAIL AT OPENINGS MC007
SCALE: 1/2" = 1'-0"



11 DETAIL MC012
SCALE: 1/2" = 1'-0"



12 MC005 - TYPICAL WOOD BLOCKING DETAILS MC005
SCALE: 3/8" = 1'-0"

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

LICENSED REGISTERED ARCHITECT KAREN V. BROWN 23211 STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
PARTITION DETAILS

SHEET NO.
A2.22

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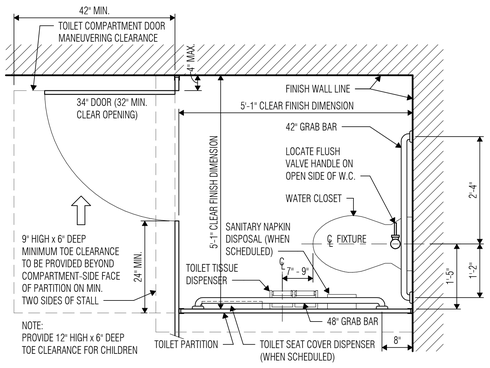
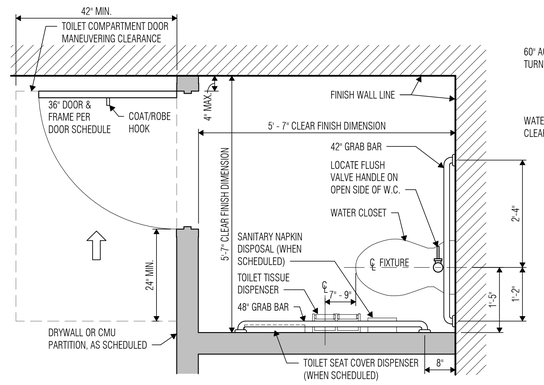
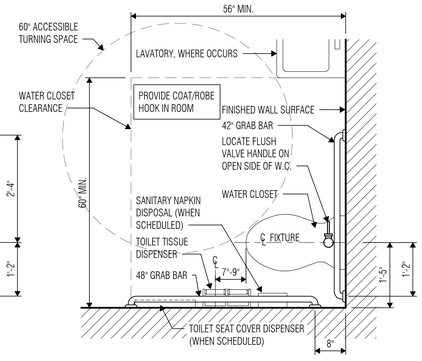


1 ACCESSIBLE TOILET COMPARTMENT HC100 TYPICAL
SCALE: 3/4" = 1'-0"



2 ACCESSIBLE TOILET COMPARTMENT (ENCLOSED) HC102
SCALE: 3/4" = 1'-0"



3 ACCESSIBLE TOILET ROOM HC101
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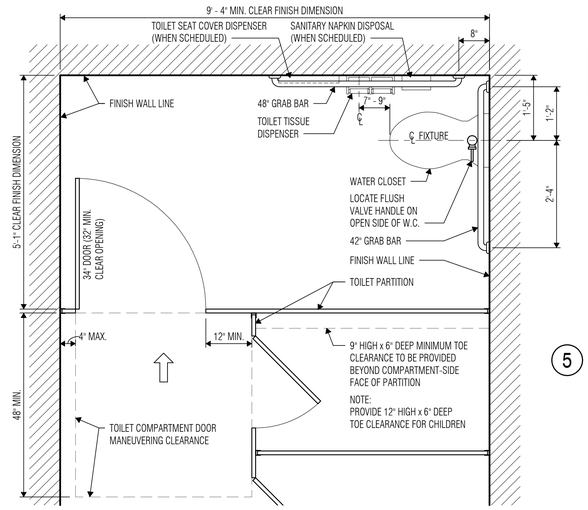
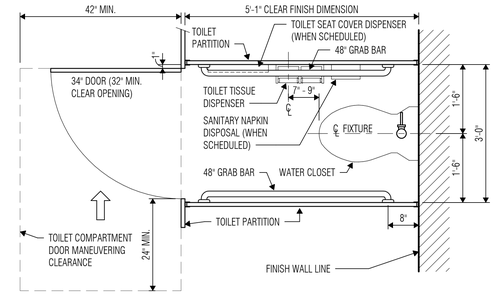


4 ACCESSIBLE TOILET COMPARTMENT (END OF AISLE) HC103
SCALE: 3/4" = 1'-0"



5 AMBULATORY TOILET COMPARTMENT HC104
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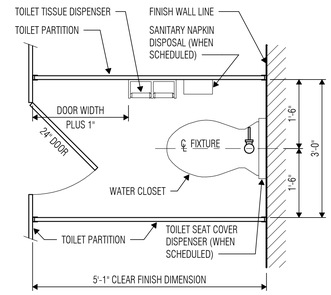
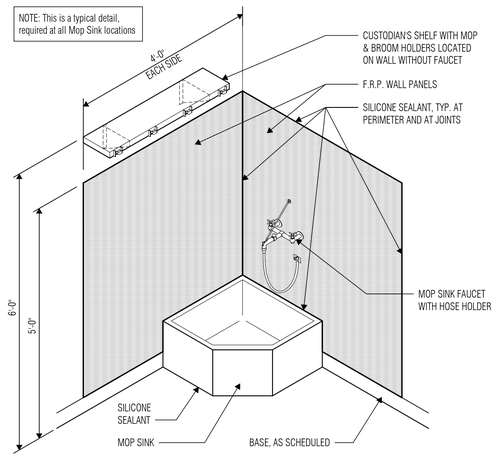


6 STANDARD TOILET COMPARTMENT MC031
SCALE: 3/4" = 1'-0"



7 CUSTODIAN ROOM WAINSCOT & ACCESSORIES MC018
SCALE: 3/4" = 1'-0"

TOILET ACCESSORY LEGEND

MARK	TOILET ACCESSORY ITEM	SIZE	STANDARD MOUNTING HEIGHT (Adult & Child)	ACCESSIBLE MOUNTING HEIGHT (Adult)	ACCESSIBLE MOUNTING HEIGHT (Child)	O.F.C.I.	O.F.O.I.	NOTES
A1	TOILET TISSUE DISPENSER, SINGLE-ROLL		MFR.	REF: A0.31	REF: A0.31			
A2	TOILET TISSUE DISPENSER, MULTI-ROLL		MFR.	REF: A0.31	REF: A0.31			
B1	GRAB BAR (SIDE WALL AT WATER CLOSET)	48"		35 1/2" TO TOP	26 1/2" TO TOP			
B2	GRAB BAR (BACK WALL AT WATER CLOSET)	42"		35 1/2" TO TOP	26 1/2" TO TOP			
C1	MIRROR, FRAMED (ABOVE LAVS AND COUNTERS)	24" x 36"	5" ABV LAV	40" TO BOT.R.S.	38" TO BOT.R.S.			6
D1	MIRROR, UNFRAMED (ABOVE LAVS & COUNTERS)	PER DETAIL	PER DETAIL	40" TO BOT.	38" TO BOT.			
E1	PAPER TOWEL DISPENSER / WASTE RECEPTACLE (SEMI-RECESSED)	12 GALLON	MATCH ACCESS	47" TO CTRL.	43" TO CTRL.			7
E3	PAPER TOWEL DISPENSER (RECESSED)		MATCH ACCESS	47" TO CTRL.	43" TO CTRL.			7
F1	SANITARY NAPKIN DISPOSAL (SURFACE-MOUNTED)		MFR.	25" TO TOP				
G1	SOAP DISPENSER, WALL-MOUNTED		MATCH ACCESS	47" TO CTRL.	43" TO CTRL.			7
H2	HAND DRYER (SEMI-RECESSED)		MATCH ACCESS	47" TO CTRL.	43" TO CTRL.			7
J1	MOP & BROOM HOLDER/ CUSTODIAN UTILITY SHELF	36"	PER DETAIL					
J2	MOP & BROOM HOLDER	36"	PER DETAIL					
K1	COAT/TOWEL/ROBE HOOK		MFR.	48"	44"			7
P1	BABY CHANGING STATION	PER SPECS	REF. A0.31		REF. A0.31			
S2	WASTE RECEPTACLE (RECESSED)	12 GALLON	42" TO TOP	42" TO TOP	42" TO TOP			

NOTES:
1. All items are contractor-furnished and installed unless noted otherwise.
2. Provide blocking in walls for all wall-mounted items, including O.F.C.I. and O.F.O.I. items. Refer to Sheet A2.22.
3. All mounting heights are from finished flooring material at centerline of accessory.
4. Roll-in Type Showers larger than 30"x60" will require different toilet accessories.
5. Set height of curtain rod so curtain is 1" above threshold.
6. Mounting height of mirrors at Standard Height Lavatories should be installed such that the bottom of mirror aligns with bottom of accessible mirror when possible.
7. Child Accessible Mounting Height shall be 40" when primary users are ages 6 through 8, and 36" when primary users are ages 3 through 4.

ABBREVIATIONS:
ACCESS. = ACCESSIBLE
BOT. = BOTTOM
BOT.R.S. = BOTTOM OF REFLECTIVE SURFACE
CTRL. = CONTROLS
STD. = STANDARD
See INDEX Sheet for additional abbreviations

TOILET & SHOWER NOTES

1. Install all accessible plumbing fixtures and toilet accessories in accordance with the Texas Accessibility Standards, and as indicated on this sheet. Install all non-accessible plumbing fixtures and toilet accessories at manufacturers' recommended mounting heights, unless noted otherwise.
2. At accessible toilet rooms and compartments, install water closets with the centerline of fixture at 1'-5" off the side wall finish material. At both ambulatory-accessible and non-accessible toilet compartments, install water closets at the center of the compartment.
3. Install hand-operated flush controls for wheelchair accessible water closets on the open side of the water closet. Flush control assembly shall not extend above grab bar, and top of flush control assembly shall be held a minimum of 1-1/2" below the grab bar.

TOILET PLUMBING FIXTURE LEGEND

MARK	PLUMBING FIXTURE ITEM	MOUNTING HEIGHT (A.F.F.)	NOTES
L	LAVATORY - STANDARD	MATCH ACCESS.	
LA	LAVATORY- ADULT ACCESSIBLE	34" TO RIM	4
EA	ELECTRIC WATER COOLER (HIGH/LOW UNIT) - ADULT ACCESSIBLE	36" TO LOW SPOUT	4
EHA	ELECTRIC WATER COOLER (HIGH - STANDING) - ADULT ACCESSIBLE	42" TO SPOUT	
ELA	ELECTRIC WATER COOLER (LOW) - ADULT ACCESSIBLE	36" TO SPOUT	4
U	URINAL - STANDARD	24" TO RIM	6
UA	URINAL - ADULT ACCESSIBLE	17" TO RIM	4
W	WATER CLOSET - STANDARD	16" TOP OF SEAT	3
WA	WATER CLOSET - ADULT ACCESSIBLE	18" TOP OF SEAT	3

NOTES:
1. Note that the architectural marks in this legend may differ from the designations in the MEP Plumbing Legend.
2. Reference MEP Plumbing drawings and legends for additional fixtures.
3. Mounting height at floor-mounted fixture might vary slightly based on actual product selected.
4. Mounting height is based on maximum allowable and cannot be exceeded.
5. The TAS required kneespace of 27" is not provided using this mounting height; ensure spout is located 3-1/2" max. from front edge/bumper as required for parallel approach per the TAS.
6. For standard urinals at child-only facilities, provide 20" to rim.

ABBREVIATIONS:
ACCESS. = ACCESSIBLE
STD. = STANDARD
See INDEX Sheet for additional abbreviations

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT — KAREN V. BROWN — 23211 — STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
TYPICAL TOILET ROOM DETAILS, TOILET ACCESSORY LEGEND

SHEET NO.
A2.30

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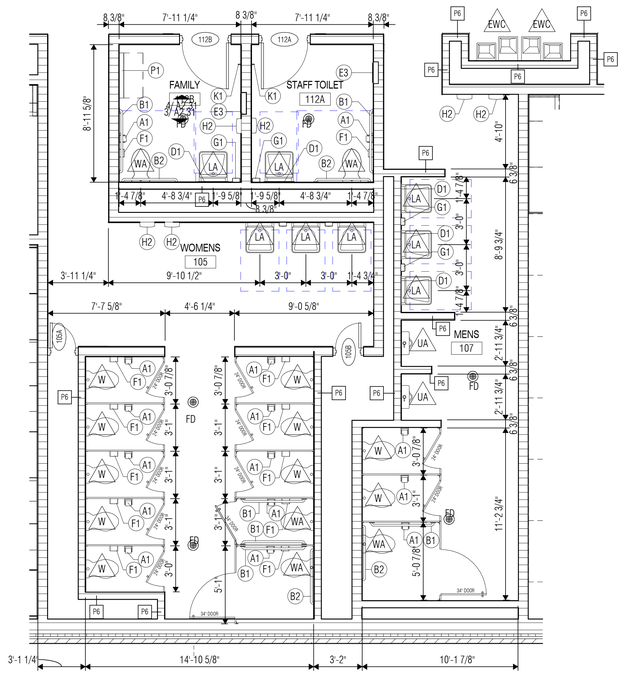
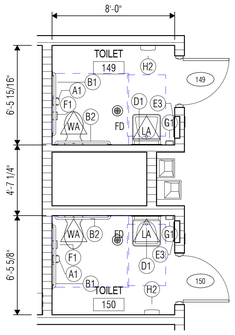
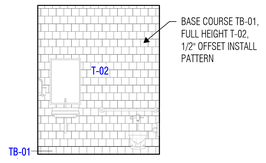


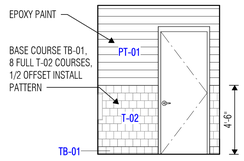
1 ENLARGED RESTROOM PLAN
SCALE: 1/4" = 1'-0"



2 149/150 - TOILET - ENLARGED PLAN
SCALE: 1/4" = 1'-0"



3 RESTROOM TILE - WET WALL, TYPICAL
SCALE: 1/4" = 1'-0"



4 RESTROOM TILE - NON-WET WALL, TYPICAL
SCALE: 1/4" = 1'-0"

ENLARGED FLOOR PLAN NOTES

1. Dimensions on Enlarged Floor Plans are to face of wall finish material unless noted otherwise.
2. Dashed lines shown on Enlarged Floor Plans indicate accessibility requirements and are indicated for information only.
3. Install all accessible plumbing fixtures and toilet accessories in accordance with the Texas Accessibility Standards and as indicated on Sheets A0.31, Sheet A2.30 and Sheet A2.31.
4. Install all non-accessible plumbing fixtures and toilet accessories at manufacturers' recommended mounting heights, unless noted otherwise.
5. Refer to Toilet Accessory Legend on Sheet A2.30 for Toilet Accessory information and mounting heights.
6. At accessible toilet compartments, install water closets with the centerline of fixture at 1'-5" off the side wall finish material. At both ambulatory-accessible and non-accessible toilet compartments, install water closets at the centerline of the compartment.
7. Install hand-operated flush controls for wheelchair accessible water closets on the open side of the water closet. Flush control assembly shall not extend above grab bar, and top of flush control assembly shall be held a minimum of 1-1/2" below the grab bar.
8. Provide pipe protection for all exposed piping at both accessible and non-accessible lavatories.
9. Floor drains are indicated for location purposes only. Refer to Plumbing Drawings for floor drain sizes and plumbing information.

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05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
ENLARGED TOILET PLANS AND ELEVATIONS

SHEET NO.
A2.31

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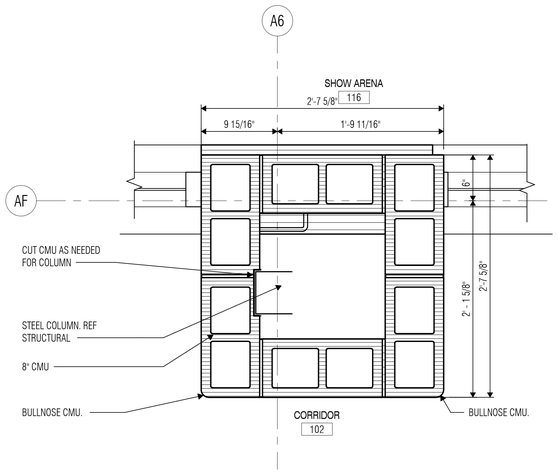
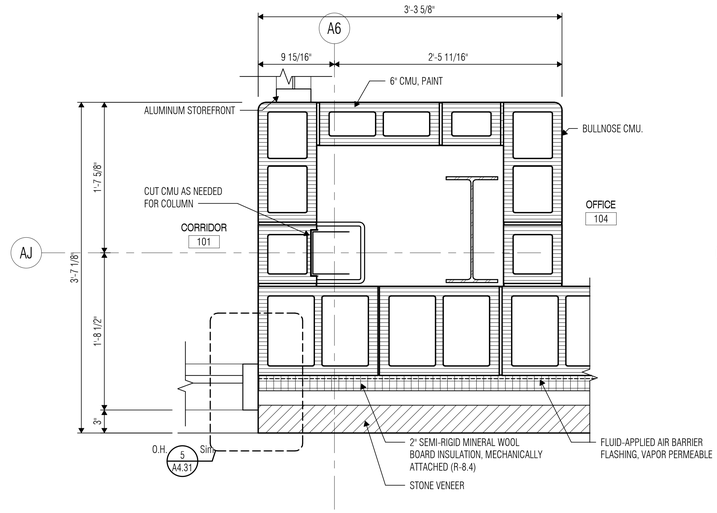
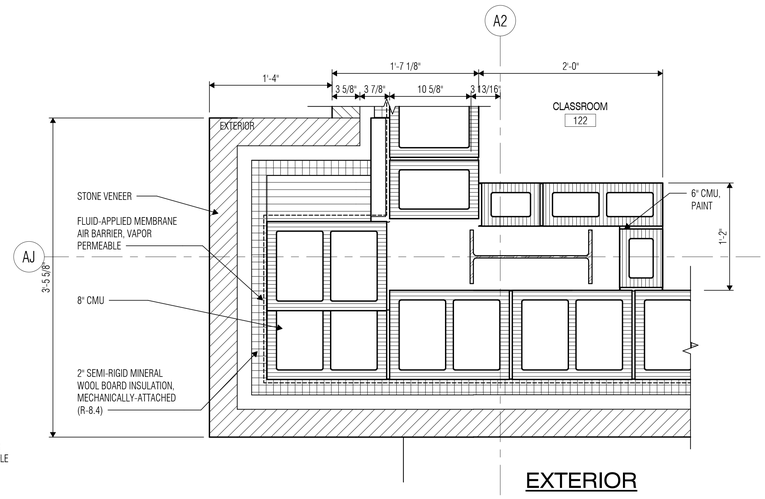


1 PLAN DETAIL - CMU COLUMN WRAP
SCALE: 1 1/2" = 1'-0"



2 PLAN DETAIL - OFFICE 104
SCALE: 1 1/2" = 1'-0"



3 PLAN DETAIL - CLASSROOM 122
SCALE: 1 1/2" = 1'-0"

4 PLAN DETAIL - UNIT B PILASTER
SCALE: 1 1/2" = 1'-0"

5 PLAN DETAIL - CLASSROOM
SCALE: 1 1/2" = 1'-0"

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ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
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Designer	Quality Control
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Proj. Arch.	
KT	

PROJECT NO.
24-057.00

SHEET TITLE
ENLARGED PLAN DETAILS

SHEET NO.
A2.32

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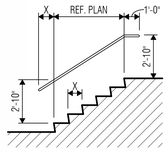
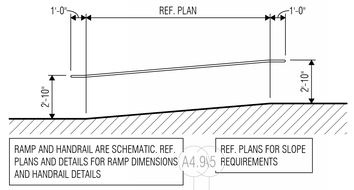


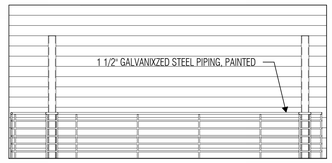
NOTES:
1. Handrails shall be continuous along both sides of stairs. The inside handrail of switchback or dogleg stairs shall always be continuous.
2. If handrails are not continuous, they shall extend at least 12" beyond the top riser and one tread depth beyond the bottom riser. At the top, extension shall be parallel with the floor or ground surface. At the bottom, the handrail shall continue to slope.
3. The clear space between the handrail and the wall shall be 1 1/2".
4. Gripping surfaces shall be continuous.
5. Ends of handrails shall be returned smoothly to floor, wall or post.
6. Handrails shall not rotate in their fittings.

1 TYPICAL STAIR HANDRAIL ELEVATION
HC300
SCALE: 1/4" = 1'-0"

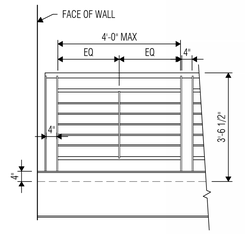


NOTES:
1. Handrails shall extend at least 12" beyond the top and the bottom of the ramp segment and shall be parallel with the floor or ground surface.
2. The clear space between the handrail and the wall shall be 1 1/2".
3. Gripping surfaces shall be continuous.
4. Ends of handrails shall be returned smoothly to floor wall, or post.
5. Handrail shall not rotate in their fittings.
6. Handrails shall be provided on both sides of ramp segments.

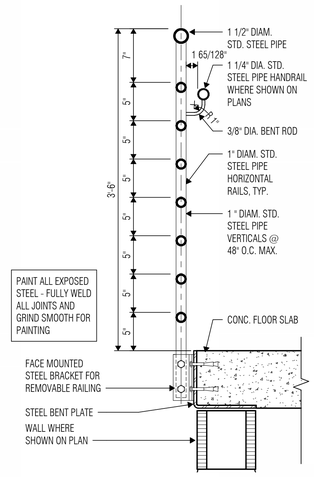
2 TYPICAL RAMP HANDRAIL ELEVATION
HC301
SCALE: 1/4" = 1'-0"



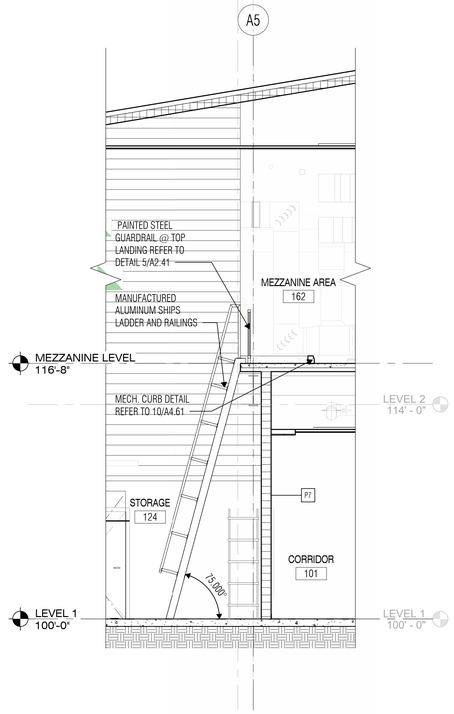
3 WASH/TRIM HANDRAIL
SCALE: 1/4" = 1'-0"



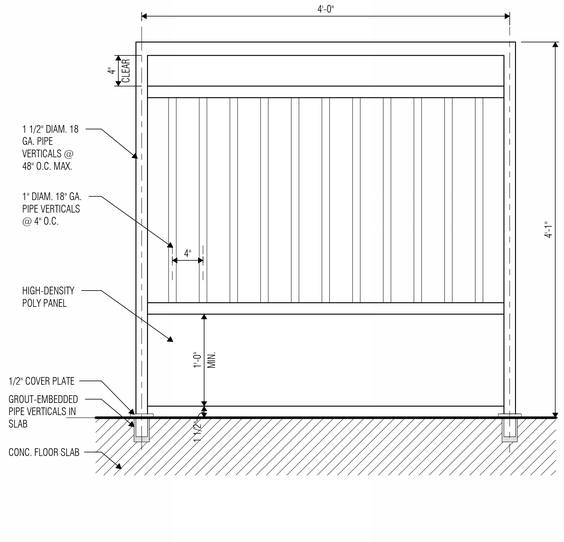
4 MC126 - GUARDRAIL ELEVATION
SCALE: 1/2" = 1'-0"



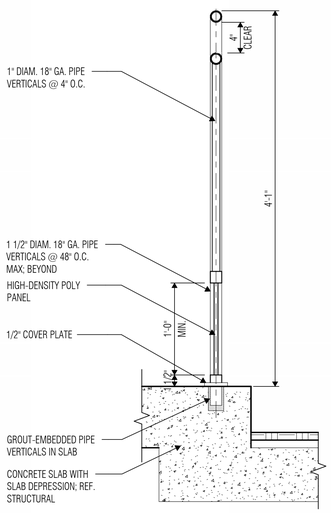
5 REMOVABLE GUARDRAIL DETAIL
SCALE: 1 1/2" = 1'-0"



6 MEZZANINE ACCESS
SCALE: 1/4" = 1'-0"



8 LIVESTOCK CONTAINMENT PANEL ELEVATION
SCALE: 1 1/2" = 1'-0"



9 LIVESTOCK CONTAINMENT PANEL DETAIL
SCALE: 1 1/2" = 1'-0"

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ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
ENLARGED STAIR PLANS & SECTIONS

SHEET NO.
A2.41

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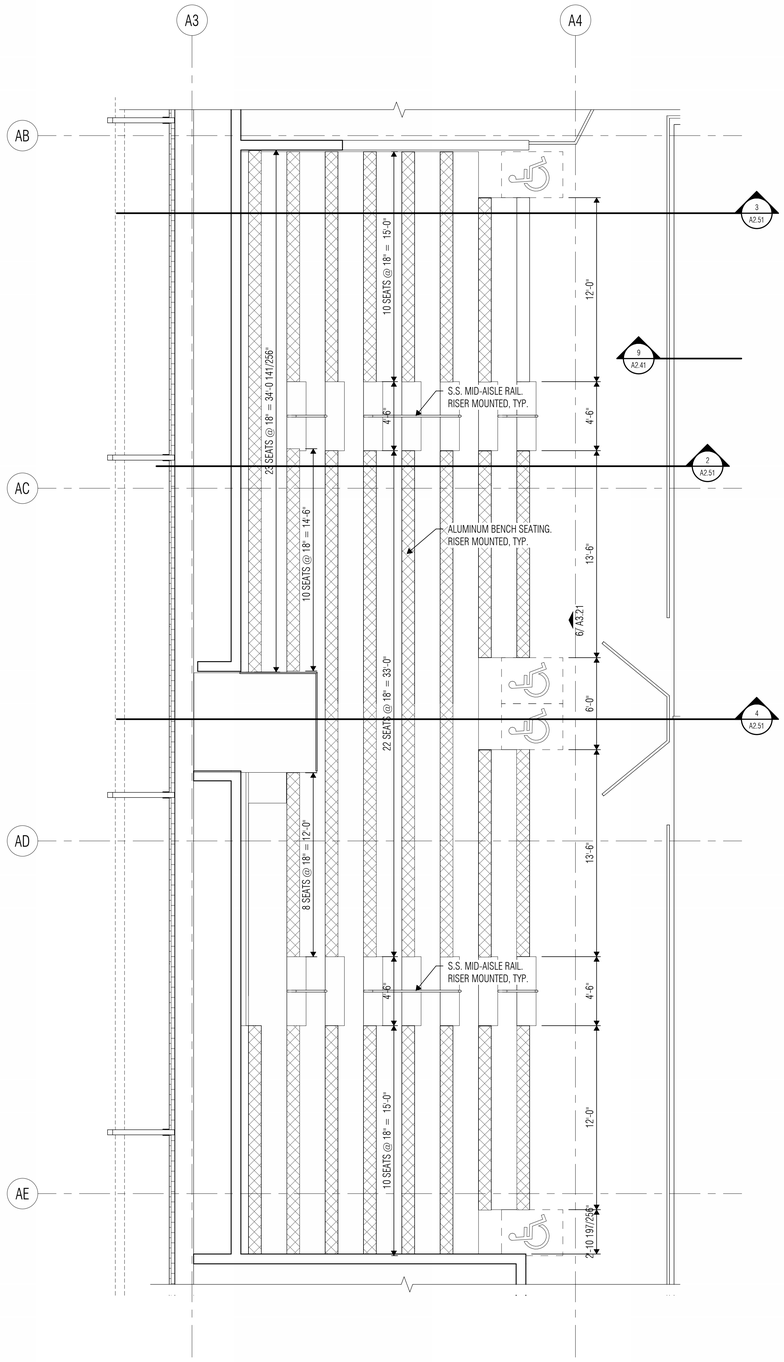
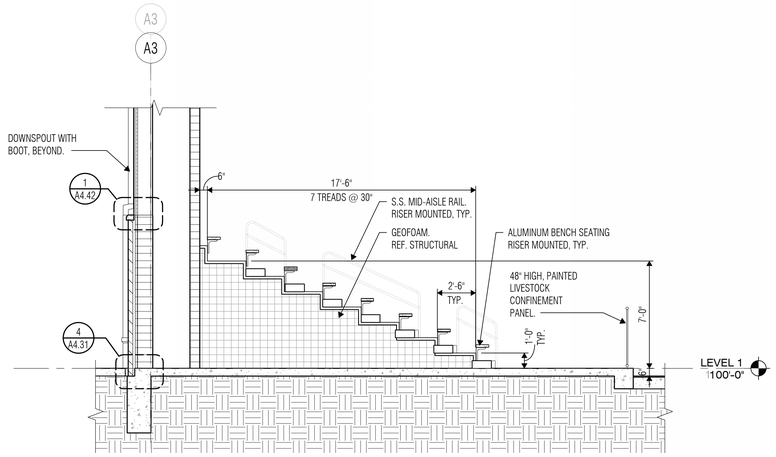
SEAT COUNT

SEATING
590 BENCH SEATS
8 HC SPACES
598 TOTAL SEATING

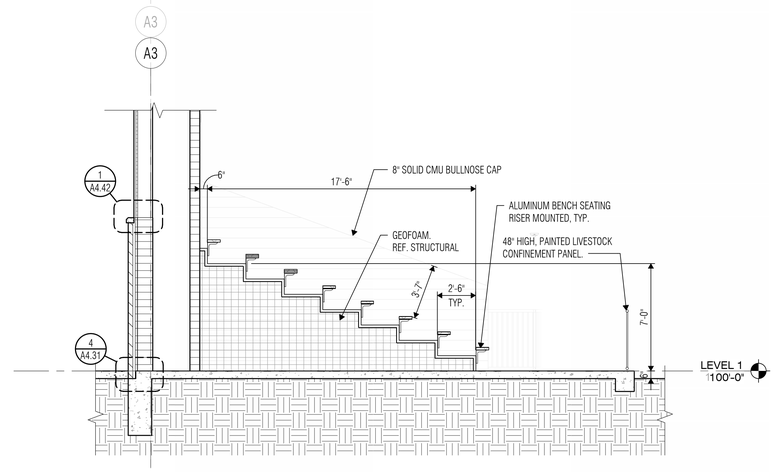
2 SEATING SECTIONS @ 295 +
4 HC SPACE PER SECTION = 598



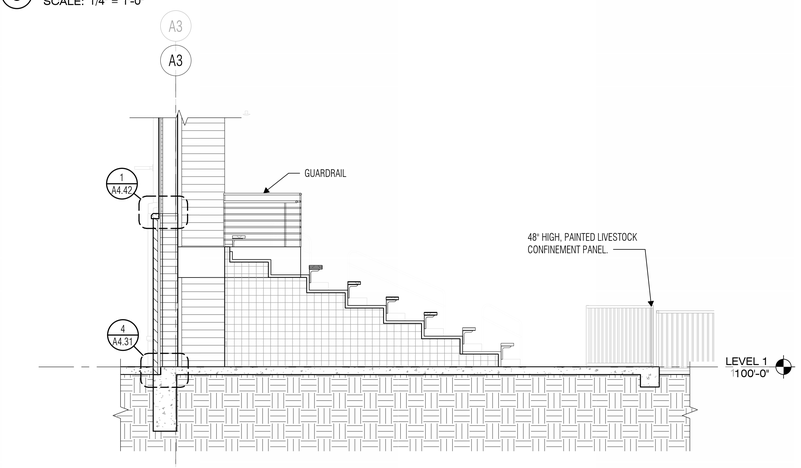
1 ENLARGED SEATING PLAN
SCALE: 1/4" = 1'-0"



2 SECTION - SEATING SECTION
SCALE: 1/4" = 1'-0"



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



4 SECTION - SEATING CAMERA PLATFORM
SCALE: 1/4" = 1'-0"

ARCHITECT

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT KAMREN V. BROWN 33911 STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
ENLARGED SEATING PLAN

SHEET NO.
A2.51

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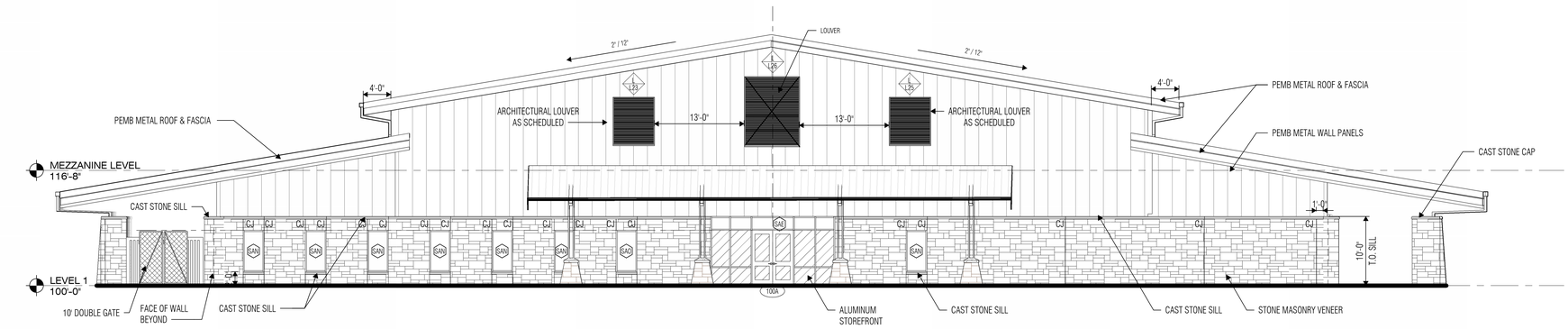
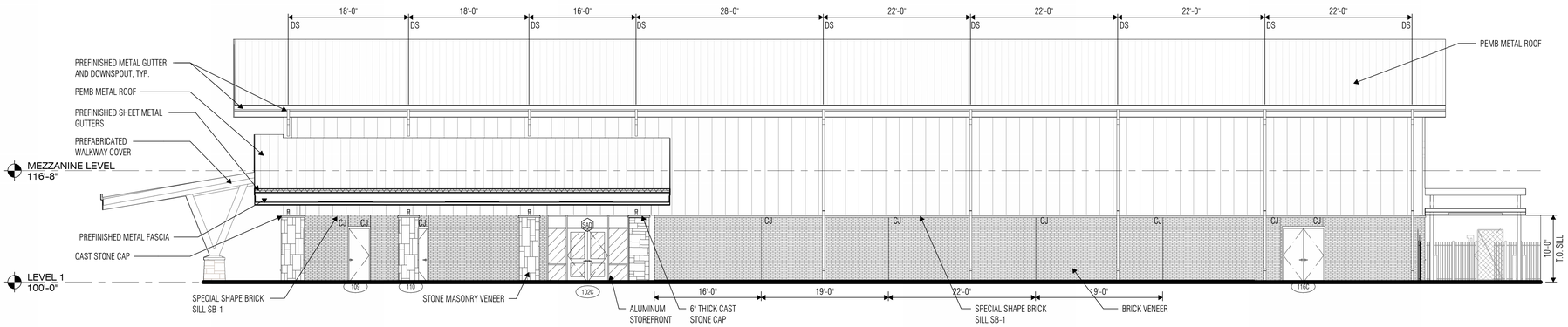


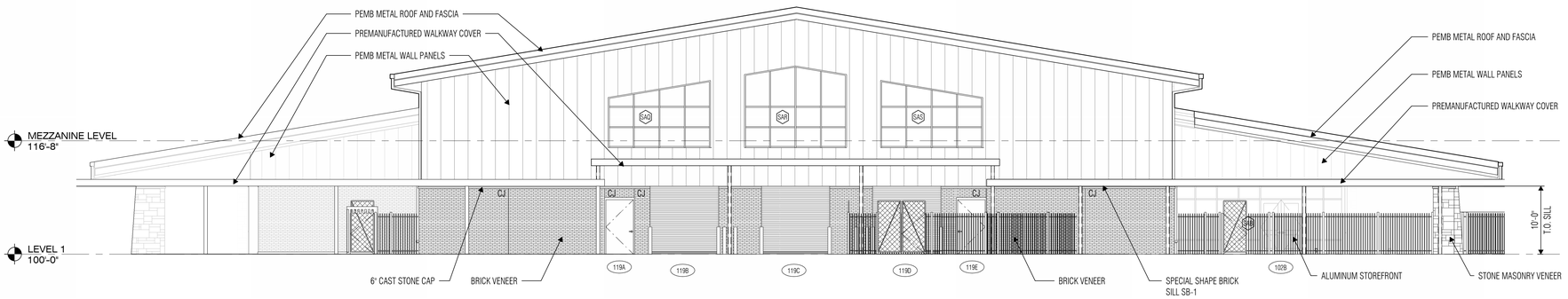
1 SOUTH ELEVATION - SHOW AREA

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



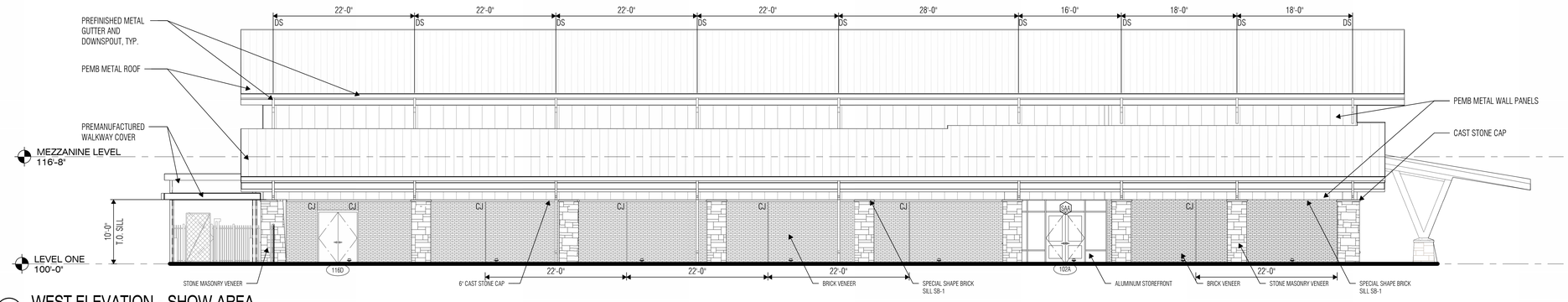
2 EAST ELEVATION - SHOW AREA

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



3 NORTH ELEVATION - SHOW AREA

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



4 WEST ELEVATION - SHOW AREA

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

EXTERIOR ELEVATION NOTES

1. Refer to Sheet A3.11 for Typical Control Joint and Building Expansion Joint Details.
2. Based on the applicable design criteria, submit the proposed pattern of control joints in masonry veneer, CMU and stucco/cement plaster to the Architect for review and approval prior to construction.
3. Verify mounting heights of all Electrical and Mechanical items on the exterior of the building prior to construction, whether specifically indicated on the Exterior Elevations or not.
4. Install cast stone in accordance with the recommendations of the Cast Stone Institute, unless specifically noted or detailed otherwise.
5. Refer to Sheet A3.11 for Loose Lintel Details. Refer to Structural Drawings for maximum span and bearing requirements.
6. Terminate recessed and projected masonry veneer courses at 4" from intersecting window frames, door frames, sloping roofs, etc., unless noted otherwise.

EXTERIOR ELEVATION LEGEND

A	BRICK VENEER, TYPE 'A'
DS	DOWNSPOUT 5/A5.31
CJ	CONTROL JOINT, REF. 7 & 8/A3.11
SXX	ALUMINUM STOREFRONT, REF. SHEET A7.02

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT — LAUREN V. BROWN — 43511 — STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

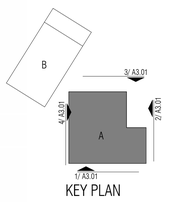
24-057.00

SHEET TITLE

EXTERIOR ELEVATIONS

SHEET NO.

A3.01



KEY PLAN

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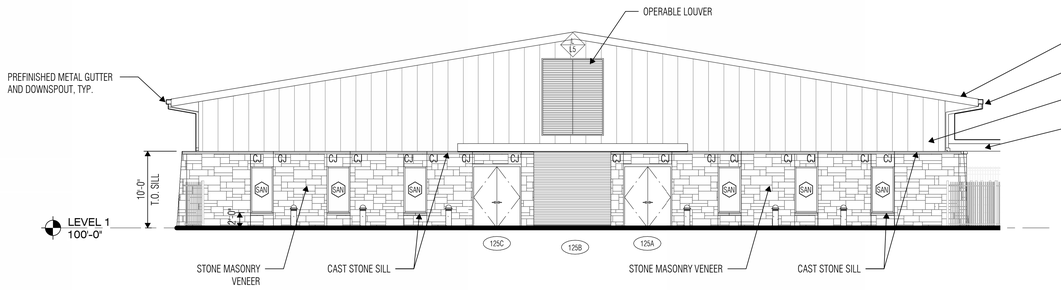
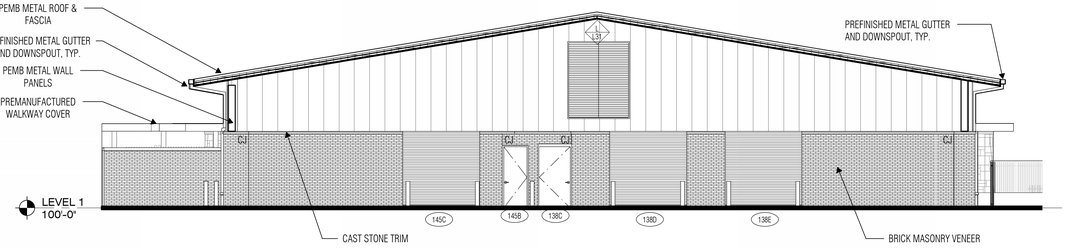
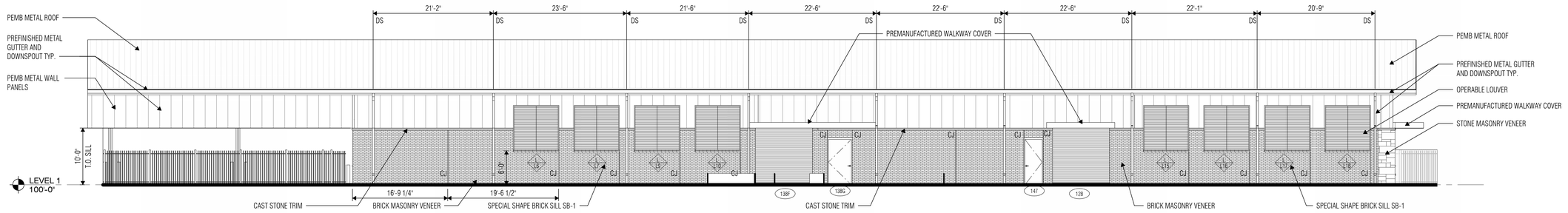


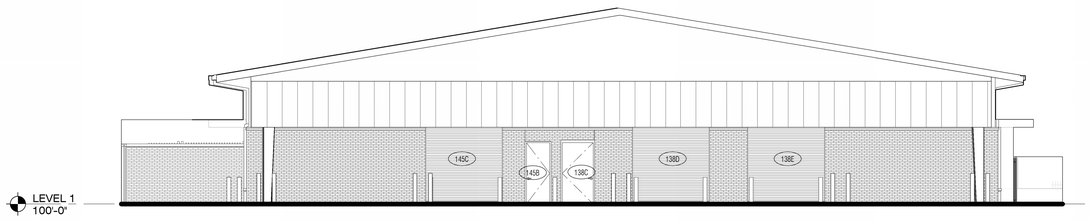
1 SOUTH ELEVATION - BARN
SCALE: 1/8" = 1'-0"



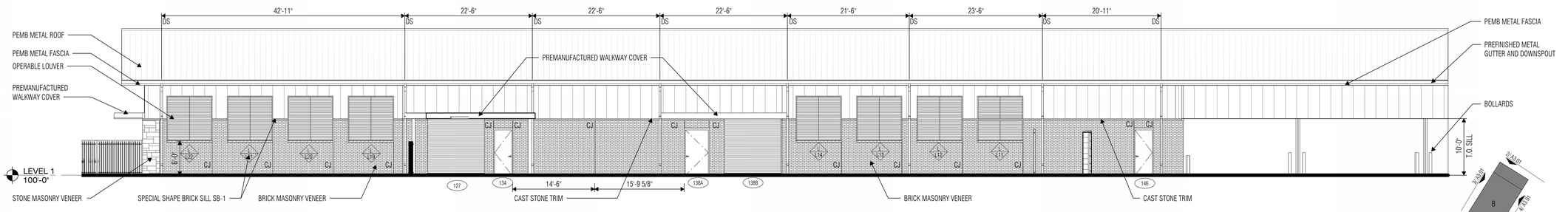
2 NORTH ELEVATION - BARN
SCALE: 1/8" = 1'-0"



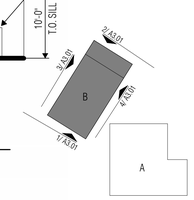
3 WEST ELEVATION - BARN
SCALE: 1/8" = 1'-0"



5 NORTH ELEVATION - BARN - COVERED AREA
SCALE: 1/8" = 1'-0"



4 EAST ELEVATION - BARN
SCALE: 1/8" = 1'-0"



KEY PLAN

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
LAH	VLK
Designer	Quality Control
ET	
Proj. Arch.	
KT	

PROJECT NO.
24-057.00

SHEET TITLE
EXTERIOR ELEVATIONS

SHEET NO.
A3.02

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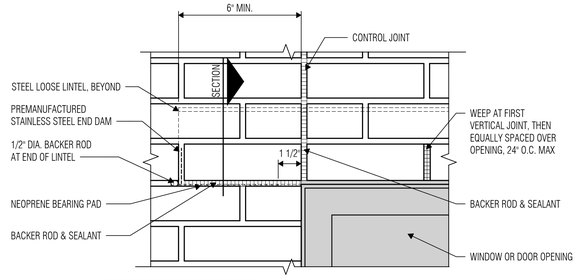
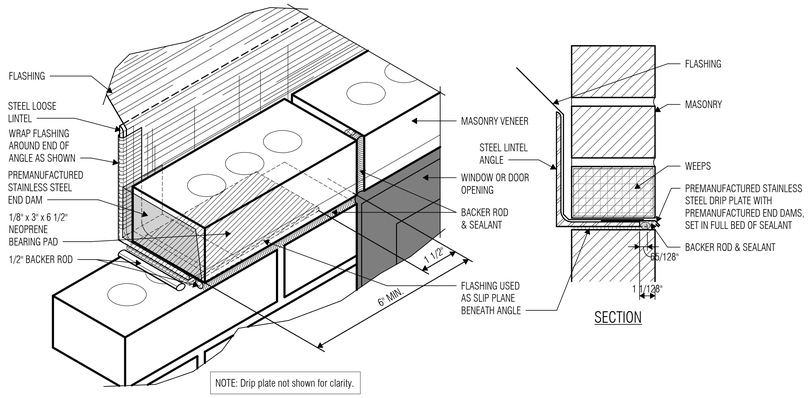


ELEVATION

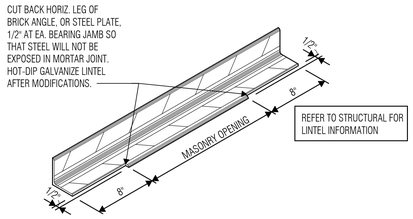


SECTION

1 X400 - MASONRY VENEER CONTROL JOINT AT LOOSE LINTEL

X400

SCALE: 3" = 1'-0"



2 LOOSE LINTEL DETAIL, TYP.

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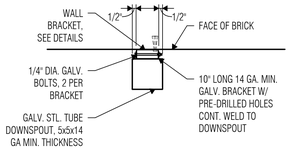
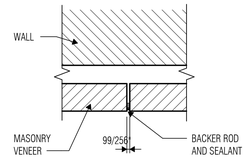


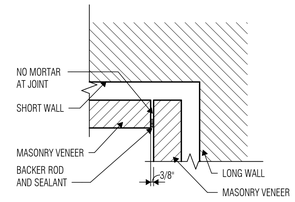
3 MC610 - DOWNSPOUT HANGER

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



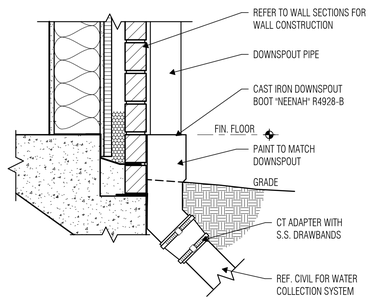
7 X007 - EXT. CONTROL JOINT

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



8 X002 - MASONRY VEEER CONTROL JOINT_INSIDE CORNER

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



4 MC611 - DOWNSPOUT BOOT

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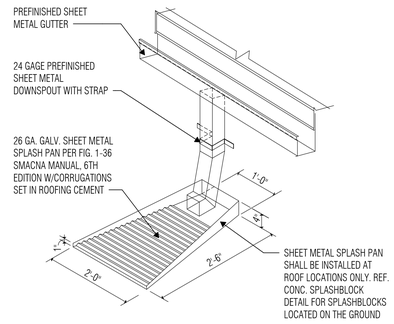

5 R713 - DOWNSPOUT & SPLASH PAN at ROOF

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

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EAGLE MOUNTAIN-SAGINAW ISD
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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT KATHRYN V. BROWN 23211 STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

24-057.00

SHEET TITLE

EXTERIOR ELEVATION DETAILS

SHEET NO.

A3.11

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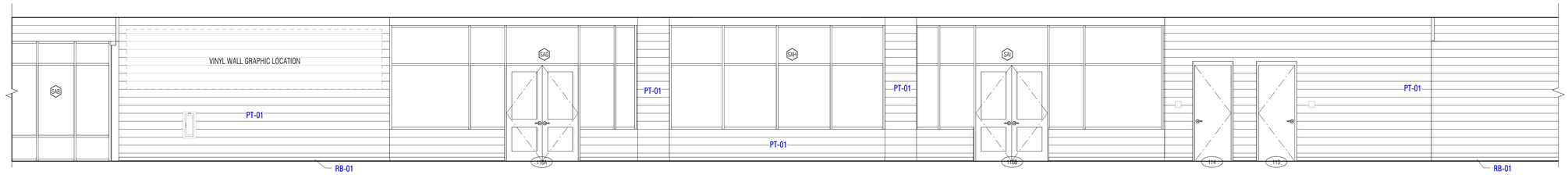
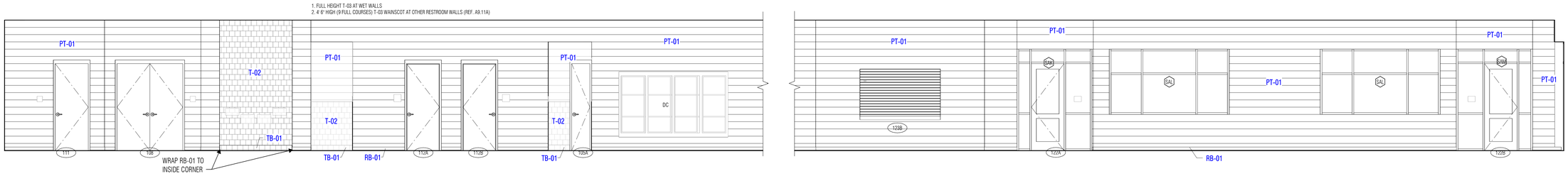
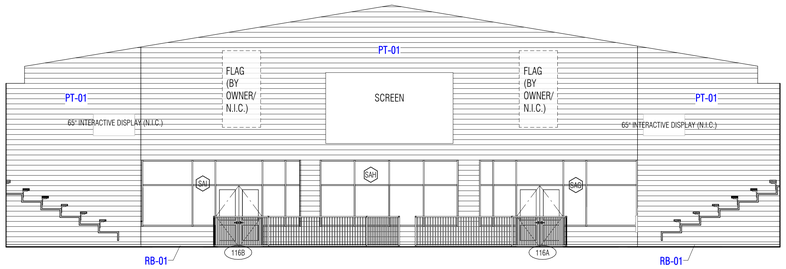


1 102 CORRIDOR - NORTH
SCALE: 1/4" = 1'-0"



2 111 CORRIDOR - SOUTH
SCALE: 1/4" = 1'-0"

3 114 SHOW ARENA - NORTH
SCALE: 1/8" = 1'-0"



4 114 SHOW ARENA - SOUTH
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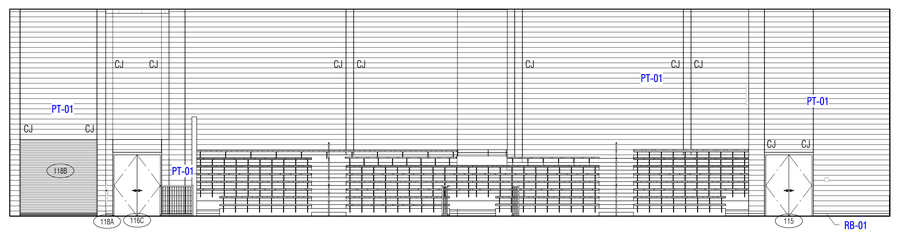
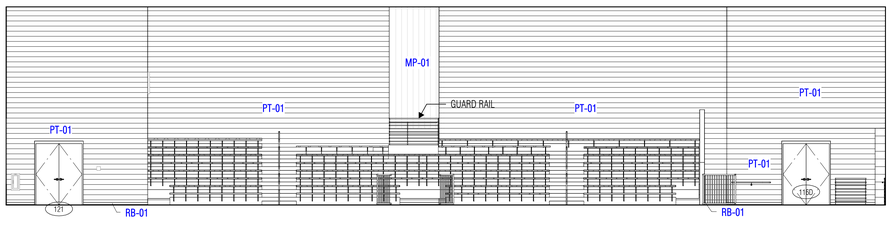
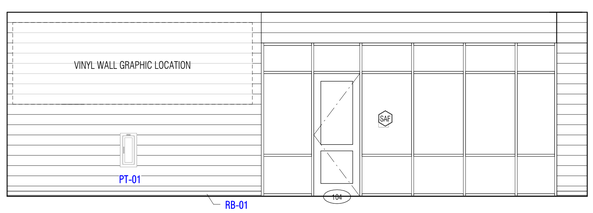


5 114 SHOW ARENA - EAST
SCALE: 1/8" = 1'-0"



6 114 SHOW ARENA - WEST
SCALE: 1/8" = 1'-0"



7 CORRIDOR 111 - EAST
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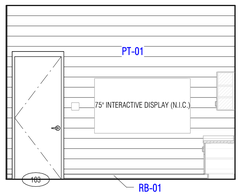
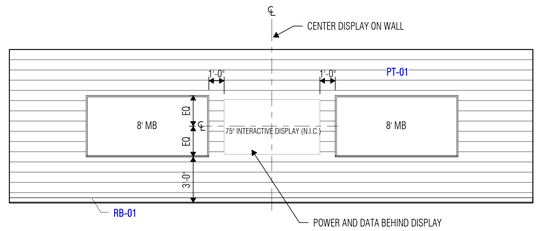
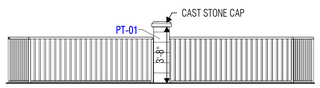


8 101 OFFICE - NORTH
SCALE: 1/4" = 1'-0"



9 120 CLASSROOM - TEACHING WALL TYP.
SCALE: 1/4" = 1'-0"

12 BARN - TYP.
SCALE: 1/8" = 1'-0"



11 STALL - TYP.
SCALE: 1/4" = 1'-0"

REF. SHEET A9.01 FOR MATERIAL INFORMATION

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
INTERIOR ELEVATIONS

SHEET NO.
A3.21

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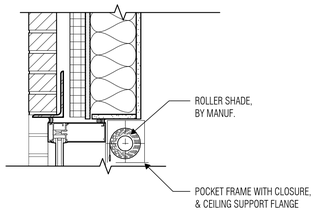

1 ROLLER SHADES
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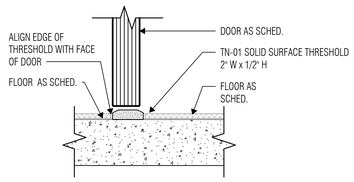

4 TRANSITION - WET AREAS
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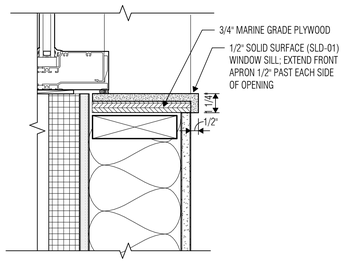

9 WINDOW SILL
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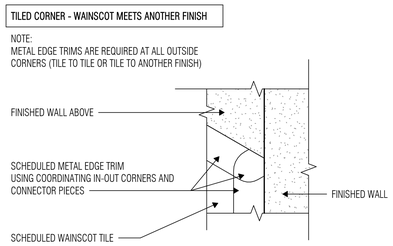

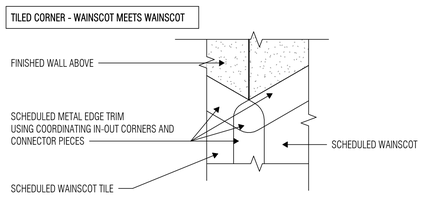

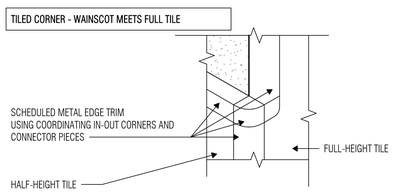

2 OUTSIDE CORNER WALL TILE TRIM
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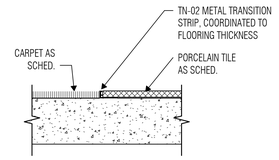
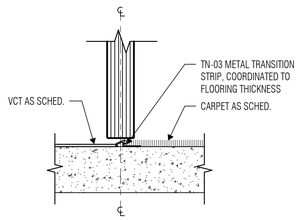
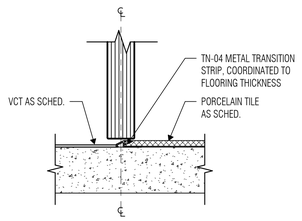


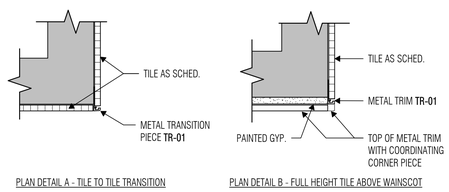
5 TRANSITION - CPT TO TILE
SCALE: 3" = 1'-0"



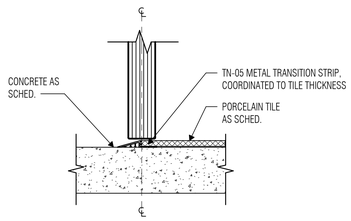
6 TRANSITION - CPT TO VCT
SCALE: 3" = 1'-0"



7 TRANSITION - TILE TO VCT
SCALE: 3" = 1'-0"



3 OUTSIDE CORNER WALL TILE TRIM - PLAN
SCALE: 3" = 1'-0"



8 TRANSITION - TILE TO CONCRETE
SCALE: 3" = 1'-0"

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EAGLE MOUNTAIN-SAGINAW ISD
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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT
KAREN V. BROWN
23211
STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
INTERIOR ELEVATION DETAILS

SHEET NO.
A3.31

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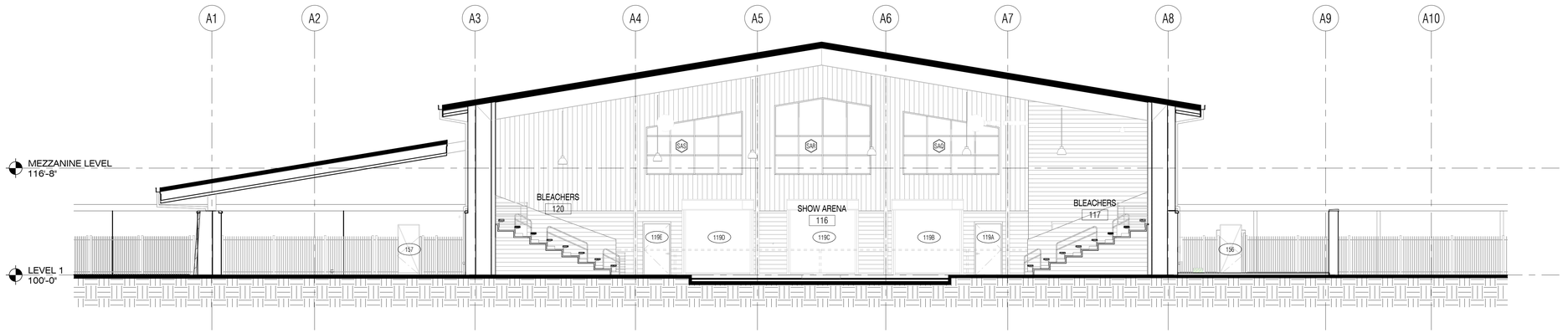
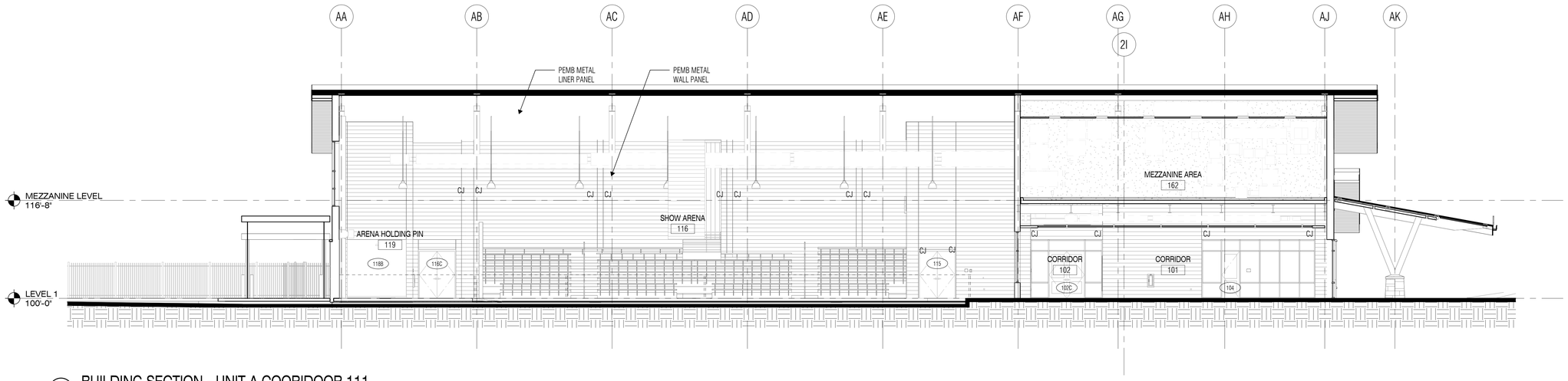
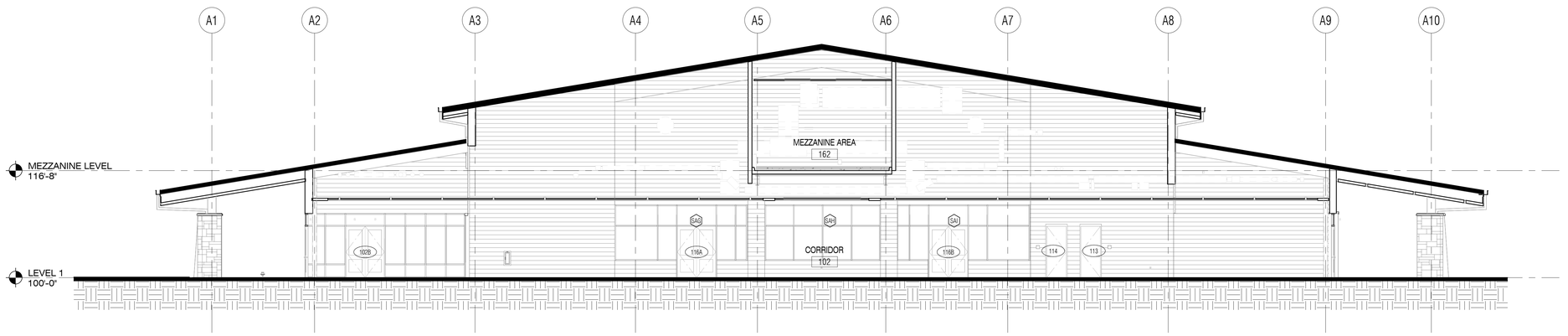


1 BUILDING SECTION - UNIT A SHOW ARENA 114
SCALE: 1/8" = 1'-0"



2 BUILDING SECTION - UNIT A COORIDOOR 111
SCALE: 1/8" = 1'-0"



3 BUILDING SECTION - UNIT A
SCALE: 1/8" = 1'-0"

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LICENSED REGISTERED ARCHITECT
LAUREN V. BROWN
23211
STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
BUILDING SECTIONS

SHEET NO.
A4.01

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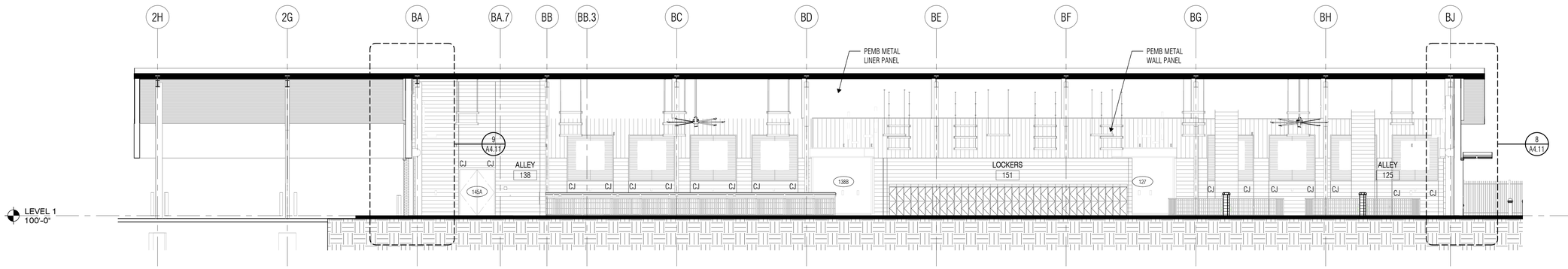
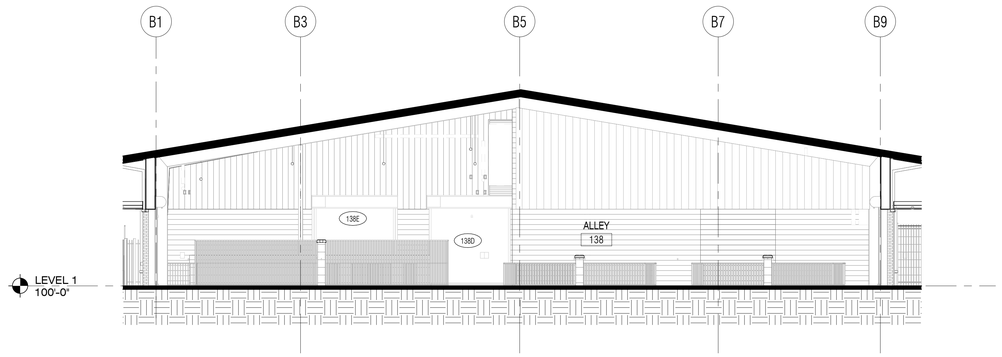
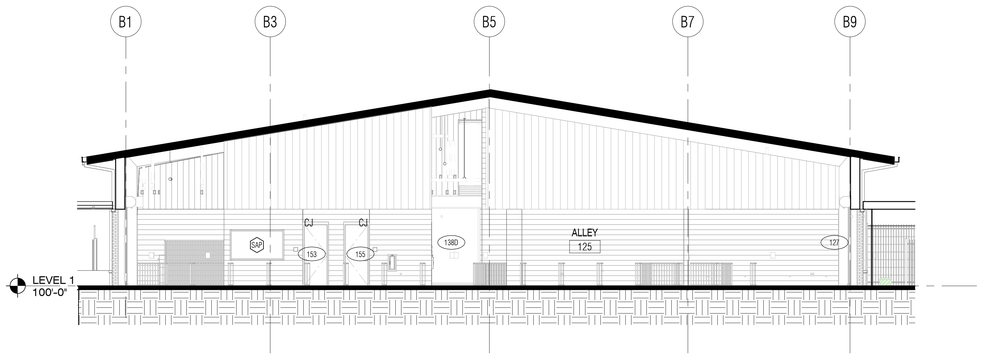


1 BUILDING SECTION - UNIT B LOCKERS 132
SCALE: 1/8" = 1'-0"



2 BUILDING SECTION - UNIT B ALLEY 141
SCALE: 1/8" = 1'-0"



3 BUILDING SECTION - UNIT B ALLEY 148
SCALE: 1/8" = 1'-0"

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LAUREN V. BROWN 29011 REGISTERED ARCHITECT STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
BUILDING SECTIONS

SHEET NO.
A4.02

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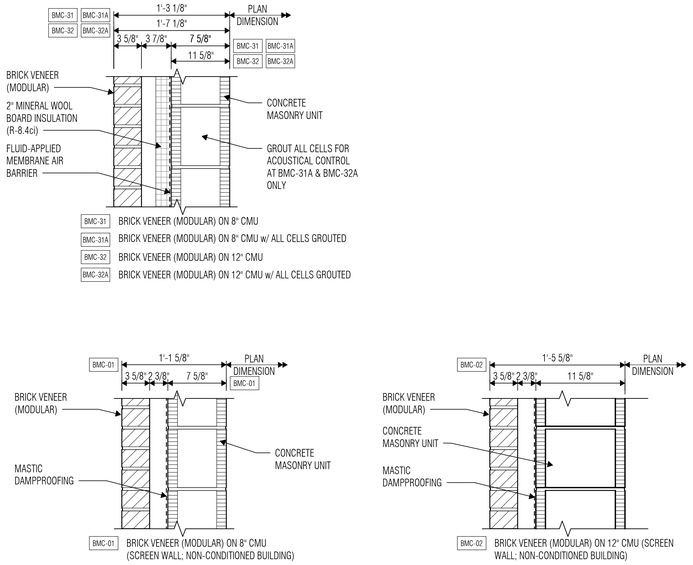
BUILDING ENVELOPE ASSEMBLY LEGEND - CLIMATE ZONE 3

KEY: CLADDING BACKUP CLIMATE ZONE MARK — BMS-31

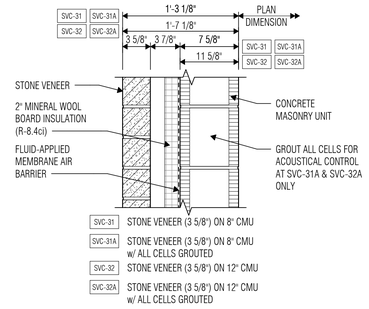
NOTES:
1. REFERENCE SHEET A4.10 FOR BUILDING ENVELOPE ASSEMBLY TYPES
2. CLIMATE ZONE DESIGNATION REFERS TO BUILDING LOCATION PER ENERGY CODE. 0 = NO CLIMATE ZONE CRITERIA AT THAT ASSEMBLY.

WALL ASSEMBLY		FLOOR ASSEMBLY	
Brick Veneer, Modular		CSG-01	Concrete Slab on Grade
BMC-01	Brick Veneer (Modular) on 8" CMU (Screen Wall; Non-Insulated Building)	CSS-01	Concrete Slab on Steel Deck & Framing
BMC-02	Brick Veneer (Modular) on 12" CMU (Screen Wall; Non-Insulated Building)		
BMC-31	Brick Veneer (Modular) on 8" CMU	**ROOF ASSEMBLY**	
BMC-31A	Brick Veneer (Modular) on 8" CMU w/ All Cells Grouted	MRS-32	Metal Roof System on Metal Building framing w/ Purlins
BMC-32	Brick Veneer (Modular) on 12" CMU		
BMC-32A	Brick Veneer (Modular) on 12" CMU w/ All Cells Grouted	**PARAPET ASSEMBLY**	
		SPP-01	Single-Ply Roof Membrane on Plywood Sheathing
Stone Veneer			
SVC-31	Stone Veneer on 8" CMU	**SOFFIT ASSEMBLY**	
SVC-31A	Stone Veneer on 8" CMU w/All Cells Grouted	MSS-01	Metal Soffit Panel on Suspended Steel Framing
SVC-32	Stone Veneer on 12" CMU	MSS-02	Metal Soffit Panel on Steel Stud Framing
SVC-32A	Stone Veneer on 12" CMU w/All Cells Grouted		
Metal Wall Panel			
MWC-35	Metal Wall Panel (Vertical) w/ Clip System on 8" CMU		
MWC-35A	Metal Wall Panel (Vertical) w/ Clip System on 8" CMU w/All Cells Grouted		
MWC-36	Metal Wall Panel (Vertical) w/ Clip System on 12" CMU		
MWC-35A	Metal Wall Panel (Vertical) w/ Clip System on 12" CMU w/All Cells Grouted		



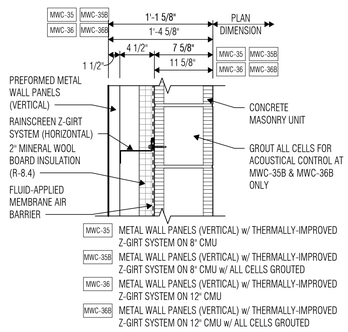
1 BUILDING ENVELOPE ASSEMBLY - WALL TYPES - BRICK VENEER

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



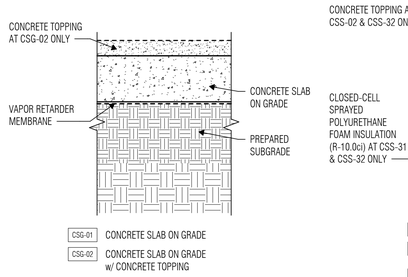
2 BUILDING ENVELOPE ASSEMBLY - WALL TYPES - STONE VENEER

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



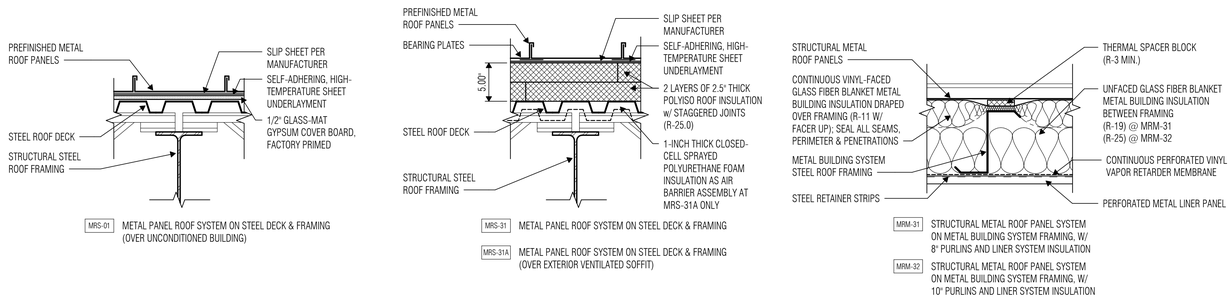
3 BUILDING ENVELOPE ASSEMBLY - WALL TYPES - METAL WALL PANEL

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



4 BUILDING ENVELOPE ASSEMBLY - FLOOR TYPES

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



5 BUILDING ENVELOPE ASSEMBLY - ROOF TYPES

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

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT — KAREN V. BROWN — #23011 — STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

24-057.00

SHEET TITLE

BUILDING ASSEMBLY TYPES

SHEET NO.

A4.10

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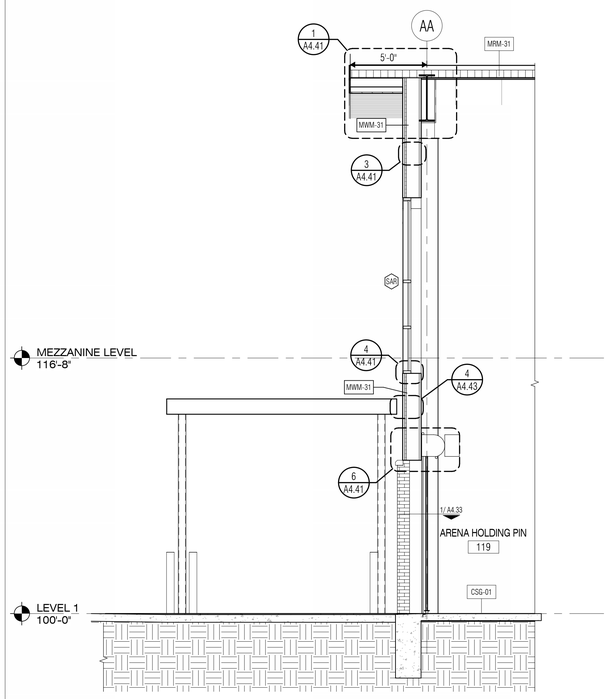
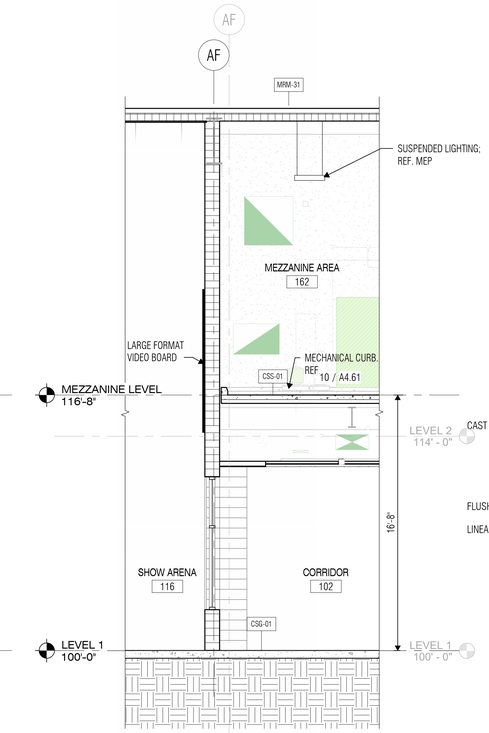
BUILDING ENVELOPE ASSEMBLY LEGEND - CLIMATE ZONE 3

KEY: CLADDING BACKUP CLIMATE ZONE MARK — BMS-31

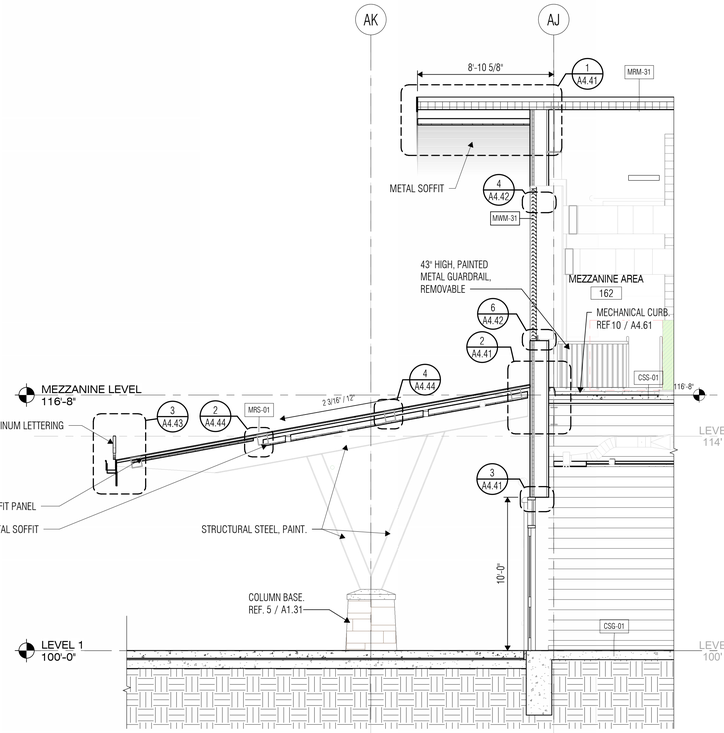
NOTES:
1. REFERENCE SHEET A4.10 FOR BUILDING ENVELOPE ASSEMBLY TYPES
2. CLIMATE ZONE DESIGNATION REFERS TO BUILDING LOCATION PER ENERGY CODE. 0 = NO CLIMATE ZONE CRITERIA AT THAT ASSEMBLY.



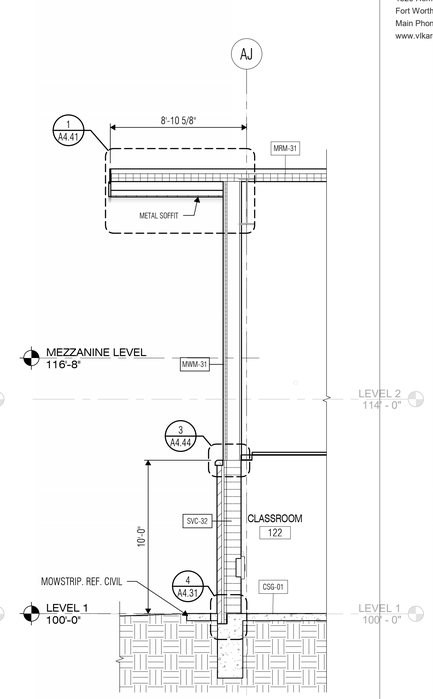
1 WALL SECTION - UNIT A - ARENA ENTRY
SCALE: 1/4" = 1'-0"



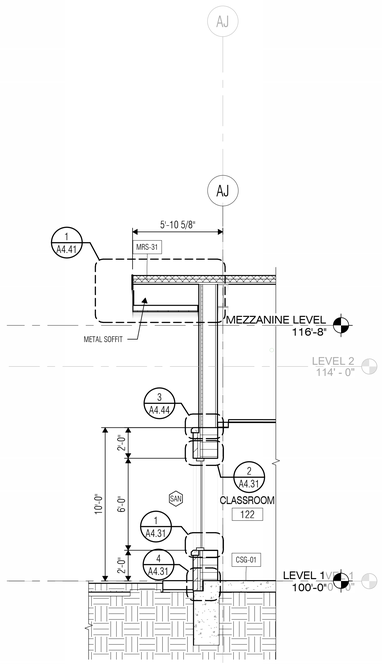
2 WALL SECTION - UNIT A - ARENA ENTRY
SCALE: 1/4" = 1'-0"



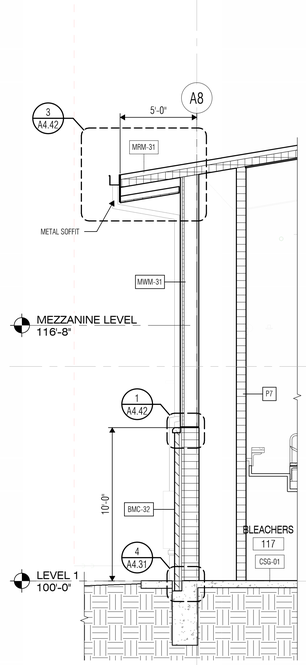
3 WALL SECTION - UNIT A - MAIN ENTRY
SCALE: 1/4" = 1'-0"



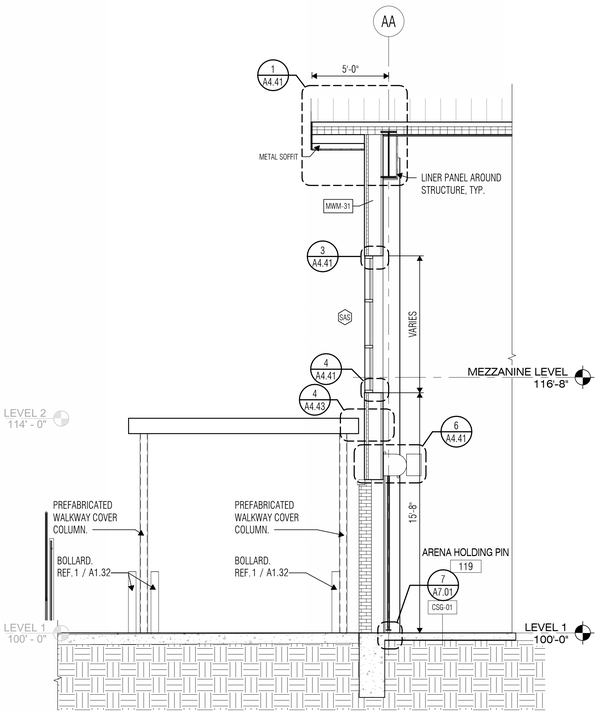
4 WALL SECTION - UNIT A - CLASSROOM
SCALE: 1/4" = 1'-0"



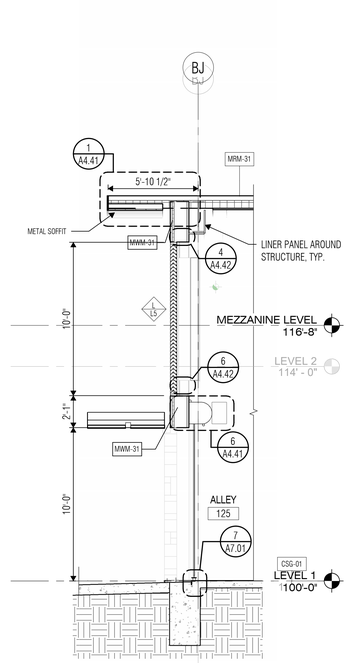
5 WALL SECTION - CLASSROOM
SCALE: 1/4" = 1'-0"



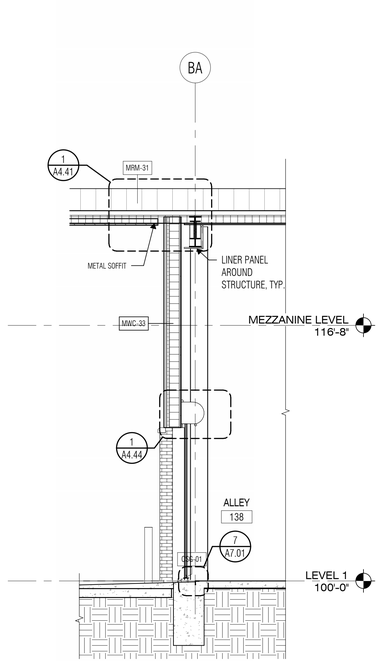
6 WALL SECTION - UNIT A - ARENA - EAST
SCALE: 1/4" = 1'-0"



7 WALL SECTION - UNIT A - ARENA
SCALE: 1/4" = 1'-0"



8 WALL SECTION - UNIT B - ALLEY SOUTH
SCALE: 1/4" = 1'-0"



9 WALL SECTION - UNIT B - ALLEY
SCALE: 1/4" = 1'-0"

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EAGLE MOUNTAIN-SAGINAW ISD
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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT — LAUREN V. BROWN — 23211 — STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
LAH	VLK
Designer	Quality Control
ET	
Proj. Arch.	
KT	

PROJECT NO.
24-057.00

SHEET TITLE
WALL SECTIONS

SHEET NO.
A4.11

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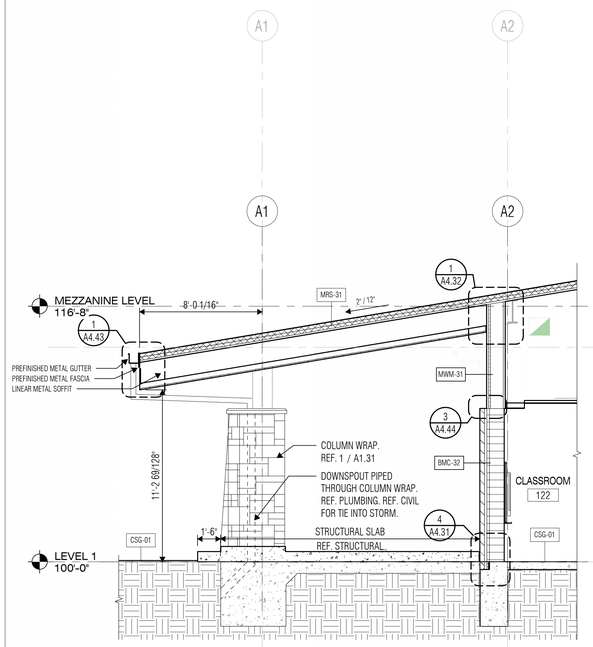
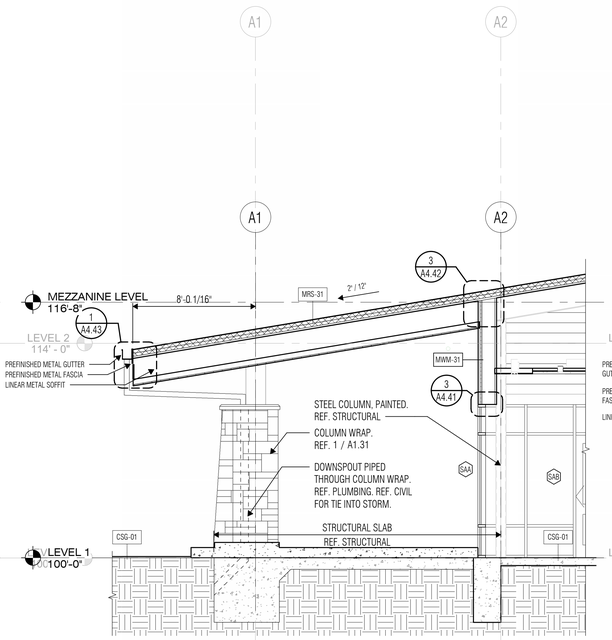
BUILDING ENVELOPE ASSEMBLY LEGEND - CLIMATE ZONE 3

KEY: CLADDING BACKUP CLIMATE ZONE MARK — BMS-31

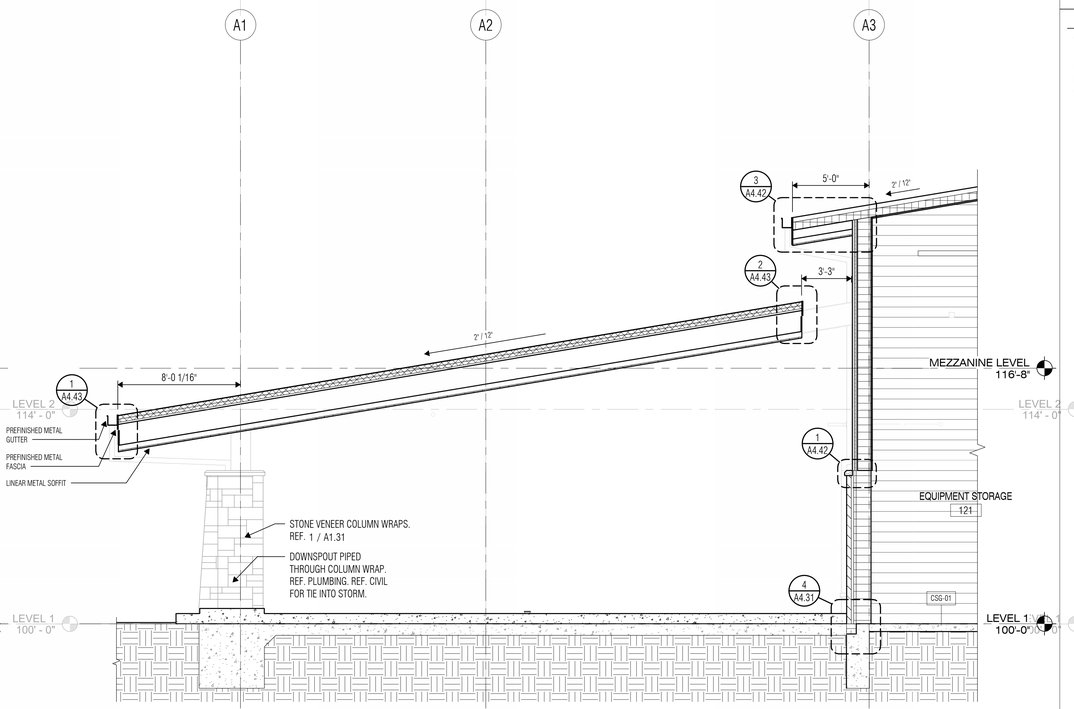
NOTES:
1. REFERENCE SHEET A4.10 FOR BUILDING ENVELOPE ASSEMBLY TYPES
2. CLIMATE ZONE DESIGNATION REFERS TO BUILDING LOCATION PER ENERGY CODE. 0 = NO CLIMATE ZONE CRITERIA AT THAT ASSEMBLY.



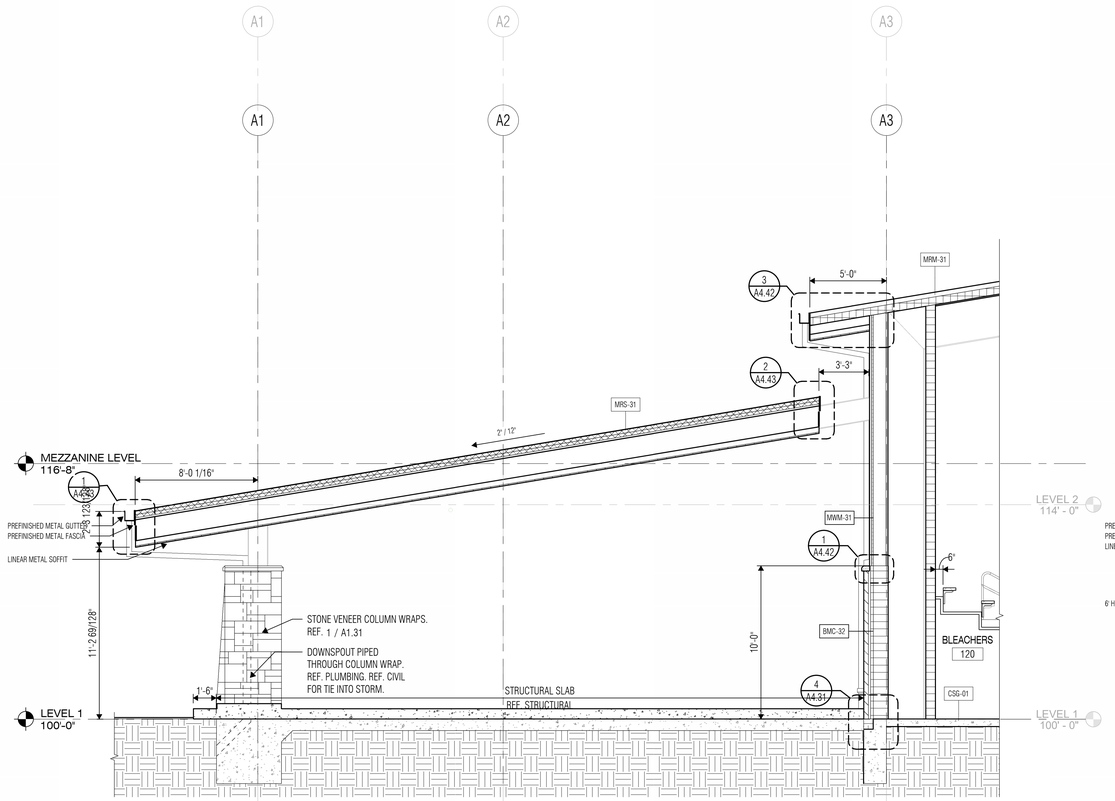
1 WALL SECTION - COVERED COURTYARD
SCALE: 1/4" = 1'-0"



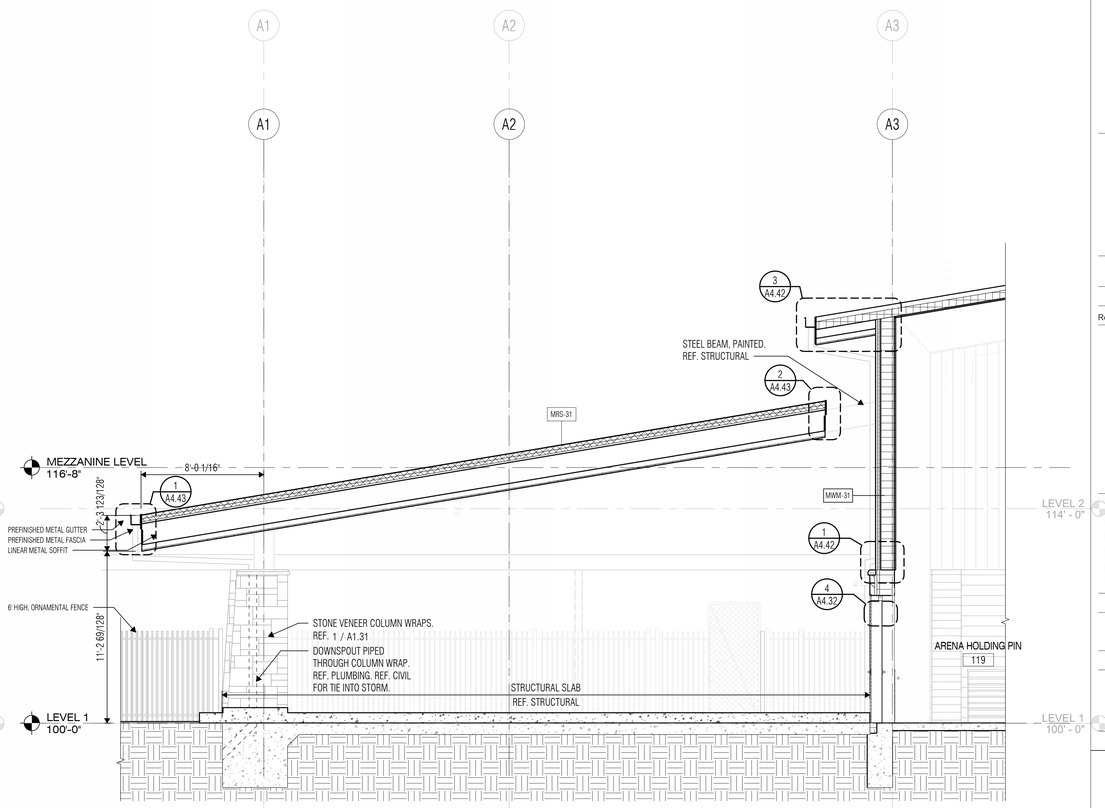
2 WALL SECTION - COVERED COURTYARD GLAZING
SCALE: 1/4" = 1'-0"



6 WALL SECTION - COVERED COURTYARD
SCALE: 1/4" = 1'-0"



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



4 WALL SECTION - COVERED COURTYARD
SCALE: 1/4" = 1'-0"

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT — KAREN V. BROWN — 23211 — STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
LAH	VLK
Designer	Quality Control
ET	
Proj. Arch.	
KT	

PROJECT NO.
24-057.00

SHEET TITLE
WALL SECTIONS

SHEET NO.
A4.12

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BUILDING ENVELOPE ASSEMBLY LEGEND - CLIMATE ZONE 3

KEY: CLADDING BACKUP CLIMATE ZONE MARK — BMS-31

NOTES:
1. REFERENCE SHEET A4.10 FOR BUILDING ENVELOPE ASSEMBLY TYPES
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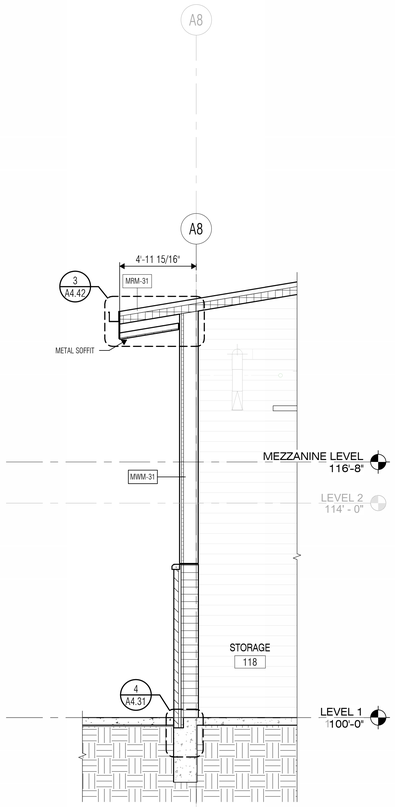
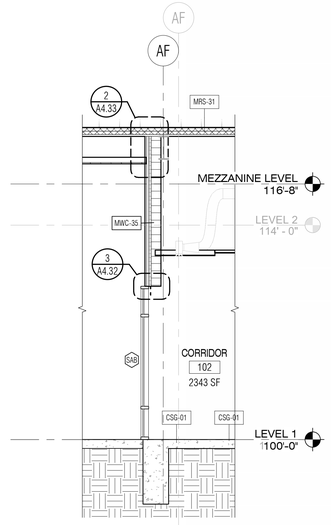
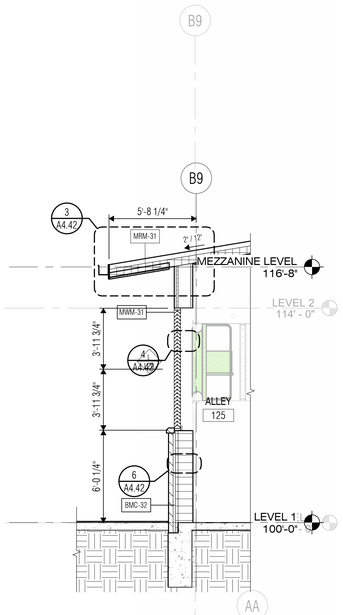


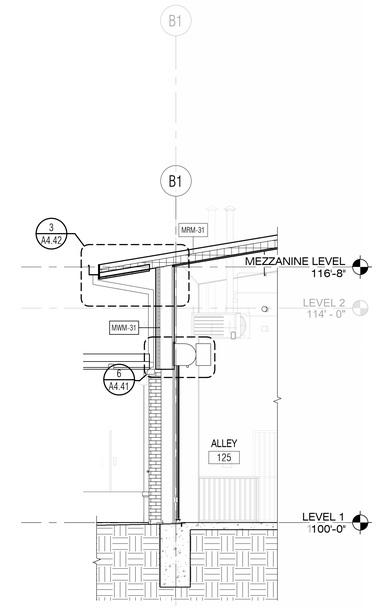
1 WALL SECTION - STORAGE
SCALE: 1/4" = 1'-0"



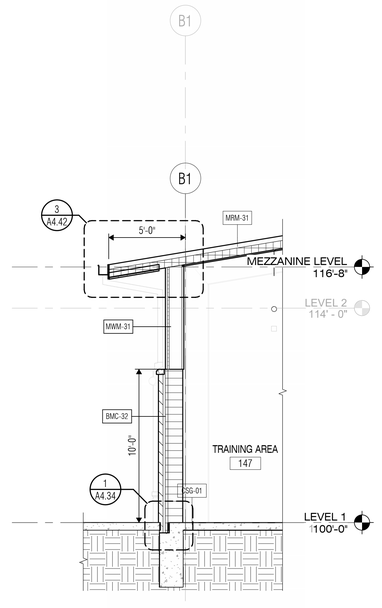
2 WALL SECTION - CORRIDOR
SCALE: 1/4" = 1'-0"



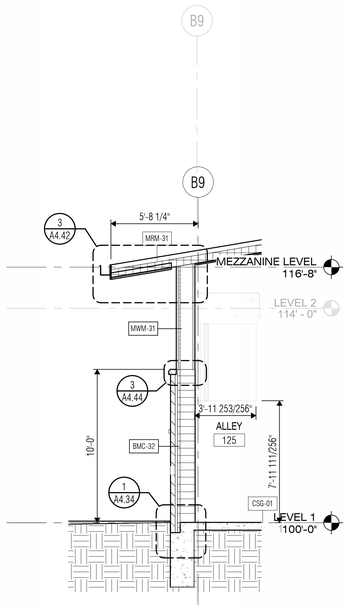
3 WALL SECTION - LOUVERS
SCALE: 1/4" = 1'-0"



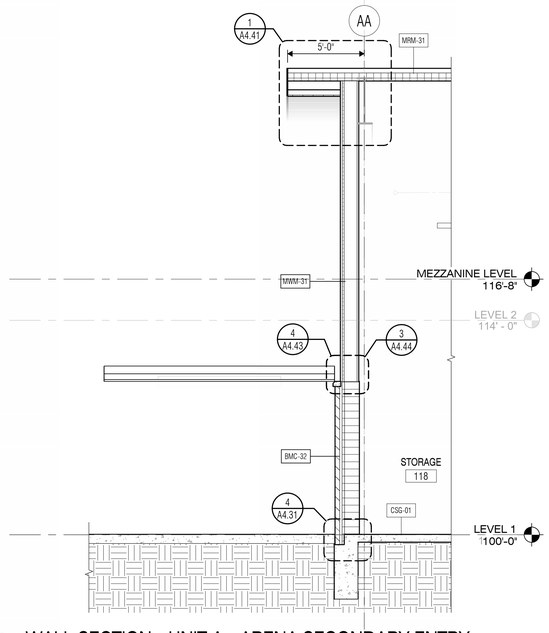
4 WALL SECTION - OHD
SCALE: 1/4" = 1'-0"



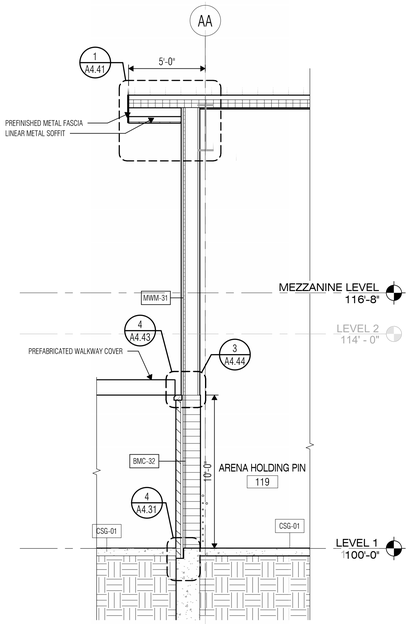
5 WALL SECTION - TRAINING AREA
SCALE: 1/4" = 1'-0"



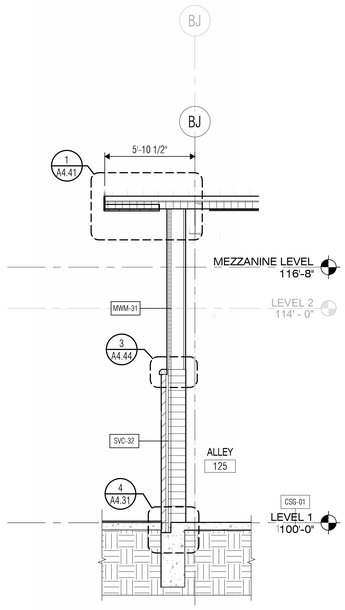
6 WALL SECTION - BARN TYPICAL WALL
SCALE: 1/4" = 1'-0"



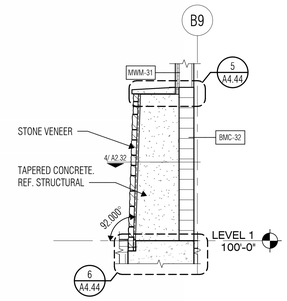
7 WALL SECTION - UNIT A - ARENA SECONDARY ENTRY
SCALE: 1/4" = 1'-0"



10 WALL SECTION - HOLDING PIN
SCALE: 1/4" = 1'-0"



8 WALL SECTION - UNIT B - TYPICAL STONE WALL
SCALE: 1/4" = 1'-0"



9 WALL SECTION - UNIT B PILASTER
SCALE: 1/4" = 1'-0"

ARCHITECT

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

LAUREN V. BROWN — 25211 — STATE OF TEXAS — REGISTERED ARCHITECT
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control QC
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
WALL SECTIONS

SHEET NO.
A4.13

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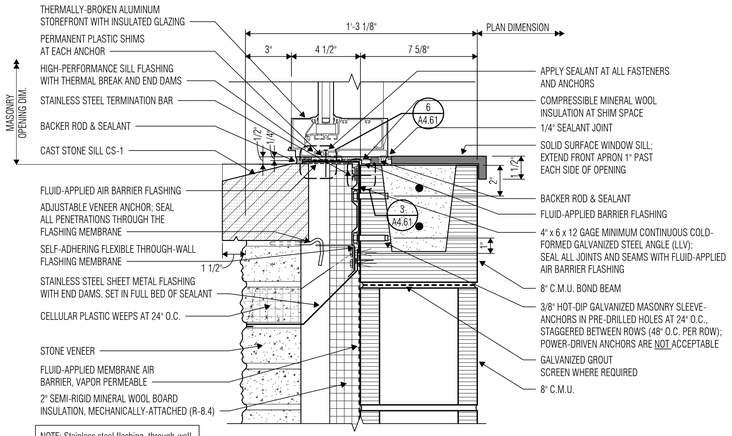
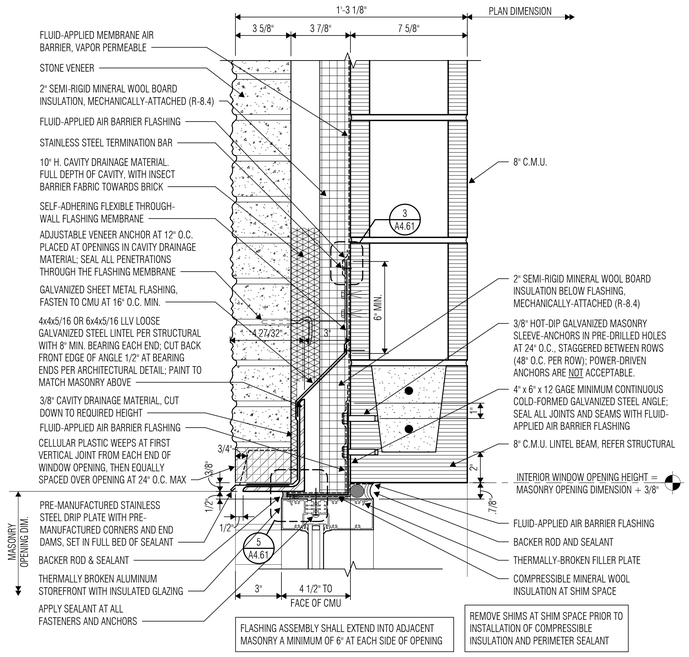


NOTE: Stainless steel flashing, through-wall flashing membrane, termination bar and weeps are only required if detail is above another opening, or if detail is higher than 10' above exterior grade.

1 STONE VENEER CMU WALL AT STOREFRONT SILL

SCALE: 3" = 1'-0"

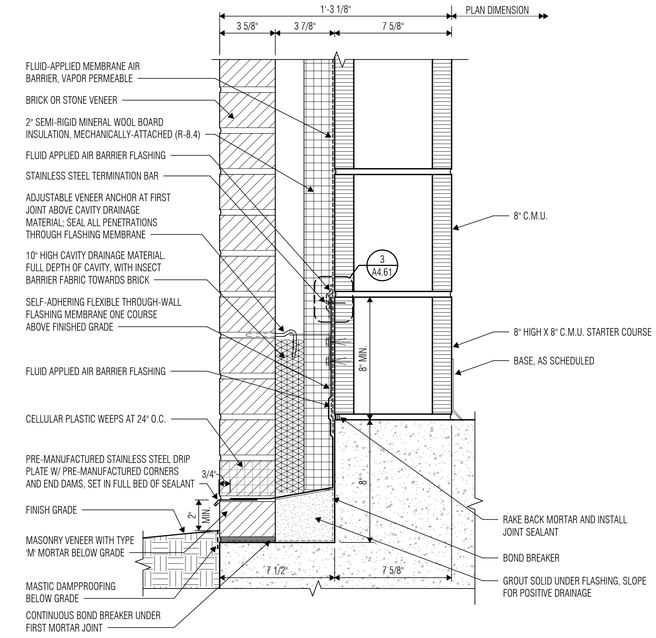
*STC-31.S.60SF.CS



2 STONE VENEER CMU WALL AT STOREFRONT HEAD - LOOSE LINTEL

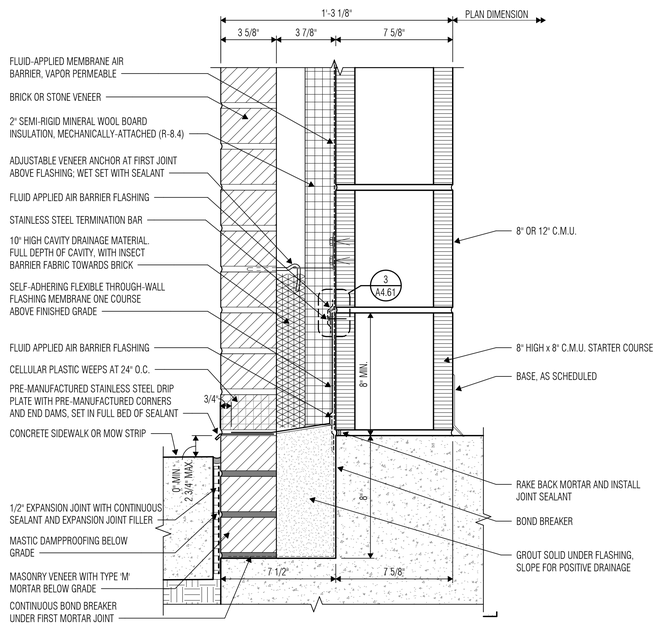
SCALE: 3" = 1'-0"

*STC-31.H.60SF.LL



3 MASONRY VENEER CMU WALL AT GRADE

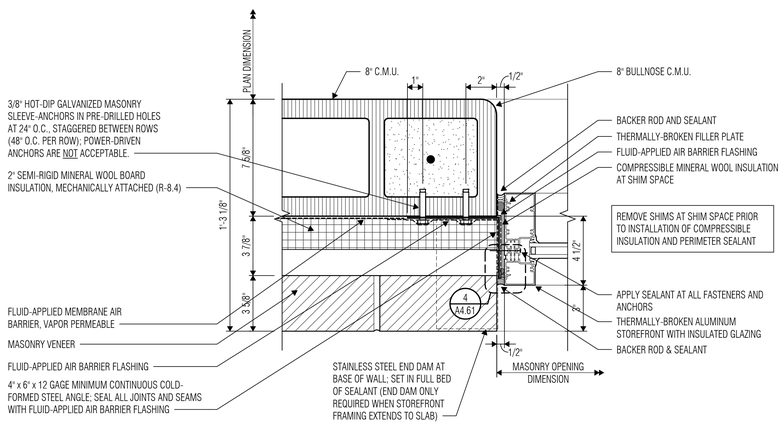
SCALE: 3" = 1'-0"



4 MASONRY VENEER CMU WALL AT SIDEWALK

SCALE: 3" = 1'-0"

WHERE GRADE IS LESS THAN 2 3/4" BELOW FINISH FLOOR



5 MASONRY VENEER CMU WALL AT STOREFRONT JAMB

SCALE: 3" = 1'-0"

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EAGLE MOUNTAIN-SAGINAW ISD
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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT — KAREN V. BROWN — #3211 — STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

24-057.00

SHEET TITLE

BUILDING ASSEMBLY DETAILS

SHEET NO.

A4.31

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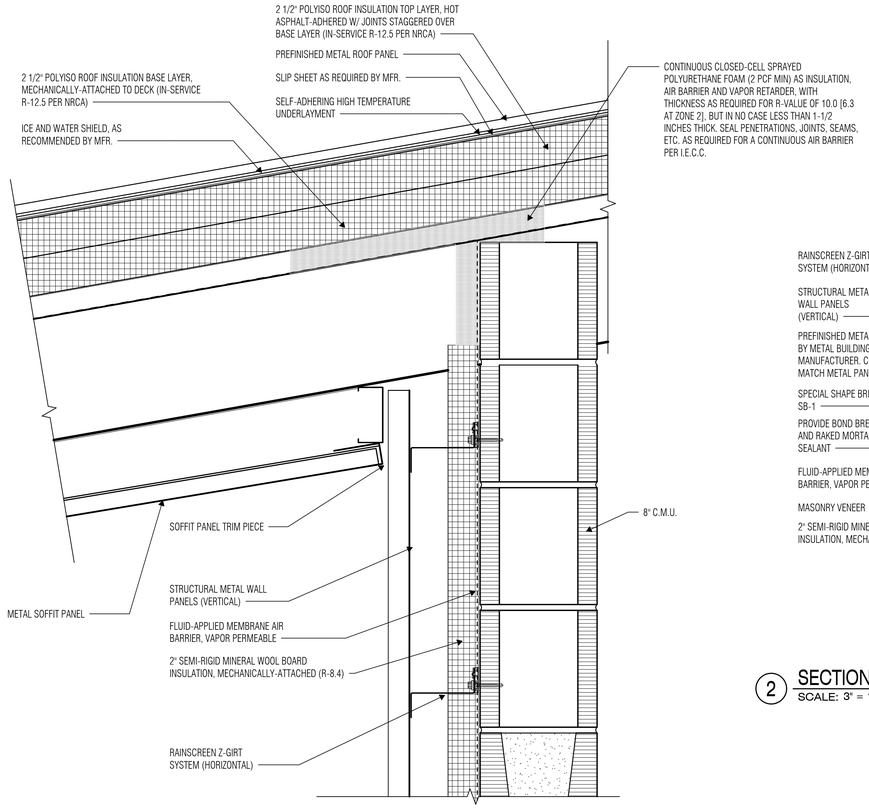
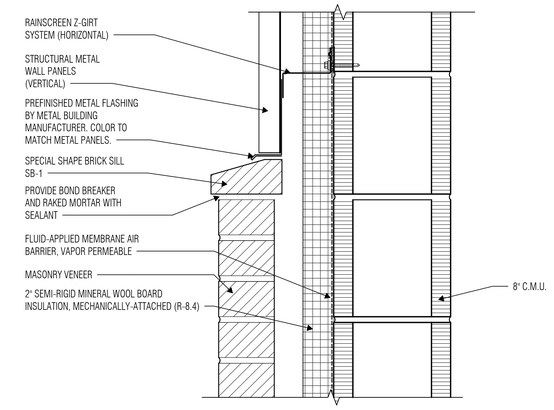
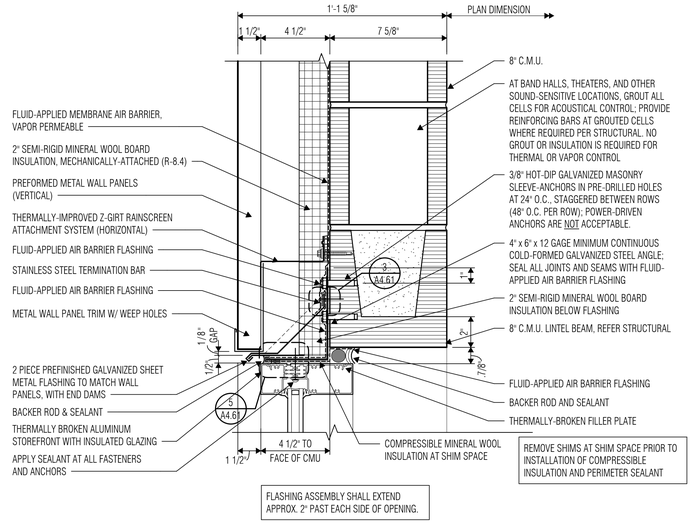


1 SECTION DETAIL - SIDEWALL AT CMU
SCALE: 3" = 1'-0"

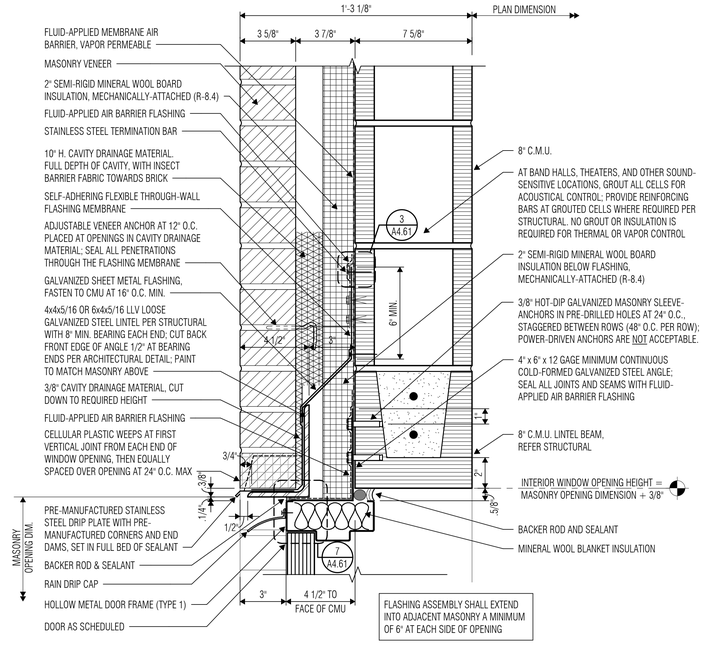


2 SECTION DETAIL - CAST STONE CMU
SCALE: 3" = 1'-0"



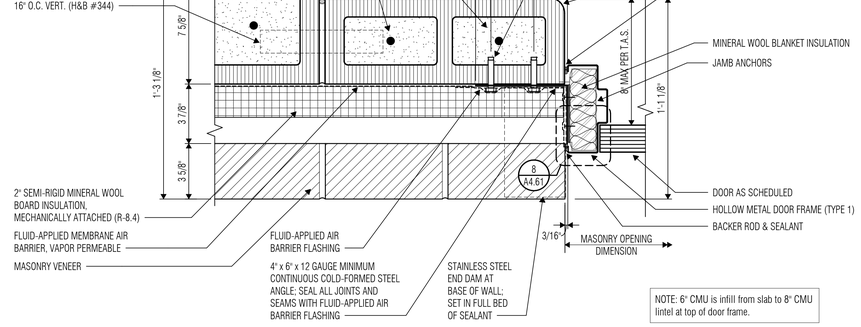
3 METAL WALL PANEL / CMU WALL AT STOREFRONT HEAD
SCALE: 3" = 1'-0"

MWC-35.H.60SF



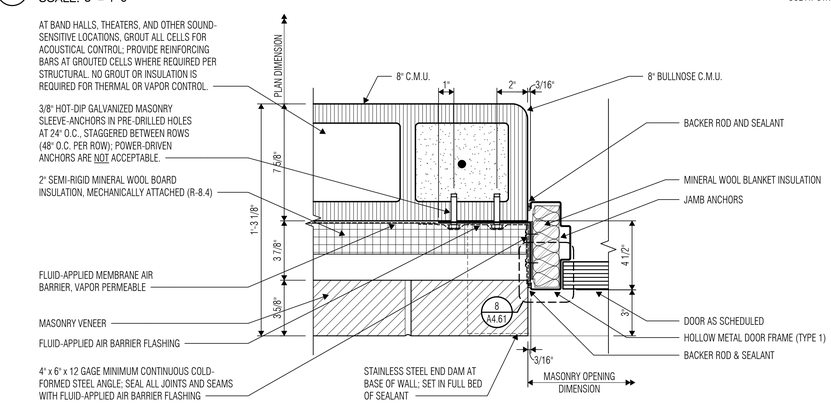
4 MASONRY VENEER CMU WALL AT H.M. FRAME HEAD
SCALE: 3" = 1'-0"

*BMC-31.H.HM1.LL



6 MASONRY VENEER CMU WALL AT HOLLOW METAL FRAME JAMB
SCALE: 3" = 1'-0"

*BMC-31.J.HM1.STRIKE
USE AT STRIKE-JAMB ONLY OF OUTSWINGING ACCESSIBLE SINGLE DOORS



5 MASONRY VENEER CMU WALL AT HOLLOW METAL JAMB
SCALE: 3" = 1'-0"

*BMC-31.J.HM1
USE AT BOTH JAMBS OF NON-ACCESSIBLE DOORS, AND AT HINGE-JAMB ONLY OF ACCESSIBLE DOORS

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT — KAREN K. BROWN — 43511 — STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
BUILDING ASSEMBLY DETAILS

SHEET NO.
A4.32

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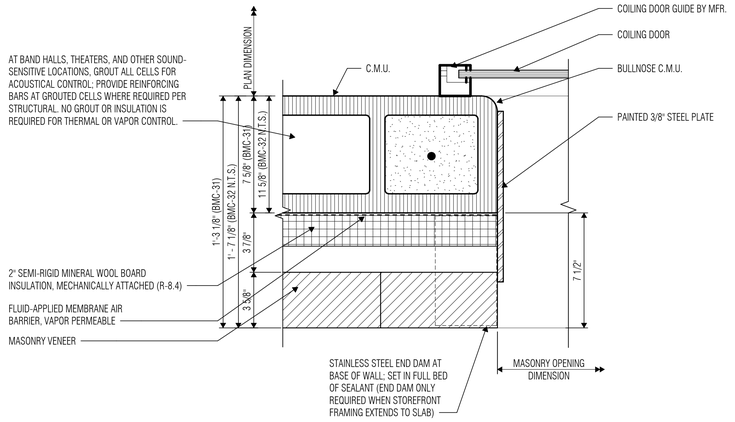
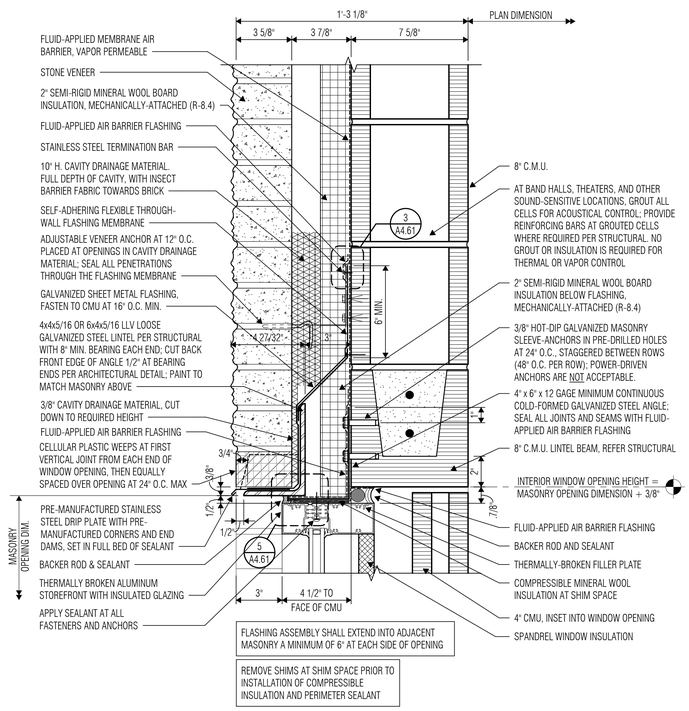


1 MASONRY VENEER / CMU WALL AT COILING DOOR JAMB

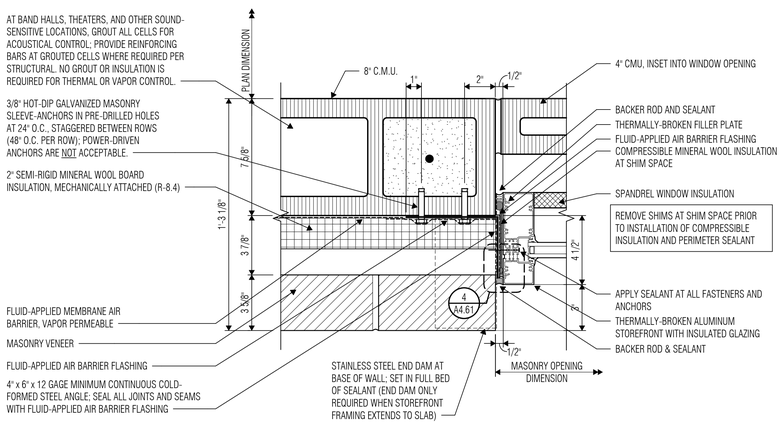
SCALE: 3" = 1'-0"



3 STOREFRONT HEAD AT STC-31 - LOOSE LINTEL - AT SPANDREL WINDOW

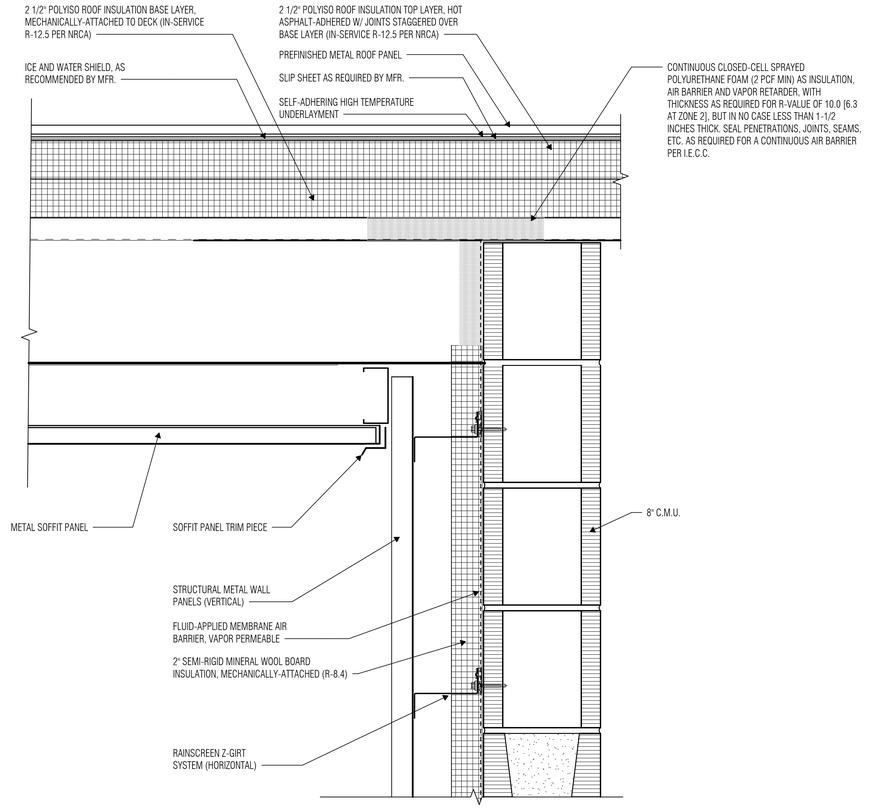
SCALE: 3" = 1'-0"

*STC-31.H.60SF.LL



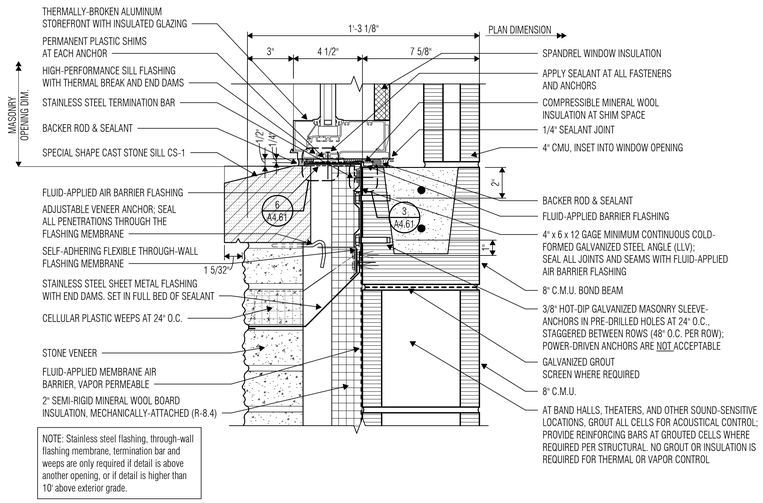
4 MASONRY VENEER CMU WALL AT STOREFRONT JAMB AT SPANDREL WINDOW

SCALE: 3" = 1'-0"



2 SECTION DETAIL - SIDEWALL AT CMU

SCALE: 3" = 1'-0"



5 STONE VENEER CMU WALL AT STOREFRONT SILL AT SPANDREL WINDOW

*STC-31.S.60SF.CS

SCALE: 3" = 1'-0"

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT
KAREN V. BROWN
STATE OF TEXAS
23211

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

24-057.00

SHEET TITLE

BUILDING ASSEMBLY DETAILS

SHEET NO.

A4.33

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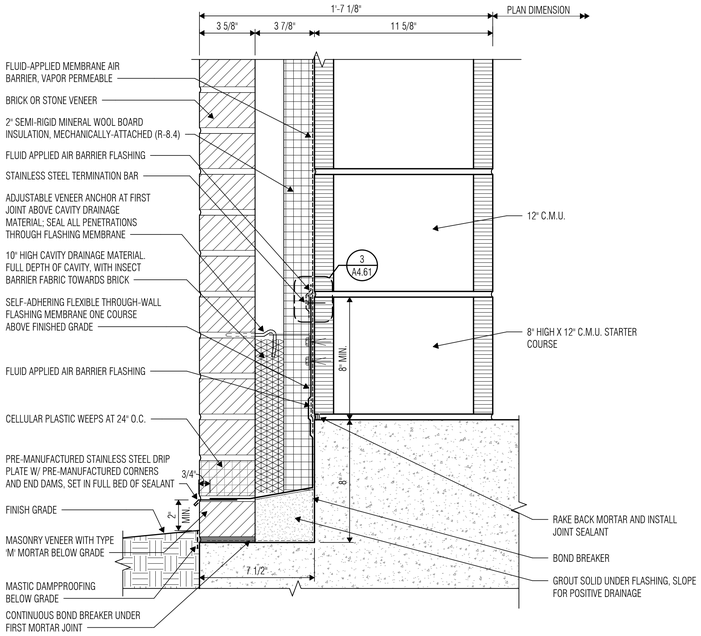
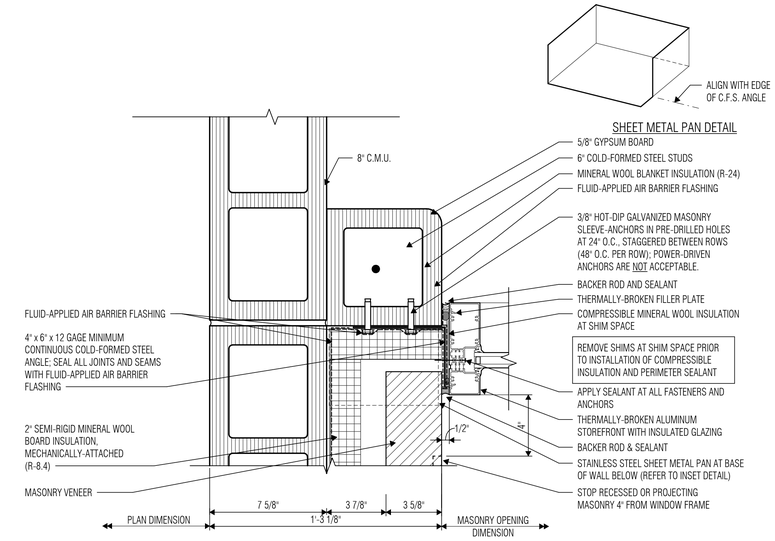


1 MASONRY VENEER CMU WALL AT GRADE

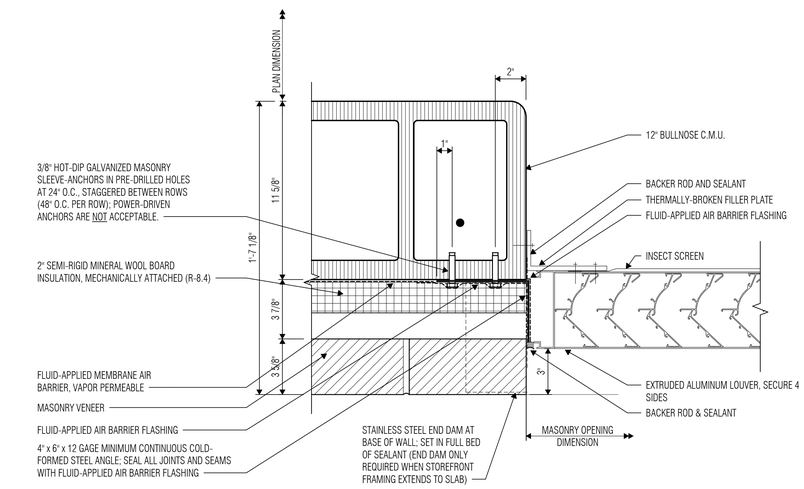
SCALE: 3" = 1'-0"



2 WINDOW JAMB WITH PERPENDICULAR MASONRY WALL

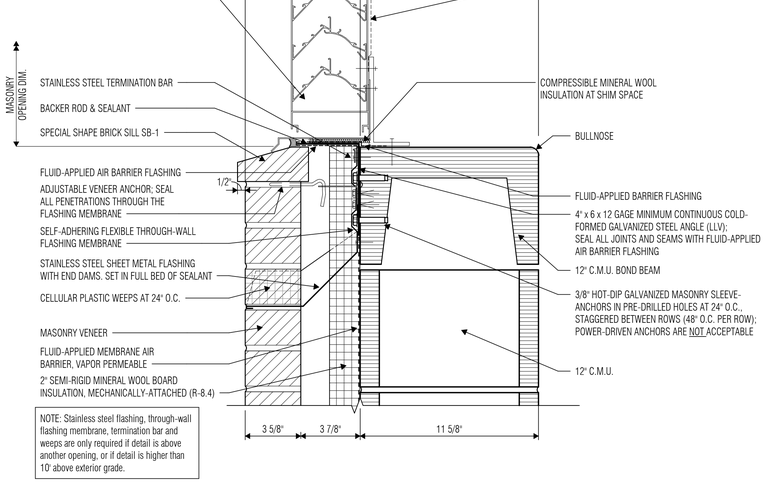
*BMC-31.J.60SF.PERP

SCALE: 3" = 1'-0"



3 MODULAR BRICK/ CMU WALL AT LOUVER JAMB

SCALE: 3" = 1'-0"



NOTE: Stainless steel flashing, through-wall flashing membrane, termination bar and weeps are only required if detail is above another opening, or if detail is higher than 10' above exterior grade.

4 MODULAR BRICK/ CMU WALL AT LOUVER SILL - BRICK SILL

SCALE: 3" = 1'-0"

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EAGLE MOUNTAIN-SAGINAW ISD
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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT KATHRYN V. BROWN 23211 STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

24-057.00

SHEET TITLE

BUILDING ASSEMBLY DETAILS

SHEET NO.

A4.34

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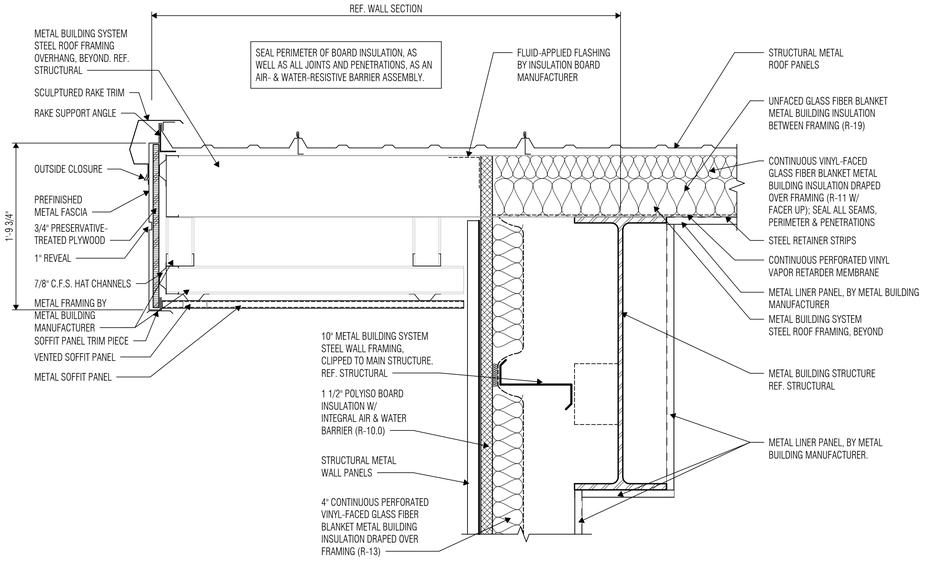
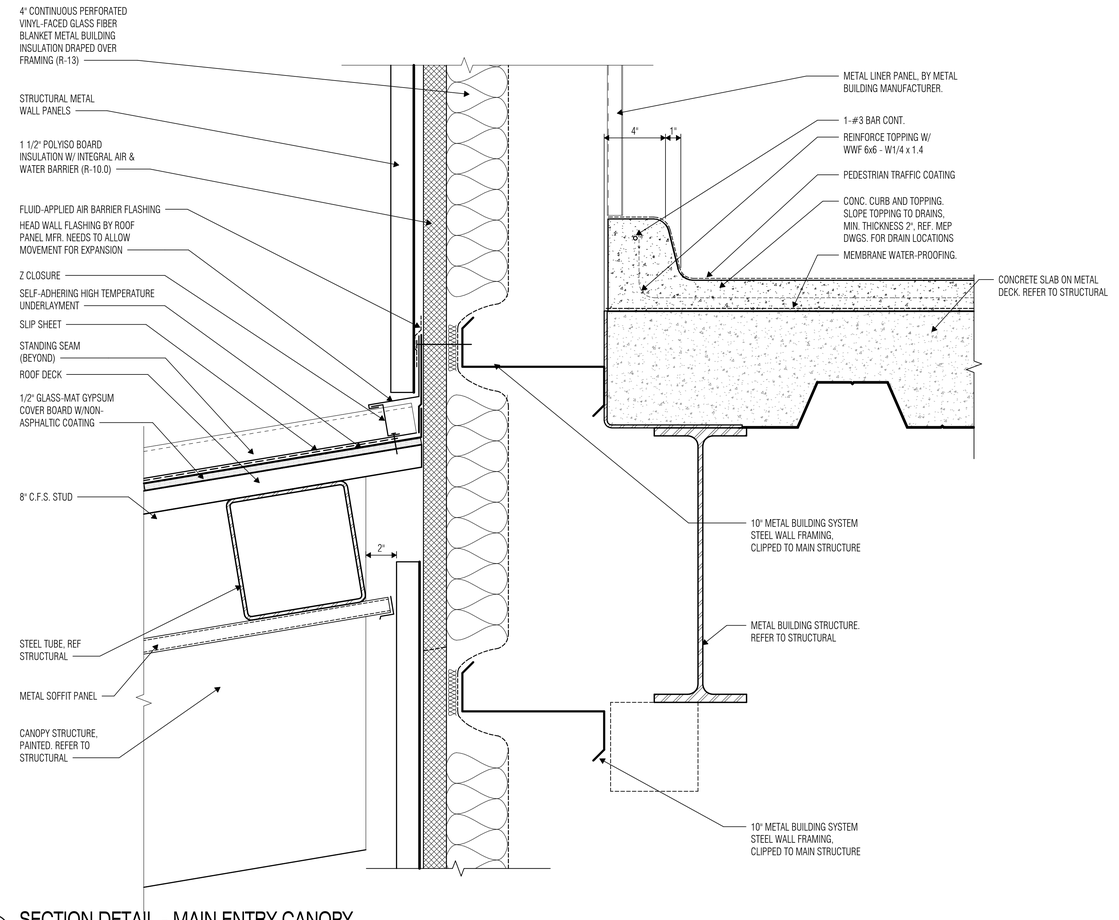


1 SECTION DETAIL - SIDEWALL/RAKE

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

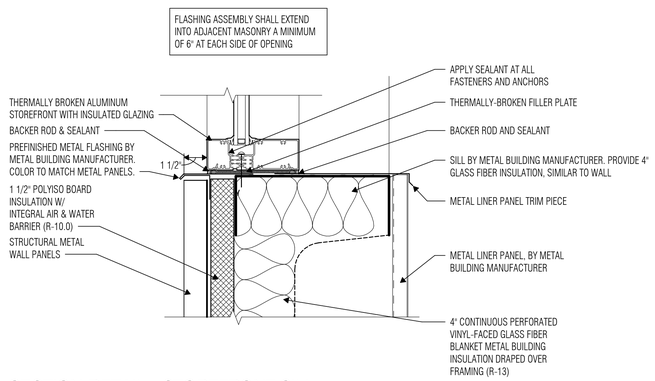


2 SECTION DETAIL - MAIN ENTRY CANOPY

SCALE: 3" = 1'-0"

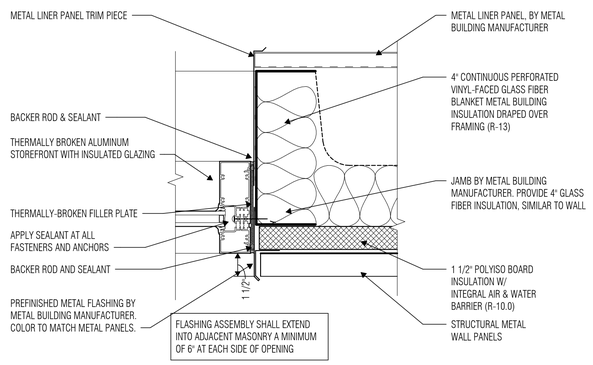
3 SECTION DETAIL - STOREFRONT HEAD

SCALE: 3" = 1'-0"



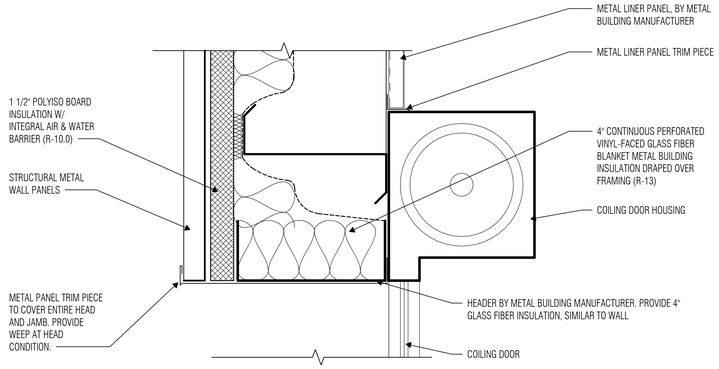
4 SECTION DETAIL - STOREFRONT SILL

SCALE: 3" = 1'-0"



5 SECTION DETAIL - STOREFRONT JAMB

SCALE: 3" = 1'-0"



6 SECTION DETAIL - OVERHEAD DOOR HEAD

SCALE: 3" = 1'-0"

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

LICENSED REGISTERED ARCHITECT — LAUREN V. BROWN — 23211 — STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

24-057.00

SHEET TITLE

BUILDING ASSEMBLY DETAILS

SHEET NO.

A4.41

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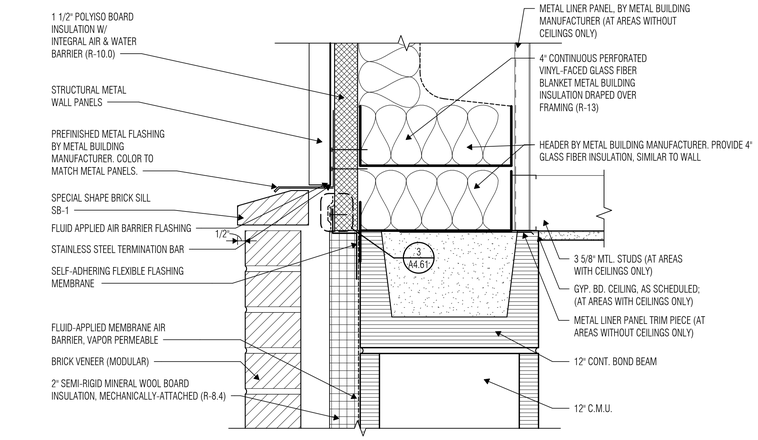
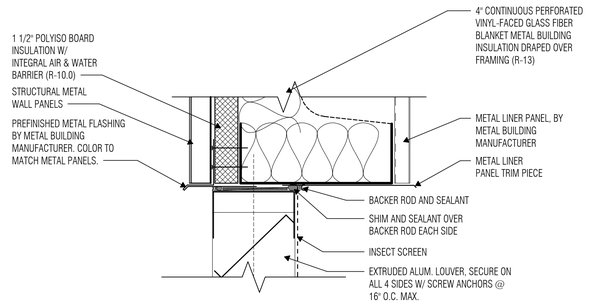
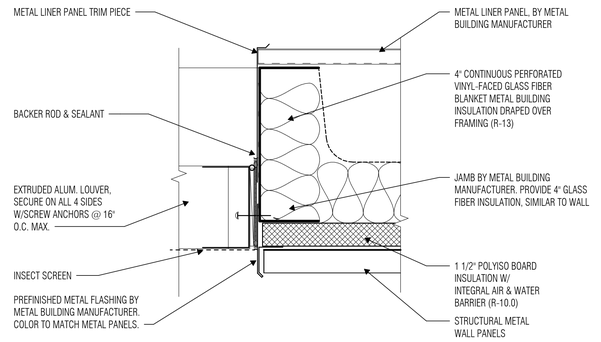


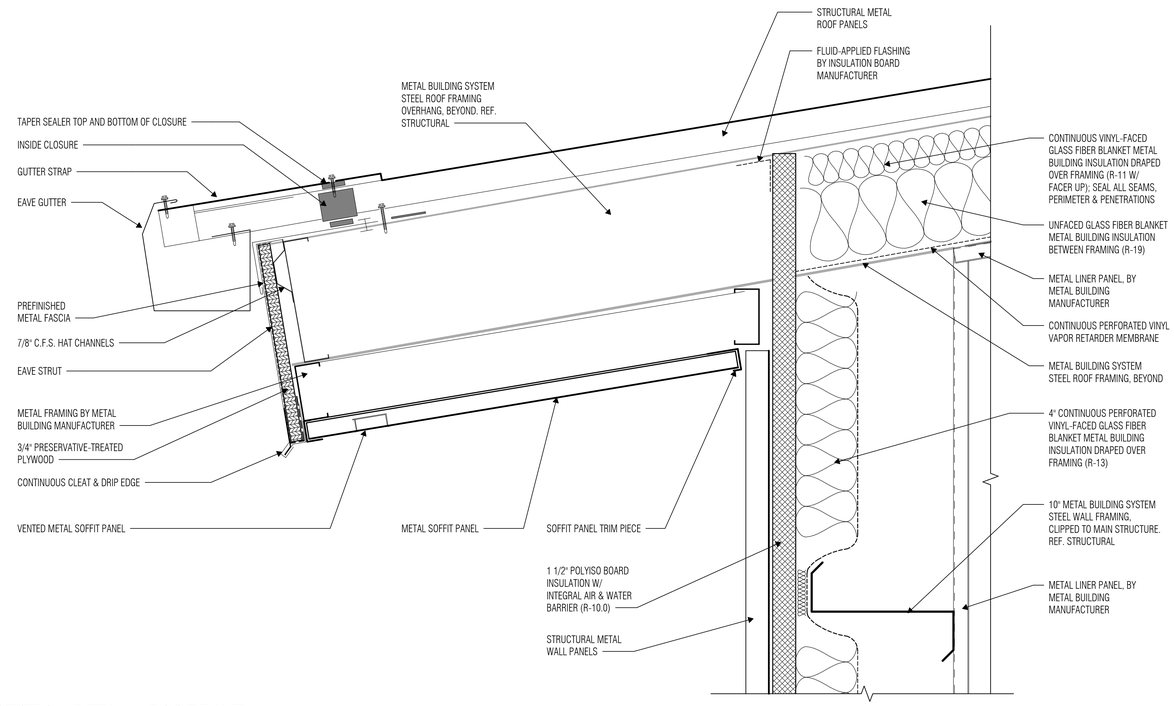
1 SECTION DETAIL - SPECIAL SHAPE BRICK
SCALE: 3" = 1'-0"



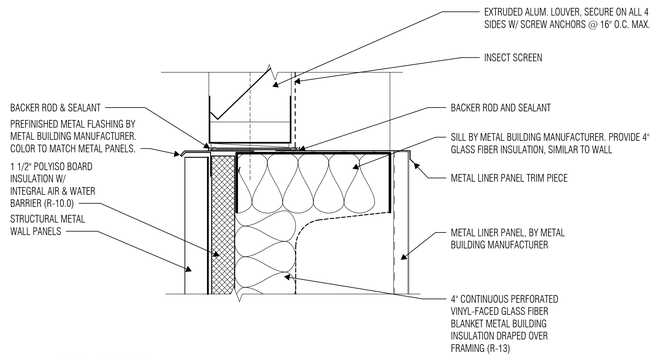
4 HEAD DETAIL
SCALE: 3" = 1'-0"



5 JAMB DETAIL
SCALE: 3" = 1'-0"



3 SECTION DETAIL - ROOF EAVE
SCALE: 3" = 1'-0"



6 SILL DETAIL
SCALE: 3" = 1'-0"

VLK

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT
LAUREN V. BROWN
23211
STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
LAH	VLK
Designer	Quality Control
ET	
Proj. Arch.	
KT	

PROJECT NO.
24-057.00

SHEET TITLE
BUILDING ASSEMBLY DETAILS

SHEET NO.
A4.42

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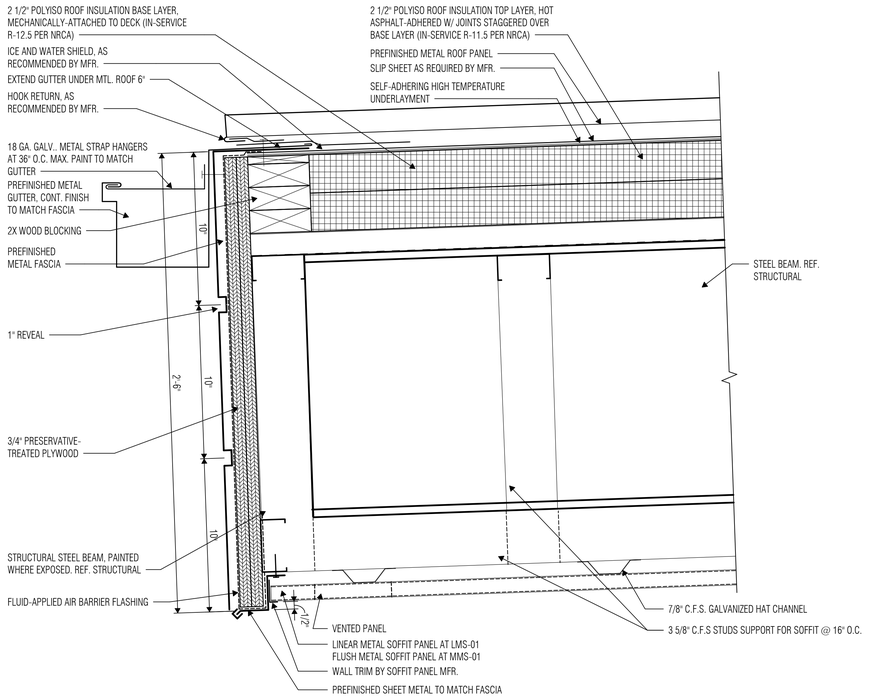
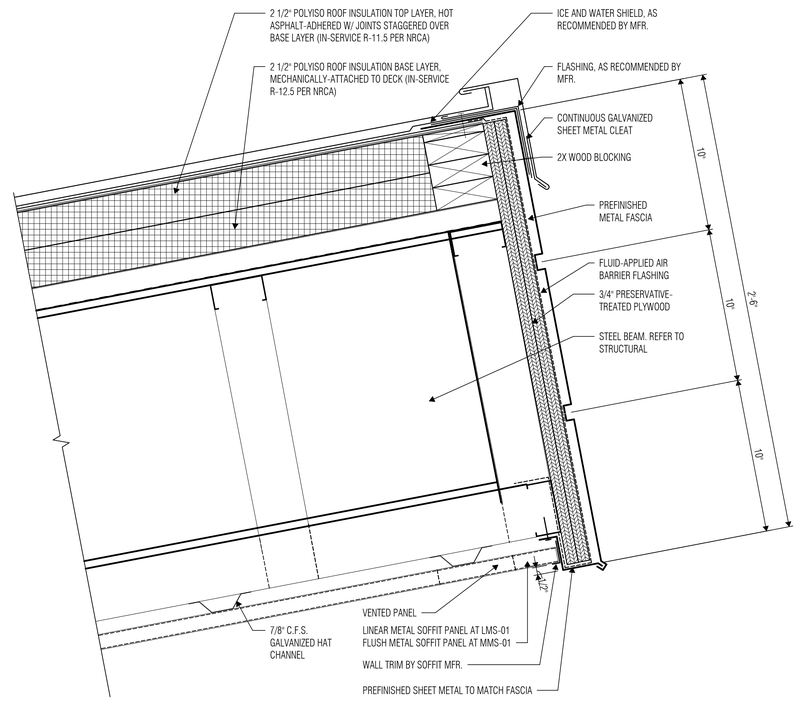
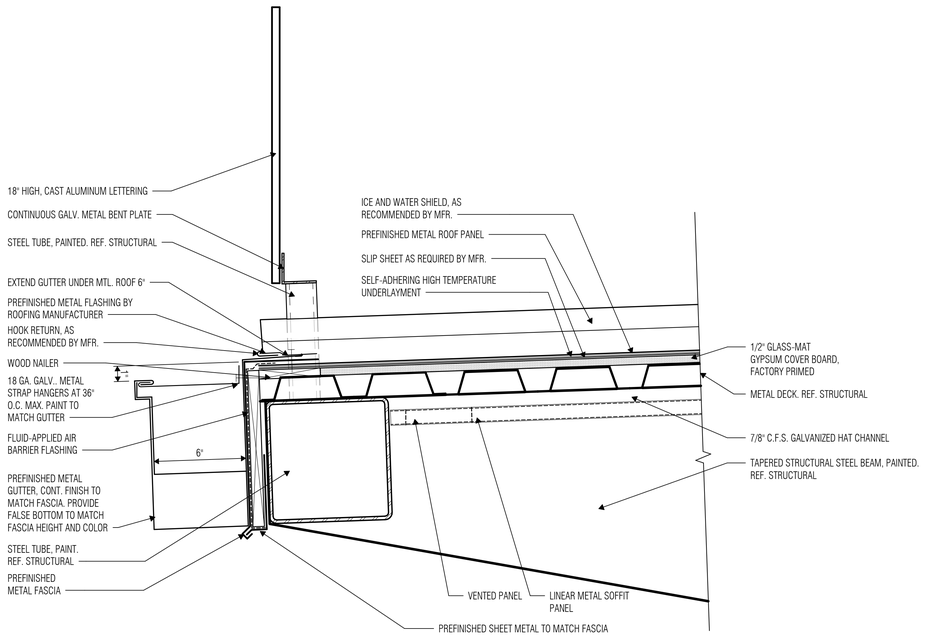


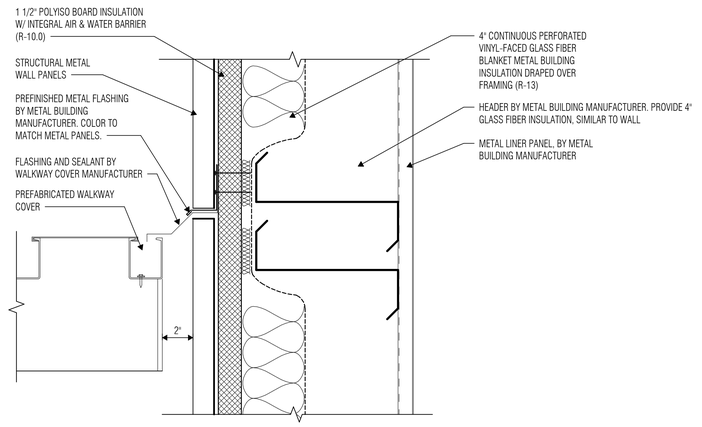
1 METAL ROOF EAVE DETAIL
SCALE: 3" = 1'-0"



2 SECTION DETAIL - ROOF EAVE COURTYARD
SCALE: 3" = 1'-0"



3 METAL ROOF EAVE DETAIL - BUILDING IDENTIFICATION LETTERING
SCALE: 3" = 1'-0"



4 SECTION DETAIL - CANOPY TRIM CLOSURE
SCALE: 3" = 1'-0"

ARCHITECT

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

LICENSED REGISTERED ARCHITECT KAREN V. BROWN #3511 STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
BUILDING ASSEMBLY DETAILS

SHEET NO.
A4.43

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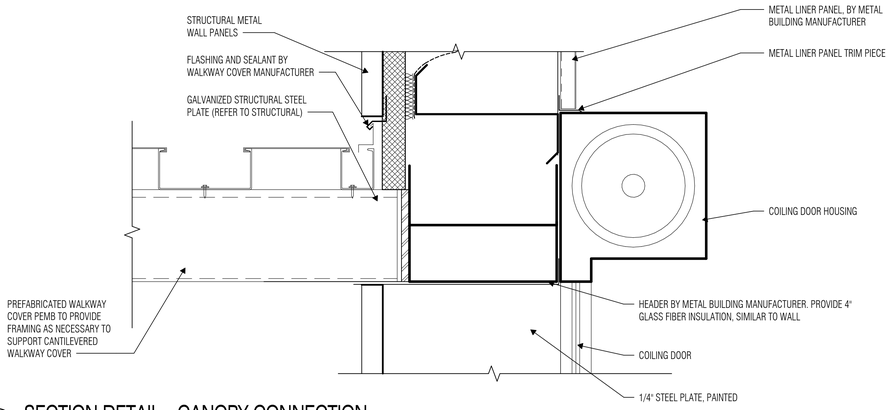
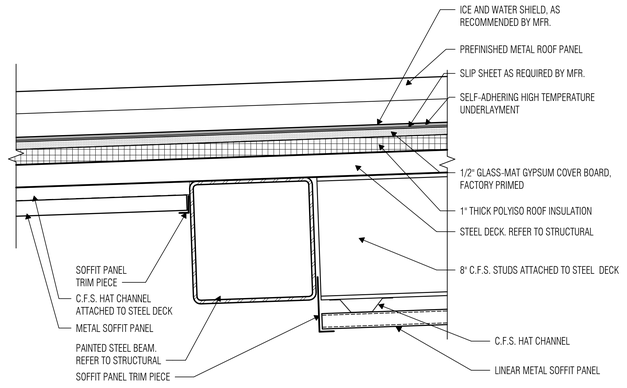
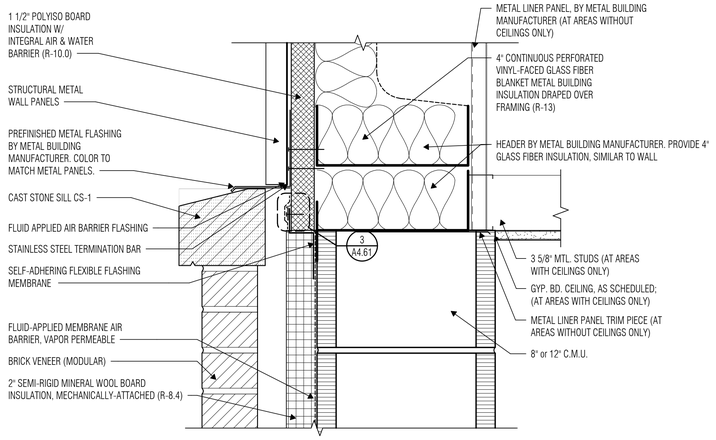


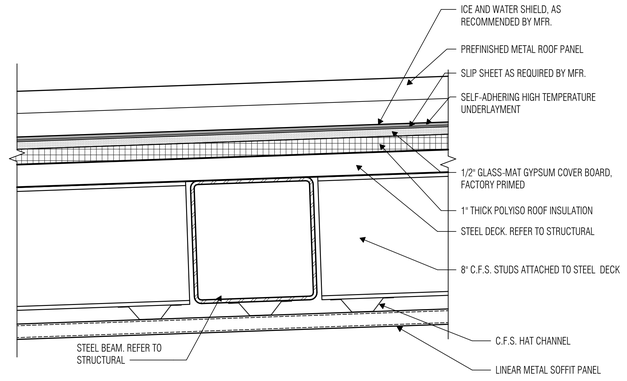
1 SECTION DETAIL - CANOPY CONNECTION
SCALE: 3" = 1'-0"



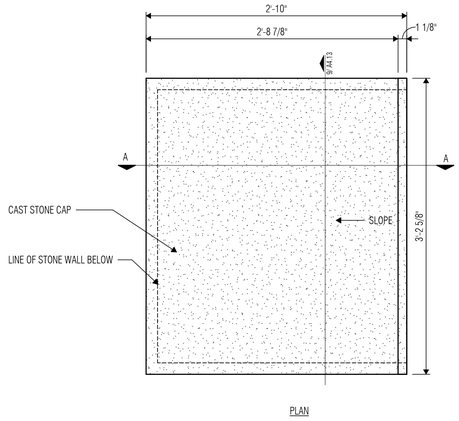
2 ENTRANCE CANOPY SOFFIT DETAIL
SCALE: 3" = 1'-0"

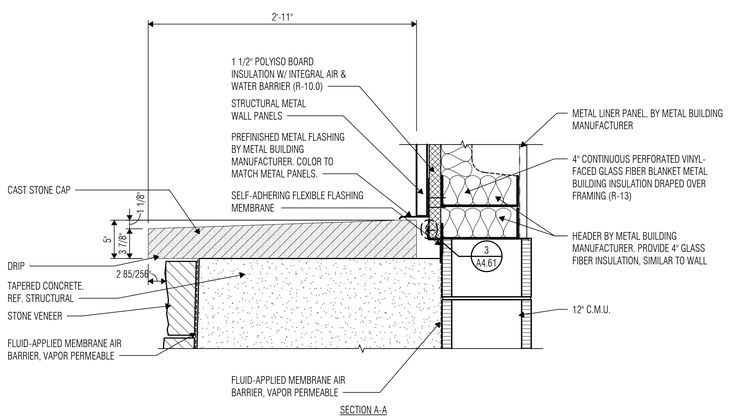


3 SECTION DETAIL - CAST STONE
SCALE: 3" = 1'-0"

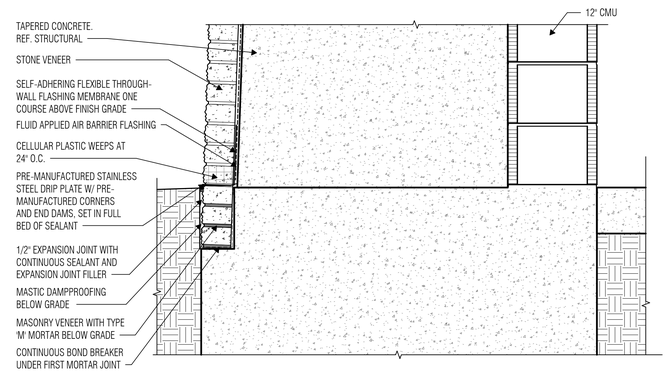


4 ENTRANCE CANOPY SOFFIT DETAIL - COVERED BEAM
SCALE: 3" = 1'-0"





5 UNIT B - PILASTER CAP
SCALE: 1 1/2" = 1'-0"



6 UNIT B - PILASTER BASE
SCALE: 1 1/2" = 1'-0"

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05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
LAH	VLK
Designer	Quality Control
ET	
Proj. Arch.	
KT	

PROJECT NO.
24-057.00

SHEET TITLE
BUILDING ASSEMBLY DETAILS

SHEET NO.
A4.44

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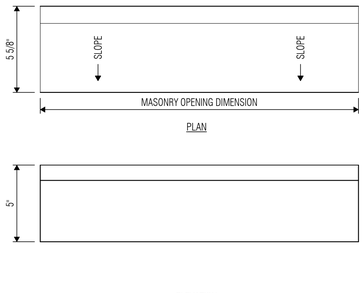
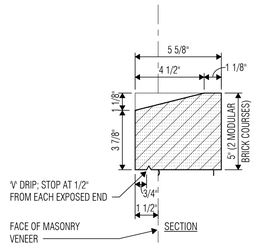
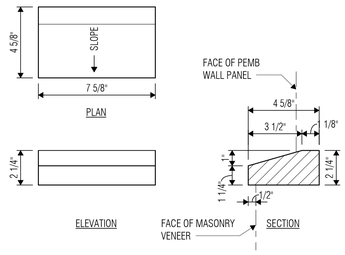




1 CAST STONE SHAPE - CS-1

SCALE: 3" = 1'-0"

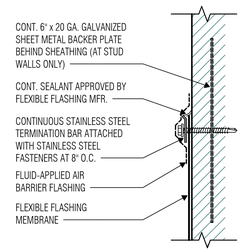
*CS-1.BM.L.30
AT 3" WINDOW SETBACK IN MASONRY BRICK VENEER



2 SPECIAL BRICK SHAPE - SB-1

SCALE: 3" = 1'-0"

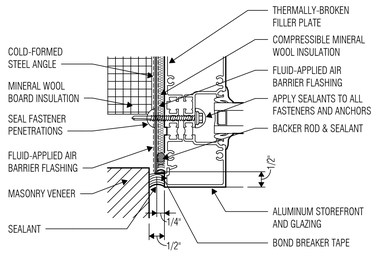
*SB-1.BM.30



3 TERMINATION BAR DETAIL

GD010

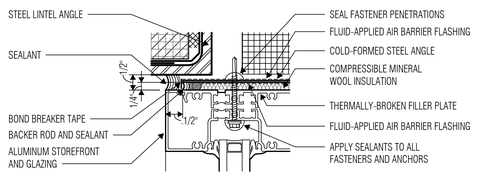
SCALE: 6" = 1'-0"



4 DETAIL at STOREFRONT JAMB FLASHING

GD014

SCALE: 6" = 1'-0"

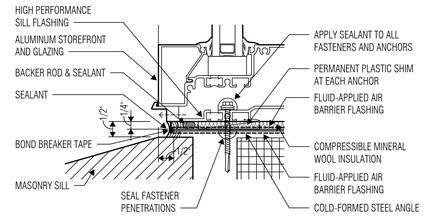


5 DETAIL at STOREFRONT HEAD FLASHING

GD013

SCALE: 6" = 1'-0"

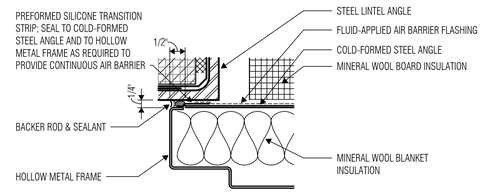
C.F.S. ANGLE



6 DETAIL at STOREFRONT SILL FLASHING

GD005

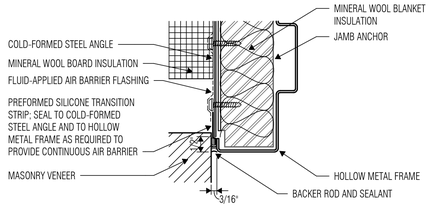
SCALE: 6" = 1'-0"



7 DETAIL at HOLLOW METAL FRAME HEAD FLASHING

GD003

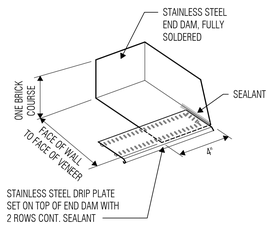
SCALE: 6" = 1'-0"



8 DETAIL at HOLLOW METAL FRAME JAMB FLASHING

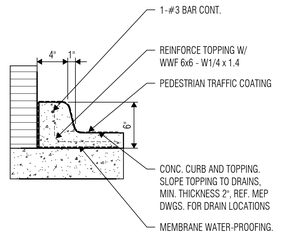
GD004

SCALE: 6" = 1'-0"



9 STAINLESS STEEL END DAM AT DOOR & WINDOW JAMBS

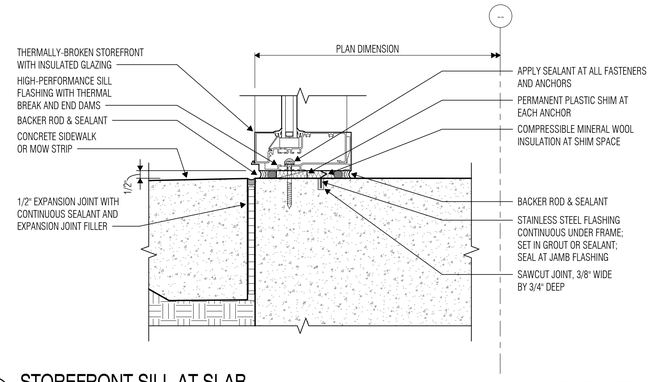
SCALE: 3" = 1'-0"



10 MECH. CURB DETAIL

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

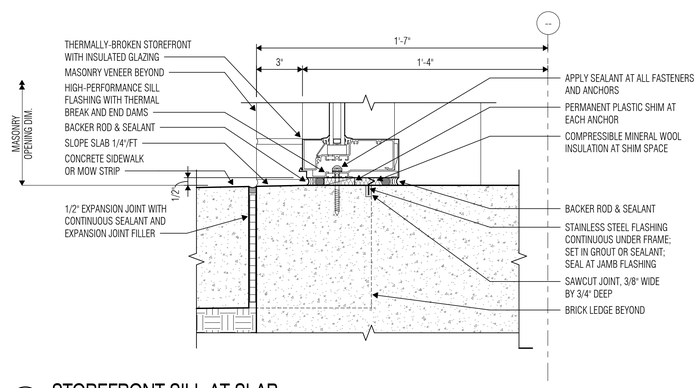
GD034



11 STOREFRONT SILL AT SLAB

SCALE: 3" = 1'-0"

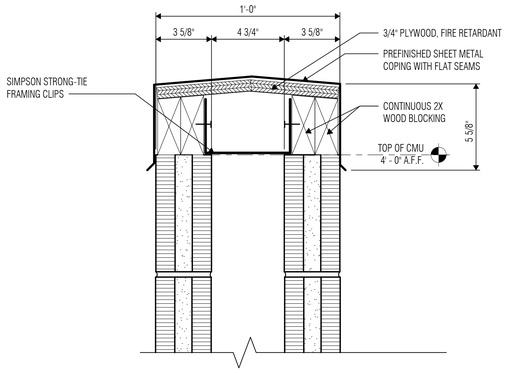
*SILL.60SF.SLAB.SS
WITHOUT BRICK LEDGE ON EITHER SIDE OF WINDOW



12 STOREFRONT SILL AT SLAB

SCALE: 3" = 1'-0"

*SILL.60SF.358MASONRY.CO.SLAB.SS
WITH BRICK LEDGE ON EITHER SIDE OF WINDOW



13 SECTION DETAIL - ANIMAL PIN CAP DETAIL

SCALE: 3" = 1'-0"

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

LAUREN V. BROWN #9311 REGISTERED ARCHITECT STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

24-057.00

SHEET TITLE

BUILDING ASSEMBLY DETAILS

SHEET NO.

A4.61

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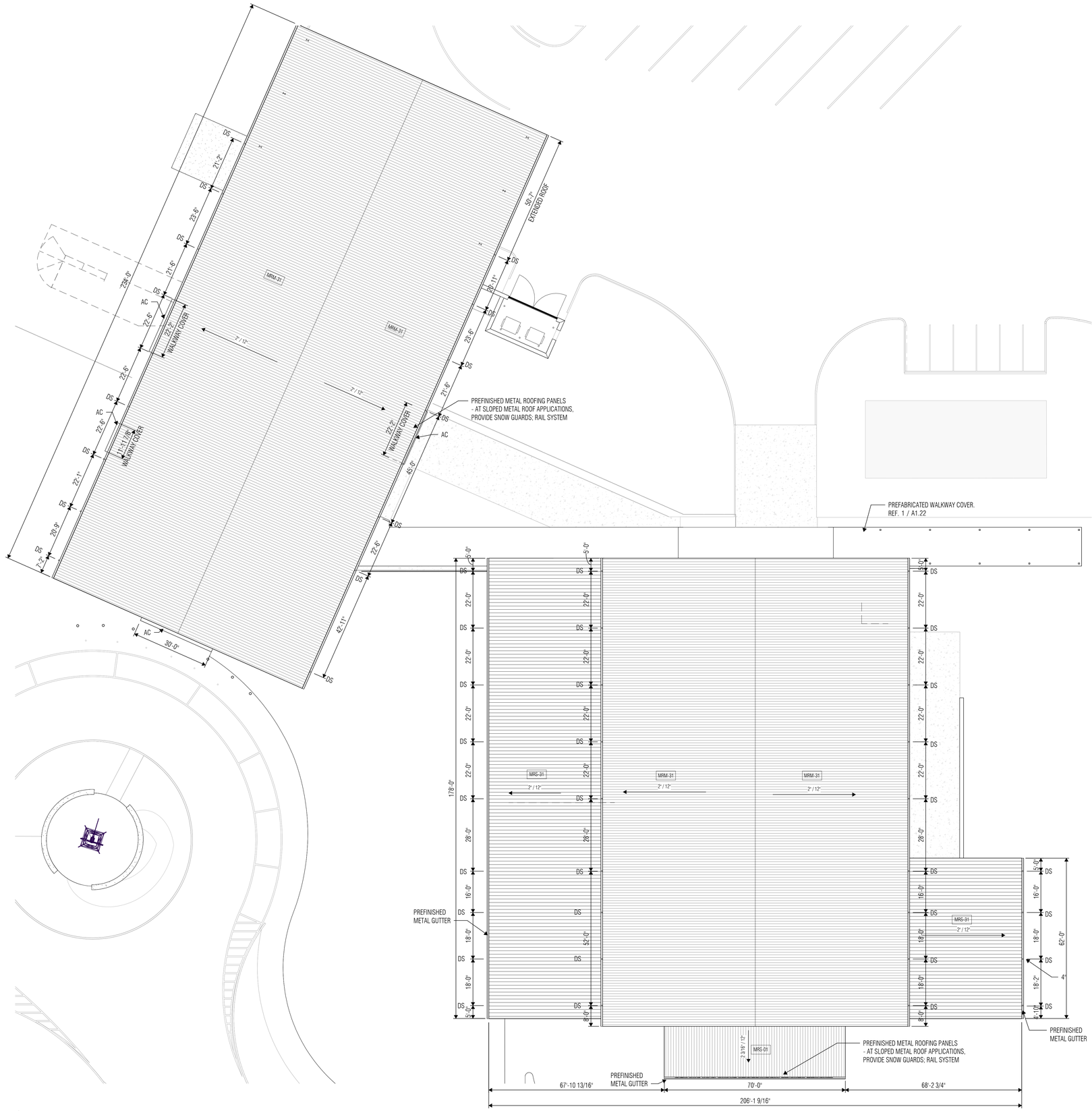

N
PLAN NORTH

N
TRUE NORTH

1 **ROOF PLAN**
SCALE: 1/16" = 1'-0"

ROOF PLAN NOTES

1. Provide tapered insulation crickets at the high side of all rooftop curbs, mounting rails, and other miscellaneous roof penetrations as required to shed water around them and to ensure positive roof drainage, whether indicated on the drawings or not.
2. Crickets shall slope 1/2" per foot, unless noted otherwise.
3. Locate overflow scuppers per Building Elevations. If conflicts occur, contact Architect prior to construction.
4. Provide roof walkway protection at base of all roof ladders, around all sides of roof hatches, on all sides of rooftop units and condensing units, and on paths leading from roof access points to rooftop units and condensing units, whether indicated on drawings or not.
5. Provide layer of roof walkway protection under all pipe and conduit supports, fully-adhered to roof membrane.
6. Provide metal end closure at the ends of expansion joints, flashings and counterflashings.
7. Paint all exposed galvanized metal flashings, miscellaneous steel, piping, conduits, etc. that are not prefinished.

ROOF PLAN LEGEND

MRP	PREFINISHED METAL ROOF PANELS
T.O.M.	TOP OF MASONRY ELEVATION
T.O.D.	TOP OF DECK ELEVATION
T.O.S.	TOP OF STEEL ELEVATION
DS	DOWNSPOUT, REF. 5/A5.31
RV	RELIEF VENT, REF. M.E.P.
EF	EXHAUST FAN, REF. M.E.P.
AC	ALUMINUM WALKWAY COVER. REF.

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05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
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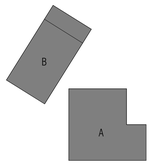
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
OVERALL ROOF PLAN

SHEET NO.
A5.11



KEY PLAN

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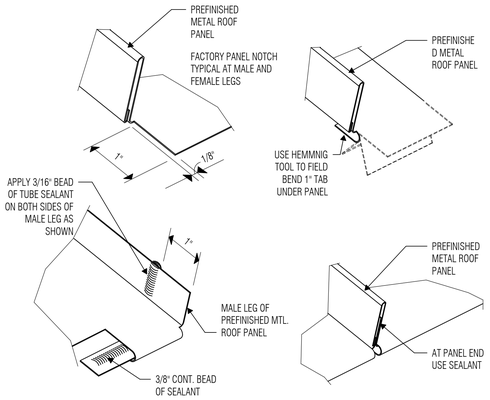
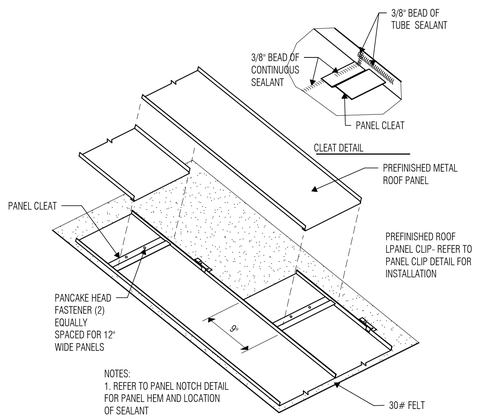
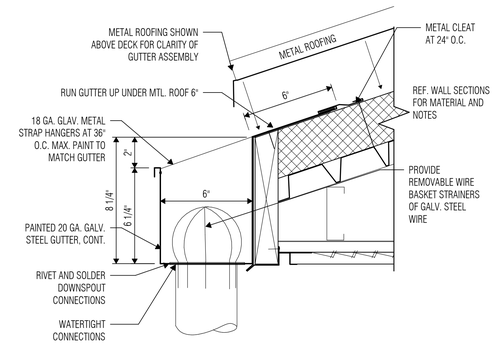


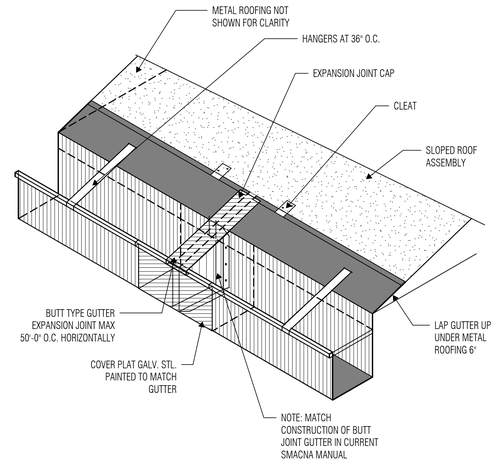
1 R500 - EAVE-HEM_PREFINISHED METAL ROOF
SCALE: N.T.S.



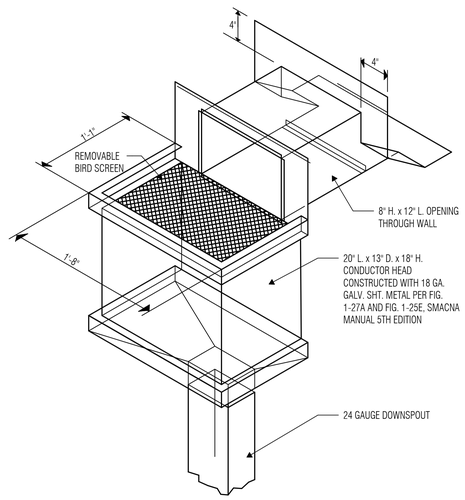
2 R501 - END-LAP_PREFINISHED METAL ROOF
SCALE: 1 1/2" = 1'-0"



3 R503 - GUTTER_PREFINISHED METAL ROOF
SCALE: 3" = 1'-0"



4 R504 - GUTTER EXP. JOINT
SCALE: 1 1/2" = 1'-0"



5 R708 - CONDUCTOR HEAD NO OVERFLOW_RECT DOWNSPOUT
SCALE: 1 1/2" = 1'-0"

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23211
STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
ROOF DETAILS

SHEET NO.
A5.31

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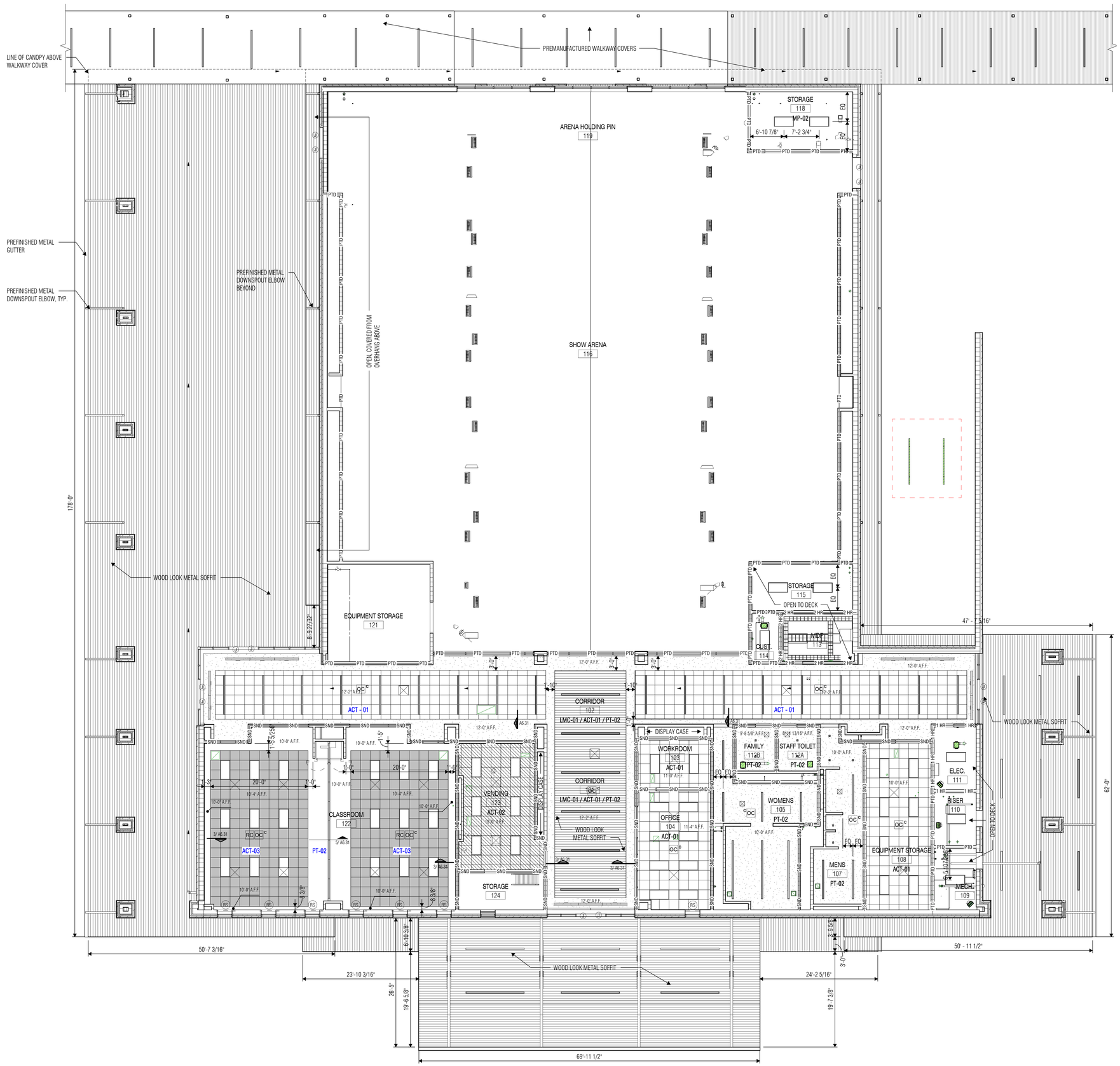


1 REFLECTED CEILING PLAN - LEVEL ONE
SCALE: 1/8" = 1'-0"

REFLECTED CEILING PLAN NOTES

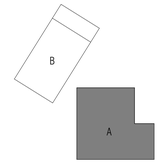
1. All ceiling heights shall be 8'-8"A.F.F. unless noted otherwise.
2. Refer to Detail 6/A6.31 for Typical Gypsum Board Ceiling Control Joint Detail.
3. Provide vented reveals at perimeter of all non-insulated exterior plaster soffits. Provide venting strips or perforated panels at perimeter of all non-insulated metal panel soffits (refer to Detail _/A6.__). Venting at non-insulated soffits shall be provided whether specifically indicated on the drawings or not.
4. Provide partition to deck (PTD) at walls surrounding spaces with exposed structure. Refer to Reflected Ceiling Plan Legend for PTD requirements.
5. Provide hold-down clips for all acoustic lay-in ceiling panels at vestibules, at sloped ceilings, at fire-rated ceilings, and within 6 feet of exterior doors without vestibules.
6. At ceiling furring details, the suspended assemblies, bracing, blocking, etc. shown on the details are for schematic representation only. Provide stable, secure and permanent assemblies at these locations in accordance with recommended light-gage steel framing installation practices.
7. At partitions that do not extend to deck above, extend partition 4" minimum above highest adjacent ceiling and brace per Floor Plan Legend and Floor Plan Notes.

REFLECTED CEILING PLAN LEGEND

ACT-01	ACOUSTIC LAY-IN CEILING TILE 24" X 24"
ACT-02	ALUMINUM GRID W/ VINYL COATED LAY-IN ACOUSTIC CEILING TILE & HOLD-DOWN CLIPS 24" X 24"
ACT-03	ACOUSTIC LAY-IN CEILING TILE, HIGH NRC 24" X 24"
PT-03	5/8" GYPSUM BOARD CEILING PAINTED PT-03, U.N.O.
MLP-01	PEMB METAL LINER PANEL
LMC	LINEAR METAL CEILING/SOFFIT
	LIGHT FIXTURES. Refer to Electrical Drawings.
	SUPPLY AND RETURN GRILLES. Shown for location purposes only. Refer to Mechanical Drawings.
P-C	CEILING MOUNTED PROJECTOR
M-C	CEILING MOUNTED MONITOR

PARTITION LEGEND

1HR	1-HOUR FIRE BARRIER PARTITION. Extend partition to deck above and seal with firestopping sealant as required for fire-resistance requirements. Paint stenciled label on partitions above ceiling at 15'-0" o.c. as follows: *1-HOUR FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS*. Brace partitions per Floor Plan General Notes.
2HR	2-HOUR FIRE BARRIER PARTITION. Extend partition to deck above and seal with firestopping sealant as required for fire-resistance requirements. Paint stenciled label on partitions above ceiling at 15'-0" o.c. as follows: *2-HOUR FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS*. Brace partitions per Floor Plan General Notes.
SMK	SMOKE PARTITION. Extend partition to deck above and seal with sealant as required to resist the passage of smoke. Seal all joints and penetrations. Brace partitions per Floor Plan General Notes.
SND	ACOUSTICAL DRYWALL PARTITION / SOUND-CONDITIONED CMU PARTITION. Extend partition to deck above and seal with acoustical sealant. Seal all joints and penetrations with acoustical sealant. Brace partitions per Floor Plan General Notes.
PTD	NON-RATED PARTITION TO DECK. Extend partition to deck above. Brace partitions per Floor Plan General Notes.



KEY PLAN

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FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

LAUREN V. BROWN 29011 REGISTERED ARCHITECT STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
REFLECTED CEILING PLAN - LEVEL ONE - UNIT A

SHEET NO.
A6.11A

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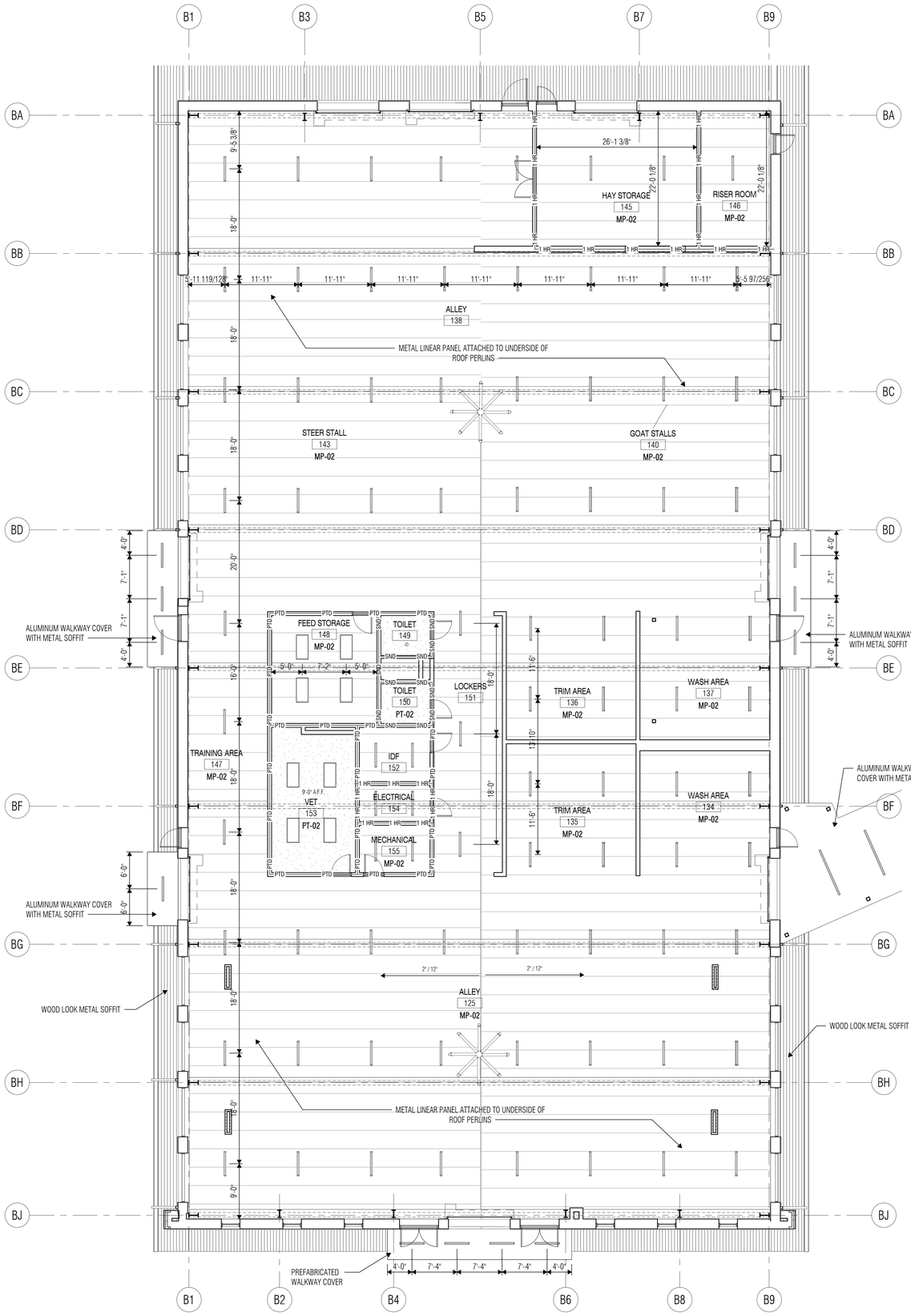
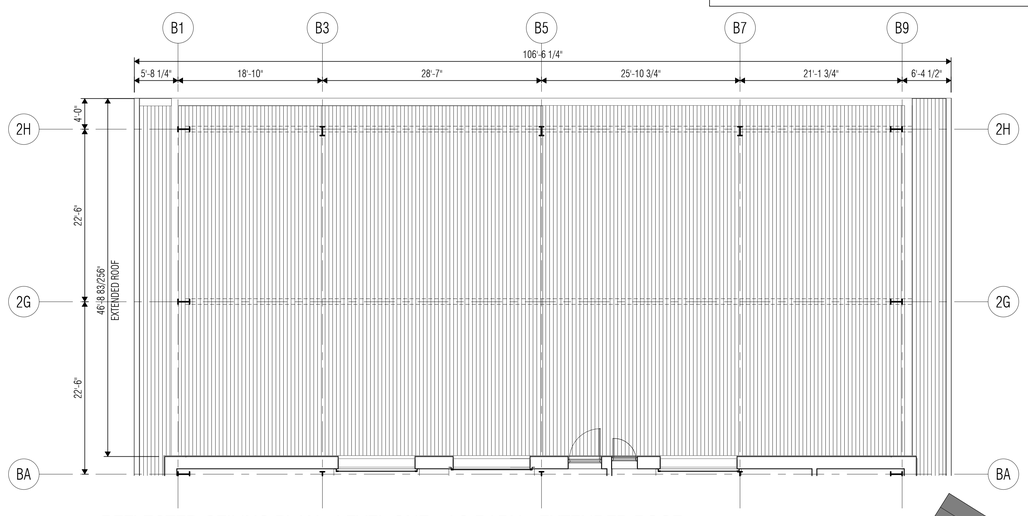


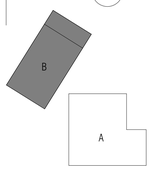
1 REFLECTED CEILING PLAN - LEVEL ONE - AG BARN

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



2 REFLECTED CEILING PLAN - LEVEL ONE - AG BARN - EXTENDED ROOF

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



KEY PLAN

REFLECTED CEILING PLAN NOTES

1. All ceiling heights shall be 8'-8"A.F.F. unless noted otherwise.
2. Refer to Detail 6/A6.31 for Typical Gypsum Board Ceiling Control Joint Detail.
3. Provide vented reveals at perimeter of all non-insulated exterior plaster soffits. Provide venting strips or perforated panels at perimeter of all non-insulated metal panel soffits (refer to Detail _/A6.__). Venting at non-insulated soffits shall be provided whether specifically indicated on the drawings or not.
4. Provide partition to deck (PTD) at walls surrounding spaces with exposed structure. Refer to Reflected Ceiling Plan Legend for PTD requirements.
5. Provide hold-down clips for all acoustic lay-in ceiling panels at vestibules, at sloped ceilings, at fire-rated ceilings, and within 6 feet of exterior doors without vestibules.
6. At ceiling furring details, the suspended assemblies, bracing, blocking, etc. shown on the details are for schematic representation only. Provide stable, secure and permanent assemblies at these locations in accordance with recommended light-gage steel framing installation practices.
7. At partitions that do not extend to deck above, extend partition 4" minimum above highest adjacent ceiling and brace per Floor Plan Legend and Floor Plan Notes.

REFLECTED CEILING PLAN LEGEND

	ACT-01	ACOUSTIC LAY-IN CEILING TILE 24" X 24"
	ACT-02	ALUMINUM GRID W/ VINYL COATED LAY-IN ACOUSTIC CEILING TILE & HOLD-DOWN CLIPS 24" X 24"
	ACT-03	ACOUSTIC LAY-IN CEILING TILE, HIGH NRC 24" X 24"
	PT-03	5/8" GYPSUM BOARD CEILING PAINTED PT-03, U.N.O.
	MLP-01	PEMB METAL LINER PANEL
	LMC	LINEAR METAL CEILING/SOFFIT
		LIGHT FIXTURES. Refer to Electrical Drawings.
		SUPPLY AND RETURN GRILLES. Shown for location purposes only. Refer to Mechanical Drawings.
P-C		CEILING MOUNTED PROJECTOR
M-C		CEILING MOUNTED MONITOR

PARTITION LEGEND

1HR	1-HOUR FIRE BARRIER PARTITION. Extend partition to deck above and seal with firestopping sealant as required for fire-resistance requirements. Paint stenciled label on partitions above ceiling at 15'-0" o.c. as follows: *'1-HOUR FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS'*. Brace partitions per Floor Plan General Notes.
2HR	2-HOUR FIRE BARRIER PARTITION. Extend partition to deck above and seal with firestopping sealant as required for fire-resistance requirements. Paint stenciled label on partitions above ceiling at 15'-0" o.c. as follows: *'2-HOUR FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS'*. Brace partitions per Floor Plan General Notes.
SMK	SMOKE PARTITION. Extend partition to deck above and seal with sealant as required to resist the passage of smoke. Seal all joints and penetrations. Brace partitions per Floor Plan General Notes.
SND	ACOUSTICAL DRYWALL PARTITION / SOUND-CONDITIONED CMU PARTITION. Extend partition to deck above and seal with acoustical sealant. Seal all joints and penetrations with acoustical sealant. Brace partitions per Floor Plan General Notes.
PTD	NON-RATED PARTITION TO DECK. Extend partition to deck above. Brace partitions per Floor Plan General Notes.

VLK

ARCHITECT

VLK
1320 Hemphill Street, Suite 400
Fort Worth, Texas 76104
Main Phone: 817.633.1600
www.vlkarchitects.com

EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT — KATHLEEN V. BROWN — 43211 — STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

24-057.00

SHEET TITLE

REFLECTED CEILING PLAN - LEVEL ONE - UNIT B

SHEET NO.

A6.11B

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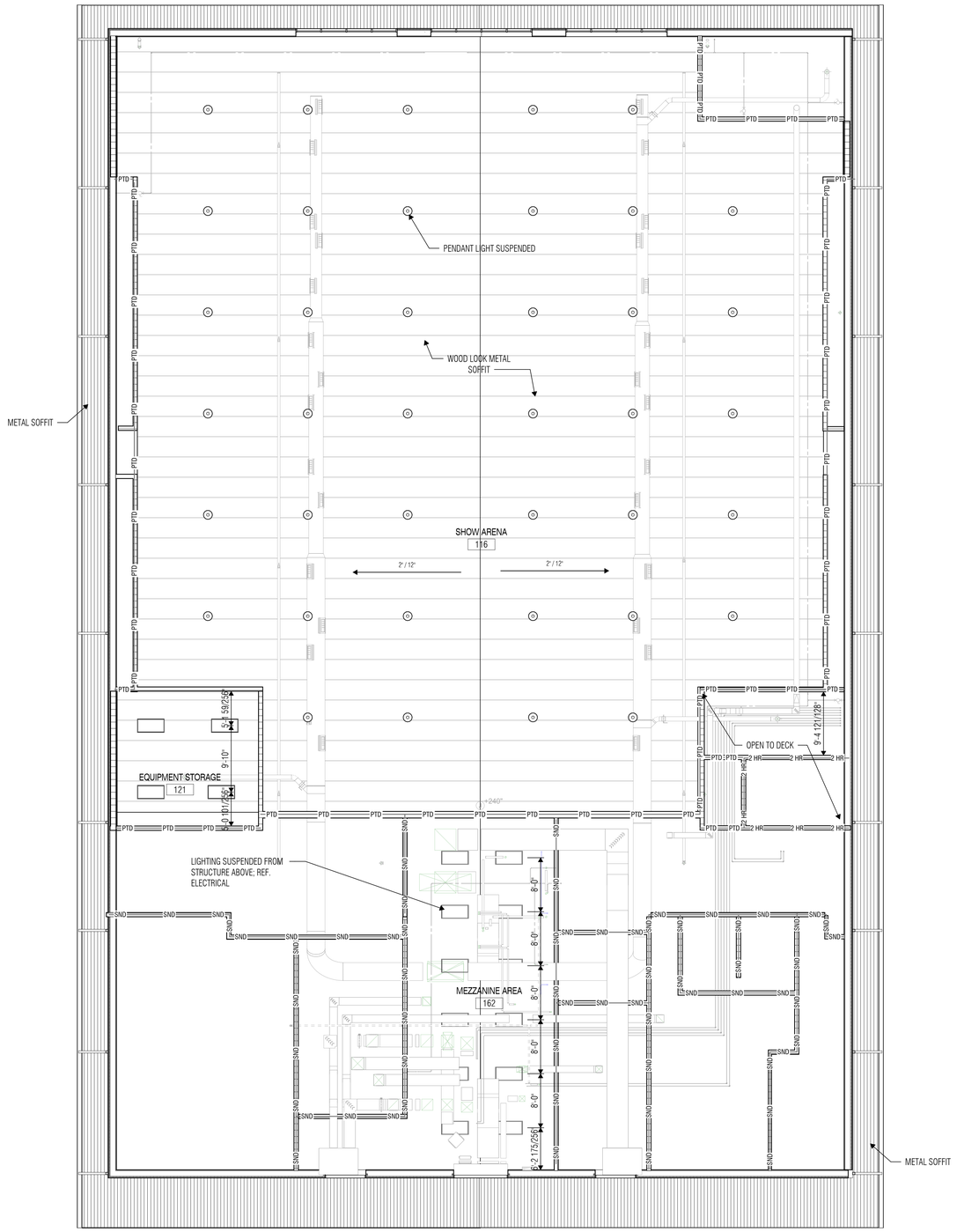


1 REFLECTED CEILING PLAN - LEVEL TWO
SCALE: 1/8" = 1'-0"

REFLECTED CEILING PLAN NOTES

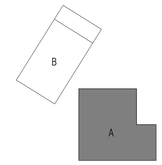
1. All ceiling heights shall be 8'-8"A.F.F. unless noted otherwise.
2. Refer to Detail 6/A6.31 for Typical Gypsum Board Ceiling Control Joint Detail.
3. Provide vented reveals at perimeter of all non-insulated exterior plaster soffits. Provide venting strips or perforated panels at perimeter of all non-insulated metal panel soffits (refer to Detail _/A6.__). Venting at non-insulated soffits shall be provided whether specifically indicated on the drawings or not.
4. Provide partition to deck (PTD) at walls surrounding spaces with exposed structure. Refer to Reflected Ceiling Plan Legend for PTD requirements.
5. Provide hold-down clips for all acoustic lay-in ceiling panels at vestibules, at sloped ceilings, at fire-rated ceilings, and within 6 feet of exterior doors without vestibules.
6. At ceiling furring details, the suspended assemblies, bracing, blocking, etc. shown on the details are for schematic representation only. Provide stable, secure and permanent assemblies at these locations in accordance with recommended light-gage steel framing installation practices.
7. At partitions that do not extend to deck above, extend partition 4" minimum above highest adjacent ceiling and brace per Floor Plan Legend and Floor Plan Notes.

REFLECTED CEILING PLAN LEGEND

	ACT-01	ACOUSTIC LAY-IN CEILING TILE 24" X 24"
	ACT-02	ALUMINUM GRID W/ VINYL COATED LAY-IN ACOUSTIC CEILING TILE & HOLD-DOWN CLIPS 24" X 24"
	ACT-03	ACOUSTIC LAY-IN CEILING TILE, HIGH NRC 24" X 24"
	PT-03	5/8" GYPSUM BOARD CEILING PAINTED PT-03, U.N.O.
	MLP-01	PEMB METAL LINER PANEL
	LMC	LINEAR METAL CEILING/SOFFIT
		LIGHT FIXTURES. Refer to Electrical Drawings.
		SUPPLY AND RETURN GRILLES. Shown for location purposes only. Refer to Mechanical Drawings.
P-C		CEILING MOUNTED PROJECTOR
M-C		CEILING MOUNTED MONITOR

PARTITION LEGEND

1HR	1-HOUR FIRE BARRIER PARTITION. Extend partition to deck above and seal with firestopping sealant as required for fire-resistance requirements. Paint stenciled label on partitions above ceiling at 15'-0" o.c. as follows: *'1-HOUR FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS'*. Brace partitions per Floor Plan General Notes.
2HR	2-HOUR FIRE BARRIER PARTITION. Extend partition to deck above and seal with firestopping sealant as required for fire-resistance requirements. Paint stenciled label on partitions above ceiling at 15'-0" o.c. as follows: *'2-HOUR FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS'*. Brace partitions per Floor Plan General Notes.
SMK	SMOKE PARTITION. Extend partition to deck above and seal with sealant as required to resist the passage of smoke. Seal all joints and penetrations. Brace partitions per Floor Plan General Notes.
SND	ACOUSTICAL DRYWALL PARTITION / SOUND-CONDITIONED CMU PARTITION. Extend partition to deck above and seal with acoustical sealant. Seal all joints and penetrations with acoustical sealant. Brace partitions per Floor Plan General Notes.
PTD	NON-RATED PARTITION TO DECK. Extend partition to deck above. Brace partitions per Floor Plan General Notes.



KEY PLAN

VLK

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT KAREN K. BROWN 43911 STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
REFLECTED CEILING PLAN - LEVEL ONE - UNIT A MEZZANINE

SHEET NO.
A6.11C

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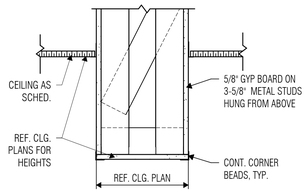
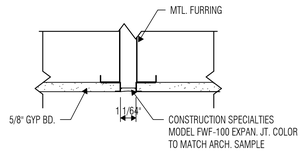
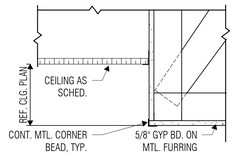


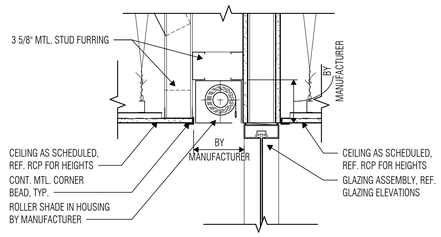
1 C500 - DETAIL AT FURR DOWN
SCALE: 1 1/2" = 1'-0"



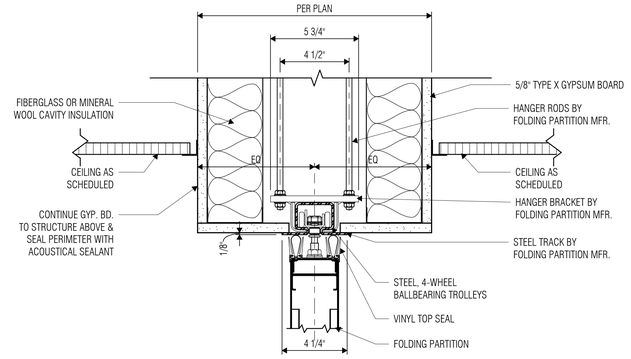
2 C800 - DETAIL AT CEILING E.J.
SCALE: 3" = 1'-0"



3 C509 - DETAIL AT FURR DOWN
SCALE: 1 1/2" = 1'-0"



4 DETAIL AT TYP. STOREFRONT/ ROLLER SHADE
SCALE: 1 1/2" = 1'-0"



5 CXX1 - DETAIL AT FOLDING PARTITION TRACK
SCALE: 3" = 1'-0"

6 C000 - GYP. BOARD CJ
SCALE: 3" = 1'-0"

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Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
REFLECTED CEILING PLAN DETAILS

SHEET NO.
A6.31

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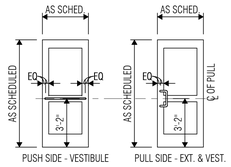
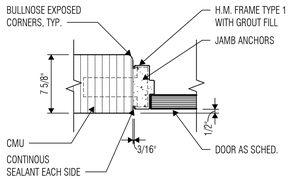
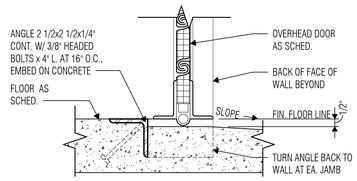
DOOR NUMBER	DOOR TYPE	FRAME TYPE	DOOR OPENING WIDTH	DOOR OPENING HEIGHT	HEAD	JAMB	SILL	FIRE RATING	HDWR SET	KEYED NOTES	REMARKS
100A	A4	----	6'-0"	8'-0"	3/A4.32	5/A4.31	11	---	C714M-1	5,9	REFER TO STOREFRONT ELEVATION SAE AND REMOVABLE MULLION W/ PANIC HARDWARE
102A	A4	----	6'-0"	8'-0"	3/A4.32	5/A4.31	11	---	C714M-1	5,9	REFER TO STOREFRONT ELEVATION SAA AND REMOVABLE MULLION W/ PANIC HARDWARE
102B	A4	----	6'-0"	8'-0"	3/A4.32	5/A4.31	11	---	C714M-1	5,9	REFER TO STOREFRONT ELEVATION SAB AND REMOVABLE MULLION W/ PANIC HARDWARE
102C	A4	----	6'-0"	8'-0"	3/A4.32	5/A4.31	11	---	C714M-1	5,9	REFER TO STOREFRONT ELEVATION SAD AND REMOVABLE MULLION W/ PANIC HARDWARE
103	A1	1	3'-0"	8'-0"	6	5	8	----	201		
104	E1	----	3'-0"	8'-0"	----	----	13	----	201AC	8, 9, 11	REFER TO STOREFRONT ELEVATION SAF
105A	A4	1	1'-7 5/8"	8'-0"	6	5	12	----	201		
105B	A4	1	1'-7 5/8"	8'-0"	6	5	12	----	201C		
108	A5		6'-0"	8'-0"					200P		
109	A4	1	3'-0"	8'-0"	4/A4.32	5 & 6/A4.32	14	----	205		
110	A4	1	3'-0"	8'-0"	4/A4.32	5 & 6/A4.32	14	----	205		
111	A4	1	3'-0"	8'-0"	6	5	12	----	201C		
112A	A4	1	3'-0"	8'-0"	6	5	8	----	331L		
112B	A4	1	3'-0"	8'-0"	6	5	8	----	331L		
113	B5	1	3'-0"	8'-0"	6	5	12	----	201C		
114	B5	1	3'-0"	8'-0"	6	5	12	----	201C		
115	B4	1	6'-0"	8'-0"	6	5	8		200EP		
116A	F2	----	6'-0"	8'-0"	----	----	12	---	710AEFHMZ-D	2, 7,	REFER TO STOREFRONT ELEVATION SAG W/ 180 SWING W/ PANIC HARDWARE
116B	F2	----	6'-0"	8'-0"	----	----	12	---	710AEFHMZ-D	2, 7,	REFER TO STOREFRONT ELEVATION SAI W/ 180 SWING W/ PANIC HARDWARE
116C	A5	1	6'-0"	8'-0"	4/A4.32	5 & 6/A4.32	14		C714M-1	9	W/ PANIC HARDWARE
116D	B4	1	6'-0"	8'-0"	4/A4.32	5 & 6/A4.32	14		C714M-1	9	W/ PANIC HARDWARE
118A	A4	1	3'-0"	8'-0"	6	5	8	----	201C		
118B	P7		10'-0 3/8"	10'-0"					001		
119A	A4	1	4'-0"	8'-0"	4/A4.32	5 & 6/A4.32	14	----	C715	9	W/ PANIC HARDWARE
119B	P7	----	10'-0 3/8"	10'-0"	6/A4.41	1/A4.33	7		C001	9	
119C	P7	----	10'-0 3/8"	10'-0"	6/A4.41	1/A4.33	7		C001	9	CARD READER ON INTERIOR SIDE
119D	P7	----	10'-0 3/8"	10'-0"	6/A4.41	1/A4.33	7		C001	9	CARD READER
119E	A4	1	4'-0"	8'-0"	4/A4.32	5 & 6/A4.32	14	----	C715	9	W/ PANIC HARDWARE
121	B4	1	6'-0"	8'-0"	6	5	8		200EP		
122A	E1	----	3'-0"	8'-0"	----	----	13	----	711ACH-D	7	REFER TO STOREFRONT ELEVATION SAK
122B	E1	----	3'-0"	8'-0"	----	----	13	----	711ACH-D	7	REFER TO STOREFRONT ELEVATION SAM
123A	A4	1	3'-0"	8'-0"	6	5	12	----	201		
123B	N1	----	7'-4 3/8"	4'-8"	15	16	10	----	001		
124	A4	1	3'-0"	8'-0"	6	5	8	----	203S		
125A	B4	1	6'-0"	8'-0"	4/A4.32	5 & 6/A4.32	14		DE714M-D		W/ PANIC HARDWARE
125B	P7	----	10'-0 3/8"	10'-0"	6/A4.41	1/A4.33	7		C001		
125C	B4	1	6'-0"	8'-0"	4/A4.32	5 & 6/A4.32	14		C714M-1	9. 6	W/ PANIC HARDWARE
127	P7	----	10'-0 3/8"	10'-0"	6/A4.41	1/A4.33	7		C001		
128	P7	----	10'-0 3/8"	10'-0"	6/A4.41	1/A4.33	7		C001	9	
134	A4		3'-0"	8'-0"		6/A4.32		----	C795	9	W/ PANIC HARDWARE
138A	A4	1	4'-0"	8'-0"	4/A4.32	5 & 6/A4.32	14	----	C795	9	W/ PANIC HARDWARE
138B	P7	----	10'-0 3/8"	10'-0"	6/A4.41	1/A4.33	7		C001	9	
138C	A4	1	4'-0"	8'-0"	4/A4.32	5 & 6/A4.32	14	----	C715	9	W/ PANIC HARDWARE
138D	P7	----	10'-0 3/8"	10'-0"	6/A4.41	1/A4.33	7		C001	9	
138E	P7	----	10'-0 3/8"	10'-0"	6/A4.41	1/A4.33	7		C001		
138F	P7	----	10'-0 3/8"	10'-0"	6/A4.41	1/A4.33	7		C001	9	
138G	A4	1	4'-0"	8'-0"	4/A4.32	5 & 6/A4.32	14	----	C715	9	W/ PANIC HARDWARE
145A	B4	1	6'-0"	8'-0"	6	5	8		212E		
145B	A4	1	3'-0"	8'-0"	4/A4.32	5 & 6/A4.32	14		C205	9	180 SWING
145C	P7	----	10'-0 3/8"	10'-0"	6/A4.41	1/A4.33	7		C001		
146	A4	1	3'-0"	8'-0"	4/A4.32	5 & 6/A4.32	14	----	205		
147	A4		3'-0"	8'-0"		6/A4.32		----	C715	9	W/ PANIC HARDWARE
148	A4	1	3'-0"	8'-0"	6	5	8	----	C201	9	180 SWING
149	A4	1	3'-0"	8'-0"	6	5	12	----	331CL		
150	A4	1	3'-0"	8'-0"	6	5	12	----	331CL		
151	P9		4'-0"	8'-0"				----	J715Y		SERVICE GATE W/ PANIC HARDWARE
152	A4	1	3'-0"	8'-0"	6	5	8	----	201C		
153	A4	1	3'-0"	8'-0"	6	5	8	----	201		
154	A4	1	3'-0"	8'-0"	6	5	8	----	201C		
155	A4	1	3'-0"	8'-0"	6	5	8	----	201		
156	C		6'-0"	6'-0"				----	J715Y		SERVICE GATE W/ PANIC HARDWARE
157	C		6'-0"	6'-0"				----	J715Y		SERVICE GATE W/ PANIC HARDWARE
159	D		6'-0"	6'-0"				----	J714MY		SERVICE GATE W/ PANIC HARDWARE
160	D		6'-0"	6'-0"				----	J714MY		SERVICE GATE W/ PANIC HARDWARE
161	D		6'-0"	6'-0"				----	J714MY		SERVICE GATE W/ PANIC HARDWARE
162	D		6'-0"	6'-0"				----			



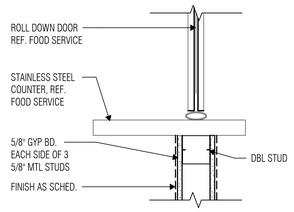
3 PUSH/ PULL HEIGHTS
SCALE: 1/4" = 1'-0"



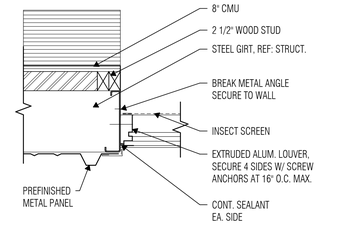
5 JAMB DETAIL H.M. TYPE 1_8" CMU_INTERIOR
SCALE: 1 1/2" = 1'-0"



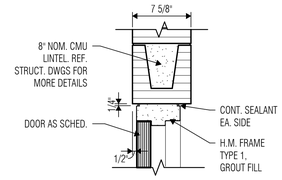
7 SILL DETAIL
SCALE: 3" = 1'-0"



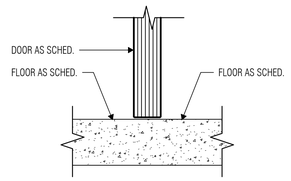
10 SILL DETAIL - COILING DOOR
SCALE: 1 1/2" = 1'-0"



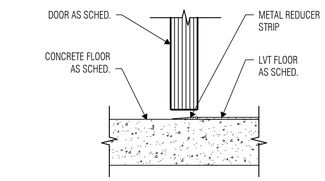
4 JAMB DETAIL-MTL BUILDING LOUVER
SCALE: 1 1/2" = 1'-0"



6 HEAD DETAIL H.M. TYPE 1_8" CMU_INTERIOR
SCALE: 1 1/2" = 1'-0"



8 SILL DETAIL - FLOOR AS SCHED.
SCALE: 3" = 1'-0"



9 SILL DETAIL - LVT/CONCRETE
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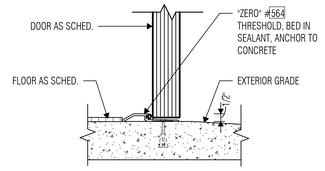

11 SILL DETAIL - FLOOR/EXT. CONCRETE
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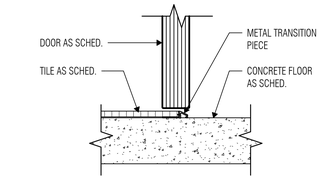

12 SILL DETAIL - TILE/CONCRETE
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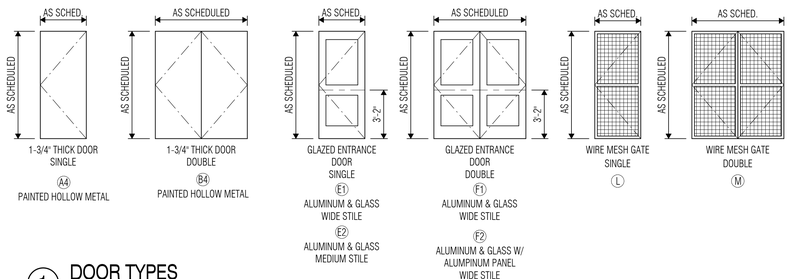
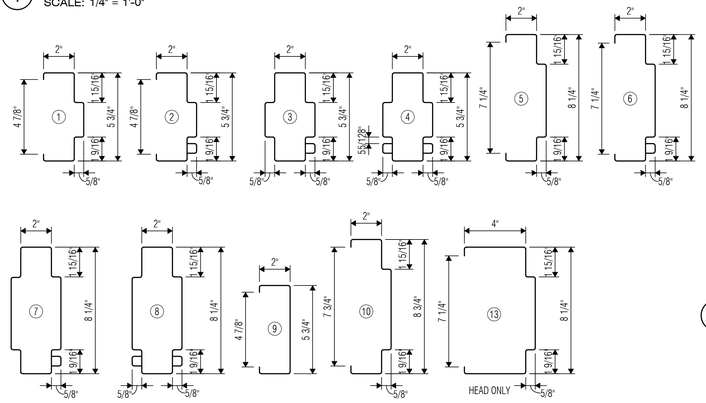


1 DOOR TYPES
SCALE: 1/4" = 1'-0"



2 HOLLOW METAL FRAME TYPES
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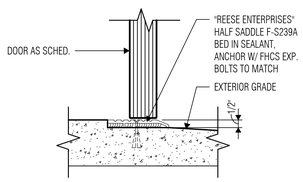
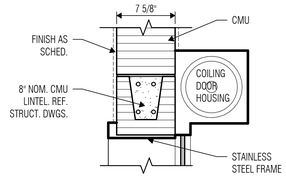
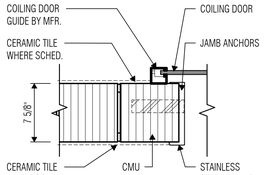


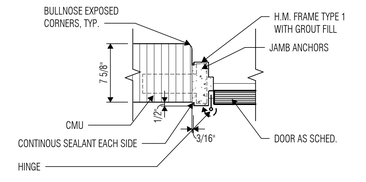
14 SILL DETAIL - CONC./EXT. CONCRETE
SCALE: 3" = 1'-0"



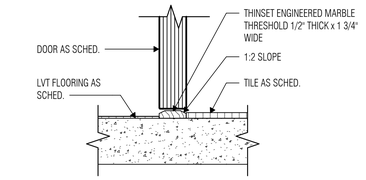
15 HEAD DETAIL
SCALE: 1 1/2" = 1'-0"



16 JAMB DETAIL
SCALE: 1 1/2" = 1'-0"



17 JAMB DETAIL H.M. 8" CMU 180 SWING
SCALE: 1 1/2" = 1'-0"



13 SILL DETAIL - LVT/TILE
SCALE: 3" = 1'-0"

DOOR SCHEDULE NOTES

1. At Doors marked 'SMK', provide smoke seals at frame and door bottom to resist the passage of smoke. Provide threshold if required by code or if necessary for proper function of door bottom seal.
2. At Doors marked 'SND', frames to be stuffed with mineral fiber insulation prior to installation and the perimeter of the frame sealed to the surrounding wall with non-hardening acoustical sealant on both sides of the partition. Threshold, where used, shall be sealed to the floor with acoustical sealant.
3. At Doors without a Frame Type designation, the door frame is part of a Glazing System, Sound-Control Door Assembly, Tornado-Resistant Door Assembly, etc.
4. At Doors with a Frame Type designation "AL", the door frame is an interior aluminum frame that is not part of a glazing system
5. At Doors with a Frame Type designation "N/A", there is no door frame required (e.g. all-glass doors, gates, etc.).
6. At Doors with a Frame Type designation "REF DET", refer to the referenced Head and Jamb detail for frame information.
7. At Doors with a Door Type or Frame Type designation "EX", the door or door frame is existing to remain.
8. Refer to Hardware Schedule for additional information regarding hardware.
9. Vision panels at non-rated interior doors shall be 1/4" clear tempered glass (CT4) U.N.O. Vision panels at interior fire-rated glass (CC4) U.N.O. Vision panels at exterior doors shall be 1" tinted tempered insulating glass (TT1) U.N.O.
10. Refer to Glazing System Elevation Sheets for Glass Types.

DOOR SCHEDULE KEYED NOTES

1. CASED OPENING
2. DOUBLE EGRESS DOORS
3. FIRE-RATED WIRED GLASS
4. FIRE-RATED CERAMIC GLASS
5. KEYED REMOVABLE MULLION
6. ELECTROMAGNETIC HOLD-OPEN
7. MANUAL HOLD-OPEN, FLOOR MOUNTED
8. MANUAL HOLD-OPEN, OVERHEAD
9. ACCESS CONTROL / CARD READER
10. DOOR POSITION SWITCH
11. APPLIED SOUND SEALS & THRESHOLD

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT — KAMEN V. BROWN — 43511 — STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
LAH	VLK
Designer	Quality Control
ET	
Proj. Arch.	
KT	

PROJECT NO.
24-057.00

SHEET TITLE
DOOR SCHEDULE

SHEET NO.
A7.01

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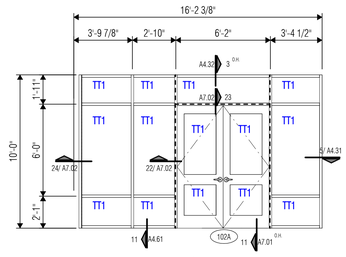
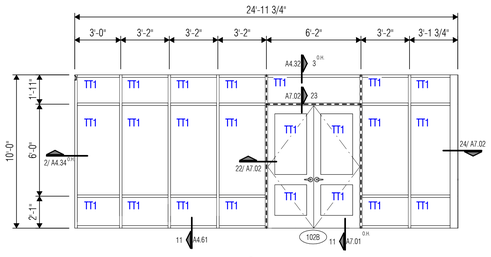


5A6
2" x 6"
ALUMINUM STOREFRONT



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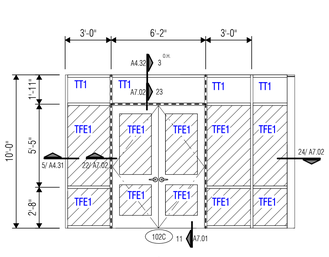

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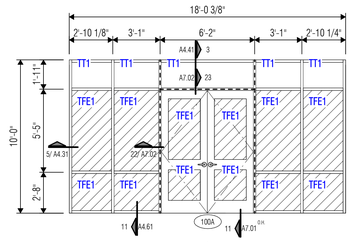
ALUMINUM STOREFRONT



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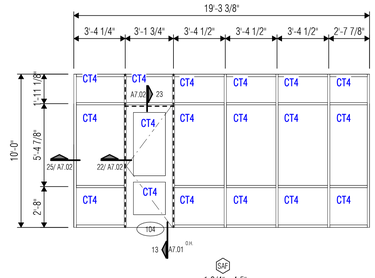
2" x 6"
ALUMINUM STOREFRONT



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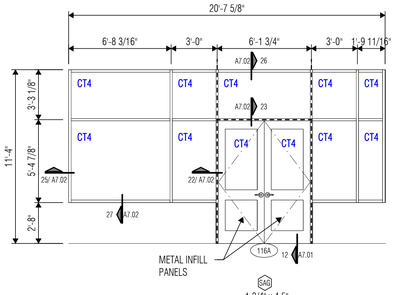
ALUMINUM STOREFRONT
INTERIOR



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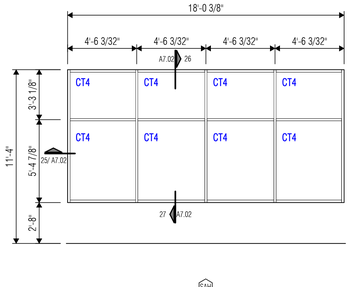
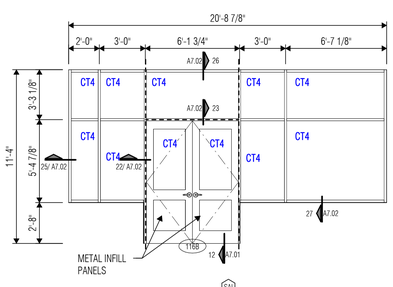
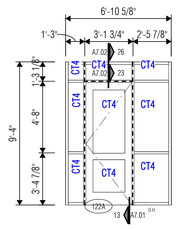
ALUMINUM STOREFRONT
INTERIOR



5A8
1 3/4" x 4.5"
ALUMINUM STOREFRONT
INTERIOR



5A8
1 3/4" x 4.5"
ALUMINUM STOREFRONT
INTERIOR



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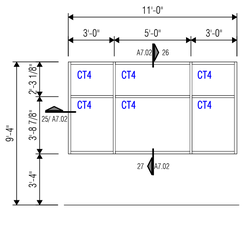
1 3/4" x 4.5"
ALUMINUM STOREFRONT
INTERIOR



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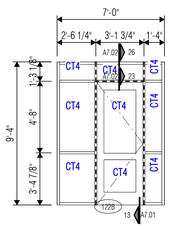
1 3/4" x 4.5"
ALUMINUM STOREFRONT
INTERIOR



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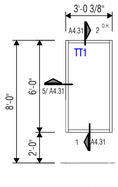
1 3/4" x 4.5"
ALUMINUM STOREFRONT
INTERIOR



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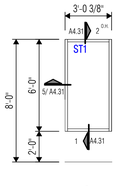
2" x 6"
ALUMINUM STOREFRONT



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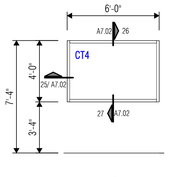
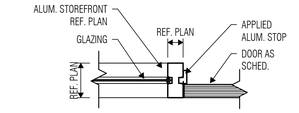
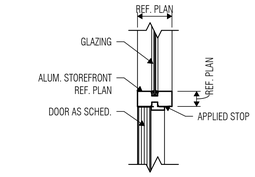
ALUMINUM STOREFRONT



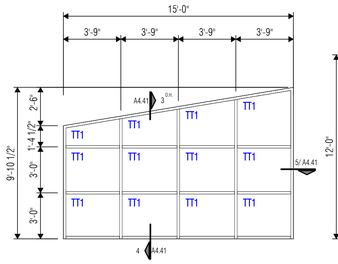
5A8
1 3/4" x 4.5"
ALUMINUM STOREFRONT
INTERIOR



22 JAMB DETAIL - AT GLAZING
SCALE: 1 1/2" = 1'-0"



23 HEAD DETAIL - AT GLAZING
SCALE: 1 1/2" = 1'-0"



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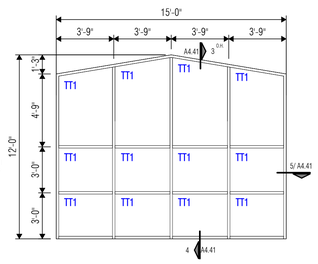
2" x 6"
ALUMINUM STOREFRONT



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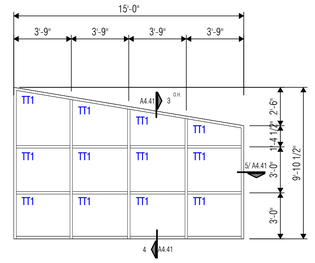
2" x 6"
ALUMINUM STOREFRONT



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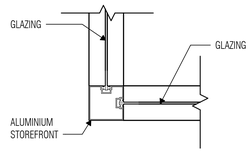
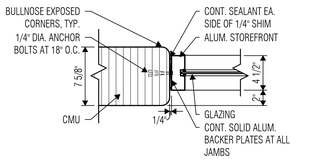
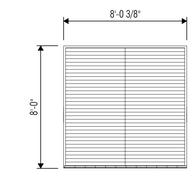
2" x 6"
ALUMINUM STOREFRONT



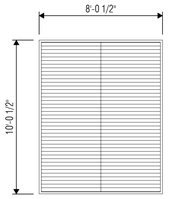
24 JAMB DETAIL - CORNER
SCALE: 1 1/2" = 1'-0"



25 JAMB DETAIL - AT CMU WALL
SCALE: 1 1/2" = 1'-0"



L
TYPICAL STEEL BARN LOUVER L
REF. MEP



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HIGH STEEL BARN LOUVER
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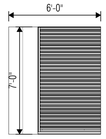
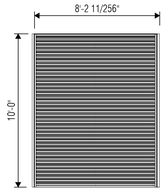
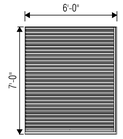


L
L23
ALUMINUM INTAKE LOUVER AT MEZZANINE
REF. MEP



ALUMINUM DECORATIVE RUSKIN
ELT LOUVER AT MEZZANINE



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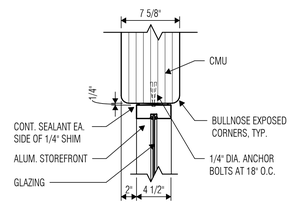
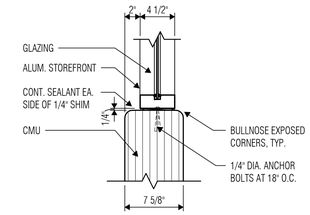
ALUMINUM EXHAUST LOUVER AT MEZZANINE
REF. MEP



26 HEAD DETAIL - AT CMU WALL
SCALE: 1 1/2" = 1'-0"



27 SILL DETAIL - AT CMU WALL
SCALE: 1 1/2" = 1'-0"

GLAZING SYSTEM NOTES

1. Overall dimensions of glazing system elevations reflect rough opening dimensions, inclusive of perimeter joints.
2. Provide 3/16" thick heavy wall framing members at all door frames in exterior and interior aluminum Storefront systems.
3. Provide 3/16" thick heavy wall door adapters at all door frame members in exterior and interior aluminum Curtain Wall systems.
4. Door opening dimensions in Curtain Wall systems reflect 1" door adapters at jamb conditions, and 1-3/4" door adapters at head conditions. Adjust dimensions between mullions at door openings in curtain wall systems as required for actual size of door adapters provided. Door sizes as identified in Door Schedule shall be maintained.
5. Refer to 3/A7.01 for Typical Push/Pull Mounting Heights Detail for aluminum/glass doors

GLASS TYPE LEGEND

TT1 TINTED, TEMPERED, 1" THICK INSULATING GLASS
TFE1 TINTED, FORCED-ENTRY RESISTANT, 1" THICK INSULATING GLASS W/ FILM

CT4 CLEAR, TEMPERED, 1/4" THICK GLASS
CB2 CLEAR, BULLET-RESISTANT, 1/2" THICK GLASS W/ FILM

ST1 SPANDREL, TEMPERED, 1" THICK INSULATING GLASS

GLAZING SYSTEM LEGEND

STOREFRONT FRAMING WITH 3/16" THICK 'HEAVY WALL' MATERIAL. TYPICAL AT ALL DOOR FRAME MEMBERS IN STOREFRONT GLAZING SYSTEMS.

CURTAIN WALL FRAMING WITH STEEL REINFORCING PROVIDED BY MANUFACTURER.

VLK

ARCHITECT

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FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT
KAMREN V. BRENNAN
23211
STATE OF TEXAS
05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
GLAZING ASSEMBLY ELEVATIONS

SHEET NO.
A7.02

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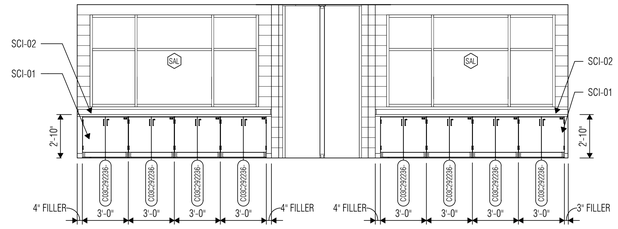
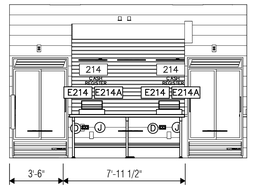
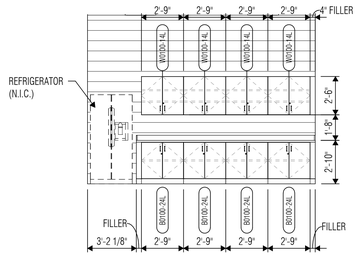


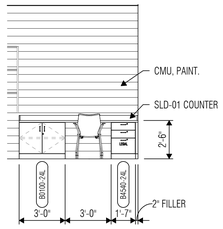
1 122 - CLASSROOM - NORTH
SCALE: 1/4" = 1'-0"



2 123 - CONCESSIONS - NORTH
SCALE: 1/4" = 1'-0"



3 103 - WORKROOM - NORTH
SCALE: 1/4" = 1'-0"



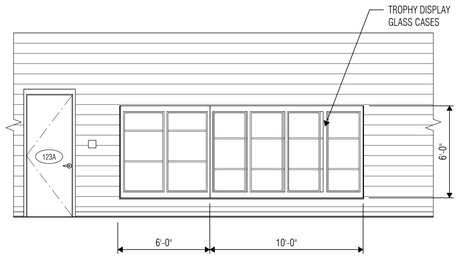
4 CASEWORK ELEVATION - EQUIPMENT STORAGE
SCALE: 1/4" = 1'-0"

CASEWORK NOTES

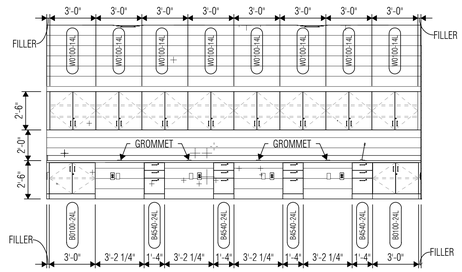
1. Casework shall meet criteria set forth in Americans with Disabilities Act and Texas Accessibility Standards.
2. All casework model numbers are based on Case Systems, Inc. Refer to casework elevations for height and width of each unit.
3. Coordinate locations of electrical and/or plumbing within casework and millwork. Notify Architect of any conflicts prior to installation.
4. Coordinate all column locations prior to installation of casework.
5. Refer to Floor Plan Notes for blocking requirements at stud partitions.
6. All adjustable shelves longer than 2'-3", and shelves of any length at open shelving units, shall be 1" thick..
7. Provide finished surface on all exposed surfaces.
8. Plastic Laminate on all casework shall be PL-02 U.N.O.
9. Provide fillers and finished end panels (F.E.) as required. Refer to Detail 8/A8.01 for filler requirements.
10. Provide locks on all doors and drawers as indicated.
11. All counters shall have 4" high splashes, U.N.O.
12. At countertop locations, no joints in plastic laminate should occur over knee spaces, or within 24 inches of sinks and lavatories.
13. Casework cabinet doors and drawers shall be flush overlay.
14. Base cabinets should not extend to floor. Sub-base shall be separate and recessed 1/2" at sides of cabinet to receive rubber base.
15. Provide 1-1/2" thick divider panel between knee spaces and adjacent spaces (e.g. dishwasher openings, other knee spaces, etc.).
16. At front of casework, countertops shall extend 1/2" over base cabinet door/drawer (approximately 1-1/2" over base cabinet body). At ends of casework, countertops shall extend 1/2" over base cabinet body. Refer to Detail 8/A8.01.
17. Provide custom height at all file-size drawers to be a minimum of 1'-0" deep. Provide locks at all file-size drawers.

C.S.I. CATALOG CASEWORK NUMBER — XXXXM-24LV — CASEWORK NOMINAL DEPTH; V = LIGHT VALANCE PANEL (C.S.I. #R9600-03); M = MODIFIED FROM STANDARD CATALOG SELECTION; L = LOCKED CABINET

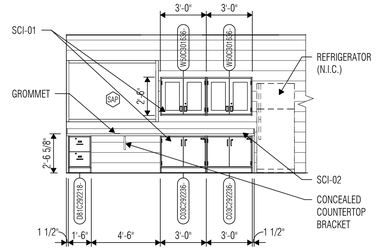
NOTE:
1. The height indicated at base cabinets includes the countertop.



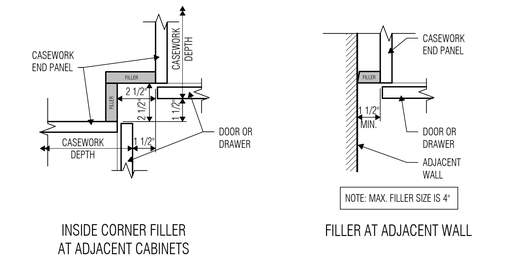
5 101 - CORRIDOR TROPHY CASE - WEST
SCALE: 1/4" = 1'-0"



6 104 - OFFICE - NORTH
SCALE: 1/4" = 1'-0"

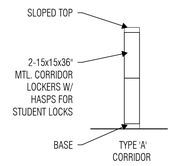


7 153 VET - WEST
SCALE: 1/4" = 1'-0"

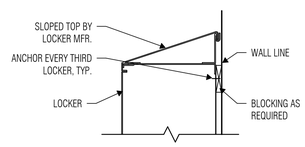


8 TYPICAL CASEWORK DETAILS
SCALE: 3" = 1'-0"

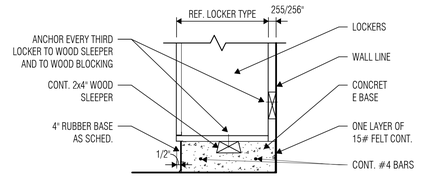
M830



9 MC200 - LOCKER TYPE ELEVATIONS
SCALE: 1/4" = 1'-0"



10 MC201 - LOCKER CAP DETAIL
SCALE: 1 1/2" = 1'-0"



11 MC203 - LOCKER BASE DETAIL
SCALE: 1 1/2" = 1'-0"

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT — KAREN K. BROWN — 23511 — STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
CASEWORK ELEVATIONS

SHEET NO.
A8.01

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ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL	CEILING	COMMENTS
LEVEL ONE						
101	CORRIDOR	T-01 / CPT-01	RB-01	PT-01	LMC-01 / ACT-01 / PT-02	
102	CORRIDOR	T-01 / CPT-01	RB-01	PT-01 / PT-02	LMC-01 / ACT-01 / PT-02	
103	WORKROOM	VCT-01	RB-01	PT-01	ACT-01	
104	OFFICE	VCT-01	RB-01	PT-01	ACT-01	
105	WOMENS	T-01	TB-01	T-02 / PT-01	PT-02	Ref. 3/A2.31 & 4/A2.31
107	MENS	T-01	TB-01	T-02 / PT-01	PT-02	Ref. 3/A2.31 & 4/A2.31
108	EQUIPMENT STORAGE	CO-01	RB-01	PT-01	ACT-01	
109	MECH.	CO-01	RB-01	PT-01	PT-03	
110	RISER	CO-01	RB-01	PT-01	PT-03	
111	ELEC.	CO-01	RB-01	PT-01	PT-03	
112A	STAFF TOILET	T-02	TB-01	T-02 / PT-01	PT-02	Ref. 3/A2.31 & 4/A2.31
112B	FAMILY	T-02	TB-01	T-02 / PT-01	PT-02	Ref. 3/A2.31 & 4/A2.31
113	MDF	CO-01	RB-01	PT-01	PT-03	
114	CUST.	CO-01	RB-01	PT-01	PT-03	
115	STORAGE	CO-01	RB-01	PT-01	PT-03	
116	SHOW ARENA	CO-02	RB-01	PT-01 / MP-01	MP-02	
117	BLEACHERS	---	---	---	---	
118	STORAGE	CO-01	RB-01	PT-01	MP-02	
119	ARENA HOLDING PIN	CO-02	RB-01	PT-01 / MP-01	MP-02	
120	BLEACHERS	---	---	---	---	
121	EQUIPMENT STORAGE	CO-01	RB-01	PT-01	MP-02	
122	CLASSROOM	VCT-01	RB-01	PT-01 / FP	ACT-03 / PT-02	
123	VENDING	CO-01	RB-01	PT-01	ACT-02	
124	STORAGE	CO-01	RB-01	PT-01	PT-03	
125	ALLEY	CO-02	---	PT-01	MP-02	
126	PIG STALLS	CO-02	---	PT-01	MP-02	
127	PIG STALLS	CO-02	---	PT-01	MP-02	
128	PIG STALLS	CO-02	---	PT-01	MP-02	
129	PIG STALLS	CO-02	---	PT-01	MP-02	
130	PIG STALLS	CO-02	---	PT-01	MP-02	
132	PIG STALLS	CO-02	---	PT-01	MP-02	
133	PIG STALLS	CO-02	---	PT-01	MP-02	
134	WASH AREA	CO-03	---	PT-01	MP-02	
135	TRIM AREA	CO-03	---	PT-01	MP-02	
136	TRIM AREA	CO-03	---	PT-01	MP-02	
137	WASH AREA	CO-03	---	PT-01	MP-02	
138	ALLEY	CO-02	---	PT-01	MP-02	
139	GOAT STALLS	CO-02	---	PT-01	MP-02	
140	GOAT STALLS	CO-02	---	PT-01	MP-02	
141	GOAT STALLS	CO-02	---	PT-01	MP-02	
142	GOAT STALLS	CO-02	---	PT-01	MP-02	
143	STEER STALL	CO-02	---	PT-01	MP-02	
144	STEER STALL	CO-02	---	PT-01	MP-02	
145	HAY STORAGE	CO-01	---	PT-01	MP-02	
146	RISER ROOM	CO-01	---	PT-01	MP-02	
147	TRAINING AREA	CO-02	---	PT-01 / MP-01	MP-02	
148	FEED STORAGE	CO-01	RB-01	PT-01	MP-02	
149	TOILET	CO-02	TB-01	T-02 / PT-01	PT-02	Ref. 3/A2.31 & 4/A2.31
150	TOILET	CO-02	TB-01	T-02 / PT-01	PT-02	Ref. 3/A2.31 & 4/A2.31
151	LOCKERS	CO-02	---	PT-01	MP-02	
152	IDF	CO-01	RB-01	PT-01	MP-02	
153	VET	CO-01 / CO-03	RB-01	PT-01	PT-02	
154	ELECTRICAL	CO-01	RB-01	PT-01	MP-02	
155	MECHANICAL	CO-01	RB-01	PT-01	MP-02	
163	GOAT STALLS	CO-02	---	PT-01	MP-02	
MEZZANINE						
162	MEZZANINE AREA	PTC	RB-01	PT-01 / MP-01	MP-02	

MATERIAL FINISH SCHEDULE

NOTE: ALL MATERIALS, PRODUCTS, SIZES, COLORS AND PATTERNS ARE THE BASIS OF DESIGN. REFERENCE PROJECT MANUAL FOR ADDITIONAL APPROVED MANUFACTURERS MEETING THE DESIGN INTENT. SUBSTITUTIONS WILL BE CONSIDERED WHEN SUBMITTED IN COMPLIANCE WITH SECTION 01 62 00 – PRODUCT OPTIONS.

MARK	DESCRIPTION	SPEC SECTION	MANUFACTURER INFO				COMMENTS
			MANUFACTURER	SERIES/STYLE	COLOR/FINISH	SIZE	
ARCHITECTURAL / MILLWORK							
FP	Fabric - Folding Partition	10 22 39	Modernfold	Xorel Premium Fabric		---	
GMT	Grommet	12 32 16	Mockett	PS-1B			
PL-01	Plastic Laminate - Doors	08 14 23	Wilsonart	---	Phantom Cocoa 8213K-28	---	
PL-02	Plastic Laminate - Casework	12 32 16	Wilsonart	---	Loft Oak 7968K-12	---	
SLD-01	Solid Surface - Countertops / Windowsills	12 32 16	Staron	---	PB852 Pebble Boulder	---	
BASE							
RB-01	Rubber Base	09 65 00	Roppe	Pinnacle	193 Black Brown	4"	
TB-01	Tile Base	09 30 00	Daltile	Color Wheel Classic; Cove Base	Suede Gray	6" x 6"	
CEILING							
ACT-01	Acoustic Ceiling Tile	09 51 00	Armstrong	Ultima	White	24" x 24"	
ACT-02	Acoustic Ceiling Tile - Vinyl Coated	09 51 00	Certainteed	Vinyl Rock	White	24" x 24"	
LMC-01	Linear Metal Ceiling - Wood	09 54 23	A.M.I. / Innovative Architectural Solutions	Linea Strip System	Butternut Oak		
MP-02	Metal Panel - Ceiling	13 34 19	As Specified	---	---	---	
EXTERIOR							
BRK	Brick	04 20 00	Acme	TBD	TBD		
FNC	Composite Fencing	32 31 32	TREX	As Specified	Woodland Brown		At dumpster enclosure
MLBD	Metal Building System	13 34 19	Schulte Building Systems, Inc.	As Specified	PT-08, PT-09	---	
STN	Natural Stone Masonry	04 43 00	Apex Stone / Acme	Vienna Brick Rocks	---		
FLOOR							
CO-01	Concrete - Sealed	03 30 00	As Specified	---	Sealed	---	
CO-02	Concrete - Sealed w/ Broom Finish	09 30 00	As Specified	---	Broom Finish	---	
CO-03	Concrete - Sealed w/ Jitterbug Finish	09 30 00	As Specified	---	Jitterbug Finish	---	
CPT-01	Carpet - Walk-off	09 68 13	Milliken	Obex Tile; CutX / Footpath	FOX143-178 Russet	50cm x 50cm	Ashlar install
GR-02	Grout - Floor Tile	09 30 00	Mapei	---		---	
PTC	Pedestrian Traffic Coating	07 18 13	As Specified	---	---	---	
T-01	Porcelain Tile	09 30 00	Daltile	Acreage	AC11 Palomino	8" x 48"	
VCT-01	Vinyl Composition Tile	09 65 00	Tarkett	VCT II	530 Winter Storm	---	
PAINT							
PT-01	Epoxy Paint - Field	09 91 00	Sherwin Williams	As Specified	SW 7016 Mindful Gray	---	
PT-02	Epoxy Paint - Ceiling	09 91 00	Sherwin Williams	As Specified	SW 7006 Extra White	---	
PT-03	Paint - Exposed Structure	09 91 00	Sherwin Williams	As Specified	SW 9170 Acier	---	
PT-04	Paint - HM Doors	09 91 00	Sherwin Williams	As Specified	SW 7039 Virtual Taupe	---	
PT-05	Paint - HM Door Frames	09 91 00	Sherwin Williams	As Specified	SW 7069 Iron Ore	---	
PT-06	Paint - HM Door Vision Panels	09 91 00	Sherwin Williams	As Specified	SW 7039 Virtual Taupe	---	
PT-07	Paint - Exterior HM Doors & Frames	09 91 00	Sherwin Williams	As Specified		---	
PT-08	Paint - Framing / Louvers	09 91 00	SBS / Sherwin Williams	As Specified	Colonial Red	---	Schulte Building System prefab metal building
PT-09	Paint - Exterior Metal	09 91 00	SBS / Sherwin Williams	As Specified	Brownstone	---	Schlute Building System prefab metal building
SPECIALTY EQUIPMENT							
DC-01	Display Case	10 12 00	Claridge Products	As Specified	Dark Bronze	---	Claridge Cork (Forbo), color 1103 Oyster
LK	Lockers	10 51 13	Penco Products	As Specified	TBD		
MB	Markerboard	10 11 16	As Specified	---	---	---	
RS	Roller Shade	12 24 13	MechoShade	As Specified	Thermoveil 1500	1524 Taupe	Ref. specs for system
SCI-01	Metal - Casework	12 35 53.13	Kewaunee	As Specified	62 Driftwood	---	
SCI-02	Epoxy - Countertop	12 35 53.13	Kemresin	As Specified	Slate	---	
TC	Toilet Compartment	10 21 13.17	Accurate Partitions	Color Thru Phenolic		---	
TRIM / TRANSITION							
TN-01	Transition - Solid Surface	09 30 00	Grifform Innovations	TT2, with bevels	Corian -		At threshold of wet areas
TN-02	Transition - CPT to Tile	09 30 00	Schluter	Schiene			
TN-03	Transition - CPT to VCT	09 30 00					
TN-04	Transition - Tile to VCT	09 30 00	Schluter	RENO-U			
TN-05	Transition - Tile to CO	09 30 00	Schluter	RENO-RAMP/-K			
TR-01	Trim - Tile Edge / Corner	09 30 00	Schluter	Rondec			
WALL							
FRP	Fiberglass Reinforced Plastic	09 72 21	Marlite	Pebbled Texture	P-100 White		At mop sink; reference 7/A2.30
GR-01	Grout - Wall Tile	09 30 00	Mapei	---		---	
MP-01	Metal Panel - Wall	13 34 19	As Specified	---	---	---	
T-02	Ceramic Tile - Restroom Wall	09 30 00	Daltile	Color Wheel Classic	Suede Gray 0182	6" x 6"	1/2 offset install pattern

FINISH SCHEDULE NOTES

1. **General Finish Notes**
   - A. Any finish conflict between finish schedules and finish floor plans to be brought to the architect's attention for resolution.
   - B. **Plastic Laminate**
     - a. Typical Casework/Millwork cabinet body, doors, and drawer fronts shall be PL-02, unless noted otherwise.
     - b. Countertops shall be SLD-01.
     - c. Interior Plastic Laminate clad wood doors to be PL-01.
     - d. Window Sills shall be SLD-01.
2. **Ceiling Finishes**
   - A. Refer to Reflected Ceiling Plans for scheduled finish.
   - B. At ceilings with exposed structure, all exposed elements shall be painted the scheduled color, including mechanical ductwork, electrical, piping, conduit, j-boxes, etc.
   - C. All interior gyp. bd. ceilings to be painted PT-02, unless noted otherwise.
   - D. All interior gyp. bd. furr-downs to be painted PT-02, unless noted otherwise.
3. **Floor Finishes**
   - A. Refer to Interior Finish Plans for floor finish patterns.
   - B. Refer to Interior Finish Plans for tile origin in each room. If origin point is not indicated, center in middle of the room or corridor.
   - C. All changes in floor material between rooms shall occur at centerline of doorway, unless noted otherwise.
   - D. Level and float flooring at public corridor walls.
   - E. All toilets and other areas capable of water mitigation shall have a 2" x ½" marble threshold with double ¼" bevel edge. The thresholds shall be held in place with thin set.
   - F. Sealant color shall match adjacent material.
   - G. Typical carpet application at brick walls: rake brick joint at floor level and tuck carpet tight into raked brick joint.
4. **Wall Finishes**
   - A. Finishes shall continue to inside corner, unless noted otherwise.
   - B. At painted CMU base, color shall match the wall above.
   - C. Provide Corner Guard at all outside gyp. bd. corners, whether indication on finish plans or not. Corner Guards should go to ceiling.
5. **Paint Information:**
   - a. **Interior Paint**
     - All exterior walls with gyp. bd. interior are to be painted PT-01, unless noted otherwise.
     - All interior sealants shall be painted to match adjacent wall.
   - b. **Hollow Metal Doors and Windows:**
     - Hollow metal doors to be painted PT-04, unless noted otherwise
     - Hollow metal door frames shall be painted PT-05, unless noted otherwise.
     - Vision panel frames shall be painted PT-06, unless noted otherwise.
     - At door frames with 2 different colors, transition color at inside corner of door stop, on the door side of the stop.
     - Hollow metal glazed opening frames shall be painted PT-05, unless noted otherwise.
6. **Tiling**
   - A. Refer to Sheet A2.31 for typical toilet room wall patterns.
   - B. At outside corners and exposed edges of ceramic or porcelain tile, provide anodized aluminum trim, unless otherwise detailed.
   - C. Provide TR-01 at all outside and/or exposed tile locations (top, bottom, and corners) in corridors, whether indicated on finish plans or not.

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05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No. | Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

24-057.00

SHEET TITLE

MATERIAL & ROOM FINISH SCHEDULES

SHEET NO.

A9.01

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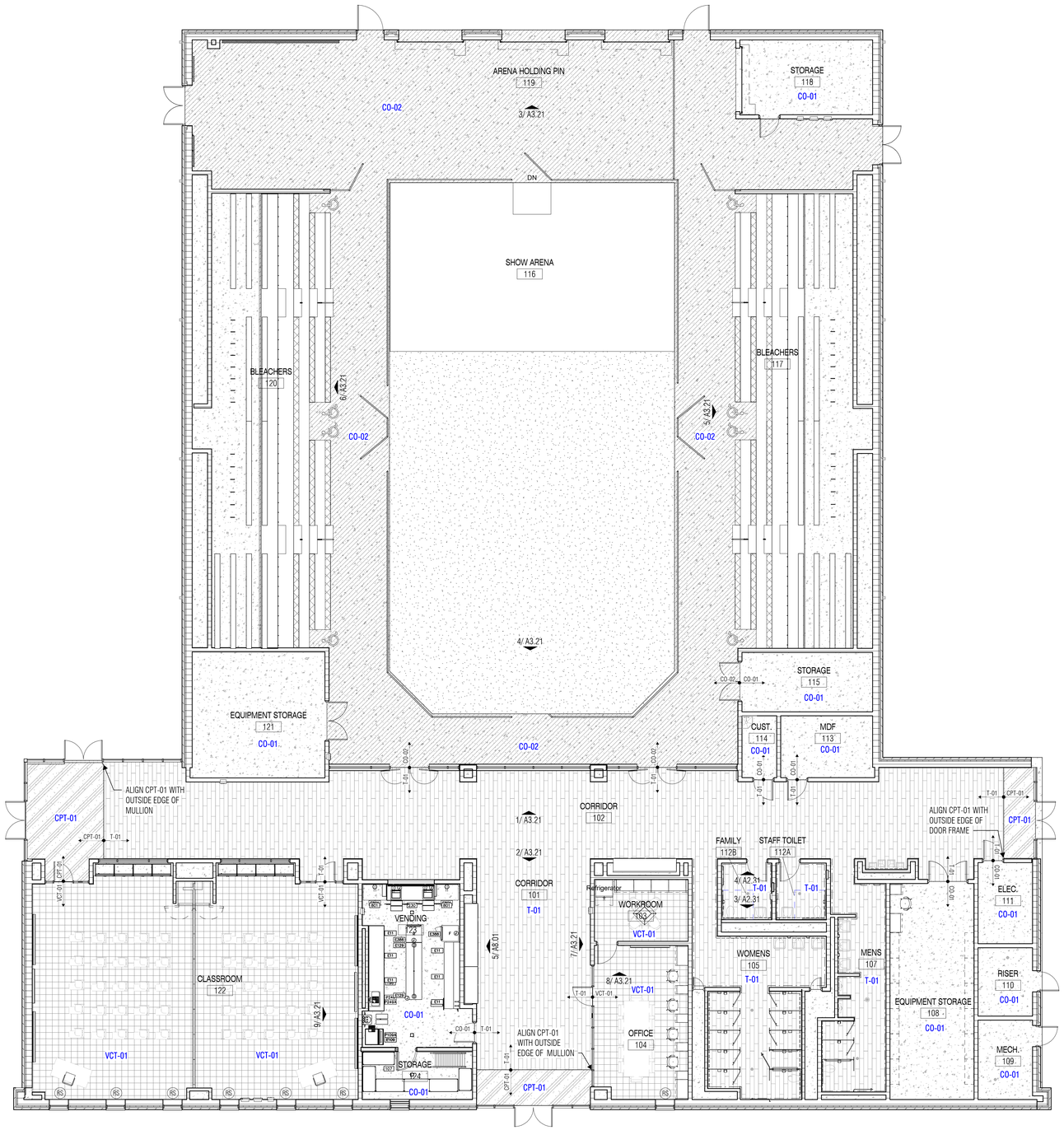

1 INTERIOR FINISH PLAN - LEVEL ONE - UNIT A

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

INTERIOR FINISH LEGEND

C0-01	CONCRETE - SEALED
C0-02	CONCRETE - SEALED W/ BROOM FINISH
C0-03	CONCRETE - SEALED W/ HEAVY BROOM FINISH
CPT-01	CARPET - WALK-OFF [50cm x 50cm]
T-01	PORCELAIN TILE
VCT-01	VINYL COMPOSITION TILE

WALL FINISH LEGEND

T-03	TILE - FULL HEIGHT
T-03	TILE - WAINSCOT [4 FULL COURSES]

TRANSITION/TRIM LEGEND

	FLOOR FINISH ACCESSORY TRIM
OP	ORIGIN POINT

B

A

KEY PLAN

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05/28/2025

ISSUED: MAY 28, 2025

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Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.

24-057.00

SHEET TITLE

INTERIOR FINISH PLAN - LEVEL ONE - UNIT A

SHEET NO.

A9.11A

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1 INTERIOR FINISH PLAN - LEVEL ONE - UNIT B
SCALE: 1/8" = 1'-0"

INTERIOR FINISH LEGEND

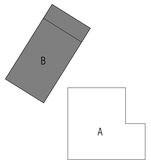
	C0-01	CONCRETE - SEALED
	CO-02	CONCRETE - SEALED W/ BROOM FINISH
	CO-03	CONCRETE - SEALED W/ HEAVY BROOM FINISH
	CPT-01	CARPET - WALK-OFF [50cm x 50cm]
	T-01	PORCELAIN TILE
	VCT-01	VINYL COMPOSITION TILE

WALL FINISH LEGEND

----------	T-03	TILE - FULL HEIGHT
—·—·—	T-03	TILE - WAINSCOT [4 FULL COURSES]

TRANSITION/TRIM LEGEND

◂—●—▸	FLOOR FINISH ACCESSORY TRIM
OP	ORIGIN POINT



KEY PLAN

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
INTERIOR FINISH PLAN - LEVEL ONE - UNIT B

SHEET NO.
A9.11B

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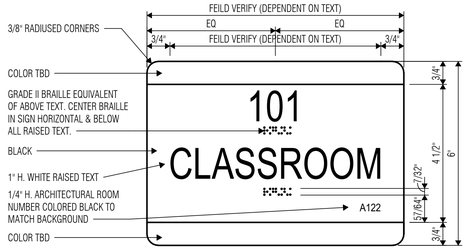
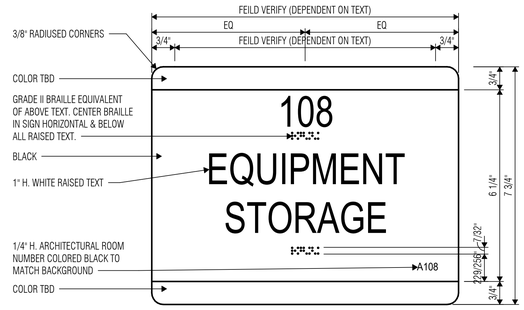
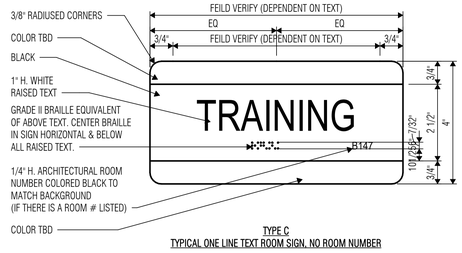


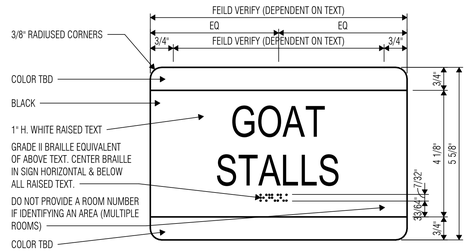
TYPE A
TYPICAL ONE LINE TEXT WITH ROOM NUMBER



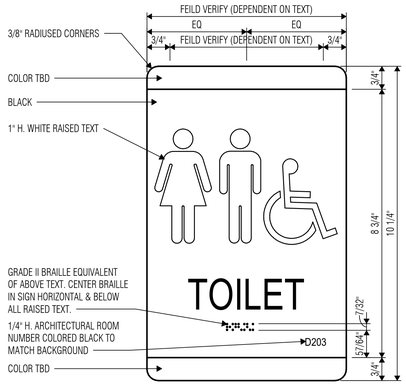
TYPE B
TYPICAL TWO LINE TEXT ROOM SIGN AND ROOM NUMBER



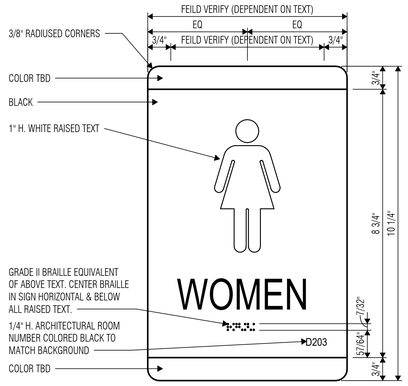
TYPE C
TYPICAL ONE LINE TEXT ROOM SIGN, NO ROOM NUMBER



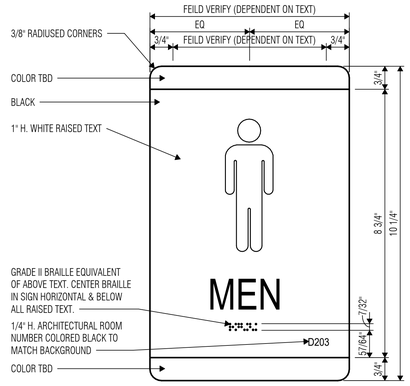
TYPE D
TYPICAL TWO LINE TEXT ROOM SIGN, NO ROOM NUMBER



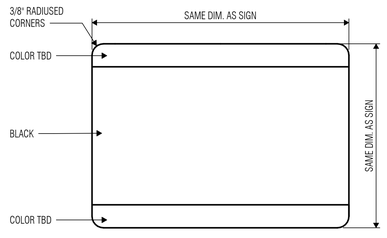
TYPE E
TYPICAL RESTROOM ROOM SIGN



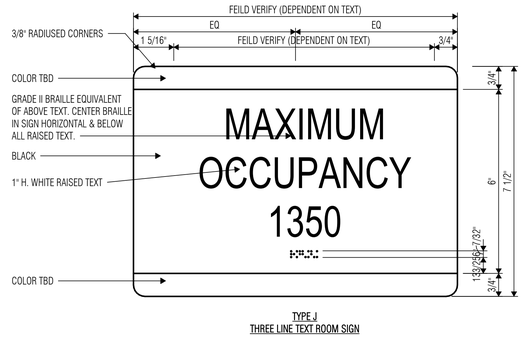
TYPE F
WOMEN'S RESTROOM ROOM SIGN



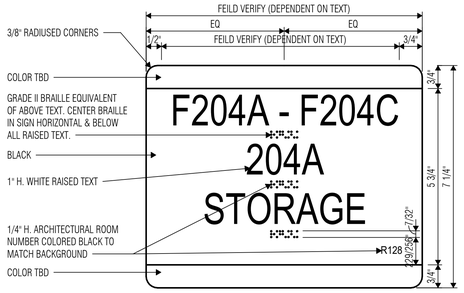
TYPE G
MEN'S RESTROOM ROOM SIGN



TYPE H
BLANK SIGN SAME AS SIGN
INSTALL ON GLASS ON OPPOSITE SIDE OF SIGN



TYPE J
THREE LINE TEXT ROOM SIGN



TYPE K
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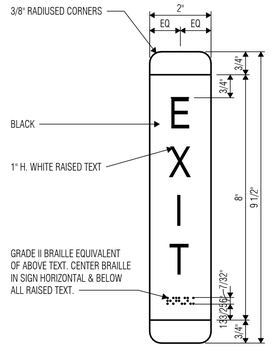
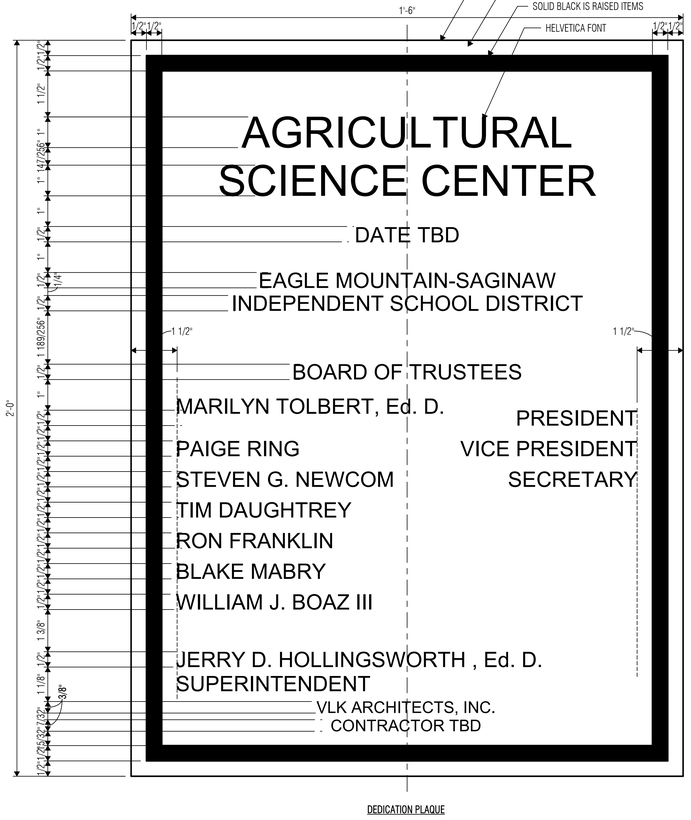


TYPE L
EXIT SIGNAGE



DEDICATION PLAQUE

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REGISTERED ARCHITECT
LAUREN V. BROWN
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STATE OF TEXAS

05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
WAYFINDING ROOM SIGNAGE TYPES

SHEET NO.
A9.12

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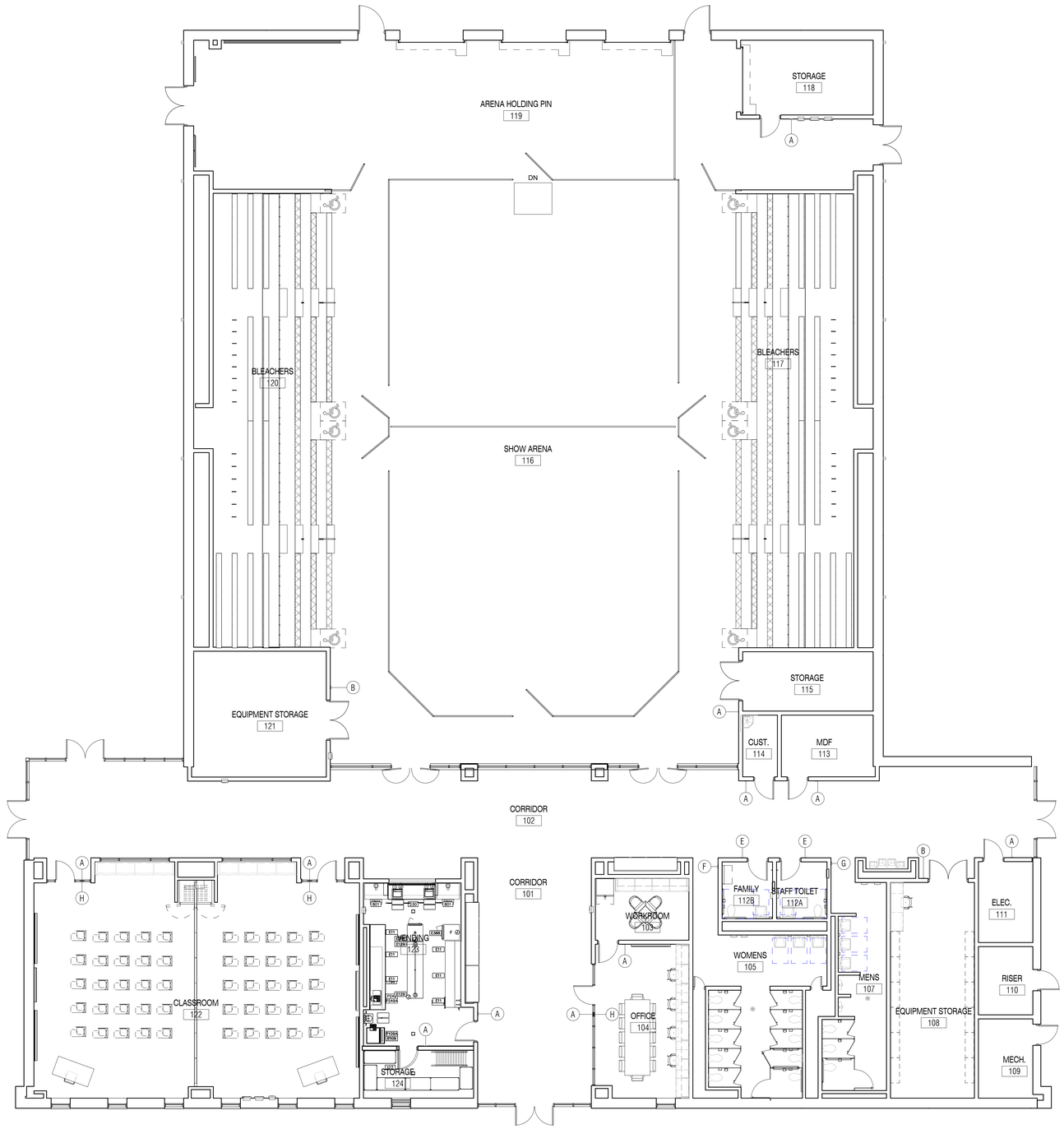

1 INTERIOR ROOM SIGNAGE - UNIT A
SCALE: 1/8" = 1'-0"

FURNITURE & WAYFINDING LEGEND

SIGNAGE TYPES

EQUIPMENT NOT IN SCOPE

EQUIPMENT IN SCOPE

1. FURNITURE IS SHOWN FOR REFERENCE ONLY
2. REFERENCE SHEET A9.12 FOR INTERIOR SIGNAGE TYPE DETAILS

INTERIOR SIGNAGE SCHEDULE - UNIT A

ROOM NUMBER	ROOM NAME	SIGN TYPE	SIGN TEXT
101	CORRIDOR	---	---
102	CORRIDOR	---	---
103	WORKROOM	A	(OWNER'S ROOM #), WORKROOM
104	OFFICE	A, H	(OWNER'S ROOM #), OFFICE
105	WOMENS	F	WOMEN'S
107	MENS	G	MEN'S
108	EQUIPMENT STORAGE	B	(OWNER'S ROOM #), EQUIPMENT STORAGE
109	MECH.	---	---
110	RISER	---	---
111	ELEC.	A	(OWNER'S ROOM #), ELECTRICAL
112A	STAFF TOILET	E	TOILET
112B	FAMILY	E	TOILET
113	MDF	A	(OWNER'S ROOM #), MDF
114	CUST.	A	(OWNER'S ROOM #), CUSTODIAL
115	STORAGE	A	(OWNER'S ROOM #), STORAGE
116	SHOW ARENA	---	---
117	BLEACHERS	---	---
118	STORAGE	A	(OWNER'S ROOM #), STORAGE
119	ARENA HOLDING PIN	---	---
120	BLEACHERS	---	---
121	EQUIPMENT STORAGE	B	(OWNER'S ROOM #), EQUIPMENT STORAGE
122	CLASSROOM	A, H	(OWNER'S ROOM #), CLASSROOM
123	VENDING	A	(OWNER'S ROOM #), VENDING
124	STORAGE	A	(OWNER'S ROOM #), STORAGE

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05/28/2025

ISSUED: MAY 28, 2025

REVISIONS

Revision No. Revision Date

Director LAH
Designer ET
Proj. Arch. KT
Drawn By VLK
Quality Control

PROJECT NO.
24-057.00

SHEET TITLE
WAYFINDING & FURNITURE PLAN - UNIT A

SHEET NO.
A9.13

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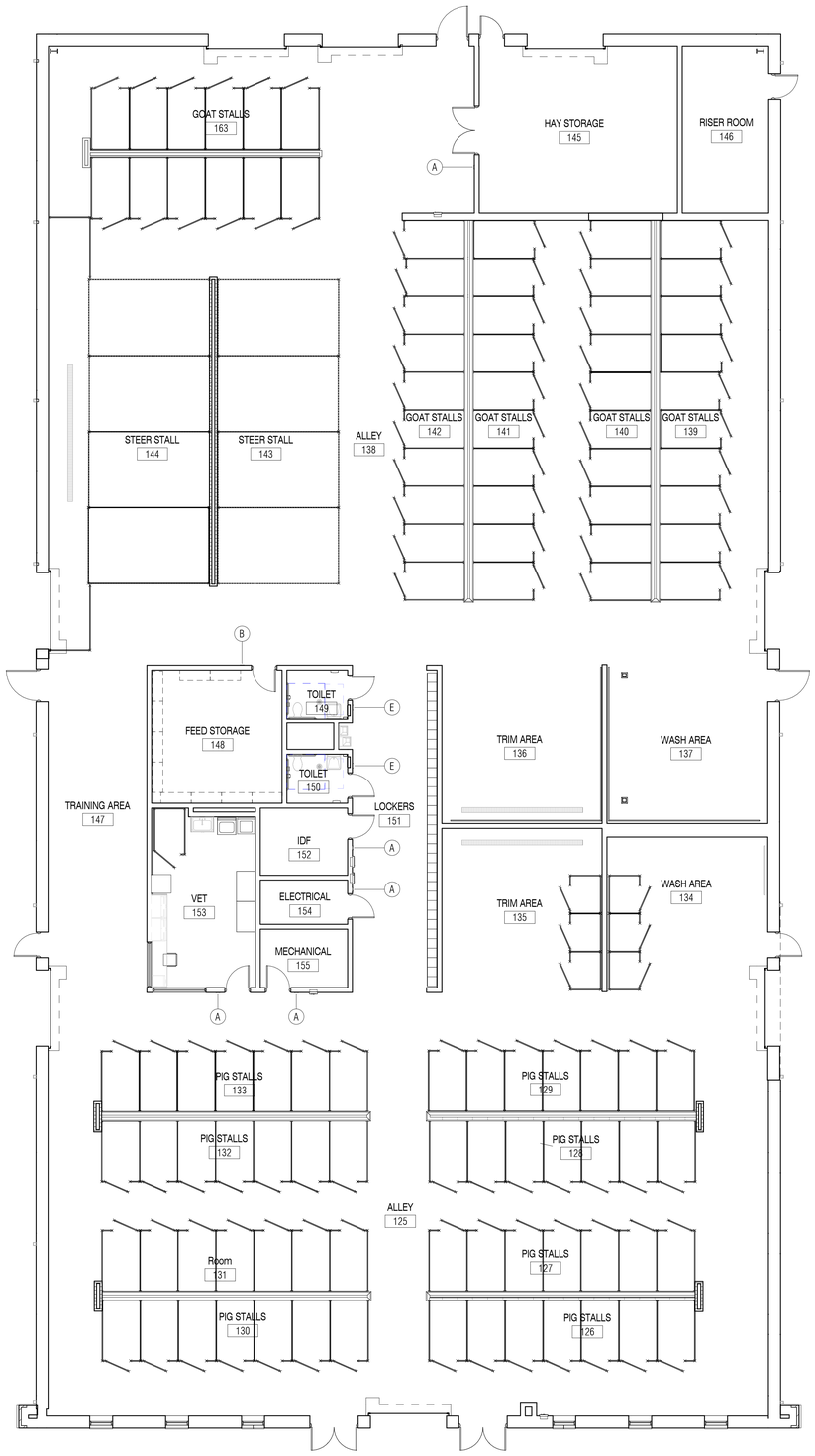

1 INTERIOR ROOM SIGNAGE - UNIT B
SCALE: 1/8" = 1'-0"

INTERIOR SIGNAGE SCHEDULE - UNIT B

ROOM NUMBER	ROOM NAME	SIGN TYPE	SIGN TEXT
125	ALLEY	---	---
126	PIG STALLS	---	---
127	PIG STALLS	---	---
128	PIG STALLS	---	---
129	PIG STALLS	---	---
130	PIG STALLS		
132	PIG STALLS	---	---
133	PIG STALLS	---	---
134	WASH AREA	---	---
135	TRIM AREA	---	---
136	TRIM AREA	---	---
137	WASH AREA	---	---
138	ALLEY	---	---
139	GOAT STALLS	---	---
140	GOAT STALLS	---	---
141	GOAT STALLS	---	---
142	GOAT STALLS	---	---
143	STEER STALL	---	---
144	STEER STALL	---	---
145	HAY STORAGE	A	(OWNER'S ROOM #), HAY STORAGE
146	RISER ROOM	---	---
147	TRAINING AREA	---	---
148	FEED STORAGE	B	(OWNER'S ROOM #), FEED STORAGE
149	TOILET	E	TOILET
150	TOILET	E	TOILET
151	LOCKERS	---	---
152	IDF	A	(OWNER'S ROOM #), IDF
153	VET	A	(OWNER'S ROOM #), VET
154	ELECTRICAL	A	(OWNER'S ROOM #), ELECTRICAL
155	MECHANICAL	A	(OWNER'S ROOM #), MECHANICAL

ARCHITECT

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ISSUED: MAY 28, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By VLK
Designer ET	Quality Control
Proj. Arch. KT	

PROJECT NO.
24-057.00

SHEET TITLE
WAYFINDING & FURNITURE PLAN - UNIT B

SHEET NO.
A9.14

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FOOD SERVICE DRAWING INDEX	
FDP SHEET NUMBER	FDP SHEET NAME
QF1	FS GENERAL COORDINATION NOTES
QF1.0	FS EQUIPMENT PLAN
QF1.1	FS FACILITY MODEL
QF1.2	FS EQUIPMENT MODEL
QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
QF1.4	FS PLUMBING PLAN
QF1.5	FS ELECTRICAL PLAN
QF1.6	FS ELEVATIONS & SECTIONS

REFER TO FOODSERVICE DESIGN PROFESSIONALS SPECIFICATIONS AND SUBSEQUENT SHEETS FOR ADDITIONAL COORDINATION INFORMATION

CRITICAL NOTES:

1. CONTRACTOR MUST COORDINATE AND VERIFY ALL DIMENSIONS WITH FOOD SERVICE EQUIPMENT SHOP DRAWINGS AND MANUFACTURER'S DATA. DIMENSIONS SHOWN ARE FOR DESIGN AND BIDDING PURPOSES ONLY.
2. WALK-IN ASSEMBLY DOORS MUST BE LEFT OPEN WHILE INTERIOR CONCRETE FLOOR CURES.
3. INSTALL PROTECTIVE COVER ON WALK-IN ASSEMBLY WALL PANELS BEFORE INSTALLING CONCRETE FLOORS AND CURBS.
4. REFER TO GENERAL SPECS - DIVISION 27 TO PROVIDE CONDUIT, DATA, AND INTERCONNECT THE PANIC ALARM INSIDE FREEZER TO THE BUILDING AUTOMATION SYSTEM FOR NOTIFICATION TO DISTRICT PERSONNEL IN THE EVENT OF STAFF ENTRAPMENT.
5. PIPING AND DRAINAGE SYSTEMS (SANITARY AND GREASE-LADEN). SYSTEMS MUST BE CLEANED AND FLUSHED BEFORE THE FINAL CONNECTION WITH FOOD SERVICE EQUIPMENT - CRITICAL (DIV. 22).

7 CRITICAL NOTES
NOT TO SCALE

DIVISION 26 (ELECTRICAL) IS RESPONSIBLE FOR BUT NOT LIMITED TO:

1. **DO NOT ROUGH IN FROM FDP DRAWINGS. REFER TO THE KITCHEN EQUIPMENT CONTRACTOR'S DIMENSIONED SHOP DRAWINGS. DIMENSIONS INDICATED ARE TO BE VERIFIED BY KITCHEN EQUIPMENT CONTRACTOR AND ADJUSTED AS REQUIRED BY EQUIPMENT AND FIELD CONDITIONS.**
2. SECTION 11 40 00 TO VERIFY UTILITY REQUIREMENTS OF ANY EXISTING EQUIPMENT.
3. ALL CONNECTIONS SHALL BE MADE FOLLOWING LOCAL CODES AND NATIONAL STANDARDS, EXCEPT WHERE PLANS AND SPECIFICATIONS EXCEED THOSE CODES AND STANDARDS.
4. VERIFY ALL ELECTRICAL REQUIREMENTS WITH ENGINEERING DRAWINGS.
5. ROUGH-IN AND FINAL CONNECTION OF ELECTRICAL SYSTEMS TO FOOD SERVICE EQUIPMENT, WALK-IN ASSEMBLIES, AND BETWEEN COMPONENTS (INCLUDING MATERIALS AND LABOR). ACCESSORIES PROVIDED LOOSE WITH FOOD SERVICE EQUIPMENT BY SECTION 11 40 00 TO BE FIELD INSTALLED BY DIVISION 26.
6. EMPTY EMT CONDUIT WITH PULL-WIRE AND WIDE-SWEEP BENDS FOR REFRIGERANT PIPING TO REMOTE FOOD SERVICE EQUIPMENT REFRIGERATION SYSTEMS.
7. EMPTY EMT CONDUIT WITH PULL-WIRE AND WIDE-SWEEP BENDS FOR INTERCONNECT CABLES BETWEEN LAN AND POS TERMINALS, CHANGE-MAKERS, PRE-CHECK UNITS, PRINTERS, CPUS, ETC. DIVISION 26 TO VERIFY WHERE THE CONDUIT IS TO RUN FOR POS SYSTEM (I.E., MANAGER'S OFFICE OR IDF ROOM).
8. EMPTY EMT CONDUIT WITH PULL-WIRE AND WIDE-SWEEP BENDS FOR FIRE SUPPRESSION SYSTEMS. INTERCONNECT FIRE PROTECTION SYSTEM TO PANEL BOX SHUNT TRIPS AND BUILDING ALARM.
9. WALK-IN LIGHT FIXTURE INSTALLATION (PROVIDED LOOSE BY SECTION 11 40 00) (IF WALK-IN IS PROVIDED IN THIS PROJECT).
10. TABLE LIMIT SWITCH INSTALLATION (PROVIDED LOOSE BY SECTION 11 40 00) (IF DISHMACHINE IS PROVIDED IN THIS PROJECT).
11. ELECTRICAL MATERIALS AND DEVICES (SHUNT-TRIP BREAKERS, SURGE PROTECTORS, LIGHTING CONTROL DEVICES, CONDUIT, WIRE, ETC.).
12. SWITCHES AND STAINLESS STEEL DISCONNECTS AS REQUIRED (PROVIDE, LOCATE, AND INSTALL – TO BE IN AN ACCESSIBLE LOCATION).
13. CHARGING STATIONS FOR FORKLIFTS, PALLET STACKERS, AND PALLET JACKS (SIZE, PROVIDE, LOCATE, AND INSTALL) (IF EQUIPMENT IS PROVIDED IN THIS PROJECT).
14. INTERCONNECTION BETWEEN CONDENSATE FAN AND DISHMACHINE CONTROL PANEL (IF EQUIPMENT IS PROVIDED IN THIS PROJECT).
15. INTERCONNECTION BETWEEN EXHAUST HOOD FANS AND SWITCH (IF EQUIPMENT IS PROVIDED IN THIS PROJECT).
16. INTERCONNECTION BETWEEN EXHAUST HOOD LIGHTS AND SWITCH (IF EQUIPMENT IS PROVIDED IN THIS PROJECT).
17. DOOR HEATERS, LIGHTS, COILS, AND PRESSURE RELIEF PORTS PRE-WIRED TO JUNCTION BOX AT TOP OF WALK-IN ASSEMBLIES (IF EQUIPMENT IS PROVIDED IN THIS PROJECT) PROVIDED BY SECTION 11 40 00. FINAL CONNECTION BY DIV. 26.
18. IF ANY ELECTRICAL ACCESSORIES, FITTINGS, AND CORD/PLUGS ARE PROVIDED LOOSE WITH EQUIPMENT BY 11 40 00, DIV.26 IS TO ATTACH TO EQUIPMENT AND PROVIDE FINAL CONNECTION.
19. PROVIDE WATERPROOF RECEPTACLES IN WET AREAS.
20. ALL ELECTRICAL CONNECTIONS BENEATH EXHAUST HOODS (IF EQUIPMENT IS PROVIDED IN THIS PROJECT) TO EXTEND TO SHUNT TRIP BREAKERS WITH ELECTRICAL PANEL BOX FOR SHUTDOWN DURING FIRE MODE.
21. RECEPTACLES ARE TO BE PRE-WIRED TO THE JUNCTION BOX OR LOAD CENTER FOR FINAL CONNECTION BY DIVISION 26.
22. ALL ELECTRICAL LIGHTING, POWER, AND DISTRIBUTION SYSTEMS.
23. DO NOT INTERCONNECT MORE THAN THREE (3) CONVENIENCE OUTLETS ON ONE (1) BREAKER.
24. OTHER THAN CONVENIENCE OUTLETS, ALL ELECTRICAL CONNECTIONS SHOWN ON FOOD SERVICE PLANS ARE DEDICATED BREAKERS.
25. DOORBELL AT RECEIVING DOOR (PROVIDE AND INSTALL – TO BE AUDIBLE THROUGHOUT KITCHEN, OFFICE, AND DRY STORAGE ROOM).
26. ADEQUATE LIGHTING AT RECEIVING DOOR.
27. PROVIDE AND INSTALL TWO EMERGENCY STROBE BEACONS THAT INTERCONNECT TO PANIC ALARM IN WALK-IN FREEZER. ONE (1) IN KITCHEN ABOVE WALK-IN FREEZER DOOR ONE (1) IN CAFETORIUM (IF WALK-IN IS PROVIDED IN THIS PROJECT). REFER TO GENERAL SPECIFICATIONS FOR ADDITIONAL DETAILS.
28. DEDICATED CIRCUIT FOR HEATED DRAIN LINE CONNECTION IN WALK-IN FREEZER AT EACH COIL (IF WALK-IN IS PROVIDED IN THIS PROJECT).

NOTE: ELECTRICAL CONNECTIONS INDICATED ARE THOSE REQUIRED FOR THE FOOD SERVICE EQUIPMENT AND THOSE REQUIRED FOR SUPPORT EQUIPMENT FURNISHED BY DIVISION 26. FOR ADDITIONAL REQUIREMENTS, REFER TO THE ELECTRICAL ENGINEER'S DRAWINGS.

6 ELECTRICAL COORDINATION NOTES
NOT TO SCALE

ARCHITECT TO VERIFY/COORDINATE THE AESTHETIC OPTIONS BELOW (FOOD SERVICE COLOR, MATERIAL, OR SIGNAGE SELECTIONS) IF THESE ITEMS ARE PROVIDED IN THIS PROJECT:

1. COUNTERTOPS: STONE (STAINLESS STEEL IS PROVIDED UNLESS OTHERWISE SPECIFIED).
2. TRAY SLIDES: CORIAN OR STONE (STAINLESS STEEL IS PROVIDED UNLESS OTHERWISE SPECIFIED).
3. COUNTER FRONTS: CERAMIC TILE, 3 FORM, OR PLASTIC LAMINATE.
4. SNEEZE GUARDS: STONE INSETS.
5. GENERAL COLOR, MATERIAL AND GRAPHIC SELECTIONS:
   - A. DISPLAY AIR SCREEN MERCHANDISERS - COLOR SELECTION: POWDER COAT OR PLASTIC LAMINATE (S/S IS PROVIDED UNLESS OTHERWISE SPECIFIED).
   - B. BAKERY DISPLAY CASES - COLOR SELECTION: POWDER COAT OR PLASTIC LAMINATE (S/S IS PROVIDED UNLESS OTHERWISE SPECIFIED).
   - C. PASS THRU OR REACH IN HOLDING CABINETS - COLOR SELECTION: POWDER COAT (MFG.: TRUE) OR PLASTIC LAMINATE (MFG.: TRAULSEN) (S/S IS PROVIDED UNLESS OTHERWISE SPECIFIED).
   - D. HANGING HEAT LAMPS - TRACK AND FIXTURE COLOR SELECTION.
   - E. HEATED MERCHANDISERS.
   - F. PORTABLE GUIDE RAILS - STANCHION AND BELT COLOR SELECTION.
   - G. POPCORN MACHINE - SIGNAGE SELECTION.
   - H. BOTTLE COOLER - SIGNAGE SELECTION.
   - I. GRAPHICS PACKAGE INFORMATION.
   - J. HOT FOOD WELL COVERS.
6. ARCHITECT TO VERIFY/COORDINATE THE FINISHES BELOW:
   - A. WALLS: CERAMIC TILE, FLAT FRP, OR MOLDED FRP (SMOOTH, IMPERVIOUS, AND EASILY CLEANABLE AS APPROVED BY LOCAL JURISDICTION).
   - B. CEILINGS: REMOVABLE VINYL FACE TILE (SMOOTH, IMPERVIOUS, AND EASILY CLEANABLE AS APPROVED BY LOCAL JURISDICTION).
   - C. FLOORS: TILE, EPOXY, OR RUBBERIZED FLOORING SYSTEM (SMOOTH, IMPERVIOUS, EASILY CLEANABLE AND SLIP RESISTANT AS APPROVED BY LOCAL JURISDICTION) (COORDINATE FLOOR TILE TRANSITION AT SERVING LINES).
   - D. FLOORS: WALK-IN ASSEMBLY - EXTEND KITCHEN FLOOR FLUSH INTO WALK-IN ASSEMBLY WITH COVED BASE.
   - E. FURR DOWNS ABOVE SERVING COUNTERS.

5 ARCHITECTURAL COORDINATION NOTES
NOT TO SCALE

DIVISION 22 (PLUMBING) RESPONSIBLE FOR BUT NOT LIMITED TO:

1. **DO NOT ROUGH-IN FROM FDP DRAWINGS. REFER TO THE KITCHEN EQUIPMENT CONTRACTOR'S DIMENSIONED SHOP DRAWINGS. DIMENSIONS INDICATED ARE TO BE VERIFIED BY KITCHEN EQUIPMENT CONTRACTOR AND ADJUSTED AS REQUIRED BY EQUIPMENT AND/OR FIELD CONDITIONS.**
2. SECTION 11 40 00 TO VERIFY UTILITY REQUIREMENTS OF ANY EXISTING EQUIPMENT.
3. ALL CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH LOCAL CODES AND NATIONAL STANDARDS, EXCEPT WHERE PLANS AND SPECIFICATIONS EXCEED THOSE CODES AND STANDARDS.
4. VERIFY ALL PLUMBING REQUIREMENTS WITH ENGINEERING DRAWINGS.
5. EMPTY PVC CONDUIT WITH WIDE-SWEEP BENDS FOR REFRIGERANT PIPING TO BEVERAGE LINES, CO2 LINES, AND REMOTE FOOD SERVICE EQUIPMENT REFRIGERATION SYSTEMS.
6. ROUGH-IN AND FINAL PLUMBING CONNECTIONS TO FOOD SERVICE EQUIPMENT AND BETWEEN COMPONENTS (INCLUDING MATERIALS AND LABOR). ACCESSORIES PROVIDED LOOSE WITH FOOD SERVICE EQUIPMENT BY SECTION 11 40 00 TO BE FIELD INSTALLED BY DIVISION 22. THIS INCLUDES BUT IS NOT LIMITED TO INSTALLATION OF ALL FAUCETS (WATER FILL FAUCETS, PRE-RINSE FAUCETS, ETC.), HOSES, GAS DISCONNECTS, AND DRAINS FROM EQUIPMENT POINT OF CONNECTION TO BUILDING PLUMBING SYSTEMS. ALL DRAIN LINES ARE PROVIDED AND INSTALLED BY DIV. 22.
7. KITCHEN EQUIPMENT CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL FAUCETS (WATER FILL FAUCETS, PRE-RINSE FAUCETS, ETC.), DRAIN FITTINGS, MIXING VALVES, CONTROL VALVES, WATER PRESSURE REGULATORS, VACUUM BREAKERS, AND ALL ACCESSORIES FOR EQUIPMENT SPECIFIED UNDER 11 40 00. DIVISION 22 IS RESPONSIBLE FOR INSTALLATION.
8. INDIRECT DRAIN LINE RUNS FROM EQUIPMENT TO NEAREST DRAIN OR FLOOR SINK. LINES TO BE TYPE 'K' COPPER.
9. IF ANY PLUMBING ACCESSORIES OR FITTINGS ARE PROVIDED LOOSE WITH EQUIPMENT BY 11 40 00, DIV. 22 IS TO ATTACH TO EQUIPMENT AND PROVIDE FINAL CONNECTION.
10. GAS SUPPLY SYSTEMS WITH ALL COMPONENTS AND FITTINGS AS REQUIRED FOR A COMPLETE SYSTEM.
11. WATER SUPPLY SYSTEMS WITH ALL COMPONENTS AND FITTINGS AS REQUIRED FOR A COMPLETE SYSTEM.
12. COMPRESSED AIR SYSTEMS WITH ALL COMPONENTS AND FITTINGS AS REQUIRED FOR A COMPLETE SYSTEM (IF REQUIRED FOR THIS PROJECT).
13. PIPING AND DRAINAGE SYSTEMS (SANITARY AND GREASE-LADEN). SYSTEMS MUST BE CLEANED AND FLUSHED BEFORE THE FINAL CONNECTION WITH FOOD SERVICE EQUIPMENT - CRITICAL.
14. FLOOR SINKS (PROVIDE AND INSTALL). FLANGE AND GRATES TO BE FLUSH WITH FINISHED FLOOR.
15. FLOOR DRAINS (PROVIDE AND INSTALL). FLANGE AND GRATES TO BE FLUSH WITH FINISHED FLOOR.
16. TRENCH DRAINS (PROVIDE AND INSTALL). TRENCH LINERS PROVIDED BY 11 40 00. FLANGE AND LINERS TO BE FLUSH WITH FINISHED FLOOR.
17. GREASE TRAPS AS REQUIRED. VERIFY WITH LOCAL CODES TO BYPASS OR PIPE THRU GREASE TRAP AND/OR INTERCEPTOR.
18. P-TRAPS AS REQUIRED (INCLUDING ALL DISPOSERS).
19. INTERCONNECT WATER THRU WATER FILTER (FILTER PROVIDED BY 11 40 00 UNLESS OTHERWISE SPECIFIED) TO EQUIPMENT.
20. GAS QUICK DISCONNECT INSTALLATION (QUICK DISCONNECT PROVIDED BY 11 40 00).
21. SAFETY RESTRAINT CABLE INSTALLATION (SAFETY RESTRAINT CABLE PROVIDED BY 11 40 00).
22. SPECIFIED COUPLINGS AND PIPING TO ALL EQUIPMENT FURNISHED BY 11 40 00.
23. AIR COMPRESSORS (IF REQUIRED FOR THIS PROJECT) (SIZE, PROVIDE, AND INSTALL, UNLESS OTHERWISE SPECIFIED).
24. WATER SOFTENERS (IF REQUIRED FOR THIS PROJECT) (SIZE, PROVIDE, AND INSTALL, UNLESS OTHERWISE SPECIFIED).
25. PRESSURE BOILERS (IF REQUIRED FOR THIS PROJECT) (SIZE, PROVIDE, AND INSTALL, UNLESS OTHERWISE SPECIFIED).
26. HAND SINKS (PROVIDE (UNLESS OTHERWISE SPECIFIED) AND INSTALL). PROVIDE HOT WATER TEMPERING VALVE IF REQUIRED. WATER TEMPERATURE TO BE AT LEAST 100 DEGREES AND FLOW FOR AT LEAST 20 SECONDS.
27. ICE BIN DRAIN INSULATION (IF ICE MACHINE IS PROVIDED IN THIS PROJECT) (PROVIDE AND INSTALL).
28. UNIONS AT DISPOSER SOLENOID VALVES (IF DISPOSER IS PROVIDED IN THIS PROJECT) (PROVIDE AND INSTALL).
29. BACK FLOW PREVENTION AS REQUIRED (PROVIDE AND INSTALL - INCLUDING ALL DISPOSERS). BACK- SIPHONAGE SHALL BE INSTALLED AT ALL FIXTURES AND EQUIPMENT WHERE BACKFLOW AND/OR BACK-SIPHONAGE MAY OCCUR AND WHERE A MINIMUM AIR GAP CANNOT BE PROVIDED BETWEEN THE WATER TO THE FIXTURE OR EQUIPMENT AT ITS FLOOD/LEVEL RIM. VACUUM BREAKERS, WHEN FURNISHED WITH EQUIPMENT, SHALL OVERRIDE THE ABOVE, IF ACCEPTABLE WITH APPLICABLE CODES. DIVISION 22 RESPONSIBLE FOR VERIFYING REQUIREMENT WITH LOCAL CODES.
30. JANITOR SINK WITH FAUCET (PROVIDE AND INSTALL).
31. FREEZE PROOF HYDRANT AT EXTERIOR OF BUILDING BY RECEIVING DOOR (PROVIDE AND INSTALL).
32. REVERSE OSMOSIS SYSTEMS (SIZE, PROVIDE (UNLESS OTHERWISE SPECIFIED), LOCATE AND INSTALL).
33. ALL PIPING WITHIN COUNTER BODY OR UNDER FABRICATED COUNTERS TO BE RUN TO A CONNECTION POINT BELOW COUNTER BODY BY SECTION 11 40 00. FINAL CONNECTION BY DIVISION 22.
34. EXHAUST HOOD CONDENSATE DRAIN CONNECTIONS (IF EXHAUST HOOD IS PROVIDED IN THIS PROJECT) (PROVIDE AND INSTALL).
35. INTERCONNECTION OF 1/2" CW TO PRE-RINSE AND DISPOSERS CONE/BODY INLETS PIPED THROUGH SOLENOID AND VACUUM BREAKER (IF DISPOSER IS PROVIDED IN THIS PROJECT).
36. FIRE SYSTEM PIPING. EXPOSED PIPING TO BE CHROME PLATED.
37. PIPE 1/2" COLD WATER TO SWIRL INLETS AT DISPOSERS (IF DISPOSER IS PROVIDED IN THIS PROJECT).
38. WATER TREATMENT FOR ICE BUILDERS (NON-CHLORINATED WATER WITH A PH LEVEL OF 10 OR HIGHER) AND ANY DRAINS AND OVERFLOWS. PIPING FROM ICE BUILDERS TO TUMBLE CHILLERS BY DIV. 23 (IF ICE BUILDERS AND TUMBLE CHILLERS ARE PROVIDED IN THIS PROJECT).

NOTE: WATER AND DRAIN CONNECTIONS INDICATED ARE THOSE REQUIRED FOR THE FOOD SERVICE EQUIPMENT AND THOSE REQUIRED FOR SUPPORT EQUIPMENT FURNISHED BY DIVISION 22. FOR ADDITIONAL WATER AND DRAIN REQUIREMENTS REFER TO MECHANICAL DRAWINGS.

NOTE: REFER TO ELECTRICAL/MECHANICAL DRAWINGS FOR REQUIREMENTS OF EXHAUST FANS AND MAKE-UP AIR HANDLERS AND LOCATION OF AN INTERLOCK AND START/STOP CONTROLS TO BE LOCATED WITHIN FOOD SERVICE AREA BY DIVISION 26.

4 PLUMBING COORDINATION NOTES
NOT TO SCALE

DIVISION 23 (MECHANICAL) RESPONSIBLE FOR BUT NOT LIMITED TO:

1. **DO NOT ROUGH-IN FROM FDP DRAWINGS. REFER TO THE KITCHEN EQUIPMENT CONTRACTOR'S DIMENSIONED SHOP DRAWINGS. DIMENSIONS INDICATED ARE TO BE VERIFIED BY KITCHEN EQUIPMENT CONTRACTOR AND ADJUSTED AS REQUIRED BY EQUIPMENT AND/OR FIELD CONDITIONS.**
2. SECTION 11 40 00 TO VERIFY UTILITY REQUIREMENTS OF ANY EXISTING EQUIPMENT.
3. ALL CONNECTIONS SHALL BE MADE FOLLOWING LOCAL CODES AND NATIONAL STANDARDS, EXCEPT WHERE PLANS AND SPECIFICATIONS EXCEED THOSE CODES AND STANDARDS.
4. VERIFY ALL MECHANICAL REQUIREMENTS WITH ENGINEERING DRAWINGS.
5. EMPTY EMT CONDUIT WITH PULL-WIRE AND WIDE-SWEEP BENDS FOR REFRIGERANT PIPING TO REMOTE FOOD SERVICE EQUIPMENT REFRIGERATION SYSTEMS.
6. ROUGH-IN AND FINAL CONNECTION OF MECHANICAL SYSTEMS TO FOOD SERVICE EQUIPMENT, WALK-IN ASSEMBLIES, AND BETWEEN COMPONENTS (INCLUDING MATERIALS AND LABOR).
7. TESTING AND BALANCING FOR ROOMS AND EXHAUST HOODS TO BE PERFORMED BY MECHANICAL CONTRACTOR. BALANCE REPORT FOR FOOD SERVICE EXHAUST HOODS TO BE PROVIDED TO FOODSERVICE DESIGN PROFESSIONALS (FDP) IMMEDIATELY UPON COMPLETION (SEND TO HOUSTON.SUBMITTAL@FDP.ORG FOR HOUSTON OFFICE AND DALLAS.SUBMITTAL@FDP.ORG FOR DALLAS OFFICE) AND MUST BE SUBMITTED WITH O&M MANUALS.
8. EXHAUST HOODS, CONDENSATE HOODS, FIRE SUPPRESSION SYSTEMS, CONNECTIONS AND CONTROLS (PROVIDE AND INSTALL – *UNLESS OTHERWISE SPECIFIED*). PROVIDE TEMPERED AIR AT ALL SUPPLY DUCTS.
   - A. IF EXHAUST/CONDENSATE HOODS AND FIRE SUPPRESSION SYSTEMS ARE SPECIFIED UNDER SECTION 11 40 00, DIVISION 23 IS RESPONSIBLE FOR ALL EXHAUST AND CONDENSATE HOOD CONNECTIONS (PROVIDE AND INSTALL).
9. VFD SYSTEM AND CONTROLLERS, WHEN REQUIRED BY CODE (PROVIDE AND INSTALL).
10. PROVIDE AND INSTALL ALL VENTILATION (DIRECT OR INDIRECT), AIR CONDITIONING AND HEATING SYSTEMS (UNLESS OTHERWISE SPECIFIED).
11. COORDINATE SUPPLY AND RETURN DUCTS ABOVE SERVING COUNTERS OR OPEN-AIR REFRIGERATED MERCHANDISERS. NO COLD AIR TO BLOW DIRECTLY ON HOT FOOD COUNTERS.
12. COORDINATE SUPPLY AND RETURN DUCTS AWAY FROM EQUIPMENT WITH TOP MOUNTED REFRIGERATION. NO COLD AIR TO BLOW DIRECTLY ON COMPRESSORS.
13. MECHANICAL CONTRACTOR TO LOCATE TEMPERATURE MONITORS WITHIN RETURN DUCTS.
14. CIRCULATING AIR ABOVE WALK-IN ASSEMBLIES (PROVIDE AND INSTALL).
15. CIRCULATING AIR ABOVE AND IN AIR GAPS AT WAREHOUSE COLD STORAGE ASSEMBLIES (PROVIDE AND INSTALL).
16. WATER CHILLERS AS REQUIRED (IF EQUIPMENT IS PROVIDED IN THIS PROJECT) (PROVIDE, SIZE AND LOCATE).
17. PIPING FROM ICE BUILDERS TO TUMBLE CHILLERS (IF EQUIPMENT IS PROVIDED IN THIS PROJECT) (PROVIDE, SIZE AND LOCATE).

3 MECHANICAL COORDINATION NOTES
NOT TO SCALE

GENERAL CONTRACTOR RESPONSIBLE FOR BUT NOT LIMITED TO:

1. ANY WALL PENETRATION REQUIRED FOR FOOD SERVICE EQUIPMENT UTILITIES. ESCUTCHEON PLATES OR S/S SLEEVES TO BE PROVIDED AND INSTALLED AS NEEDED.
2. BULK FREEZER VENTILATION PIPE (IF BULK FREEZER IS PROVIDED IN THIS PROJECT) (PROVIDE AND INSTALL, UNLESS OTHERWISE SPECIFIED).
3. CORE DRILLING FOR GUIDE RAILS (IF GUIDE RAILS ARE PROVIDED IN THIS PROJECT).
4. REFRIGERATION ROOF CURBS / ROOF JACK (IF REFRIGERATION SYSTEM IS PROVIDED IN THIS PROJECT AND LOCATED ON ROOF).
5. INTERIOR BOLLARDS (IF REQUIRED FOR THIS PROJECT) – TO BE EPOXY PAINTED PER LOCAL CODES (PROVIDE AND INSTALL).
6. FURNISH AND INSTALL 3/4" PLYWOOD BLOCKING IN THE WALL FOR MOUNTING EQUIPMENT FURNISHED BY SECTION 11 40 00 AS REQUIRED.
7. WALK-IN DEPRESSIONS (TO BE DEAD LEVEL) AND SAND LEVELING BED (IF WALK-IN IS PROVIDED IN THIS PROJECT AND RECESS IS SHOWN).
8. STRUCTURAL BRACING FOR BULK WALK-IN CEILING PANELS IF REQUIRED.
9. MENU SYSTEM VIDEO MONITORS IN SERVERY (UNLESS OTHERWISE SPECIFIED).
10. STRUCTURAL BRACING FOR MENU SYSTEM VIDEO MONITORS IF REQUIRED.
11. INTERIOR/EXTERIOR REFRIGERATION PENETRATIONS AND SLEEVES AT BUILDING PENETRATIONS.
12. DOORSCOPE VIEWER (PEEPHOLE) WITH WIDE VIEWING ANGLE AT RECEIVING DOOR.
13. CANOPY AT RECEIVING DOOR. COORDINATE HEIGHT WITH THE HEIGHT OF RECEIVING DOOR (8') AND THE MOUNTING HEIGHT OF AIR SCREEN ABOVE THE DOOR.
14. SOAP AND TOWEL DISPENSER PROVIDED BY OWNER. G.C. RESPONSIBLE FOR INSTALLATION.
15. WASHER AND DRYER (PROVIDE AND INSTALL, UNLESS OTHERWISE SPECIFIED).
16. DWARF WALL AT EXPOSED FRONT/ENDS OF CAFETERIA SERVING COUNTERS WITH FINISH AS SELECTED BY ARCHITECT (IF REQUIRED IN THIS PROJECT).

2 GENERAL CONTRACTOR COORDINATION NOTES
NOT TO SCALE

HEALTH DEPARTMENT REQUIREMENTS (VERIFY WITH LOCAL JURISDICTIONS):

1. FLOORS: VERIFY WITH DIVISION 9. FLOORS TO BE SMOOTH, IMPERVIOUS, EASILY CLEANABLE AND SLIP RESISTANT.
2. WALLS: VERIFY WITH ARCHITECTURAL DOCUMENTS. WALLS TO BE SMOOTH, IMPERVIOUS, AND EASILY CLEANABLE.
3. CEILING: LAY-IN TILES. CEILING TILES TO BE SMOOTH, IMPERVIOUS, AND EASILY CLEANABLE.
4. EMPLOYEE TOILET: TO BE LOCATED OFF MAIN CORRIDOR AND ADJACENT TO MAIN KITCHEN. RESTROOM MUST HAVE A VESTIBULE AND NOT OPEN TO KITCHEN / PREP AREAS. TOILETS TO BE WELL VENTILATED.
5. LAVATORIES: WALL HUNG LAVATORIES LOCATED WITHIN ALL FUNCTIONAL WORKING AREAS.
6. UTENSIL CLEANING/SANITIZING: ACCOMPLISHED IN UTENSIL WASH AREA WITH (3) 2'-0" x 2'-2" x 15" MINIMUM DEEP SINKS AND WAREWASH MACHINE.
7. MECHANICAL CLEANING/SANITIZING OF TABLEWARE: ACCOMPLISHED BY WAREWASH MACHINE.
8. STOREROOMS: AMPLE DAILY STORAGE PROVIDED IN ENCLOSED STORE ROOMS. STORE ROOMS TO BE VENTILATED AND MAINTAIN PROPER TEMPERATURE.
9. WATER HEATER: LOCATED IN THE MECHANICAL ROOM ADJACENT TO KITCHEN. TO BE SIZED TO PROVIDE AMPLE WATER TO MAINTAIN PROPER WATER TEMPERATURE THROUGHOUT HOURS OF OPERATION.
10. GREASE TRAP: LOCATED AT EXTERIOR OF BUILDING. REFER TO ENGINEER'S DRAWINGS.
11. FOOD SERVICE EQUIPMENT: ALL FLOOR-MOUNTED EQUIPMENT IS TO BE SEALED TO THE FLOOR TO PROVIDE AN EASILY CLEANABLE SURFACE AND PREVENT SEEPAGE. EQUIPMENT NOT MOUNTED TO THE FLOOR IS TO BE WALL MOUNTED ON WALL CARRIERS, OR ELEVATED ON LEGS TO PROVIDE AT LEAST A SIX-INCH CLEARANCE BETWEEN FLOOR AND EQUIPMENT.
12. MOP SINK: LOCATED IN JANITOR CLOSET OFF MAIN KITCHEN CORRIDOR, AND LOCATED IN CLOSE PROXIMITY TO THE SERVERY WAREWASH AREA.
13. EXHAUST HOODS: EXHAUST HOODS PROVIDED OVER COOKING EQUIPMENT WITH LIQUID CHEMICAL ANSUL FIRE EXTINGUISHING SYSTEM.
14. LIGHTING AND PROTECTIVE SHIELDING: RECESSED CEILING-MOUNTED FLUORESCENT LIGHT FIXTURES FITTED WITH CLEAR LEXAN DIFFUSERS.
15. GARBAGE AND REFUSE: CENTRAL TRASH COLLECTION PROVIDED FOR BUILDING LOCATED NEAR RECEIVING AREA ON SMOOTH CONCRETE SURFACE.
16. POISONOUS AND TOXIC MATERIAL STORAGE: LOCATED IN RESPECTIVE JANITOR CLOSETS WITH LOCKING HARDWARE.

1 HEALTH DEPARTMENT COORDINATION NOTES
NOT TO SCALE

FDP FOODSERVICE DESIGN PROFESSIONALS

B
A
KEY PLAN

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT LAUREN V. BROWN 23211 STATE OF TEXAS

05/28/2025

ISSUED: MAY 28 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	MM
Designer	Quality Control
Designer	
Proj. Arch.	
KD/MD	

PROJECT NO.
24-057.00

SHEET TITLE
FS GENERAL COORDINATION NOTES

SHEET NO.
QF1

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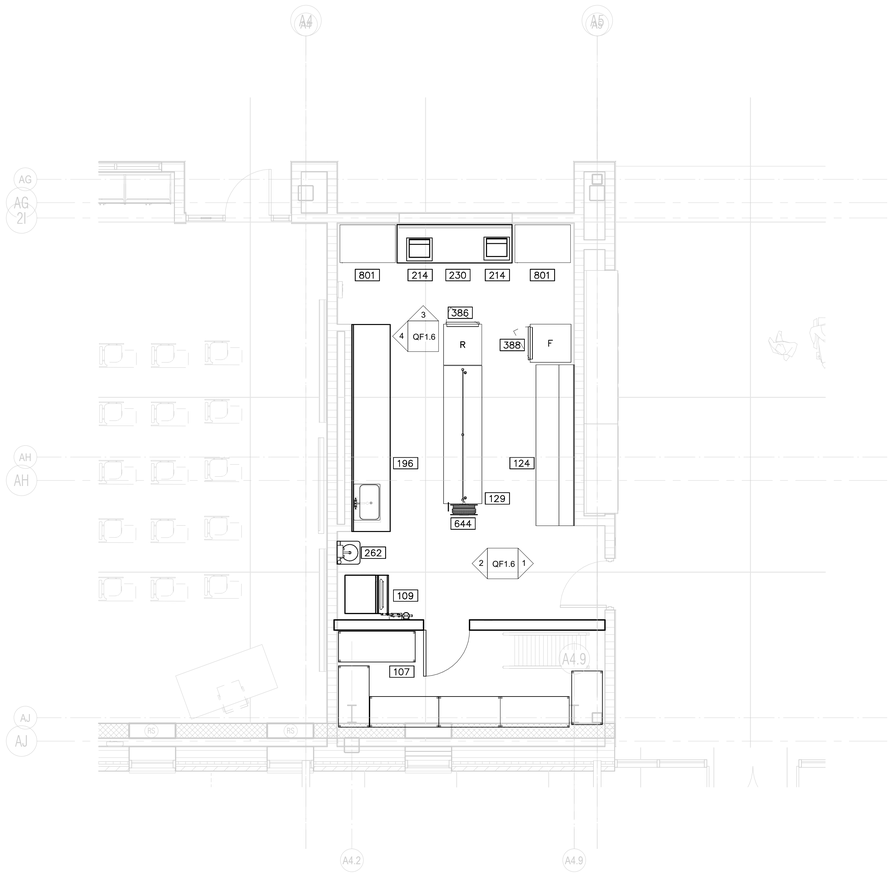
FOOD SERVICE EQUIPMENT SCHEDULE - KITCHEN			
REFER TO SHEET QF1 FOR GENERAL CONTRACTOR & HEALTH...			
FDP ITEM	FDP QTY	FDP DESCRIPTION	FDP REMARKS
107	1	DRY STORAGE SHELVING	
109	1	ICE MACHINE W/ BIN	
124	1	WORKTABLE W. OVERSHELF	
129	1	WORKTABLE W/S.BAR UT.RACK	
196	1	BACK COUNTER W/ 3-COMP SINK	
214	2	CASH REGISTER	OWNER FURNISHED
230	1	FRONT CONCESSION COUNTER	
262	1	HAND SINK	
386	1	REACH-IN REFRIGERATOR 1DR	
388	1	REACH-IN FREEZER - 1DR	
644	1	ELECTRIC HOSE REEL	
801	2	BEVERAGE MERCHANDISER	



1 FOOD SERVICE EQUIPMENT PLAN
1/4" = 1'-0"

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05/28/2025

ISSUED: MAY 28 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	MM
Designer	Quality Control
Designer	
Proj. Arch.	
MD/KD	

PROJECT NO.

24-057.00

SHEET TITLE

FS EQUIPMENT PLAN

SHEET NO.

QF1.0

FOODSERVICE DESIGN PROFESSIONALS

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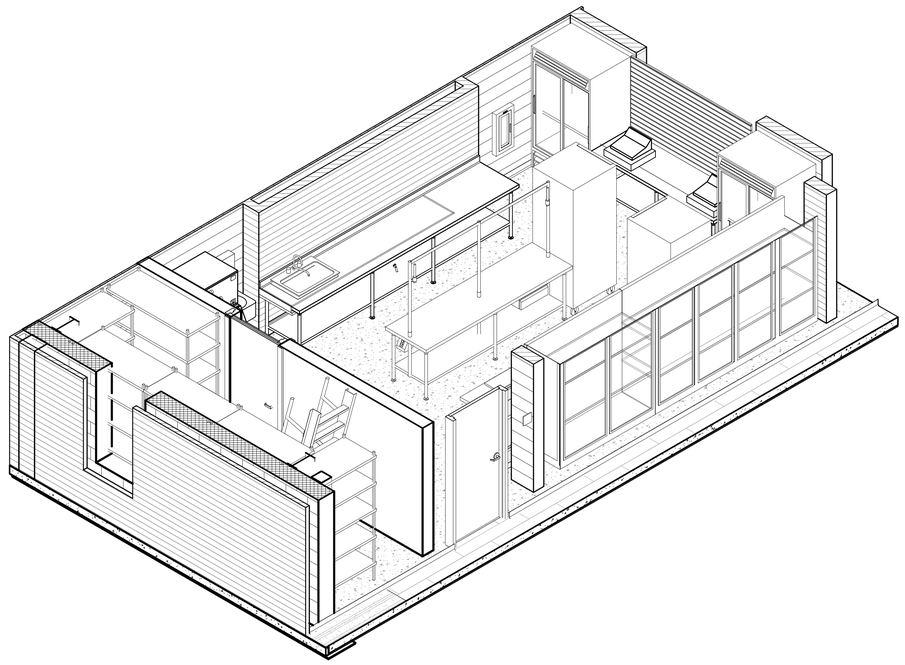

1 FS FACILITY MODEL

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05/28/2025

ISSUED: MAY 28 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	MM
Designer	Quality Control
Designer	
Proj. Arch.	
MD/KD	

PROJECT NO.
24-057.00

SHEET TITLE
FS FACILITY MODEL

SHEET NO.
QF1.1

KEY PLAN

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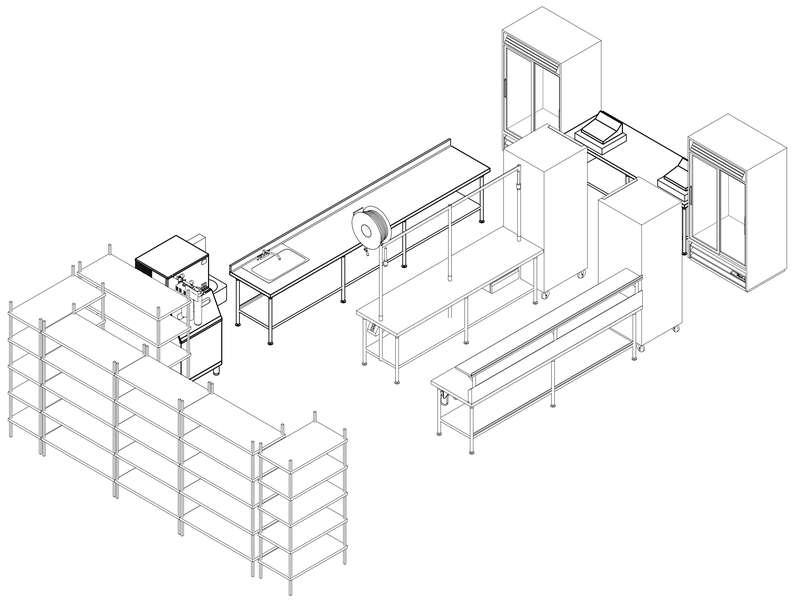

1 FS EQUIPMENT MODEL

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05/28/2025

ISSUED: MAY 28 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	MM
Designer	Quality Control
Designer	
Proj. Arch.	
MD/KD	

PROJECT NO.

24-057.00

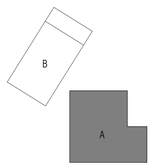
SHEET TITLE

FS EQUIPMENT MODEL

SHEET NO.

QF1.2

FDP
FOODSERVICE DESIGN PROFESSIONALS



KEY PLAN

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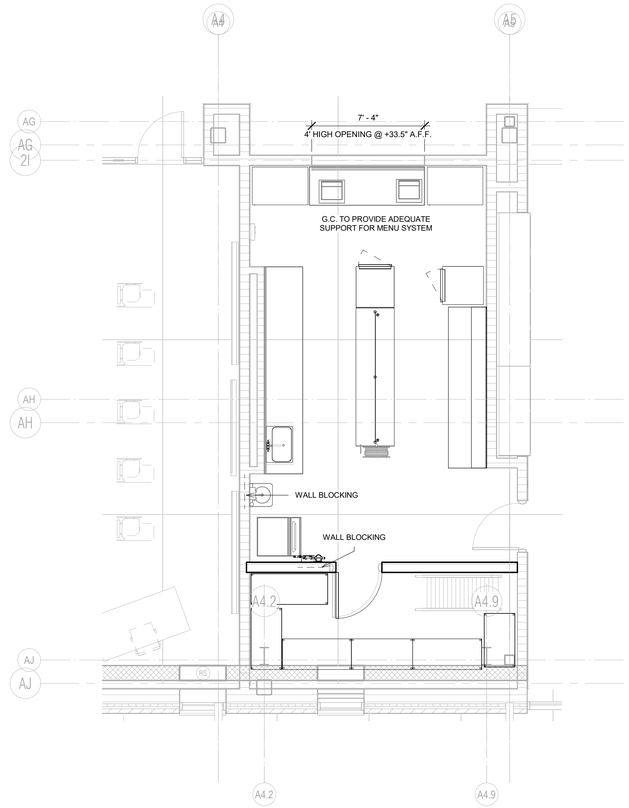
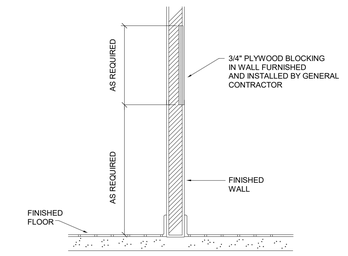
FOOD SERVICE MECHANICAL SCHEDULE						
REFER TO SHEET QF1 FOR MECHANICAL COORDINATION NOTES						
FDP NO.	FDP QTY	FDP TYPE	FDP SIZE	FDP LOC	FDP CFM	FDP S.P.

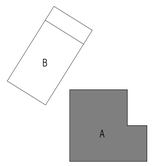


1 FOOD SERVICE SPECIAL CONDITIONS PLAN
1/4" = 1'-0"

NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION AND SIZE OF WALL BLOCKING.



5 WALL BLOCKING DETAIL
NOT TO SCALE



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05/28/2025

ISSUED: MAY 28 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	MM
Designer	Quality Control
Designer	
Proj. Arch.	
MD/KD	

PROJECT NO.

24-057.00

SHEET TITLE

FS SPECIAL CONDITIONS & MECHANICAL PLAN

SHEET NO.

QF1.3

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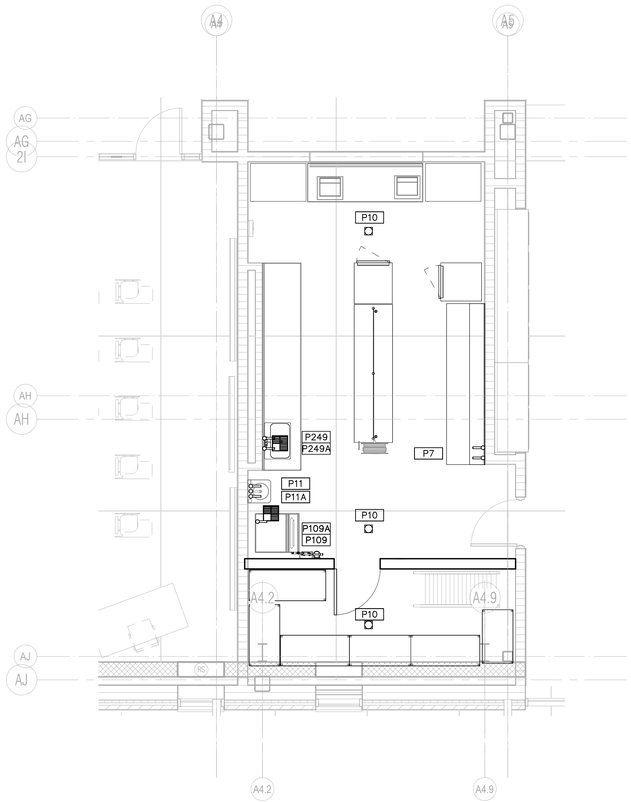
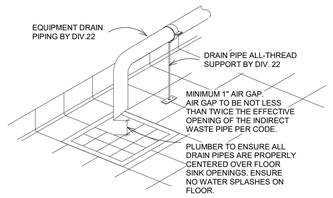
FOOD SERVICE PLUMBING SCHEDULE						
REFER TO SHEET QF1 FOR PLUMBING COORDINATION NOTES						
FDP PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS
P7	3/4"	H & C WATER	HOSE BIBB	WALL	18"	BTC: RE: NOTE #3
P10	VERIFY	FLOOR DRAIN	GENERAL AREA DRAIN	FLOOR	VERIFY	LOCATE PER ENGINEER'S DRAWING
P11	1/2"	H & C WATER	FAUCET	WALL	18"	FURNISHED BY SECTION 11 40 00; INSTALLED BY DIV. 22
P11A	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED BY SECTION 11 40 00; INSTALLED BY DIV. 22
P109	3/4"	COLD WATER	WATER/ ICE	WALL	60"	BTC
P109A	12" SQ.	FLOOR SINK	ICE MACHINE	FLOOR	0"	3/4 GRATE
P249	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P249A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	THREE QUARTER GRATE



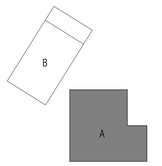
1 FOOD SERVICE PLUMBING PLAN
1/4" = 1'-0"



5 DRAIN PIPING FASTENER DETAIL
NOT TO SCALE

○	HW	HOT WATER	□	FFD	FUNNEL FLOOR DRAIN
○	CW	COLD WATER	◣	EVC	EXHAUST VENT CONNECTION
○	HTW	180 F HOT WATER	⋈	SVC	SUPPLY VENT CONNECTION
◎		CHILLED WATER	◔	FR	DIRECT-CONNECTED FLUE RISER
●	W	DIRECT WASTE	◍	PS	PIPE SLEEVE
○	IW	INDIRECT WASTE	⊙		COMPRESSED AIR
⊙		GAS SUPPLY	♦		CO2
◕		STEAM SUPPLY		AFF	ABOVE FINISHED FLOOR
⊗	CR	CONDENSATE RETURN		BTC	BRANCH TO CONN. ON EQUIP
●	DR	DRAIN		DFA	DROP FROM ABOVE
□	FD	FLOOR DRAIN		CLG	CEILING
▟	FST	FLOOR SINK 3/4 GRATE			
▙	FSH	FLOOR SINK 3/4 GRATE			

2 PLUMBING SYMBOLS
NOT TO SCALE



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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT — LAUREN V. BROWN — 23211 — STATE OF TEXAS

05/28/2025

ISSUED: MAY 28 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	MM
Designer	Quality Control
Designer	
Proj. Arch.	
MD/KD	

PROJECT NO.

24-057.00

SHEET TITLE

FS PLUMBING PLAN

SHEET NO.

QF1.4

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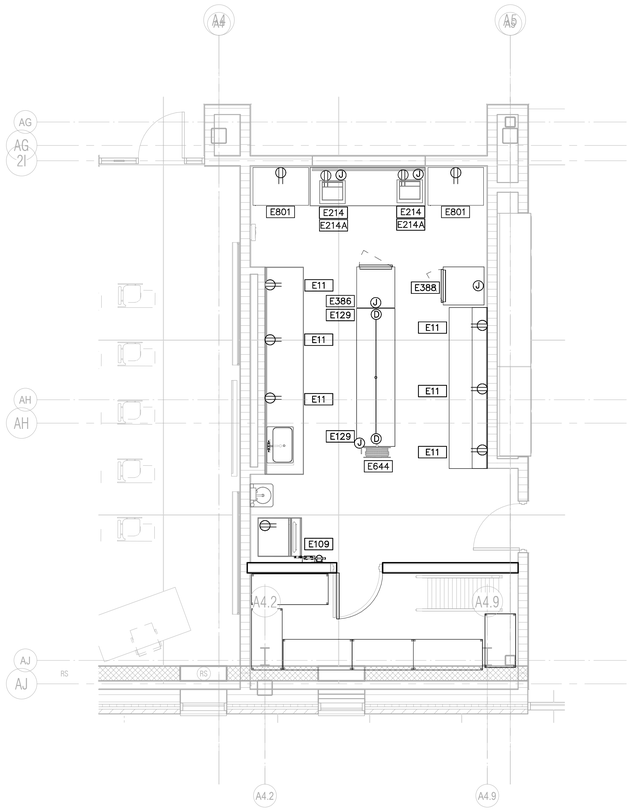
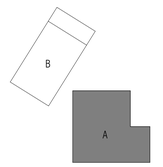
FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E11	DR	16.0A	120	1	CONVENIENCE OUTLET	WALL	47"	MOUNT HORIZONTAL
E109	DR	11.9A	120	1	ICE MACHINE	WALL	60"	---
E129	DCR	16.0A	120	1	TABLE RECEPTACLE	CLG	84"	TWISTLOCK PLUG & RECEPTACLE
E214	DR	16.0A	120	1	CASH REGISTER	WALL	24"	DEDICATED CIRCUIT
E214A	JB	---	---	-	POS	WALL	24"	BTC; RE: NOTE #14 - EMPTY CONDUIT
E386	JB	3.8A	120	1	REFRIGERATOR	WALL	84"	BTC; OMIT PLUG, UNIT TO PLUG INTO ITEM 129
E388	JB	9.7A	120	1	FREEZER	WALL	84"	BTC; OMIT PLUG, UNIT TO PLUG INTO ITEM 129
E644	JB	16.0A	120	1	ELECTRIC CORD REEL	CLG	VERIFY	BTC; PROVIDED AND INSTALLED BY DIV. 26
E801	DR	6.3A	120	1	REFRIGERATED MERCHANDISER	WALL	86"	



1 FOOD SERVICE ELECTRICAL PLAN
1/4" = 1'-0"

	SCR	CONDUIT STUB BTC ON RECEPT FURNISH WITH EQUIPMENT		CC	CONDUIT FOR COMPUTER CABLES
•	CS	CONDUIT STUB UP/OUT FOR DIRECT CONNECTION		BTC	BRANCH TO CONNECTION ON EQUIPMENT
	DR	DUPLEX RECEPTACLE		WPR	WATERPROOF RECEPTACLE (SPRING COVER)
	SR	SINGLE PURPOSE RECEPTACLE-1PH		FPB	FIRE PROTECTION BUZZER
	SR	SINGLE PURPOSE RECPTACLE-3PH		BSC	BEVERAGE SYSTEM CONDUIT
	FR	FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE
	PMR	PEDESTAL MOUNTED RECEPTACLE		AFF	ABOVE FINISH FLOOR
	DCR	DROP CORD RECEPTACLE		CSJB	JUNCTION BOX ON PEDESTAL
	JB	JUNCTION BOX ON CEILING		SW	SWITCH
	JB	JUNCTION BOX IN WALL		D	DATA
	JB/DS	JUNCTION BOX WITH DISCONNECT BY DIV.26			

2 ELECTRICAL SYMBOLS
NOT TO SCALE



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REGISTERED ARCHITECT KAMREN V. BROWN 33711 STATE OF TEXAS

05/28/2025

ISSUED: MAY 28 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	MM
Designer	Quality Control
Designer	
Proj. Arch.	
MD/KD	

PROJECT NO.

24-057.00

SHEET TITLE

FS ELECTRICAL PLAN

SHEET NO.

QF1.5

FDP FOODSERVICE DESIGN PROFESSIONALS

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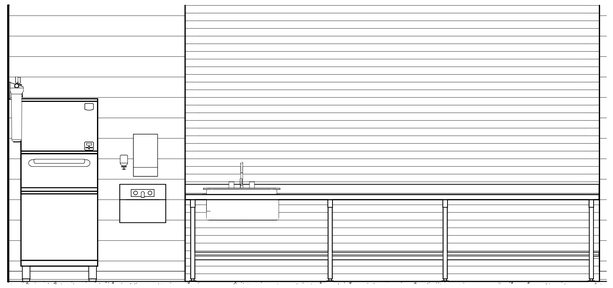
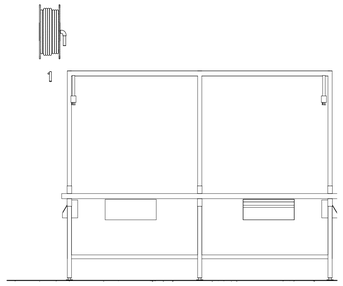
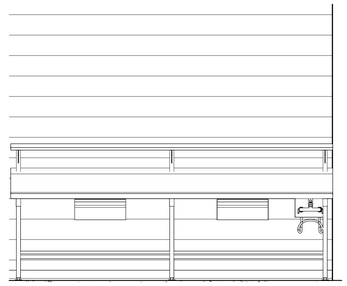


4 ELEVATION @ 3-COMP SINK
1/2" = 1'-0"

3 ELEVATION @ FRONT CONCESSION COUNTER
1/2" = 1'-0"

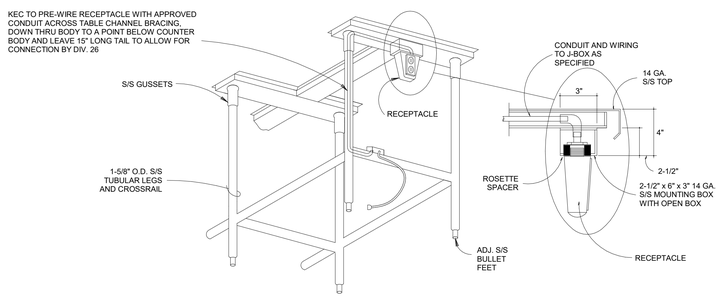


2 ELEVATION @ ISLAND WORK TABLE
1/2" = 1'-0"

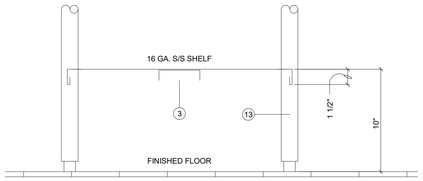


1 ELEVATION @ WORK TABLE
1/2" = 1'-0"

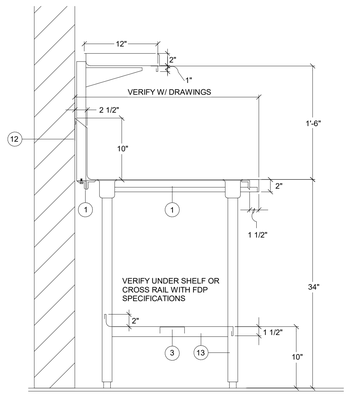
NOTE:
COORDINATE ALL RECEPTACLES WITH ELECTRICAL CONTRACT DRAWING REQUIREMENTS, REFER TO ELECTRICAL PLAN



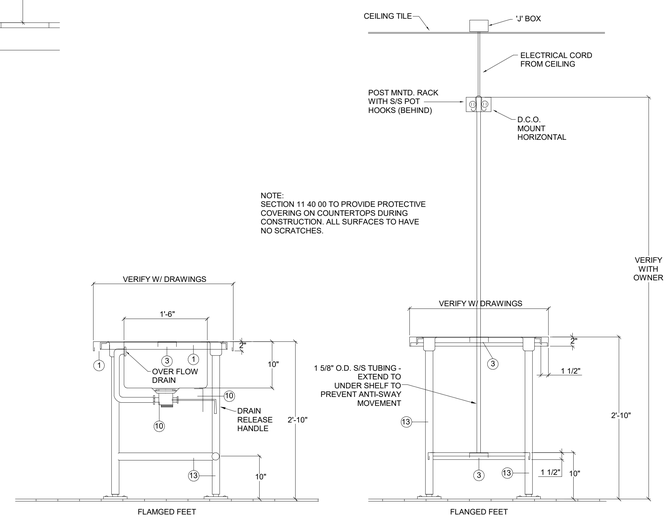
10 WORKTABLE - ELECTRICAL RECEPTACLE MOUNTED UNDER TOP DETAIL
NOT TO SCALE



9 UNDER SHELF DETAIL
NOT TO SCALE



6 WORKTABLE W/ OVER SHELF SECTION
NOT TO SCALE



8 WORKTABLE - ISLAND W/ SINK & S. BAR UT. RACK SECTION
NOT TO SCALE

CUSTOM FABRICATION NOTES:

A. WORK SHALL BE DONE IN AN APPROVED WORKMANLIKE MANNER, TO COMPLETE SATISFACTION OF FOODSERVICE DESIGN PROFESSIONALS (FDP).

B. STAINLESS STEEL SHALL BE U.S. STANDARD GAUGES AS CALLED FOR. 18-8, TYPE 304, NOT OVER .012% MAXIMUM CARBON, NO. 4 FINISH.

C. GALVANIZED IRON SHALL BE ARMCO OR EQUAL. FRAMEWORK OF GALVANIZED IRON SHALL BE WELDED CONSTRUCTION, HAVING WELDS SMOOTH, AND WHERE GALVANIZING HAS BURNED OFF, TOUCHED UP WITH HIGH-GRADE ALUMINUM BRONZE.

D. LEGS AND CROSSRAIL SHALL BE CONTINUOUSLY WELDED, UNLESS OTHERWISE NOTED, AND GROUND SMOOTH.

E. BOTTOM OF LEGS AT FLOOR SHALL BE FITTED WITH SANITARY STAINLESS STEEL BULLET-TYPE FOOT, WITH NO LESS THAN 1/2" ADJUSTMENT.

F. LEGS SHALL BE FASTENED TO EQUIPMENT AS FOLLOWS:

01. TO SINKS BY MEANS OF CLOSED GUSSETS. GUSSETS SHALL BE S/S, REINFORCED WITH BUSHING, HAVING SET SCREWS FOR SECURING LEGS.

02. TO TABLES AND DRAINBOARDS WITH CLOSED GUSSETS WHICH SHALL BE WELDED TO GALVANIZED HAT SECTIONS OR CHANNELS, 14 GAUGE OR HEAVIER, EXPOSED HAT SECTIONS HAVING CLOSED ENDS. BRACING SHALL BE UNDERSIDE OF TOPS.

G. CLOSED GUSSETS SHALL BE 3" MINIMUM DIAMETER AT TOP, WELDED TO FRAME MEMBERS OR TO SINK BOTTOM.

H. ROLLS SHALL BE 1 1/2" DIAMETER, EXCEPT AS DETAILED TO THE CONTRARY, WITH CORNERS BULLNOSED, GROUND, AND POLISHED.

I. SEAMS AND JOINTS SHALL BE SHOP-WELDED WHERE POSSIBLE. WELDS TO BE GROUND AND POLISHED TO MATCH ORIGINAL FINISH. MATERIALS 18 GAUGE OR HEAVIER SHALL BE WELDED.

J. METAL TOPS SHALL BE ONE-PIECE WELDED CONSTRUCTION UNLESS SPECIFIED OTHERWISE, REINFORCED ON UNDERSIDE WITH GALVANIZED HAT SECTIONS OR CHANNELS WELDED IN PLACE. CROSSBRACE TO BE NOT MORE THAN 30" ON CENTERS.

K. HARDWARE SHALL BE SOLID MATERIALS AND EXCEPT WHERE EXPOSED OR SPECIFIED TO THE CONTRARY, OF CAST BRASS, CHROME-PLATED. IDENTIFY ALL HARDWARE WITH MANUFACTURER'S NAME AND NUMBER SO THAT BROKEN OR WORN PARTS MAY BE ORDERED AND REPLACED.

L. FABRICATE SINK COMPARTMENTS WITH 3/4" COVED VERTICAL AND HORIZONTAL CORNERS. MULTIPLE- COMPARTMENT PARTITIONS TO BE DOUBLE THICKNESS, CONTINUOUSLY WELDED WHERE SHEETS JOIN AT TOP. FRONT OF MULTIPLE-COMPARTMENT PARTITIONS TO BE CONTINUOUS ON EXTERIOR. BOTTOMS SHALL BE CREASED TO DRAIN.

M. ENDS OF FIXTURES, SPLASHBACKS, SHELVES, ETC., SHALL BE FINISHED FLUSH TO WALLS OR ADJOINING FIXTURES.

N. DISHTABLES, DRAINBOARDS, SPLASHBACKS, AND TURN-UP EDGES SHALL HAVE RADIUS BENDS IN ALL HORIZONTAL AND VERTICAL CORNERS, COVED AT INTERSECTIONS.

O. ROUNDED AND COVED CORNERS OR RADIUS BENDS SHALL BE 1/2" RADIUS OR LONGER.

P. UNDERSIDES OF TOPS TO BE COATED WITH HEAVY-BODIED RESINOUS MATERIAL COMPOUND FOR PERMANENT, NON-FLAKING ADHESION TO METAL, 1/8" THICK, APPLIED AFTER REINFORCING MEMBERS HAVE BEEN INSTALLED, DRYING WITHOUT DIRT-CATCHING CREVICES.

Q. SHELVES ARE TO BE TURNED UP 2" ON THE BACK EDGE. TURN OTHER EDGES DOWN 1 1/2" TO FORM OPEN CHANNELS. REINFORCE SHELF UNITS TO SUPPORT 40 LBS. PER SQUARE FOOT LOADING, PLUS 100% IMPACT LOADING.

R. TRIMWORK AND FRAMING AT MASONRY OPENINGS SHALL BE 18 GAUGE STAINLESS STEEL AND FORMED SO AS TO FIT SNUG TO WALLS AND ADJACENT SURFACES. FRAMING SHALL EXTEND A MINIMUM OF 2" ON EACH SURFACE. SEAL TRIMWORK TO WALLS. REFER TO DRAWINGS.

S. METAL COMPONENTS, UNLESS SPECIFIED OR NOTED OTHERWISE, TO BE THE FOLLOWING GAUGES:

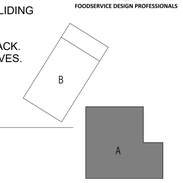
TABLETOPS	14 GAUGE STAINLESS STEEL
WALL SHELVES	16 GAUGE STAINLESS STEEL
UNDER SHELVES	16 GAUGE STAINLESS STEEL
SINKS & DRAINBOARDS	14 GAUGE STAINLESS STEEL
EXHAUST DUCTS	18 GAUGE STAINLESS STEEL
LEGS - 1 5/8" DIA.	16 GAUGE STAINLESS STEEL

7 CUSTOM FAB NOTES
NOT TO SCALE

SECTION DETAIL NOTES:

1. 1 1/2" X 1 1/2" X 1/8" GALVANIZED ANGLE IRON.
2. 1" X 4" 14 GAUGE STAINLESS STEEL HAT CHANNEL.
3. 16 GAUGE STAINLESS STEEL C-CHANNEL.
4. 16 GAUGE STAINLESS STEEL UNDER SHELF, COVE UP REAR 2", TURN DOWN FRONT 1 1/2".
5. 1/2" CEMENT BACKERBOARD WITH TILE FRONT BY TRADE CONTRACTOR OR COUNTER MANUFACTURER. VERIFY FINISH WITH ARCHITECTURAL DRAWINGS.
6. COLD PAN - 2" RIGID INSULATION WITH 1" C.P. DRAIN - 16 GAUGE STAINLESS STEEL SECTION FALSE BOTTOM. PERFORATE FALSE BOTTOM WITH 1/4" DIA. HOLES AT 3" O.C.
7. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN DOOR WITH RECESSED PULL.
8. MANIFOLD DRAINS AT HOT FOOD UNITS WITH 1" TYPE 'K' COPPER AND EXTEND TO VALVE IN PLUMBING COMPARTMENT.
9. FINISHED TRUE AND LEVEL MASONRY BASE BY DIVISION 09. CLOSE COUNTER BODY AT BASE AND SEAL BY SECTION 11 40 00.
10. FISHER #22314 DRAIN WITH TAILPIECE AND OVERFLOW.
11. 14 GAUGE STAINLESS STEEL BRACKET WITH DRAIN HANDLE BUSHING.
12. 16 GAUGE STAINLESS STEEL 'Z' CLIP TO WALL AND SEAL.
13. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL LEGS AND CROSS RAILS.
14. 1/2" S/S TUBING DRAIN LINE - STRAP TO SHELF AND WALL - EXTEND DOWN TO TOP OF SPLASH.
15. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL TUBING - SUPPORT FRONT OF SHELF WITH 1/2" ALL-THREAD INSIDE TUBING EXTENDING TO STRUCTURE ABOVE.
16. 1/4" S/S BAR STOCK WELDED TO TOP OF EACH POST - POT HOOKS TO BE COMPONENT HARDWARE #J77-4401 SPACED 8" O.C.
17. 1 5/8" 16 GAUGE STAINLESS STEEL TUBING - BOLT TO ANGLE IRON AND EXTEND UP THRU SPLASH TO 7'-0" A.F.F.
18. OVER SHELF - 16 GAUGE STAINLESS STEEL, COVE UP REAR 2", TURN FRONT AND ENDS DOWN 1", ENDS TO BE CAPPED WITH EASED CORNERS WHERE ADJACENT TO WALL / FIXTURE.
19. 18 GAUGE STAINLESS STEEL LOUVERED PANEL.
20. 18 GAUGE STAINLESS STEEL LOUVERED DOUBLE PAN DOOR WITH RECESSED PULL.
21. NUMBER NOT USED.
22. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN SLIDING DOOR WITH COMPONENT HARDWARE COMPONENTS
    - A. #B57 - (VERIFY LENGTH) EXTRUDED ALUMINUM TRACK.
    - B. #B58-5511 & #B58-5521 FRONT & REAR DOOR SHEAVES.
    - C. #B62-1093 DOOR GUIDE.
    - D. #B60-1086 DOOR STOPS WHERE NEEDED.
    - E. #P62-1010 RECESS PULLS.

5 SECTION DETAIL NOTES
NOT TO SCALE



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EMS ISD AGRICULTURAL SCIENCE COMPLEX

REGISTERED ARCHITECT
STEPHEN V. BRENNAN
23211
STATE OF TEXAS

05/28/2025

ISSUED: MAY 28 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	MM
Designer	Quality Control
Designer	
Proj. Arch.	
MD/KD	

PROJECT NO.
24-057.00

SHEET TITLE
FS ELEVATIONS & SECTIONS

SHEET NO.
QF1.6

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STRUCTURAL GENERAL NOTES

SECTION 1 - GENERAL INFORMATION AND DESIGN CRITERIA

SECTION 1.1 - DOCUMENTS

1.1.1 Structural Drawings are not stand-alone documents and are augmented by technical specifications and must be coordinated with the complete set of contract documents.

1.1.2 Faded backgrounds of other design disciplines in structural drawings are for general reference only and do not infer control or ownership of such elements. See Arch/MEP/Civil/Etc. drawings and specifications for requirements of other disciplines.

1.1.3 Structural documents are protected by Copyright Law of the United States and are not to be used for any purpose other than construction of the building structure described in the contract documents at the geographic location shown.

1.1.4 General Notes and Typical Details apply throughout the project wherever conditions similar to those depicted exist and are not necessarily specifically referenced in the documents.

1.1.5 The Geotechnical Report referenced herein is not part of the Structural Documents. However, a copy should be obtained for reference during installation of foundations and subgrade preparation.

COORDINATION

1.1.6 Contractor is responsible for coordinating Structural Documents with other trades and disciplines in the contract documents. Some requirements are not known prior to issue and may change as layout and fabrication drawings are developed. Promptly report deviations and interferences with structural components for resolution by the Architect.

1.1.7 Contractor to verify dimensional location and depth of slab recesses and offsets with Architectural Drawings.

1.1.8 Contractor to verify size, weights, location, and details of structurally supported equipment and associated openings prior to fabrication of the supporting structure.

1.1.9 Contractor to verify size and location of floor and roof penetrations shown on structural drawings with other disciplines.

1.1.10 Submit for approval a composite drawing showing all proposed openings and sleeves through structural members for engineering review prior to or simultaneous with shop drawings for affected framing.

1.1.11 Do not scale plans, details and sections for quantity, length or fit of materials.

REFERENCE ELEVATIONS

1.1.12 Heights of floor and roof decks and various framing components are given on the drawings relative to a reference elevation of 100'-0". This reference elevation is equivalent to a Mean Sea Level Elevation of 737.00 feet. Contractor to verify against Civil grading plans and report discrepancies to Architect for resolution prior to construction.

TEMPORARY BRACING

1.1.13 Structural systems are designed for final, in-place conditions only. Provide temporary bracing of structural components for conditions that will exist during construction and to meet all regulatory requirements for safety of workers.

1.1.14 Maintain temporary frame bracing until installation of permanent structural bracing elements, member connections and floor and roof diaphragms are complete.

SECTION 1.2 - CODES AND STANDARDS

1.2.1 Building Code of jurisdiction - 2021 International Building Code with City of Fort Worth amendments

1.2.2 Structural Concrete Code - American Concrete Institute (ACI) 318

1.2.3 Structural Masonry Code – The Masonry Society (TMS) 402

1.2.4 Structural Steel Code - American Institute of Steel Construction (AISC) 360 (and 341 where applicable)

1.2.5 Structural Cold-Formed Steel Code - American Iron and Steel Institute (AISI) S100

1.2.6 Structural Wood Code – American Wood Council National Design Specification (AWC NDS)

SECTION 1.3 - DESIGN CRITERIA

1.3.1 Structure Risk Category III

1.3.2 Live Loads

Occupancy or Use	Uniform (psf)	Concentrated (lbf)	Notes
Assembly, Stadium Bleachers	100		(2)
Ground Level, Typical UNO	100		
Light Storage	125		(2)
Mechanical Room	150		(1,2)
Roof, Typical	20		
Stairs and Exitways	100	300	(3)

Notes:
(1) Minimum load, or weight of equipment (the heavier)
(2) Load is not reducible in accordance with the provisions of the Building Code unless specific exemptions apply.
(3) Typical concentrated loads applied over 2.5-foot square area to structural members.

1.3.3 Roof Snow Loads

Ground Snow Load, Pg	5.0 psf
Flat Roof Snow Load, Pf	5.5 psf
Snow Exposure Factor, Ce	1.0
Snow Importance Factor, Is	1.1
Snow Thermal Factor, Ct	1.2
Roof Slope Factor, Cs	1.0

1.3.4 Superimposed Dead Loads

Typical Soil-Supported Level	8 psf
with Thin Set Tile or Wood Flooring	15 psf
Typical Mezzanine Level	17 psf
PEMB Roofing System + Collateral	10 psf

Notes:
Superimposed dead loads do not include self-weight of PEMB framing members or miscellaneous steel shown in structural drawings.

1.3.5 Wind Loads

Ultimate design wind speed, Vult	112 mph
Allowable design wind speed, Vasd	87 mph
Serviceability wind speed	74 mph
Exposure Classification	C
Wind Importance Factor	1.0
Internal Pressure Coefficient	+/- 0.18
Windborne Debris Region	No

See components and cladding wind load diagram.

1.3.6 Seismic Loads

Seismic Importance Factor, Ie	1.25
Mapped Spectral Acceleration, Ss	0.096
Mapped Spectral Acceleration, S1	0.052
Site Class	B
Design Spectral Acceleration, Sds	0.064
Design Spectral Acceleration, Sd1	0.034
Seismic Design Category	A
Analysis Procedure Used:	By PEMB Manufacturer
Basic Seismic Force Resisting System:	By PEMB Manufacturer
Response Modification Coefficient, R:	By PEMB Manufacturer
Seismic Response Coeff, Cs:	By PEMB Manufacturer
Design Base Shear:	By PEMB Manufacturer

1.3.7 Other Concentrated Loads

Location	Load-pounds	Area
Steel Roof Deck	200	1 sq ft
Stair Treads	300	4 sq in

Notes:
Concentrated loads apply to any location on supporting structure, separately from (not in addition to) uniform live loads, except as noted otherwise.

1.3.8 Assumed weights and locations of structurally supported equipment are indicated on the framing plans.

1.3.9 Pedestrian Guardrail - 50 lbf/ft horizontal and vertical, or 200 lbf concentrated at top, any direction.

STRUCTURAL DEFLECTIONS

1.3.10 Live Load - Floor systems are designed to limit vertical deflections due to live loads to (Clear Span)/360 or less. Roofing systems designed by Pre-Engineered Metal Building manufacturer to limit vertical vertical deflections to minimum (Clear Span)/360 or less as required by metal building performance specifications. Attachments of architectural and mechanical components to or between floor and roof structures do not allow for live load deflections of this magnitude to occur without causing distress or deformity to the components.

1.3.11 Dead Load - Floor systems are designed to limit vertical deflections due to total loads to (Clear Span)/240 or less. Roofing systems designed by Pre-Engineered Metal Building manufacturer to limit vertical vertical deflections to minimum (Clear Span)/240 or less as required by metal building performance specifications. Some deflections may occur incrementally as loads are placed on the structure, and in the case of concrete structures, may occur over an extended time period. Attachments of architectural and mechanical components do not allow for dead load deflections that may occur after installation. For example, significant deflections may occur when mechanical systems are charged with water or other coolants.

SECTION 2 - FOUNDATIONS AND RELATED EARTHWORK

SECTION 2.1 - GEOTECHNICAL REPORT

2.1.1 Design of foundations and structural components in contact with soil is based on the recommendations given in the following:

Report by	: Universal Engineering Sciences (UES)
Date of Report	: April 10, 2025
Report Number	: W251074-rev1

2.1.2 Refer to the soil report for subsoil conditions that may be encountered in the installation of foundations, and other information relevant to foundations and site preparation.

SOIL IMPROVEMENT UNDER BUILDING SLABS

2.1.3 Design of soil-supported building slabs is based on a range of soil movement of 0 inches to 1 inch, based on the recommendations of Geotechnical Report.

2.1.4 Refer to Specifications for soil stabilization under soil-supported building slabs.

EARTH RETENTION SYSTEMS

2.1.5 The design of earth retention systems is not included in Structural Documents. Refer to the Technical Specifications for requirements.

SECTION 2.2 - STRAIGHT SHAFT PIERS

2.2.1 Design Criteria:

Bearing Stratum	: Tan and/or Gray Limestone
Top of Stratum Elevation (for Bidding Purposes Only)	: Approximately 734 feet MSL
Allowable End Bearing	: 30,000 psf
Positive Side Friction	: 4,500 psf
Upheaval Side Friction	: 2,000 psf
Upheaval Design Depth	: 3 feet
Negative Side Friction	: 3,600 psf

2.2.2 Piers shall extend to minimum embedment into bearings stratum shown in pier schedule on S3.01 or overall pier length not to be less than four times the pier diameter, whichever results in a deeper pier. See notes on pier schedule for additional information.

2.2.3 Pier depths indicated are for bidding purposes only. Actual pier depths may vary depending on depth to bearing stratum.

2.2.4 Steel dowels at tops of piers or footings shall extend 30 bar diameters above and below top of pier unless noted otherwise (noted as "LAP" on Typical Details).

2.2.5 Top of pier elevations given are relative to reference elevation of 100'-0".

2.2.6 Overpour at tops of piers ("mushrooms") shall be removed to the required pier diameter.

SECTION 3 - STRUCTURAL CONCRETE

SECTION 3.1 - CONCRETE FORMS

3.1.1 Formed Voids - Provide retained void spaces between bottom of structural members and subgrade as follows:

Grade Beams and Pilasters	6"
Pier Caps	6"

3.1.2 Form vertical faces of grade beams, pilasters, pier caps, and other vertical foundation elements unless specifically shown or noted otherwise in the details.

SECTION 3.2- STEEL REINFORCING

3.2.1 Reinforcing bars shall be deformed. Strength of bars shall be Grade 60.

SPLICING OF REINFORCING BARS

3.2.2 Top bars in beams, slabs or joists shall be spliced at midspan between supports, unless noted otherwise.

3.2.3 Bottom bars in beams, slabs or joists shall be spliced at supports, unless noted otherwise.

LAPPED SPLICE LENGTHS

3.2.4 Lap reinforcing 30 bar diameters at splices of slab-on-grade and temperature and shrinkage reinforcing unless noted or detailed otherwise.

3.2.5 Tension splice lengths shall be calculated in accordance with ACI 318. Use Class B splices unless noted otherwise.

3.2.6 Welded Wire Reinforcement splice length (overlap), measured between outermost cross wires of each fabric sheet, shall be at least one spacing of cross wires plus 2 inches, but in no case less than 6 inches.

CONCRETE COVER TO REINFORCING

3.2.7 Clearance from face of concrete to face of reinforcing:

Piers	3"
Formed Grade Beams, Pier Caps, and Pilasters	1 1/2" top, 2" sides, 3" bottom
Slabs	1 1/2"

Notes: Above dimensions apply unless noted otherwise in details.

PLACEMENT OF REINFORCING

3.2.8 Place first bar of slab reinforcing parallel to side 2 inches from a free edge or half of required bar spacing from face of edge beam.

3.2.9 Place reinforcing in topping slabs or in slabs poured on steel deck at center of slab unless noted otherwise.

SECTION 3.3 - CONCRETE MIX DESIGNS

3.3.1 Concrete Mix Schedule:
a. Concrete type is NWC unless noted otherwise. NWC refers to normal weight concrete with maximum cured density of 145 PCF.
b. Where w/c ratio is not indicated in the Concrete Mix Schedule, it shall be as necessary to meet strength requirements.
c. Where the w/c ratio is shown, it shall be adhered to regardless of strength requirements.
d. "Strength" is required compressive cylinder strength at an age of 28 days.
e. Provide concrete mix for drilled piers with 5" to 7" slump. Use water-reducing admixture for other mixes to achieve a pumpable mix with optimum slump for placing and finishing.
f. Exposure classes are noted as defined in ACI 318. Exposure classes for concrete mixes are F0, S0, W0, and C0 unless noted otherwise.

Description of Use	Strength psi	Agg Size	Max w/c	Air Content	Exposure Class	Notes
Drilled Piers	3000	1 1/2"	---	---	--	---
Grade Beams, Pilasters, and Pier Caps	4000	1"	0.55	4.5%	F1	---
Slab on Grade (Interior)	3500	1"	---	---	--	---
Slab on Grade (Exterior)	5000	1"	0.40	6%	F3	---
Slab on Steel Composite Deck	3500	3/4"	---	---	--	---
Topping Slab (Interior)	3000	3/4"	---	---	--	---

SECTION 3.4 - CONCRETE SLABS

3.4.1 Slabs on Composite Steel Deck
Composite Slab Schedule:

Type Mark	Overall Thickness	Typ Slab Reinf	Notes/ Addl Top Reinf
CA	6.5"	WWR 6x6-W2.1xW2.1	(1, 2)

Notes:
(1) See typical details for reinforcing placement and additional reinforcing over girders. "Girders" refers to interior beams oriented parallel to deck.
(2) Slab types correspond to deck type (see Composite Steel Deck).

3.4.2 Slabs Placed on Grade – See plans and typical details.

3.4.3 Topping Slabs

Location	Thickness	Reinforcing
Topping Slab on Geofoam	4 inches	#4 @ 18 EW
Elevated Mechanical Slab	3 inches	#3 @ 18 EW

SECTION 3.5- DRILLED IN ANCHORS

3.5.1 Drill holes with rotary impact hammer drill using carbide tipped bits. Drill bits shall be of the diameter as specified by the anchor manufacturer. All holes shall be drilled perpendicular to the concrete or masonry surface.

3.5.2 Embedded items: Identify position of reinforcing steel and other embedded items prior to drilling holes for anchors. Exercise care in drilling to avoid damaging existing reinforcing or embedded items. Notify the Engineer if reinforcing steel or other embedded items are encountered during drilling. Take precautions as necessary to avoid damaging electrical and telecommunications conduit, and gas lines.

3.5.3 Base Material Strength: Unless otherwise specified, do not drill holes in concrete or masonry until concrete, mortar, or grout has achieved full design strength. Do not install adhesive anchors in concrete that is placed less than 21 days prior. (from ACI 318 requirement)

TESTING

3.5.4 Continuous special inspection is required for adhesive anchors. Remove and replace misplaced or malfunctioning anchors. Clean and fill empty anchor holes and patch failed anchor locations with high-strength nonshrink, nonmetallic grout. Anchors that fail to meet proof load or installation torque requirements shall be regarded as malfunctioning.

EXPANSION, UNDERCUT, SCREW AND ADHESIVE ANCHORS

3.5.5 Concrete base material: provide anchors of size and type shown with ICC-ES or IAPMO-UES compliance required

Expansion Anchors: Hilti KWIK Bolt TZ2 (ICC-ES ESR-4266)

Undercut Anchors: Hilti HDA Undercut Anchors (ICC-ES ESR-1546)

Screw Anchors: Hilti Kwik HUS-EZ (ICC-ES ESR-3027)

Adhesive Anchors: Hilti HIT-HY 200 Safe Set System (ICC-ES ESR-3187) for use with Hilti HIT-Z Rod, HAS-E Rod, & Hollow Drill Bit
Hilti HIT-RE 500-V3 Safe Set System (ICC-ES ESR-3814) for use with Hilti HAS-E Rod, Hollow Drill Bit & Hilti Roughening Tool
Hilti HIT HY-200 (ICC-ES ESR 3187)

Power-driven or Actuated Fasteners:
Hilti X-U (ICC-ES ESR-2269)
Hilti Low-Velocity Power-driven Fasteners (ICC-ES ESR-1663, ICC-ES ESR-1752)

3.5.6 Grout filled CMU (Concrete Masonry Unit) base material: provide anchors of size and type shown with ICC-ES or IAPMO-UES compliance required

Screw Anchors: Hilti Kwik HUS EZ (ICC-ES ESR-3056)

Adhesive Anchors: Hilti HIT-HY 270 (ICC-ES ESR-4143)

INSTALLATION

3.5.7 Perform anchor installation in accordance with manufacturer's printed installation instructions (MPII).

3.5.8 Protect threads from damage during anchor installation.

3.5.9 Contractor to arrange for a manufacturer's field representative to provide installation training for all products to be used prior to commencement of work. Only trained installers shall perform post-installed anchor installation. A record of training shall be kept on site and made available upon request.

3.5.10 Adhesive anchors installed horizontally or upwardly inclined shall be qualified in accordance with ACI 355.4 requirements for sensitivity to installation direction.

SECTION 4 - STRUCTURAL MASONRY

SECTION 4.1 - GENERAL

4.1.1 See Architectural Drawings and Specifications for details and dimensions of masonry work.

4.1.2 Grout lifts at reinforced masonry walls shall be accomplished in accordance with TMS 402/602.

SECTION 4.2 - STRUCTURAL PROPERTIES

4.2.1 Required compressive strength of structural assembly = 2000 psi

4.2.2 Load-bearing Concrete Masonry Units: ASTM C90 Normal-weight
Required net area compressive strength = 2000 psi

4.2.3 Mortar: ASTM C270 Type S

4.2.4 Grout: ASTM C476
Required 28-day compressive strength of grout 2000 psi

SECTION 4.3 - REINFORCING

JOINT REINFORCEMENT

4.3.1 Horizontal joint reinforcing shall be "Ladder Type" 9 gage welded wires spaced 16 inches on center vertically.

4.3.2 Horizontal joint reinforcing shall be "Ladder Type" with 3/16" diameter longitudinal wires and 9 gage cross wires spaced 16 inches on center vertically.

4.3.3 Provide prefabricated "L" and "T" shaped sections at wall intersections.

4.3.4 Lap horizontal wires at least 8" at splices.

BAR REINFORCEMENT

4.3.5 Reinforcing bars shall conform to ASTM A615 Grade 60.

4.3.6 Bar reinforcing shall be lapped at splices per schedule in typical details. Stagger splices in adjacent horizontal bars at least 4'-0".

4.3.7 Vertical reinforcing in cells to be grouted shall be placed using fabricated bar positioners to maintain location within cell.

4.3.8 Grout solid cells below adjacent grade or finish floor elevation and cells with vertical or horizontal bar reinforcement.

STRUCTURAL WALLS

4.3.9 Unless shown otherwise on plans or details, reinforcing for load-bearing CMU walls shown in the structural drawings shall be as follows:

Wall Type	Wall Thickness	Vert Reinf	Dowels
W1	8 inches	1 #5 @ 12 max	1 #5(0-10/4-0) @ 12 max
W2	12 inches	2 #5 @ 12 max	2 #5(0-10/4-0) @ 12 max

Notes:
a) Structural Walls are to be W1 type unless otherwise noted.
b) Align and lap dowels with vertical wall reinforcing.
c) At wall openings, see wall opening reinforcing schedule in typical details for reinforcing of jambs and lintels.

NON-STRUCTURAL WALLS

4.3.10 Unless shown otherwise on plans or details, reinforcing for CMU walls not shown in the structural drawings shall be as follows:

Wall Thickness	Max Height	Vert Reinf	Dowels
6 inches	12'-0"	N/A	
8 inches	16'-4"	N/A	
8 inches	31'-0"	1 #5 @ 48 max	1 #5(0-10/4-0) @ 48 max
12 inches	31'-0"	2 #5 @ 48 max	1 #5(0-10/4-0) @ 48 max

Notes:
a) Align and lap dowels with vertical wall reinforcing.
b) At wall openings, see wall opening reinforcing schedule in typical details for reinforcing of jambs and lintels.

4.3.11 Grout and reinforce the first cell at corners, ends of walls, and each side of a control joint with 1 vertical bar for 6- or 8-inch CMU walls or 2 vertical bars for 12-inch CMU walls. Jambs adjacent to openings in structural masonry are to be grouted and reinforced per applicable details.

4.3.12 Install single course depth bond beam with at least one horizontal bar at the top of CMU walls.

SECTION 4.4 - CONTROL JOINTS

4.4.1 Do not locate vertical control joints in CMU walls through an opening or within the jamb or lintel bearing adjacent to an opening. Control joints must be vertical from the wall foundation to the top of wall.

4.4.2 Maximum spacing of control joints not to exceed 25 feet.

4.4.3 See plans for control joint locations in load-bearing CMU walls.

SECTION 4.5 - REQUIRED SUBMITTALS

4.5.1 Prior to construction, contractor is to submit CMU reinforcing layout and fabrication drawings for review. Submittal shall contain the following information:
a) CMU wall thickness
b) Material properties
c) Plans and wall elevations that show wall reinforcing details, openings, beam pockets, and lintels
d) Control joint locations

SECTION 5 - STRUCTURAL STEEL

SECTION 5.1- STRUCTURAL FRAME

5.1.1 Structural Steel Properties:

W Shapes, WTs, and Channels	ASTM A992 Grade 50
Angles and Plates	ASTM A572 Grade 50
Steel Pipes	ASTM A53, Grade B
Hollow Structural Sections (HSS)	ASTM A500, Grade C
Erection Bolts	ASTM A307
High Strength Bolts	ASTM F3125, A325N UNO
Anchor Rods	ASTM F1554 Gr. 36 UNO
High Strength Anchor Rods	ASTM F1554 Gr. 105 where shown in drawings
Headed Stud Anchors	ASTM A29 Gr. 1010-1020, Type B

5.1.2 Continuity Plates (Full Depth column stiffeners aligned with beam flanges, or Full Depth beam stiffeners aligned with column flanges) shall match the steel grade of the base member.

WELDING

5.1.3 Unless otherwise noted, angles, plates, rods, and miscellaneous framing shall be welded at contact joints and supports. Weld sizes shall conform to AWS D1.1 minimums, except where noted otherwise.

5.1.4 Where fillet weld sizes are not indicated on weld symbols, fillet size shall be 1/16th inch smaller than thickness of thinner of materials being joined.

5.1.5 Complete penetration welds are indicated by notation "CJP" on weld symbols, partial penetration by "PJP".

STRUCTURAL BOLTS

5.1.6 Bolts indicated on details shall be 3/4 inch diameter, unless noted otherwise.

5.1.7 Bolts shall be tightened by the AISC "Snug Tight" method unless noted otherwise.

MISCELLANEOUS

5.1.8 Edge angles at perimeters of floors and roofs shall be continuous and spliced per typical details.

5.1.9 Steel members shown to be curved shall be rolled in a manner that will not cause distortion or buckling. Should alterations to the member size, such as a thicker flange or web, be required to ensure this outcome, the additional steel shall be provided at no additional cost to the contract.

5.1.10 Unless noted otherwise, steel members shall be hot dip galvanized at exterior conditions. Field welds to be repaired in accordance with ASTM A780.

COMPOSITE STEEL BEAMS

5.1.11 Beams shall have shear studs spaced at 2 feet maximum on center, whether shown or not.

5.1.12 Composite steel beams do not require shoring during placement of concrete slab, unless noted otherwise.

SHEAR STUDS

5.1.13 Shear studs shall be fusion-welded, headed studs of high strength steel.

5.1.14 Unless noted otherwise, studs shall have a shank diameter of 3/4-inch. See details for length of studs measured after welding.

SECTION 5.4- COMPOSITE STEEL DECK

5.4.1 Basis of design assumes the deck is continuous over three spans. Contractor shall review deck properties at conditions that do not meet this assumption.

5.4.2 Contractor shall provide composite metal decking to meet the following criteria:
1. Decking alone shall be capable of supporting the wet weight of concrete plus construction loads without requiring intermediate shoring for all span conditions on the project, unless noted otherwise.
2. Composite slab and deck system shall be capable of supporting design loads indicated on the drawings for all span conditions on the project.
3. Deck thickness, indicated by gage in Composite Steel Deck Schedule, is a minimum and shall be increased as necessary to meet these requirements, at no additional cost to the Contract.

5.4.3 Composite Steel Deck Schedule:
a. See framing plans for location of deck types.
b. Deck yield strength: Fy = 50 ksi minimum

Type Mark	Deck Height	Minimum Gage	Minimum Ip-in4	Minimum In-in4	Minimum Sp-in3	Minimum Sn-in3
CA	3.0"	20	.921	.931	.524	.573

5.4.4 Composite floor system minimum load capacity requirements:

Type	Superimposed Uniform Load (psf)	Concentrated Load (lbs) *
	XXX	See Section 1

*Concentrated load acting on area 2.5 ft x 2.5 ft; not acting simultaneously with uniform load.

5.4.5 See technical specifications for composite deck connection to supporting structure.

SECTION 5.5- STEEL ROOF DECK

5.5.1 Steel Roof Deck Schedule:
(a) Deck Type A applies throughout.
(b) Typical deck yield strength: Fy = 40 ksi minimum

Deck Type Mark	Deck Gage	SDI Profile	Deck Height	Min Ip in4	Min In in4	Min Sp in4	Min Sn in3	Deck Finish
A	20	DR	3.0"	.725	.946	.464	.506	Painted

5.5.2 Steel Roof Deck Connection Schedule:
(a) Shear Capacity listed is allowable (0.6W, 0.7E) and is considered acting in combination with wind uplift pressures.
(b) W/N = sheet width/no. connections each sheet.
(c) Deck Connections are Mark I throughout.

Conn Type Mark	Conn @ Supports (W/N)	Parallel Edges (In)	Sidelap Conn No./Span	Reqd Shear Capacity (PLF)
I	24/4	12	3	XXX @ _'-_" span

5.5.3 Support and parallel edge connections shall be 5/8" visible diameter arc spot welds. Sidelap connections shall be no. 10 hex head screws or 1/8" x 1.5" fillet welds.

SECTION 6 - METAL BUILDING SYSTEMS

6.1 Superstructure is Metal Building designed and fabricated by supplier.

6.2 Design and fabricate metal building in accordance with the contract specifications, AISC, MBMA, and AISI latest specifications. American Institute of Steel Construction certification is required of the metal building system manufacturer and a certificate to verify compliance shall be submitted with the design analysis. The dimensional tolerances outlined in AWS code under workmanship and the tolerances applicable to hot rolled steel under AISC "Standard Mill Practice" section is required in the fabrication of the steel building frames.

6.3 Design metal building to support equipment and prefabricated canopies in Contract Documents. Provide additional girts or purlins as required for attachment of equipment.

6.4 Limit maximum metal building drift and deflection at serviceability wind speed:

Building Frames H/400
Girts/Purlins L/240

6.5 Foundation elements shown in the Contract Documents are based on assumed configurations and loading and are subject to change. Submit signed and sealed drawings and calculations (including foundation reactions) to Architect for review of foundation design prior to construction.

6.6 The base of rigid frame columns are assumed to be a pinned connection with no bending moments transferred to the foundation. Rigid frame column flange bracing is not allowed.

6.7 Anchor rod designs for the frame reactions furnished by the metal building designer are a delagated design by a professional engineer. Submit anchor rod design including size, configuration, embedment into concrete, and additional required anchorage reinforcement and supporting calculations for review prior to fabrication.

6.8 Metal building columns, rigid frames, and vertical bracing to be located as shown on plan.

6.9 Metal building supplier to provide structural support for building cladding and openings other than masonry veneer bearing on foundation. Metal building supplier to coordinate with Architectural drawings for exterior finishes and for the location and dimensions of openings.

SHEET LIST

SHEET NUMBER	SHEET NAME
S1.01	STRUCTURAL GENERAL NOTES
S1.02	STRUCTURAL GENERAL NOTES & STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS
S1.11	OVERALL AXONOMETRIC VIEW
S2.11	FOUNDATION AND GROUND FLOOR PLAN - OVERALL
S2.11A	FOUNDATION AND GROUND FLOOR PLAN - UNIT A
S2.11B	FOUNDATION AND GROUND FLOOR PLAN - UNIT B
S2.12A	MEZZANINE AND ROOF LEVEL FRAMING PLANS - UNIT A
S3.01	TYPICAL CONCRETE DETAILS
S3.02	TYPICAL CONCRETE DETAILS
S3.03	CONCRETE DETAILS
S4.01	TYPICAL MASONRY DETAILS
S4.02	MASONRY DETAILS
S5.01	TYPICAL STEEL DETAILS
S5.02	STEEL DETAILS
S6.01	OVERALL BUILDING SECTIONS
S6.02	OVERALL BUILDING SECTIONS

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05-28-2025

ISSUED: May 28, 2025

REVISIONS

Revision No.	Revision Date

Director LVB	Drawn By LAFP
Designer ET	Quality Control LAFP
Proj. Arch. KDT	

PROJECT NO.
24-057.00

SHEET TITLE
STRUCTURAL GENERAL NOTES

EMS ISD AGRICULTURAL SCIENCE

SHEET NO.
S1.01

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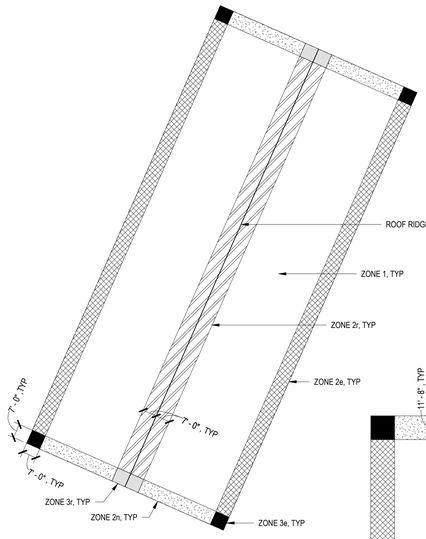
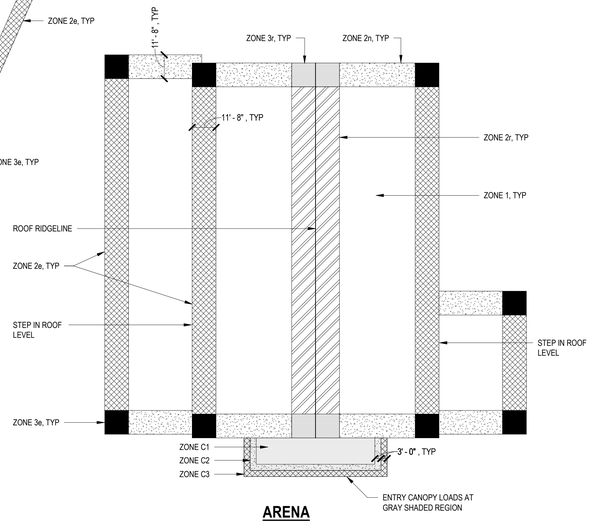
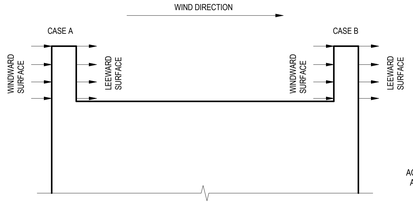
COMPONENTS & CLADDING WIND PRESSURES - ASCE 7-16



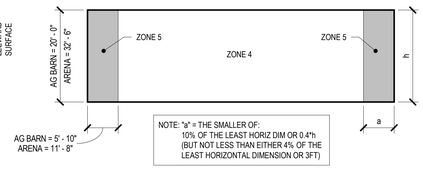
AG BARN ROOF PLAN



ARENA ROOF PLAN



TYPICAL SECTION AT PARAPET



TYPICAL WALL ELEVATION

ARENA - COMPONENTS AND CLADDING WIND PRESSURES

ZONE	DESCRIPTION	POSITIVE PRESSURE (PSF) EFFECTIVE AREA (SQ FT)						NEGATIVE PRESSURE (PSF) EFFECTIVE AREA (SQ FT)						OVERHANG NEGATIVE PRESSURE (PSF) EFFECTIVE AREA (SQ FT)					
		10	20	50	100	200	500	10	20	50	100	200	500	10	20	50	100	200	500
1	ROOF INTERIOR	19	17	16	16	16	16	-57	-57	-35	-18	-18	-18	-69	-69	-55	-44	-44	-44
2e	ROOF EDGE (EAVE)	19	17	16	16	16	16	-57	-57	-35	-18	-18	-18	-69	-69	-55	-44	-44	-44
2n	ROOF EDGE	19	17	16	16	16	16	-82	-71	-57	-46	-34	-31	-95	-87	-76	-68	-59	-57
2r	ROOF EDGE (RIDGE)	19	17	16	16	16	16	-82	-71	-57	-46	-34	-31	-95	-87	-76	-68	-59	-57
3e	ROOF CORNER (EAVE)	19	17	16	16	16	16	-82	-71	-57	-46	-34	-31	-111	-96	-77	-63	-48	-44
3r	ROOF CORNER (RIDGE)	19	17	16	16	16	16	-98	-84	-65	-51	-51	-51	-126	-108	-83	-64	-64	-64
4	WALL INTERIOR	31	29	28	26	25	23	-33	-32	-30	-29	-28	-26						
5	WALL EDGE	31	29	28	26	25	23	-41	-38	-35	-32	-29	-26						
C1	ENTRY CANOPY INTERIOR	25	25	25	25	25	25	-27	-27	-27	-27	-27	-27						
C2	ENTRY CANOPY EDGE	38	38	38	25	25	25	-40	-40	-40	-27	-27	-27						
C3	ENTRY CANOPY CORNER	49	38	38	25	25	25	-53	-40	-40	-27	-27	-27						

AG BARN - COMPONENTS AND CLADDING WIND PRESSURES

ZONE	DESCRIPTION	POSITIVE PRESSURE (PSF) EFFECTIVE AREA (SQ FT)						NEGATIVE PRESSURE (PSF) EFFECTIVE AREA (SQ FT)						OVERHANG NEGATIVE PRESSURE (PSF) EFFECTIVE AREA (SQ FT)					
		10	20	50	100	200	500	10	20	50	100	200	500	10	20	50	100	200	500
1	ROOF INTERIOR	17	16	16	16	16	16	-52	-52	-32	-17	-17	-17	-64	-64	-50	-40	-40	-40
2e	ROOF EDGE (EAVE)	17	16	16	16	16	16	-52	-52	-32	-17	-17	-17	-64	-64	-50	-40	-40	-40
2n	ROOF EDGE	17	16	16	16	16	16	-76	-66	-52	-42	-32	-28	-88	-80	-70	-62	-55	-52
2r	ROOF EDGE (RIDGE)	17	16	16	16	16	16	-76	-66	-52	-42	-32	-28	-88	-80	-70	-62	-55	-52
3e	ROOF CORNER (EAVE)	17	16	16	16	16	16	-76	-66	-52	-42	-32	-28	-102	-89	-71	-58	-45	-40
3r	ROOF CORNER (RIDGE)	17	16	16	16	16	16	-90	-77	-60	-47	-47	-47	-116	-99	-76	-59	-59	-59
4	WALL INTERIOR	25	24	23	22	21	19	-28	-26	-25	-24	-23	-21						
5	WALL EDGE	25	24	23	22	21	19	-34	-32	-29	-26	-24	-21						

NOTES:
1. PRESSURES ARE BASED ON THE ULTIMATE DESIGN WIND SPEED, Vult, AT MEAN ROOF HEIGHTS EQUAL TO:
   AG BARN, h_{RD} = 20' - 0"
   ARENA, h_{RD} = 29' - 0"
2. PRESSURES INCLUDE A DIRECTIONALITY FACTOR, Kd, OF 0.85 AND AN ELEVATION FACTOR, Ke, OF 1.0.
3. LOADS INDICATED ABOVE ARE ULTIMATE WIND LOADS (1.0W) FOR USE IN APPLICABLE WIND LOAD COMBINATIONS CONSIDERING GRAVITY EFFECTS AS REQUIRED PER ASCE 7-16 SECTION 2.3.
4. WIND LOADS ACT ON EACH OUTSIDE FACE OF THE BUILDING. DO NOT ASSUME SHIELDING FROM ADJACENT STRUCTURES. POSITIVE AND NEGATIVE VALUES INDICATE PRESSURES ACTING TOWARD AND AWAY FROM SURFACES, RESPECTIVELY.
5. SEE ADJACENT DIAGRAMS FOR LOCATIONS OF ROOF AND WALL ZONES.
6. PARAPET DESIGN PRESSURES: CONSIDER BOTH CASES BELOW:
   CASE A: POSITIVE WALL PRESSURE APPLIED TO WINDWARD SURFACE + NEGATIVE ADJACENT EDGE OR CORNER ZONE ROOF PRESSURE APPLIED TO LEEWARD SURFACE
   CASE B: POSITIVE WALL PRESSURE APPLIED TO WINDWARD SURFACE + NEGATIVE WALL PRESSURE APPLIED TO LEEWARD SURFACE
7. WHERE PARAPET HEIGHT IS EQUAL TO OR GREATER THAN 3' - 0", NEGATIVE ROOF ZONE 3 PRESSURES EQUAL THOSE FOR ZONE 2, AND POSITIVE ROOF ZONES 2 AND 3 PRESSURES EQUAL THOSE FOR POSITIVE WALL ZONES 4 AND 5, RESPECTIVELY.
8. PEMB MANUFACTURER: DESIGN ROOF MEMBERS TO RESIST NET UPLIFT WIND PRESSURE USING THE FOLLOWING ASD FORMULA: 0.6D - 0.6W, WHERE:
   D = DEAD = SELF WEIGHT OF STRUCTURE AND ROOFING SYSTEM (SEE ARCH)
   W = WIND = TABULATED VALUES

STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS 2021 INTERNATIONAL BUILDING CODE

SCHEDULE OF STRUCTURAL SPECIAL INSPECTION SERVICES TABLE NOTES

1. **Registered Design Professional In Responsible Charge**
   a. This Statement of Special Inspections is submitted in accordance with Section 1704 of the 2021 International Building Code. It includes a *Schedule of Structural Special Inspection Services* applicable to the Project. If applicable, it includes *Requirements for Seismic Resistance* and/or *Requirements for Wind Resistance*.
2. **The Owner**
   a. Shall Employ one or more approved agencies to provide special inspections and test during construction on the types of work specified in Section 1705 and in accordance with the building code.
3. **The Special Inspector(s)**
   a. Shall provide written documentation to the Building Official demonstrating the competence and relevant experience or training of the Special Inspector(s) who will perform the Special Inspections and tests during construction.
   b. Shall keep records of Special Inspections and tests. The Special Inspector(s) shall submit reports of Special inspection and tests to the Building Official and to the Registered Design Professional in Responsible Charge. Reports shall indicate that work inspected or tested was or was not completed in conformance to approved Construction Documents.
   c. Discrepancies shall be brought to the immediate attention of the Contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge prior to completion of that phase of work.
   d. Shall prepare a final report documenting required special inspections and tests, and corrections of any discrepancies noted in the inspections or tests, shall be submitted at a point in time agreed upon prior to the start of work by the Owner or the or the Owner's authorized agent to the Building Official.
4. **The Contractor(s)**
   a. Shall be solely responsible to ensure tests and inspections are performed. The construction or work for which Special Inspection or testing is required shall remain accessible and exposed for Special Inspection or testing purposes until completion of the required Special Inspections or test.
   b. The Special Inspection program does not relieve the Contractor of responsibility to comply with the Contract Documents. Jobsite safety and means and methods of construction are solely the responsibility of the Contractor.
5. See specifications for additional testing requirements. Where conflicts occur, the most stringent requirement shall control.
6. LEGEND.
   Continuous: Inspections by the special inspector who is present when and where the work to be inspected is being performed.
   Periodic: Inspections by the special inspector who is intermittently present where the work to be inspected has been or is being performed. Periodic Inspections need not interrupt construction activities.
   Perform: Continuous inspections by the special inspector for specific task to be completed prior to acceptance of the designated item, and need be performed at that time on a continuous basis.
   Observe: Periodic inspections by the special inspector conducted on a daily basis as a minimum and need not interrupt construction activities.
   Document: The special inspector shall prepare reports indicating that the work has been performed in accordance with the contract documents.

SCHEDULE OF SPECIAL INSPECTION SERVICES 1705.2: STEEL CONSTRUCTION

Special Inspections and nondestructive testing of structural steel elements in buildings, structures and portions thereof shall be in accordance with the quality assurance inspection requirements of AISC 360.

CHECK IF REQD	MINIMUM VERIFICATIONS AND INSPECTIONS	FREQUENCY	REFERENCED STANDARD
☒	1. Fabricator and Erector documents per AISC 360, chapter N, paragraph 3.2 for compliance with construction documents.	PERIODIC	AISC 360 - Chapter N 3.2
☒	2. Verify Structural Steel identification markings and certified mill test	PERIODIC	AISC 360
☒	3. Verify embedment member diameter, grade, type, and embedment length	PERIODIC	AISC 360
☒	4. Verify member locations, braces, stiffeners, embedment and application of joint detail at each connection	PERIODIC	AISC 360
☒	5. Structural steel welding		
	a. Inspect task prior to welding: 1. Welding procedure specifications and consumable certificates	PERFORM	AISC 360 - Table N5.4-1, AWS D1.1 AWS D1.1/D1.1M 6.3, 6.2
	2. Material identification type and grade 3. Welder identification system 4. Fit-up groove welds joint preparation, alignment, root opening, root face, bevel condition of steel surfaces, tack weld quality and location, backing type and fit 5. Access holes configuration and finish 6. Fit-up of fillet welds alignment, gaps at root, condition of steel surfaces, tack weld quality and location.	OBSERVE	AWS D1.1/D1.1M 6.2 AWS D1.1/D1.1M 6.4 AWS D1.1/D1.1M 6.5.2, 5.22, 5.15, 5.18, 5.10 AWS D1.1/D1.1M 6.5.2, 5.17 AWS D1.1/D1.1M 5.22.1, 5.15, 5.18 6.2, 5.11
	b. Inspect task during welding: 1. Qualified welders 2. Control and handling of welding consumables 3. No welding over cracked tack welds 4. Environmental conditions, wind speed, precipitation, and temperature 5. Welding procedure specification followed 6. Welding techniques, interpass and final cleaning, each pass within profile limitations, and each pass meets quality requirements	OBSERVE	AISC 360 - Table N5.4-2, AWS D1.1 AWS D1.1/D1.1M 6.4 AWS D1.1/D1.1M 6.2, 5.3 AWS D1.1/D1.1M 5.18 AWS D1.1/D1.1M 5.12.1, 5.12.2 AWS D1.1/D1.1M 6.3.3, 6.5.2, 5.5, 5.21, 5.6, 5.7 AWS D1.1/D1.1M 6.5.2, 6.5.3, 5.24, 5.30.1
	c. Inspect task after welding: 1. Welds cleaned 2. Weld proportions (size, length, location) 3. Weld meet visual acceptance criteria 4. Arc strikes, 5. k-area 6. Backing removed and weld tabs removed 7. Repair activities 8. Document acceptance or rejection of weld	OBSERVE PERFORM	AISC 360 - Table N5.4-3, AWS D1.1 AWS D1.1/D1.1M 5.30.1 AWS D1.1/D1.1M 6.5.1 AWS D1.1/D1.1M 6.5.3, 6.1 AWS D1.1/D1.1M 5.29 AWS D1.1/D1.1M 5.10, 5.31 AWS D1.1/D1.1M 6.5.3, 5.26 AWS D1.1/D1.1M 6.5.4, 6.5.5
	d. Nondestructive testing (NDT) of welded joints 1. CJP welds (Testing shall be performed on 100% of shop and field complete-penetration welds) 2. Access holes (Flanges > 2") 3. Welded joints subject to fatigue	PERFORM	AISC 360 - Section N5b
☒	6. Structural Steel Bolting		
	a. Inspection task prior to bolting: 1. Manufacturer's certification for fastener materials	PERFORM	AISC 360 - Table N5.6-1, RCSC RCSC 2.1, 9.1
	2. Fasteners mark in accordance with ASTM requirements 3. Proper fasteners selected (grade, type, bolt length) 4. Proper bolting procedure 5. Connecting elements including, faying surface and hole preparation 6. Pre-installation verification testing by installation personnel 7. Proper storage provided for bolts, nuts, washers, and other fastener components	OBSERVE	RCSC C-2.1, 9.1 RCSC 2.3.2, 2.7.2, 9.1 RCSC 4, 8 RCSC 3, 9.3 RCSC 7, 9.2 RCSC 2.2, 8, 9.1
	b. Inspection task during bolting: 1. Fastener assemblies, of suitable condition, placed in all holes and washers are positioned as required 2. Joint brought to the snug-tight condition prior to pretensioning operation 3. Fastener not turned by the wrench prevented from rotating 4. Fasteners are pretensioned in accordance with the RCSC Specification progressing systematically from the most rigid point towards the free edges.	OBSERVE	AISC 360 - Table N5.6-2, RCSC RCSC 8.1, 9.1 RCSC 8.1, 9.1 RCSC 8.2, 9.2 RCSC 8.2, 9.2
	c. Inspection task after bolting: 1. Document acceptance or rejection of bolted connections	PERFORM	AISC 360 - Table N5.6-3
	7. Composite Steel Construction		
☒	a. Verify placement and installation of steel headed studs	PERFORM	AWS D1.1/D1.1M 7.8
☒	b. For steel deck elements, perform test and additional Special Inspections in accordance with Steel Deck Construction		
☒	c. For concrete elements, perform test and additional Special Inspections in accordance with Concrete Construction		

SCHEDULE OF SPECIAL INSPECTION SERVICES 1705.2.2: STEEL DECK CONSTRUCTION

CHECK IF REQD	MINIMUM VERIFICATIONS AND INSPECTIONS	FREQUENCY	REFERENCED STANDARD
	1. Material verification of Cold-Formed Steel Deck		
☒	a. Verify type, size, and support spacing of deck and accessories	PERIODIC	AISC 360, ANSI SDI QA/QC
☒	b. Manufacturer's certified test reports	CONTINUOUS	
	2. Connection of cold formed steel deck to support structure		
☒	a. Verify size, location, spacing, and visual appearance of welds	PERIODIC	AISC 360, ANSI SDI QA/QC
☒	b. Verify fastener type, location, spacing, and fastener installation	PERIODIC	

SCHEDULE OF SPECIAL INSPECTION SERVICES TABLE 1705.8: CAST-IN-PLACE DEEP FOUNDATIONS

CHECK IF REQD	MINIMUM VERIFICATIONS AND INSPECTIONS	FREQUENCY	REFERENCED STANDARD
☒	1. Inspect drilling operations and maintain complete and accurate records for each element.	CONTINUOUS	IBC Table 1705.8
☒	2. Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable), and adequate end-bearing strata capacity. Record concrete or grout volumes.	CONTINUOUS	IBC Table 1705.8
☒	3. For concrete elements, perform tests and additional Special Inspection in accordance with Concrete Construction.		IBC Table 1705.3

SCHEDULE OF SPECIAL INSPECTION SERVICES 1705.3: CONCRETE CONSTRUCTION

CHECK IF REQD	MINIMUM VERIFICATION AND INSPECTION	FREQUENCY	REFERENCED STANDARD
☒	1. Inspect reinforcement, including prestressing tendons, and verify placement.	PERIODIC	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3
☒	2. Reinforcing bar welding:		AWS D1.4, ACI 318: 26.6.4
	a. Verify weldability of reinforcing bars other than ASTM A706.	PERIODIC	
	b. Inspect single-pass fillet welds, maximum 5/16" ; and	PERIODIC	
	c. Inspect all other welds.	CONTINUOUS	
☒	3. Inspect anchors and anchor reinforcement cast in concrete	PERIODIC	ACI 318: 17.8.2, 26.13.3.3
☒	4. Inspect anchors post-installed in hardened concrete members.		
	a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads.	CONTINUOUS	ACI 318: 17.8.2.4
	b. Mechanical anchors and adhesive anchors not defined in 4.a.	CONTINUOUS	ACI 318: 17.8.2
☒	5. Verifying use of required design mix for intended location.	CONTINUOUS	ACI 318: Ch. 19, 26.4.3, 26.4.4
☒	6. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	CONTINUOUS	ACI 318: 26.5, 26.12 ASTM C172, ASTM C31
☒	7. Inspect concrete and shotcrete placement for proper application techniques.	CONTINUOUS	ACI 318: 26.5
☒	8. Verify maintenance of specified curing temperature and techniques.	PERIODIC	ACI 318: 26.5.3, 26.5.5
☐	9. Inspect prestressed concrete for:		ACI 318: 26.10
	a. Application of prestressing forces; and	CONTINUOUS	
	b. Grouting of bonded prestressing tendons.	CONTINUOUS	
☐	10. Inspect erection and connection of precast concrete members.	PERIODIC	ACI 318: 26.9, 26.13.3.3
☐	11. For precast concrete diaphragm connections or reinforcement at joints classified as moderate or high deformability elements (MDE or HDE) in structures assigned to Seismic Design Category C, D, E, or F., inspect such connections and reinforcement in the field for:		ACI 318: 26.13.1.3
	a. Installation of the embedded parts	CONTINUOUS	
	b. Completion of the continuity of reinforcement across joints	CONTINUOUS	ACI 550.5
	c. Completion of connections in the field	CONTINUOUS	
☐	12. Inspect installation tolerances of precast concrete diaphragm connections for compliance with ACI 550.5	PERIODIC	ACI 318: 26.13.1.3
☒	13. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	PERIODIC	ACI 318: 26.11.2
☒	14. Inspect formwork for shape, location, and dimensions of the concrete member being formed.	PERIODIC	ACI 318: 26.11.1.2(b)
☐	15. Placement of reinforcement for special moment frames, boundary elements of special structural walls and coupling beams.	CONTINUOUS	ACI 318: 26.13.3.2
☐	16. Welding of reinforcement for special moment frames, boundary elements of special structural walls, and coupling beams.	CONTINUOUS	ACI 318: 26.13.3.2

SCHEDULE OF SPECIAL INSPECTION SERVICES 1705.4: MASONRY CONSTRUCTION

CHECK IF REQD	MINIMUM VERIFICATION	FREQUENCY	REFERENCED STANDARD
☒	1. Prior to construction, verification of compliance of submittals		TMS 602 Article 1.5
☒	2. Prior to construction, verification of *f'm* and *f'aac* except where specifically exempted by code		TMS 602 Article 1.4B
☒	3. During construction, verification of Slump flow and Visual Stability Index (VSI) when self-consolidating grout is delivered to the project site		TMS 602 Article 1.5 & 1.6.3
☒	4. During construction, verification of *f'm* and *f'aac* for every 5,000 square feet of wall construction		TMS 602 Article 1.4B
☒	5. During construction, verification of proportions of materials as delivered to the project site for premixed or preblended mortar, prestressing grout, and grout other than self-consolidating grout.		TMS 602 Article 1.4B
	6. As masonry construction begins, verify that the following are in compliance at least one time:		
☒	a. Proportions of site-mixed mortar Proportion Specification: Mortar Aggregate Ratio Test Property Specification: Air Content, Compressive Strength	PERIODIC	TMS 602 Article 2.1, 2.6A, 2.6C ASTM C780
☒	b. Masonry supports constructed within level tolerances, and reinforcing dowels positioned correctly	PERIODIC	TMS 602 Article 3.1
☐	c. Grade and size of prestressing tendons and anchorages	PERIODIC	TMS 602 Article 2.4B, 2.4H
☒	d. Grade, type, and size of reinforcement, connectors, and anchor bolts	PERIODIC	TMS 602 Article 3.4, 3.6A
☐	e. Prestressing technique	PERIODIC	TMS 602 Article 3.6B
☒	f. Properties of thin-bed mortar for AAC masonry	(1)	TMS 602 Article 2.1C.1
☒	g. Sample panel construction	PERIODIC	TMS 602 Article 1.6D
	7. Prior to each grouting operation, verify that the following are in compliance:		
☒	a. Grout space	PERIODIC	TMS 602 Article 3.2D, 3.2F
☐	b. Placement of prestressing tendons and anchorages	PERIODIC	TMS 402 Section 10.8, 10.9 TMS 602 Article 2.4, 3.6
☒	c. Placement of reinforcement, connectors, and anchor bolts	PERIODIC	TMS 402 Section 6.1, 6.3.1, 6.3.6-7 TMS 602 Article 3.2E, 3.4
☒	d. Proportions of site-prepared grout and prestressing grout for bonded tendons	PERIODIC	TMS 602 Article 2.6B, 2.4G.1.b
	8. At least once daily during masonry construction, verify that the following are in compliance:		
☒	a. Materials and procedures with the approved submittals	PERIODIC	TMS 602 Article 1.5
☒	b. Mortar mixing procedures	PERIODIC	
☒	c. Placement of masonry units and mortar joint construction.	PERIODIC	TMS 602 Article 3.3B
☒	d. Location and dimensions of elements including size, mortar joint thickness, grout space, cavity width, and alignment	PERIODIC	TMS 602 Article 3.3F
☒	e. Type, size, and location of anchors, including other details of anchorage to masonry to structural members, frames, and other construction	PERIODIC	TMS 402 Section 1.2.1(e), 6.2.1, & 6.3.1
☒	f. Welding of reinforcement	CONTINUOUS	TMS 402 Section 6.1, 6.1.2
☒	g. Preparation, construction, and protection of masonry during cold weather (temperature below 40° F) or hot weather (temperature above 90° F) on each applicable day	PERIODIC	TMS 602 Article 1.8C, 1.8D
☐	h. Application and measurement of prestressing force	CONTINUOUS	TMS 602 Article 3.6B
☒	i. Placement of grout and prestressing grout for bonded tendons is in compliance	CONTINUOUS	TMS 602 Article 3.5, 3.6C
☒	j. Placement of AAC masonry units and construction of thin-bed mortar joints	(1)	TMS 602 Article 3.3B.9, 3.3F.1.b
☒	9. Observe preparation of grout specimens, mortar specimens, and/or prisms for every 5,000 square feet of wall	PERIODIC	TMS 602 Article 1.4B.2.a.3, 1.4B.2.b.3, 1.4B.2.c.3, 1.4B3, 1.4B4

(1) Inspection and verification for AAC masonry to be continuous for the first 5,000 sf of wall construction, and periodic for additional construction

SCHEDULE OF SPECIAL INSPECTION SERVICES TABLE 1705.6: SOILS

CHECK IF REQD	MINIMUM VERIFICATIONS AND INSPECTIONS	FREQUENCY	REFERENCED STANDARD
☒	1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	PERIODIC	IBC Table 1705.6
☒	2. Verify excavations are extended to proper depth and have reached proper material.	PERIODIC	IBC Table 1705.6
☒	3. Perform classification and testing of compacted fill materials.	PERIODIC	IBC Table 1705.6
☒	4. During fill placement, verify use of proper materials and procedures in accordance with the provisions of the approved geotechnical report. Verify densities, and lift thickness during placement and compaction of compacted fill.	CONTINUOUS	IBC Table 1705.6
☒	5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.	PERIODIC	IBC Table 1705.6

SCHEDULE OF SPECIAL INSPECTION SERVICES TABLE 1705.11: FABRICATED ITEMS

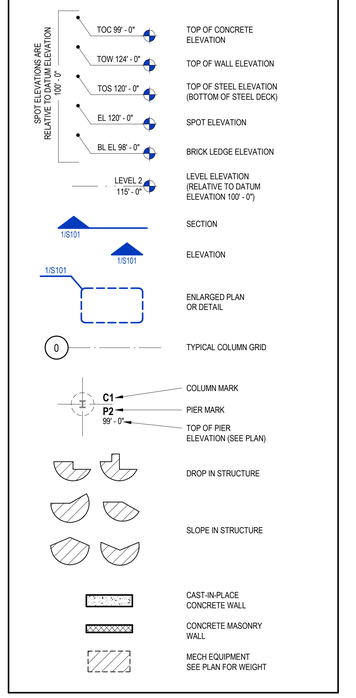
CHECK IF REQD	MINIMUM VERIFICATIONS AND INSPECTIONS	FREQUENCY	REFERENCED STANDARD
☒	1. Where fabrication of structural load-bearing or lateral load-resisting member or assemblies is being conducted on the premises of a fabricator's shop, Special Inspection of the fabricated items shall be required during fabrication. (1)		IBC 1704.2.5

(1) Special inspections during fabrication are not required where the work is done on the premises of a fabricator approved to perform such work without special inspection. Approval shall be based on review of fabricator's written fabrication procedures and quality control manuals that provide a basis for control of materials and workmanship, with periodic auditing of fabrication and quality control practices by an approved agency or the building official.

AB	Anchor Bolt	JST	Joist
ADDL	Additional	JT	Joint
ADJ	Adjacent	K	Kip (1,000 pounds)
AESS	Architectural Exposed Structural Steel	KSI	Kips per Square Inch
		K-FT	Kip-Feet (Moment)
AFF	Above Finished Floor	K/FT	Kips per Foot
AGGR	Aggregate	LBF	Pound-Force
ALT	Alternate	LLBB	Long Leg Back-to-Back
AR	Anchor Rod	LLH	Long Leg Horizontal
ARCH	Architect(ural)	LLV	Long Leg Vertical
ASD	Allowable Strength Design	LRFD	Load and Resistance Factor Design
BB	Bond Beam	LSH	Long Side Horizontal or Long-Slotted Hole(s)
BCX	Bottom Chord Extension		
BL	Building Line or Brick Ledge	LSV	Long Side Vertical
		LT	Left
BLDG	Building	M	Moment
BLK	Block	MATL	Material
BLKG	Blocking	MAX	Maximum
BM	Beam	MECH	Mechanical
BOT, B	Bottom	MEP	Mech/Elec/Plumbing
BRG	Bearing	MFR	Manufacturer
BTWN	Between	MIN	Minimum
C	Channel	MK	Mark
CFMF	Cold-Formed Metal Framing	MTL	Metal
CGS	Center of Gravity of Steel	NIC	Not in Contract
CIP	Cast-in-Place	NO	Number
CJ	Construction Joint or Control Joint	NS	Near Side
		NSG	Non-Shrink Grout
CJP	Complete Joint Penetration	NTS	Not to Scale
CL	Center Line	OF	Outside Face
CMU	Concrete Masonry	OP HD	Opposite Hand
COL	Column	OPNG	Opening
COMP	Compression	P	Pan (form)
CONC	Concrete	P-T	Post-Tensioning
CONN	Connect(ion)	PCC	Precast Concrete
CONSTR	Construction	PEMB	Pre-Engineered Metal Building
CONT	Continuous	PEN	Penetration
COORD	Coordinate	PJP	Partial Joint Penetration
CTR	Center	PI	Plasticity Index
CW	Curtain Wall	PIL	Pilaster
db	Bar Diameter(s)	PL	Plate
DBA	Deformed Bar Anchor	PNL	Panel
DBL	Double	PSF	Pounds Per Square Foot
DEG	Degree(s)	PSI	Pounds Per Square Inch
DET	Detail	PT	Point or Pressure Treated
DIA	Diameter		
DIM	Dimension	R	Radius
DWG	Drawing	RECT	Rectangle(ular)
DWL	Dowel	REF	Refer (to)
EA	Each	REINF	Reinforcing
EF	Each Face	REQD	Required
EJ	Expansion Joint	RT	Right
EL	Elevation	RTU	Rooftop Unit
ELEV	Elevator	SC	Slip-Critical
ENGR	Engineer	SCHED	Schedule
EOD	Edge of Deck	SECT	Section
EOS	Edge of Slab	SHT	Sheet
EQ	Equal	SIM	Similar
EQUIP	Equipment	SOG	Slab on Grade
EW	Each Way	SOV	Slab on Void Cartons
EXP BT	Expansion Bolt	SPA	Space(ing)
EXIST	Existing	SPEC	Specifications
EXT	Exterior	SQ	Square
F	Force (Axial)	SSH	Short-Slotted Hole(s)
FABR	Fabricator	ST	Stirrup(s)
FDN	Foundation	STD	Standard
Fe	Force (Effective)	STIF	Stiffener
FIN	Finish	STL	Steel
FIN FLR, FF	Finish Floor	STRUCT	Structure(al)
FLR	Floor	SUPPT	Support
FRT	Fire Retardant Treated	SYM	Symmetrical
FS	Far Side	T	Top
FTG	Footing	T&B	Top and Bottom
FV	Field Verify	TCX	Top Chord Extension
GA	Gauge, Gage	TEMP	Temperature
GALV	Galvanize(ing)	TOC	Top of Concrete
GC	General Contractor	TOF	Top of Footing
GN	General Notes	TOJ	Top of Joist
GR	Grade	TOP	Top of Pier
GR BM	Grade Beam	TOPCC	Top of Precast Concrete
HORIZ, H	Horizontal	TOS	Top of Steel
HSA	Headed Stud Anchor	TOW	Top of Wall
HSS	Hollow Structural Section	TYP	Typical
HT	Height	ULT	Ultimate (force)
ICF	Insulating Concrete Form	UNO	Unless Noted Otherwise
IF	Inside Face	V	Shear
INFO	Information	VERT, V	Vertical
INT	Interior	WD	Wood
INTERM	Intermediate	WF	Wide Flange
		WP	Working or Work Point

STANDARD ABBREVIATIONS

SYMBOL LEGEND



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LANCE W. MUNGER 98237 REGISTERED PROFESSIONAL ENGINEER 05-28-2025

ISSUED: May 28, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
LVB	LAFP
Designer	Quality Control
ET	LAFP
Proj. Arch.	
KDT	

PROJECT NO.

24-057.00

SHEET TITLE

STRUCTURAL GENERAL NOTES & STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS

SHEET NO.

S1.02

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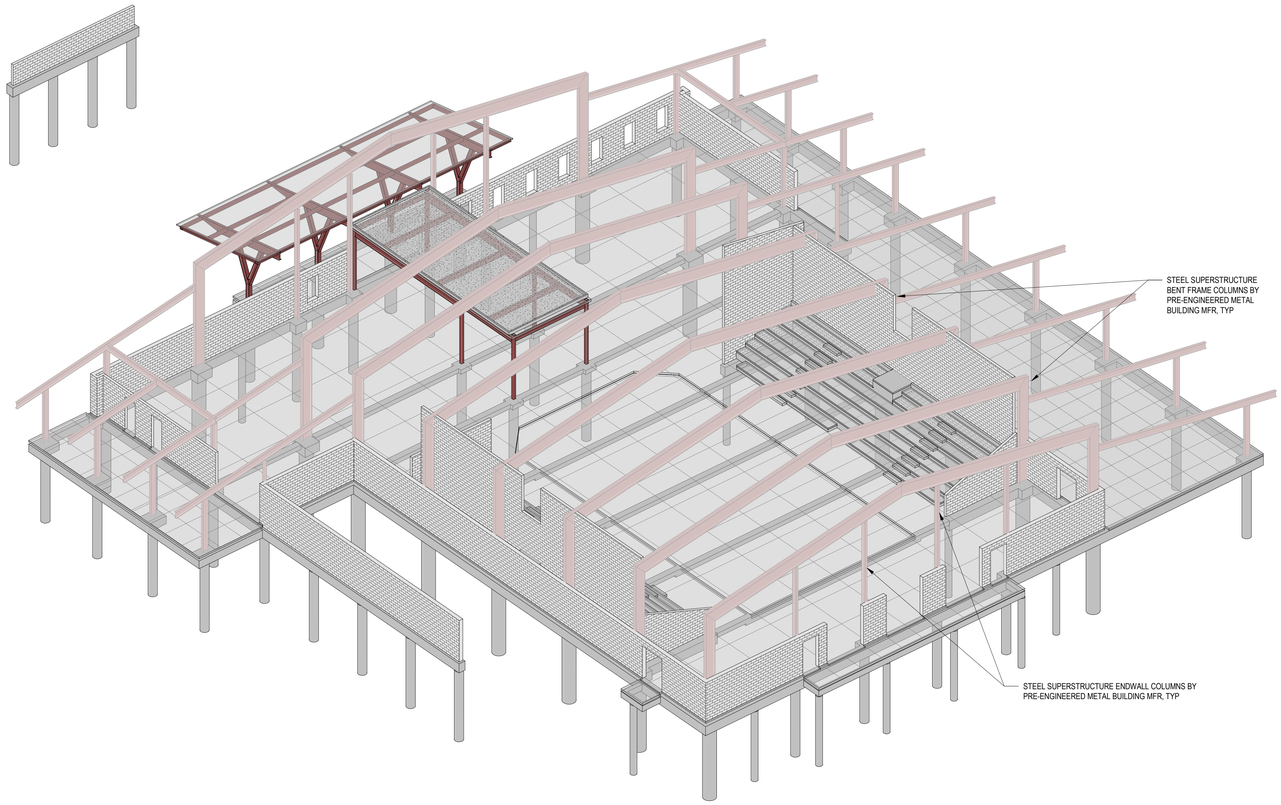
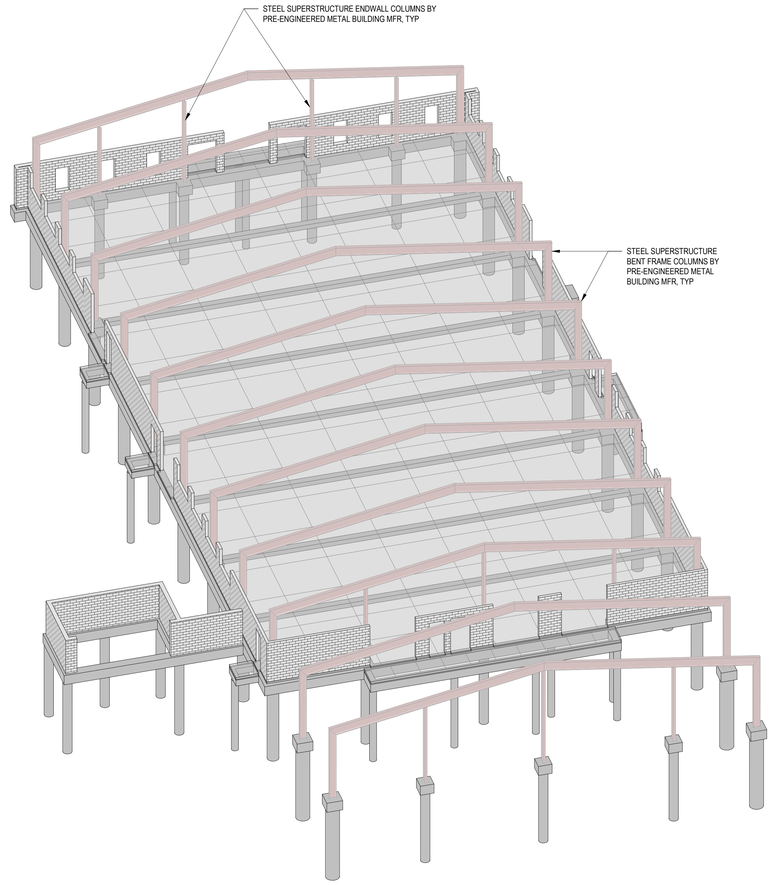
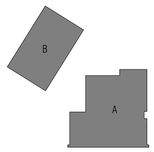


1 AXONOMETRIC VIEW - OVERALL





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ISSUED: May 28, 2025

REVISIONS

Revision No.	Revision Date

Director LVB	Drawn By LAFP
Designer ET	Quality Control LAFP
Proj. Arch. KDT	

PROJECT NO.
24-057.00

SHEET TITLE
OVERALL AXONOMETRIC VIEW

SHEET NO.
S1.11

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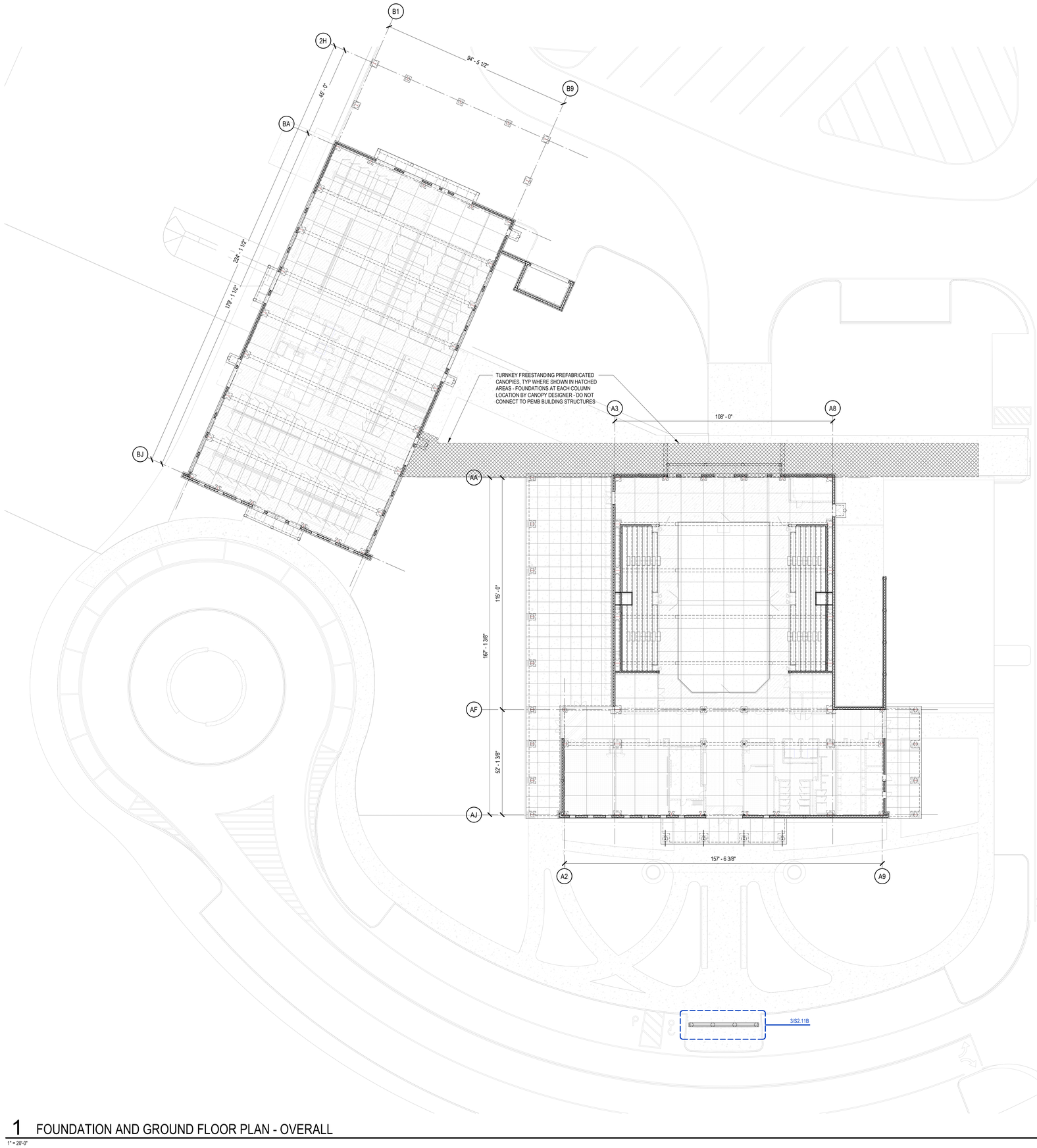
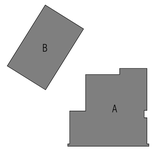


1 FOUNDATION AND GROUND FLOOR PLAN - OVERALL

1" = 20'-0"



KEY PLAN

PLAN NORTH

TRUE NORTH

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05-28-2025

ISSUED: May 28, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
LVB	LAFP
Designer	Quality Control
ET	LAFP
Proj. Arch.	
KDT	

PROJECT NO.

24-057.00

SHEET TITLE

FOUNDATION AND GROUND FLOOR PLAN - OVERALL

SHEET NO.

S2.11

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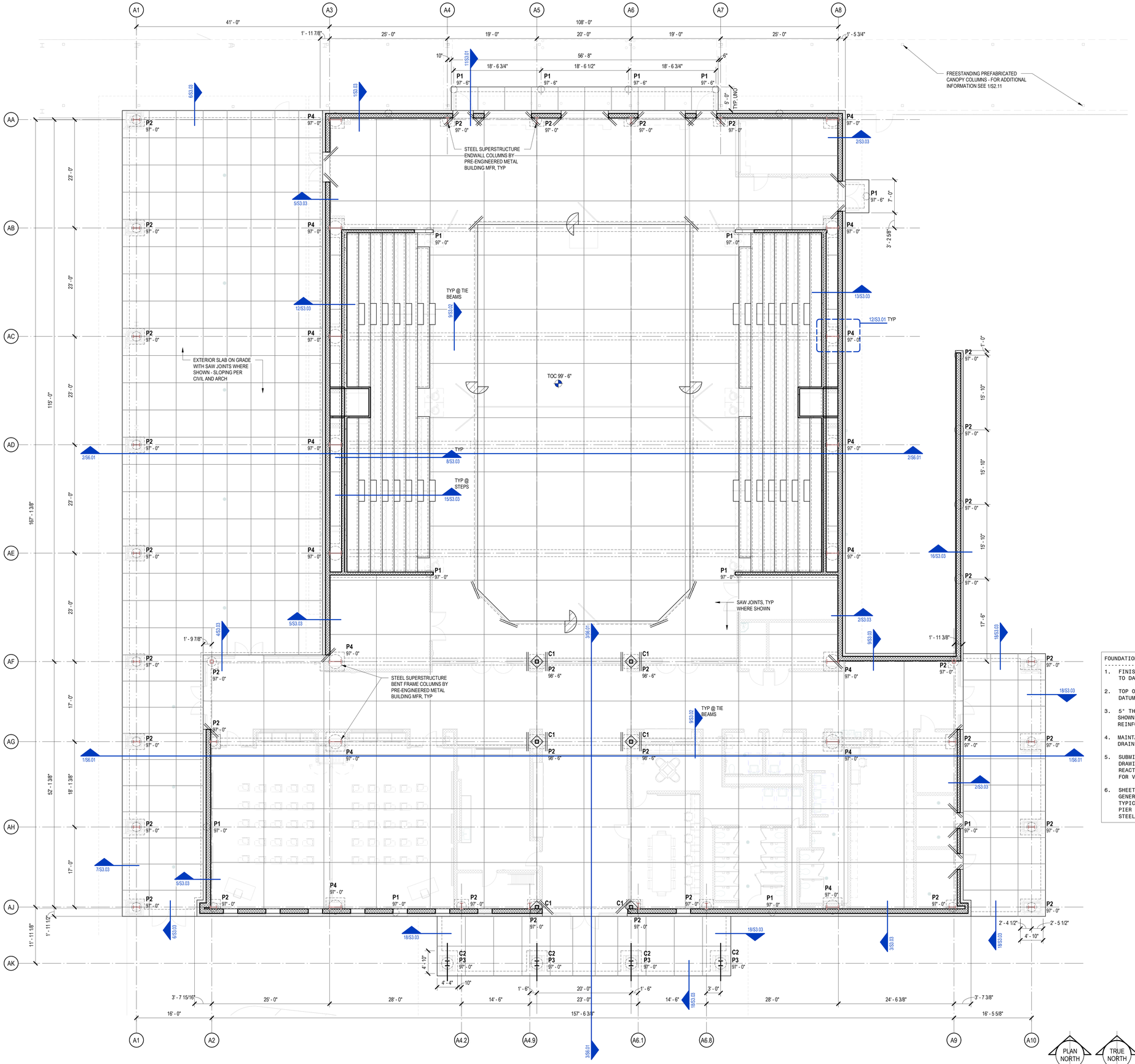

1 FOUNDATION AND GROUND FLOOR PLAN - UNIT A

1/8" = 1'-0"

FOUNDATION AND GROUND FLOOR PLAN NOTES

1. FINISH FLOOR ELEVATION IS 100'-0" (RELATIVE TO DATUM 100'-0").
2. TOP OF PIER ELEVATIONS ARE RELATIVE TO DATUM 100'-0".
3. 5" THICK SLAB-ON-GRADE WITH SAW JOINTS WHERE SHOWN ON PLAN. REFER TO GENERAL NOTES FOR REINFORCING AND ADDITIONAL SLAB INFORMATION.
4. MAINTAIN CONSTANT SLAB THICKNESS WHERE SLOPES TO DRAIN EXIST. SEE MEP FOR LOCATION OF FLOOR DRAINS.
5. SUBMIT FINAL, SEALED, PRE-ENGINEERED METAL BUILDING DRAWINGS AND CALCULATIONS (INCLUDING FOUNDATION REACTIONS) TO AOR AND EOR PRIOR TO CONSTRUCTION FOR VERIFICATION OF FOUNDATION DESIGN.
6. SHEET INDEX:

GENERAL NOTES	S1.01+
TYPICAL DETAILS	S3.01+, S4.01, S5.01
PIER SCHEDULE	S3.01
STEEL COLUMN SCHEDULE	S5.01

PLAN NORTH

TRUE NORTH

KEY PLAN

VLK

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LAFP PROJ. NO. 24149 FIRM REG. NO. F-537

LANCE W. MUNGER 98227 REGISTERED PROFESSIONAL ENGINEER 05-28-2025

ISSUED: May 28, 2025

REVISIONS

Revision No.	Revision Date

Director LVB	Drawn By LAFP
Designer ET	Quality Control LAFP
Proj. Arch. KDT	

PROJECT NO.

24-057.00

SHEET TITLE

FOUNDATION AND GROUND FLOOR PLAN - UNIT A

SHEET NO.

S2.11A

EMS ISD AGRICULTURAL SCIENCE

EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

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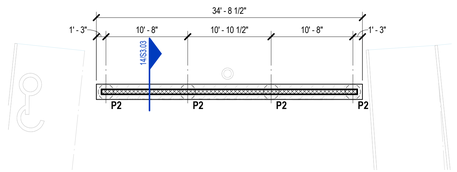
MONUMENT SIGN FOUNDATION PLAN NOTES

1. SEE CIVIL AND ARCHITECTURAL DRAWINGS FOR LOCATION OF MONUMENT SIGN ON PLAN.

2. COORDINATE TOP OF PIER ELEVATIONS WITH CIVIL GRADING PLANS AND SECTION 14/S3.03.



3 FOUNDATION PLAN - MONUMENT SIGN

1/8" = 1'-0"

FOUNDATION AND GROUND FLOOR PLAN NOTES

1. FINISH FLOOR ELEVATION IS 100'-0" (RELATIVE TO DATUM 100'-0").

2. TOP OF PIER ELEVATIONS ARE RELATIVE TO DATUM 100'-0".

3. 5" THICK SLAB-ON-GRADE WITH SAW JOINTS WHERE SHOWN ON PLAN. REFER TO GENERAL NOTES FOR REINFORCING AND ADDITIONAL SLAB INFORMATION.

4. MAINTAIN CONSTANT SLAB THICKNESS WHERE SLOPES TO DRAIN EXIST. SEE MEP FOR LOCATION OF FLOOR DRAINS.

5. SUBMIT FINAL, SEALED, PRE-ENGINEERED METAL BUILDING DRAWINGS AND CALCULATIONS (INCLUDING FOUNDATION REACTIONS) TO AOR AND EOR PRIOR TO CONSTRUCTION FOR VERIFICATION OF FOUNDATION DESIGN.

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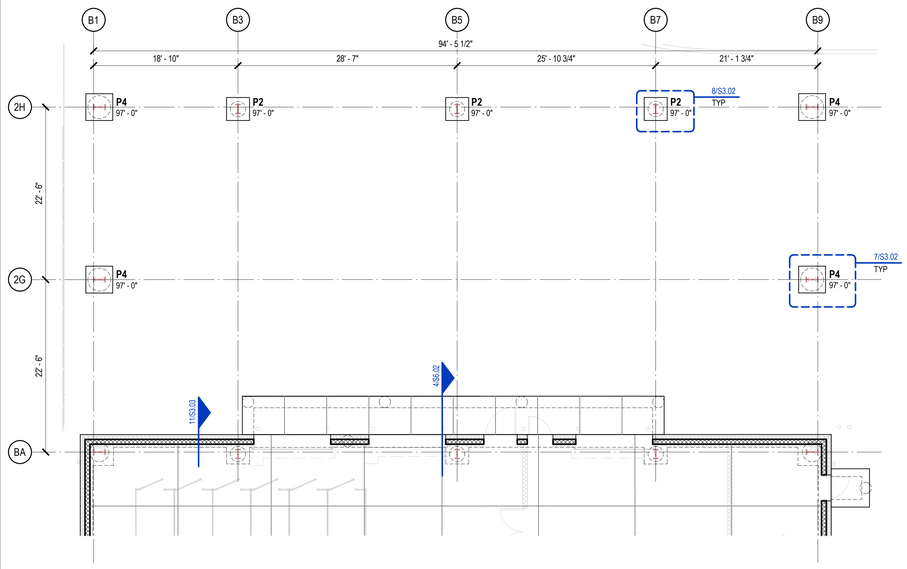
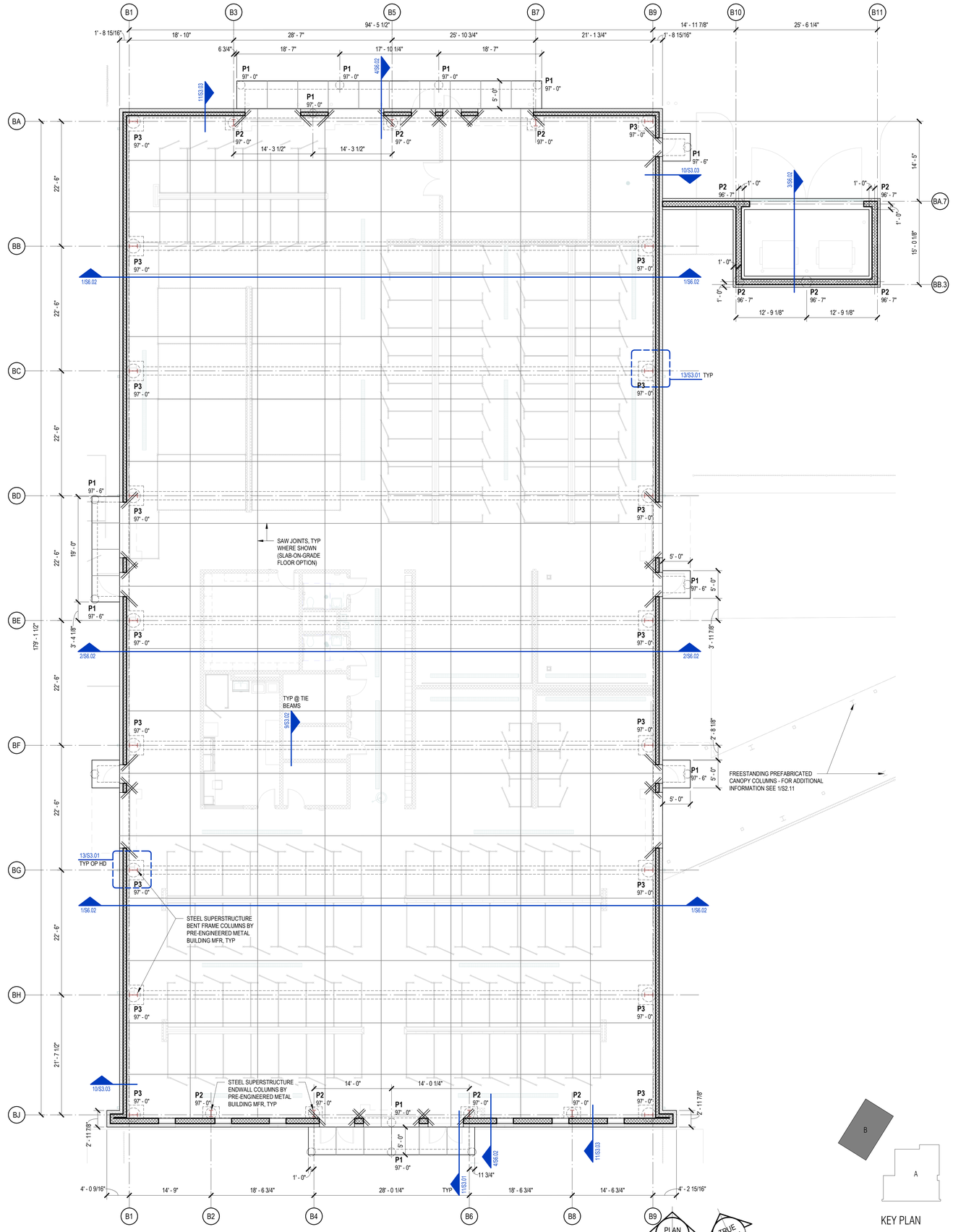


2 FOUNDATION AND GROUND FLOOR PLAN - UNIT B

1/8" = 1'-0"



1 FOUNDATION AND GROUND FLOOR PLAN - UNIT B

1/8" = 1'-0"

KEY PLAN

PLAN NORTH

TRUE NORTH

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FORT WORTH, TEXAS

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STATE OF TEXAS
LANCE W. BLAGRAVE
99237
REGISTERED PROFESSIONAL ENGINEER
05-28-2025

ISSUED: May 28, 2025

REVISIONS

Revision No.	Revision Date

Director LVB	Drawn By LAFP
Designer ET	Quality Control LAFP
Proj. Arch. KDT	

PROJECT NO.

24-057.00

SHEET TITLE

FOUNDATION AND GROUND FLOOR PLAN - UNIT B

SHEET NO.

S2.11B

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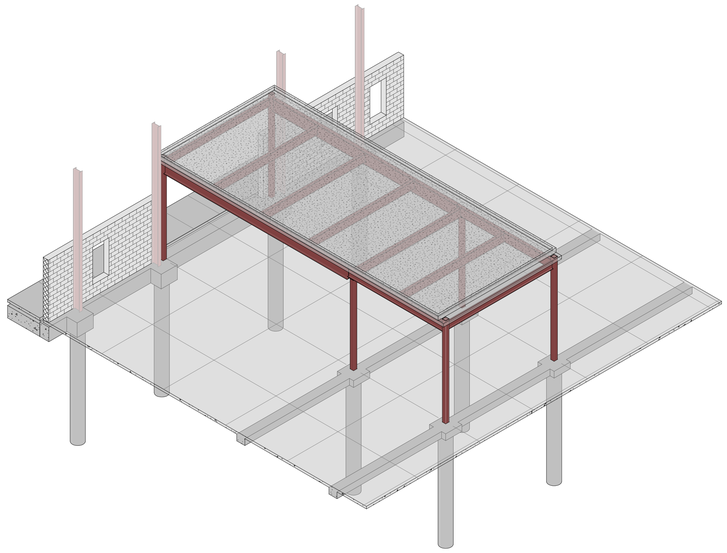
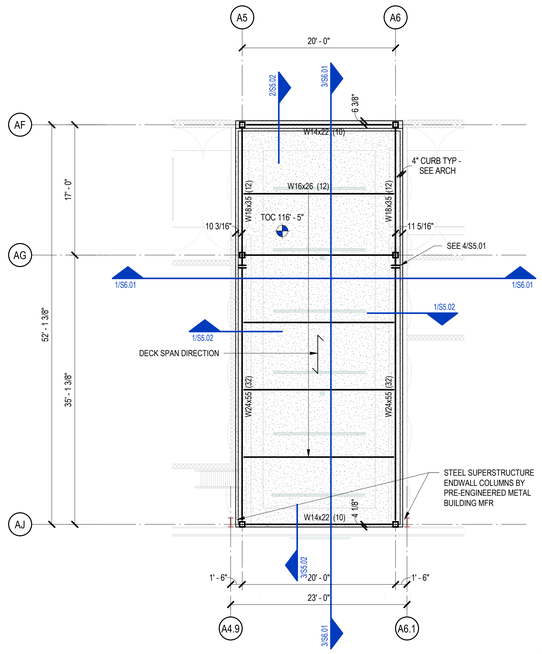
3D VIEWS INCLUDED IN THE STRUCTURAL DRAWINGS ARE PROVIDED FOR REFERENCE ONLY AND DO NOT SUPERSEDE THE INFORMATION PRESENTED IN THE 2D PLANS AND DETAILS.



2 AXONOMETRIC VIEW - MEZZANINE



FLOOR FRAMING PLAN NOTES

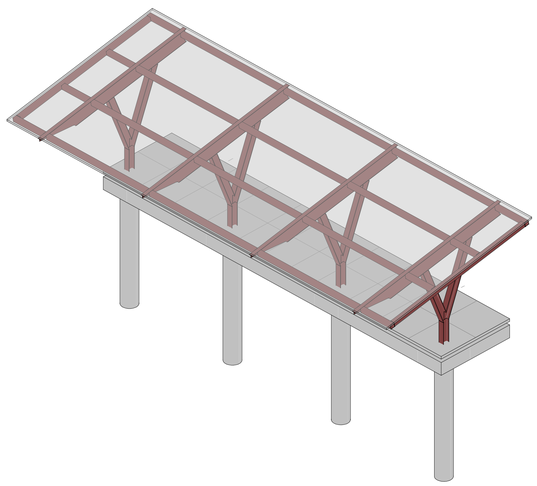
1. FINISH FLOOR ELEVATION (TOC) IS 116'-5" (WITHOUT TOPPING SLAB) RELATIVE TO DATUM 100'-0". WHERE TOPPING SLABS ARE SHOWN ON PLAN, TOP OF CONCRETE IS TOP OF STRUCTURED SLAB.REFER TO STRUCTURAL GENERAL NOTES FOR ACTUAL ELEVATIONS.
2. TYPICAL FLOOR SLAB IS TYPE CA SLAB ON COMPOSITE METAL DECK WITH OVERALL THICKNESS EQUAL TO 6 1/2" (3 1/2" CONCRETE OVER 3" DECK). SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.
3. UNLESS SHOWN OTHERWISE, STEEL BEAMS ARE CENTERED ON AND EQUALLY SPACED BETWEEN COLUMN CENTERLINES.
4. NUMBER OF SHEAR STUDS IS NOTED IN PARENTHESES ( ) ADJACENT TO BEAM SIZES. SEE TYPICAL DETAILS FOR LAYOUT REQUIREMENTS OF STUDS.
5. SHEET INDEX:

GENERAL NOTES	- S1.01+
TYPICAL DETAILS	- S3.01+, S4.01+, S5.01+
STEEL COLUMN SCHEDULE	- S5.01+

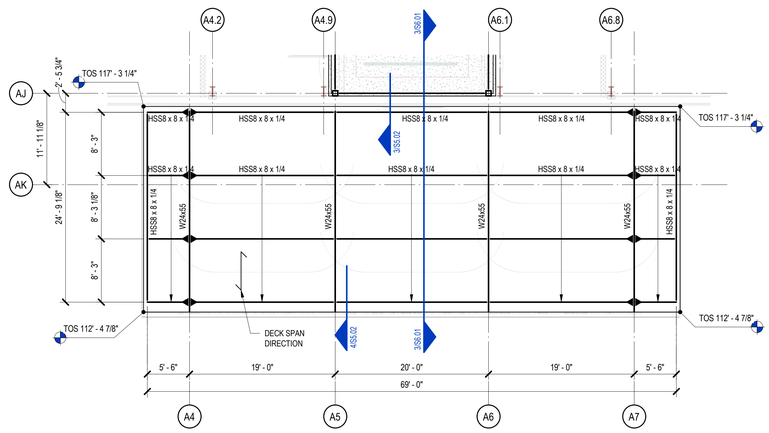
PLAN NORTH
TRUE NORTH

1 MEZZANINE LEVEL FRAMING PLAN - UNIT A

1/8" = 1'-0"



4 AXONOMETRIC VIEW - ENTRY CANOPY



ENTRY CANOPY PLAN NOTES

1. TOP OF STEEL (BOTTOM OF ROOF DECK) ELEVATIONS INDICATED ON PLAN ARE RELATIVE TO DATUM 100'-0". REFER TO STRUCTURAL GENERAL NOTES FOR ACTUAL ELEVATIONS.
2. TYPICAL ROOF DECK IS TYPE 3N (3" DEEP) WITH CONNECTIONS AS SHOWN IN THE STRUCTURAL GENERAL NOTES.
3. UNLESS SHOWN OTHERWISE, STEEL BEAMS ARE CENTERED ON AND EQUALLY SPACED BETWEEN COLUMN CENTERLINES.
4. SHEET INDEX:

GENERAL NOTES	- S1.01+
TYPICAL DETAILS	- S3.01+, S4.01+, S5.01+
STEEL COLUMN SCHEDULE	- S5.01+

PLAN NORTH
TRUE NORTH

3 ENTRY CANOPY FRAMING PLAN - UNIT A

1/8" = 1'-0"

B
A

KEY PLAN

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LANCE W. WILMORE
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05-28-2025

ISSUED: May 28, 2025

REVISIONS

Revision No.	Revision Date

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Designer ET	Quality Control LAFP
Proj. Arch. KDT	

PROJECT NO.
24-057.00

SHEET TITLE
MEZZANINE AND ROOF LEVEL FRAMING PLANS - UNIT A

SHEET NO.
S2.12A

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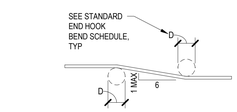
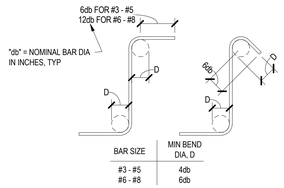
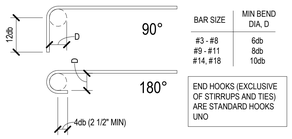


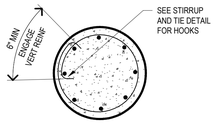
OFFSET BARS



STIRRUPS AND TIES



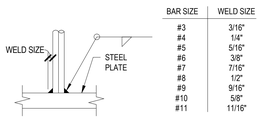
STANDARD END HOOKS



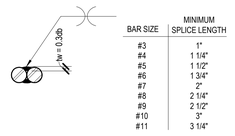
ROUND STIRRUPS AND TIES

9 REBAR BENDS AND HOOKS TYPICAL DETAIL

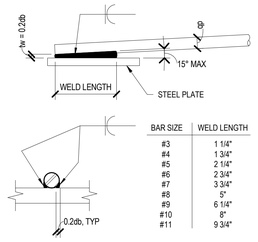
NO SCALE TD03201



BAR PERPENDICULAR TO PLATE



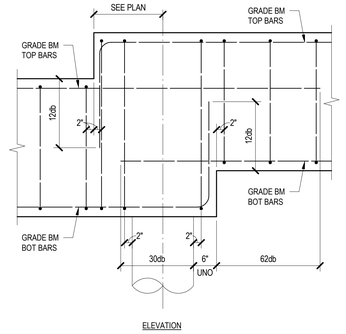
BAR SPLICE



BAR PARALLEL TO PLATE

10 REBAR WELDING TYPICAL DETAIL

NO SCALE TD03202

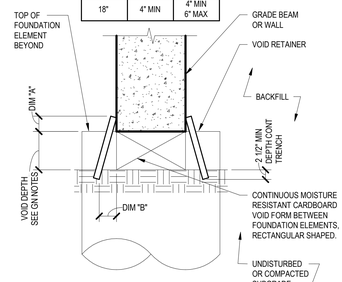


ELEVATION

7 STEP IN GRADE BEAM TYPICAL DETAIL

NO SCALE TD03144

VOID DEPTH	DIM "A"	DIM "B"
6" - 8"	3" MIN	3" MIN 5" MAX
10" - 12"	4" MIN	4" MIN 6" MAX
18"	4" MIN	4" MIN 6" MAX

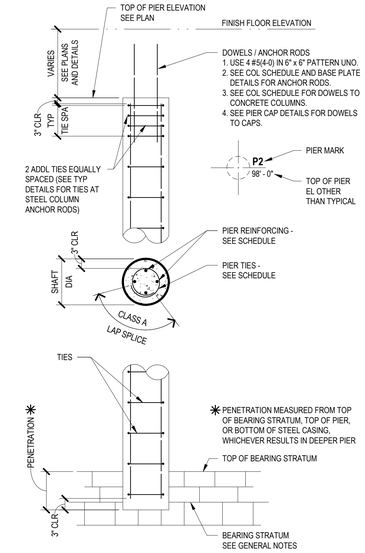


3 VOID BOX - BM OR WALL TYPICAL DETAIL

NO SCALE TD02526

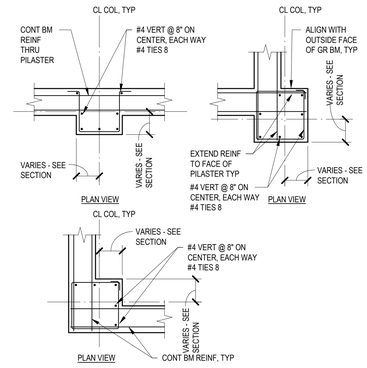
STRAIGHT SHAFT DRILLED PIER SCHEDULE

PIER MARK	SHAFT DIAMETER	VERTICAL REINF	TIES	MINIMUM PENETRATION	MINIMUM TOTAL PIER LENGTH	DESIGN CAPACITY (COMPRESSION) - KIPS
P1	18"	4 #6	#3 @ 18	7' - 0"	6' - 0"	95
P2	24"	5 #7	#3 @ 10	8' - 0"	8' - 0"	179
P3	30"	6 #8	#4 @ 12	8' - 0"	10' - 0"	253
P4	36"	7 #9	#4 @ 12	8' - 0"	12' - 0"	339



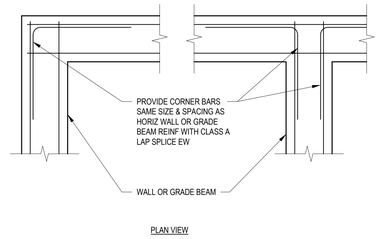
1 STRAIGHT SHAFT PIER TYPICAL DETAIL

NO SCALE TD02110



8 PILASTER REINFORCING TYPICAL DETAIL

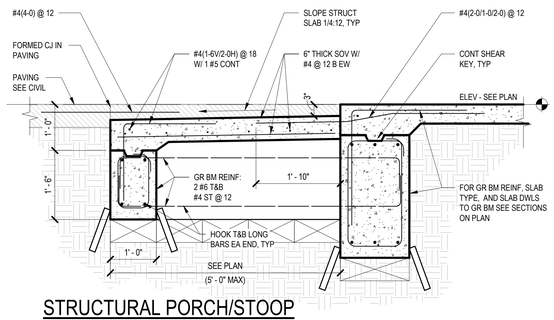
NO SCALE TD03150



PLAN VIEW

4 CORNER BARS TYPICAL DETAIL

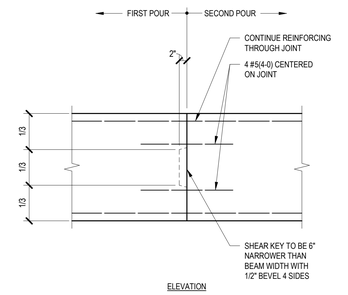
NO SCALE TD03026



STRUCTURAL PORCH/STOOP

11 TYPICAL DETAIL

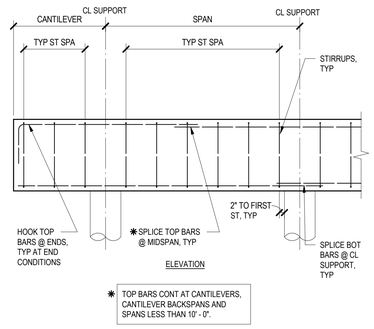
NO SCALE STRUCTURAL PORCH



ELEVATION

5 GRADE BEAM CONSTR JOINT TYPICAL DETAIL

NO SCALE TD03140

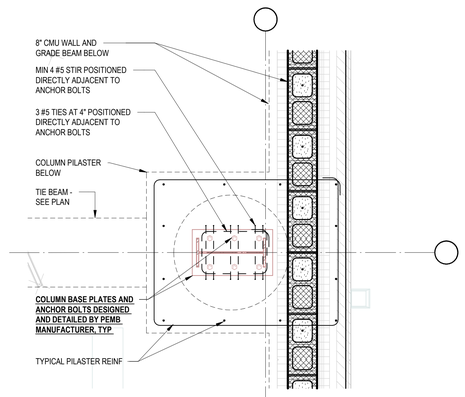


ELEVATION

✱ TOP BARS CONT AT CANTILEVERS, CANTILEVER BACKSPANS AND SPANS LESS THAN 10' - 0".

6 GRADE BEAM REINF TYPICAL DETAIL

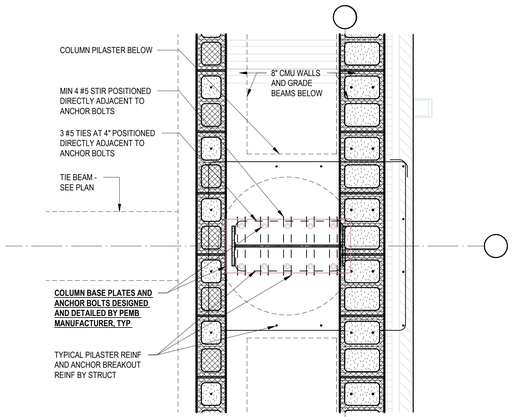
NO SCALE TD03141



PLAN VIEW

13 UNIT B - TYPICAL BENT COLUMN BASE CONNECTION

3/4" = 1'-0"



PLAN VIEW

12 UNIT A -TYPICAL BENT COLUMN BASE CONNECTION

3/4" = 1'-0"

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Proj. Arch. KDT	

PROJECT NO.

24-057.00

SHEET TITLE

TYPICAL CONCRETE DETAILS

SHEET NO.

S3.01

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LAFP PROJ. NO. 24149 FIRM REG. NO. F-537

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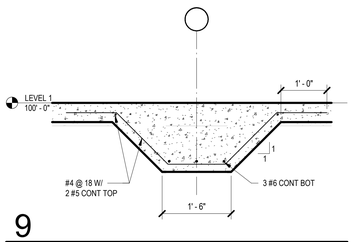
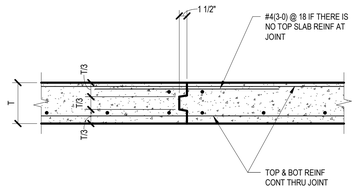


9

3/4" = 1'-0"

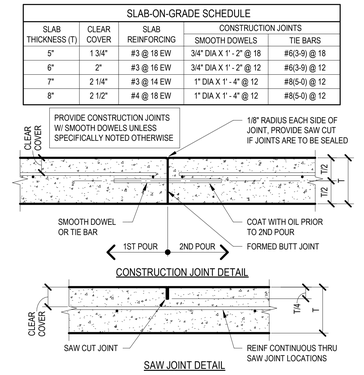


STRUCT NON-POST-TENSIONED SLAB CONSTRUCTION JOINT TYPICAL DETAIL

5

NO SCALE TD03342

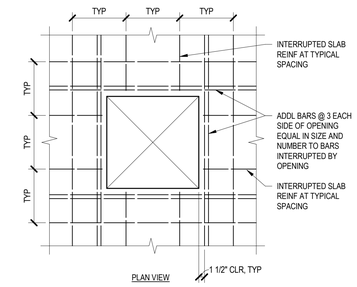
SLAB-ON-GRADE SCHEDULE				
SLAB THICKNESS (T)	CLEAR COVER	SLAB REINFORCING	CONSTRUCTION JOINTS	
			SMOOTH DOWELS	TIE BARS
5"	1 3/4"	#3 @ 18 EW	3/4" DIA X 1' - 2" @ 18	#6(3-9) @ 18
6"	2"	#3 @ 16 EW	3/4" DIA X 1' - 2" @ 12	#6(3-9) @ 12
7"	2 1/4"	#3 @ 14 EW	1" DIA X 1' - 4" @ 12	#8(5-0) @ 12
8"	2 1/2"	#4 @ 18 EW	1" DIA X 1' - 4" @ 12	#8(5-0) @ 12



SLAB ON GRADE TYPICAL DETAIL

1

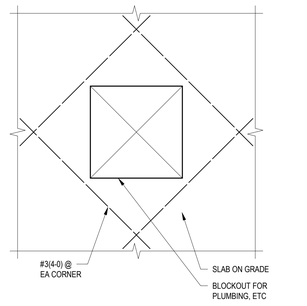
NO SCALE TD03101



SLAB OPENING TYPICAL DETAIL

6

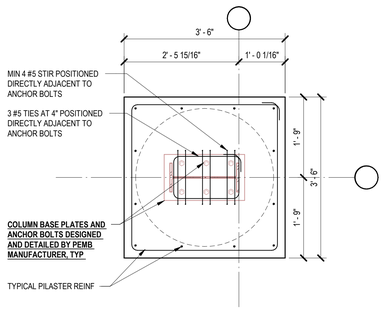
NO SCALE TD03343



REINFORCING AT SLAB ON GRADE BLOCKOUT TYPICAL DETAIL

2

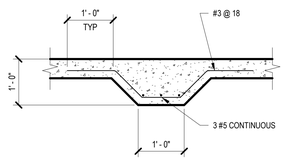
NO SCALE TD03042



PLAN VIEW

7

3/4" = 1'-0"



THICKENED SLAB TYPICAL DETAIL

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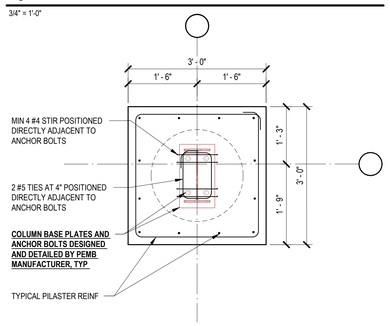

PLAN VIEW

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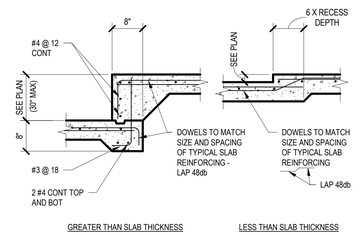

SLAB ON GRADE RECESSES TYPICAL DETAIL

4

NO SCALE TD03103

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REVISIONS

Revision No.	Revision Date

Director	Drawn By
LVB	LAFP
Designer	Quality Control
ET	LAFP
Proj. Arch.	
KDT	

PROJECT NO.

24-057.00

SHEET TITLE

TYPICAL CONCRETE DETAILS

SHEET NO.

S3.02

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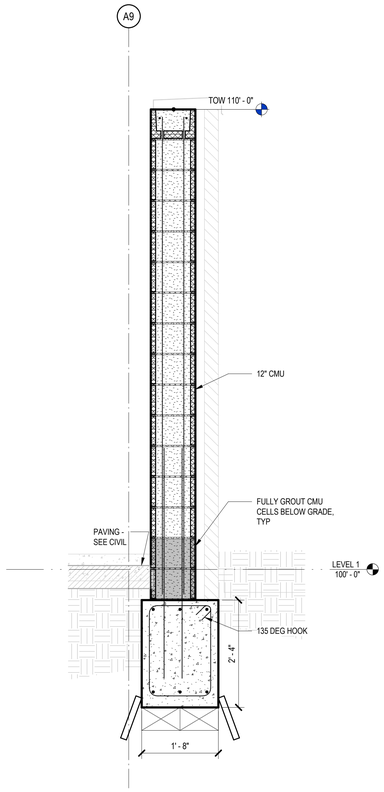

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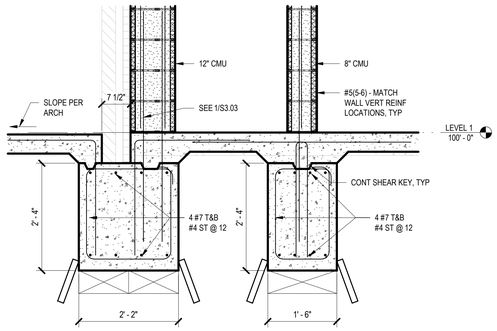

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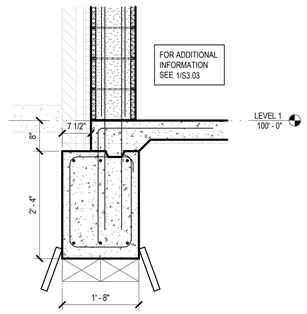

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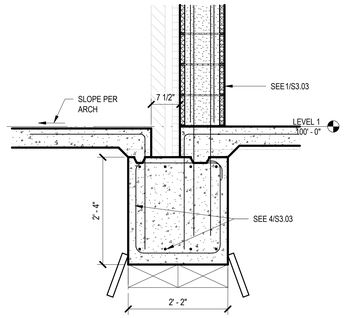

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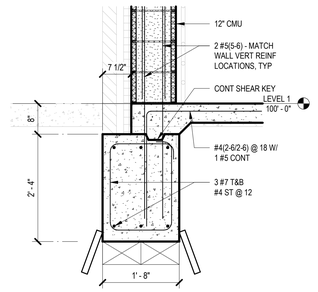

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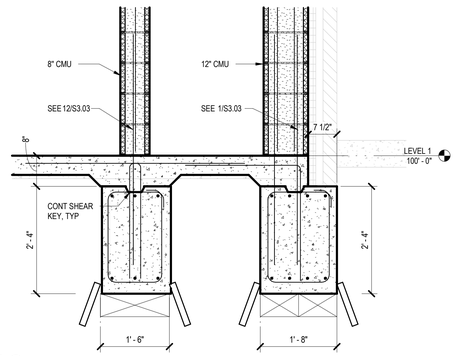

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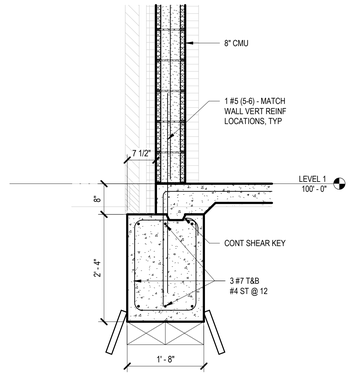

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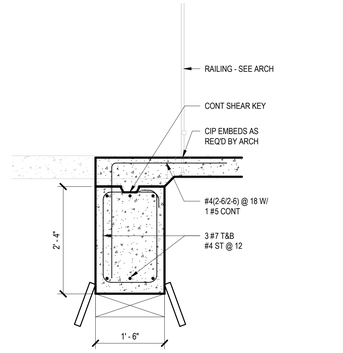

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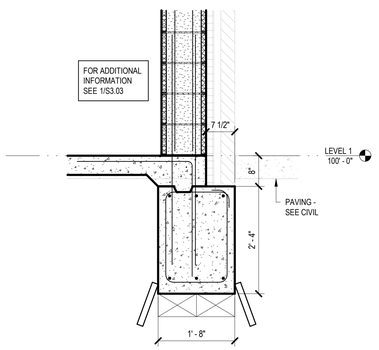

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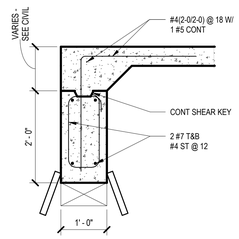

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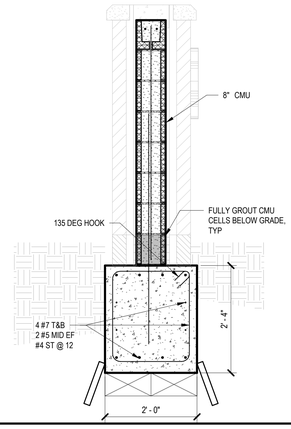

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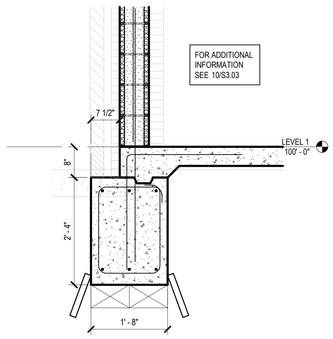

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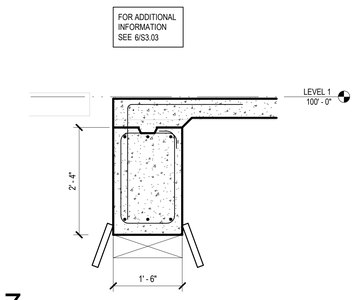

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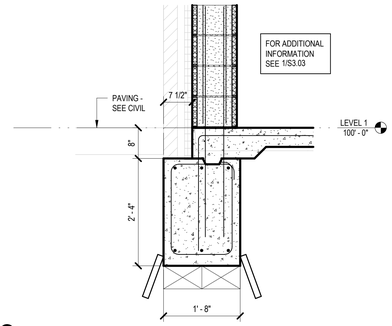

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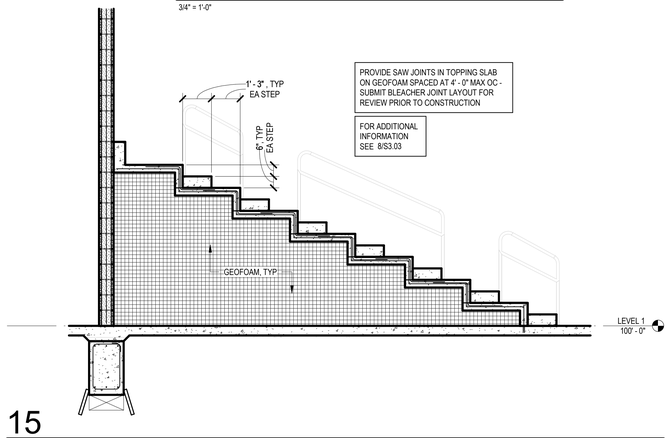

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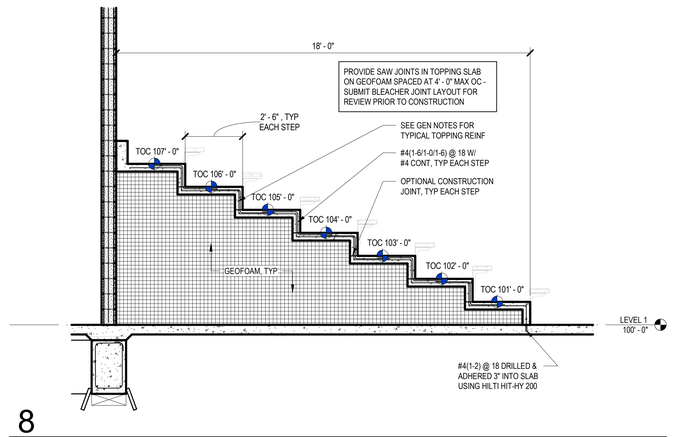

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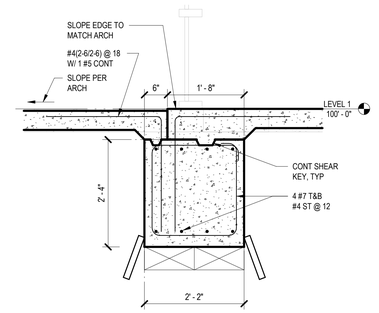

4
3/4" = 1'-0"

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Proj. Arch.	
KDT	

PROJECT NO.
24-057.00

SHEET TITLE
CONCRETE DETAILS

SHEET NO.
S3.03

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NOTES:
1. SEE CMU LINTEL SCHEDULE FOR REINFORCEMENT ABOVE OPENINGS.
2. SEE TABLE FOR CMU SILL BEAM REINFORCEMENT BELOW OPENINGS.
3. SEE TABLE FOR CMU JAMBS ADJACENT TO TYPICAL OPENINGS UNLESS NOTED OTHERWISE. JAMB REINFORCEMENT IS REQUIRED FOR OPENINGS GREATER THAN 16" IN WIDTH. REINFORCE EACH CELL WITHIN JAMB WITH CONTINUOUS VERTICAL BARS. BAR SIZE AND QUANTITY PER CELL TO MATCH VERTICAL BAR CONFIGURATION SPECIFIED IN THE REMAINDER OF THE WALL SECTION.
4. SEE RELATED WALL SECTIONS AND ELEVATIONS FOR SIZE AND LOCATIONS OF BOND BEAMS
5. SEE LAP SPLICE SCHEDULE FOR MINIMUM REQUIRED SPLICE LENGTHS.
6. EXTEND VERTICAL REINFORCEMENT TO TOP OF WALL FOR OPENINGS IN AN EXTERIOR WALL. EXTEND VERTICAL REINFORCEMENT TO TOP OF WALL OR A MINIMUM OF LAP SPLICE LENGTH PER SCHEDULE PAST FLOOR LEVEL ABOVE FOR OPENINGS IN AN INTERIOR WALL.
7. TYPICAL WALL REINFORCEMENT IS NOT SHOWN FOR CLARITY. DO NOT EXCEED THE MAXIMUM SPACING REQUIREMENTS BETWEEN ANY TWO ADJACENT GROUTED AND REINFORCED VERTICAL OR HORIZONTAL CELLS AS SHOWN IN GENERAL NOTES, DETAILS, OR ELEVATIONS.
8. MISCELLANEOUS MEP OPENINGS 16" WIDE OR SMALLER DO NOT REQUIRE JAMB OR LINTEL REINFORCEMENT.

CMU SILL REINFORCING SCHEDULE

	MAX OPNG WIDTH	DEPTH	REINF
6" CMU	6' - 8"	8"	1 #4
	8' - 8"	16"	1 #4 T&B
8" CMU	8' - 8"	8"	2 #4
	12' - 8"	16"	2 #5 T&B
12" CMU	10' - 8"	8"	2 #4
	16' - 0"	16"	2 #5 T&B

CMU JAMB SCHEDULE

	MAX OPNG WIDTH	INTERIOR WALL JAMB WIDTH	EXTERIOR WALL JAMB WIDTH
	3' - 4"	8"	8"
	6' - 8"	8"	16"
	10' - 0"	16"	24"
	12' - 8"	16"	24"
	16' - 0"	16"	32"

9 CMU WALL OPENING REINFORCING TYPICAL DETAIL
NO SCALE TD04120

CMU REINFORCEMENT LAYOUT NOTES:
1. LOCATE VERTICAL OR HORIZONTAL REINFORCEMENT AT LEAST 1/2" FROM CMU SHELL TO ALLOW FOR PROPER GROUT CONSOLIDATION.
2. THESE BOND BEAMS APPLY TO WALLS WHERE BOND BEAMS ARE NOT SPECIFICALLY REFERENCED. SEE SECTIONS & DETAILS FOR SPECIAL BOND BEAMS THAT ARE REQUIRED.
3. CONSTRUCT BOTTOM COURSE OF A BOND BEAM USING SOLID BOTTOM, TROUGH-STYLE MASONRY UNITS, UNO.

MASONRY SPLICE SCHEDULE - GRADE 60

f'm	1900 - 2000 PSI		2500 PSI	
BAR SIZE	HORIZ OR EDGE VERT	CENTER VERT	HORIZ OR EDGE VERT	CENTER VERT
#4	24"	16"	20"	14"
#5	36"	24"	32"	22"
#6	54"	45"	54"	40"
#7	64"	62"	64"	54"
#8	72"	72"	72"	72"

NOTES:
1. SPLICE LENGTHS GIVEN ARE FOR GRADE 60 REINFORCING BARS.
2. USE LONGEST LENGTH WHEN SPLICING BARS OF DIFFERENT SIZE.
3. INCREASE SPLICE LENGTH OF EPOXY-COATED REINFORCEMENT 50% OVER TABLE VALUES, UP TO A MAXIMUM OF 96 BAR DIAMETERS
4. SEE PLAN VIEWS FOR DEFINITION OF HORIZ, EDGE VERT, AND CENTER VERT BARS.

1 CMU REINFORCEMENT LAYOUT, BOND BEAMS, AND SPLICE SCHED TYPICAL DETAIL
NO SCALE TD04100

7 CMU CONTROL JOINT TYPICAL DETAIL
NO SCALE TD04140

2 CMU LINTELS TYPICAL DETAIL
NO SCALE TD04101

CMU LINTEL SCHEDULE

WALL THICKNESS	MAX OPENING	LINTEL DEPTH	TOP REINF	BOT REINF
6"	3' - 4"	8"	NONE	1 #4
	6' - 8"	16"	1 #4	1 #4
	8' - 8"	24"	1 #4	1 #4
8"	3' - 4"	8"	NONE	2 #4
	6' - 8"	16"	2 #4	2 #4
	10' - 0"	24"	2 #4	2 #4
	12' - 8"	32"	2 #5	2 #5
12"	3' - 4"	8"	NONE	2 #4
	6' - 8"	16"	2 #4	2 #4
	10' - 0"	24"	2 #4	2 #4
	12' - 8"	24"	2 #5	2 #5
	16' - 0"	32"	2 #6	2 #6

NOTES:
1. CONSTRUCT BOTTOM COURSE OF LINTEL OF SOLID-BOTTOM, TROUGH-STYLE BLOCKS, UNLESS OTHERWISE NOTED.
2. A CMU LINTEL IS REQUIRED FOR OPENINGS GREATER THAN 16" IN WIDTH.
3. LINTEL REINFORCEMENT MAY NOT BE LAP SPLICED ABOVE AN OPENING.
4. CONTROL JOINTS ARE NOT PERMITTED TO OCCUR WITHIN LINTEL REINFORCEMENT.
5. SEE CMU WALL REINFORCING DETAIL FOR VERTICAL REINFORCEMENT PLACEMENT AT JAMBS.
6. EXTEND HORIZONTAL REINFORCEMENT 24" OR 40 BAR DIAMETERS BEYOND THE FACE OF OPENING. PROVIDE STD HOOK AT END OF BAR IF HORIZONTAL EXTENSION IS NOT POSSIBLE.
7. PRECAST CONCRETE LINTELS OF THE SAME SIZE AND LENGTH MAY BE SUBSTITUTED EXCEPT PROVIDE TOP BARS EQUAL TO SCHEDULED BOTTOM BARS.

10 CMU ANCHOR BOLT INSTALLATION TYPICAL DETAIL
NO SCALE CMU ANCHOR INSTALLATION

BOLT DIA	E
1/2"	4"
5/8"	4"
3/4"	5"
7/8"	6"

8 MASONRY ANCHOR BOLTS TYPICAL DETAIL
NO SCALE TD04105

DO NOT FORM GROUT KEY WITHIN A BEAM OR LINTEL. DO NOT INSTALL HORIZONTAL CONSTRUCTION JOINT WITHIN LAP SPLICE.

5 MASONRY CONSTRUCTION JOINT TYPICAL DETAIL
NO SCALE TD04130

BAR	STEP LENGTH
#4	4' - 0"
#5	4' - 0"
#6	5' - 4"

3 STEP IN BOND BEAM TYPICAL DETAIL
NO SCALE TD04103

MASONRY WALL BRACING NOTES:
1. CLEAR GAPS INDICATED BETWEEN TOP OF WALLS AND STRUCTURE ARE TO BE FILLED (COMPRESSIBLE FILLER, ETC.) AS INDICATED ON ARCHITECTURAL DRAWINGS.
2. WHERE WALLS ARE ORIENTED SKEWED TO FRAMING, USE PARALLEL AND PERPENDICULAR DETAILS IN COMBINATION TO PROVIDE BRACING CONNECTIONS AT MAXIMUM SPACING INDICATED.
3. AT FREE ENDS OF WALLS, LOCATE FIRST BRACE WITHIN 5 FT OF END OF WALL.
4. CORNERS AND TEES WITH MINIMUM 5 FT LONG INTERSECTING WALLS CAN BE CONSIDERED BRACED POINTS. HORIZONTAL RUNS OF WALL 10 FT LONG AND LESS WITH INTERSECTIONS ON BOTH ENDS DO NOT REQUIRE BRACING.
5. REFER TO SHEET ARCHITECTURAL DRAWINGS FOR LAYOUT AND DEFINITION OF WALLS THAT EXTEND TO DECK.

WALL EXTENDING TO DECK PERPENDICULAR TO BEAMS OR JOISTS

WALL EXTENDING TO DECK PARALLEL TO BEAMS OR JOISTS

6 CMU WALL BRACING TYPICAL DETAIL
NO SCALE

4 BOND BEAM INTERSECTIONS TYPICAL DETAIL
NO SCALE TD04104

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PROJECT NO.
24-057.00

SHEET TITLE
TYPICAL MASONRY DETAILS

SHEET NO.
S4.01

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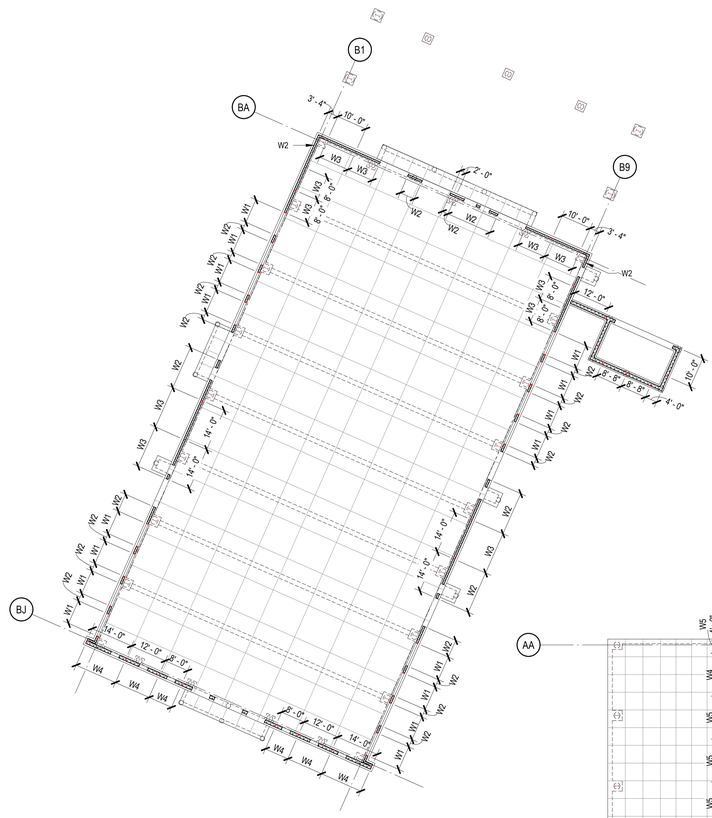
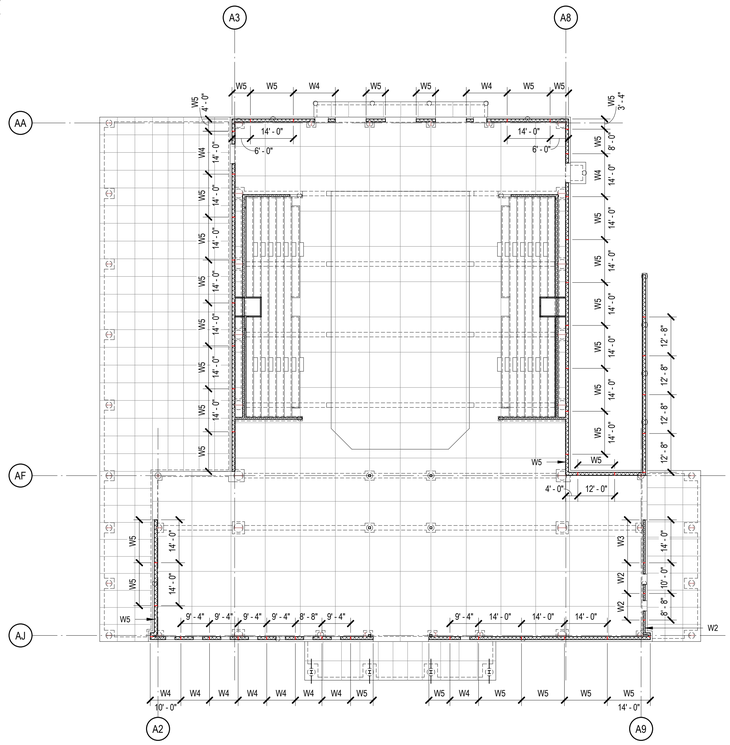
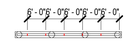




CMU WALL SCHEDULE				
WALL TYPE	NOMINAL WALL THICKNESS	GROUTED CELL SPACING	VERTICAL REINFORCING	TOP OF WALL
W1	8"	16"	1 #5 @ 16"	106' - 0"
W2	8"	8"	1 #5 @ 8"	110' - 0"
W3	8"	16"	1 #5 @ 16"	110' - 0"
W4	12"	16"	2 #5 @ 16"	110' - 0"
W5	12"	24"	2 #5 @ 24"	110' - 0"

NOTES:
1. SEE GENERAL NOTES AND TYPICAL DETAILS FOR MASONRY REINFORCING AT WALL ENDS, CORNERS, CONTROL JOINTS, AND AROUND OPENINGS.
2. SEE GENERAL NOTES AND DETAILS FOR LOCATIONS OF ADDITIONAL REINFORCED BOND BEAMS AND GROUTED CELLS AT ROOFS, FLOORS, TOP AND BOTTOM OF WALLS, AND OTHER LOCATIONS AS REQUIRED.
3. PROVIDE JAMB LENGTH AND REINFORCING AT RETURN WALLS. HOOK T&B LINTEL REINF AT WALL END.



1 CMU WALL KEYPLAN

1" = 20'-0"

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PROJECT NO.
24-057.00

SHEET TITLE
MASONRY DETAILS

SHEET NO.
S4.02

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SIMPLE SHEAR CONNECTION FLOW CHART

DOES CONNECTION GEOMETRY ALLOW FOR THE USE OF DOUBLE ANGLE CONNECTION AS DETAILED?

- YES → USE DOUBLE ANGLE CONNECTION AS DETAILED
- NO → PROVIDE AISC STANDARD CONNECTION DETAIL TO MEET MINIMUM REQUIRED STRENGTH AS LISTED IN THE TABLE → SUBMIT CALCULATIONS FOR EACH DIFFERENT CONNECTION, SIGNED AND SEALED BY A PE REGISTERED IN THE STATE OF THE PROJECT
- YES, BUT FABRICATOR WISHES TO SUBSTITUTE EITHER DIFFERENT CONNECTION COMPONENTS OR A DIFFERENT CONNECTION TYPE → PROVIDE AISC STANDARD CONNECTION DETAIL TO MEET MINIMUM REQUIRED STRENGTH AS LISTED IN THE TABLE

BEAM SIZE	MINIMUM CONNECTION DESIGN STRENGTH (LRFD, KIPS) STANDARD	HEAVY
W8	17	-----
W10	21	-----
W12	28	38
W14	46	58
W16	50	66
W18	78	94
W21	92	130
W24	128	170
W27	150	230
W30	181	260
W33	215	300
W36	242	308

NOTES:
1. EXTENDED CONNECTIONS (IN WHICH THE END OF THE SUPPORTED BEAM STOPS SHORT OF THE COLUMN OR GIRDER FLANGES) ARE NOT ALLOWED, UNLESS SPECIFICALLY DETAILED IN THE DRAWINGS.

NOTES:
1. WELD A IS 3/16" FOR STANDARD, 1/4" FOR HEAVY.
2. BOLTS ARE ASTM A325N UNO
3. BEAM CONNS ARE STANDARD UNLESS DENOTED BY A ✳ ON PLAN.

BEAM SIZE	STANDARD ANGLE LENGTH (L)	STANDARD # OF ROWS OF BOLTS (N)	HEAVY ANGLE LENGTH (L)	HEAVY # OF ROWS OF BOLTS (N)
W8, W10	5 1/2"	2	-----	-----
W12	5 1/2"	2	8 1/2"	3
W14, W16	8 1/2"	3	11 1/2"	4
W18	11 1/2"	4	14 1/2"	5
W21	11 1/2"	4	17 1/2"	6
W24	14 1/2"	5	20 1/2"	7
W27	14 1/2"	5	23 1/2"	8
W30	17 1/2"	6	26 1/2"	9
W33	20 1/2"	7	29 1/2"	10
W36	23 1/2"	8	29 1/2"	10

REFER TO AISC TABLES 10-1 & 10-2

10 SIMPLE SHEAR STEEL BEAM CONN TYPICAL DETAIL
NO SCALE TD05200

OVERHANG	T ≤ 6 1/4" POUR STOP	6 1/4" < T ≤ 7 1/2" POUR STOP
≤ 5"	14 GA	12 GA
5 ≤ 8"	12 GA	10 GA
8" ≤ 11"	10 GA	3/16 " BENT PL
11" ≤ 14"	1/4" BENT PL	1/4" BENT PL

7 SLAB EDGE - COMPOSITE DECK TYPICAL DETAIL
NO SCALE TD05323

8 COMPOSITE BEAM TYPICAL DETAIL
NO SCALE TD05350

STEEL COLUMN SCHEDULE													
		BASE PLATE DIMENSIONS							ANCHOR RODS				
COL MARK	COL SIZE	DIM "A"	DIM "B"	t	DIM "C"	DIM "D"	DIM "E"	DETAIL	NUMBER	TYPE	DIA	EMBED
C1	HSS8 x 8 x 1/2	1' - 2"	1' - 2"	1"	5 1/2"	5 1/2"		2/S5.01	4	AR-2	3/4"	1' - 0"
C2	W12x58	1' - 6"	1' - 4"	3/4"	7 1/2"	6 1/2"		2/S5.01	4	AR-2	3/4"	1' - 0"

SUPPORTED BEAM SIZE	PLATE THICKNESS	ROWS OF BOLTS (N)
W8 - W10	1/4"	2
W12 - W16	1/4"	3
W18 - W21	1/4"	4
W24	5/16"	5
W27	5/16"	6
W30	5/16"	7
W33	5/16"	8
W36	5/16"	9

NOTE: BOLTS ARE 3/4" DIA GRADE A325N

4 BEAM SPLICE CONNECTION TYPICAL DETAIL
NO SCALE TD05170

ROD DIA	MAX HOLE DIA IN BASE PL	PLATE WASHER THICKNESS	PLATE WASHER SIZE OR DIA
3/4" *	1 5/16"	1/4"	2"
7/8" *	1 9/16"	5/16"	2 1/2"
1" *	1 7/8"	3/8"	3"
1 1/4"	2 1/8"	1/2"	3 1/2"
1 1/2"	2 3/8"	1/2"	4"
1 3/4"	2 7/8"	5/8"	4 1/2"
2"	3 1/4"	3/4"	5"
2 1/2"	3 3/4"	7/8"	5 1/2"

* ASTM F844 WASHERS MAY BE USED ON GRAVITY COLUMN BASES WHERE MAX HOLE DIA IS LIMITED TO ROD DIA +5/16" AND CONTRACTOR AGREES TO MEET TIGHTER TOLERANCES ON ANCHOR ROD PLACEMENT THAN PERMITTED BY ACI 117.

1 ANCHOR ROD TYPES TYPICAL DETAIL
NO SCALE TD05102

11 STUD WELDING DETAILS TYPICAL DETAIL
NO SCALE TD05355

LAY OUT DECK TO ACCOMMODATE MULTIPLE ROWS OF SHEAR CONNECTIONS AS REQUIRED BY STUD LAYOUT

SEE TYPICAL COMPOSITE BEAM DETAIL FOR WWM REINF

9 COMPOSITE GIRDER TYPICAL DETAIL
NO SCALE TD05351

SPAN	ANGLE SIZE
< 7' - 6"	L4 x 4 x 5/16
7' - 6" TO 10' - 0"	L6 x 4 x 3/8 (LLV)

NOTES:
1. SPAN = CLEAR OPENING WIDTH
2. BEAR 8" EA END
3. SEE SPECS FOR COATING REQUIREMENT

5 LOOSE LINTEL SCHEDULE TYPICAL DETAIL
NO SCALE TD05190

SEE BASE PLATE SCHEDULE FOR DIMENSIONS. DIMENSIONS C & D APPLY ONLY IF SCHEDULED.

2 COLUMN BASE PLATE TYPICAL DETAIL
NO SCALE TD05120

SIMPLE BEAM
1. PLACE STUDS EVENLY DISTRIBUTED ALONG LENGTH OF BEAM AT 2' - 0" SPA.
2. PLACE ADDITIONAL STUDS AT 1' - 0" FROM EACH END OF BEAM. USE TANDEM OR TRIPLE ROWS AS REQUIRED.
3. TOTAL NUMBER OF STUDS SHALL NOT BE LESS THAN SHOWN ON PLAN.

GIRDER
A. UNIFORM STUD LAYOUT EXAMPLE:
1. PLACE STUDS EVENLY DISTRIBUTED ALONG LENGTH OF BEAM AT 1' - 0" SPA, STARTING AT 3" FROM EACH END OF BEAM.
2. PLACE ADDITIONAL STUDS AT 6" FROM EACH END OF BEAM. USE TANDEM OR TRIPLE ROWS AS REQUIRED.
3. TOTAL NUMBER OF STUDS SHALL NOT BE LESS THAN SHOWN ON PLAN.

B. SEGMENTED STUD LAYOUT EXAMPLE:
1. PLACE STUDS EVENLY DISTRIBUTED ALONG LENGTH OF BEAM AT 1' - 0" SPA STARTING AT 3" FROM EACH END OF BEAM.
2. PLACE ADDITIONAL STUDS BETWEEN IN-FRAMING BEAMS TO PROVIDE FOR NUMBER OF STUDS SHOWN ON PLAN. USE TANDEM OR TRIPLE ROWS AS REQUIRED.
3. MINIMUM STUD SPACING ALONG LENGTH OF BEAM IS 6".

12 STUD LAYOUT - COMPOSITE BEAMS TYPICAL DETAIL
NO SCALE TD05356

MIN COLUMN WALL THICKNESS FOR SINGLE PLATE CONN		
RECTANGULAR & SQUARE HSS	CONNECTED HSS WIDTH (B)	MIN WALL THICKNESS
	3" ≤ B < 8"	1/4"
	8" ≤ B < 10"	5/16"
	10" ≤ B < 12"	3/8"
	12" ≤ B < 16"	1/2"
	16" ≤ B < 20"	5/8"
ROUND HSS	COLUMN DIA	MIN WALL THICKNESS
	3" ≤ DIA < 12"	1/4"
	12" ≤ DIA	5/16"
NO MIN WALL THICKNESS FOR A53 PIPE		

BEAM SIZE	MINIMUM CONN DESIGN STRENGTH (LRFD, KIPS) N BOLTS	CAPACITY
W8	2	20
W10	2	23
W12	3	36
W14	3	42
W16	4	61
W18	5	81
W21	6	89
W24	7	108
W27	7	108
W30	8	127

6 BEAM TO HSS COLUMN CONN TYPICAL DETAIL
NO SCALE TD05207

CONTRACTOR PROVIDE AND COORDINATE MEANS OF LEVELING AND ELEVATION CONTROL.

SEE DETAILS FOR BRACED FRAME MEMBER WHERE PRESENT

3 LATERAL COL BASE PLATE TYPICAL DETAIL
NO SCALE TD05122

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05-28-2025

ISSUED: May 28, 2025

REVISIONS

Revision No.	Revision Date

Director LVB	Drawn By LAFP
Designer ET	Quality Control LAFP
Proj. Arch. KDT	

PROJECT NO.
24-057.00

SHEET TITLE
TYPICAL STEEL DETAILS

EMS ISD AGRICULTURAL SCIENCE

SHEET NO.
S5.01

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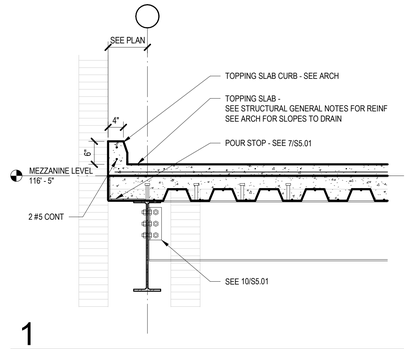
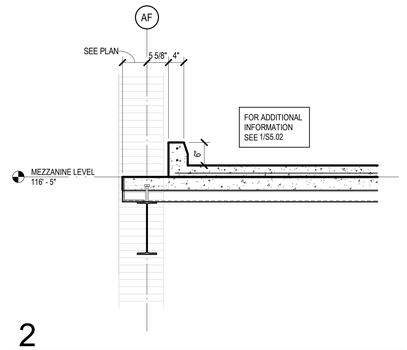


1
3/4" = 1'-0"



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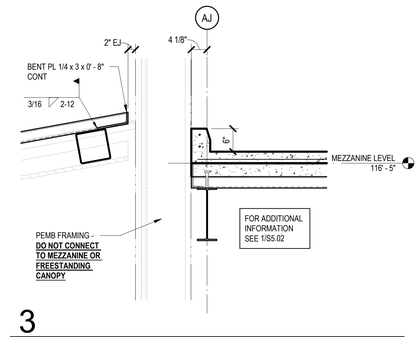

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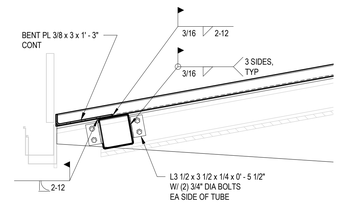

4
3/4" = 1'-0"

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05-28-2025

ISSUED: May 28, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
LVB	LAFP
Designer	Quality Control
ET	LAFP
Proj. Arch.	
KDT	

PROJECT NO.
24-057.00

SHEET TITLE
STEEL DETAILS

SHEET NO.
S5.02

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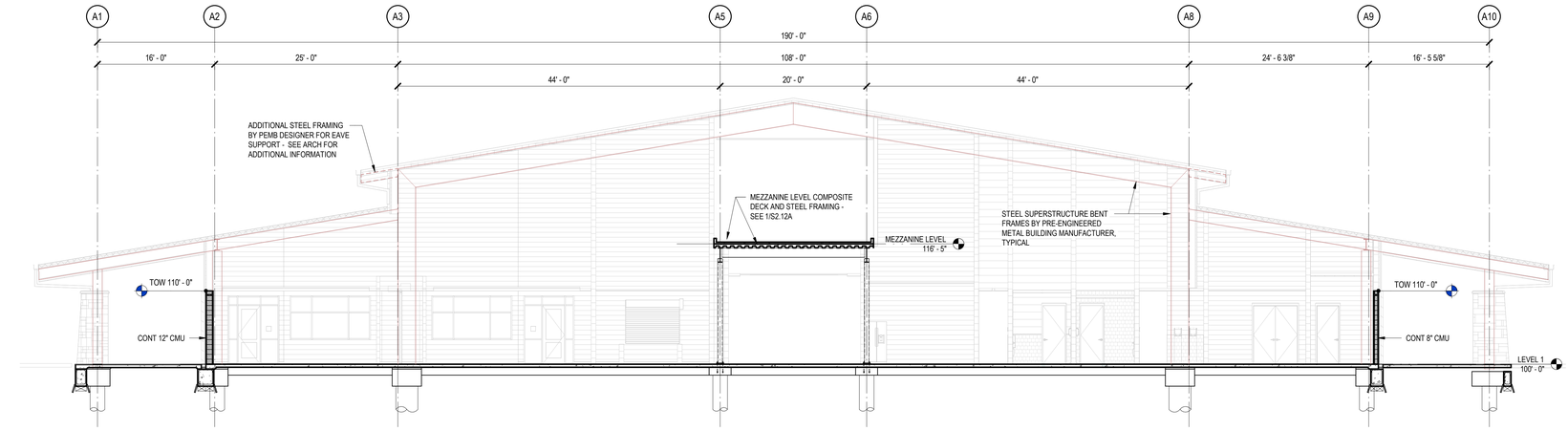
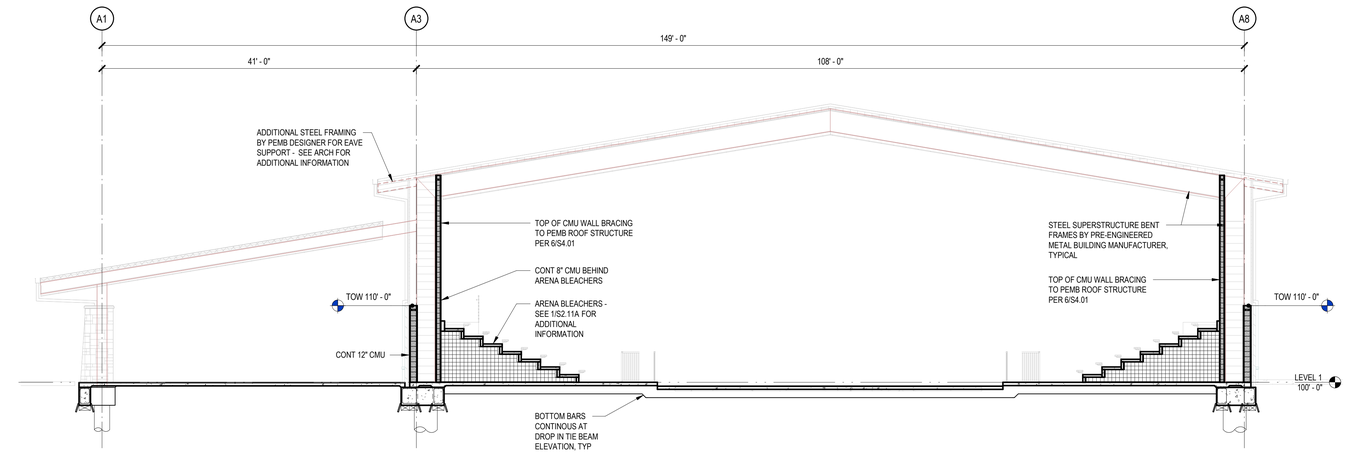


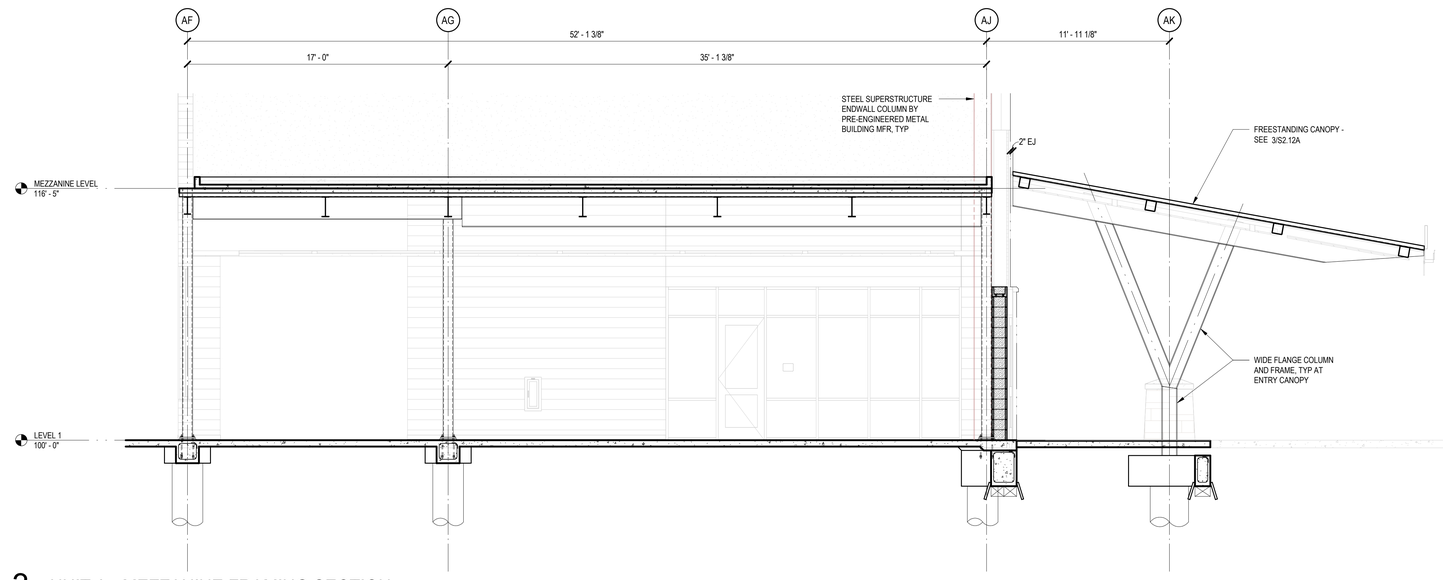
1 UNIT A - OVERALL SECTION 1

1/8" = 1'-0"



2 UNIT A - OVERALL SECTION 2

1/8" = 1'-0"



3 UNIT A - MEZZANINE FRAMING SECTION

1/4" = 1'-0"

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05-28-2025

ISSUED: May 28, 2025

REVISIONS

Revision No.	Revision Date

Director LVB	Drawn By LAFP
Designer ET	Quality Control LAFP
Proj. Arch. KDT	

PROJECT NO.
24-057.00

SHEET TITLE
OVERALL BUILDING SECTIONS

SHEET NO.
S6.01

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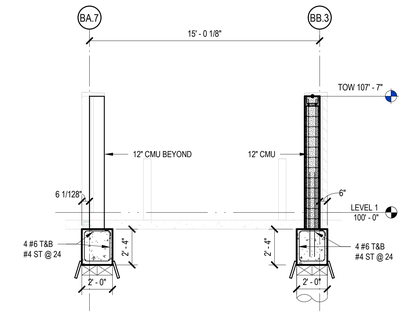
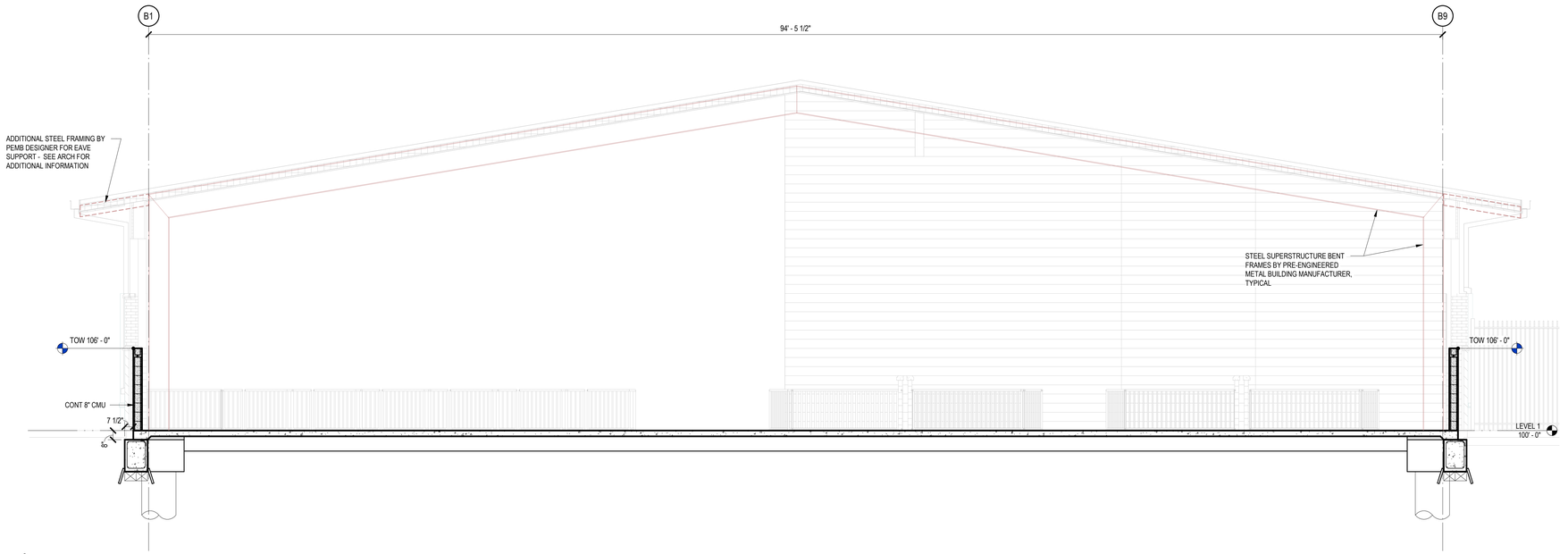


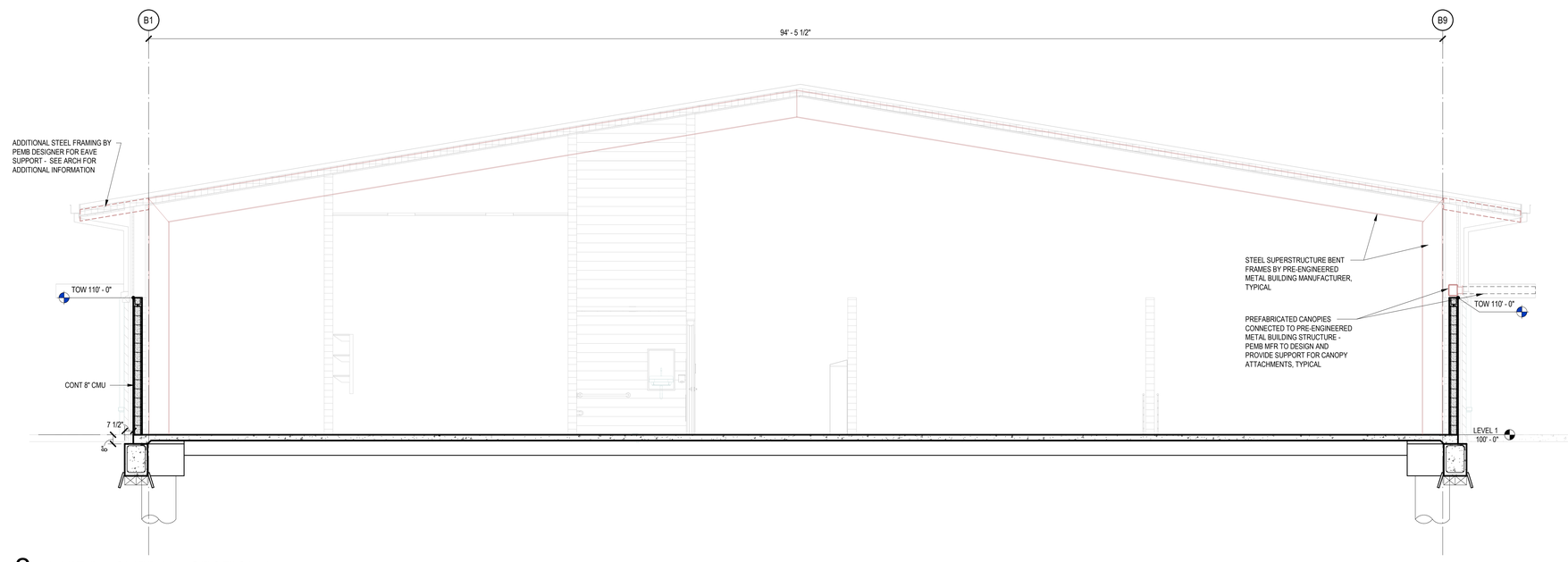
3 UNIT B GENERATOR ENCLOSURE SECTION

1/4" = 1'-0"



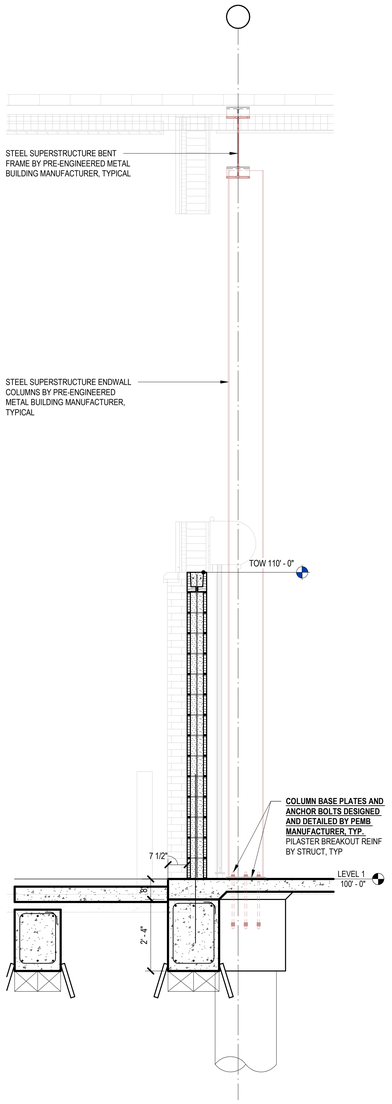
1 UNIT B - OVERALL SECTION 1

1/4" = 1'-0"



2 UNIT B - OVERALL SECTION 2

1/4" = 1'-0"



4 UNIT B - ENLARGED ENDWALL SECTION

1/2" = 1'-0"

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05-28-2025

ISSUED: May 28, 2025

REVISIONS

Revision No.	Revision Date

Director LVB	Drawn By LAFP
Designer ET	Quality Control LAFP
Proj. Arch. KDT	

PROJECT NO.

24-057.00

SHEET TITLE

OVERALL BUILDING SECTIONS

SHEET NO.

EMS ISD AGRICULTURAL SCIENCE

S6.02

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LAFP PROJ. NO. 24149 FIRM REG. NO. F-537

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MECHANICAL SHEET LIST

SHEET NO.	SHEET NAME	SHEET ISSUE DATE
M0.01	GENERAL NOTES & LEGEND - MECHANICAL	2025.05.28
M2.11	FLOOR PLAN - LEVEL ONE - OVERALL - MECHANICAL	2025.05.28
M2.11A	FLOOR PLAN - LEVEL ONE - AREA A - HVAC	2025.05.28
M2.11B	FLOOR PLAN - LEVEL ONE - AREA B - MECHANICAL	2025.05.28
M2.12A	FLOOR PLAN - LEVEL TWO - AREA A MEZZANINE - MECHANICAL	2025.05.28
M3.11A	FLOOR PLAN - LEVEL ONE - AREA A - HVAC PIPING	2025.05.28
M5.11	FLOOR PLAN - ROOF - OVERALL - MECHANICAL	2025.05.28
M5.11A	FLOOR PLAN - ROOF - AREA A - MECHANICAL	2025.05.28
M5.11B	FLOOR PLAN - ROOF - AREA B - MECHANICAL	2025.05.28
M6.01	DETAILS - MECHANICAL	2025.05.28
M6.02	DETAILS - MECHANICAL	2025.05.28
M6.03	DETAILS - MECHANICAL	2025.05.28
M6.04	DETAILS - MECHANICAL	2025.05.28
M6.05	DETAILS - MECHANICAL	2025.05.28
M7.01	SCHEDULES - MECHANICAL	2025.05.28
M7.02	SCHEDULES - MECHANICAL	2025.05.28

Grand total: 16

HVAC PIPING LEGEND

RS	REFRIGERANT SUCTION
RL	REFRIGERANT LIQUID
RG	REFRIGERANT GAS
CD	CONDENSATE DRAIN
	FLOW IN DIRECTION OF ARROW
1/8" / FT.	SLOPE DOWN IN DIRECTION OF ARROW WITH SLOPE SHOWN
	RISE / DROP IN PIPING
	STRAINER WITH BLOW DOWN VALVE
	GATE VALVE
	BUTTERFLY VALVE
	UNION
	BALL VALVE
	GLOBE VALVE
	PLUG VALVE
	CHECK VALVE
	FLOW SWITCH
F	FLOW METER
	AUTO FLOW CONTROL VALVE
	AUTOMATIC 2-WAY CONTROL VALVE
	AUTOMATIC 3-WAY CONTROL VALVE
	AUTOMATIC STEAM CONTROL VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	GAUGE COCK
	PRESSURE GAUGE WITH GAUGE COCK
	THERMOMETER
	INSTRUMENT PORT
	CAP
	LOW PRESSURE DRIP TRAP ASSEMBLY
	MEDIUM PRESSURE DRIP TRAP ASSEMBLY
	AUTOMATIC AIR VENT
	THERMOWELL

HVAC LEGEND

	SUPPLY DUCT RISE / DROP
	OUTSIDE AIR DUCT RISE / DROP
	RETURN DUCT RISE / DROP
	EXHAUST/RELIEF AIR DUCT RISE / DROP
	AIR FLOW IN DIRECTION OF ARROW
R D	RISE / DROP IN DUCT
	MANUAL DAMPER
M	MOTORIZED DAMPER
F.D.	FIRE DAMPER
S.D.	SMOKE DAMPER
F.S.D.	FIRE-SMOKE DAMPER
T	THERMOSTAT / TEMPERATURE SENSOR
H	HUMIDITY SENSOR
C	CARBON DIOXIDE SENSOR
M	CARBON MONOXIDE SENSOR
S	SPACE PRESSURIZATION SENSOR
THC	COMBINATION TEMPERATURE, HUMIDITY, & CARBON DIOXIDE SENSOR
TC	COMBINATION TEMPERATURE & CARBON DIOXIDE SENSOR
NH3	AMMONIA SENSOR
F	FAN CONTROLLER
F	FIRESTAT
S	DUCT SMOKE DETECTOR
$	WALL SWITCH
$P	WALL SWITCH WITH PUSH BUTTON
$T	WALL TIMER SWITCH
	CONNECT TO EXISTING
	EXISTING WORK TO REMAIN
	EXISTING WORK TO BE REMOVED
	NEW WORK (COLOR VARIES PER SYSTEM)
	NEW EQUIPMENT

MECHANICAL DESIGN PARAMETERS:

CODE COMPLIANCE
- 2021 INTERNATIONAL MECHANICAL CODE
- 2015 INTERNATIONAL ENERGY CONSERVATION CODE

BUILDINGS
- SHOW ARENA AND CLASSROOM BUILDING, APPROXIMATELY 27,000 ft² TOTAL
- LIVESTOCK BUILDING, APPROXIMATELY 25,000 ft² TOTAL

SITE ENVIRONMENTAL CONDITIONS
- LOCATION:
  NORTH OF MUSTANG ROCK RD, WEST OF MARINE CREEK PKWY
  FORT WORTH, TEXAS 76179
  APPROXIMATELY 32.844, -97.393
- APPROXIMATE SITE ELEVATION:
  690 ft ABOVE SEA LEVEL
  (SEE CIVIL TOPOGRAPHICAL SURVEY AND GRADING PLAN)
- STANDARD PRESSURE:
  14.33 PSI
  (BASED ON WORLD METEOROLOGICAL ORGANIZATION (WMO) STATION #747390)
- EARTH / GROUND POTENTIAL VERTICAL MOVEMENT:
  (BASED ON GEOTECHNICAL EXPLORATION REPORT BY UES DATED APRIL 10, 2025):
  - UP TO 3 INCHES (WITHOUT SOIL CONDITIONING);
  - REFER TO STRUCTURAL PLAN FOR FOUNDATION TYPE AND SOIL CONDITIONING.
- AMBIENT OUTDOOR AIR CONDITIONS:
  (BASED ON WORLD METEOROLOGICAL ORGANIZATION (WMO) STATION #722595):
  - SUMMER COOLING:
    101.6°Fdb / 74.0°Fwb, 20.0°F DAILY RANGE
  - SUMMER EVAPORATION:
    92.0°Fdb / 78.7°Fwb
  - SUMMER DEHUMIDIFICATION:
    82.9°Fdb / 76.5°Fwb
  - WINTER:
    22.6°Fdb

GENERAL SYSTEM DESCRIPTION

THE AGRICULTURAL SCIENCE BUILDING SPACES SHALL BE COOLED AND HEATED AS NOTED IN THE ORIENTATION PLAN ON THIS SHEET.
- SPACES THAT ARE NOTED TO BE PROVIDED COOLING SHALL BE COOLED BY DIRECT EXPANSION (DX) SPLIT SYSTEMS AS NOTED, OR CHILLED WATER COOLING AS NOTED.
- SPACES THAT ARE NOTED TO BE PROVIDED HEATING SHALL BE HEATED BY DX SPLIT SYSTEM HEAT PUMPS, DX SPLIT SYSTEMS WITH GAS-FIRED HEAT EXCHANGER, ELECTRIC UNIT HEATERS, HEATING WATER, OR GAS-FIRED UNIT HEATERS AS NOTED.
- SPACES THAT WILL CONTAIN LIVESTOCK SHALL BE PROVIDED WITH GAS-FIRED FAN-FORCED UNIT HEATERS TO PROVIDE HEAT FOR ANIMALS.
- SPACES THAT ARE NOTED TO BE UNCONDITIONED SHALL NOT BE PROVIDED COOLING OR HEATING.

THE AGRICULTURAL SCIENCE BUILDING SPACES SHALL BE VENTILATED AS NOTED IN THE ORIENTATION PLAN ON THIS SHEET.
- SPACES THAT ARE SERVED BY DUCTED DX SPLIT SYSTEMS SHALL BE PROVIDED OUTSIDE AIR THROUGH THE SPACE'S HVAC SYSTEM.
- SPACES THAT ARE NOTED TO BE PROVIDED WITH NATURAL VENTILATION SHALL BE PROVIDED WITH PERMANENT WALL OPENINGS TO ALLOW OUTSIDE AIR TO FLOW THROUGH THE BUILDING. HIGH VOLUME, LOW SPEED (HVLS) FANS SHALL BE PROVIDED IN THESE SPACES FOR CIRCULATION OF AIR.
- SPACES THAT ARE NOTED TO BE PROVIDED EXHAUST FANS SHALL BE PROVIDED AN AIR TRANSFER PATH TO ALLOW OUTSIDE AIR TO TRANSFER FROM ADJACENT SPACES.

A BUILDING AUTOMATION SYSTEM (BAS) WITH DIRECT DIGITAL CONTROLLERS, LOCAL AND REMOTE CABINETS, FIELD DEVICES, AND APPURTENANCES SHALL BE PROVIDED FOR CONTROLLING HVAC SYSTEMS. THE BAS SHALL INTEGRATE CONTROLS SYSTEMS FOR OTHER SYSTEMS AS WELL — INCLUDING FIRE AND FREEZE PROTECTION.

TEST AND BALANCING OF THE MECHANICAL SYSTEMS SHALL BE PERFORMED BY AN IMPARTIAL AND INDIVIDUAL TECHNICAL FIRM. COMMISSIONING OF THE MECHANICAL SYSTEMS SHALL ALSO BE REQUIRED.

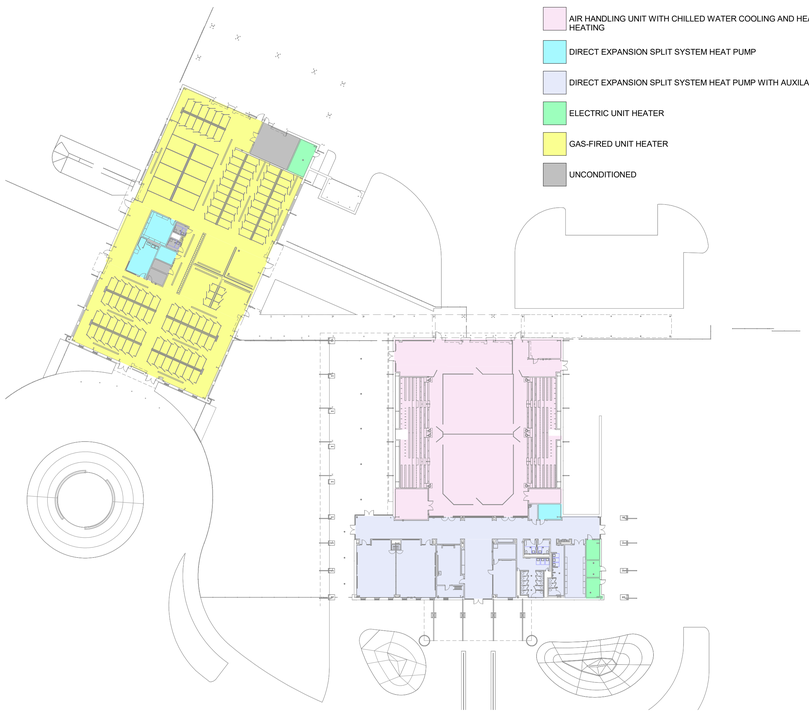
MECHANICAL DESIGN DOCUMENTATION:

SPECIFICATIONS
MECHANICAL DESIGN DOCUMENTATION IS ACCOMPANIED BY AND SPECIFIED IN THE PROJECT MANUAL.

DRAWINGS
MECHANICAL DESIGN DOCUMENTATION IS SHOWN AND DESCRIBED IN THE MECHANICAL DRAWINGS. MECHANICAL DRAWINGS ARE IN THE DRAWING SET.

SPACE HEATING AND/OR COOLING SOURCE

- AIR HANDLING UNIT WITH CHILLED WATER COOLING AND HEATING WATER HEATING
- DIRECT EXPANSION SPLIT SYSTEM HEAT PUMP
- DIRECT EXPANSION SPLIT SYSTEM HEAT PUMP WITH AUXILARY ELECTRIC HEAT
- ELECTRIC UNIT HEATER
- GAS-FIRED UNIT HEATER
- UNCONDITIONED

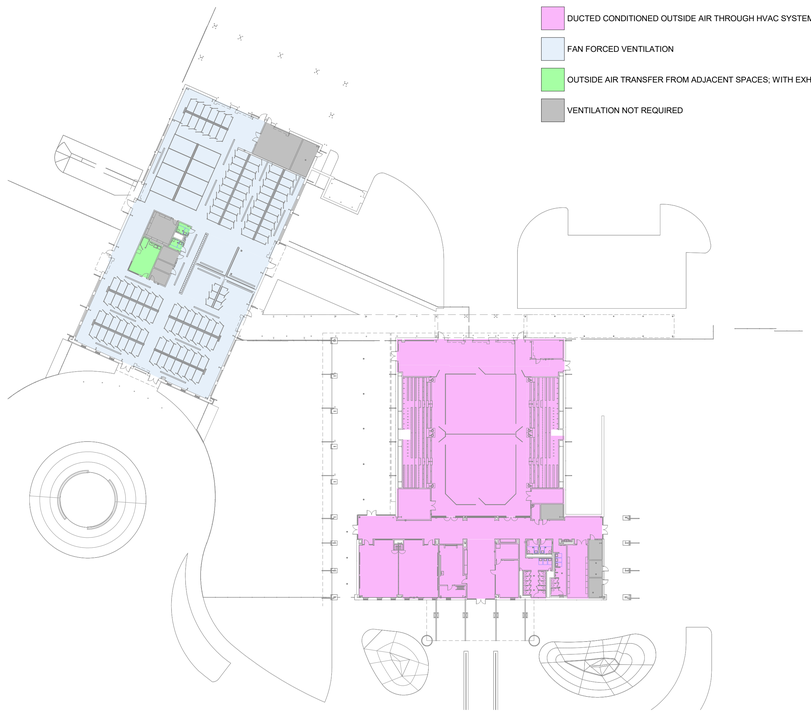


PLAN NORTH / TRUE NORTH

1 ORIENTATION PLAN - HEATING AND COOLING - MECHANICAL
SCALE: 1" = 40'-0"

SPACE VENTILATION SOURCE

- DUCTED CONDITIONED OUTSIDE AIR THROUGH HVAC SYSTEM
- FAN FORCED VENTILATION
- OUTSIDE AIR TRANSFER FROM ADJACENT SPACES; WITH EXHAUST FAN
- VENTILATION NOT REQUIRED



PLAN NORTH / TRUE NORTH

2 ORIENTATION PLAN - VENTILATION - MECHANICAL
SCALE: 1" = 40'-0"

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LICENSED
PROFESSIONAL ENGINEER
2025.05.28

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director VLK	Drawn By LCA
Designer VLK	Quality Control JCP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
GENERAL NOTES & LEGEND - MECHANICAL

SHEET NO.
M0.01

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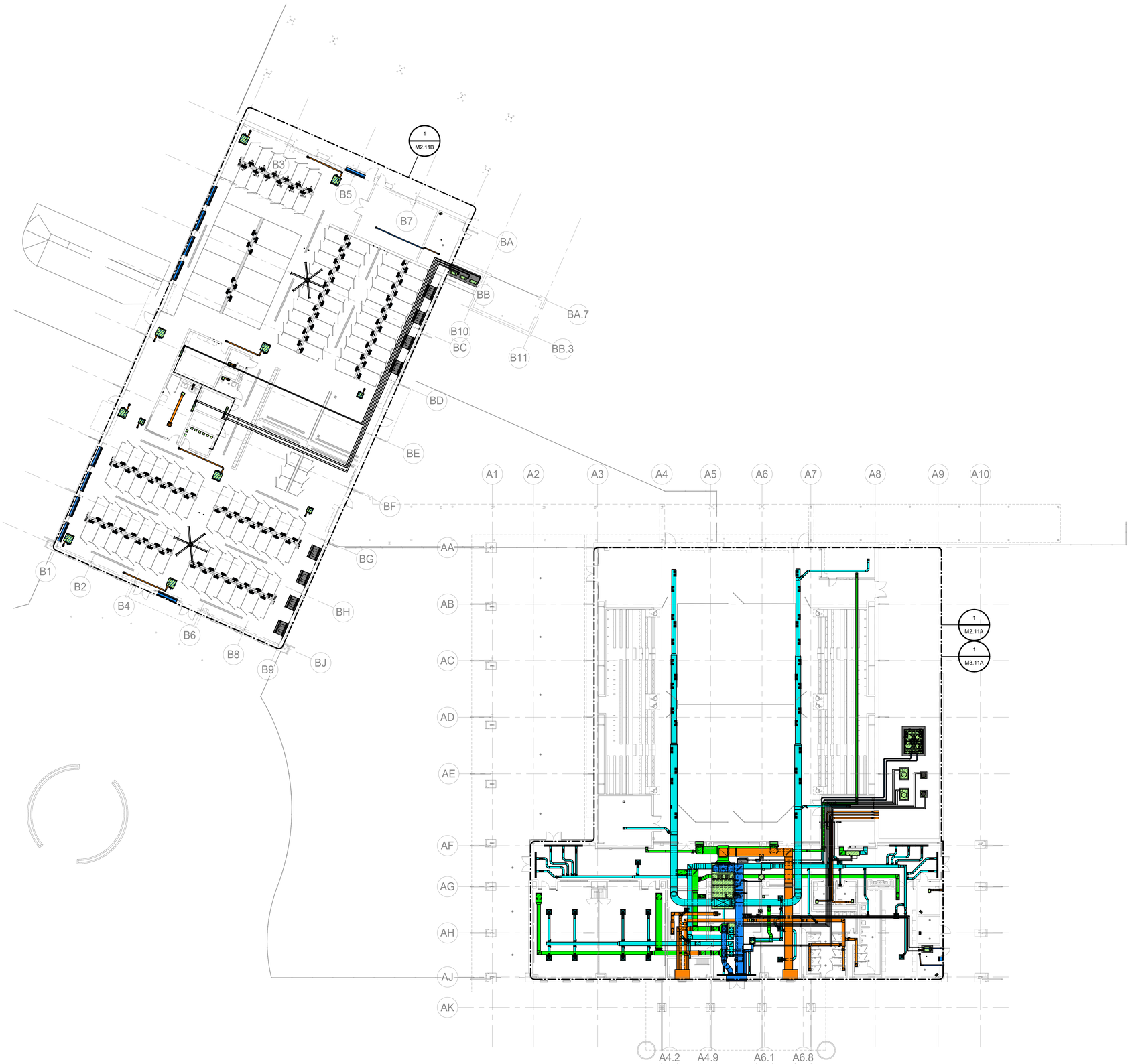

PLAN NORTH / TRUE NORTH

1 FLOOR PLAN - LEVEL ONE - OVERALL - MECHANICAL
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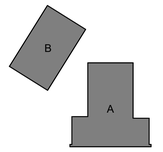

KEY PLAN

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Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
FLOOR PLAN - LEVEL ONE - OVERALL - MECHANICAL

SHEET NO.
M2.11

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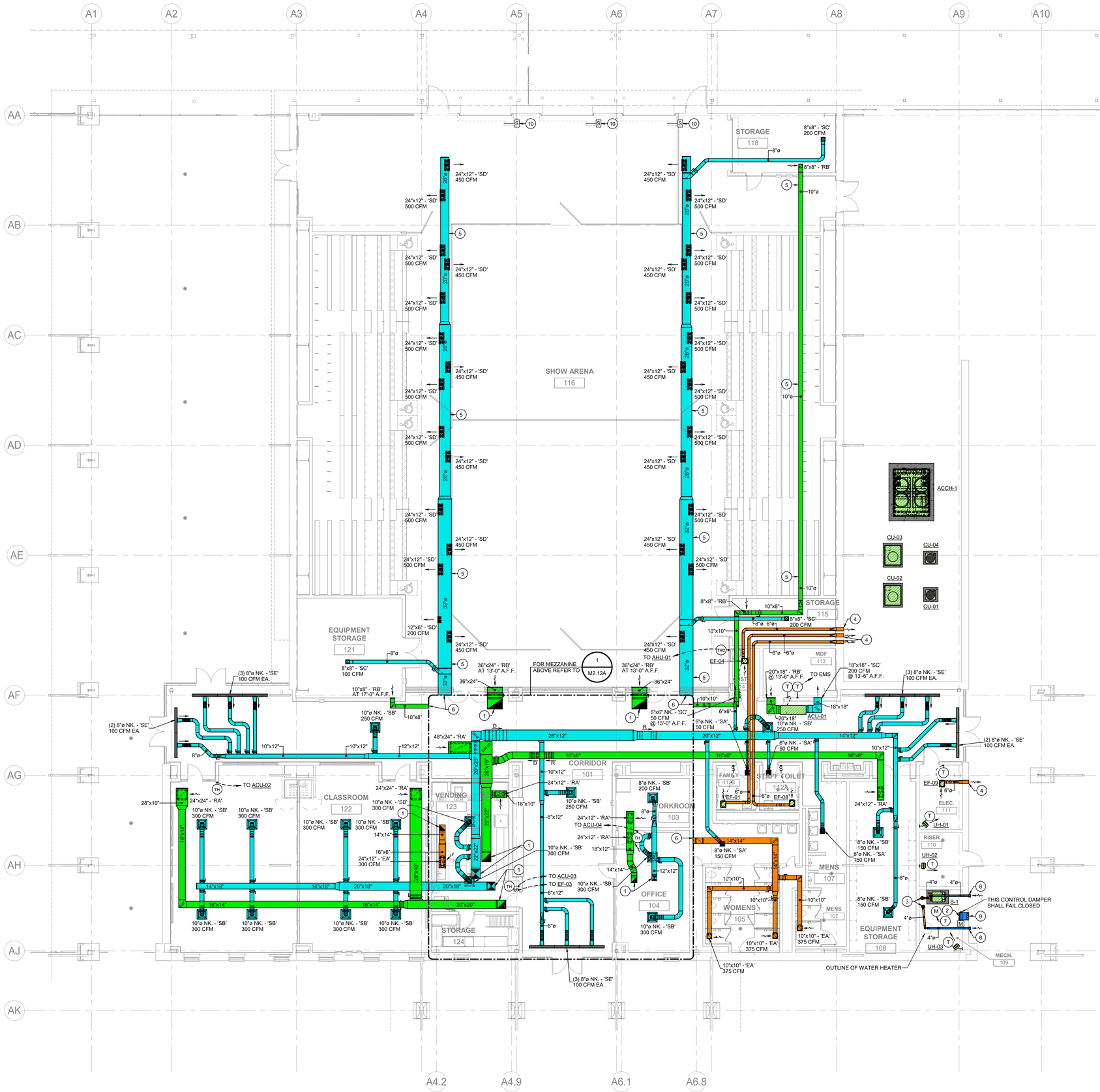

PLAN NORTH / TRUE NORTH

1 FLOOR PLAN - LEVEL ONE - AREA A - HVAC

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

B / A

KEY PLAN

GENERAL MECHANICAL NOTES:

1. RECTANGULAR AND ROUND SUPPLY/RETURN AIR DUCTWORK IS TO BE EXTERNALLY INSULATED WITH 2" THICK ACOUSTICAL AND THERMAL WRAP TO MEET ENERGY CODE (ASHRAE 90.1 - 2007) REQUIREMENTS. RECTANGULAR TRANSFER AIR DUCT SHALL BE LINED WITH 1" LINER ONLY. DUCTWORK SIZES SHOWN ARE NET INTERNAL AIR STREAM DIMENSIONS. SHEET METAL SIZES ARE TO BE INCREASED IN SIZE TO MAINTAIN THESE INTERNAL CLEAR DIMENSIONS. ROUND DUCTWORK IS TO BE EXTERNALLY WRAPPED. FLEXIBLE ROUND DUCT SHALL HAVE A MINIMUM R-VALUE OF 6.0.
2. BRANCH RUN-OUTS TO CEILING/COVE MOUNTED AIR DEVICES SHALL BE SAME SIZE AS NECK, UNLESS NOTED OTHERWISE. PROVIDE A TWIST-IN FLARED TAP WITH MANUAL VOLUME DAMPER AT MAIN DUCT TAP AND EXTENDED HANDLE AS SHOWN (REFER TO SPECIFICATIONS FOR DETAILS). EXTEND FLEXIBLE DUCTWORK A MAXIMUM OF 5'-0" FROM DIFFUSERS, INSTALL STRAIGHT AS POSSIBLE WITH LONG RADIUS BENDS WITH CLAMPS TO BE USED AT BOTH ENDS.
3. ALL DUCTWORK SHALL BE RUN CONCEALED ABOVE CEILINGS AS HIGH AS POSSIBLE & CONCEALED IN WALLS, CHASES, OR FURROUTS IN GENERAL LOCATIONS SHOWN, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL COORDINATE WITH STRUCTURE, ARCHITECTURE, AND OTHER TRADES TO ENSURE CONFLICTS DO NOT OCCUR. ABOVE CEILING SPACE IS MINIMAL AND THE CEILINGS AND ROOF ARE VARIOUSLY SLOPED. CAUTION IS NECESSARY FOR PROPER INSTALLATION AND COORDINATION.
4. LOCATE CEILING MOUNTED AIR DEVICES APPROXIMATELY WHERE SHOWN. FOR EXACT LOCATION AND FRAME MOUNTING TYPES, REFER TO ARCHITECTURAL REFLECTED CEILING PLANS. ALL CEILING DIFFUSERS TO BE FOUR-WAY TYPE, UNLESS NOTED OTHERWISE BY AIR FLOW ARROWS ON FLOOR PLAN.
5. ALL ROOF PENETRATIONS, ROOF PIPE SUPPORTS, FLASHING, ETC., SHALL BE MADE WATERTIGHT AND BE AS RECOMMENDED BY THE ROOF SYSTEM MANUFACTURER. VERIFY WITH OWNER WHAT ACCEPTABLE ROOFING SYSTEMS INSTALLER CAN BE USED.
6. EXTEND DUCTWORK AS SHOWN THROUGH ROOF INSIDE CURB TO EACH DUCT CONNECTION TO/FROM A ROOF MOUNTED UNIT. TRANSITION TO FULL SIZE OF EQUIPMENT OPENING FROM DUCT SIZES SHOWN. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCT CONNECTIONS AT EACH ROOF MOUNTED UNIT.
7. SEAL ALL LONGITUDINAL AND TRANSVERSE DUCT JOINTS TO PREVENT DUCT AIR LEAKAGE TO INCLUDE DUCT AND ACCESSORY PENETRATIONS. DO NOT SEAL CONTROL/FIRE DAMPER CONTROL ROD PENETRATIONS. SEAL CLASS "A" REQUIRED.
8. MAIN CONDENSATE DRAIN LINES SHALL BE SIZED AND ROUTED AS SHOWN WITH A SLOPE OF 1/8"/1'-0". ROUTE CONDENSATE DRAIN PIPING THROUGH JOIST WEBBING, AS HIGH AS POSSIBLE WHILE MAINTAINING SLOPE. PROVIDE CONNECTIONS TO EACH ROOF TOP UNIT FULL SIZE OF UNIT CONNECTION (MINIMUM 3/4" OR 1" AS NOTED ON ROOF PLANS).
9. PROVIDE CLEANOUTS IN ALL CONDENSATE DRAIN PIPING AT A MINIMUM OF EVERY 40'-0" ON CENTER AND AT ALL CHANGES OF DIRECTION.
10. EXPOSED DUCTWORK SHALL BE INTERNALLY LINED AND RECEIVE A PAINT GRIP FINISH SO THAT PAINT MAY BE APPLIED IN ACCORDANCE WITH ARCHITECTURAL PLANS AND SPECIFICATIONS.
11. ROUTE REFRIGERANT PIPING AS SHOWN. SIZE AS PER A/C UNIT MANUFACTURER'S RECOMMENDATIONS. COORDINATE ROUTING WITH OTHER TRADES.

NOTES BY SYMBOL '⬡':

1. ROUTE DUCTWORK TO/FROM ABOVE. REFER TO SHEET M2.12A FOR CONTINUATION.
2. PROVIDE 1/2"x1/2" GALVANIZED STEEL HARDWARE CLOTH OVER DUCT OPENING.
3. ROUTE GAS VENTING FLUE UP TO ROOF CAP LOCATED ON ROOF. REFER TO ROOF PLAN FOR LOCATION. FLUE VENTING MATERIAL SHALL NOT BE PVC, REFER TO SPECIFICATIONS FOR MATERIAL REQUIREMENTS.
4. ROUTE EXHAUST DUCT THROUGH WALL TO BRICK VENT PROVIDED BY EXHAUST FAN MANUFACTURER. BRICK VENT SHALL HAVE DRIP FLANGE, INSECT SCREEN, AND WATER STOP. APPROXIMATE MOUNTING ELEVATION IS 17'-0" A.F.F. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION.
5. DUCTWORK IN THE ARENA IS EXPOSED. SPIRAL ROUND DUCTWORK SHALL BE INTERNALLY LINED AND THE EXTERIOR DUCTWORK SHALL RECEIVE A PAINT GRIP FINISH. PAINT REQUIREMENTS SHALL BE BY ARCHITECT. DUCT MOUNTED GRILLES SHALL BE FACTORY PAINTED TO MATCH COLOR OF DUCTWORK. REFER TO ARCHITECTURAL PLANS FOR COLOR.
6. DUCT ROUTED HIGH AT THIS LOCATION. REFER TO SHEET M2.12A FOR CONTINATION.
7. PROVIDE CARBON MONOXIDE DETECTOR IN THIS SPACE, INTERLOCKED TO DISABLE GAS BURNER OF THE WATER HEATERS WHEN THE MEASURED LEVEL OF CARBON MONOXIDE RISES ABOVE 50 PPM. LOCATE THE SENSOR SUSPENDED FROM THE CEILING IN ACCORDANCE WITH THE SENSOR MANUFACTURER'S RECOMMENDATIONS.
8. ROUTE COMBUSTION AIR FROM WALL CAP ON EXTERIOR WALL.
9. WALL LOUVER WITH MINIMUM 0.75 SQ.FT. FREE AREA. CONNECT DUCTWORK TO LOUVER FULL SIZE OF LOUVER. EXTEND DUCTWORK A MIN. 18" FROM THE LOUVER FULL SIZE INTO SPACE. EXTERNALLY WRAP DUCTWORK WITH 1" DUCT INSULATION AND WRAP WITH JACKETING. THE BOTTOM OF THE DUCT SHALL BE APPROXIMATELY 10'-10" A.F.F.
10. PROVIDE SENSOR AT OVERHEAD DOOR TO MONITOR WHEN OPENED/CLOSED. INTEGRATE SENSOR WITH BUILDING AUTOMATION SYSTEM. REFER TO SPECIFICATION SECTION 23 09 00 FOR DETAILS.

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EAGLE MOUNTAIN-SAGINAW ISD
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EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS — JOSEPH C. PROCTOR — 132777 — LICENSED PROFESSIONAL ENGINEER — 2025.05.28

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director VLK	Drawn By LCA
Designer VLK	Quality Control JCP
Proj. Arch. VLK	

PROJECT NO.

24-057.00

SHEET TITLE

FLOOR PLAN - LEVEL ONE - AREA A - HVAC

SHEET NO.

M2.11A

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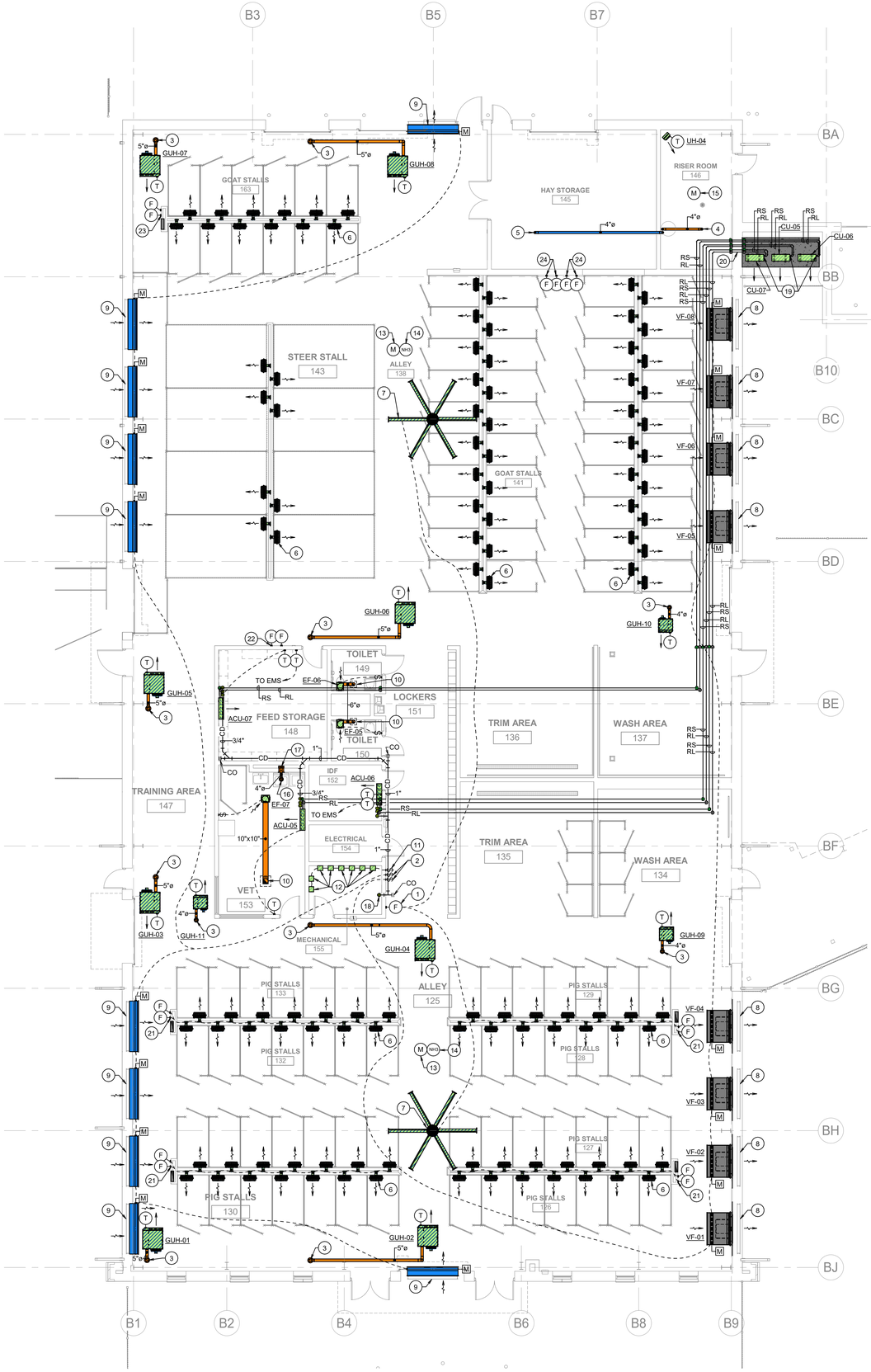

PLAN NORTH / TRUE NORTH

1 FLOOR PLAN - LEVEL ONE - AREA B - MECHANICAL

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

NOTES BY SYMBOL '◯':

1. PROVIDE HVLS FAN CONTROLLER. MOUNT 42" A.F.F., ONE CONTROLLER SHALL CONTROL ALL FANS.
2. PROVIDE MOTOR RATED TOGGLE SWITCH MOUNTED 42" A.F.F., THE SWITCH SHALL BE USED FOR OPENING AND CLOSING THE VENTILATION LOUVERS. ONE SWITCH SHALL CONTROL THE LOUVER ACTUATORS ON THE WEST WALL LOUVERS AND THE SAME SWITCH SHALL CONTROL THE LOUVER ACTUATORS ON THE EAST WALL LOUVERS. REFER TO SPECIFICATIONS FOR SEQUENCE OF OPERATION. LABEL THE SWITCH: "VENTILATION ON/OFF".
3. ROUTE GAS UNIT HEATER FLUE VENT UP THROUGH ROOF TO TERMINAL DEVICE. REFER TO ROOF PLAN FOR CONTINUATION.FLUE VENTING MATERIAL SHALL NOT BE PVC, REFER TO SPECIFICATIONS FOR MATERIAL REQUIREMENTS.
4. ROUTE GAS WATER HEATER FLUE VENT UP THROUGH ROOF TO TERMINAL DEVICE. REFER TO ROOF PLAN FOR CONTINUATION. FLUE VENTING MATERIAL SHALL NOT BE PVC, REFER TO SPECIFICATIONS FOR MATERIAL REQUIREMENTS.
5. ROUTE COMBUSTION AIR INTAKE VENT DOWN FROM INTAKE ON ROOF. REFER TO ROOF PLAN FOR CONTINUATION.
6. PROVIDE AND INSTALL HORIZONTAL AIR FLOW FAN AND MOUNT ON WALL; REFER TO DETAIL '1' ON SHEET M6.05 (TYPICAL AT EACH ANIMAL PEN, TOTAL OF 116 PENS).
7. INSTALL HVLS FAN IN APPROXIMATE LOCATION SHOWN TO ADEQUATELY CIRCULATE AIR IN THIS SECTION OF THE BUILDING. PROVIDE MANUFACTURER'S MOUNTING KIT IN COORDINATION WITH BUILDING STRUCTURE. PROVIDE ADDITIONAL MISCELLANEOUS STEEL AS NECESSARY TO MOUNT FAN. SELECT DROP LENGTH OF FAN TO CLEAR SLOPED STRUCTURE AND KEEP FAN HIGH IN SPACE. COORDINATE WITH OTHER TRADES (FIRE PROTECTION, LIGHTING, AND OTHERS) TO ENSURE CLEARANCE AROUND THE FAN IS PROVIDED.
8. PROVIDE AND INSTALL IN-WALL VENTILATION FAN, REFER TO DETAIL '2' ON SHEET M6.05.
9. VENTILATION LOUVER TO BE SPECIFIED BY ARCHITECT, REFER TO ARCHITECTURAL PLANS FOR LOUVER ELEVATION, LOCATION, SIZE, AND SPECIFICATIONS.
10. ROUTE DUCT UP THROUGH ROOF TO ROOF CAP. REFER TO ROOF PLAN FOR CONTINUATION.
11. PROVIDE SWITCH FOR CONTROL OF IN-WALL VENTILATION FANS.
12. VARIABLE FREQUENCY DRIVES FOR SPEED CONTROL OF IN-WALL VENTILATION FANS VF-01 THROUGH VF-08.
13. PROVIDE CARBON MONOXIDE DETECTOR IN THIS SPACE. WHEN THE MEASURED LEVEL OF CARBON MONOXIDE RISES ABOVE 50 PPM, THE GAS BURNERS OF THE UNIT HEATERS SEVING THIS SPACE SHALL BE DISABLED. LOCATE THE SENSOR SUSPENDED FROM THE CEILING IN ACCORDANCE WITH THE SENSOR MANUFACTURER'S RECOMMENDATIONS.
14. PROVIDE AMMONIA DETECTOR IN THIS SPACE. WHEN THE MEASURED LEVEL OF AMMONIA RISES ABOVE 50 PPM, THE VENTILATION FANS SHALL BE ENABLED TO OPERATE. LOCATE THE SENSOR SUSPENDED FROM THE CEILING IN ACCORDANCE WITH THE SENSOR MANUFACTURER'S RECOMMENDATIONS.
15. PROVIDE CARBON MONOXIDE DETECTOR IN THIS SPACE. WHEN THE MEASURED LEVEL OF CARBON MONOXIDE RISES ABOVE 50 PPM, THE GAS BURNERS OF THE WATER HEATERS SHALL BE DISABLED. LOCATE THE SENSOR SUSPENDED FROM THE CEILING IN ACCORDANCE WITH THE SENSOR MANUFACTURER'S RECOMMENDATIONS.
16. ROUTE GAS DRYER EXHAUST VENT UP THROUGH ROOF TO TERMINAL DEVICE. REFER TO ROOF PLAN FOR CONTINUATION.
17. DRYER DEFLECTION BOX; REFER TO DETAIL '6' ON SHEET M6.03.
18. ROUTE CONDENSATE DRAIN PIPING DOWN ALONG WALL. SECURE VERTICAL PIPE TO WALL IN A MIN. THREE (3) LOCATIONS (HIGH, MIDDLE, LOW). ROUTE PIPE OVER FLOOR DRAIN AND TERMINATE OPEN SITE OVER FLOOR DRAIN.
19. ROUTE REFRIGERANT PIPING TO/FROM ASSOCIATED INDOOR UNIT. SIZE PIPING PER MANUFACTURERS RECOMMENDATIONS.
20. ROUTE REFRIGERANT PIPING IN THE VERTICAL AND SECURE TO THE WALL IN A MIN. THREE LOCATIONS (HIGH, LOW, AND IN BETWEEN). ROUTE PIPING THROUGH THE WALL FOR CONNECTION WITH OUTDOOR UNITS.
21. PROVIDE TWO CONTROL PANELS FOR CONTROL OF HORIZONTAL AIRFLOW FANS AT PIG STALLS. EACH CONTROL PANEL SHALL PROVIDE THE USER THE ABILITY TO INDIVIDUALLY CONTROL (7) FANS. ONE CONTROL PANEL SHALL CONTROL THE FANS TO THE NORTH OF THE COMMON WALL AND THE OTHER CONTROL PANEL SHALL CONTROL FANS TO THE SOUTH OF THE COMMON WALL. MOUNT 42" A.F.F.
22. PROVIDE TWO CONTROL PANELS FOR CONTROL OF HORIZONTAL AIRFLOW FANS AT STEER STALLS. EACH CONTROL PANEL SHALL PROVIDE THE USER THE ABILITY TO INDIVIDUALLY CONTROL (4) FANS. ONE CONTROL PANEL SHALL CONTROL THE FANS TO THE EAST OF THE COMMON WALL AND THE OTHER CONTROL PANEL SHALL CONTROL FANS TO THE WEST OF THE COMMON WALL. MOUNT 42" A.F.F.
23. PROVIDE TWO CONTROL PANELS FOR CONTROL OF HORIZONTAL AIRFLOW FANS AT GOAT STALLS. EACH CONTROL PANEL SHALL PROVIDE THE USER THE ABILITY TO INDIVIDUALLY CONTROL (6) FANS. ONE CONTROL PANEL SHALL CONTROL THE FANS TO THE NORTH OF THE COMMON WALL AND THE OTHER CONTROL PANEL SHALL CONTROL FANS TO THE SOUTH OF THE COMMON WALL. MOUNT 42" A.F.F.
24. PROVIDE TWO CONTROL PANELS FOR CONTROL OF HORIZONTAL AIRFLOW FANS AT GOAT STALLS. EACH CONTROL PANEL SHALL PROVIDE THE USER THE ABILITY TO INDIVIDUALLY CONTROL (10) FANS. ONE CONTROL PANEL SHALL CONTROL THE FANS TO THE EAST OF THE COMMON WALL AND THE OTHER CONTROL PANEL SHALL CONTROL FANS TO THE WEST OF THE COMMON WALL. MOUNT 42" A.F.F.

GENERAL MECHANICAL NOTES:

1. RECTANGULAR AND ROUND SUPPLY/RETURN AIR DUCTWORK IS TO BE EXTERNALLY INSULATED WITH 2" THICK ACOUSTICAL AND THERMAL WRAP TO MEET ENERGY CODE (ASHRAE 90.1 - 2007) REQUIREMENTS. RECTANGULAR TRANSFER AIR DUCT SHALL BE LINED WITH 1" LINER ONLY. DUCTWORK SIZES SHOWN ARE NET INTERNAL AIR STREAM DIMENSIONS. SHEET METAL SIZES ARE TO BE INCREASED IN SIZE TO MAINTAIN THESE INTERNAL CLEAR DIMENSIONS. ROUND DUCTWORK IS TO BE EXTERNALLY WRAPPED. FLEXIBLE ROUND DUCT SHALL HAVE A MINIMUM R-VALUE OF 6.0.
2. BRANCH RUN-OUTS TO CEILING/COVE MOUNTED AIR DEVICES SHALL BE SAME SIZE AS NECK, UNLESS NOTED OTHERWISE. PROVIDE A TWIST-IN FLARED TAP WITH MANUAL VOLUME DAMPER AT MAIN DUCT TAP AND EXTENDED HANDLE AS SHOWN (REFER TO SPECIFICATIONS FOR DETAILS). EXTEND FLEXIBLE DUCTWORK A MAXIMUM OF 5'-0" FROM DIFFUSERS, INSTALL STRAIGHT AS POSSIBLE WITH LONG RADIUS BENDS WITH CLAMPS TO BE USED AT BOTH ENDS.
3. ALL DUCTWORK SHALL BE RUN CONCEALED ABOVE CEILINGS AS HIGH AS POSSIBLE & CONCEALED IN WALLS, CHASES, OR FURROUTS IN GENERAL LOCATIONS SHOWN, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL COORDINATE WITH STRUCTURE, ARCHITECTURE, AND OTHER TRADES TO ENSURE CONFLICTS DO NOT OCCUR. ABOVE CEILING SPACE IS MINIMAL AND THE CEILINGS AND ROOF ARE VARIOUSLY SLOPED. CAUTION IS NECESSARY FOR PROPER INSTALLATION AND COORDINATION.
4. LOCATE CEILING MOUNTED AIR DEVICES APPROXIMATELY WHERE SHOWN. FOR EXACT LOCATION AND FRAME MOUNTING TYPES, REFER TO ARCHITECTURAL REFLECTED CEILING PLANS. ALL CEILING DIFFUSERS TO BE FOUR-WAY TYPE, UNLESS NOTED OTHERWISE BY AIR FLOW ARROWS ON FLOOR PLAN.
5. ALL ROOF PENETRATIONS, ROOF PIPE SUPPORTS, FLASHING, ETC., SHALL BE MADE WATERTIGHT AND BE AS RECOMMENDED BY THE ROOF SYSTEM MANUFACTURER. VERIFY WITH OWNER WHAT ACCEPTABLE ROOFING SYSTEMS INSTALLER CAN BE USED.
6. EXTEND DUCTWORK AS SHOWN THROUGH ROOF INSIDE CURB TO EACH DUCT CONNECTION TO/FROM A ROOF MOUNTED UNIT. TRANSITION TO FULL SIZE OF EQUIPMENT OPENING FROM DUCT SIZES SHOWN. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCT CONNECTIONS AT EACH ROOF MOUNTED UNIT.
7. SEAL ALL LONGITUDINAL AND TRANSVERSE DUCT JOINTS TO PREVENT DUCT AIR LEAKAGE TO INCLUDE DUCT AND ACCESSORY PENETRATIONS. DO NOT SEAL CONTROL/FIRE DAMPER CONTROL ROD PENETRATIONS. SEAL CLASS "A" REQUIRED.
8. MAIN CONDENSATE DRAIN LINES SHALL BE SIZED AND ROUTED AS SHOWN WITH A SLOPE OF 1/8"/1'-0". ROUTE CONDENSATE DRAIN PIPING THROUGH JOIST WEBBING, AS HIGH AS POSSIBLE WHILE MAINTAINING SLOPE. PROVIDE CONNECTIONS TO EACH ROOF TOP UNIT FULL SIZE OF UNIT CONNECTION (MINIMUM 3/4" OR 1" AS NOTED ON ROOF PLANS).
9. PROVIDE CLEANOUTS IN ALL CONDENSATE DRAIN PIPING AT A MINIMUM OF EVERY 40'-0" ON CENTER AND AT ALL CHANGES OF DIRECTION.
10. EXPOSED DUCTWORK SHALL BE INTERNALLY LINED AND RECEIVE A PAINT GRIP FINISH SO THAT PAINT MAY BE APPLIED IN ACCORDANCE WITH ARCHITECTURAL PLANS AND SPECIFICATIONS.
11. ROUTE REFRIGERANT PIPING AS SHOWN. SIZE AS PER A/C UNIT MANUFACTURER'S RECOMMENDATIONS. COORDINATE ROUTING WITH OTHER TRADES.

KEY PLAN

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2025.05.28

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director VLK	Drawn By LCA
Designer VLK	Quality Control JCP
Proj. Arch. VLK	

PROJECT NO.

24-057.00

SHEET TITLE

FLOOR PLAN - LEVEL ONE - AREA B - MECHANICAL

SHEET NO.

M2.11B

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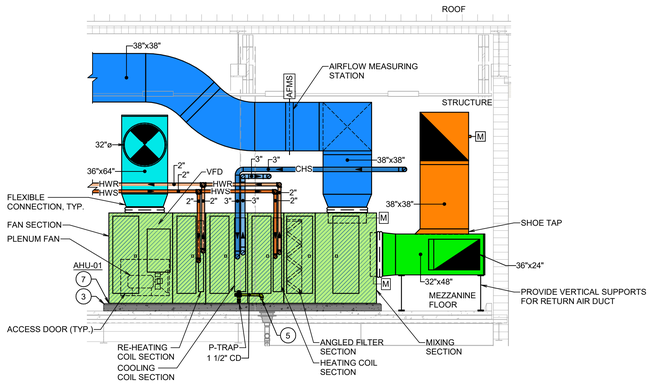

3 AHU-01 SECTION VIEW
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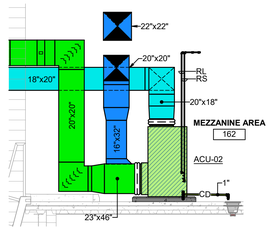

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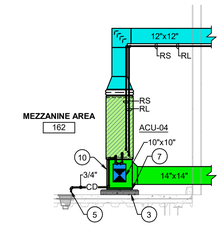

6 ACU-04 SECTION VIEW
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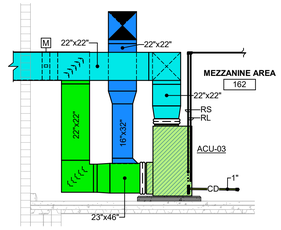
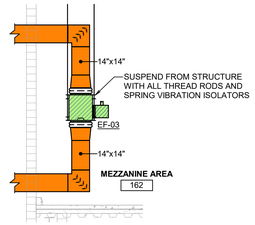
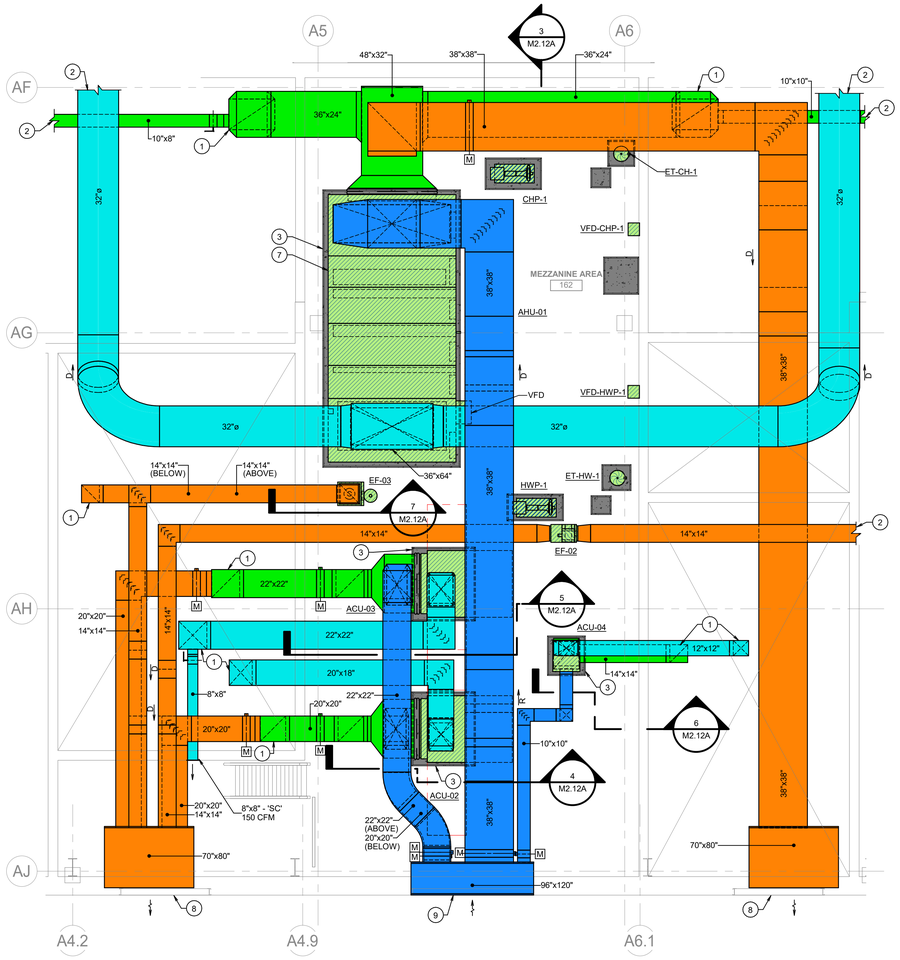


5 ACU-03 SECTION VIEW
SCALE: 1/4" = 1'-0"

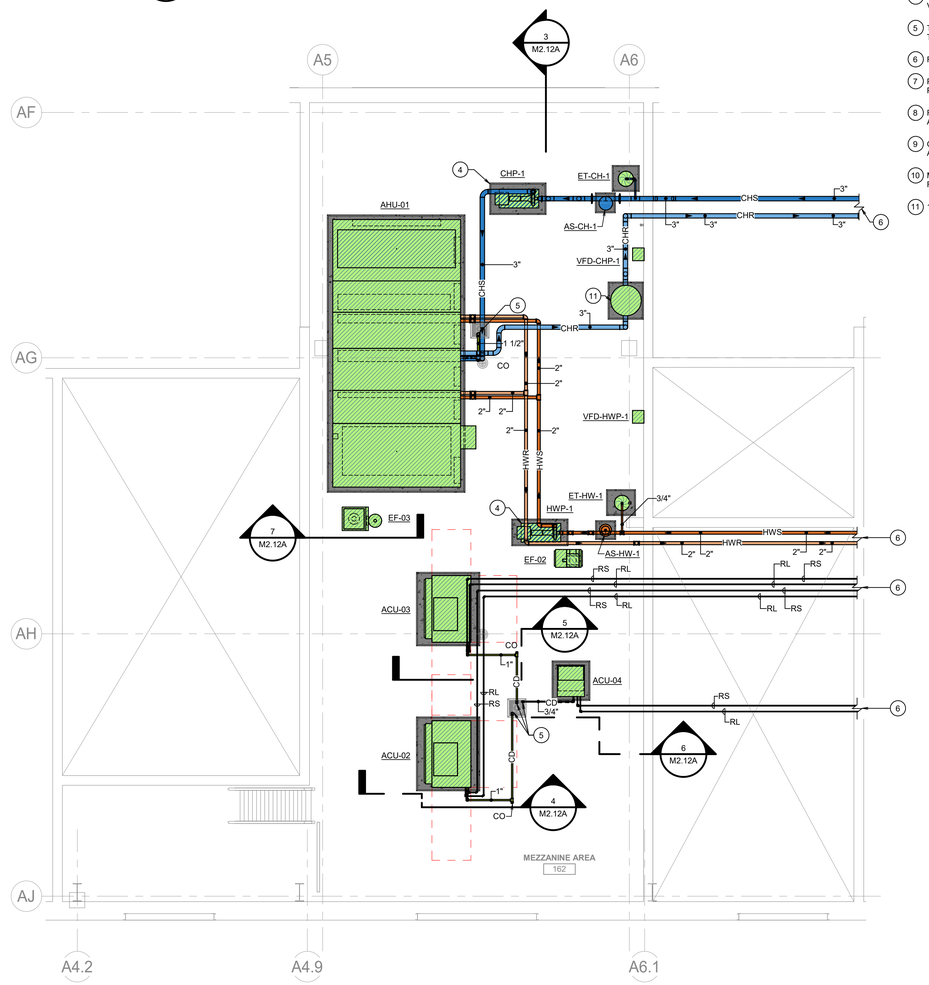


7 EF-03 SECTION VIEW
SCALE: 1/4" = 1'-0"



PLAN NORTH / TRUE NORTH

1 FLOOR PLAN - LEVEL TWO - MEZZANINE - HVAC
SCALE: 1/4" = 1'-0"



PLAN NORTH / TRUE NORTH

2 FLOOR PLAN - LEVEL TWO - MEZZANINE - HVAC PIPING
SCALE: 1/4" = 1'-0"

GENERAL MECHANICAL NOTES:

1. RECTANGULAR AND ROUND SUPPLY/RETURN AIR DUCTWORK IS TO BE EXTERNALLY INSULATED WITH 2" THICK ACOUSTICAL AND THERMAL WRAP TO MEET ENERGY CODE (ASHRAE 90.1 - 2007) REQUIREMENTS. RECTANGULAR TRANSFER AIR DUCT SHALL BE LINED WITH 1" LINER ONLY. DUCTWORK SIZES SHOWN ARE NET INTERNAL AIR STREAM DIMENSIONS. SHEET METAL SIZES ARE TO BE INCREASED IN SIZE TO MAINTAIN THESE INTERNAL CLEAR DIMENSIONS. ROUND DUCTWORK IS TO BE EXTERNALLY WRAPPED. FLEXIBLE ROUND DUCT SHALL HAVE A MINIMUM R-VALUE OF 6.0.
2. BRANCH RUN-OUTS TO CEILING/COVE MOUNTED AIR DEVICES SHALL BE SAME SIZE AS NECK, UNLESS NOTED OTHERWISE. PROVIDE A TWIST-IN FLARED TAP WITH MANUAL VOLUME DAMPER AT MAIN DUCT TAP AND EXTENDED HANDLE AS SHOWN (REFER TO SPECIFICATIONS FOR DETAILS). EXTEND FLEXIBLE DUCTWORK A MAXIMUM OF 5'-0" FROM DIFFUSERS, INSTALL STRAIGHT AS POSSIBLE WITH LONG RADIUS BENDS WITH CLAMPS TO BE USED AT BOTH ENDS.
3. ALL DUCTWORK SHALL BE RUN CONCEALED ABOVE CEILINGS AS HIGH AS POSSIBLE & CONCEALED IN WALLS, CHASES, OR FURROUTS IN GENERAL LOCATIONS SHOWN, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL COORDINATE WITH STRUCTURE, ARCHITECTURE, AND OTHER TRADES TO ENSURE CONFLICTS DO NOT OCCUR. ABOVE CEILING SPACE IS MINIMAL AND THE CEILINGS AND ROOF ARE VARIOUSLY SLOPED. CAUTION IS NECESSARY FOR PROPER INSTALLATION AND COORDINATION.
4. LOCATE CEILING MOUNTED AIR DEVICES APPROXIMATELY WHERE SHOWN. FOR EXACT LOCATION AND FRAME MOUNTING TYPES, REFER TO ARCHITECTURAL REFLECTED CEILING PLANS. ALL CEILING DIFFUSERS TO BE FOUR-WAY TYPE, UNLESS NOTED OTHERWISE BY AIR FLOW ARROWS ON FLOOR PLAN.
5. ALL ROOF PENETRATIONS, ROOF PIPE SUPPORTS, FLASHING, ETC., SHALL BE MADE WATERTIGHT AND BE AS RECOMMENDED BY THE ROOF SYSTEM MANUFACTURER. VERIFY WITH OWNER WHAT ACCEPTABLE ROOFING SYSTEMS INSTALLER CAN BE USED.
6. EXTEND DUCTWORK AS SHOWN THROUGH ROOF INSIDE CURB TO EACH DUCT CONNECTION TO/FROM A ROOF MOUNTED UNIT. TRANSITION TO FULL SIZE OF EQUIPMENT OPENING FROM DUCT SIZES SHOWN. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCT CONNECTIONS AT EACH ROOF MOUNTED UNIT.
7. SEAL ALL LONGITUDINAL AND TRANSVERSE DUCT JOINTS TO PREVENT DUCT AIR LEAKAGE TO INCLUDE DUCT AND ACCESSORY PENETRATIONS. DO NOT SEAL CONTROL/FIRE DAMPER CONTROL ROD PENETRATIONS. SEAL CLASS "A" REQUIRED.
8. MAIN CONDENSATE DRAIN LINES SHALL BE SIZED AND ROUTED AS SHOWN WITH A SLOPE OF 1/8"/1'-0". ROUTE CONDENSATE DRAIN PIPING THROUGH JOIST WEBBING, AS HIGH AS POSSIBLE WHILE MAINTAINING SLOPE. PROVIDE CONNECTIONS TO EACH ROOF TOP UNIT FULL SIZE OF UNIT CONNECTION (MINIMUM 3/4" OR 1" AS NOTED ON ROOF PLANS).
9. PROVIDE CLEANOUTS IN ALL CONDENSATE DRAIN PIPING AT A MINIMUM OF EVERY 40'-0" ON CENTER AND AT ALL CHANGES OF DIRECTION.
10. EXPOSED DUCTWORK SHALL BE INTERNALLY LINED AND RECEIVE A PAINT GRIP FINISH SO THAT PAINT MAY BE APPLIED IN ACCORDANCE WITH ARCHITECTURAL PLANS AND SPECIFICATIONS.
11. ROUTE REFRIGERANT PIPING AS SHOWN. SIZE AS PER A/C UNIT MANUFACTURER'S RECOMMENDATIONS. COORDINATE ROUTING WITH OTHER TRADES.

NOTES BY SYMBOL '⬡':

1. ROUTE DUCT TO/FROM BELOW. REFER TO SHEET M2.11A FOR CONTINUATION.
2. REFER TO SHEET M2.11A FOR CONTINUATION.
3. PROVIDE 6" TALL EQUIPMENT PAD WITH 1" CHAMFERRED EDGES.
4. MOUNT END-SUCTION PUMP ON CONCRETE INERTIA BASE WITH SPRING VIBRATION ISOLATORS. REFER TO DETAIL '_' ON SHEET M____.
5. TERMINATE CONDENSATE DRAIN PIPE OPEN SIGHT OVER FLOOR SINK. REFER TO PLUMBING PLANS FOR FLOOR SINK LOCATION.
6. REFER TO SHEET M3.11A FOR CONTINUATION.
7. PROVIDE NEOPRENE ISOLATION PAD BETWEEN UNIT AND HOUSEKEEPING PAD.
8. RELIEF AIR LOUVER WITH MINIMUM 20 SQ.FT. FREE AREA. REFER TO ARCHITECTURAL PLANS.
9. OUTSIDE AIR LOUVER WITH MINIMUM 40 SQ.FT. FREE AREA. REFER TO ARCHITECTURAL PLANS.
10. MOUNT AIR CONDITIONING INDOOR UNIT ON MANUFACTURER FURNISHED RETURN AIR PLENUM.
11. 120 GALLON CHILLED WATER BUFFER TANK, AMTROL MODEL #CWBT120.

KEY PLAN

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2025.05.28

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director VLK	Drawn By LCA
Designer VLK	Quality Control JCP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
FLOOR PLAN - LEVEL TWO - AREA A MEZZANINE - MECHANICAL

SHEET NO.
M2.12A

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DATE/TIME:5/28/2025 12:57:28 PM
PLOT SCALE:As indicated

GENERAL MECHANICAL NOTES:

1. RECTANGULAR AND ROUND SUPPLY/RETURN AIR DUCTWORK IS TO BE EXTERNALLY INSULATED WITH 2" THICK ACOUSTICAL AND THERMAL WRAP TO MEET ENERGY CODE (ASHRAE 90.1 - 2007) REQUIREMENTS. RECTANGULAR TRANSFER AIR DUCT SHALL BE LINED WITH 1" LINER ONLY. DUCTWORK SIZES SHOWN ARE NET INTERNAL AIR STREAM DIMENSIONS. SHEET METAL SIZES ARE TO BE INCREASED IN SIZE TO MAINTAIN THESE INTERNAL CLEAR DIMENSIONS. ROUND DUCTWORK IS TO BE EXTERNALLY WRAPPED. FLEXIBLE ROUND DUCT SHALL HAVE A MINIMUM R-VALUE OF 6.0.
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5. ALL ROOF PENETRATIONS, ROOF PIPE SUPPORTS, FLASHING, ETC., SHALL BE MADE WATERTIGHT AND BE AS RECOMMENDED BY THE ROOF SYSTEM MANUFACTURER. VERIFY WITH OWNER WHAT ACCEPTABLE ROOFING SYSTEMS INSTALLER CAN BE USED.
6. EXTEND DUCTWORK AS SHOWN THROUGH ROOF INSIDE CURB TO EACH DUCT CONNECTION TO/FROM A ROOF MOUNTED UNIT. TRANSITION TO FULL SIZE OF EQUIPMENT OPENING FROM DUCT SIZES SHOWN. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCT CONNECTIONS AT EACH ROOF MOUNTED UNIT.
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8. MAIN CONDENSATE DRAIN LINES SHALL BE SIZED AND ROUTED AS SHOWN WITH A SLOPE OF 1/8"/1'-0". ROUTE CONDENSATE DRAIN PIPING THROUGH JOIST WEBBING, AS HIGH AS POSSIBLE WHILE MAINTAINING SLOPE. PROVIDE CONNECTIONS TO EACH ROOF TOP UNIT FULL SIZE OF UNIT CONNECTION (MINIMUM 3/4" OR 1" AS NOTED ON ROOF PLANS).
9. PROVIDE CLEANOUTS IN ALL CONDENSATE DRAIN PIPING AT A MINIMUM OF EVERY 40'-0" ON CENTER AND AT ALL CHANGES OF DIRECTION.
10. EXPOSED DUCTWORK SHALL BE INTERNALLY LINED AND RECEIVE A PAINT GRIP FINISH SO THAT PAINT MAY BE APPLIED IN ACCORDANCE WITH ARCHITECTURAL PLANS AND SPECIFICATIONS.
11. ROUTE REFRIGERANT PIPING AS SHOWN. SIZE AS PER A/C UNIT MANUFACTURER'S RECOMMENDATIONS. COORDINATE ROUTING WITH OTHER TRADES.

NOTES BY SYMBOL '◯':

1. REFER TO SHEET M2.12A FOR CONTINUATION.
2. HEATING WATER BOILER, REFER TO DETAIL '_' ON SHEET M____.
3. AIR-COOLED CHILLER, REFER TO DETAIL '_' ON SHEET M____.
4. ROUTE CONDENSATE DRAIN PIPING DOWN ALONG WALL. SECURE VERTICAL PIPE TO WALL IN A MIN. THREE (3) LOCATIONS (HIGH, MIDDLE, LOW). ROUTE PIPE OVER MOP SINK AND TERMINATE OPEN SITE OVER MOP SINK.
5. ROUTE REFRIGERANT PIPING TO/FROM ASSOCIATED INDOOR UNIT. SIZE PIPING PER MANUFACTURERS RECOMMENDATIONS.
6. PROVIDE HEAT TRACE AND ALUMINUM JACKETING FOR CHILLED WATER PIPING ROUTED OUTDOORS.
7. CHILLED WATER PIPE SUPPORT, REFER TO DETAIL '3' ON SHEET M6.01.

PLAN NORTH / TRUE NORTH

1 FLOOR PLAN - LEVEL ONE - AREA A - HVAC PIPING
SCALE: 1/8" = 1'-0"

KEY PLAN

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2025.05.28

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director VLK	Drawn By LCA
Designer VLK	Quality Control JCP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
FLOOR PLAN - LEVEL ONE - AREA A - HVAC PIPING

SHEET NO.
M3.11A

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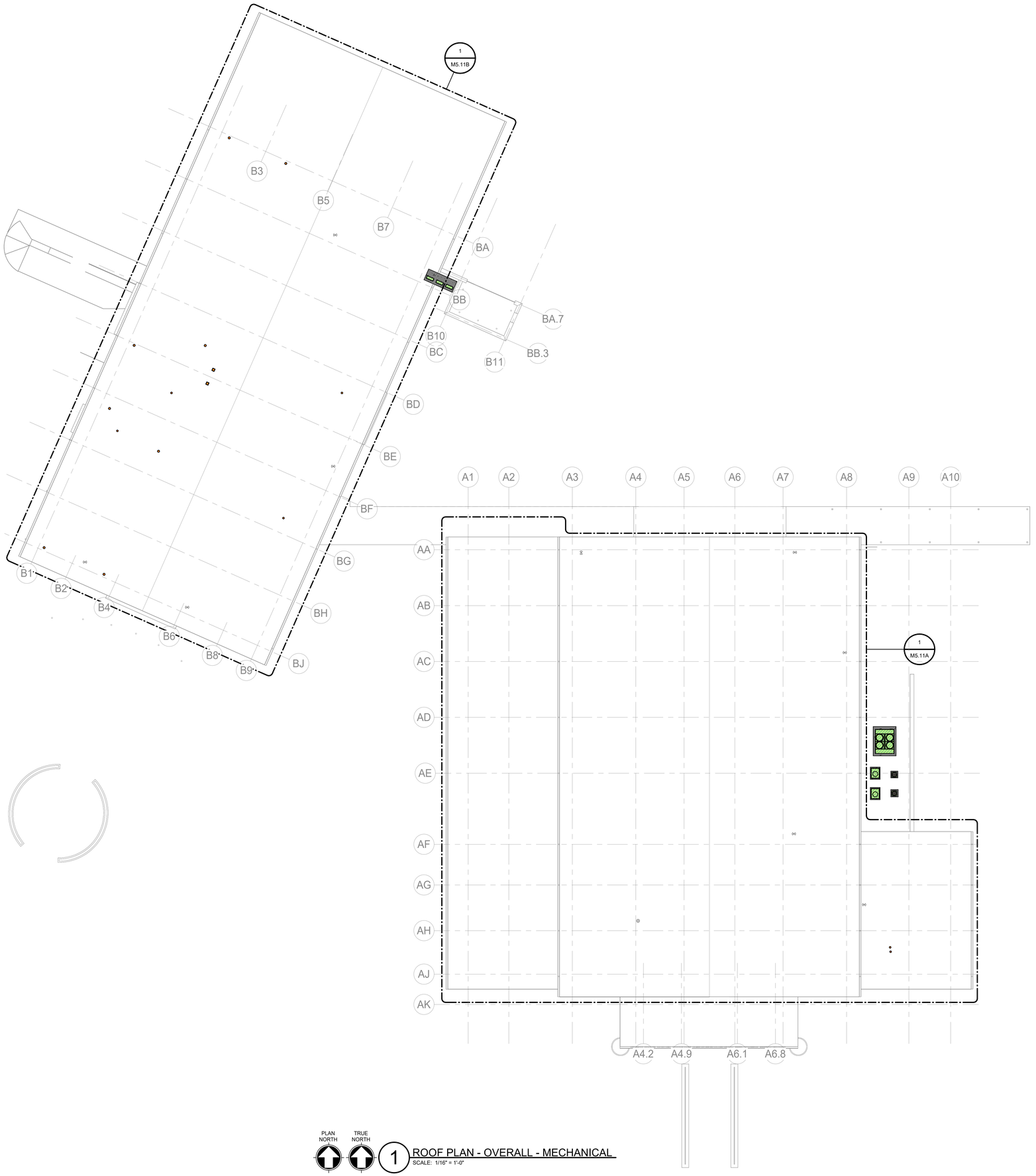

PLAN NORTH / TRUE NORTH

1 ROOF PLAN - OVERALL - MECHANICAL
SCALE: 1/16" = 1'-0"

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Director	Drawn By
VLK	LCA
Designer	Quality Control
VLK	JCP
Proj. Arch.	
VLK	

PROJECT NO.
24-057.00

SHEET TITLE
FLOOR PLAN - ROOF - OVERALL - MECHANICAL

SHEET NO.
M5.11

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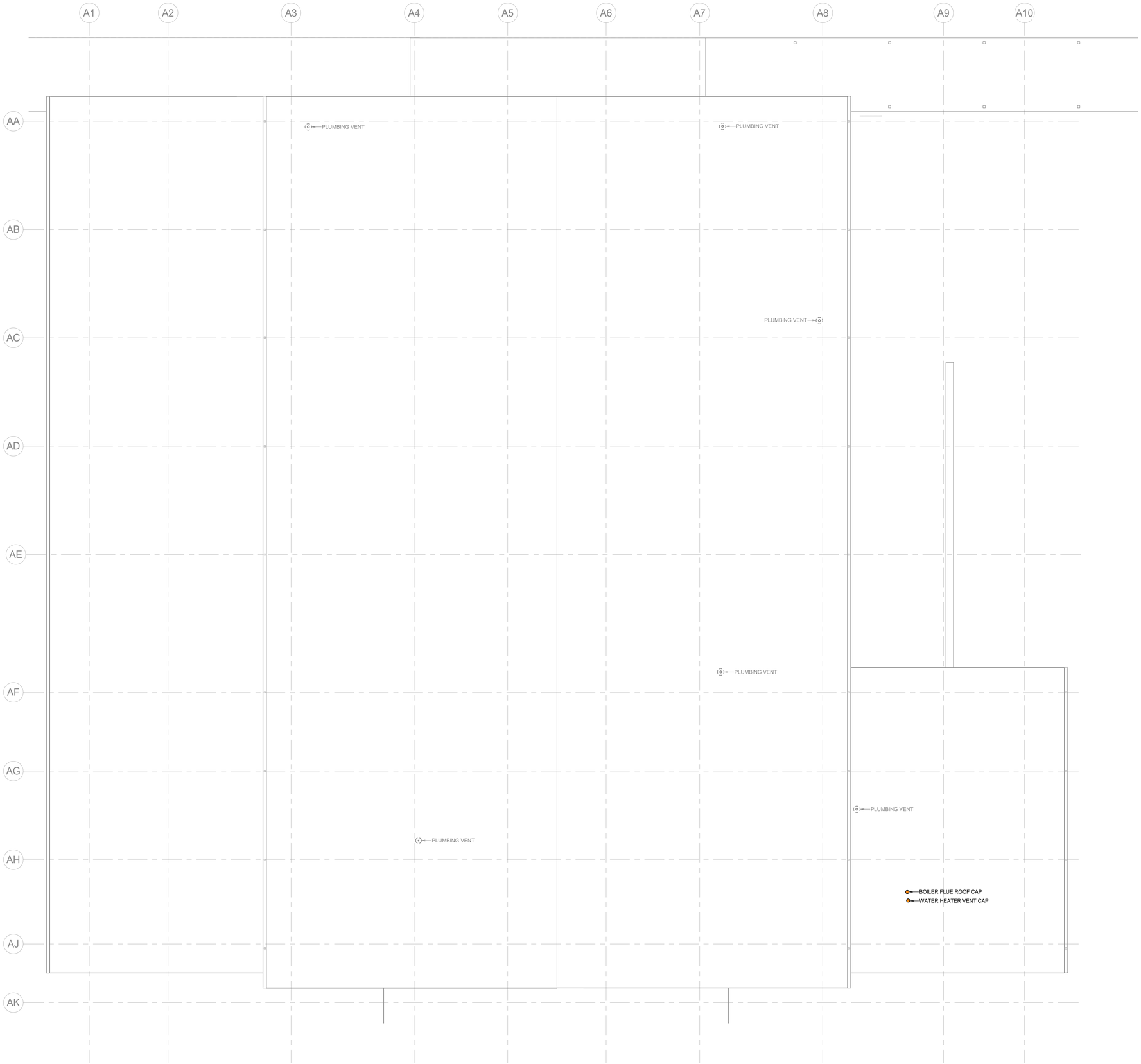

GENERAL MECHANICAL ROOF PLAN NOTES:

1. ALL ROOF PENETRATIONS SHALL BE MADE WATERTIGHT AND BE AS RECOMMENDED BY THE ROOF SYSTEM MANUFACTURER. REFER TO ARCHITECTURAL AND ROOFING SYSTEM CONSULTANT DRAWINGS.
2. LOCATE EQUIPMENT ON ROOF IN GENERAL LOCATIONS SHOWN.
3. MAINTAIN A MINIMUM OF 25'-0" CLEARANCE FROM PLUMBING VENTS AND EXHAUST FANS AND OUTSIDE AIR INTAKES.
4. COORDINATE ALL WORK WITH STRUCTURAL AND ROOFING SYSTEMS INSTALLED TO INCLUDE SUPPORTS FOR EQUIPMENT.
5. ALL OUTDOOR ELECTRICAL DISCONNECT SWITCHES SHALL BE WEATHERPROOF.

PLAN NORTH / TRUE NORTH

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

B
A
KEY PLAN

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SHEET TITLE
FLOOR PLAN - ROOF - AREA A - MECHANICAL

SHEET NO.
M5.11A

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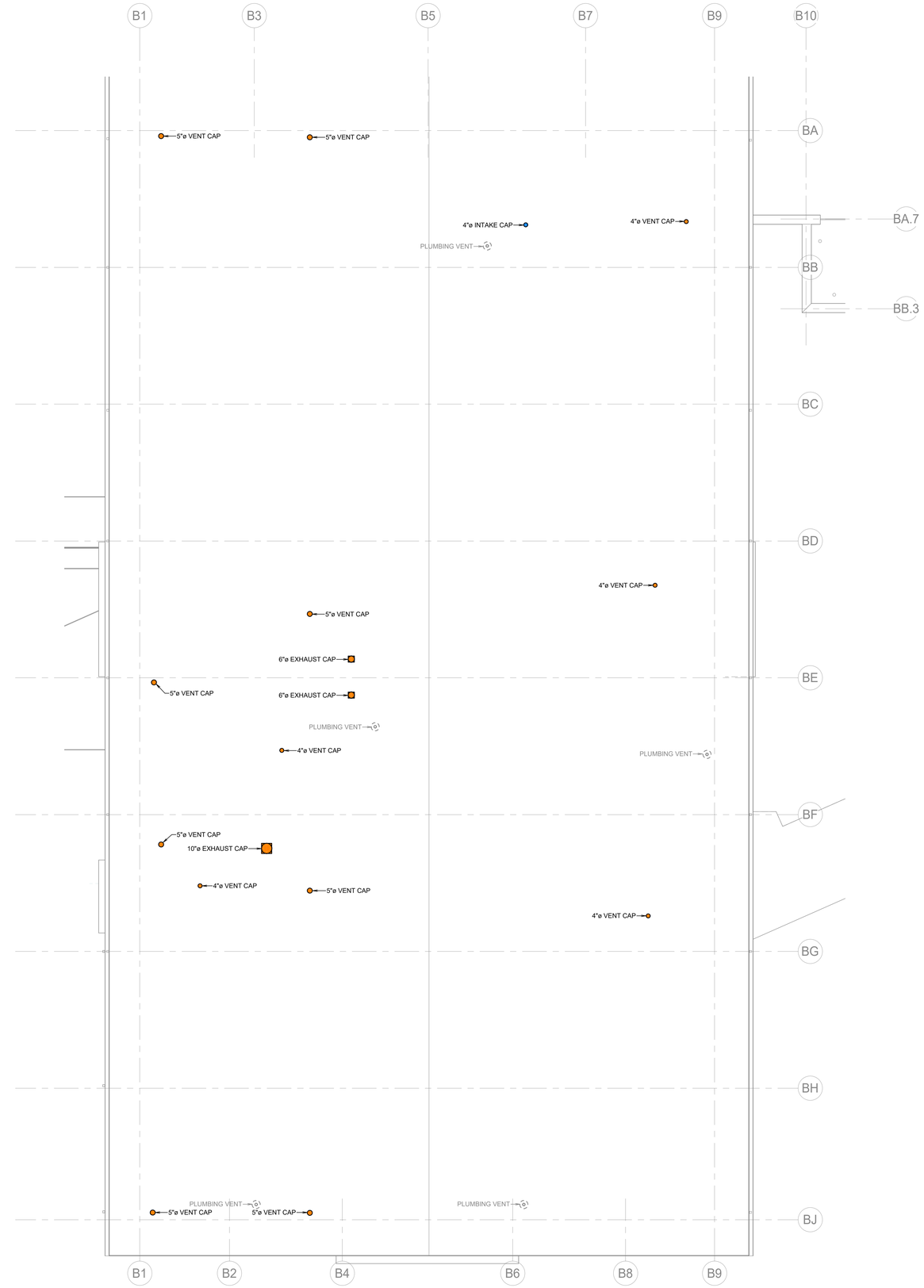

PLAN NORTH / TRUE NORTH

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

GENERAL MECHANICAL ROOF PLAN NOTES:

1. ALL ROOF PENETRATIONS SHALL BE MADE WATERTIGHT AND BE AS RECOMMENDED BY THE ROOF SYSTEM MANUFACTURER. REFER TO ARCHITECTURAL AND ROOFING SYSTEM CONSULTANT DRAWINGS.
2. LOCATE EQUIPMENT ON ROOF IN GENERAL LOCATIONS SHOWN.
3. MAINTAIN A MINIMUM OF 25'-0" CLEARANCE FROM PLUMBING VENTS AND EXHAUST FANS AND OUTSIDE AIR INTAKES.
4. COORDINATE ALL WORK WITH STRUCTURAL AND ROOFING SYSTEMS INSTALLED TO INCLUDE SUPPORTS FOR EQUIPMENT.
5. ALL OUTDOOR ELECTRICAL DISCONNECT SWITCHES SHALL BE WEATHERPROOF.

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2025.05.28

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SHEET TITLE
FLOOR PLAN - ROOF - AREA B - MECHANICAL

SHEET NO.
M5.11B

KEY PLAN

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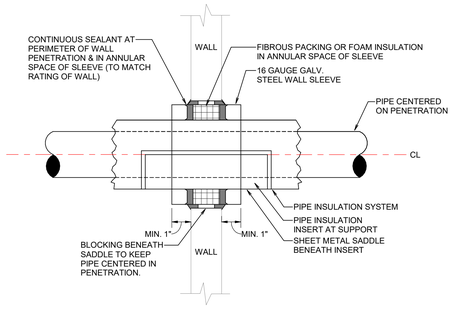

1 BUILDING WALL PIPE PENETRATION DETAIL
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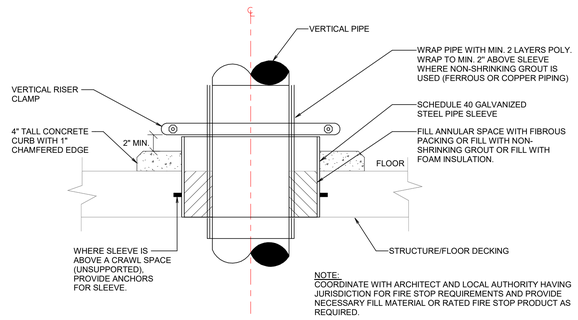

2 FLOOR PIPE PENETRATION DETAIL
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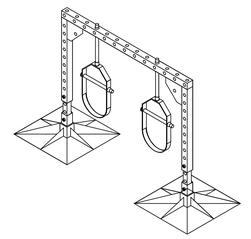
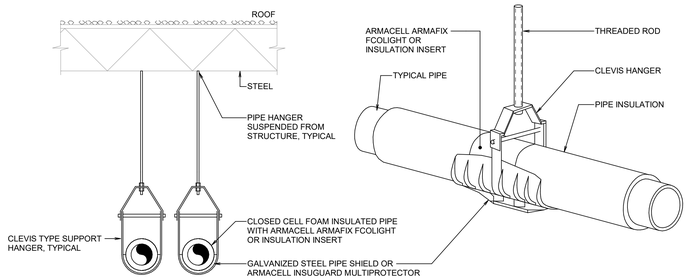
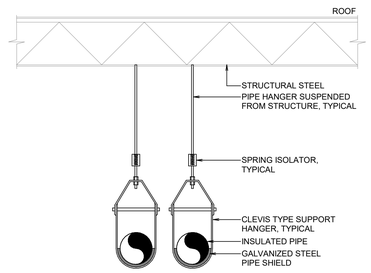


NOTE: PORTABLE PIPE HANGERS, INC. TYPE PSE-CUSTOM.

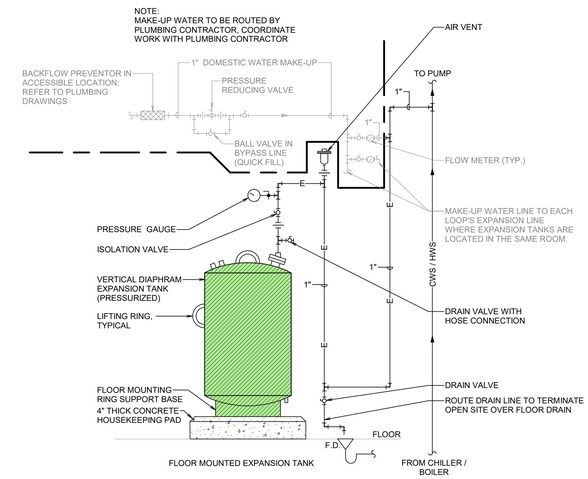
3 CHS/R, HWS/R PIPE SUPPORT DETAIL
NO SCALE



4 INDOOR CLOSED CELL FOAM INSULATED PIPE SUPPORT DETAIL
NO SCALE

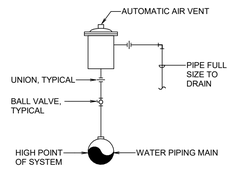


5 INDOOR ABOVE CEILING PIPE SUPPORT DETAIL
NO SCALE



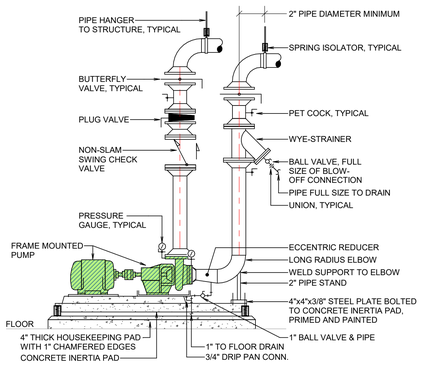
NOTES:
1. REFER TO EXPANSION TANK MANUFACTURER'S INFORMATION FOR SPECIFIC CONNECTION LOCATIONS ON THE SELECTED TANK. ADJUST EXPANSION PIPE ROUTING AS REQUIRED FOR TANK'S PIPE CONNECTIONS.
2. FOR HORIZONTAL TANK INSTALLATION, SUSPEND TANK FROM STRUCTURE HORIZONTALLY AND ROUTE EXPANSION LINE FROM AIR VENT TO TANK SYSTEM CONNECTION. THE HOUSEKEEPING PAD IS NOT REQUIRED WHEN THE TANK IS SUSPENDED. PROVIDE NECESSARY SUSPENSION PRODUCTS / MATERIALS WHEN INSTALLING TANKS HORIZONTALLY.

6 EXPANSION TANK PIPING CONNECTION DETAIL
NO SCALE

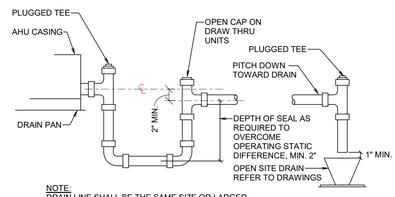


NOTE: PROVIDE AT ALL HIGH POINTS IN SYSTEM.

7 AIR VENT (AUTOMATIC) DETAIL
NO SCALE



8 END SUCTION PUMP DETAIL
NO SCALE



NOTE:
DRAIN LINE SHALL BE THE SAME SIZE OR LARGER THAN THE CONNECTIONON THE DRAIN PAN. NO LINE SMALLER THAN 3/4" SHALL BE ALLOWED.

9 TYPICAL AHU/FCU CONDENSATE DRAIN TRAP DETAIL
NO SCALE

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

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2025.05.28

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
VLK	LCA
Designer	Quality Control
VLK	JCP
Proj. Arch.	
VLK	

PROJECT NO.
24-057.00

SHEET TITLE
DETAILS - MECHANICAL

SHEET NO.
M6.01

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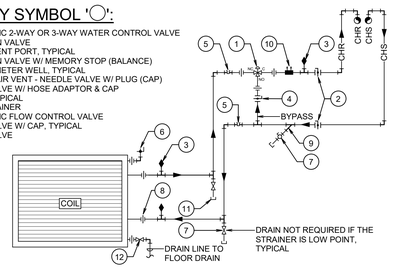
DATE/TIME:5/29/2025 12:57:39 PM
PLOT SCALE: 12" = 1'-0"

NOTES BY SYMBOL '◯':

1. AUTOMATIC 2-WAY OR 3-WAY WATER CONTROL VALVE
2. ISOLATION VALVE
3. INSTRUMENT PORT, TYPICAL
4. ISOLATION VALVE W/ MEMORY STOP (BALANCE)
5. THERMOMETER WELL, TYPICAL
6. MANUAL AIR VENT - NEEDLE VALVE W/ PLUG (CAP)
7. DRAIN VALVE W/ HOSE ADAPTOR & CAP
8. UNION, TYPICAL
9. WYE STRAINER
10. AUTOMATIC FLOW CONTROL VALVE
11. DRAIN VALVE W/ CAP, TYPICAL
12. DRAIN VALVE



NOTES:

1. ALL COILS SHALL HAVE 2-WAY VALVES EXCEPT WHERE INDICATED OTHERWISE ON DRAWINGS TO HAVE 3-WAY VALVES. FOR TWO WAY VALVES, REMOVE BYPASS PIPING.
2. ALL COILS SHALL BE PIPED WITH WATER FLOW COUNTER TO AIR FLOW.
3. PIPE COILS WITH PROVISIONS FOR COIL AND FILTER REMOVAL & ACCESS.
4. PIPE DRAINS TO FLOOR DRAINS WHEN IN MECHANICAL ROOMS. DO NOT DOUBLE TRAP DRAIN LINE.
5. PROVIDE FOR AIR VENTS IN ALL HIGH POINTS OF PIPING AND DRAINS IN ALL LOW POINTS.
6. COIL DRAIN TO BE AT LOW POINT OF PIPING SYSTEM.
7. PIPE CONTROL VALVES AND VALVES WITH VALVE STEMS IN THE VERTICAL AND POINTED UP.

1 SINGLE CHILLED WATER COIL CONNECTION DETAIL - AHU
NO SCALE

NOTES BY SYMBOL '◯':

1. AUTOMATIC 2-WAY OR 3-WAY WATER CONTROL VALVE
2. ISOLATION VALVE
3. INSTRUMENT PORT, TYPICAL
4. ISOLATION VALVE W/ MEMORY STOP (BALANCE)
5. THERMOMETER WELL, TYPICAL
6. MANUAL AIR VENT - NEEDLE VALVE W/ PLUG (CAP)
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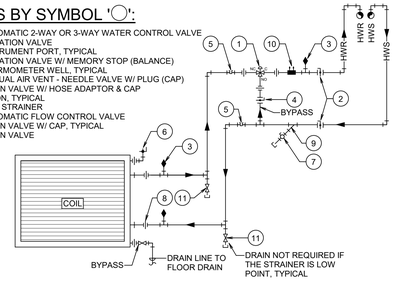
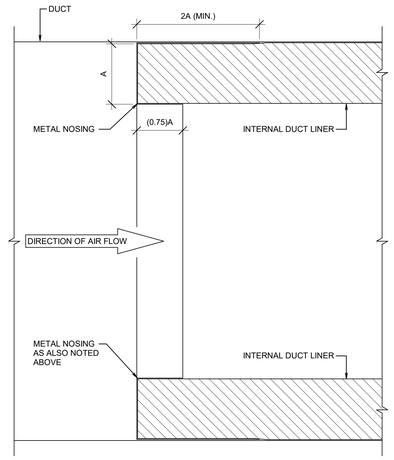
8. UNION, TYPICAL
9. WYE STRAINER
10. AUTOMATIC FLOW CONTROL VALVE
11. DRAIN VALVE W/ CAP, TYPICAL
12. DRAIN VALVE



NOTES:

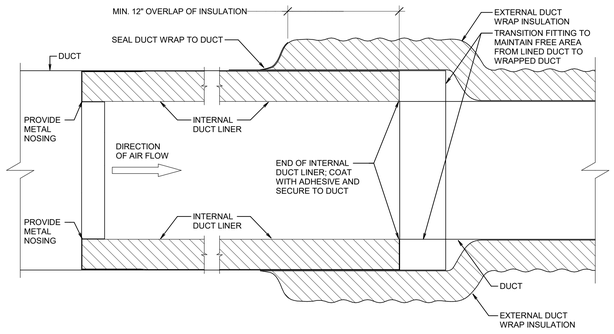
1. ALL COILS SHALL HAVE 2-WAY VALVES EXCEPT WHERE INDICATED OTHERWISE ON DRAWINGS TO HAVE 3-WAY VALVES. FOR TWO WAY VALVES, REMOVE BYPASS PIPING.
2. ALL COILS SHALL BE PIPED WITH WATER FLOW COUNTER TO AIR FLOW.
3. PIPE COILS WITH PROVISIONS FOR COIL AND FILTER REMOVAL & ACCESS.
4. PIPE DRAINS TO FLOOR DRAINS WHEN IN MECHANICAL ROOMS. DO NOT DOUBLE TRAP DRAIN LINE.
5. PROVIDE FOR AIR VENTS IN ALL HIGH POINTS OF PIPING AND DRAINS IN ALL LOW POINTS.
6. COIL DRAIN TO BE AT LOW POINT OF PIPING SYSTEM.
7. PIPE CONTROL VALVES AND VALVES WITH VALVE STEMS IN THE VERTICAL AND POINTED UP.

2 SINGLE HEATING WATER COIL CONNECTION DETAIL - AHU
NO SCALE

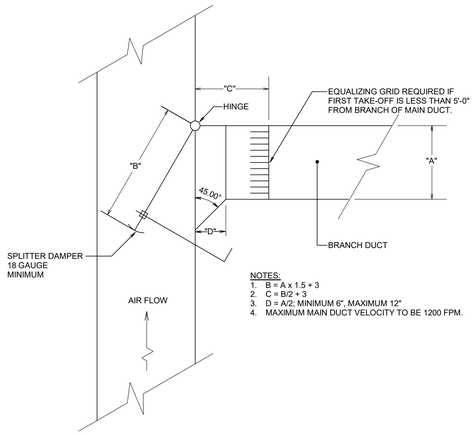


NOTE:
METAL NOSING SHALL BE USED WHEREVER LINER IS PRECEDED BY UNLINED METAL. IT SHALL ALSO BE USED ON LEADING EDGES.

3 DUCT INSULATION DETAIL - NOSINGS
NO SCALE

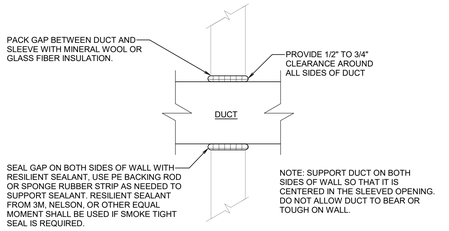


4 DUCT INSULATION DETAIL - TRANSITION FROM INTERNAL TO EXTERNAL
NO SCALE

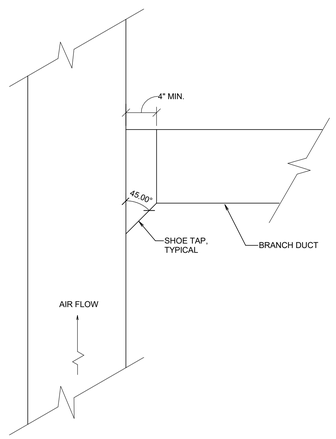


NOTES:
1. B = A x 1.5 + 3
2. C = B/2 + 3
3. D = A/2; MINIMUM 6", MAXIMUM 12"
4. MAXIMUM MAIN DUCT VELOCITY TO BE 1200 FPM.

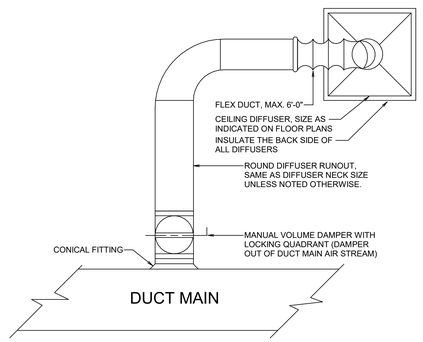
5 BRANCH DUCT DETAIL
NO SCALE



6 SOUND RATED WALL DUCT PENETRATION DETAIL
NO SCALE

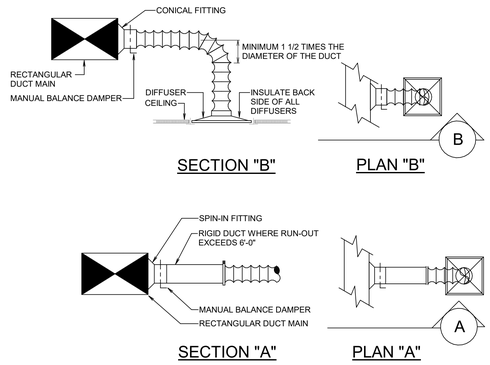


7 SHOE TAP DETAIL
NO SCALE



8 ROUND DIFFUSER TAP DETAIL
NO SCALE

NOTES:
1. FOR ROUND DUCT USE STRAIGHT SPIN-IN TYPE FITTINGS WITH SEPARATE LOCKING HANDLE BALANCING DAMPERS IN ALL AREAS WITH LAY-IN CEILINGS.
2. IN AREAS WITH HARD CEILINGS, USE SPIN-IN FITTINGS AND DAMPERS WITH REMOTE BALANCING DAMPER (SEE SPECIFICATIONS FOR REQUIREMENTS) LOCATED ON THE CEILING. ALTERNATELY PROVIDE CEILING ACCESS DOORS LARGE ENOUGH TO FACILITATE AIR BALANCING. THE NUMBER OF ACCESS PANELS SHALL BE MINIMIZED AND CONSOLIDATED. ALL ACCESS PANEL LOCATIONS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION.
3. MAXIMUM LENGTH OF FLEXIBLE DUCT USED SHALL NOT EXCEED 6'-0".
4. RIGID AND FLEX DUCT DIAMETER TO BE EQUAL TO NECK SIZE SHOWN UNLESS SPECIFICALLY NOTED OTHERWISE.
5. FLEXIBLE DUCT DROPS SHOULD BE STRAIGHT DOWN TO THE DIFFUSER NECK WITH NO MORE THAN A 10° OFFSET FROM THE VERTICAL. PROVIDE A SMOOTH RADIUS TURN BEFORE THE DROP AS DETAILED.



9 SUPPLY DIFFUSER DETAILS
NO SCALE

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2025.05.28

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
VLK	LCA
Designer	Quality Control
VLK	JCP
Proj. Arch.	
VLK	

PROJECT NO.
24-057.00

SHEET TITLE
DETAILS - MECHANICAL

SHEET NO.
M6.02

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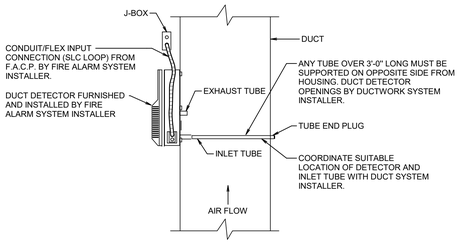

1 DUCT DETECTOR MOUNTING DETAIL
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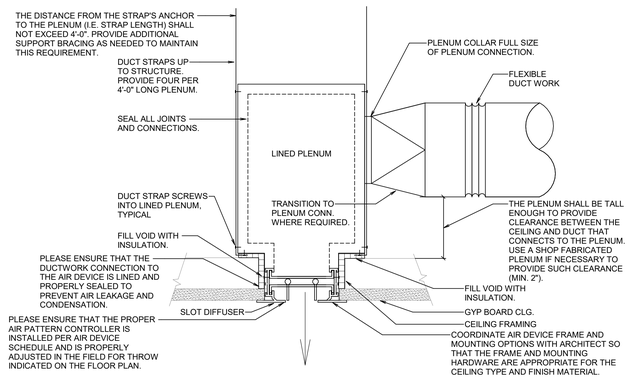

2 LINEAR SLOT DIFFUSER CEILING MOUNTING & HANGER DETAIL
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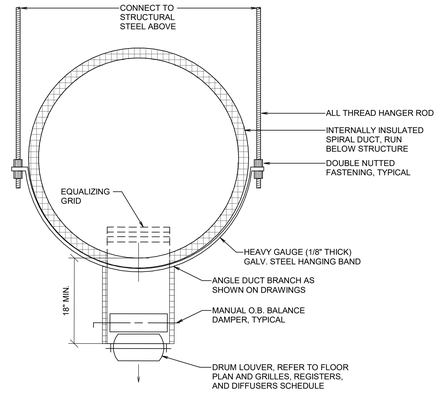

3 ARENA DUCTWORK DIFFUSER SECTION DETAIL
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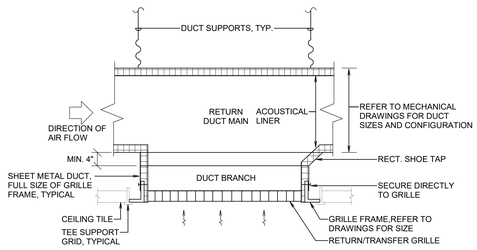

4 RETURN/TRANSFER AIR GRILLE
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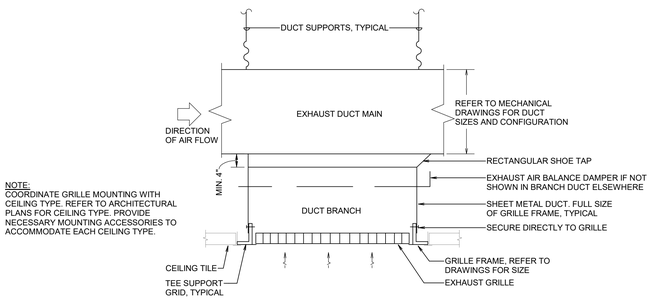

5 EXHAUST GRILLE DETAIL
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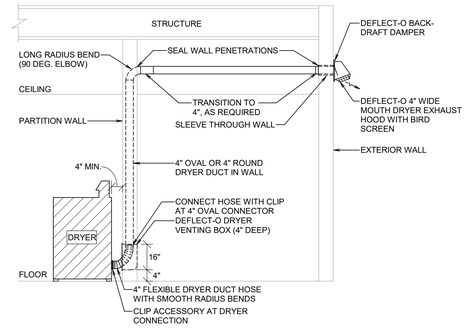

6 DRYER DUCTWORK DETAIL
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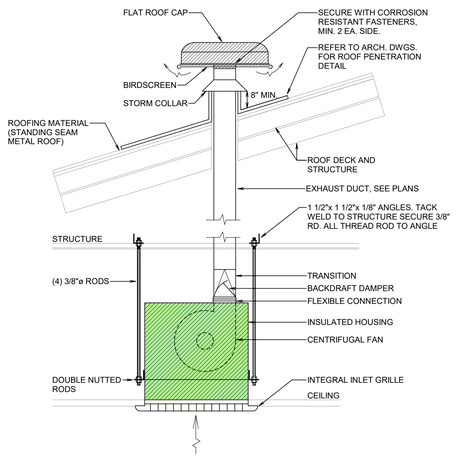
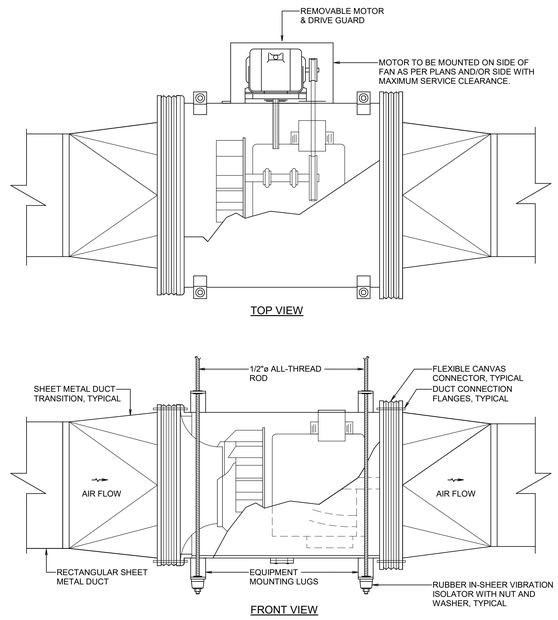
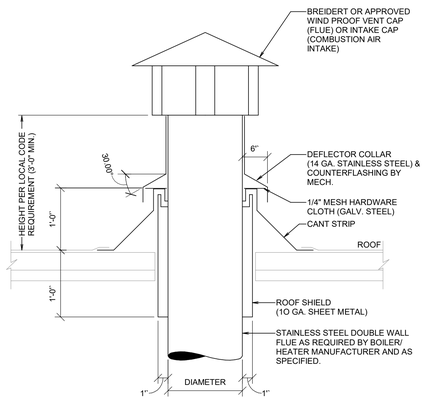


7 CEILING (SLOPED) EXHAUST FAN WTH ROOF CAP DETAIL
NO SCALE



8 IN-LINE CENTRIFUGAL EXHAUST FAN DETAIL
NO SCALE



9 VENTING TERMINAL DEVICE DETAIL
NO SCALE

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2025.05.28

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director VLK	Drawn By LCA
Designer VLK	Quality Control JCP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
DETAILS - MECHANICAL

SHEET NO.
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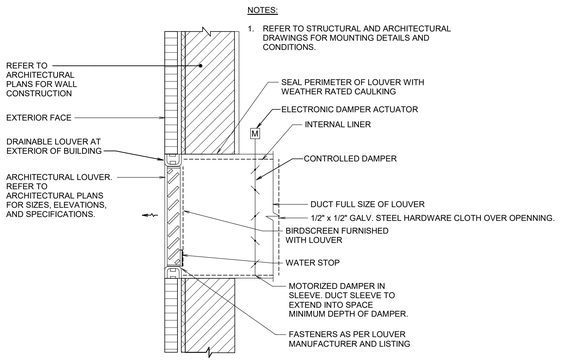
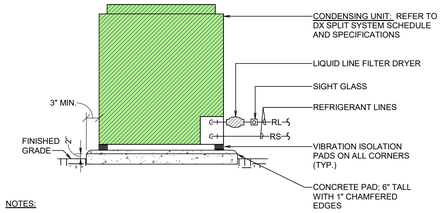
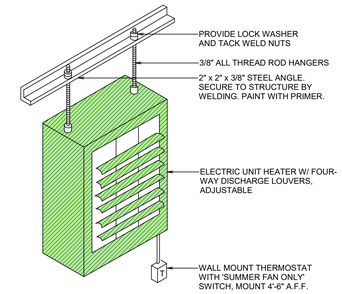


1 LOUVER AND CONTROL DAMPER DETAIL
NO SCALE



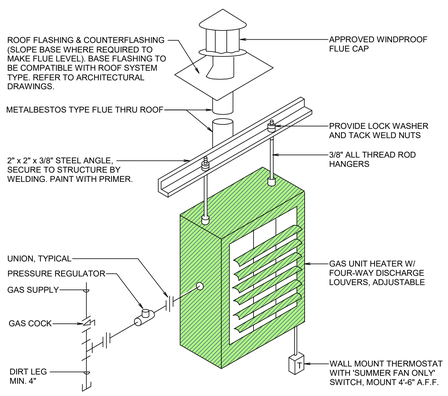
NOTES:
1. REFRIGERANT LINES SHALL BE SIZED AND PIPED FROM EVAPORATOR COIL AT INDOOR AIR HANDLING UNIT TO CONDENSING UNIT BASED ON MANUFACTURERS RECOMMENDATIONS.
2. ROUTE LINES IN EXTERIOR WALL, ON THE INTERIOR SIDE OF THE WALL INSULATION AND ABOVE CEILING ACCORDING TO JOB SITE CONDITIONS TO CONDENSING UNIT.
3. COMBINE CONDENSING UNITS ONTO ONE CONTINUOUS FORMED & POURED CONCRETE PAD W/ CHAMFERED EDGES WHERE POSSIBLE AND AS SHOWN. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS.
4. CLEARANCES FROM UNITS TO WALLS AND SCREENED ENCLOSURES SHALL BE BASED ON THE MANUFACTURERS RECOMMENDATIONS AND REQUIREMENTS. EACH UNIT SHALL BE SUPPORTED (ADDED SUPPORTS), AS REQUIRED TO KEEP TOP OF EACH UNIT EQUAL TO THE TOP OF ANY ENCLOSING WALLS.

2 CONDENSING UNIT DETAIL
NO SCALE



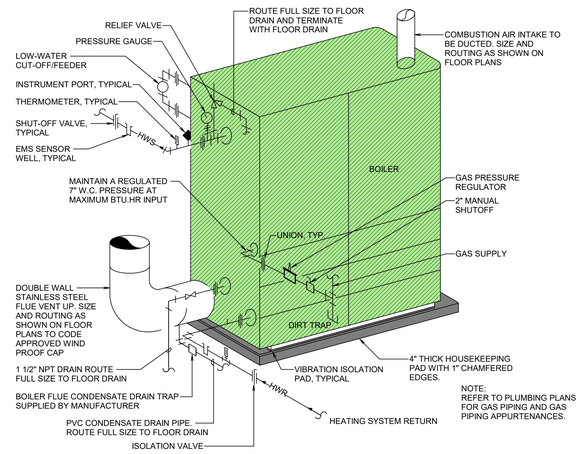
NOTES:
1. ALTERNATE UNIT MOUNTING IS TO USE MANUFACTURE SUPPLIED WALL MOUNTING BRACKET.
2. WHERE INTERLOCKED WITH EXHAUST FAN PROVIDE HEATING-COOLING THERMOSTAT AND ADJUST TO PREVENT SIMULTANEOUS HEATING AND EXHAUST.

3 UNIT HEATER DETAIL - ELECTRIC
NO SCALE



NOTES:
1. ALTERNATE UNIT MOUNTING IS TO USE MANUFACTURE SUPPLIED WALL MOUNTING BRACKET.
2. WHERE HEATER IS INTERLOCKED WITH EXHAUST FAN PROVIDE COMBINATION HEATING-COOLING THERMOSTAT.

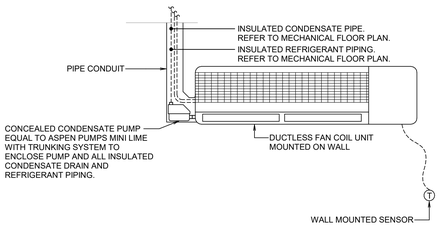
4 UNIT HEATER DETAIL - GAS FIRED
NO SCALE



5 CONDENSING BOILER PIPING DETAIL
NO SCALE

NOTES:
1. HEAT TRACE, INSULATE AND JACKET ALL WATER FILLED PIPING INCLUDING DRAIN AND ACCESSORIES.
2. FLOW SWITCH IS TO BE LOCATED INDOORS.

6 AIR COOLED CHILLER DETAIL
NO SCALE



NOTES:
1. REFER TO MECH FLOOR PLANS FOR EQUIPMENT LOCATIONS, SIZES, TYPES, ETC. AND CONTINUATION OF ALL PIPING AND GENERAL NOTES.
2. MINIMUM MOUNTING HEIGHT = 6'-0" A.F.F.

7 TYPICAL DUCTLESS FAN COIL A/C UNIT W/ CONDENSATE PUMP DETAIL
NO SCALE

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2025.05.28

ISSUED: May 29, 2025

REVISIONS

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Director VLK	Drawn By LCA
Designer VLK	Quality Control JCP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
DETAILS - MECHANICAL

SHEET NO.
M6.04

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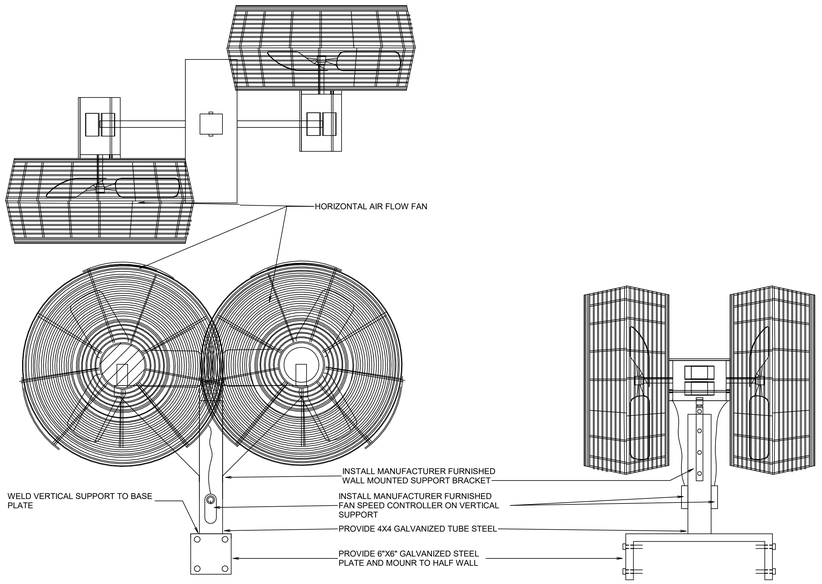
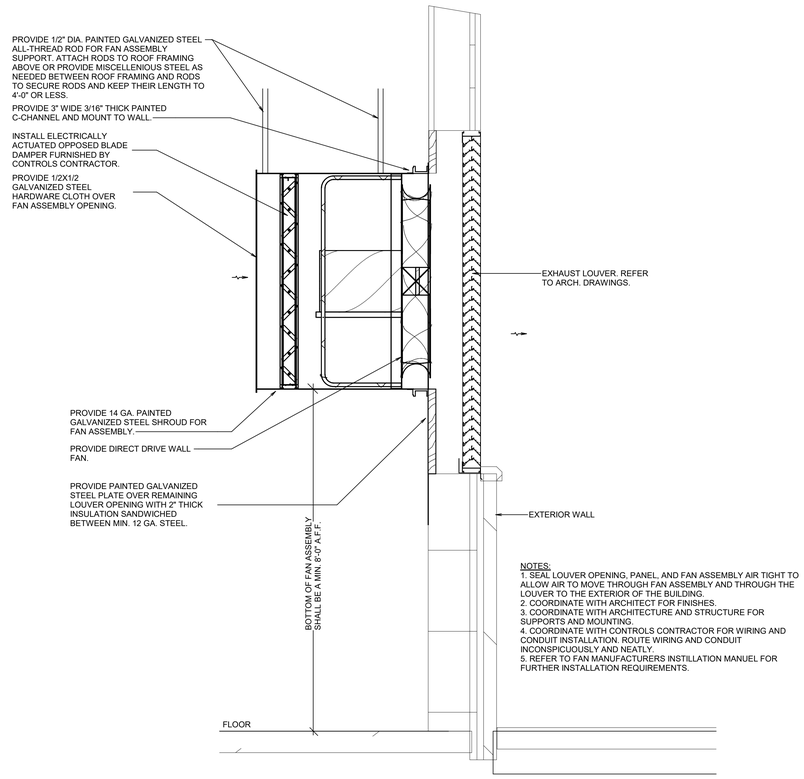


1 VENTILATION FAN DETAIL
NO SCALE



NOTES:
1. SEAL LOUVER OPENING, PANEL, AND FAN ASSEMBLY AIR TIGHT TO ALLOW AIR TO MOVE THROUGH FAN ASSEMBLY AND THROUGH THE LOUVER TO THE EXTERIOR OF THE BUILDING.
2. COORDINATE WITH ARCHITECT FOR FINISHES.
3. COORDINATE WITH ARCHITECTURE AND STRUCTURE FOR SUPPORTS AND MOUNTING.
4. COORDINATE WITH CONTROLS CONTRACTOR FOR WIRING AND CONDUIT INSTALLATION. ROUTE WIRING AND CONDUIT INCONSPICUOUSLY AND NEATLY.
5. REFER TO FAN MANUFACTURERS INSTILLATION MANUEL FOR FURTHER INSTALLATION REQUIREMENTS.

2 VENTILATION FAN DETAIL
NO SCALE

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
JOSEPH C. PROCTOR
132777
LICENSED
PROFESSIONAL ENGINEER
2025.05.28

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director VLK	Drawn By LCA
Designer VLK	Quality Control JCP
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
DETAILS - MECHANICAL

SHEET NO.
M6.05

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FILE PATH: Autodesk Docs://E_EMS ISD_24-057.00_Agriculture Science Center/24117.EMS ISD New Agricultural Science-MEP-r24.rvt
DATE/TIME:5/28/2025 12:47:43 PM
PLOT SCALE: 12" = 1'-0"

GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE

DESIGNATION	TYPE	MOUNTING TYPE	MATERIAL	FINISH	MAX N.C. LEVEL	OPPOSED BLADE DAMPER	EQUALIZING GRID	MANUFACTURER	MODEL	DESCRIPTION
SA	SUPPLY AIR DIFFUSER - LOUVERED	LAY-IN OR SURFACE	STEEL	WHITE	30	No	No	TITUS	OMNI	12"x12" FACE
SB	SUPPLY AIR DIFFUSER - LOUVERED	LAY-IN OR SURFACE	STEEL	WHITE	30	No	No	TITUS	OMNI	24"x24" FACE
SC	SUPPLY AIR REGISTER - SIDEWALL	SURFACE	ALUMINUM	WHITE	30	Yes	No	TITUS	300FL	ADJUSTABLE DOUBLE DEFLECTION
SD	SUPPLY AIR DRUM LOUVER	DUCT MOUNTED	ALUMINUM	SPECIAL	30	Yes	No	TITUS	US-DL	DUCT MOUNTED SUPPLY AIR DRUM LOUVER, SPLIT VANVES, CURVATURE TO MATCH DUCT. COORDINATE FINAL FINISH WITH ARCHITECT.
SE	SUPPLY AIR DIFFUSER - LINEAR SLOT	LAY-IN OR SURFACE	ALUMINUM	WHITE	30	No	No	TITUS	FL-10-2	60" LONG, 1.0" SLOT WIDTH, 2 SLOTS, MANUFACTURER FURNISHED PLENUM, HIGH THROW PATTERN CONTROLLER FOR SLOT ANGLED TOWARDS INTERIOR OF BUILDING, AND JET THROW PATTERN CONTROLLER FOR SLOT CLOSEST TO EXTERIOR WALL; COORDINATE EXPOSED FRAME STYLE AND COLOR WITH ARCHITECT.
RA	RETURN AIR GRILLE	LAY-IN OR SURFACE	ALUMINUM	ALUMINUM	30	No	No	TITUS	50F	1/2"x1/2"x1" EGG CRATE WITH FRAMED BORDER; DO NOT STACK 1/2"
RB	RETURN AIR GRILLE - HEAVY DUTY	SURFACE	STEEL	WHITE	30	No	No	TITUS	33RL	38° FIXED DEFLECTION
EA	EXHAUST AIR GRILLE	LAY-IN OR SURFACE	ALUMINUM	WHITE	30	No	No	TITUS	355FL	35° FIXED DEFLECTION

PUMP SCHEDULE

GENERAL DATA	DESIGNATION	CHP-1	HWP-1
	SERVICE	HEATING WATER	CHILLED WATER
	TYPE	END SUCTION	END SUCTION
	MANUFACTURER	BELL & GOSSETT	BELL & GOSSETT
	MODEL	E-1510	E-1510
PUMP DATA	WATER FLOW, GPM	96	27
	TOTAL HEAD, FT.	50	45
	MIN. PUMP EFFICIENCY	65%	53%
	MIN. MOTOR POWER, HP	3	1.5
	PUMP ROTATION, RPM	1,800	1,800
ELECTRICAL DATA	VOLTAGE	208	208
	PHASE	3	3
	FREQUENCY, HZ	60	60
COMMENTS		2	2

COMMENTS KEY:

1. PUMP SHALL BE CONSTANT VOLUME WITH VFD FOR SOFT START.
2. PUMP SHALL BE VARIABLE VOLUME WITH VFD.

AIR SEPARATOR SCHEDULE

DESIGNATION	AS-HW-1	AS-CH-1
LOCATION	MEZZANINE	MEZZANINE
SERVICE	HEATING WATER	CHILLED WATER
ORIENTATION	VERTICAL	VERTICAL
TYPE	CENTRIFUGAL	CENTRIFUGAL
SYSTEM FLOW, GPM	27	96
OPERATING WEIGHT, LBS	75	200
MAXIMUM WATER PRESSURE DROP (FT. HD.)	2	2
MANUFACTURER	BELL & GOSSETT	BELL & GOSSETT
MODEL	RL-2N	RL-3F
COMMENTS	1	1

COMMENTS KEY:

1. PROVIDE WITH BASE MOUNTING RING.

EXPANSION TANK SCHEDULE

DESIGNATION	ET-HW-1	ET-CH-1
LOCATION	CENTRAL PLANT	CENTRAL PLANT
SERVICE	HEATING WATER	CHILLED WATER
ORIENTATION	VERTICAL	VERTICAL
TYPE	BLADDER	BLADDER
ACCEPTANCE VOLUME (GAL.)	10	10
ACTUAL VOLUME (GAL.)	35	35
OPERATING WEIGHT, LBS	150	150
WORKING PRESSURE, PSIG	250	125
MANUFACTURER	BELL & GOSSETT	BELL & GOSSETT
MODEL	B-35	B-35

FAN SCHEDULE

	DESIGNATION	EF-01	EF-02	EF-03	EF-04	EF-05	EF-06	EF-07	EF-08	EF-09	CF-01	CF-02	VF-01	VF-02	VF-03	VF-04	VF-05	VF-06	VF-07	VF-08	OF-001 THRU 116
GENERAL DATA	AIR SYSTEM	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	EXHAUST	CIRCULATION	CIRCULATION	VENTILATION	VENTILATION	VENTILATION	VENTILATION	VENTILATION	VENTILATION	VENTILATION	VENTILATION	CIRCULATION
	SERVICE	FAMILY 112B	ARENA RR	VENDING 123	CUST. 114	TOILET 150	TOILET 149	VET 153	STAFF TLT 112A	ELEC 111	BARN	BARN	BARN	BARN	BARN	BARN	BARN	BARN	BARN	BARN	ANIMAL STALLS
	MOUNTING	CEILING	SUSPENDED	SUSPENDED	CEILING	CEILING	CEILING	CEILING	CEILING	CEILING	ROOF FRAMING	ROOF FRAMING	WALL	WALL	WALL	WALL	WALL	WALL	WALL	WALL	WALL
	TYPE	CEILING CABINET	IN-LINE	IN-LINE	CEILING CABINET	CEILING CABINET	CEILING CABINET	CEILING CABINET	CEILING CABINET	CEILING CABINET	12FT ø HVLS	12FT ø HVLS	WALL EXHAUST	WALL EXHAUST	WALL EXHAUST	WALL EXHAUST	WALL EXHAUST	WALL EXHAUST	WALL EXHAUST	WALL EXHAUST	OSCILLATING
	DRIVE TYPE	DIRECT	BELT	BELT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	BAF	BELT	BELT	BELT	BELT	BELT	BELT	BELT	BELT	DIRECT
	MANUFACTURER	COOK	COOK	COOK	COOK	COOK	COOK	COOK	COOK	COOK	BAF	BAF	COOK	COOK	COOK	COOK	COOK	COOK	COOK	COOK	BAF
	MODEL	GC-148	100 SQN-B	120 SQN-B	GC-148	GC-148	GC-148	GC-542	GC-148	GC-186	POWERFOIL D	POWERFOIL D	60 EWB	60 EWB	60 EWB	60 EWB	60 EWB	60 EWB	60 EWB	60 EWB	AIREYE-DIRECTIONAL
	WEIGHT, LBS	20	50	60	20	20	20	30	20	20	250	250	500	500	500	500	500	500	500	500	100
PERFORMANCE DATA	AIR FLOW, CFM	75	1,125	300	75	75	75	360	75	200	83,000 MAX	83,000 MAX	32,000 MAX	32,000 MAX	32,000 MAX	32,000 MAX	32,000 MAX	32,000 MAX	32,000 MAX	32,000 MAX	1,760
	MIN. EXT. S.P., IN. W.G.	0.5	0.5	0.5	0.5	0.5	0.5	0.25	0.5	0.25	-	-	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	-
	MAX. FAN RPM	950	2,350	1,550	950	950	950	1,600	950	1,100	145	145	580	580	580	580	580	580	580	580	1,350
ELECTRICAL DATA	MIN. MOTOR SIZE	36 W	1/2 HP	1/4 HP	36 W	36 W	36 W	119 W	36 W	88 W	2.5 HP	2.5 HP	5 HP	5 HP	5 HP	5 HP	5 HP	5 HP	5 HP	5 HP	318 W
	VOLTAGE	120	120	120	120	120	120	120	120	120	208	208	208	208	208	208	208	208	208	208	120
	PHASE	1	1	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3	3	3	1
	FREQUENCY, HZ	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
CONTROLS		EMS: LIGHT SWITCH	EMS: SCHEDULED	EMS: LIGHT SWITCH	EMS: LIGHT SWITCH	EMS: LIGHT SWITCH	EMS: LIGHT SWITCH	EMS: WALL SWITCH	EMS: LIGHT SWITCH	EMS: TEMPERATURE	HVLS FAN CONTROLLER, VFD	HVLS FAN CONTROLLER, VFD	EMS: WALL SWITCH, VFD, AMMONIA SENSOR	EMS: WALL SWITCH, VFD, AMMONIA SENSOR	EMS: WALL SWITCH, VFD, AMMONIA SENSOR	EMS: WALL SWITCH, VFD, AMMONIA SENSOR	EMS: WALL SWITCH, VFD, AMMONIA SENSOR	EMS: WALL SWITCH, VFD, AMMONIA SENSOR	EMS: WALL SWITCH, VFD, AMMONIA SENSOR	EMS: WALL SWITCH, VFD, AMMONIA SENSOR	WALL MOUNTED FAN SPEED CONTROLLER
COMMENTS		1 - 5, 7	2, 3	1 - 5	1 - 5, 7	1 - 6	1 - 6	1 - 6	1 - 5, 7	2 - 4, 7	8 - 10	8 - 10	1 - 3, 10 - 13	1 - 3, 10 - 13	1 - 3, 10 - 13	1 - 3, 10 - 13	1 - 3, 10 - 13	1 - 3, 10 - 13	1 - 3, 10 - 13	1 - 3, 10 - 13	14

COMMENTS KEY:

1. WALL SWITCHES: REFER TO MOTOR STARTER SWITCHES TO BE FURNISHED UNDER DIVISION 23 AND INSTALLED UNDER DIVISION 26 (RECESSED IN WALL).
2. EMS FAN TO BE CONTROLLED BY ENERGY MANAGEMENT SYSTEM.
3. MOTOR STARTER CAN SUBSTITUTE AS FAN DISCONNECT WHERE NOT WALL MOUNTED AND LOCATED AT FAN MOTOR. A DISCONNECT CANNOT SUBSTITUTE FOR A MOTOR STARTER.
4. PROVIDE WITH ALUMINUM GRILLE.
5. PROVIDE TIME DELAY WALL SWITCH FOR FAN OPERATION. COORDINATE WITH LIGHT SWITCH INSTALLATION.
6. PROVIDE ROOF CAP AND CURB FOR ROOF CAP. PROVIDE BIRDSCREEN WITH ROOF CAP.
7. PROVIDE WITH BRICK VENT FURNISHED BY FAN MANUFACTURER. BRICK VENT SHALL HAVE DRIP FLANGE, INSECT SCREEN, AND WATER STOP.
8. PROVIDE MANUFACTURER FURNISHED STANDARD TOUCHSCREEN CONTROLLER. ONE CONTROLLER SHALL CONTROL ALL HVLS FANS.
9. PROVIDE MANUFACTURER FURNISHED, FACTORY WIRED VFD,
10. COORDINATE WITH FIRE ALARM CONTRACTOR FOR PROVIDING SHUT-DOWN OPERATION WHEN FIRE ALARM IS TRIGGERED.
11. PROVIDE WITH TEFC MOTOR OPTION. THIS OPTION REQUIRES THE MOTOR TO BE SHIPPED SEPARATELY AND INSTALLED IN FIELD.
12. PROVIDE WITH MANUFACTURER FURNISHED ALUMINUM SHUTTER, MOTOR SIDE WIRE GUARD, AND PROP SIDE WIRE GUARD.
13. CONTROL OF FAN SHALL BE INTERLOCKED WITH AMMONIA SENSORS IN ANIMAL BARN. ON DETECTION OF AMMONIA OVER 50 PPM, THE FANS SHALL OPERATE.
14. OSCILLATING FAN WITH TEFC MOTOR. PROVIDE WITH REMOTE FAN SPEED CONTROLLER AS NOTED.

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SHEET TITLE

SCHEDULES - MECHANICAL

SHEET NO.

M7.01

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PLOT SCALE:

PACKAGE AIR COOLED CHILLER SCHEDULE

GENERAL DATA	DESIGNATION	ACCH-1
	LOCATION	ARENA CHILLER YARD
	SERVICE	CHILLED WATER
	TYPE	AIR COOLED
	REFRIGERANT	R-454B
	NOMINAL CAPACITY, TONS	52
	LOW-LOAD CAPACITY, TONS	13
	AMBIENT AIR TEMP., °F	105
	MIN. EER AT AHRI	10.11
	IPLV EER AT AHRI	17.35
	MANUFACTURER	TRANE
	MODEL	CGAM
	WEIGHT, LBS	4,200
	UNIT LENGTH (NCHES)	117.4
	UNIT WIDTH (INCHES)	88.4
	UNIT HEIGHT (INCHES)	84.8
EVAPORATOR DATA	DESIGN GPM	95.9
	E.W.T., °F	56
	L.W.T., °F	44
	MAX. W.P.D., FT	12.3
CONDENSER DATA	E.A.T., °F	105
	NO. OF FANS	4
	FAN POWER, KW, TOTAL	4.7
COMPRESSOR DATA	COUNT	4
	POWER, KW, TOTAL	52.2
ELECTRICAL DATA	VOLTAGE	208
	PHASE	3
	FREQUENCY, HZ	60
	M.C.A., AMPS	251
	M.O.C.P., AMPS	300
	TOTAL UNIT POWER, KW	51.9
COMMENTS		1 - 2

COMMENTS KEY:

1. PROVIDE WITH SINGLE POINT POWER OPTION.
2. PROVIDE THE SUPER QUIET SOUND PACKAGE.

HEATING WATER BOILER SCHEDULE

GENERAL DATA	DESIGNATION	B-1
	LOCATION	MECH 109
	SERVICE	HEATING WATER
	TYPE	CONDENSING
	WEIGHT, LBS	500
	FUEL	NATURAL GAS
	MANUFACTURER	LOCHINVAR
	MODEL	KBX0400N
PERFORMANCE DATA	INPUT, THOUSANDS BTU/HR	399
	OUTPUT, THOUSANDS BTU/HR	387
	FLUE VENT SIZE, IN.	4
	MIN. EFFICIENCY, %	97
WATER DATA	WATER FLOW, GPM	21
	E.W.T., °F	110
	L.W.T., °F	150
ELECTRICAL DATA	VOLTAGE	120
	PHASE	1
	FREQUENCY, HZ	60
	F.L.A.	1.5
COMMENTS		1

COMMENTS KEY:

1. PROVIDE DUCTED COMBUSTION AIR.

SINGLE ZONE AIR HANDLING UNIT SCHEDULE

GENERAL		DESIGNATION	AHU-01
		MANUFACTURER	TRANE
		MODEL	CSAA
		LOCATION	MEZZANINE
		TYPE	SINGLE ZONE VAV
		SIZE	035
		OVERALL LENGTH (IN.)	210
		OVERALL WIDTH (IN.)	100
		APPROXIMATE WEIGHT (LBS)	6,000
OUTSIDE AIR		OUTSIDE AIR (MIN.-MIN., CFM)	1,750
		OUTSIDE AIR (MIN.-MAX., CFM)	5,200
		OUTSIDE AIR (MAX., CFM)	14,000
SUPPLY FAN		SUPPLY AIR FLOW (CFM)	14,000
	FAN	CONFIGURATION	TOP FRONT
		QUANTITY	2
		WHEEL DIAMETER (IN.) / WIDTH	22.25
		EST. EXT. S.P. (IN. W.G.)	1.5
	MOTOR	MIN. MOTOR SIZE (HP PER FAN)	7.5
		TOTAL BRAKE HORSEPOWER	10.4
		MAX. MOTOR RPM	1,800
		VOLTAGE/PHASE/FREQ. (HZ)	208 / 3 / 60
		STARTER TYPE	VFD
COIL SECTIONS	RE-HEATING COIL SECTION	HEATING SUPPLY AIR FLOW (CFM)	14,000
		ENTERING AIR DB, °F	55
		LEAVING AIR DB, °F	70
		HEATING OUTPUT (BTU/HR)	228,200
		HEATING WATER FLOW (GPM)	11.4
		ENTERING HEATING WATER TEMP., °F	150
		LEAVING HEATING WATER TEMP., °F	110
		MIN. NO. COIL ROWS	1
		MAX. FINS/INCH	10
		MAX. FACE VELOCITY (FPM)	500
		MAX. WATER PRESSURE DROP (FT.)	3.1
	COOLING COIL SECTION	COOLING SUPPLY AIR FLOW (CFM)	14,000
		ENTERING AIR DB, °F	84.9
		ENTERING AIR WB, °F	67.2
		LEAVING AIR DB, F	55
		LEAVING AIR WB, °F	54
		CHILLED WATER FLOW (GPM)	94.6
		MAX. WATER PRESSURE DROP (FT.)	10.2
		ENTERING CHILLED WATER TEMP., °F	44
		LEAVING CHILLED WATER TEMP., °F	56
		MIN. NO. COIL ROWS	6
		MAX. FINS/INCH	12
		MAX. FACE VELOCITY (FPM)	500
		MAX. AIR PRESSURE DROP (IN. W.G.)	0.41
		SENSIBLE COOLING CAPACITY (BTU/HR)	460,600
		TOTAL COOLING CAPACITY (BTU/HR)	569,500
		TOTAL COOLING CAPACITY (TONS)	47.4
	PRE-HEATING COIL SECTION	HEATING SUPPLY AIR FLOW (CFM)	14,000
		ENTERING AIR DB, °F	52.4
		LEAVING AIR DB, °F	90
		HEATING OUTPUT (BTU/HR)	570,800
		HEATING WATER FLOW (GPM)	21
		ENTERING HEATING WATER TEMP., °F	150
		LEAVING HEATING WATER TEMP., °F	110
		MIN. NO. COIL ROWS	2
		MAX. FINS/INCH	10
		MAX. FACE VELOCITY (FPM)	500
		MAX. WATER PRESSURE DROP (FT.)	4.7
FAN ELECTRICAL CHARACTERISTICS		VOLTS/PHASE	208 / 3
		MCA, AMPS	73.4
		MOCP, AMPS	125
FILTER SECTION		THICKNESS/DEPTH - TYPE	2"/PLEATED/ MERV 13
		MINIMUM SQ. FT.	13.5
		MAX. A.P.D. CLEAN, IN. W.G.	0.17
		MANUFACTURER/EFFICIENCY	CAMFIL FARR / AP THIRTEEN
COMMENTS			1 - 5

COMMENTS KEY:

1. PROVIDE 2-WAY CONTROL VALVES IN THE CHILLED AND HEATING WATER PIPING AT UNIT CONNECTION UNLESS...
2. REFER TO PRODUCT SPECIFICATIONS FOR FURTHER PRODUCT REQUIREMENTS.
3. PROVIDE MANUFACTURER FURNISHED FAN ARRAY CONTROLLER TO ALLOW FOR A SINGLE VFD TO SERVE ALL FANS IN...
4. THREE OUTSIDE AIR VALUES ARE FOR CARBON DIOXIDE CONTROL OF SPACE.
5 PROVIDE INTEGRAL AIR FLOW MEASUREMENT STATION (TRANE TRAQ DAMPERS) IN OUTDOOR AIR OPENING TO MEASU...
6. PROVIDE 3-WAY CONTROL VALVES IN THE CHILLED AND HEATING WATER PIPING AT UNIT CONNECTION.

ELECTRIC UNIT HEATER SCHEDULE

GENERAL DATA	DESIGNATION	UH-01	UH-02	UH-03	UH-04
	LOCATION	MECH 109	RISER 110	ELEC 111	RISER 146
	SERVICE	MECH 109	RISER 110	ELEC 111	RISER 146
	TYPE	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC
	MANUFACTURER	QMARK	QMARK	QMARK	QMARK
	MODEL	MUH03B1	MUH03B1	MUH03B1	MUH03B1
FAN DATA	AIR FLOW, CFM	350	350	350	350
	ROTATION, RPM	1,600	1,600	1,600	1,600
ELECTRICAL DATA	MOTOR POWER, HP	1/100	1/100	1/100	1/100
	VOLTAGE	208	208	208	208
	PHASE	1	1	1	1
	FREQUENCY, HZ	60	60	60	60
HEATING DATA	OUTPUT CAPACITY, (1,000 BTU/HR)	10,200	10,200	10,200	10,200
	KW	3	3	3	3
	STAGES	1	1	1	1
CONTROLS	VOLTAGE	24	24	24	24
COMMENTS		1 - 2	1 - 2	1 - 2	1 - 2

COMMENTS KEY:

1. PROVIDE WITH MANUFACTURER FURNISHED UNIT MOUNTED THERMOSTAT.
2. PROVIDE CONTROL TRANSFORMER FOR THERMOSTAT.

GAS UNIT HEATER SCHEDULE

GENERAL DATA	DESIGNATION	GUH-01	GUH-02	GUH-03	GUH-04	GUH-05	GUH-06	GUH-07	GUH-08	GUH-09	GUH-10	GUH-11
	LOCATION	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN
	SERVICE	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN	ANIMAL BARN
	TYPE	FAN FORCED	FAN FORCED	FAN FORCED	FAN FORCED	FAN FORCED	FAN FORCED	FAN FORCED	FAN FORCED	FAN FORCED	FAN FORCED	FAN FORCED
	MANUFACTURER	REZNOR	REZNOR	REZNOR	REZNOR	REZNOR	REZNOR	REZNOR	REZNOR	REZNOR	REZNOR	REZNOR
	MODEL	UDXC 175	UDXC 175	UDXC 175	UDXC 175	UDXC 175	UDXC 175	UDXC 175	UDXC 175	UDXC 45	UDXC 45	UDXC 45
FAN DATA	AIR FLOW, CFM	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	630	630	630
	ROTATION, RPM	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,550	1,550	1,550
ELECTRICAL DATA	MOTOR POWER, HP	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/16	1/16	1/16
	VOLTAGE	120	120	120	120	120	120	120	120	120	120	120
	PHASE	1	1	1	1	1	1	1	1	1	1	1
	FREQUENCY, HZ	60	60	60	60	60	60	60	60	60	60	60
GAS HEATER	OUTPUT CAPACITY, (1,000 BTU/HR)	145	145	145	145	145	145	145	145	37	37	37
	INPUT CAPACITY, (1,000 BTU/HR)	175	175	175	175	175	175	175	175	45	45	45
	E.A.T., °F	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6	22.6
	L.A.T., °F	82.4	82.4	82.4	82.4	82.4	82.4	82.4	82.4	77.5	77.5	77.5
CONTROLS	VOLTAGE	24	24	24	24	24	24	24	24	24	24	24
COMMENTS		1 - 3	1 - 3	1 - 3	1 - 3	1 - 3	1 - 3	1 - 3	1 - 3	1 - 3	1 - 3	1 - 3

COMMENTS KEY:

1. PROVIDE WITH MANUFACTURER FURNISHED UNIT MOUNTED THERMOSTAT.
2. PROVIDE CONTROL TRANSFORMER FOR THERMOSTAT.
3. PROVIDE WITH TOTALLY ENCLOSED FAN MOTOR.

SPLIT SYSTEM EQUIPMENT

AIR CONDITIONING UNIT								
GENERAL	DESIGNATION	ACU-01	ACU-02	ACU-03	ACU-04	ACU-05	ACU-06	ACU-07
	LOCATION	MDF 113	MEZZANINE	MEZZANINE	MEZZANINE	VET 153	IDF 152	FEED STR. 148
	AREA SERVED	MDF 113	CLASSROOM 122	VENDING 123	OFFICE 104	VET 153	IDF 152	FEED STR. 148
	MANUFACTURER	TRANE	TRANE	TRANE	TRANE	MITSUBISHI	MITSUBISHI	MITSUBISHI
	MODEL	5TAM5	TWE090	TWE090	5TAM5	MSZ-24	MSZ-24	MSZ-24
	WEIGHT, LBS	300	400	400	150	40	40	40
	MIN. O.A., CFM	-	800	450	120	-	-	-
FAN DATA	AIR FLOW, CFM	2,000	2,400	3400	800	700 / 625 / 490	700 / 625 / 490	700 / 625 / 490
	EXT. STATIC PRESSURE, IN. W.G.	0.5	1	0.7	1	-	-	-
	MIN. FAN MOTOR POWER, HP	0.75	1.5	2	0.5	-	-	-
	VOLTAGE	208	208	208	208	-	-	-
	PHASE	1	3	3	1	-	-	-
	FREQUENCY, HZ	60	60	60	60	-	-	-
	MIN. CIRCUIT AMPACITY, A	9	5.3	5.3	3	-	-	-
	MAX.OVERCURRENT PROTECTION, A	15.0	15	15	15	-	-	-
FILTERS	TYPE	MERV-13	MERV-13	MERV-13	MERV-13	-	-	-
	THICKNESS	2"	2"	2"	2"	-	-	-
COOLING COIL	TYPE	DX	DX	DX	DX	DX	DX	DX
	SENSIBLE LOAD, BTU/HR	32,800	78,400	80,300	17,500	-	-	-
	TOTAL LOAD, BTU/HR	51,900	94,700	94,400	20,500	24,000	24,000	24,000
	MIN. EFFICIENCY RATING	14.3 SEER2	11.5 EER	11.5 EER	14.3 SEER2	20 SEER	20 SEER	20 SEER
	ENTERING AIR TEMPERATURE, °F DB	76	84.9	76.9	77.2	76	76	76
	ENTERING AIR TEMPERATURE, °F WB	67.0	67.2	63.7	63.9	64.5	64.5	64.5
	LEAVING AIR TEMPERATURE, °F DB	60.7	55.7	56.2	56.6	56	56	56
	LEAVING AIR TEMPERATURE, °F WB	58.7	54.5	54.6	55.1	55	55	55
MAIN HEATING	TYPE	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP
	TOTAL CAPACITY, BTU/HR	52,000	90,000	90,000	24,000	24,000	24,000	24,000
	ENTERING AIR TEMPERATURE, °F	70	54.2	66.4	65.9	60	60	60
	LEAVING AIR TEMPERATURE, °F	86.4	88.9	90.9	93.7	90	90	90
AUXILARY HEATING	AUXILARY HEAT TYPE	-	ELECTRIC	ELECTRIC	ELECTRIC	-	-	-
	VOLTAGE	-	208	208	208	-	-	-
	PHASE	-	3	3	1	-	-	-
	FREQUENCY, HZ	-	60	60	60	-	-	-
	HEATER INPUT, KW	-	26.2	26.2	4.8	-	-	-
	ENTERING AIR TEMPERATURE, °F DB	-	54.2	66.4	65.9	-	-	-
	LEAVING AIR TEMPERATURE, °F DB	-	88.9	90.9	84.9	-	-	-
CONDENSING UNIT								
GENERAL	DESIGNATION	CU-01	CU-02	CU-03	CU-04	CU-05	CU-06	CU-07
	LOCATION	OUTSIDE - ARENA	OUTSIDE - ARENA	OUTSIDE - ARENA	OUTSIDE - ARENA	OUTSIDE - BARN	OUTSIDE - BARN	OUTSIDE - BARN
	AREA SERVED	MDF 113	CLASSROOM 122	VENDING 123	OFFICE 104	VET 153	IDF 152	FEED STR. 148
	MANUFACTURER	TRANE	TRANE	TRANE	TRANE	MITSUBISHI	MITSUBISHI	MITSUBISHI
	MODEL	5TWA4060	TTA090	TTA090	5TWR4024	MUZ-24	MUZ-24	MUZ-24
	WEIGHT, LBS	300	300	300	250	120	120	120
	TOTAL CAPACITY, BTU/HR	60,000	90,000	90,000	24,000	24,000	24,000	24,000
	MAX. AMBIENT TEMP., °F	105	105	105	105	105	105	105
	MIN. AMBIENT TEMP., °F	22	22	22	22	22	22	22
ELECTRICAL DATA	VOLTAGE	208	208	208	208	208	208	208
	PHASE	3	3	3	1	1	1	1
	FREQUENCY, HZ	60	60	60	60	60	60	60
	MIN. CIRCUIT AMPACITY, A	22.8	38	38	13	18	18	18
	MAX OVERCURRENT PROTECTION, A	35	60	60	20	25	25	25
COMMENTS:		1 - 4, 6	1, 2, 4	1, 2, 4	1, 2, 4	1, 3 - 6	1, 3 - 6	1, 3 - 6

1. PROVIDE HAIL GUARD ON CONDENSER FAN. IF MANUFACTURER DOES NOT OFFER A HAIL GUARD, CONTRACTOR SHALL SHOP FABRICATE AND FURNISH. PROVIDE WIND BAFFLE AS RECOMMENDED BY MANUFACTURER FOR LOW AMBIENT TEMPERATURE CONDITIONS.
2. PROVIDE MANUFACTURER FURNISHED AIR FLOW ALARM IN DRAIN PAN OR P-TRAP OF COOLING COIL.
3. PROVIDE MANUFACTURER FURNISHED WALL MOUNTED TOUCHSCHREEN THERMOSTAT CONTROLLER.
4. PROVIDE LOW AMBIENT CONTROLS FOR CONDENSER UNIT AS NOTED IN SPECIFICATIONS.
5. INDOOR UNIT RECEIVES POWER FROM OUTDOOR UNIT THROUGH FIELD-SUPPLIED INTERCONNECTED WIRING.
6. PROVIDE MANUFACTURER FURNISHED CONDENSATE PUMP / LIFT.

VLK

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

JOSEPH C. PROCTOR 132777 LICENSED PROFESSIONAL ENGINEER 2025.05.28

ISSUED: May 29, 2025

REVISIONS

Revision No. | Revision Date

Director: VLK | Drawn By: LCA
Designer: VLK | Quality Control: JCP
Proj. Arch.: VLK

PROJECT NO.

24-057.00

SHEET TITLE

SCHEDULES - MECHANICAL

SHEET NO.

M7.02

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FILE PATH: Autodesk Docs://E_EMS ISD_24-057.00_Agricultural Science Center/24117.EMS ISD New Agricultural Science.MEP.v24.rvt
DATE/TIME:5/29/2025 12:56:02 PM
PLOT SCALE:

FIRE PROTECTION SHEET LIST

SHEET NO.	SHEET NAME	SHEET ISSUE DATE
FP0.01	GENERAL NOTES, LEGEND, DETAILS AND SECTIONS - FIRE PROTECTION	2025.05.28
FP2.01	FLOOR PLAN - LEVEL ONE - OVERALL FIRE PROTECTION	2025.05.28

Grand total: 2

FIRE PROTECTION LEGEND

F	FIRE SUPPRESSION (F)
SP	FIRE SPRINKLER (SP)
DSP	DRY FIRE SPRINKLER (DSP)
N	NITROGEN (N)
	WET FIRE SPRINKLER VALVE ASSEMBLY
	DRY FIRE SPRINKLER VALVE ASSEMBLY
	INDICATING BUTTERFLY VALVE

FIRE PROTECTION DESIGN PARAMETERS:

CODE COMPLIANCE
- 2021 INTERNATIONAL FIRE CODE WITH CITY OF FORT WORTH AMMENDMENTS
- NFPA

BUILDINGS
- SHOW ARENA AND CLASSROOM BUILDING, APPROXIMATELY 27,000 ft² TOTAL
- LIVESTOCK BUILDING, APPROXIMATELY 25,000 ft² TOTAL

SITE ENVIRONMENTAL CONDITIONS
- LOCATION:
  NORTH OF MUSTANG ROCK RD, WEST OF MARINE CREEK PKWY
  FORT WORTH, TEXAS 76179
  APPROXIMATELY 32.844, -97.393

GENERAL SYSTEM DESCRIPTION

SHOW ARENA AND CLASSROOM BUILDING
- PROVIDE AUTOMATIC DRY ALARM VALVE ASSEMBLY TO SERVE BUILDING.
- PROVIDE NITROGEN GENERATOR TO SERVE DRY SPRINKLER SYSTEM.
- PROVIDE A FIRE DEPARTMENT CONNECTION AS REQUIRED BY AUTHORITY HAVING JURISDICTION.
- PROVIDE A CLASS I FIRE DEPARTMENT VALVE IN FULLY CONCEALED STAINLESS STEEL CABINENTS AS REQUIRED BY AUTHORITY HAVING JURISDICTION.

LIVESTOCK BUILDING
- PROVIDE AUTOMATIC DRY ALARM VALVE ASSEMBLY TO SERVE BUILDING.
- PROVIDE NITROGEN GENERATOR TO SERVE DRY SPRINKLER SYSTEM.
- PROVIDE A FIRE DEPARTMENT CONNECTION AS REQUIRED BY AUTHORITY HAVING JURISDICTION.
- PROVIDE A CLASS I FIRE DEPARTMENT VALVE IN FULLY CONCEALED STAINLESS STEEL CABINENTS AS REQUIRED BY AUTHORITY HAVING JURISDICTION.

FIRE PROTECTION DESIGN DOCUMENTATION:

SPECIFICATIONS

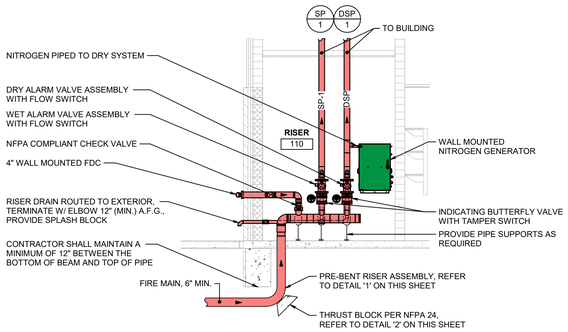
A SPECIFICATION INDEX HAS BEEN PROVIDED WITH THIS 95% CONSTRUCTION DOCUMENT PROGRESS SET.

DRAWINGS

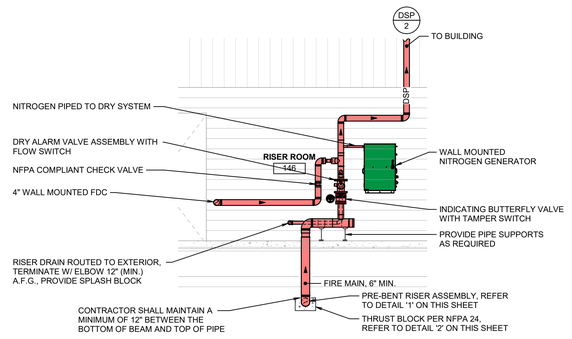
FIRE PROTECTION DESIGN DOCUMENTATION IS SHOWN AND DESCRIBED IN THE FIRE PROTECTION DRAWINGS. FIRE PROTECTION DRAWINGS ARE IN THE DRAWING SET.

GENERAL FIRE SPRINKLER NOTES:

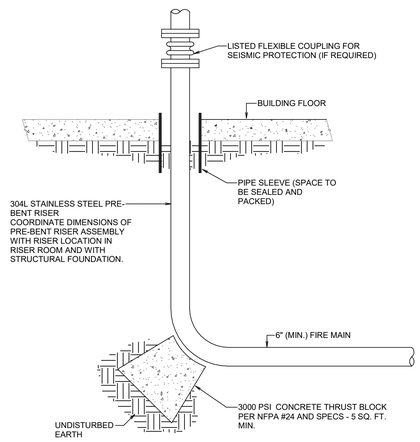
1. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY WATER SUPPLY INFORMATION INCLUDING FLOW TEST AND SYSTEM'S WORKING PRESSURE.
2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING LOCATION AND SIZES OF PIPING THAT WILL BE CONNECTED TO SUPPLY SYSTEM(S).
3. SPRINKLER SYSTEM PIPING (ALL FEED MAINS, CROSS MAINS AND BRANCH LINES) SHALL BE HYDRAULICALLY SIZE. CONTRACTOR IS RESPONSIBLE FOR COORDINATING PIPING LAYOUT WITH BEAMS AND GUIDES, ALL DUCTWORK, DIFFUSERS, LIGHTING FIXTURES, AND OTHER PIPING, ETC. SEE ARCH
4. CONTRACTOR SHALL NOT SCALE DRAWINGS.
5. IN AREAS WHERE THERE ARE NO FINISHED CEILING OR WHERE BEAMS ARE EXPOSED, CONTRACTOR SHALL COORDINATE SPRINKLER LOCATION WITH STRUCTURAL MEMEBERS TO INSURE CODE COMPLIANCE.
6. ALL FIRE LINES SHALL BE PRIMED & PAINTED WHERE EXPOSED (IN FINISHED AREAS).
7. NO MECHANICAL TEES SHALL BE INSTALLED.
8. ALL VALVES SHALL BE EQUIPPED WITH A TAMPER SWITCH, EXCEPT DRAIN VALVES, UNLESS INSTRUCTED OTHERWISE BY ARCH.
9. CONTRACTOR SHALL REVISE LOCATIONS OF PIPING, AS SHOWN, TO MEET UNFORESEEN CONDITIONS OR CONTRACTOR'S REQUIREMENTS. PREPARE SHOP DRAWINGS, AS REQUIRED, SUBJECT TO APPROVAL OF THE STATE INSURANCE AUTHORITIES AND THE LOCAL AUTHORITIES.
10. ALL DIMENSIONS AND CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR AT THE SITE. ALL PIPING AND EQUIPMENT, LOCATIONS, SIZES, AND DIMENSIONS SHALL BE CHECKED AND VERIFIED AT THE BUILDING SITE.
11. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ALL WALLS, PARTITIONS, CEILING HEIGHTS, AND EQUIPMENT.
12. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF SPRINKLERS FROM THE ARCHITECTURAL REFLECTING CEILING PLANS.
13. CONTRACTOR SHALL RUN NEW LINES PER FIELD CONDITIONS.
14. COMPLETED BUILDING SPRINKLER SYSTEM SHALL BE ACCEPTABLE TO THE "AUTHORITIY HAVING JURISDICTION".
15. PRIOR TO BID SUBMITTAL THE CONTRACTOR SHALL BECOME FAMILIAR WITH ALL ARCHITECTURAL AND STRUCTURAL DRAWINGS. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS TO VERIFY FLOOR PLAN SCALE OF MECHANICAL DRAWINGS PRIOR TO ANY QUANTITATIVE TAKE-OFF OR MATERIALS.



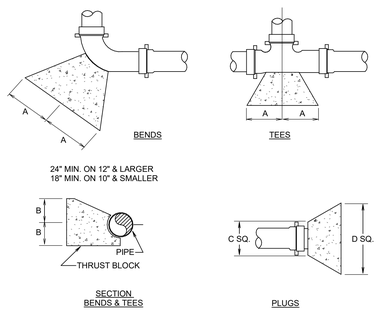
4 UNIT A FIRE RISER ASSEMBLY DETAIL
NO SCALE



5 UNIT B FIRE RISER ASSEMBLY DETAIL
NO SCALE



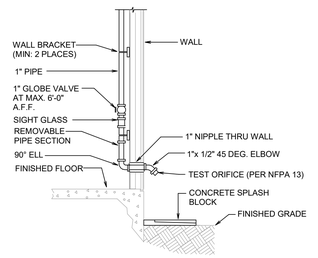
1 PRE-BENT STAINLESS STEEL FIRE RISER SUPPORT DETAIL
NO SCALE



THRUST BLOCK SCHEDULE											
	1/4 BEND		1/8 BEND		1/8 BEND		TEES			PLUGS	
SIZE	A	B	A	B	A	B	A	B	C	D	
6"	16"	10"	9"	10"	6"	8"	10"	12"	10"	21"	
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	28"	
10"	28"	17"	12"	17"	10"	13"	16"	20"	14"	36"	
12"	29"	21"	16"	21"	11"	16"	16"	24"	14"	41"	

NOTE:
THRUST BLOCKS SHALL BE ISNTALLED IN COMPLIANCE W/ NFPA 24.

2 THRUST BLOCK DETAIL
NO SCALE



NOTES:
INSPECTORS TEST CONNECTION SHALL BE PIPED FROM THE END OF THE HYDRAULICALLY MOST REMOTE BRANCH LINE.

TEST CONNECTION SHALL BE PLACE IN APPROVED ACCESSIBLE LOCATION, I.E. JANITOR'S CLOSET, MECH. ROOM.

3 AUTOMATIC WET SPRINKLER SYSTEM INSPECTOR'S TEST DETAIL
NO SCALE

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

JOSEPH C. PROCTOR
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LICENSED PROFESSIONAL ENGINEER
2025.05.28

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director VLK	Drawn By LCA
Designer VLK	Quality Control MD
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
GENERAL NOTES, LEGEND, DETAILS AND SECTIONS - FIRE PROTECTION

SHEET NO.
FP0.01

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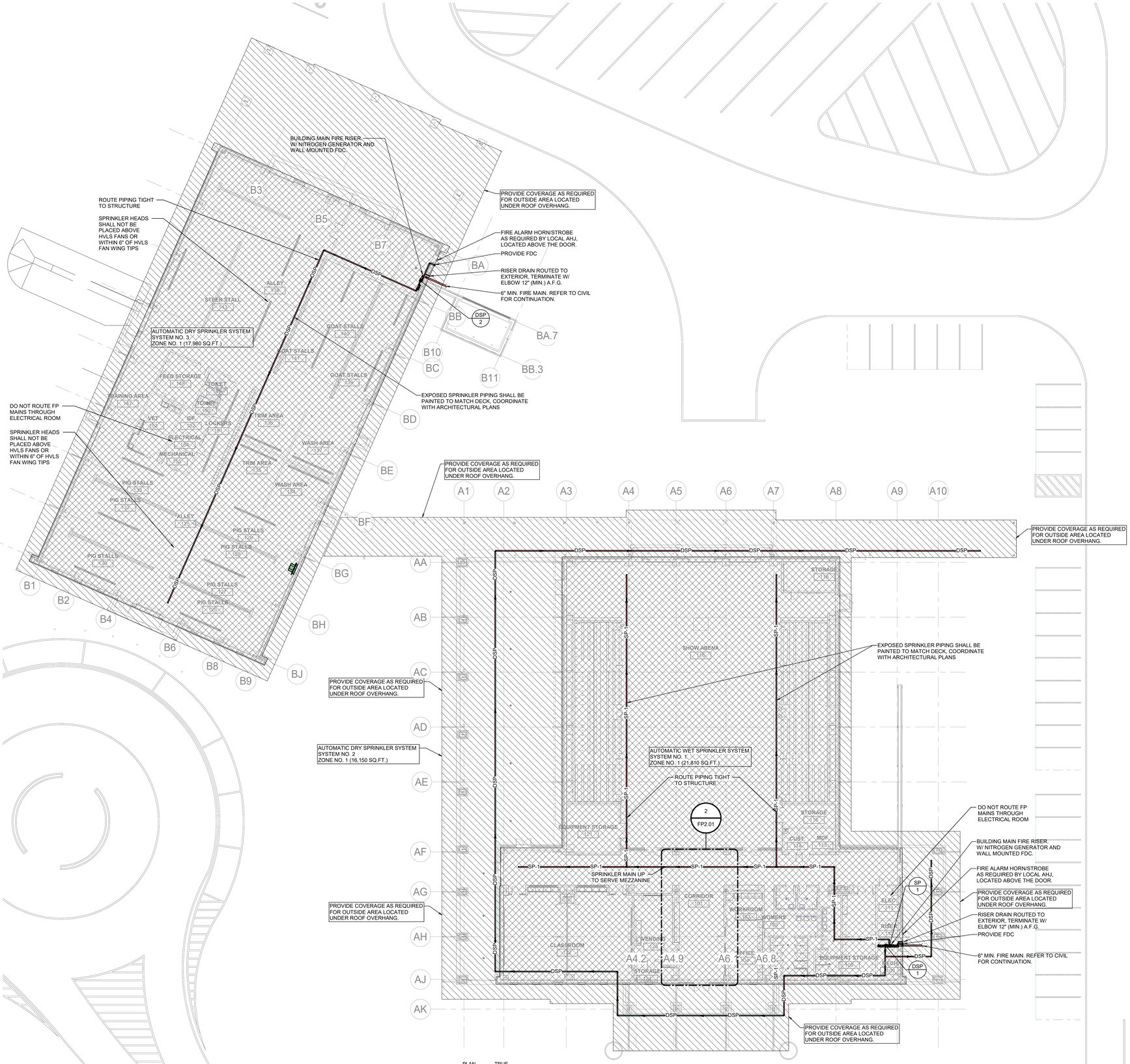

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

JOSEPH C. PROCTOR 132777 LICENSED PROFESSIONAL ENGINEER 2025.05.28

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director VLK	Drawn By LCA
Designer VLK	Quality Control MD
Proj. Arch. VLK	

PROJECT NO.

24-057.00

SHEET TITLE

FLOOR PLAN - LEVEL ONE - OVERALL FIRE PROTECTION

SHEET NO.

FP2.01

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DATE/TIME:5/28/2025 2:03:13 PM
PLOT SCALE: 1/16" = 1'-0"

PLUMBING SHEET LIST

SHEET NO.	SHEET NAME	SHEET ISSUE DATE
P0.01	GENERAL NOTES & LEGENDS - PLUMBING	2025.05.28
P1.10	SITE PLAN - OVERALL - PLUMBING	2025.05.28
P1.11	SITE PLAN - PLUMBING	2025.05.28
P2.01	UNDERFLOOR PLAN - OVERALL - PLUMBING	2025.05.28
P2.01A	UNDERFLOOR PLAN - AREA A - PLUMBING	2025.05.28
P2.01B	UNDERFLOOR PLAN - AREA B - PLUMBING	2025.05.28
P2.11	FLOOR PLAN - LEVEL ONE - OVERALL - PLUMBING	2025.05.28
P2.11A	FLOOR PLAN - LEVEL ONE - AREA A - PLUMBING	2025.05.28
P2.11B	FLOOR PLAN - LEVEL ONE - AREA B - PLUMBING	2025.05.28
P2.12A	FLOOR PLAN - LEVEL TWO - AREA A MEZZANINE - PLUMBING	2025.05.28
P3.01	ENLARGED FLOOR PLANS - PLUMBING	2025.05.28
P5.11	FLOOR PLAN - ROOF - OVERALL	2025.05.28
P5.11A	FLOOR PLAN - ROOF - AREA A - PLUMBING	2025.05.28
P5.11B	FLOOR PLAN - ROOF - AREA B - PLUMBING	2025.05.28
P6.01	DETAILS - PLUMBING	2025.05.28
P6.02	DETAILS - PLUMBING	2025.05.28
P7.01	SCHEDULES - PLUMBING	2025.05.28
P8.01	RISER DIAGRAMS - PLUMBING	2025.05.28

Grand total: 18

PLUMBING LEGEND

A.F.F	ABOVE FINISHED FLOOR
B.F.F	BELOW FINISHED FLOOR
B.F.G	BELOW FINISHED GRADE
CO	CLEANOUT
DCO	DOUBLE CLEANOUT
DSN	DOWNSPOUT, SET 12" A.F.G. W/ CONCRETE SPLASH BLOCK, U.N.O.
FCO	FLOOR CLEANOUT
GCO	GRADE CLEANOUT
WCO	WALL CLEANOUT
FL	FLOWLINE ELEVATION
I.E.	INVERT ELEVATION
O.F.C.I.	OWNER FURNISHED, CONTRACTOR INSTALLED
VTR	VENT THROUGH ROOF

PLUMBING LEGEND

	NEW PIPE
	RISE IN PIPING
	DROP IN PIPING
X" / FT.	SLOPE IN PIPING & DIRECTION OF SLOPE
	PIPE CAP
	DIRECTION OF FLOW
	PIPE CONTINUATION
DCO	DOUBLE CLEANOUT (DCO)
FCO	FLOOR CLEANOUT (FCO)
WCO	WALL CLEANOUT (WCO)
FD-#	FLOOR DRAIN (FD)
FS-#	FLOOR SINK (FS)
HD-#	HUB DRAIN (HD)
AD-#	AREA DRAIN (AD)
VTR	VENT THRU ROOF (VTR)
	GAS METER
	INLINE / VERTICAL GAS PRESSURE REGULATOR
NFWH	NON-FREEZE WALL HYDRANT
NFPH	NON-FREEZE POST HYDRANT
HB	HOSE BIBB
	BALL VALVE
	CHECK VALVE WITH DIRECTION OF FLOW
	PLUG VALVE
	Gglobe VALVE
	PIPE UNION

PLUMBING LEGEND

CW	DOMESTIC COLD WATER (CW)
MW	MEDICATED HOG DRINKING WATER (MW)
HW	DOMESTIC HOT WATER (HW)
HWR	DOMESTIC HOT WATER RETURN (HWR)
++	140°F DOMESTIC HOT WATER (HW)
+++	140°F DOMESTIC HOT WATER RETURN (HWR)
SS	SANITARY SEWER (SS)
V	SANITARY VENT (V)
SD	STORM DRAIN (SD)
OD	OVERFLOW DRAIN (OD)
G	NATURAL GAS (G)
PD	PUMPED DISCHARGE (PD)
	SUB SOIL DRAIN

PLUMBING DESIGN PARAMETERS:

CODE COMPLIANCE
- 2021 INTERNATIONAL PLUMBING CODE WITH CITY OF FORT WORTH AMMENDMENTS
- 2021 INTERNATIONAL FUEL-GAS CODE
- 2015 INTERNATIONAL ENERGY CONSERVATION CODE

BUILDINGS
- SHOW ARENA AND CLASSROOM BUILDING, APPROXIMATELY 27,000 ft² TOTAL
- LIVESTOCK BUILDING, APPROXIMATELY 25,000 ft² TOTAL

SITE ENVIRONMENTAL CONDITIONS
- LOCATION:
  NORTH OF MUSTANG ROCK RD, WEST OF MARINE CREEK PKWY
  FORT WORTH, TEXAS 76179
  APPROXIMATELY 32.844, -97.393
- APPROXIMATE SITE ELEVATION:
  690 ft ABOVE SEA LEVEL
  (SEE CIVIL TOPOGRAPHICAL SURVEY AND GRADING PLAN)
- EARTH / GROUND POTENTIAL VERTICAL MOVEMENT:
  (BASED ON GEOTECHNICAL EXPLORATION REPORT BY UES DATED APRIL 10, 2025):
  - UP TO 3 INCHES (WITHOUT SOIL CONDITIONING);
  - REFER TO STRUCTURAL PLAN FOR FOUNDATION TYPE AND SOIL CONDITIONING.

GENERAL SYSTEM DESCRIPTION
- PLUMBING SCOPE ON THIS PROJECT INCLUDES PLUMBING FIXTURES, DOMESTIC WATER SYSTEMS, SANITARY SEWER AND VENT SYSTEMS, DOMESTIC HOT AND COLD WATER SYSTEMS, DOMESTIC HOT-WATER CIRCULATING PUMPS, PIPE INSULATION, AND NATURAL GAS PIPING.
- TANK-TYPE GAS-FIRED WATER HEATERS SHALL BE PROVIDED TO SERVE THE DOMESTIC HOT WATER SYSTEM. THERMAL EXPANSION TANKS SHALL BE PROVIDED FOR EACH DOMESTIC HOT WATER SYSTEM WHERE A CHECK VALVE OR OTHER BACKFLOW PREVENTING DEVICE IS INSTALLED ON THE COLD-WATER SUPPLY TO THE HEATING WATER EQUIPMENT. CIRCULATION PUMPS SHALL BE PROVIDED AS WELL. A MASTER MIXING VALVE SHALL BE PROVIDED AT THE WATER HEATERS TO REGULATE THE HOT WATER SUPPLY TEMPERATURE.
- PROVIDE THERMOSTATIC MIXING VALVE TO TEMPER DOMESTIC HOT WATER SUPPLY TO LAVATORIES PER ASSE 1070.
- PROVIDE VENTURI FLOW SPLITTERS.
- WHERE GUTTERS AND DOWNSPOUTS ARE SPECIFIED (BY ARCHITECT), DOWNSPOUT BOOTS SHALL ALSO BE SPECIFIED BY THE ARCHITECT AND CIVIL WILL PICK-UP CONNECTIONS FROM THE BOOT. NO PLUMBING SCOPE IS INTENDED AT DOWNSPOUT BOOTS.
- PLUMBING FIXTURES SHALL BE AS SCHEDULED AND SPECIFIED.
- TEST AND BALANCE BY DIVISION 23.
- COMMISSIONING BY DIVISION 23.

PLUMBING DESIGN DOCUMENTATION:

SPECIFICATIONS
A SPECIFICATION INDEX HAS BEEN PROVIDED WITH THIS 95% CONSTRUCTION DOCUMENT PROGRESS SET.

DRAWINGS
PLUMBING DESIGN DOCUMENTATION IS SHOWN AND DESCRIBED IN THE PLUMBING DRAWINGS. PLUMBING DRAWINGS ARE IN THE DRAWING SET.

GENERAL PLUMBING NOTES:

1. ALL DIMENSIONS AND FIELD CONDITIONS SHALL BE CHECKED AND VERIFIED BY CONTRACTOR AT THE SITE. THE LOCATION OF ALL NEW PIPING, FIXTURES, EQUIPMENT, LOCATIONS, SIZES, SCALES, AND DIMENSIONS SHALL BE CHECKED AND VERIFIED ON SITE.
2. CONTRACTOR SHALL LAY OUT THEIR WORK BASED ON ACTUAL FIELD MEASUREMENTS AND ACTUAL DIMENSIONS OF EQUIPMENT AND FIXTURES INSTALLED. ALL PIPING AND EQUIPMENT OF ALL TRADES SHALL BE PROPERLY COORDINATED AND SET IN PLACE TO MAINTAIN REQUIRED SERVICE CLEARANCES. ALL INSTALLATIONS SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT.
3. CONTRACTOR SHALL CHANGE THE LOCATION OF NEW PIPING, WHERE REQUIRED, TO MEET FIELD CONDITIONS.
4. CONTRACTOR SHALL SUBMIT CGS AND WITH THE WORK OF ALL OTHER TRADES. PRIOR TO SUBMITTAL, SHOP DRAWINGS SHALL BE CHECKED FOR OBSTRUCTIONS AND INTERFERENCES, ETC. FAILURE TO SUBMIT SHOP DRAWINGS IN A TIMELY MANNER AS REQUIRED TO KEEP PACE WITH THE CONSTRUCTION SCHEDULE MAY RESULT IN DELAYS, AND POSSIBLE STOPPAGE, OF PAYMENT TO THE CONTRACTOR. ADDTIONALLY, NO WORK MAY PROCEED UNTIL SUCH SHOP DRAWINGS ARE SUBMITTED, REVIEWED, AND FOUND TO BE ACCEPTABLE BY THE ARCHITECT AND ENGINEER.
5. REFER TO STRUCTURAL ENGINEER'S PLANS FOR EXACT LOCATION OF STRUCTURAL PIERS, BEAMS, JOISTS AND OTHER STRUCTURAL ELEMENTS. MODIFY PIPE ROUTING AS REQUIRED TO AVOID CONFLICTS WHERE SUCH OCCURS.
6. REFER TO ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATIONS OF ALL WALLS, PARTITIONS, CEILINGS, CEILING HEIGHTS, AND EQUIPMENT/FIXTURES.
7. COORDINATE ALL UNDERGROUND UTILITIES WITH CIVIL ENGINEERING PLANS FOR CONNECTION OF ALL SANITARY WASTE, STORM DRAINS, DOMESTIC WATER AND FIRE WATER SUPPLIES THAT EXTEND 5'-0" BEYOND THE BUILDING LINE. VERIFY EXACT FLOW LINE ELEVATIONS OF WASTE AND STORM MAINS PRIOR TO MAKING ANY CONNECTIONS.
8. CONTRACTOR SHALL CONFIRM SCALE OF PLUMBING DRAWINGS BY COMPARISON WITH ARCHITECTURAL DRAWINGS TO VERIFY THE ACCURACY OF ALL TAKE-OFFS MADE DURING THE BIDDING PERIOD.
9. ANY PIPE PENETRATIONS OF CEILINGS, WALLS OR FLOORS SHALL BE RESTORED TO THE FIRE RATINGS INDICATED ON THE ARCHITECTURAL DRAWINGS. FLOOR, WALL AND CEILING PIPING PENETRATIONS SHALL BE PATCHED, SLEEVED, SEALED, AND BE PROVIDED WITH APPROPRIATE ESCUTCHEONS WHERE LOCATED IN FINISHED/EXPOSED SPACES.
10. SHUT-OFF VALVES, SHOCK ARRESTORS, THERMOSTATIC MIXINGS VALVES AND CLEAN-OUTS LOCATED BEHIND ACCESS PANELS SHALL BE CENTERED ON THE ACCESS DOOR AND SHALL BE IMMEDIATELY ACCESSIBLE FROM THE ACCESS DOOR. SHUT-OFF VALVE HANDLES SHALL FACE THE ACCESS DOOR.
11. ACCESS DOORS OR ACCESS PANELS SHALL BE A MINIMUM OF 18"x18". WHERE MORE THAN ONE DEVICE IS SERVICED FROM THE ACCESS LOCATION, THE PANEL SHALL BE A MINIMUM OF 24"x24".
12. ALL POINT-OF-USE THERMOSTATIC MIXING VALVES SHALL BE PROVIDED WITH SHUT-OFF VALVES AND UNIONS ON THE COLD WATER SUPPLY, HOT WATER SUPPLY AND TEMPERED WATER OUTLET OF THE DEVICE.
13. CONTRACTOR SHALL RUN ALL PLUMBING LINES AS HIGH AS POSSIBLE EXCEPT WHERE DIRECTED OTHERWISE.
14. ALL VENTS THRU ROOF SHALL TERMINATE A MINIMUM OF 25'-0" FEET FROM ANY OUTSIDE AIR INTAKES, EXCEPT WHERE DIRECTED OTHERWISE. COORDINATE WITH MECHANICAL CONTACTOR AND OTHER TRADES.
15. REFER TO ENLARGED SCALE TOILET ROOM PLANS ON ARCHITECTRUAL DRAWINGS FOR EXACT LOCATION OF FLOOR DRAINS AND PLUMBING FIXTURES.
16. CONTRACTOR SHALL NOT DEVIATE FROM THE CONSTRUCTION DOCUMENTS. ANY DEVIATION SHALL RECEIVE WRITTEN ACCEPTANCE AND APPROVAL FROM THE OWNER AND ARCHITECT IN ADVANCE OF SUCH WORK BEING PERFORMED. SUBMIT SUCH REQUESTS TO THE ARCHITECT AND ENGINEER ALONG WITH THE MONETARY CREDIT, AS APPLICABLE. ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS FOUND ON THE PROJECT THAT DID NOT RECEIVE A LETTER OF ACCEPTANCE AND APPROVAL FROM THE OWNER OR ARCHITECT SHALL BE FULLY REPLACED AND SHALL BE MADE TO BE IN FULL COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS AT THE EXPENSE OF THE CONTRACTOR.

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2025.05.28

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director VLK	Drawn By LCA
Designer VLK	Quality Control MD
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
GENERAL NOTES & LEGENDS - PLUMBING

SHEET NO.
P0.01

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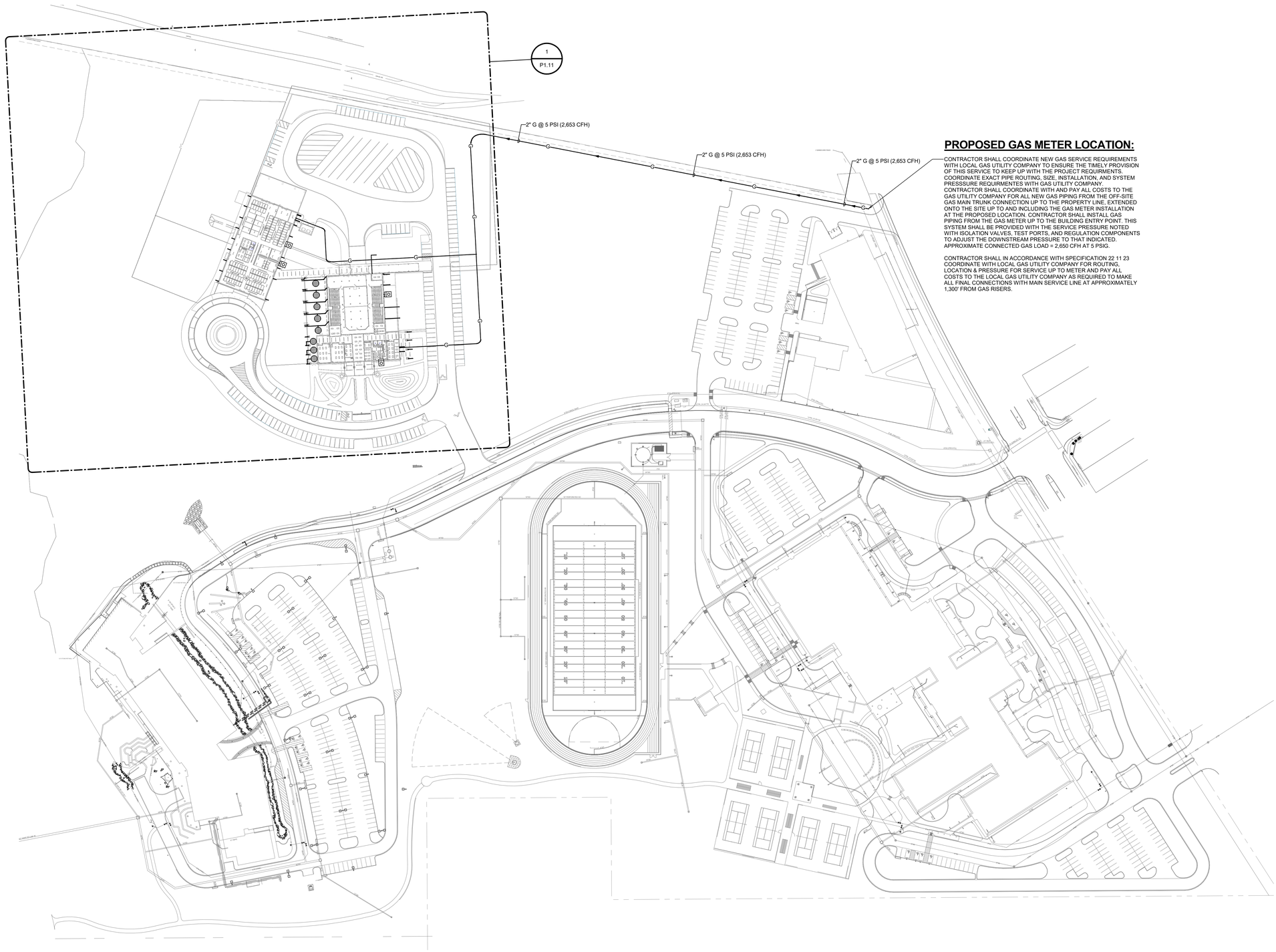

PROPOSED GAS METER LOCATION:

CONTRACTOR SHALL COORDINATE NEW GAS SERVICE REQUIREMENTS WITH LOCAL GAS UTILITY COMPANY TO ENSURE THE TIMELY PROVISION OF THIS SERVICE TO KEEP UP WITH THE PROJECT REQUIRMENTS. COORDINATE EXACT PIPE ROUTING, SIZE, INSTALLATION, AND SYSTEM PRESSSURE REQUIRMENTES WITH GAS UTILITY COMPANY. CONTRACTOR SHALL COORDINATE WITH AND PAY ALL COSTS TO THE GAS UTILITY COMPANY FOR ALL NEW GAS PIPING FROM THE OFF-SITE GAS MAIN TRUNK CONNECTION UP TO THE PROPERTY LINE, EXTENDED ONTO THE SITE UP TO AND INCLUDING THE GAS METER INSTALLATION AT THE PROPOSED LOCATION. CONTRACTOR SHALL INSTALL GAS PIPING FROM THE GAS METER UP TO THE BUILDING ENTRY POINT. THIS SYSTEM SHALL BE PROVIDED WITH THE SERVICE PRESSURE NOTED WITH ISOLATION VALVES, TEST PORTS, AND REGULATION COMPONENTS TO ADJUST THE DOWNSTREAM PRESSURE TO THAT INDICATED. APPROXIMATE CONNECTED GAS LOAD = 2,650 CFH AT 5 PSIG.

CONTRACTOR SHALL IN ACCORDANCE WITH SPECIFICATION 22 11 23 COORDINATE WITH LOCAL GAS UTILITY COMPANY FOR ROUTING, LOCATION & PRESSURE FOR SERVICE UP TO METER AND PAY ALL COSTS TO THE LOCAL GAS UTILITY COMPANY AS REQUIRED TO MAKE ALL FINAL CONNECTIONS WITH MAIN SERVICE LINE AT APPROXIMATELY 1,300' FROM GAS RISERS.

PLAN NORTH / TRUE NORTH

1 SITE PLAN - OVERALL - PLUMBING
SCALE: 1" = 80'-0"

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Designer VLK	Quality Control MD
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
SITE PLAN - OVERALL - PLUMBING

SHEET NO.
P1.10

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REFER TO SHEET P1.10 FOR PROPOSED GAS METER LOCATION:

EXTEND GAS MAIN FROM NEW GAS METER LOCATED WEST OF MARINE CREEK PKWY, APPROXIMATELY 750 FEET AWAY FROM THIS LOCATION. REFER TO SHEET P1.10 FOR APPROXIMATE LOCATION.

CONTRACTOR SHALL COORDINATE NEW GAS SERVICE REQUIREMENTS WITH LOCAL GAS UTILITY COMPANY TO ENSURE THE TIMELY PROVISION OF THIS SERVICE TO KEEP UP WITH THE PROJECT REQUIRMENTS. COORDINATE EXACT PIPE ROUTING, SIZE, INSTALLATION, AND SYSTEM PRESSSURE REQUIRMENTES WITH GAS UTILITY COMPANY. CONTRACTOR SHALL COORDINATE WITH AND PAY ALL COSTS TO THE GAS UTILITY COMPANY FOR ALL NEW GAS PIPING FROM THE OFF-SITE GAS MAIN TRUNK CONNECTION UP TO THE PROPERTY LINE, EXTENDED ONTO THE SITE UP TO AND INCLUDING THE GAS METER INSTALLATION AT THE PROPOSED LOCATION. CONTRACTOR SHALL INSTALL GAS PIPING FROM THE GAS METER UP TO THE BUILDING ENTRY POINT. THIS SYSTEM SHALL BE PROVIDED WITH THE SERVICE PRESSURE NOTED WITH ISOLATION VALVES, TEST PORTS, AND REGULATION COMPONENTS TO ADJUST THE DOWNSTREAM PRESSURE TO THAT INDICATED. APPROXIMATE CONNECTED GAS LOAD = 2,650 CFH AT 5 PSIG.

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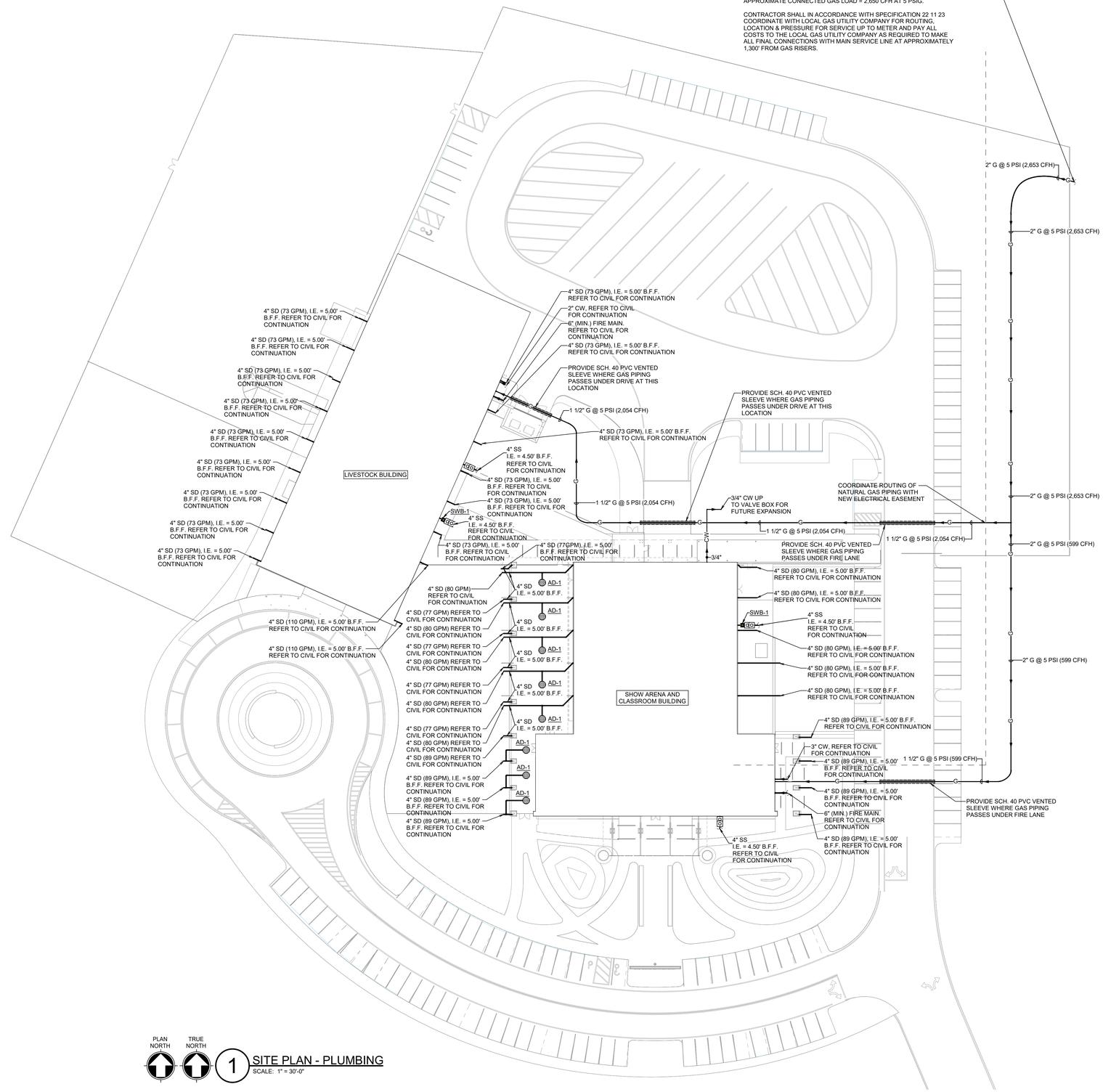
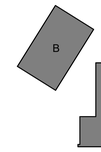


PLAN NORTH / TRUE NORTH

1 SITE PLAN - PLUMBING
SCALE: 1" = 30'-0"



KEY PLAN

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Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
SITE PLAN - PLUMBING

SHEET NO.
P1.11

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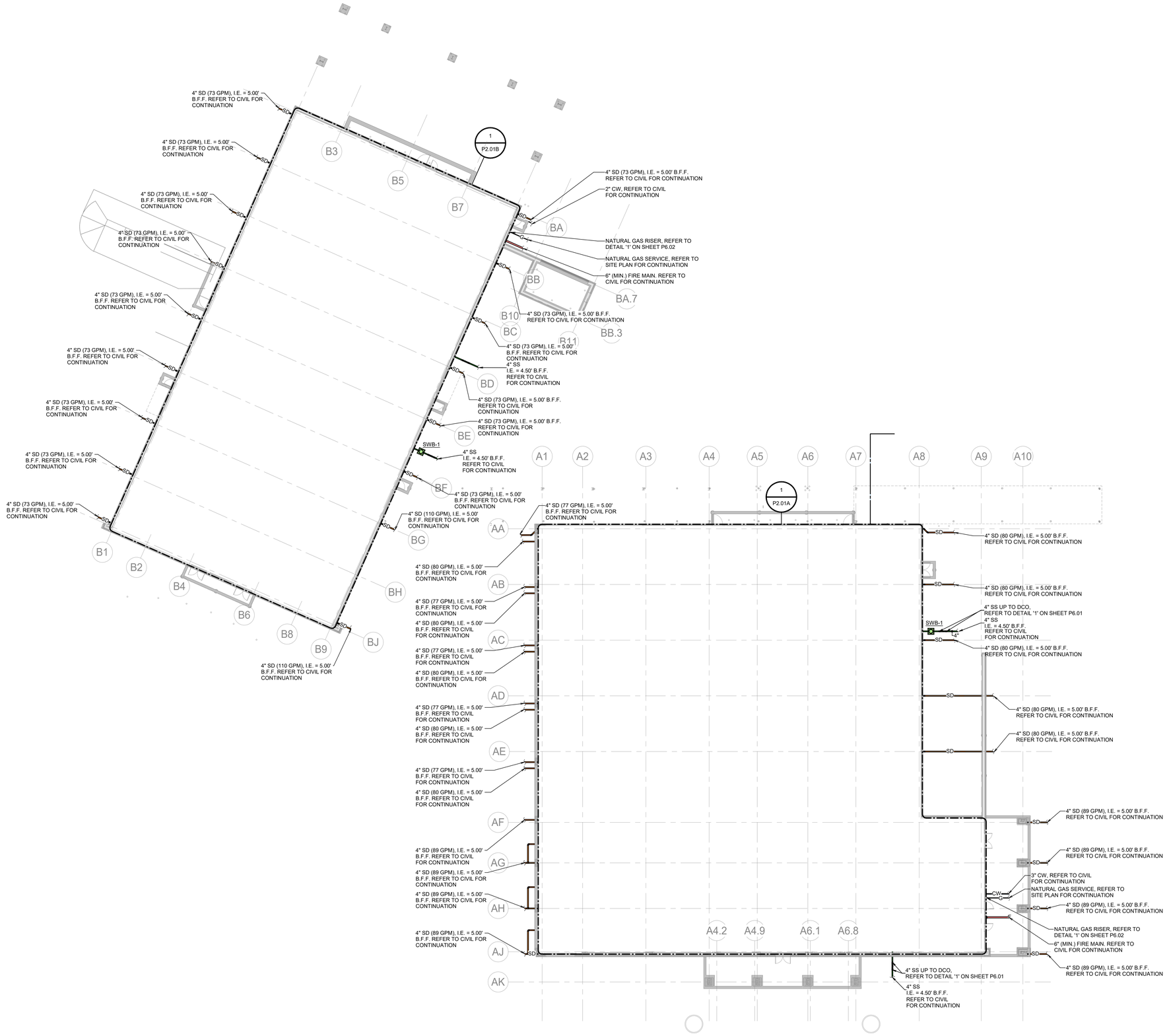

PLAN NORTH / TRUE NORTH

1 UNDERFLOOR PLAN - OVERALL - PLUMBING
SCALE: 1/16" = 1'-0"

KEY PLAN

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SHEET TITLE
UNDERFLOOR PLAN - OVERALL - PLUMBING

SHEET NO.
P2.01

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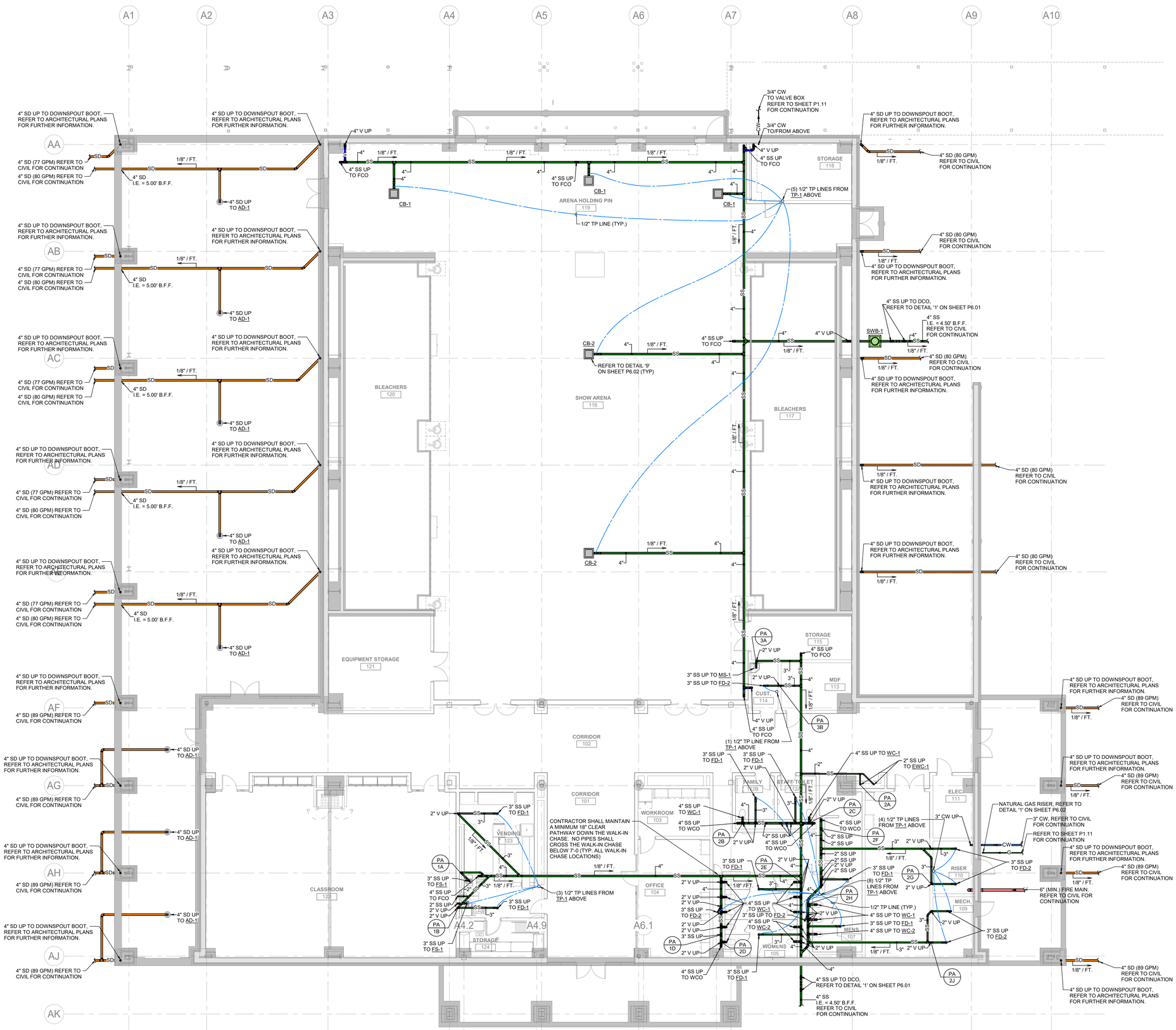
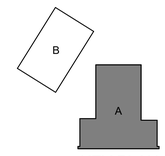


PLAN NORTH / TRUE NORTH

1 UNDERFLOOR PLAN - AREA A - PLUMBING
SCALE: 1/8" = 1'-0"



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PROJECT NO.
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SHEET TITLE
UNDERFLOOR PLAN - AREA A - PLUMBING

SHEET NO.
P2.01A

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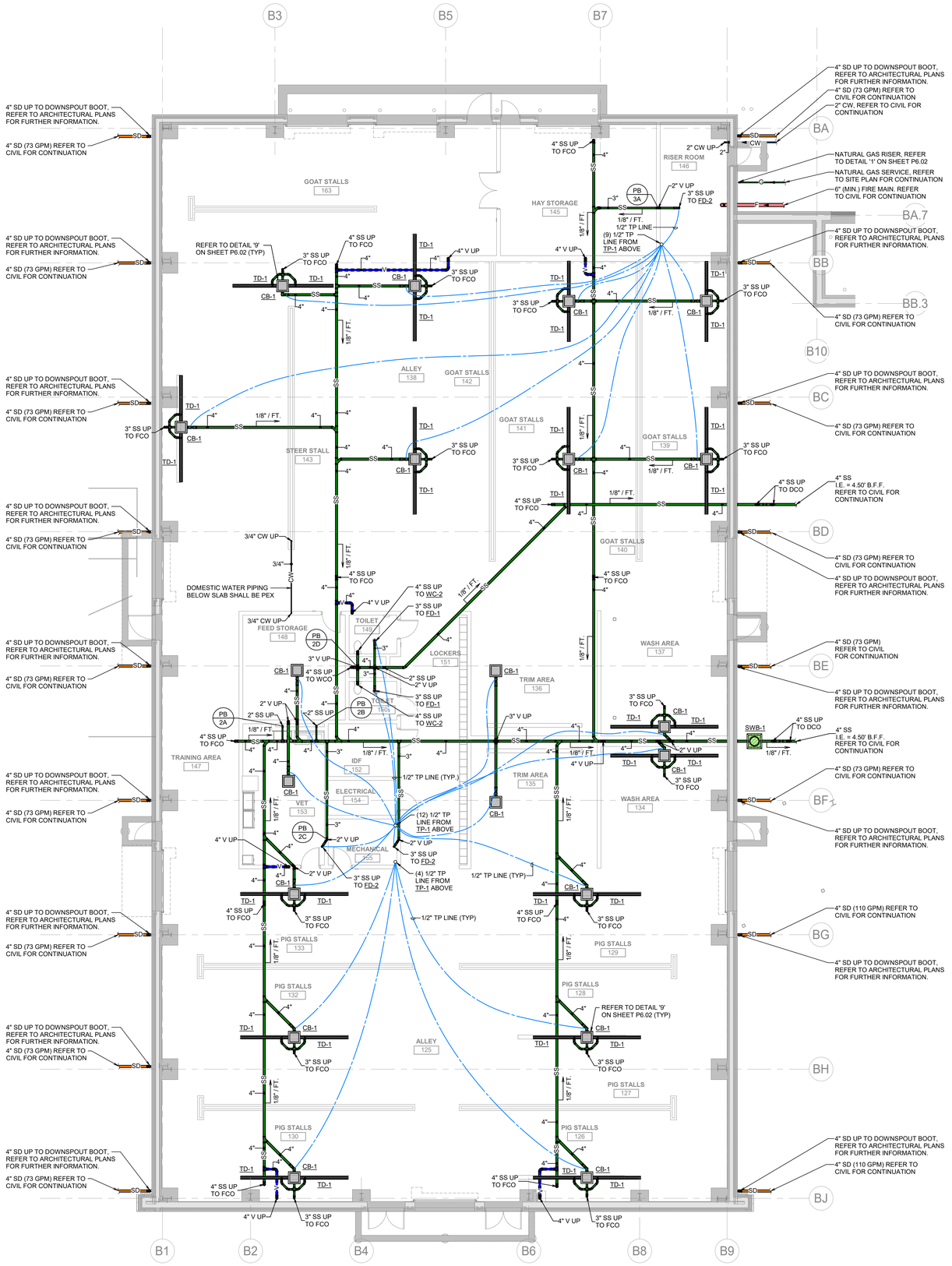

PLAN NORTH / TRUE NORTH

1 UNDERFLOOR PLAN - AREA B - PLUMBING
SCALE: 1/8" = 1'-0"

B
A
KEY PLAN

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PROJECT NO.
24-057.00

SHEET TITLE
UNDERFLOOR PLAN - AREA B - PLUMBING

SHEET NO.
P2.01B

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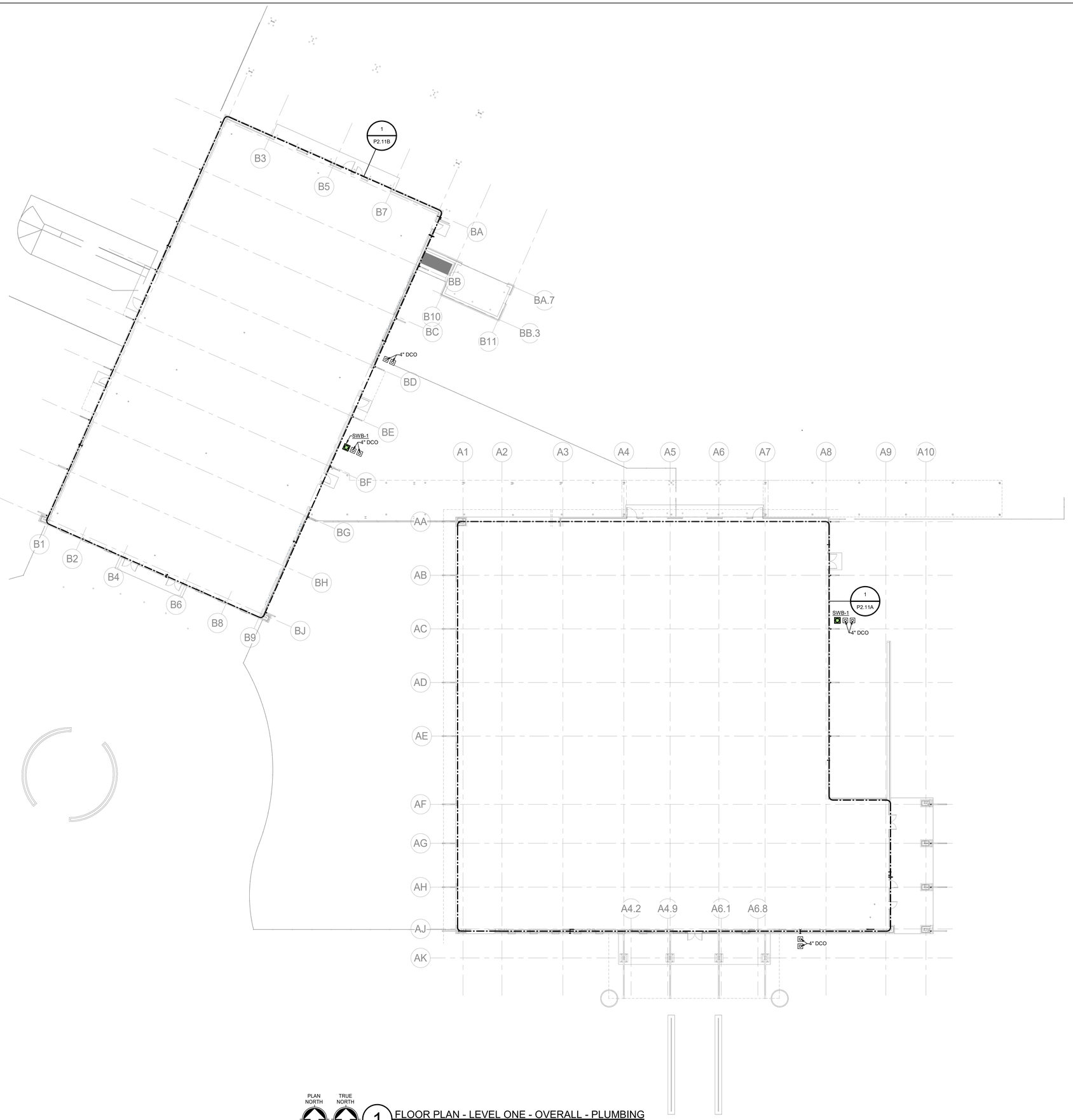
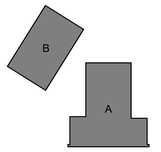


PLAN NORTH / TRUE NORTH

1 FLOOR PLAN - LEVEL ONE - OVERALL - PLUMBING
SCALE: 1/16" = 1'-0"



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SHEET TITLE
FLOOR PLAN - LEVEL ONE - OVERALL - PLUMBING

SHEET NO.
P2.11

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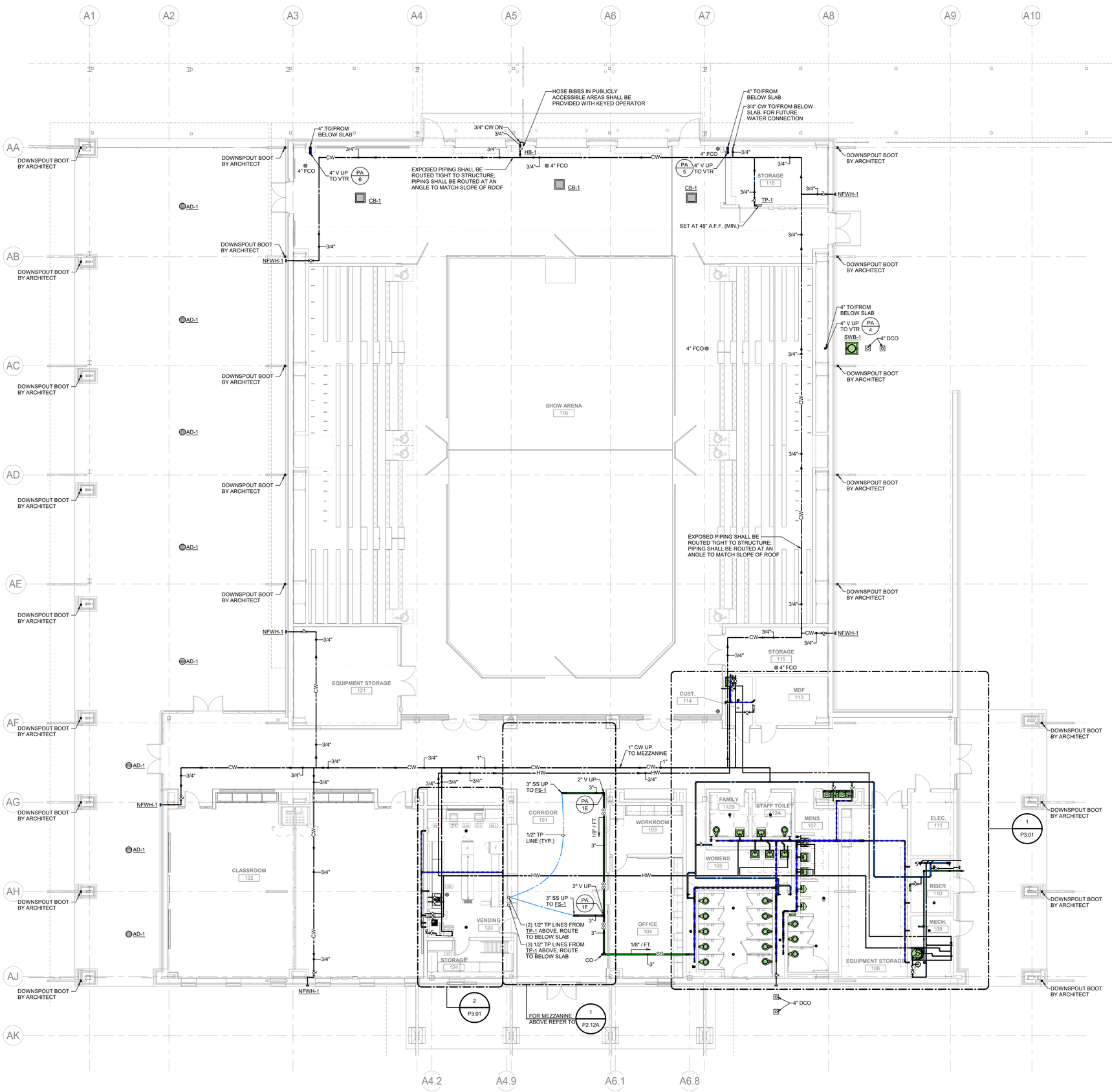

PLAN NORTH / TRUE NORTH

1 FLOOR PLAN - LEVEL ONE - AREA A - PLUMBING
SCALE: 1/8" = 1'-0"

KEY PLAN

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FLOOR PLAN - LEVEL ONE - AREA A - PLUMBING

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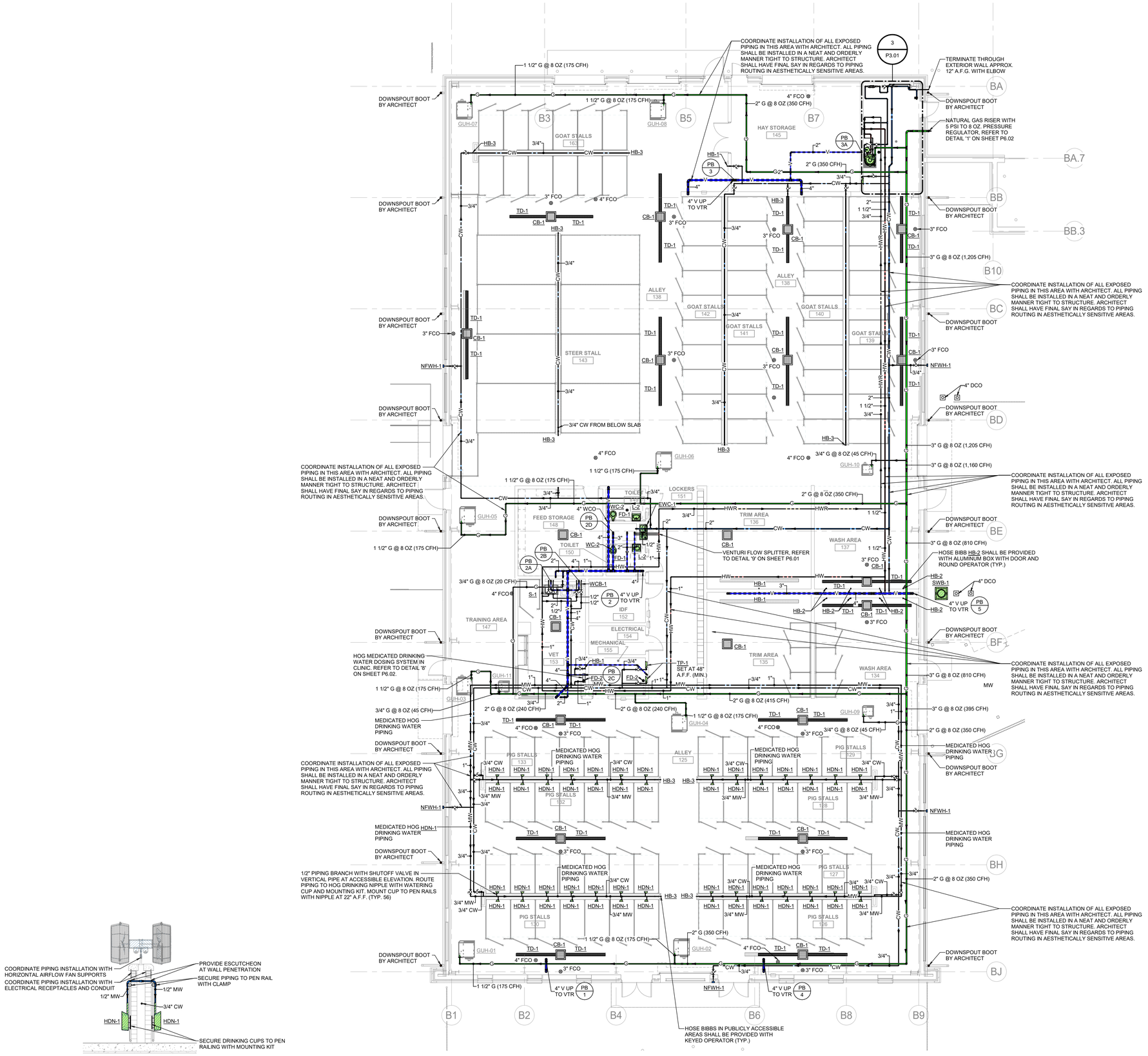

2 HOG DRINKING CUP MOUNTING DETAIL
NO SCALE

1 FLOOR PLAN - LEVEL ONE - AREA B - PLUMBING
SCALE: 1/8" = 1'-0"

KEY PLAN

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VLK	MD
Proj. Arch.	
VLK	

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SHEET TITLE
FLOOR PLAN - LEVEL ONE - AREA B - PLUMBING

SHEET NO.
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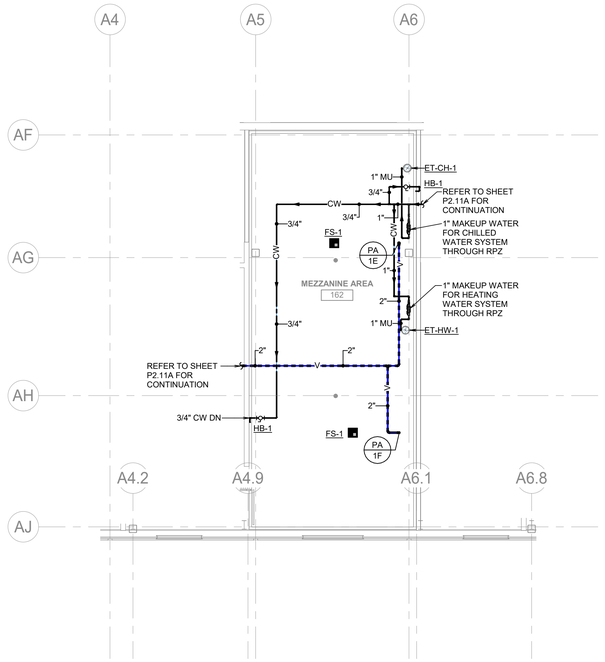

PLAN NORTH / TRUE NORTH

1 FLOOR PLAN - LEVEL TWO - MEZZANINE - PLUMBING
SCALE: 1/8" = 1'-0"

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EMS ISD AGRICULTURAL SCIENCE COMPLEX

STATE OF TEXAS
JOSEPH C. PROCTOR
132777
LICENSED
PROFESSIONAL ENGINEER
2025.05.28

ISSUED: May 29, 2025

REVISIONS

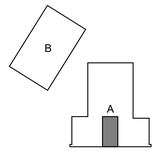
Revision No.	Revision Date

Director VLK	Drawn By LCA
Designer VLK	Quality Control MD
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
FLOOR PLAN - LEVEL TWO - AREA A MEZZANINE - PLUMBING

SHEET NO.
P2.12A



KEY PLAN

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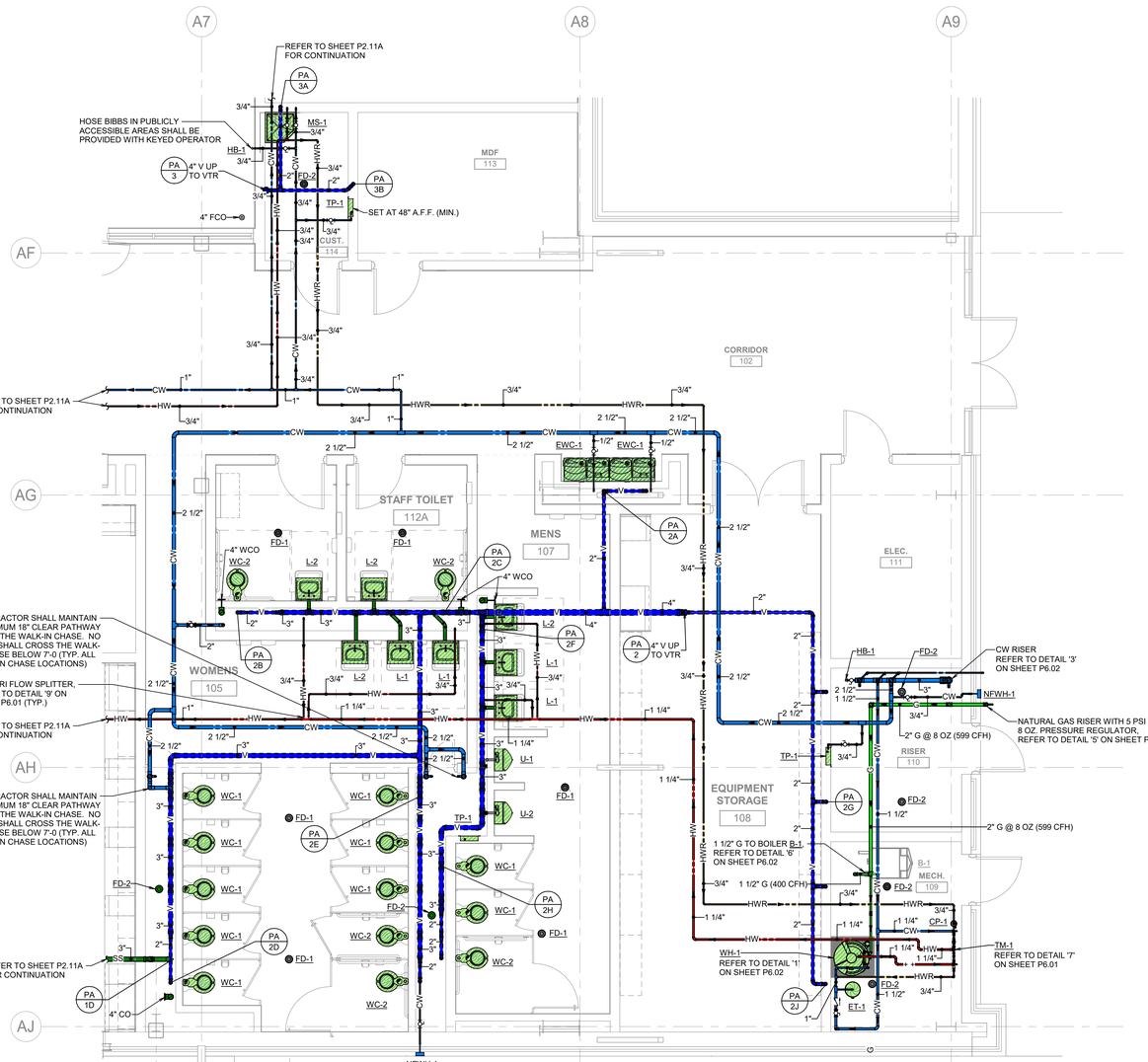

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1 ENLARGED FLOOR PLAN - LEVEL ONE - UNIT A RESTROOMS - PLUMBING

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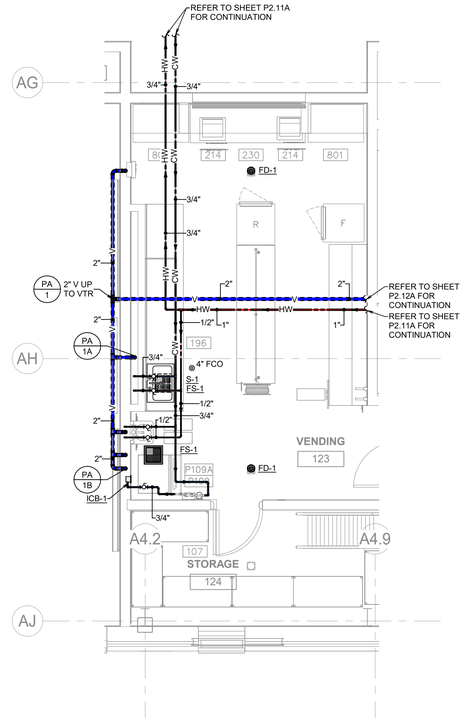

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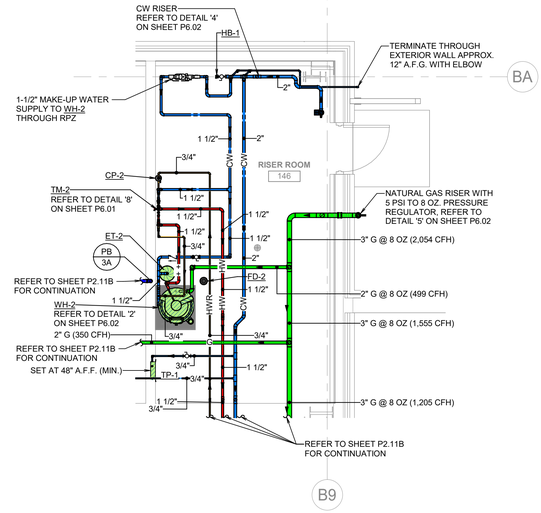

PLAN NORTH TRUE NORTH

3 ENLARGED FLOOR PLAN - LEVEL ONE - UNIT B RISER ROOM - PLUMBING

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

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STATE OF TEXAS
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Designer VLK	Quality Control MD
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
ENLARGED FLOOR PLANS - PLUMBING

SHEET NO.
P3.01

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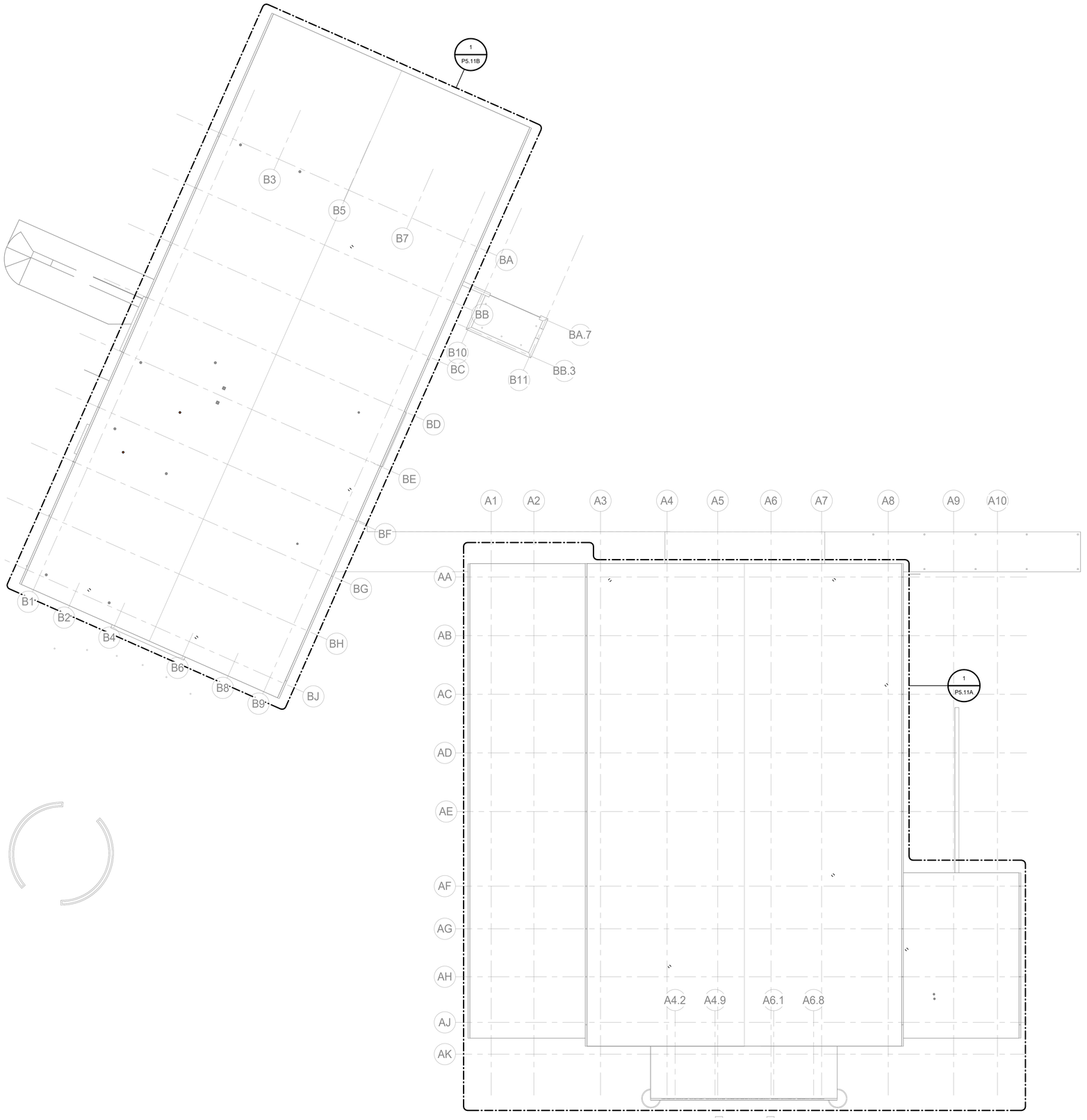

PLAN NORTH

TRUE NORTH

1 ROOF PLAN - OVERALL - PLUMBING

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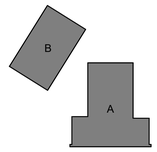

KEY PLAN

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PROJECT NO.

24-057.00

SHEET TITLE

FLOOR PLAN - ROOF - OVERALL

SHEET NO.

P5.11

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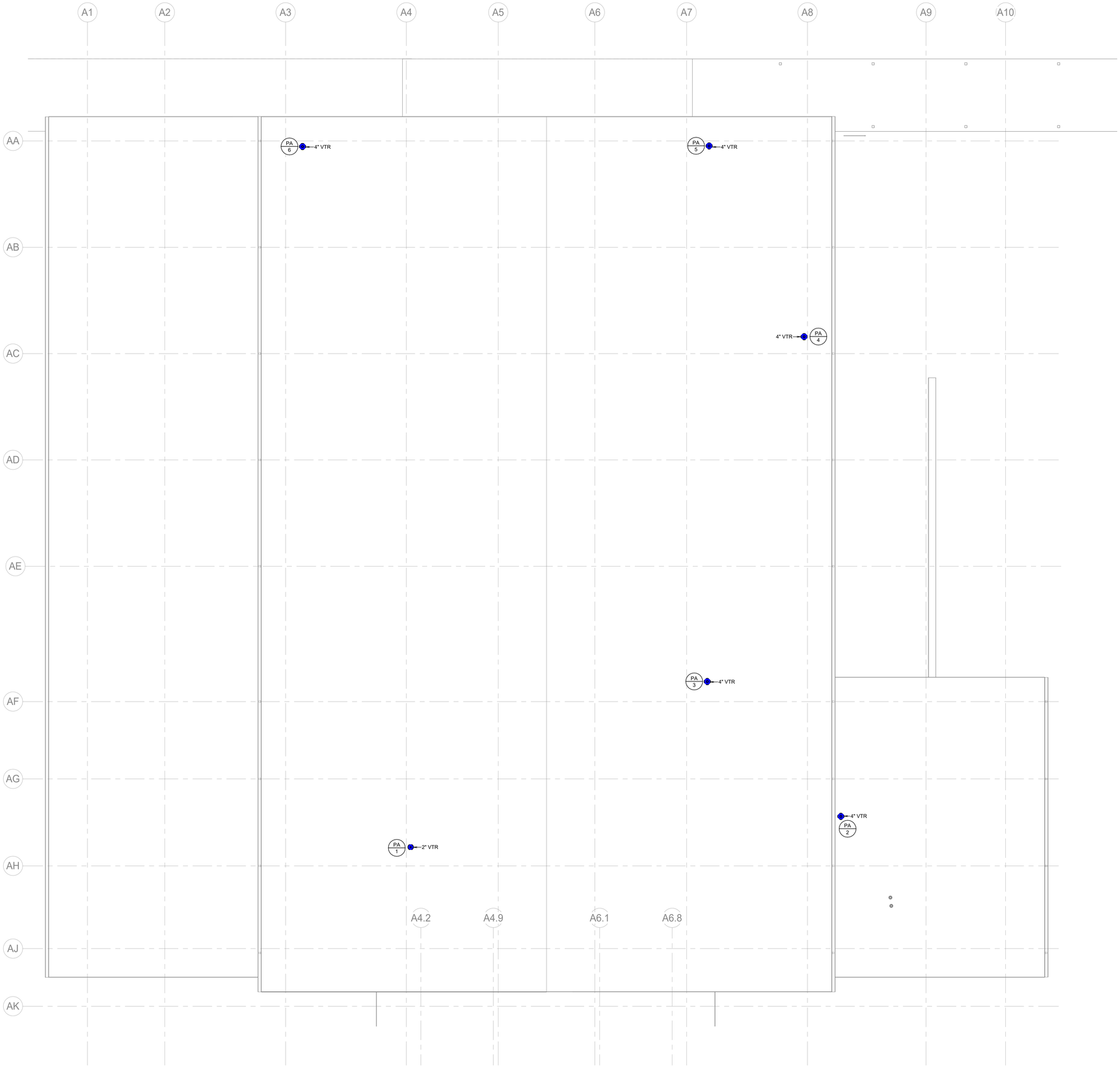

PLAN NORTH / TRUE NORTH

1 ROOF PLAN - AREA A - PLUMBING

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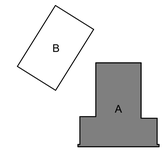

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2025.05.28

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PROJECT NO.
24-057.00

SHEET TITLE
FLOOR PLAN - ROOF - AREA A - PLUMBING

SHEET NO.
P5.11A

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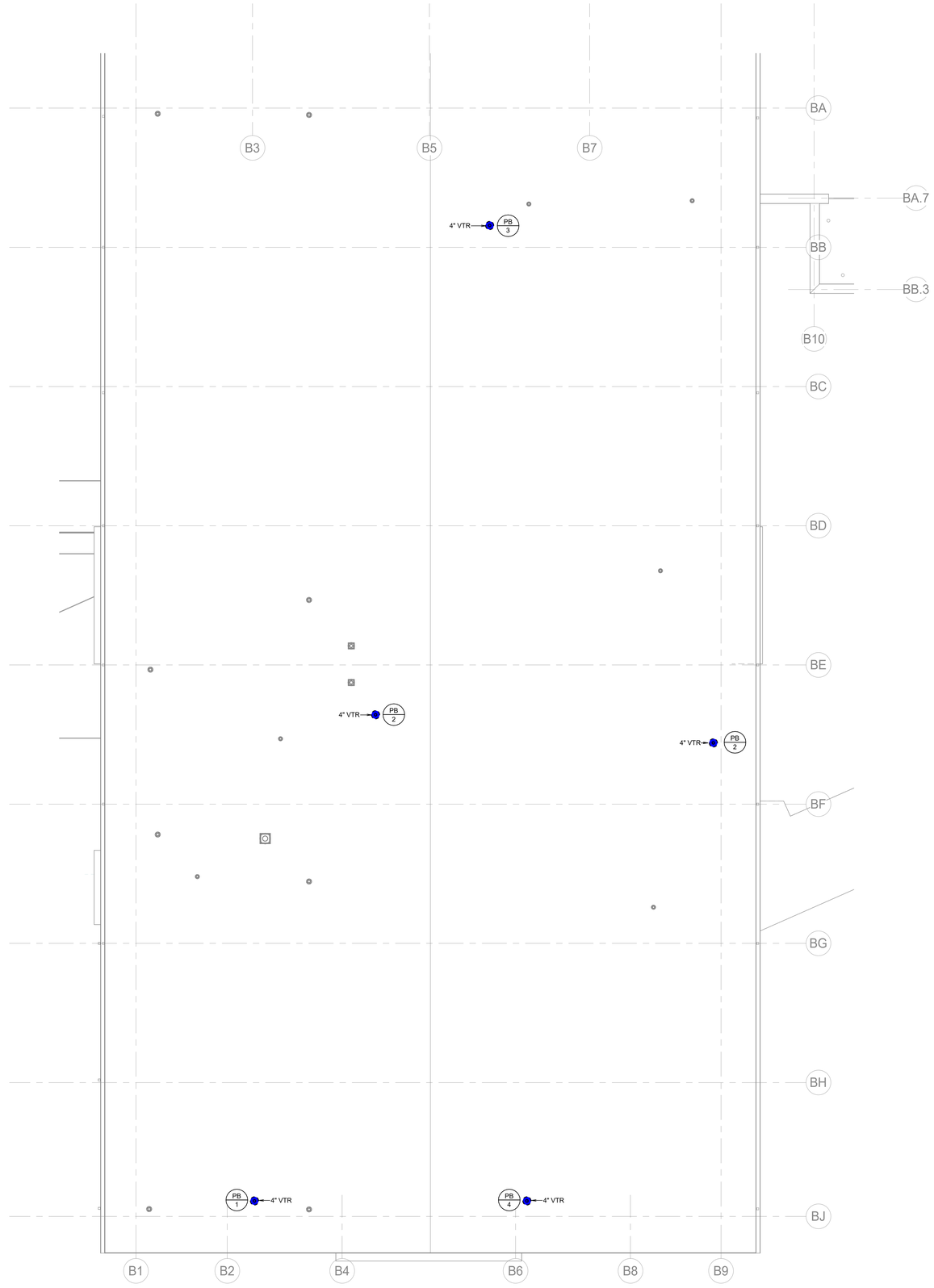

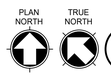

1 ROOF PLAN - AREA B - PLUMBING
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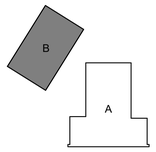

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PROJECT NO.
24-057.00

SHEET TITLE
FLOOR PLAN - ROOF - AREA B - PLUMBING

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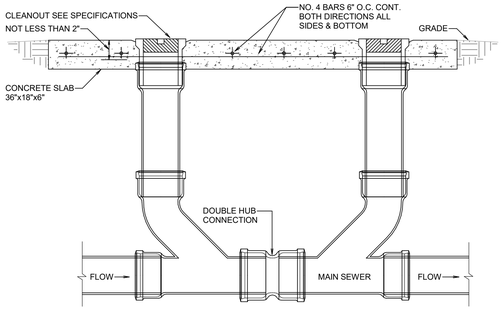

NOTE: NO TWO-WAY CLEANOUTS SHALL BE USED.

1 DOUBLE EXTERIOR CLEANOUT
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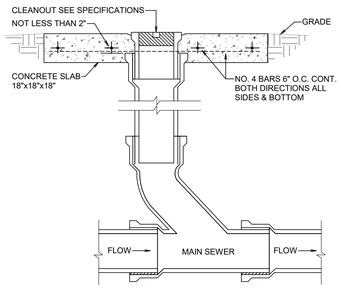

2 EXTERIOR CLEANOUT/GRADE CLEANOUT
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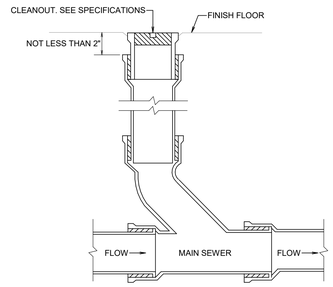

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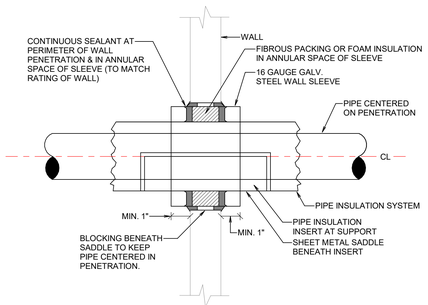

4 BUILDING WALL PIPE PENETRATION DETAIL
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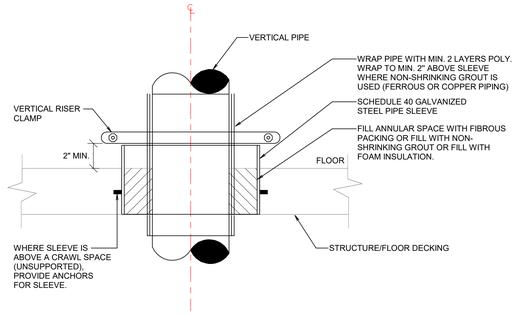

5 FLOOR PIPE PENETRATION DETAIL
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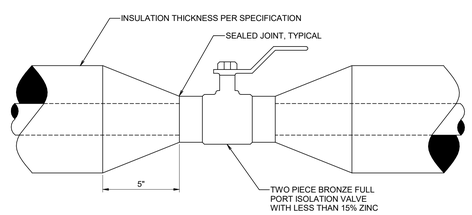

6 INSULATION TAPER AT DOMESTIC WATER ISOLATION VALVE
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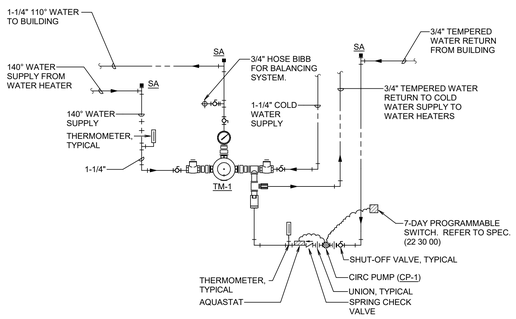

7 THERMOSTATIC MIXING VALVE DETAIL - TM-1
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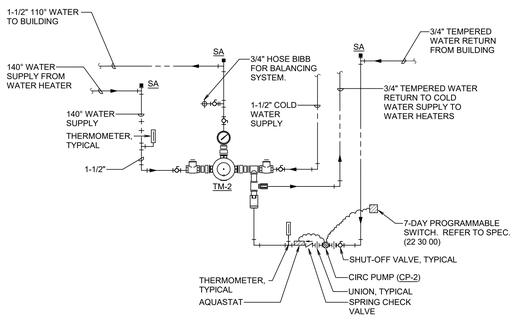

8 THERMOSTATIC MIXING VALVE DETAIL - TM-2
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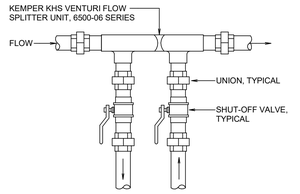

9 VENTURI FLOW SPLITTER DETAIL
NO SCALE

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JOSEPH C. PROCTOR 132777 LICENSED PROFESSIONAL ENGINEER
2025.05.28

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
VLK	LCA
Designer	Quality Control
VLK	MD
Proj. Arch.	
VLK	

PROJECT NO.
24-057.00

SHEET TITLE
DETAILS - PLUMBING

SHEET NO.
P6.01

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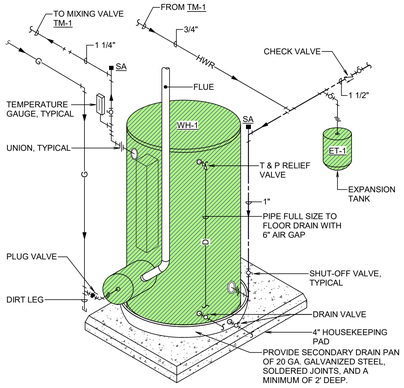

1 GAS WATER HEATER DETAIL - WH-1
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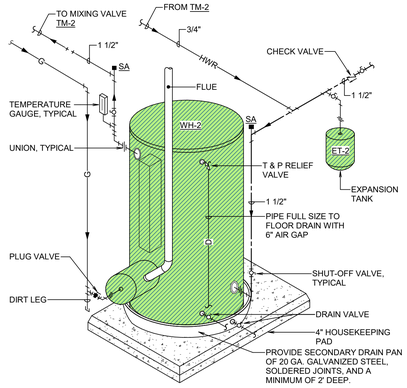

2 GAS WATER HEATER DETAIL - WH-2
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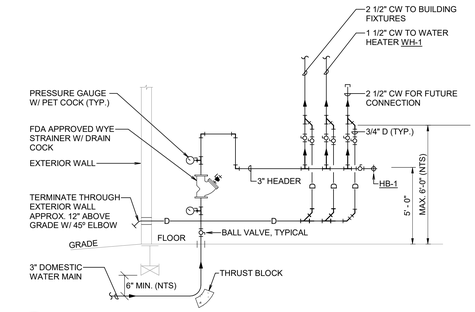

3 DOMESTIC COLD WATER ENTRY DETAIL - UNIT A
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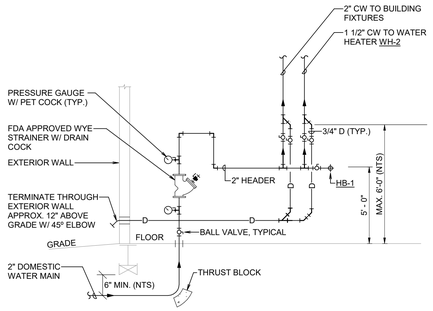

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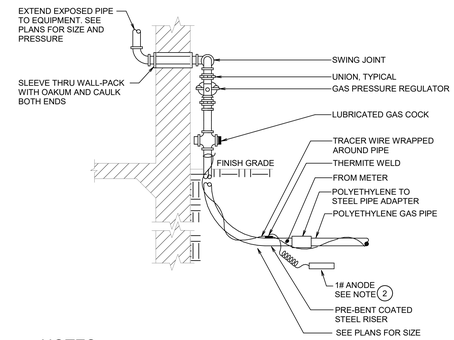
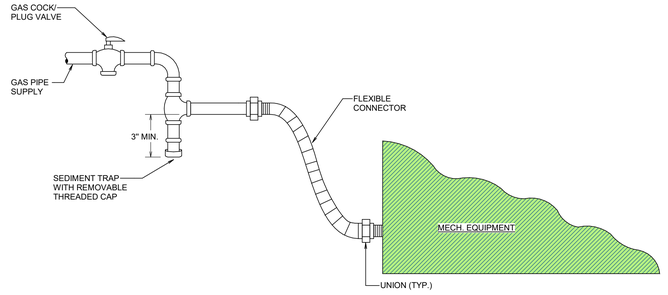


NOTES:

1. ADEQUATE SLACK SHALL BE LEFT IN LEAD WIRE TO PREVENT DAMAGE TO LEAD WIRE DURING BACKFILLING.
2. ANODE SHALL BE AT LEAST 6" BELOW SERVICE LINE UNLESS OTHERWISE SPECIFIED.
3. CONTRACTOR SHALL COORDINATE GAS SERVICE REQUIREMENTS WITH THE LOCAL NATURAL GAS UTILITY COMPANY TO INSURE THE TIMELY PROVISION OF THIS SERVICE TO KEEP UP WITH THE PROJECT REQUIREMENTS. COORDINATE EXACT PIPE ROUTING, SIZE, INSTALLATION, AND PAY ALL COSTS TO THE UTILTIY COMPANY FOR ALL NEW GAS PIPING FROM THE OFF-SITE GAS MAIN TRUNK CONNECTION UP TO THE PROPERTY LINE, EXTENDED ONTO THE SITE UP TO AND INCLUDING THE GAS METER INSTALLATION AT THE PROPOSED LOCATION. CONTRACTOR SHALL INSTALL GAS PIPING FROM THE GAS METER UP TO THE BUILDING ENTRY POINT. THIS SYSTEM SHALL BE PROVIDED WITH THE SERVICE PRESSURE NOTED ON THE PLANS WITH ISOLATION VALVES, TEST PORTS, AND REGULATION COMPONENTS TO ADJUST THE DOWNSTREAM PRESSURE TO THAT INDICATED ON THE PLANS.

5 GAS ENTRY/RISER WITH REGULATOR DETAIL
NO SCALE



6 GAS EQUIPMENT PIPE CONNECTION DETAIL
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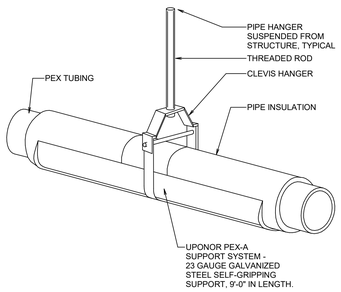

7 PEX PIPE SUPPORT DETAIL
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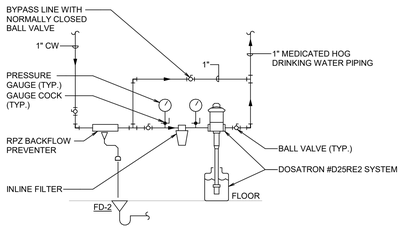

8 HOG DRINKING WATER DOSING SYSTEM
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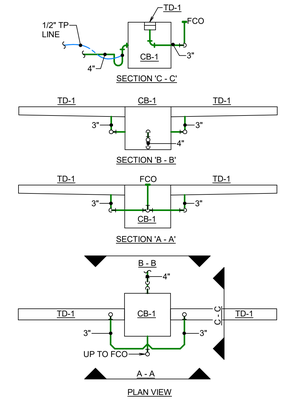

9 TRENCH AND CATCH BASIN DIAGRAM
NO SCALE

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PROJECT NO.
24-057.00

SHEET TITLE
DETAILS - PLUMBING

SHEET NO.
P6.02

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PLOT SCALE:As Indicated

PLUMBING FIXTURE ROUGH-IN SCHEDULE

DESIGNATION	FIXTURE TYPE	FIXTURE CONNECTIONS				HOT WATER TEMP. (°F)	DESCRIPTION
		COLD WATER	HOT WATER	WASTE	VENT		
AD-1	AREA DRAIN	—	—	4"	—	—	JAY R. SMITH # 2140-U-NB, CAST IRON BODY, 12" ROUND, HEAVY DUTY, TRAFFIC RATED, BOTTOM OUTLET, NICKEL BRONZE HEELPROOF AND VANDAL PROOF GRATE. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.
CB-1	CATCH BASIN	—	—	4"	2"	—	24"X24"X38" SOLIDS/SAND INTERCEPTOR, FABRICATED STEEL CATCH BASIN, COATED INSIDE AND OUTSIDE, H2O RATED DUCTILE GRATE WITH FLANGE.
CB-2	CATCH BASIN	—	—	4"	2"	—	24"X24"X38" SOLIDS/SAND INTERCEPTOR, FABRICATED STEEL CATCH BASIN, COATED INSIDE AND OUTSIDE, H2O RATED SOLID HEAVY DUTY PLATE COVER WITH FLANGE.
EWC-1	ELECTRIC WATER COOLER	1/2"	—	2"	2"	—	WALL MOUNTED ALL STAINLESS STEEL BI-LEVEL, WITH BOTTLE FILLER AND CANE APRON AS REQUIRED - ADA/TAS
FD-1	FLOOR DRAIN - GENERAL	—	—	3"	2"	—	GENERAL PURPOSE, VANDAL RESISTANT NICKEL BRONZE GRATE, CAST IRON BODY W/ TRAP GUARD
FD-2	FLOOR DRAIN - MECHANICAL	—	—	3"	2"	—	MECHANICAL ROOM, FIXED DUCTILE IRON GRATE, CAST IRON BODY W/ TRAP GUARD
FS-1	FLOOR SINK	—	—	3"	2"	—	12"X12"X8" FLOOR SINK W/ 3/4 GRATE, INTERNAL DOME STRAINER, ACID RESISTANT COATED INTERIOR UNLESS NOTED OTHERWISE
HB-1	HOSE BIBB	3/4"	—	—	—	—	WALL MOUNTED VACUUM BREAKER
HB-2	HOSE BIBB - DUAL TEMPERATURE	3/4"	3/4"	—	—	110°F	WALL MOUNTED VACUUM BREAKER, HOT & COLD WATER CONNECTIONS
HB-3	QUICK CONNECTION HOSE BIBB	3/4"	—	—	—	—	QUICK CONNECTION HOSE BIBB
ICB-1	ICE MAKER CONNECTION BOX	1/2"	—	—	—	—	WALL MOUNTED, FULLY RECESSED, WITH 1/4" THREADED CONNECTION
L-1	LAVATORY	1/2"	1/2"	2"	2"	110°F	WALL MOUNTED, 4" CENTERS WITH 5" SPOUT WITH MANUAL SINGLE LEVER HANDLE WITH ASSE 1070 COMPLIANT MIXING DEVICE - ADULT
L-2	LAVATORY	1/2"	1/2"	2"	2"	110°F	WALL MOUNTED, 4" CENTERS WITH 5" SPOUT WITH MANUAL SINGLE LEVER HANDLE WITH ASSE 1070 COMPLIANT MIXING DEVICE - ADULT - ADA/TAS
MS-1	MOP SINK	3/4"	3/4"	3"	2"	110°F	FLOOR MOUNTED TERRAZZO BASIN, WALL MOUNTED FAUCET WITH SUPPLY CHECK ARMS, VACUUM BREAKER
NFWH-1	NON-FREEZE WALL HYDRANT	3/4"	—	—	—	—	RECESSED BOX, 3/4" THREADED HOSE CONNECTION, LOOSE KEY HANDLE, WITH INTEGRAL ASSE 1052 DOUBLE CHECK VACUUM BREAKER
S-1	SINK	1/2"	1/2"	2"	2"	110°F	SINGLE COMPARTMENT, 9" DEEP, COUNTER MOUNTED TYPE 304 STAINLESS STEEL, 8" GOOSENECK, AND 4" WRIST BLADE HANDLES
TD-1	TRENCH DRAIN	—	—	4"	2"	—	PRE-FORMED POLYMER CONCRETE TRENCH WITH STAINLESS STEEL GRATE AND RIM, HEAVY DUTY TRAFFIC BEARING
TP-1	TRAP PRIMER	3/4"	—	—	—	—	MOUNT AT A MINIMUM OF 18" A.F.F. FOR EVERY 30 FEET OF TP MAKE-UP LINE, WITH AIR GAP, SOLENOID ACTIVATED DISCHARGE, DISTRIBUTION UNIT & SHUT-OFF VALVE
U-1	URINAL	3/4"	—	2"	2"	—	WALL MOUNTED, MANUAL 0.5 GPF FLUSH VALVE - ELONGATED RIM - ADULT
U-2	URINAL	3/4"	—	2"	2"	—	WALL MOUNTED, MANUAL 0.5 GPF FLUSH VALVE - ELONGATED RIM - ADULT - ADA/TAS
WC-1	WATER CLOSET	1 1/4"	—	4"	2"	—	FLOOR MOUNTED, BOTTOM OUTLET, MANUAL 1.28 GPF FLUSH VALVE - ADULT
WC-2	WATER CLOSET	1 1/4"	—	4"	2"	—	FLOOR MOUNTED, BOTTOM OUTLET, MANUAL 1.28 GPF FLUSH VALVE - ADULT - ADA/TAS
WCB-1	WASHING MACHINE CONNECTION BOX	3/4"	3/4"	2"	2"	110°F	HOT AND COLD WATER HOSE BIBBS

NOTES:

1. ROUGH-IN SUPPLY WASTE & VENT PIPE SIZES INDICATED ABOVE ARE MINIMUM PIPE SIZES SHOWN FOR ROUGH-IN ONLY. MAIN SIZES SHALL BE AS INDICATED ON DRAWINGS.
2. COORDINATE WITH PLUMBING FIXTURE MFG. DIMENSIONED ROUGH-IN SHEET/DRAWINGS FOR EXACT LOCATIONS, SIZES, REQUIREMENTS, ETC.. PLUMBING CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS AS REQUIRED FOR A COMPLETE INSTALLATION AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS, IN FULL ACCORDANCE WITH ALL APPLICABLE CODES HAVING JURISDICTION.
3. REFER TO PLUMBING FIXTURE SPECIFICATIONS FOR ACCEPTABLE MANUFACTURER & MODEL NUMBER. ALL FIXTURES SHALL BE OF COMMERCIAL GRADE UNLESS NOTED OTHERWISE.
4. REFER TO ARCHITECTURAL DRAWINGS FOR ALL MOUNTING HEIGHTS AND EXACT LOCATIONS. COORDINATE WITH GENERAL CONTRACTOR PRIOR TO STARTING ANY WORK. PROVIDE ANY ADDITIONAL SUPPORTS, HANGERS, OPENINGS, ETC. AS REQUIRED FOR A COMPLETE INSTALLATION. COORDINATE ALL CLEARANCES AND LOCATIONS WITH OTHER TRADES AS REQUIRED.
5. PROVIDE AN AIR CHAMBER ON EACH BRANCH PIPE AT EACH FIXTURE. THE AIR CHAMBER SHALL HAVE A MINIMUM VERTICAL LENGTH OF 18", SHALL BE CONCEALED IN THE WALL, AND SHALL BE OF THE SAME PIPE MATERIAL AND DIAMETER AS THE BRANCH PIPE.

GAS WATER HEATER SCHEDULE

DESIGNATION	MANUFACTURER	MODEL	SERVICE	LOCATION	GAS INPUT (MBH)	TANK VOLUME	WATER TEMP. (°F)	ELECTICAL DATA		RECOVERY RATE @ 100°F RISE	DESCRIPTION
								VOLTS	PH		
WH-1	A. O. SMITH	BTH-199	ARENA	MECH 109	199	100.0 gal	140	120	1	235 GPH	PROVIDE NEUTRALIZATION KIT
WH-2	A. O. SMITH	BTH-500	ANIMAL BARN	RISER 146	499	119.0 gal	140	120	1	576 GPH	PROVIDE NEUTRALIZATION KIT

THERMOSTATIC MIXING VALVE SCHEDULE

DESIGNATION	MANUFACTURER	MODEL	SERVICE	WATER TEMPERATURE		SENSING RANGE		PRESSURE DROP	Description
				INLET	OUTLET	MIN.	MAX.		
TM-1	ARMSTRONG	RADA 320R	WH-1	140 °F	110 °F	0 GPM	15 GPM	20.00 psi	THERMOSTATIC MIXING VALVE WITH FEMALE NPT CONNECTIONS, FACTORY MODIFIED FOR TOP OUTLET
TM-2	ARMSTRONG	RADA 320R	WH-2	140 °F	110 °F	0 GPM	15 GPM	20.00 psi	THERMOSTATIC MIXING VALVE WITH FEMALE NPT CONNECTIONS, FACTORY MODIFIED FOR TOP OUTLET

NOTES:

1. ALL MIXING VALVES SHALL BE PIPED WITH SHUT-OFF VALVES AND UNIONS ON THE COLD WATER SUPPLY, HOT WATER SUPPLY AND TEMPERED WATER OUTLET DIRECT AT THE MIXING VALVE. WHERE AN ACCESS PANEL IS PROVIDED, MIXING VALVE AND ISOLATION VALVES SHALL BE CENTERED ON THE ACCESS PANEL. PANEL SHALL BE A MINIMUM OF 18"X18" IF SERVING MIXING VALVE ONLY. IF SERVING OTHER DEVICES PANEL SHALL BE A MINIMUM OF 24"X24"

DOMESTIC HOT WATER CIRCULATION PUMP SCHEDULE

DESIGNATION	PUMP TYPE	MANUFACTURER	MODEL	SERVICE	TEMP. (°F)	GPM	PUMP HEAD	RPM	ELECTRICAL DATA				DESCRIPTION
									HP	VOLTS	PH	HZ	
CP-1	CIRCULATION PUMP	GRUNDFOS	UPS26-99SFC	WH-1	140 °F	8 GPM	11 FT	3150	1/6	120 V	1	60 Hz	AT SPEED 3 - STAINLESS STEEL BODY
CP-2	CIRCULATION PUMP	GRUNDFOS	UPS26-99SFC	WH-2	140 °F	8 GPM	11 FT	3150	1/6	120 V	1	60 Hz	AT SPEED 3 - STAINLESS STEEL BODY

THERMAL EXPANSION TANK SCHEDULE

DESIGNATION	MANUFACTURER	MODEL	SERVICE	VOLUME	MAX. OPERATING PRESSURE	MAX. OPERATING TEMP. (°F)	Description
ET-1	AMTROL	ST-12	WH-1	4.4 gal	150.00 psi	200.0 °F	NON-ASME RATED
ET-2	AMTROL	ST-12-C	WH-2	6.4 gal	150.00 psi	200.0 °F	ASME RATED

WATER HAMMER/SHOCK ARRESTOR (SA) SCHEDULE

PDI UNIT TYPES	'A'	'B'	'C'	'D'	'E'	'F'
RANGE OF FIXTURE UNITES SERVED	1-11	12-32	33-60	61-113	114-154	155-330
SHOCK ARRESTOR CONNECTION SIZE PER PDI TABLES, NOT SUPPLY PIPE SIZE	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
NOTE: 1. UNITS SHALL BE INSTALLED IN SIZE AND LOCATION PER THE MANUFACTURER'S RECOMMENTATIONS. WHERE UNITS ARE LOCATED BEHIND A WALL, THE CONTRACTOR SHALL PROVIDE ACCESS PANEL PER SPECIFICATIONS.						

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2025.05.28

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director VLK	Drawn By LCA
Designer VLK	Quality Control MD
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
SCHEDULES - PLUMBING

SHEET NO.
P7.01

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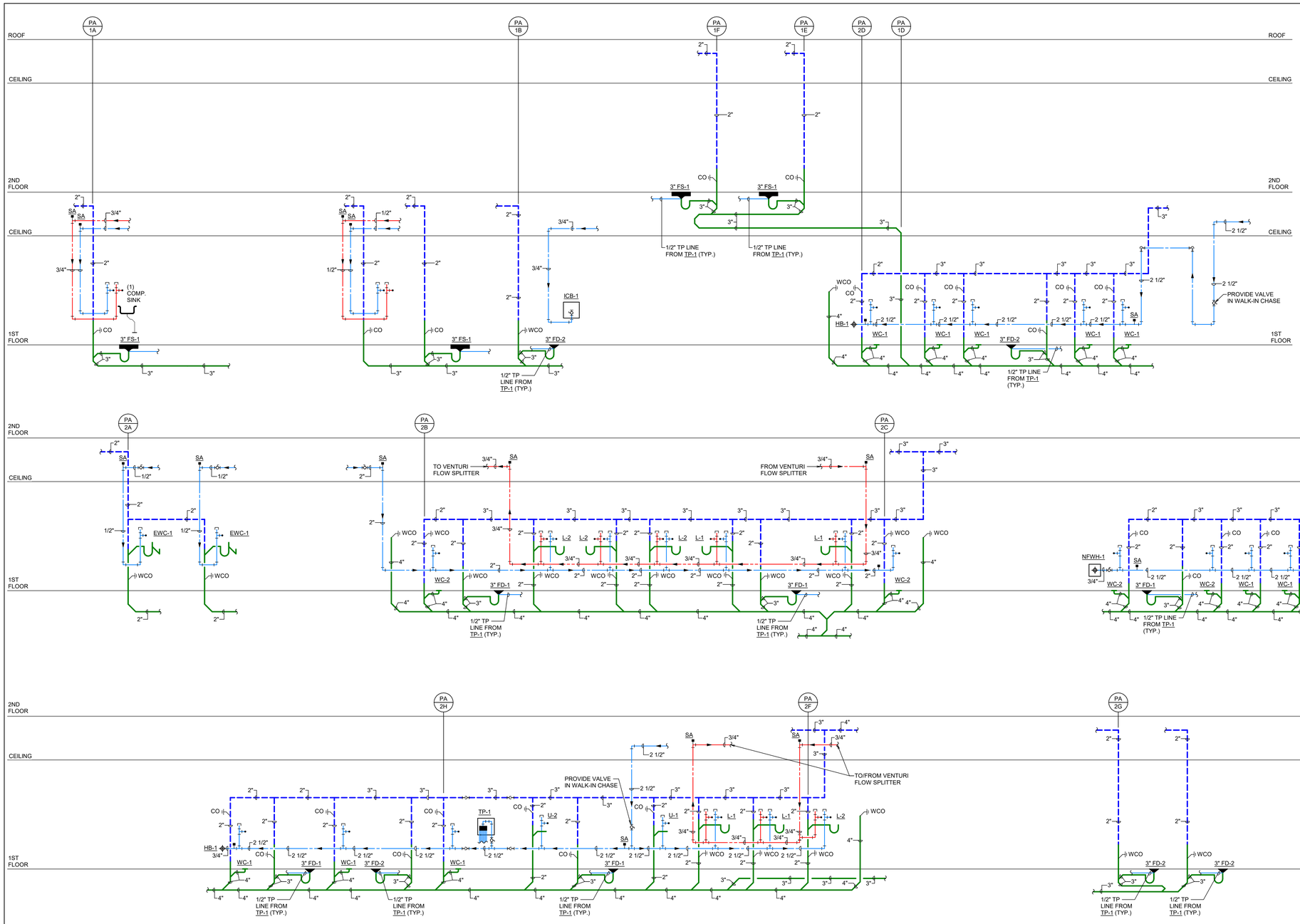

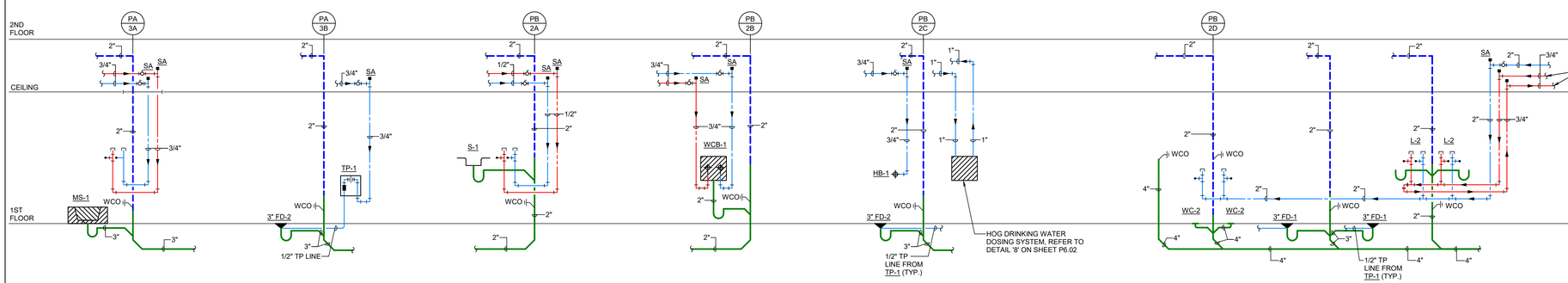

1 PLUMBING RISER DIAGRAMS
NO SCALE

GENERAL RISER NOTES:

CONTRACTOR SHALL MAINTAIN A MINIMUM 18" CLEAR PATHWAY DOWN THE WALK-IN CHASE. NO PIPES SHALL CROSS THE WALK-IN CHASE BELOW 7'-0 (TYP. ALL WALK-IN CHASE LOCATIONS)

CLEAN-OUTS - WALK-IN CHASES:

1) For each side of the walk-in chase, provide an End of Line Clean-outs set 12" above flood line of the water closets. The system design, where possible, shall provide this end of line clean-out as close as possible to the walk-in chase door. This clean-out shall face into the chase walkway.

2) At Water Closets – provide sweeping wye off vent a minimum of 12" above the flood rim of the fixture. This clean-out shall face towards the chase door.

3) At Urinals – provide sweeping wye off vent a minimum of 2" above fixture flood rim. This clean-out shall face towards the chase door.

4) At lavatories or washfountains – provide sweeping wye off vent 2" above fixture flood rim. This clean-out shall face towards the chase door.

5) Provide main stack clean-out (where sewer line drops below the floor), this shall be set 12" above flood rim of lowest water closet. Where a vertical carrier is utilized for the main stack drop, provide a clean-out 12" above the flood rim of the water closet on a 4" vent stack.

6) Cleanouts shall towards the chase door to allow for easy access.

CLEAN-OUT - NO WALK-IN CHASE:

1) End of Line Clean-outs set 12" above flood line of the water closets.

2) At Urinals – provide sweeping wye off vent a minimum of 2" above fixture flood rim to the side of the fixture.

3) At lavatories or washfountains – provide sweeping wye off vent 2" above fixture flood rim. Coord. with EMSISD project manager and Architect for lavatory spacing to allow for clean-out above flood rim.

4) Provide main stack clean-out (where sewer line drops below the floor), this shall be set 12" above flood rim of lowest water closet. Where a vertical carrier is utilized for the main stack drop, provide a clean-out 12" above the flood rim of the water closet on a 4" vent stack.

5) Cleanouts should face into the restroom from the fixture being served. If back-to-back fixture is served, provide towards Boys/Mens RR

SHUT-OFF VALVE:

a. Walk-In Chases Restroom (Where Provided) – Provide an individual shut-off valve to each side of the chase, as close as possible, to the chase opening. No piping shall cross the chase below 7'-6".

b. Gang Restroom without a Walk-In chase – In the chase behind an access panel, shall be a minimum 18"x18" access panel. One valve may turn off the entire restroom. Locate the main shut-off valve and access panel on the wide side of the Men's ADA stall.

c. Individual (private) restrooms - In the chase behind an access panel, shall be a minimum 18"x18" access panel.

d. Individual fixtures – Shall be located above the ceiling within 24"of the fixture water risers.

e. Isolation valves located above ceilings shall be set no higher than 24" above the ceiling. The water piping shall offset as required to meet this mounting requirement. Valve stems shall be set parallel to the finished floor. Insulation at valves shall be chamfered or valve handle extensions shall be provided to avoid damaging the pipe insulation

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Director	Drawn By
VLK	LCA
Designer	Quality Control
VLK	MD
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VLK	

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24-057.00

SHEET TITLE
RISER DIAGRAMS - PLUMBING

SHEET NO.
P8.01

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ELECTRICAL SHEET LIST

SHEET NO.	SHEET NAME	SHEET ISSUE DATE
E0.01	GENERAL NOTES & LEGENDS - ELECTRICAL	2025.04.21
E1.11	SITE PLAN - OVERALL - ELECTRICAL	2025.04.21
E1.12	SITE PLAN - ELECTRICAL	2025.04.21
E2.01	SITE PLAN - PHOTOMETRICS	2025.04.21
E2.11	FLOOR PLAN - LEVEL ONE - OVERALL - ELECTRICAL	2025.04.21
E2.11A	FLOOR PLAN - LEVEL ONE - AREA A - LIGHTING	2025.04.21
E2.11B	FLOOR PLAN - LEVEL ONE - AREA B - LIGHTING	2025.04.21
E2.11C	FLOOR PLAN - LEVEL TWO - AREA A MEZZANINE - LIGHTING	2025.04.21
E2.12A	FLOOR PLAN - LEVEL ONE - AREA A - POWER	2025.04.21
E2.12B	FLOOR PLAN - LEVEL ONE - AREA B - POWER	2025.04.21
E2.12C	FLOOR PLAN - LEVEL TWO - AREA A MEZZANINE - POWER	2025.04.21
E5.01	ENLARGED FLOOR PLANS - ELECTRICAL	2025.04.21
E6.01	DETAILS - ELECTRICAL	2025.04.21
E6.02	DETAILS - ELECTRICAL	2025.04.21
E7.01	ONE-LINE DIAGRAMS - ELECTRICAL	2025.04.21
E8.01	SCHEDULES - ELECTRICAL	2025.04.21
E9.01	PANEL SCHEDULES - ELECTRICAL	2025.04.21
E9.02	PANEL SCHEDULES - ELECTRICAL	2025.04.21
E9.03	PANEL SCHEDULES - ELECTRICAL	2025.04.21

Grand total: 19

GENERAL SIGNTEX NOTES:

1. REFER TO SIGNTEX INSTALLATION RECOMMENDATIONS FOR ALL ASPECTS OF INSTALLATION.
2. COORDINATE LIGHT FIXTURE MOUNTING WITH ARCHITECT, INCLUDING MOUNTING HEIGHTS.
3. COORDINATE INSTALLATION OF FIXTURES SHOWN TO BE MOUNTED ON STOREFRONT ASSEMBLIES WITH THE INSTALLER OF THOSE SYSTEMS.
4. FIELD VERIFY ORIENTATION OF DIRECTIONAL ARROWS ON ALL EXIT SIGNS TO PROVIDE THE CORRECT DIRECTION OF EGRESS.
5. ALL WIRING SHALL MEET THE MINIMUM SIZE REQUIREMENTS TO LIMIT VOLTAGE DROP TO 3%. INSTALLER TO SUBMIT PROPOSED WIRE ISSUES AND VOLTAGE DROP CALCULATIONS.
6. COORDINATE INSTALLATION OF SIGNTEX ELC DEVICES WITH LIGHT FIXTURES TO BE INSTALLED WITHIN, WITH THE ACTUAL LIGHT FIXTURE USED.

GENERAL LIGHTING NOTES:

1. ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE AND LOCAL CODES, RULES, REGULATIONS.
2. ALL WORK SHALL COMPLY WITH THE BUILDING OWNER'S CONSTRUCTION GUIDELINES.
3. GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY IF CONFLICTS OCCUR BETWEEN LIGHTING AND ANY OTHER TRADE. DO NOT PROCEED WITH INSTALLATION IN THAT AREA UNTIL CONFLICT HAS BEEN RESOLVED TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER.
4. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING INSTRUCTIONS FOR ALL LIGHT FIXTURES. NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES BETWEEN THESE PLANS AND THE ARCHITECTURAL PLANS RELATING TO QUANTITY, TYPE, AND LOCATION OF DEVICES AND/OR FIXTURES.
5. WHEN SPECIFIC LIGHT FIXTURE TYPE HAS BEEN SPECIFIED IN THE LIGHTING FIXTURE SCHEDULE, ELECTRICAL CONTRACTOR SHALL PROVIDE COMPLETE ASSEMBLY INCLUSIVE OF ALL PARTS AND HARDWARE.
6. CONTRACTOR SHALL COORDINATE LIGHT FIXTURE MOUNTING FRAMES AND ACCESSORIES WITH THE CEILING TYPE ACTUALLY BEING FURNISHED. REFER TO FINAL ARCHITECTURAL REFLECTED CEILING PLAN AND RELATED SUBMITTALS PRIOR TO CONFIRMING MOUNTING FRAMES AND ACCESSORIES. LIGHT FIXTURE SUBMITTALS SHALL BE BASED ON THIS LEVEL OF COORDINATION OCCURRING PRIOR TO SUBMITTALS BEING GENERATED BY THE CONTRACTOR.
7. ALL CIRCUITS SHOWN SHALL BE 277V, 20A CIRCUITS, UNLESS NOTED OTHERWISE.
8. ALL CONDUCTORS SHALL BE #12 AWG, UNLESS NOTED OTHERWISE.
9. ALL 120V RUNS LONGER THAN 60' SHALL BE #10 AWG AND 277V RUNS LONGER THAN 150' SHALL BE #10 AWG, UNLESS NOTED OTHERWISE ON PLANS.
10. ALL CONDUCTORS SHALL BE COPPER (#10 AND SMALLER SHALL BE SOLID).
11. WHERE CONDUCTOR SIZES ARE NOTED ON DRAWINGS, THAT WIRE SIZE SHALL BE THROUGH THE ENTIRE RUN, UNLESS NOTED OTHERWISE.
12. MOUNT LIGHT SWITCHES AS INDICATED ON ARCHITECTURAL DRAWINGS (45" AFF UNLESS NOTED OTHERWISE).
13. ALL GANGED SWITCHES SHALL HAVE A COMMON SEAMLESS FACEPLATE. EACH MULTI-GANG BOX SHALL BE NO MORE THAN SIX (6) SWITCHES WIDE. WHERE MORE THAN SIX (6) SWITCHES ARE SHOWN AT ONE (1) LOCATION, ADDITIONAL MULTI-GANG BOXES SHALL BE STACKED VERTICALLY AND THE WIDTH OF THE MULTI-GANGS SHALL BE AS EVEN AS POSSIBLE.
14. EMERGENCY LIGHTING FIXTURES WITH BATTERY PACKS DESIGNED TO BE SWITCHED SHALL BE CONNECTED TO AREA LIGHTING HOT LEG AND SWITCH LEG TO ALLOW LAMPS TO BE CONTROLLED FROM LOCAL WALL SWITCH AND ILLUMINATE UPON POWER FAILURE.
15. COORDINATE LOCATIONS OF LIGHTING FIXTURES IN MECHANICAL ROOMS TO AVOID CONFLICTS WITH DUCTWORK, PIPING, ETC.
16. CONTRACTOR SHALL PROVIDE ALL REQUIRED SWITCH PACKS, MOTION SENSORS AND ASSOCIATED WIRING TO CONTROL EACH ROOM AS SHOWN. SWITCH PACKS SHALL BE LOCATED ABOVE THE CEILING.
17. FIXTURES DESIGNATED "NL" SHALL REMAIN ON AT ALL TIMES FOR NIGHT LIGHTING.
18. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL NOTES, SYMBOLS AND DETAILS.

GENERAL POWER NOTES:

1. ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE AND LOCAL CODES, RULES, REGULATIONS AND REQUIREMENTS OF THE SERVICE UTILITY COMPANY.
2. ALL WORK SHALL COMPLY WITH THE BUILDING OWNER'S CONSTRUCTION GUIDELINES.
3. ALL CIRCUITS SHOWN SHALL BE 120V, 20A CIRCUITS, UNLESS NOTED OTHERWISE.
4. ALL CONDUCTORS SHALL BE #12 AWG, UNLESS NOTED OTHERWISE.
5. ALL 120V RUNS LONGER THAN 60' SHALL BE #10 AWG, UNLESS NOTED OTHERWISE ON THE PLANS.
6. ALL CONDUCTORS SHALL BE COPPER (#10 AND SMALLER SHALL BE SOLID).
7. WHERE CONDUCTOR SIZES ARE NOTED ON DRAWINGS AND/OR SCHEDULES, THAT CONDUCTOR SIZE SHALL BE THROUGHOUT THE ENTIRE RUN, UNLESS NOTED OTHERWISE.
8. PANELBOARD DIRECTORIES SHALL BE COMPLETELY FILLED OUT TO ACCURATELY IDENTIFY EACH CIRCUIT (EXISTING AND NEW CIRCUITS) IN ALL PANELS WITHIN SCOPE OF WORK. DIRECTORIES SHALL BE TYPEWRITTEN.
9. ELECTRICAL CONTRACTOR SHALL PROVIDE A 4"x4"x2-5/8" STEEL JUNCTION BOX WITH SINGLE GANG MUD RING AND 1" METAL CONDUIT TO A MINIMUM OF 4' ABOVE FINISHED CEILING IN ACCESSIBLE CEILING FOR ALL TEL/DATA DEVICES SHOWN ON DRAWINGS. COORDINATE EXACT DEVICE LOCATION WITH OWNER'S I.T. REPRESENTATIVE AND ARCHITECT. PROVIDE A PULL STRING INSTALLED FOR FUTURE USE. PULL STRING SHALL BE SECURED AT EACH END TO PREVENT ACCIDENTAL REMOVAL.
10. WHERE SHOWN, THE NUMBER DESIGNATION SHOWN AT WALL VOICE/DATA OUTLETS IS FOR OWNERS QUANTITY OF CABLE DROPS.
11. DO NOT MOUNT THE POWER AND/OR TELEPHONE/DATA JUNCTION BOXES BACK TO BACK IN THE WALL.
12. REFER TO MECHANICAL FLOOR PLANS FOR WALL MOUNTED THERMOSTAT, SENSOR AND ALL OTHER CONTROL DEVICE LOCATIONS. PROVIDE FLUSH, GALVANIZED STEEL, WALL MOUNTED JUNCTION BOX WITH 3/4" EMT CONDUIT AND NYLON PULL-STRING TO 4" ABOVE ACCESSIBLE CEILING FOR EACH DEVICE.
13. ALL DEVICES SHALL BE MOUNTED AS INDICATED ON THE ARCHITECTURAL DRAWINGS. COORDINATE EXACT MOUNTING LOCATIONS, HEIGHTS AND ORIENTATIONS WITH ARCHITECTURAL DRAWINGS.
14. ALL RECEPTACLES MOUNTED IN KITCHENS, RESTROOMS, AT COUNTERS CONTAINING SINKS, OUTSIDE THE BUILDING OR SERVING VENDING MACHINES SHALL HAVE GROUND FAULT CIRCUIT INTERRUPTER(GFCI) PROTECTION.
15. ELECTRIC CONNECTIONS TO PANELBOARDS SHALL BE MADE ONLY WHEN PANELBOARD HAS BEEN DE-ENERGIZED.
16. ALL ELECTRICAL PANELS AND TRANSFORMERS SHALL HAVE PERMANENT ENGRAVED LABELS ON COVER INDICATING PANEL OR TRANSFORMER DESIGNATION.
17. ELECTRICAL CONTRACTOR SHALL X-RAY SLAB PRIOR TO ANY CORE-DRILLING.
18. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR ALL MOTOR STARTERS AND CONTROL PANEL LOCATIONS.
19. THE CONTRACTOR SHALL UPDATE ROOM NAMES AND ROOM NUMBERS ON FINAL PANEL SCHEDULES TO REFLECT FINAL BUILDING CONDITIONS.
20. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL NOTES, SYMBOLS AND DETAILS.

LIGHTING LEGEND

	CEILING MOUNTED EXIT LIGHT ASSEMBLY (SINGLE OR DOUBLE FACE)
	WALL MOUNTED EXIT LIGHT ASSEMBLY (SINGLE OR DOUBLE FACE)
	CEILING MOUNTED LIGHT FIXTURE (HATCHING INDICATES EMERGENCY FIXTURE)
	WALL MOUNTED LIGHT FIXTURE (HATCHING INDICATES EMERGENCY FIXTURE)
	PENDANT/SUSPENDED LIGHT FIXTURE (HATCHING INDICATES EMERGENCY FIXTURE)
	CEILING MOUNTED RECTANGULAR LIGHT FIXTURE (HATCHING INDICATES EMERGENCY FIXTURE)
	WALL MOUNTED RECTANGULAR LIGHT FIXTURE (HATCHING INDICATES EMERGENCY FIXTURE)
	PENDANT/SUSPENDED RECTANGULAR LIGHT FIXTURE (HATCHING INDICATES EMERGENCY FIXTURE)
	POLE MOUNTED OUTDOOR AREA LIGHT FIXTURE (SINGLE OR MULTIPLE HEADS PER POLE)
	TRACK LIGHT FIXTURE (LENGTH OF TRACK AS INDICATED ON DRAWINGS, NUMBER OF HEADS AS SPECIFIED)
$ $3 $4	LIGHT SWITCH - SINGLE / THREE WAY / FOUR WAY
$D	DIMMER SWITCH
$K	KEYED SWITCH
$M	MANUAL MOTOR STARTER
$T	TIMER SWITCH
$P	SWITCH WITH PILOT LIGHT
$LV	LOW VOLTAGE SCENE SWITCH
$[a]	SWITCH WITH SWITCH LEG DESIGNATION
$OC	SWITCH WITH OCCUPANCY SENSOR
OC OC[C]	MOTION OCCUPANCY / VACANCY SENSOR - WALL / CEILING MOUNTED
PH	PHOTOCELL
L	LOW-VOLTAGE LIGHTING CONTROL STATION
RC	ROOM CONTROLLER
924	UL 924 DEVICE
	DAYLIGHTING ZONE - PRIMARY
	DAYLIGHTING ZONE - SECONDARY
	NOT-IN-SCOPE AREA
	EXISTING WORK TO REMAIN
	EXISTING WORK TO BE REMOVED
	NEW WORK

NOT ALL SYMBOLS USED

POWER LEGEND

	RACEWAY IN WALL OR ABOVE CEILING	
	RACEWAY IN OR BELOW FLOOR	
B-4	HOMERUN : LETTER(S) DENOTES PANEL NAME NUMBER DENOTES CIRCUIT NUMBER	
A	DENOTES DEVICE MOUNTED ABOVE COUNTER	
WP	DENOTES WEATHERPROOF DEVICE	
GFI	DENOTES GROUND FAULT INTERRUPTING DEVICE	
	DUPLEX RECEPTACLE - WALL / FLOOR / CEILING MOUNTED	
	QUADRUPLEXRECEPTACLE - WALL / FLOOR / CEILING MOUNTED	
	ISOLATED GROUND DUPLEX RECEPTACLE	
	ISOLATED GROUND QUADRUPLEX RECEPTACLE	
	PLUG LOAD CONTROLLED DUPLEX - HALF CONTROLLED / FULLY CONTROLLED	
	PLUG LOAD CONTROLLED QUADRUPLEX- HALF CONTROLLED / FULLY CONTROLLED	
	SIMPLEX RECEPTACLE	
	SINGLE PHASE, 3 WIRE GROUNDED RECEPTACLE (NUMBER INDICATES AMPERAGE RATING)	
	SPECIAL RECEPTACLE (NUMBER DENOTES AMPERAGE RATING)	
	USB RECEPTACLE	
	USB COMBO RECEPTACLE - DUPLEX / QUADRUPLEX	
	ISOLATED GROUND USB COMBO RECEPTACLE - DUPLEX / QUADRUPLEX	
	PLUG LOAD CONTROLLED USB COMBO - HALF CONTROLLED / FULLY CONTROLLED	
	POKE-THRU DEVICE	
J	JUNCTION BOX - WALL / FLOOR / CEILING MOUNTED	
	POWER/DATA SURFACE RACEWAY	
P	POWER/DATA POWER POLE	
	CONTROL DEVICE	
PL	PLUG LOAD CONTROL DEVICE	
	SCOREBOARD FLUSH FLOOR BOX	
	MOTOR CONNECTION	
	MOTOR STARTER	
	DISCONNECT SWITCH	SAMPLE TAG: 60/2/50AF 60 = 60A; 2 = 2 POLES; 50AF = 50A FUSE (NF = NON-FUSED DISC)
	FUSED DISCONNECT SWITCH	
	VARIABLE FREQUENCY DRIVE (VFD)	
	480V PANELBOARD	
	208V PANELBOARD	
	DISTRIBUTION PANELBOARD	
	DRY-TYPE TRANSFORMER	
	NOT-IN-SCOPE AREA	
	EXISTING WORK TO REMAIN	
	EXISTING WORK TO BE REMOVED	
	NEW WORK	

NOT ALL SYMBOLS USED

ONE-LINE DIAGRAM LEGEND

12,345	AVAILABLE FAULT CURRENT TAG (AMPERES)
100.4C	FEEDER KEY TAG (REFER TO SCHEDULE)
PNL 'A1'	PANELBOARD
	ELECTRICAL EQUIPMENT ENCLOSURE
	CIRCUIT BREAKER
	DRAWOUT CIRCUIT BREAKER
	ENCLOSED CIRCUIT BREAKER
52	MEDIUM-VOLTAGE CIRCUIT BREAKER
	AUTOMATIC TRANSFER SWITCH (ATS)
G	GENERATOR
	GROUND
	FUSE
	SWITCH / DISCONNECT
	FUSED SWITCH / DISCONNECT
	MOTOR SWITCH / STARTER
	VARIABLE FREQUENCY DRIVE SWITCH
	TRANSFORMER
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
	TRANSFORMER DELTA
	TRANSFORMER WYE
	EQUIPMENT LOAD
	EQUIPMENT LOAD: RESISTIVE ONLY
	EQUIPMENT MOTOR
M X	GENERIC METER AND SUBCATEGORY
A P V	AMPERAGE / POWER / VOLTAGE METER
52 TU	RELAY
SPD	SURGE PROTECTION DEVICE
	UTILITY SERVICE
~	WIRE CONTINUATION
	TERMINAL

NOT ALL SYMBOLS USED

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS — DAVID M. BOON — 95600 — LICENSED PROFESSIONAL ENGINEER — 2025.05.21

Director BA	Drawn By DS/LM
Designer BA	Quality Control DMB
Proj. Arch. BA	

PROJECT NO.

24-057.00

SHEET TITLE

GENERAL NOTES & LEGENDS - ELECTRICAL

SHEET NO.

E0.01

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DATE/TIME: 5/29/2025 1:45:09 PM
PLOT SCALE: 12" = 1'-0"

ONCOR CONTACT (WO 27310556):
NAME: CLAYTON TUBBS
PHONE: 817-470-7798
EMAIL: CLAYTON.TUBBS@ONCOR.COM

NOTES BY SYMBOL '⬡':

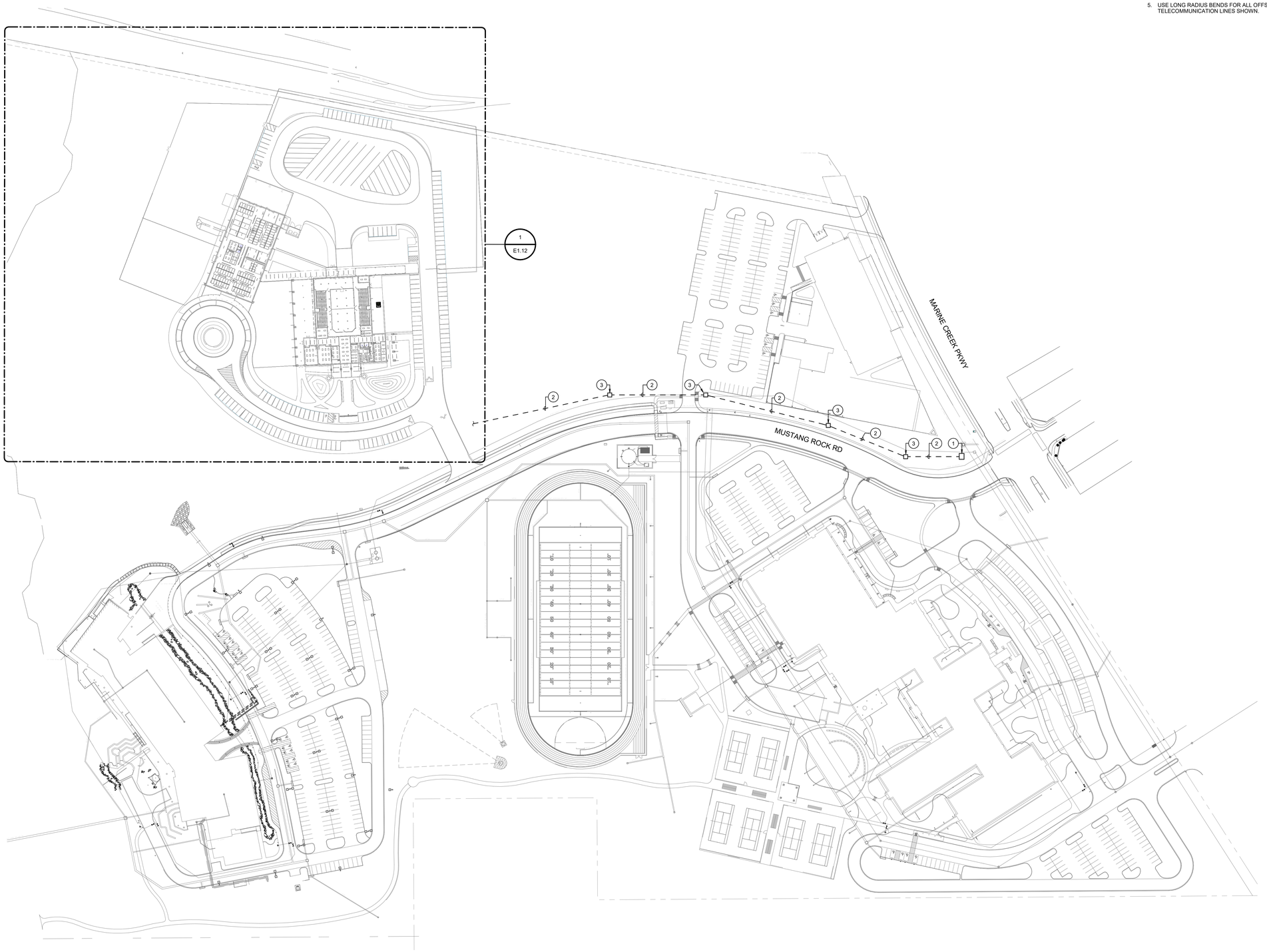
1 PAD MOUNTED ELECTRIC UTILITY SWITCHGEAR. COORDINATE EXACT LOCATION WITH ONCOR. CONCRETE PAD BY CONTRACTOR. SWITCHGEAR BY ONCOR. COORDINATE REQUIREMENTS WITH ONCOR'S COMMERCIAL ELECTRIC SERVICE GUIDELINES.

2 PROVIDE (2) 4" CONDUITS WITH MULE TAPE FROM UTILITY SWITCHGEAR TO UTILITY TRANSFORMER. COORDINATE EXACT REQUIREMENTS WITH ONCOR'S COMMERCIAL SERVICE INSTALLATION GUIDELINES. CONDUCTORS BY ONCOR.

3 PROVIDE TRAFFIC RATED PULL BOX. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH ONCOR'S COMMERCIAL SERVICE INSTALLATION GUIDELINES.

GENERAL SHEET NOTES:

1. EXTEND STORM DRAIN, SANITARY SEWER, DOMESTIC WATER, AND FIRE MAIN PIPING FROM LOCATIONS SHOWN ON THE SITE AS REQUIRED, AND CONNECT TO STUB-OUTS SHOWN ON CIVIL ENGINEERING DRAWINGS.
2. CONTRACTOR SHALL BACK FILL ALL TRENCHES WITH NATIVE SOILS WHERE ALL PIPES AND CONDUITS PASS UNDER EXTERIOR GRADE BEAMS. NATIVE SOIL BACK FILL SHALL EXTEND TO 2'-0" ON EITHER SIDE OF THE GRADE BEAM. REFER TO THE GEOTECHNICAL REPORT FOR THE DEFINITION AND REQUIREMENTS FOR NATIVE SOILS.
3. ALL UNDERGROUND AND ABOVE GRADE ELECTRICAL INSTALLATIONS SHOWN ON THE SITE SHALL BE WEATHERPROOF.
4. ALL EXISTING SITE UTILITIES SHALL BE FLAGGED AND MARKED PRIOR TO CONSTRUCTION. THESE FLAGS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. ALL UTILITIES ARE TO REMAIN ACTIVE UNLESS NOTED OTHERWISE IN THE CONSTRUCTION DOCUMENTS.
5. USE LONG RADIUS BENDS FOR ALL OFFSETS IN ELECTRICAL AND TELECOMMUNICATION LINES SHOWN.



PLAN NORTH / TRUE NORTH

1 SITE PLAN - OVERALL - ELECTRICAL
SCALE: 1" = 80'-0"

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS — DAVID M. BOON — 95600 — LICENSED PROFESSIONAL ENGINEER — 2025-05-21

Director VLK	Drawn By DS/LM
Designer VLK	Quality Control DMB
Proj. Arch. VLK	

PROJECT NO.
24-057.00

SHEET TITLE
SITE PLAN - OVERALL - ELECTRICAL

SHEET NO.
E1.11

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DATE/TIME:5/28/2025 1:45:18 PM
PLOT SCALE:As indicated

ONCOR CONTACT (WO 27310556):
NAME: CLAYTON TUBBS
PHONE: 817-470-7798
EMAIL: CLAYTON.TUBBS@ONCOR.COM

NOTES BY SYMBOL '◯':

1 PROVIDE TWO (2) 4" CONDUITS WITH MULE TAPE FROM UTILITY SWITCHGEAR TO UTILITY TRANSFORMER FOR PRIMARY UNDERGROUND ELECTRICAL DISTRIBUTION. REFER TO SHEET E1.11 FOR ADDITIONAL INFORMATION. COORDINATE EXACT REQUIREMENTS WITH ONCOR'S COMMERCIAL SERVICE INSTALLATION GUIDELINES. CONDUCTORS BY ONCOR.

2 PAD MOUNTED ELECTRIC UTILITY TRANSFORMER AND ASSOCIATED METER. CONTRACTOR SHALL PROVIDE CONCRETE TRANSFORMER PAD. COORDINATE EXACT REQUIREMENTS WITH ONCOR'S COMMERCIAL SERVICE INSTALLATION GUIDELINES. COORDINATE EXACT TRANSFORMER LOCATION WITH ONCOR. TRANSFORMER AND ASSOCIATED METER SHALL BE PROVIDED BY ONCOR.

3 SECONDARY ELECTRICAL SERVICE TO BUILDING BY CONTRACTOR. REFERENCE ELECTRICAL ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.

4 UNDERGROUND ELECTRICAL FEEDER FROM NEW DISTRIBUTION PANEL TO NEW OUT BUILDING. REFERENCE ELECTRICAL ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.

5 PROVIDE ONE (1) 3/4" CONDUIT UNDERGROND FROM BUILDING A ELECTRICAL ROOM TO MOTORIZED GATE.

6 PROVIDE POWER TO MOTORIZED GATE. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION. CONTRACTOR SHALL VERIFY MOTORIZED GATE POWER REQUIREMENTS PRIOR TO INSTALLATION. REFERENCE TECHNOLOGY DRAWINGS FOR ADDITIONAL REQUIREMENTS.

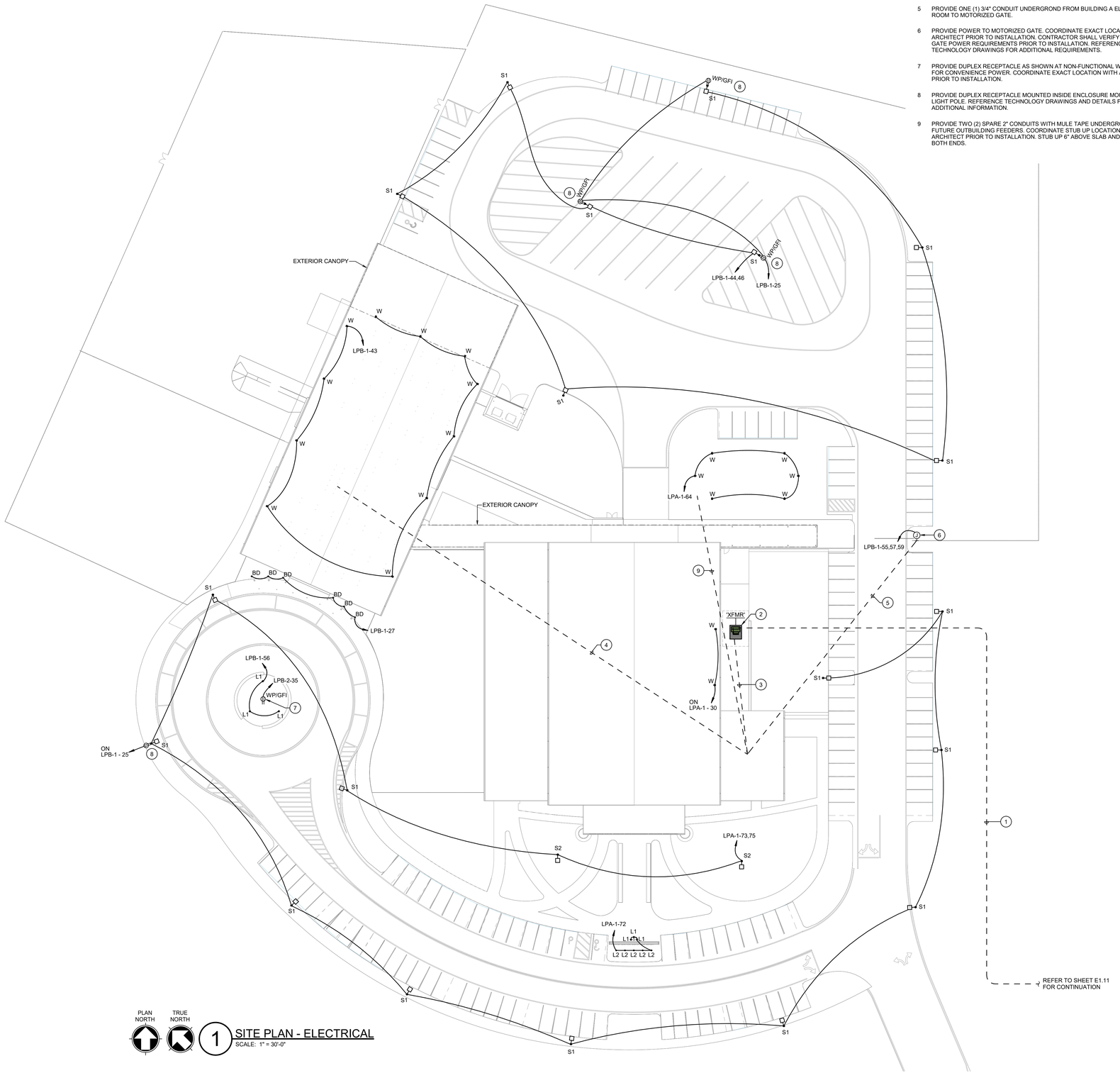
7 PROVIDE DUPLEX RECEPTACLE AS SHOWN AT NON-FUNCTIONAL WINDMILL FOR CONVENIENCE POWER. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.

8 PROVIDE DUPLEX RECEPTACLE MOUNTED INSIDE ENCLOSURE MOUNTED ON LIGHT POLE. REFERENCE TECHNOLOGY DRAWINGS AND DETAILS FOR ADDITIONAL INFORMATION.

9 PROVIDE TWO (2) SPARE 2" CONDUITS WITH MULE TAPE UNDERGROUND FOR FUTURE OUTBUILDING FEEDERS. COORDINATE STUB UP LOCATION WITH ARCHITECT PRIOR TO INSTALLATION. STUB UP 6" ABOVE SLAB AND CAP AT BOTH ENDS.

GENERAL SHEET NOTES:

1. EXTEND STORM DRAIN, SANITARY SEWER, DOMESTIC WATER, AND FIRE MAIN PIPING FROM LOCATIONS SHOWN ON THE SITE AS REQUIRED, AND CONNECT TO STUB-OUTS SHOWN ON CIVIL ENGINEERING DRAWINGS.
2. CONTRACTOR SHALL BACK FILL ALL TRENCHES WITH NATIVE SOILS WHERE ALL PIPES AND CONDUITS PASS UNDER EXTERIOR GRADE BEAMS. NATIVE SOIL BACK FILL SHALL EXTEND TO 2'-0" ON EITHER SIDE OF THE GRADE BEAM. REFER TO THE GEOTECHNICAL REPORT FOR THE DEFINITION AND REQUIREMENTS FOR NATIVE SOILS.
3. ALL UNDERGROUND AND ABOVE GRADE ELECTRICAL INSTALLATIONS SHOWN ON THE SITE SHALL BE WEATHERPROOF.
4. ALL EXISTING SITE UTILITIES SHALL BE FLAGGED AND MARKED PRIOR TO CONSTRUCTION. THESE FLAGS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. ALL UTILITIES ARE TO REMAIN ACTIVE UNLESS NOTED OTHERWISE IN THE CONSTRUCTION DOCUMENTS.
5. USE LONG RADIUS BENDS FOR ALL OFFSETS IN ELECTRICAL AND TELECOMMUNICATION LINES SHOWN.



PLAN NORTH / TRUE NORTH

1 SITE PLAN - ELECTRICAL
SCALE: 1" = 30'-0"

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS — DAVID M. BOON — No. 95600 — LICENSED PROFESSIONAL ENGINEER
2025-05-29

Director	Drawn By
BA	DS/LM
Designer	Quality Control
BA	DMB
Proj. Arch.	
BA	

PROJECT NO.
24-057.00

SHEET TITLE
SITE PLAN - ELECTRICAL

SHEET NO.
E1.12

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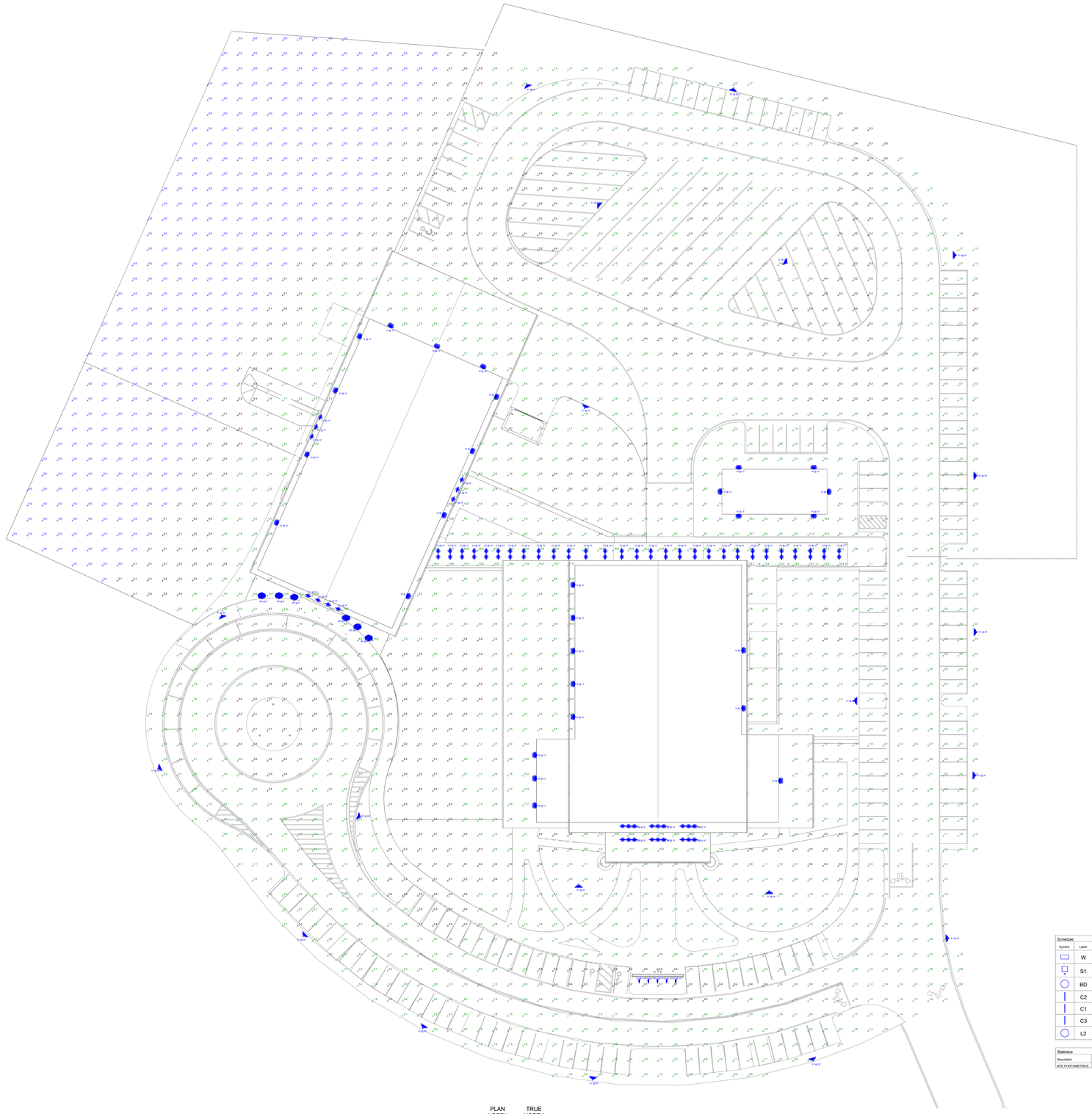

Schedule								
Symbol	Label	QTY	Manufacturer	Catalog	Description	Filename	Total Output	Input Power
	W	28	Lithonia Lighting	WDGE3 LED P2 70CRI WFT 40K	WDGE3 LED WITH P2 - PERFORMANCE PACKAGE, 4000K, 70CRI, FORWARD THROW OPTIC	W1 - WDGE3 LED P2 70CRI WFT 40K.ies	8896	59.2761
	S1	20	Lithonia Lighting	DSX1 LED P3 40K 70CRI T3M	D-Series Size 1 Area Luminaire P3 Performance Package 4000K CCT 70 CRI Type 3 Medium	S1 - DSX1 LED P3 40K 70CRI T3M.ies	13763	102.17
	BD	6	Lithonia Lighting	KBAX LED 16C 350 40K SYM MVOLT	KBAX WITH 4 LIGHT BOARDS (16 LEDs), 350mA DRIVER, 4000K COLOR TEMP, AND SYMMETRIC OPTIC.	BD - KBAX LED 16C 350 40K SYM MVOLT.ies	1640	20
	C2	58	a.light			C2 - OWL640UHE.ies	2271	20
	C1	10	a.light			C1 - OWL640UHE.ies	2271	20
	C3	18	a.light			C1 - OWL640UHE.ies	2271	20
	L2	5	3F Filippi	KPLMH1(ML240)_FL	Targetti - KEPLERO 160 ZMH 13W 80 40K EL C 95 - FL	L2 - KPLMH1(ML240)_FL_ES	1946	13

Statistics				
Description	Symbol	Avg	Max	Min
SITE PHOTOMETRICS	+	1.8 fc	31.5 fc	0.0 fc

PLAN NORTH / TRUE NORTH

1 SITE PLAN - PHOTOMETRICS
SCALE: 1" = 30'-0"

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PLOT SCALE: 1" = 30'-0"

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REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
DAVID M. BOON
95600
LICENSED
PROFESSIONAL ENGINEER
2025-05-29

Director BA	Drawn By DS/LM
Designer BA	Quality Control DMB
Proj. Arch. BA	

PROJECT NO.
24-057.00

SHEET TITLE
SITE PLAN - PHOTOMETRICS

SHEET NO.
E2.01

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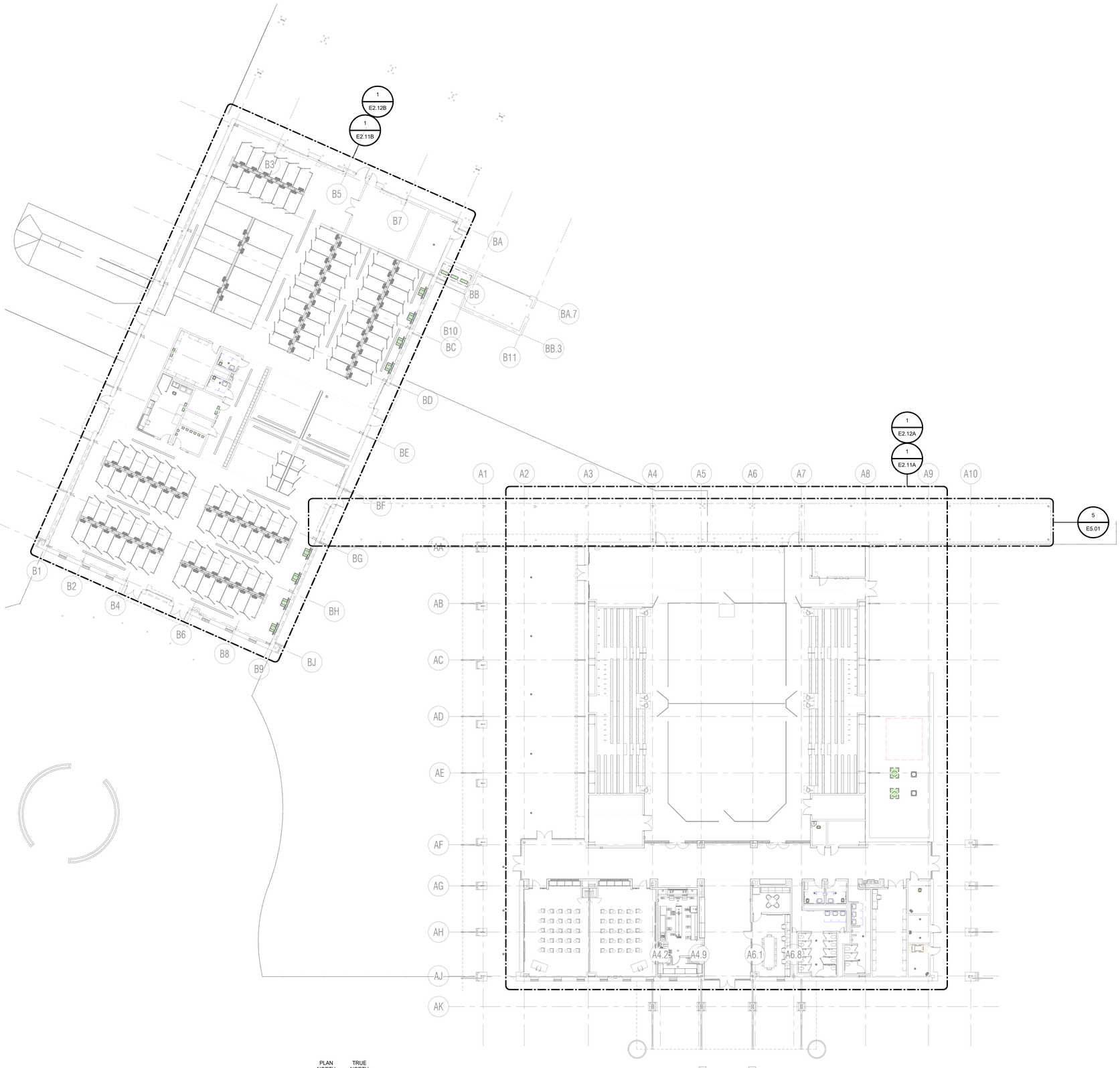

PLAN NORTH

TRUE NORTH

1 FLOOR PLAN - LEVEL ONE - OVERALL - ELECTRICAL

SCALE: 1/16" = 1'-0"

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PLOT SCALE: 1/16" = 1'-0"

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FORT WORTH, TEXAS

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REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
DAVID M. BOON
95600
LICENSED
PROFESSIONAL ENGINEER
2025-05-21

Director BA	Drawn By DS/LM
Designer BA	Quality Control DMB
Proj. Arch. BA	

PROJECT NO.

24-057.00

SHEET TITLE

FLOOR PLAN - LEVEL ONE - OVERALL - ELECTRICAL

SHEET NO.

E2.11

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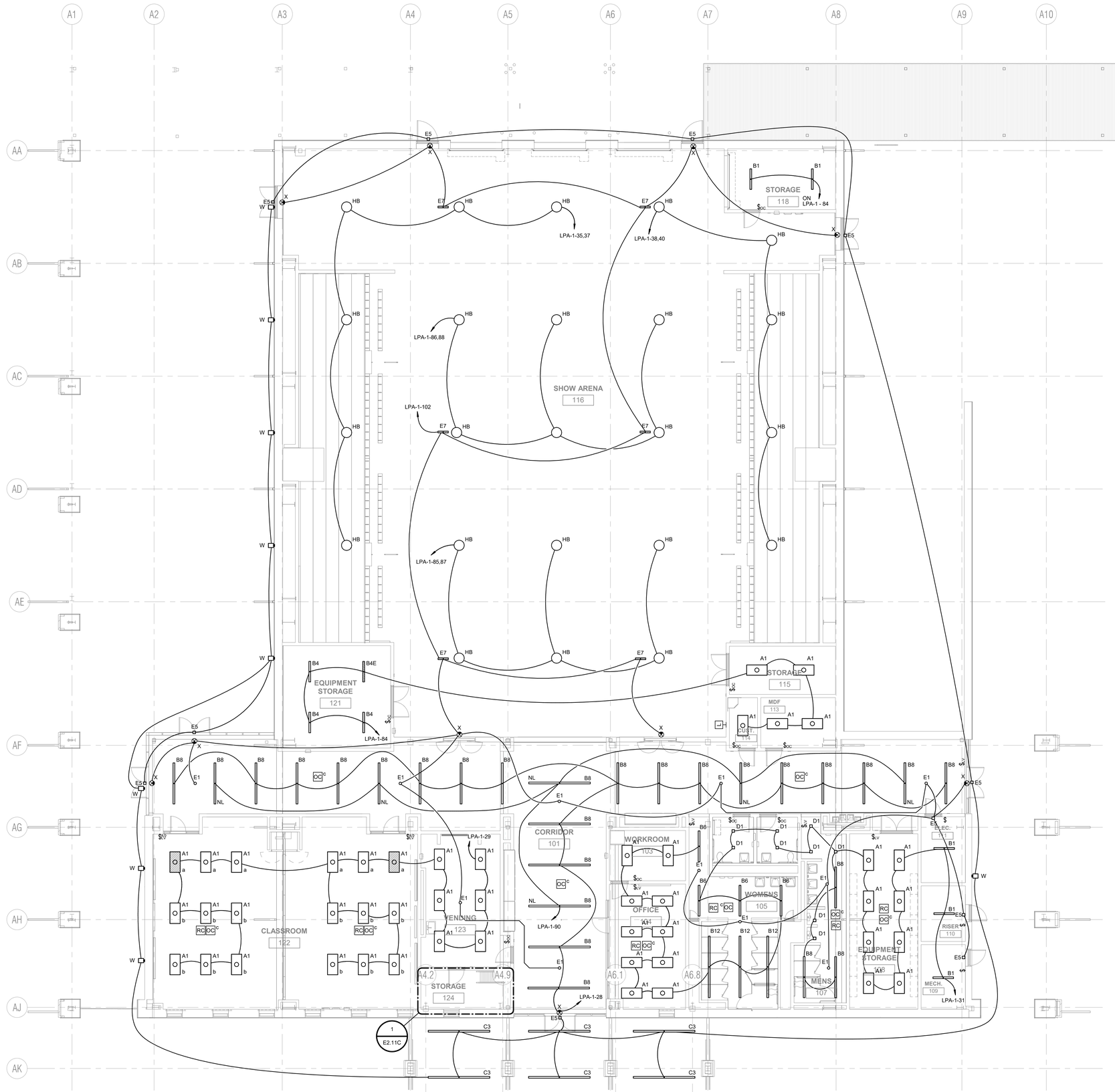
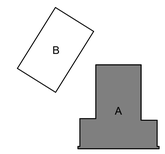


PLAN NORTH

TRUE NORTH

1 FLOOR PLAN - LEVEL ONE - AREA A - LIGHTING

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



KEY PLAN

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REVISIONS

Revision No.	Revision Date

DAVID M. BOON 95600 LICENSED PROFESSIONAL ENGINEER 2025-05-21

Director BA	Drawn By DS/LM
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Proj. Arch. BA	

PROJECT NO.

24-057.00

SHEET TITLE

FLOOR PLAN - LEVEL ONE - AREA A - LIGHTING

SHEET NO.

E2.11A

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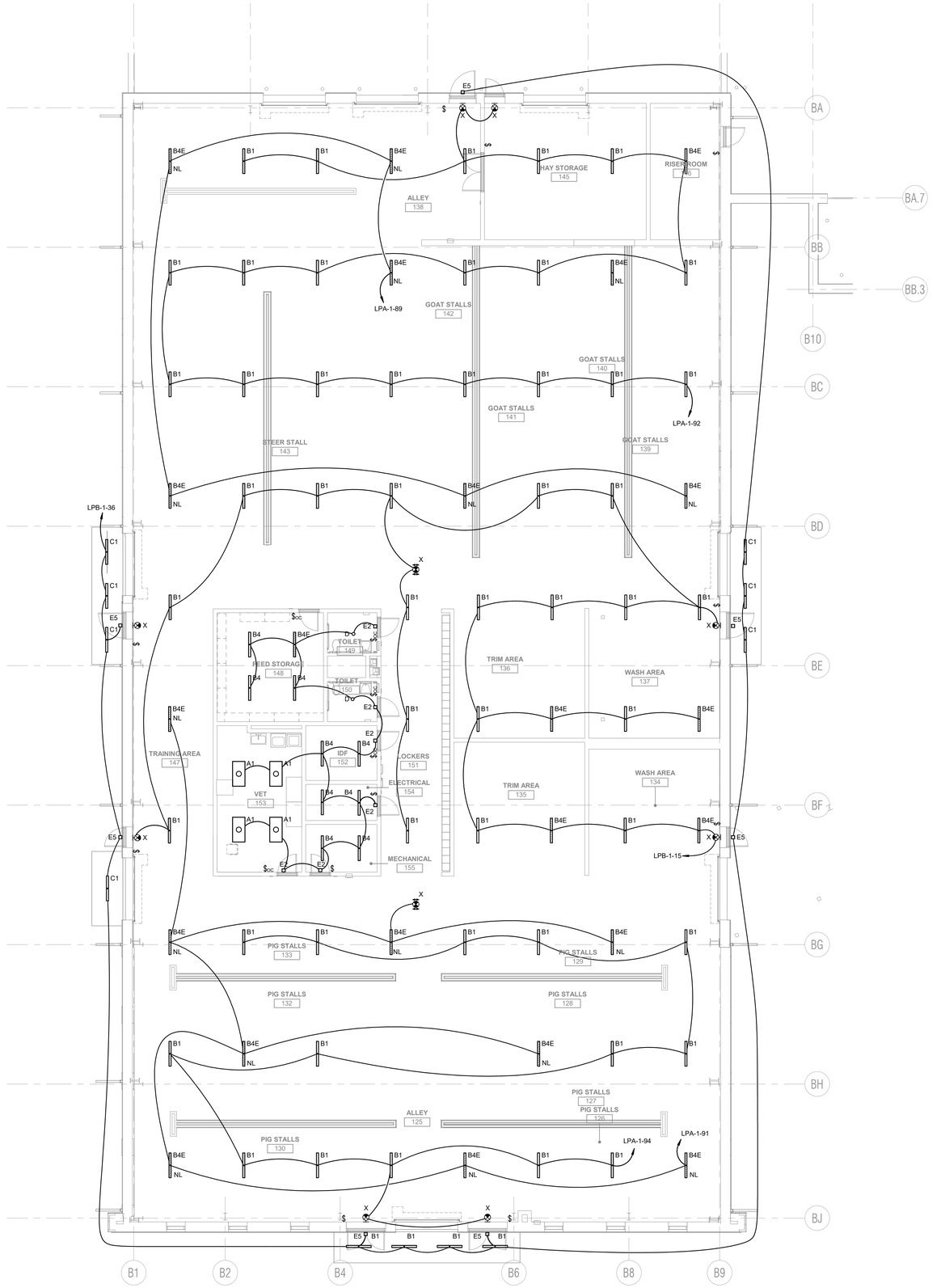

PLAN NORTH / TRUE NORTH

1 FLOOR PLAN - LEVEL ONE - AREA B - LIGHTING

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

B

A

KEY PLAN

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REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
DAVID M. BOON
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LICENSED PROFESSIONAL ENGINEER
2025-05-29

Director BA	Drawn By DS/LM
Designer BA	Quality Control DMB
Proj. Arch. BA	

PROJECT NO.
24-057.00

SHEET TITLE
FLOOR PLAN - LEVEL ONE - AREA B - LIGHTING

SHEET NO.
E2.11B

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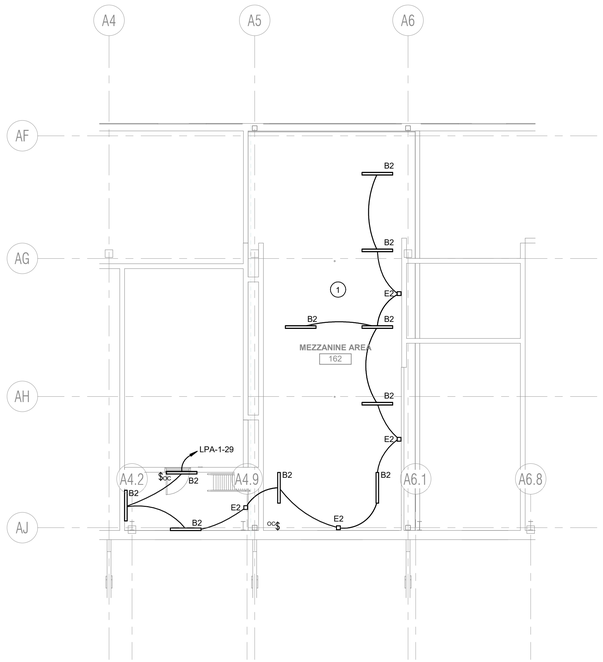
NOTES BY SYMBOL '⬡':

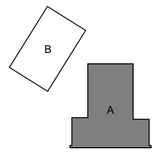
1 COORDINATE LIGHTING WITH MECHANICAL AND PLUMBING EQUIPMENT TO AVOID OBSTRUCTION OF LIGHTING FIXTURES IN THIS AREA.



PLAN NORTH / TRUE NORTH

1 FLOOR PLAN - LEVEL TWO - MEZZANINE - LIGHTING

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



KEY PLAN

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FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS — DAVID M. BOON — 95600 — LICENSED PROFESSIONAL ENGINEER — 2025-05-29

Director BA	Drawn By DS/LM
Designer BA	Quality Control DMB
Proj. Arch. BA	

PROJECT NO.

24-057.00

SHEET TITLE

FLOOR PLAN - LEVEL TWO - AREA A MEZZANINE - LIGHTING

SHEET NO.

E2.11C

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FILE PATH: Autodesk Docs://E_EMS ISD_24-057.00_Agricultural Science Center/24117.EMS ISD New Agricultural Science.MEP.r24.rvt
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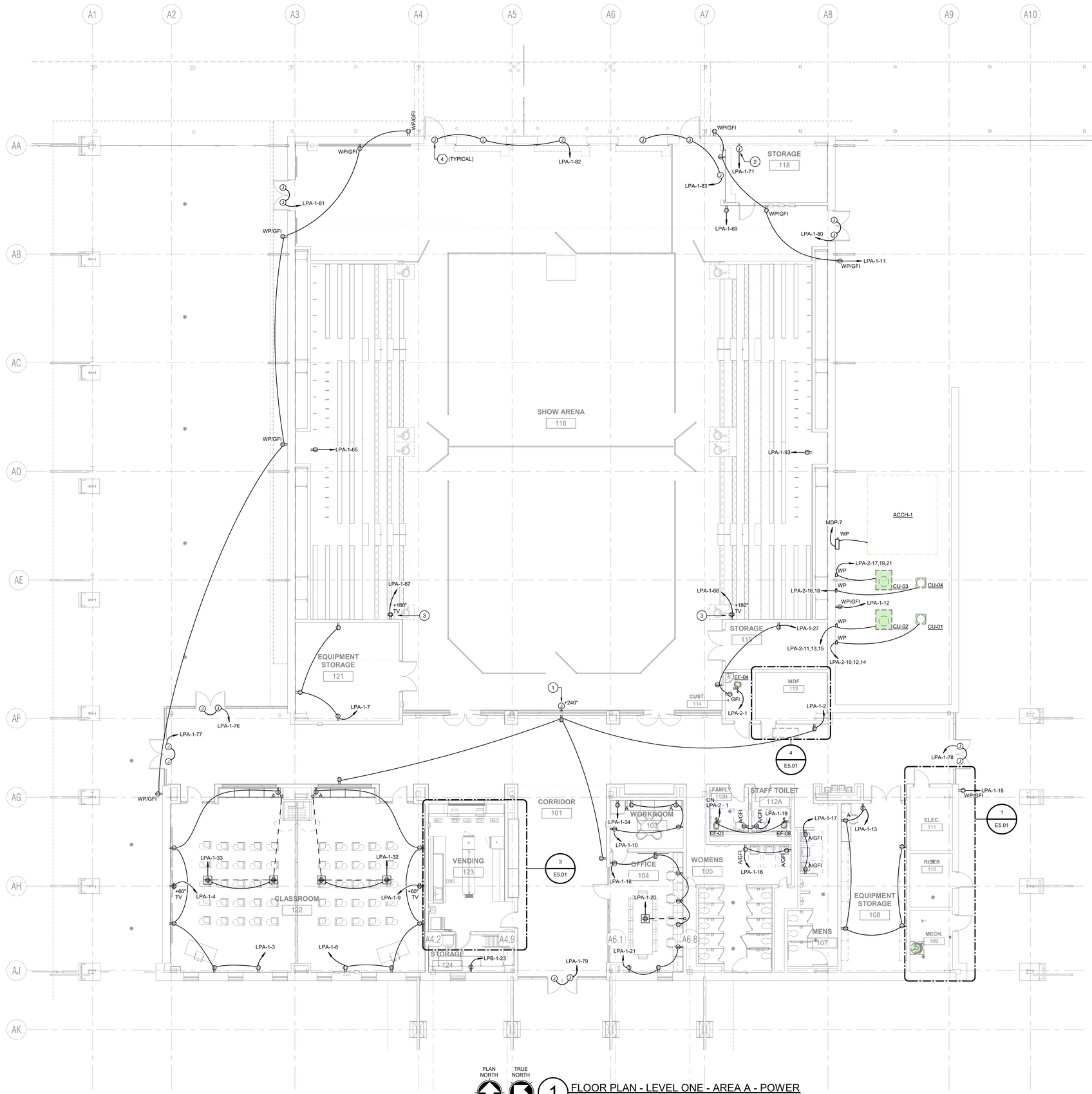

PLAN NORTH / TRUE NORTH

1 FLOOR PLAN - LEVEL ONE - AREA A - POWER
SCALE: 1/8" = 1'-0"

NOTES BY SYMBOL '⬡':

1 PROVIDE POWER TO DIGITAL LED VIDEO BOARD. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN. VERIFY ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER'S INSTALLATION SHOP DRAWINGS PRIOR TO INSTALLATION.

2 PROVIDE OVERRIDE SWITCH TO OVERHEAD DOOR 119C. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. VERIFY ELECTRICAL AND CONTROLS REQUIREMENTS WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.

3 PROVIDE POWER TO MONITOR. VERIFY EXACT LOCATION AND MOUNTING HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN.

4 PROVIDE POWER FOR DOOR ACCESS CONTROL HARDWARE. COORDINATE REQUIREMENTS WITH TECHNOLOGY DRAWINGS AND SPECIFICATIONS PRIOR TO ROUGH-IN.

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS — DAVID M. BOON — 95600 — LICENSED PROFESSIONAL ENGINEER — 2025-05-21

Director BA	Drawn By DS/LM
Designer BA	Quality Control DMB
Proj. Arch. BA	

PROJECT NO.
24-057.00

SHEET TITLE
FLOOR PLAN - LEVEL ONE - AREA A - POWER

SHEET NO.
E2.12A

KEY PLAN

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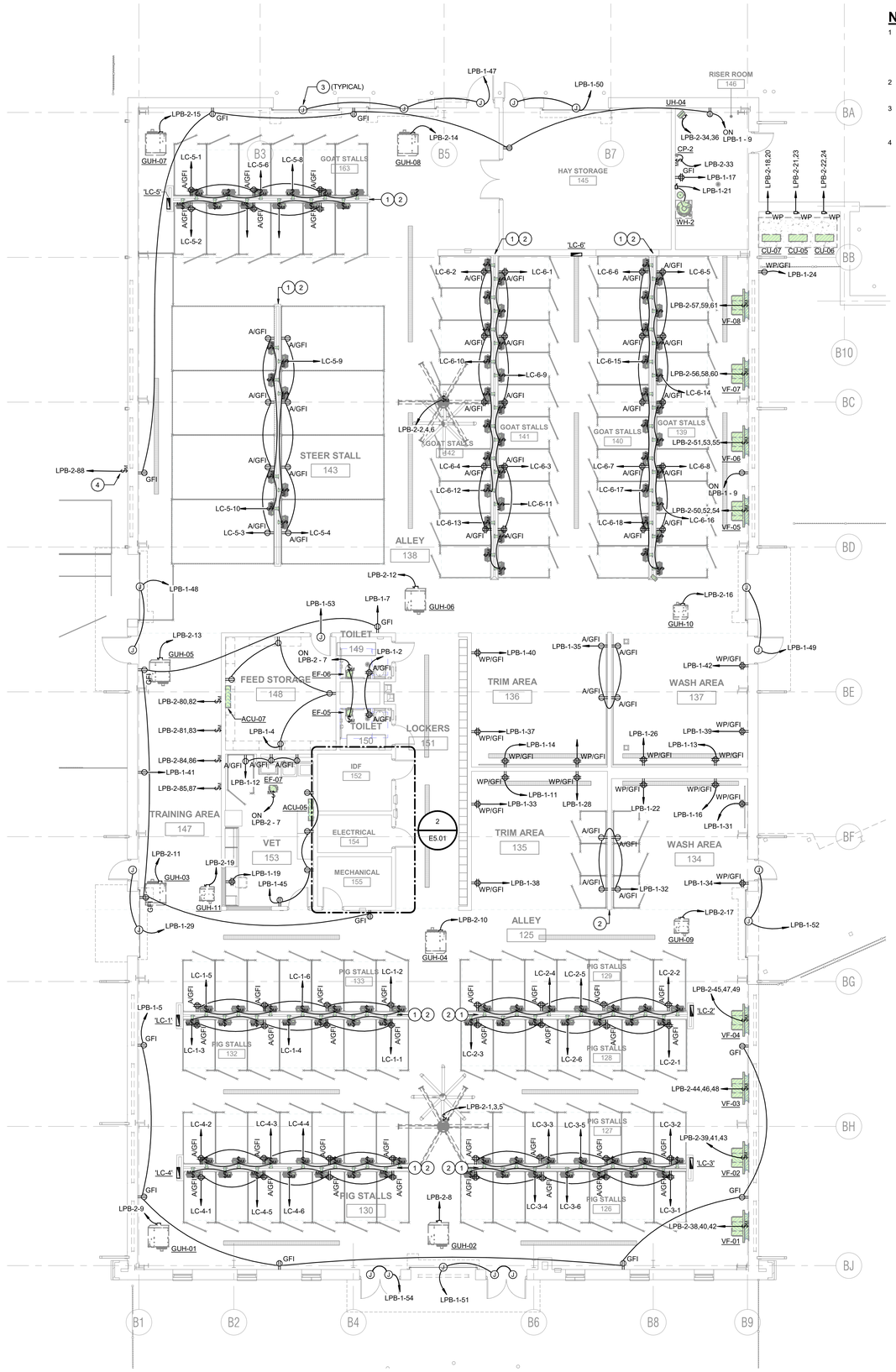

NOTES BY SYMBOL '⬡':

1. PROVIDE POWER TO OSCILLATING ANIMAL PEN FANS. PROVIDE MOTOR RATED SWITCH AS LOCAL CONTROL IN EACH ANIMAL PEN. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN. OSCILLATING FANS TO BE HARD-WIRED. COORDINATE ELECTRICAL REQUIREMENTS WITH FAN MANUFACTURER PRIOR TO INSTALLATION.
2. RECEPTACLES MOUNTED IN ANIMAL PENS/STALLS SHALL HAVE LOCKABLE COVER TO PREVENT UNAUTHORIZED CONNECTION OF APPLIANCES.
3. PROVIDE POWER FOR DOOR ACCESS CONTROL HARDWARE. COORDINATE REQUIREMENTS WITH TECHNOLOGY DRAWINGS AND SPECIFICATIONS PRIOR TO ROUGH-IN.
4. PROVIDE POWER TO GOAT/SHEEP/GOAT WALKER. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN.

PLAN NORTH / TRUE NORTH

1 FLOOR PLAN - LEVEL ONE - AREA B - POWER
SCALE: 1/8" = 1'-0"

KEY PLAN

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS — DAVID M. BOON — 95600 — LICENSED PROFESSIONAL ENGINEER — 2025.05.29

Director	Drawn By
BA	DS/LM
Designer	Quality Control
BA	DMB
Proj. Arch.	
BA	

PROJECT NO.
24-057.00

SHEET TITLE
FLOOR PLAN - LEVEL ONE - AREA B - POWER

SHEET NO.
E2.12B

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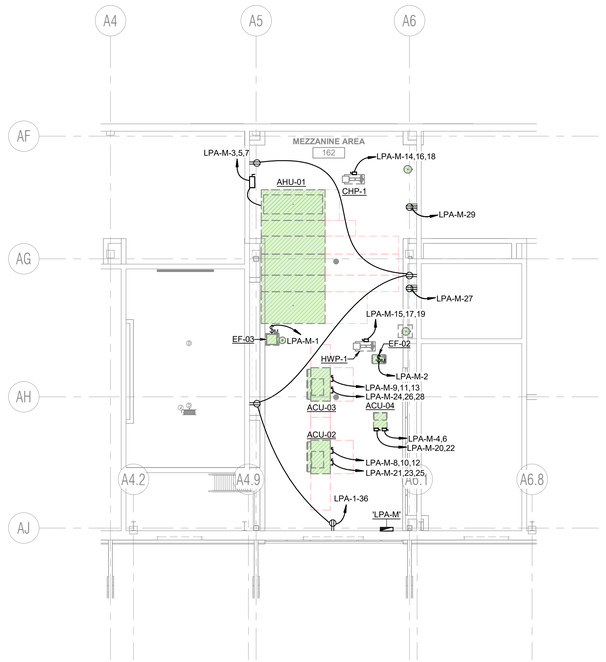

PLAN NORTH / TRUE NORTH

1 FLOOR PLAN - LEVEL TWO - MEZZANINE- POWER

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

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
DAVID M. BOON
95600
LICENSED
PROFESSIONAL ENGINEER
2025-05-21

Director BA	Drawn By DS/LM
Designer BA	Quality Control DMB
Proj. Arch. BA	

PROJECT NO.

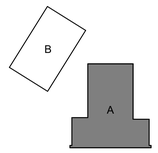
24-057.00

SHEET TITLE

FLOOR PLAN - LEVEL TWO - AREA A MEZZANINE - POWER

SHEET NO.

E2.12C



KEY PLAN

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DATE/TIME:5/29/2025 1:48:05 PM
PLOT SCALE: 1/8" = 1'-0"

NOTES BY SYMBOL '⬡':

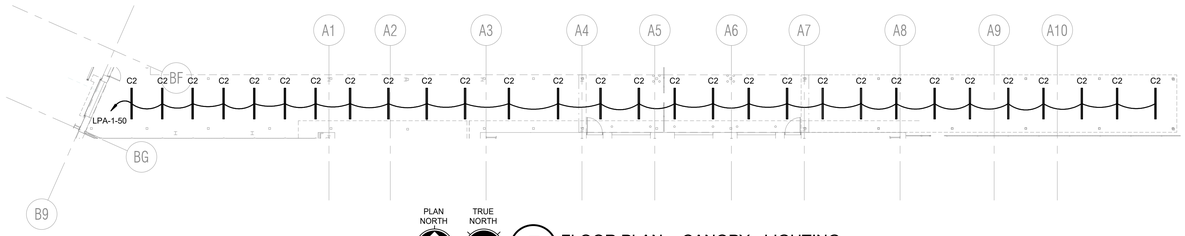
1 MAIN LIGHTING CONTROL PANEL. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.

2 PROVIDE POWER TO FIRE ALARM BOOSTER PANELS. COORDINATE EXACT LOCATION WITH FA SERIES SHEETS PRIOR TO ROUGH IN.

3 PROVIDE POWER AS SHOWN FOR AIR SCREEN. COORDINATE EXACT LOCATION WITH MECHANICAL DRAWINGS PRIOR TO ROUGH-IN. VERIFY ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER'S INSTALLATION SHOP DRAWINGS PRIOR TO INSTALLATION.

4 PROVIDE STUB UP TO JUNCTION BOX WITH EMPTY CONDUIT.

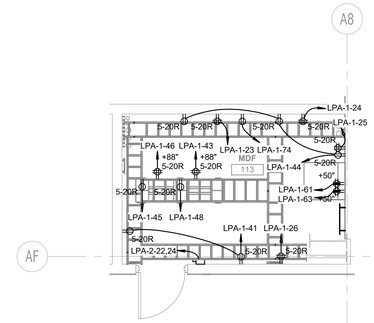
5 PROVIDE POWER TO FACP. COORDINATE EXACT LOCATION WITH FIRE ALARM SHEETS FA SERIES PRIOR TO ROUGH IN.



PLAN NORTH TRUE NORTH

5 FLOOR PLAN - CANOPY - LIGHTING

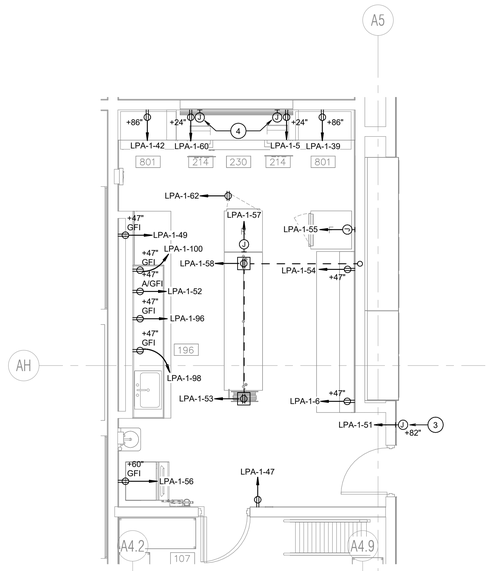
SCALE: 1/16" = 1'-0"



PLAN NORTH TRUE NORTH

4 FLOOR PLAN - LEVEL ONE - AREA A - POWER - MDF

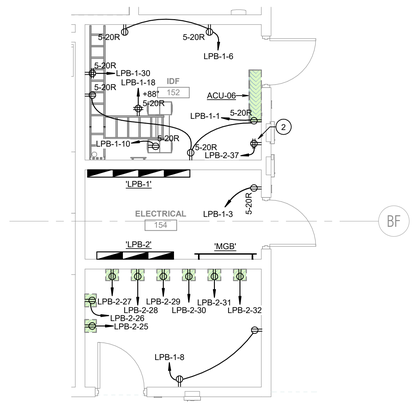
SCALE: 1/4" = 1'-0"



PLAN NORTH TRUE NORTH

3 FLOOR PLAN - FOOD SERVICE - POWER

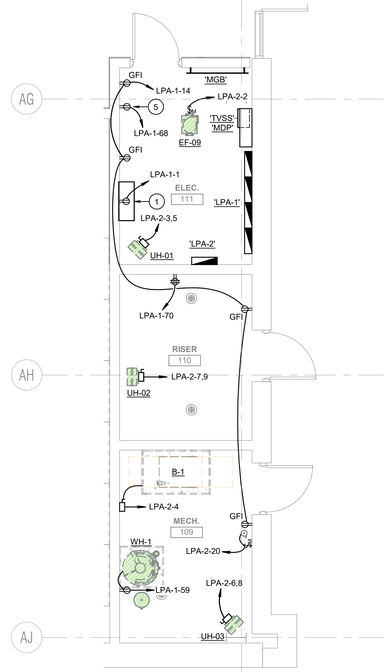
SCALE: 1/4" = 1'-0"



PLAN NORTH TRUE NORTH

2 FLOOR PLAN - LEVEL ONE - AREA B - POWER - IDF/ELECTRICAL

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



PLAN NORTH TRUE NORTH

1 FLOOR PLAN - LEVEL ONE - AREA A - POWER - ELECTRICAL ROOM

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

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS — DAVID M. BOON — 95600 — LICENSED PROFESSIONAL ENGINEER — 2025-05-21

Director BA	Drawn By DS/LM
Designer BA	Quality Control DMB
Proj. Arch. BA	

PROJECT NO.

24-057.00

SHEET TITLE

ENLARGED FLOOR PLANS - ELECTRICAL

SHEET NO.

E5.01

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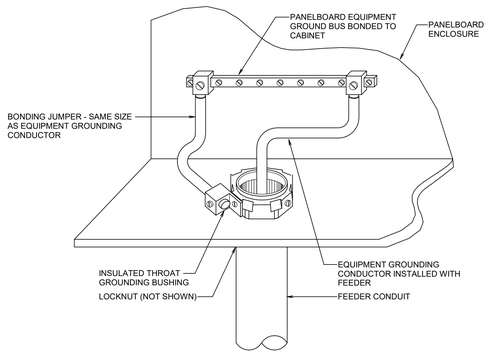
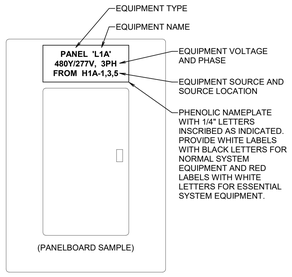
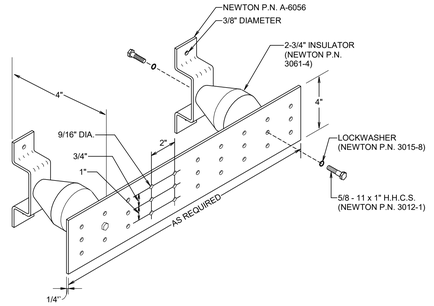


1 PANELBOARD BONDING DETAIL
NO SCALE

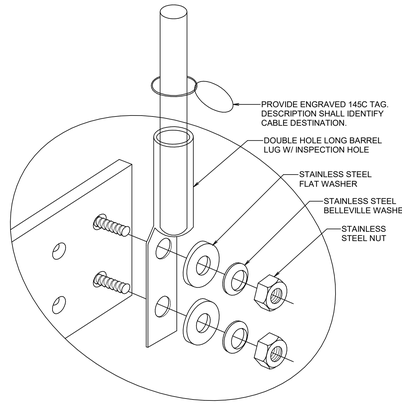


DETAIL NOTES:
1. PROVIDE EQUIPMENT LABEL AS DETAILED ABOVE FOR ALL PANELBOARDS, SWITCHBOARDS, TRANSFORMERS, DISCONNECT SWITCHES, VARIABLE FREQUENCY DRIVERS (VFD), ETC..
2. REFER TO SPECIFICATION SECTION 26 05 53 FOR ADDITIONAL INFORMATION.

2 EQUIPMENT IDENTIFICATION DETAIL
NO SCALE

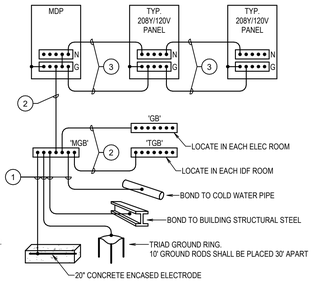


3 BUS BAR DETAIL
NO SCALE



NOTE: ALL CONNECTIONS TO BE DOUBLE COMPRESSION (CRIMP) TYPE. NO MECHANICAL CONNECTIONS, MINIMUM 4 CRIMPS FOR DOUBLE COMPRESSION FITTING.

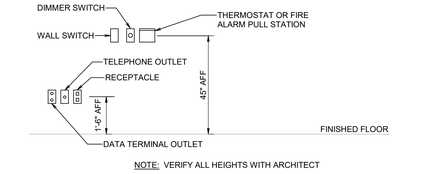
4 GROUND BUS BAR CONNECTION
NO SCALE



DETAIL NOTES BY SYMBOL:

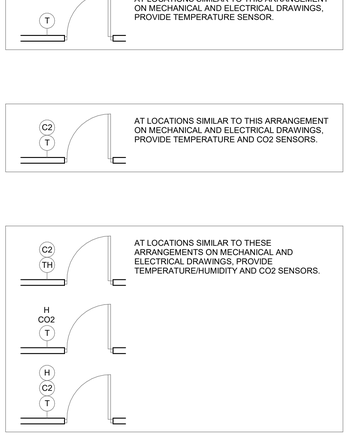
1. PROVIDE #2 SOLID, BARE, TINNED COPPER.
2. PROVIDE #4/0 IN 3/4" PVC CONDUIT.
3. PROVIDE CONDUCTOR PER ONE-LINE DIAGRAM.
4. PROVIDE 5/8" DIA. X 10' COPPER CLAD GROUND ROD.
5. SIZE PER NEC TABLE 250.66. ROUTE TO NEAREST GROUND BAR.

5 GROUND RISER DIAGRAM
NO SCALE



NOTE: VERIFY ALL HEIGHTS WITH ARCHITECT

6 WIRING DEVICE MOUNTING HEIGHTS - TYPICAL
NO SCALE



NOTES:
1. ELECTRICAL, MECHANICAL AND CONTROLS CONTRACTORS MUST COORDINATE ALL REQUIREMENTS.
2. ALL CONDUIT AND BACKBOXES ARE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
3. ALL SENSORS, CONTROL WIRING AND ASSOCIATED DEVICES ARE FURNISHED AND INSTALLED BY CONTROLS CONTRACTOR.
4. COORDINATE BACK BOX QUANTITY AND ORIENTATION WITH EMCS AND HVAC CONTRACTORS.
5. VERIFY SENSOR LOCATIONS DO NOT CONFLICT WITH ADJACENT FURNITURE/FIXTURES OR FINISHES.

7 HVAC SENSOR BACK BOX AND CONDUIT INSTALLATION DETAIL
SCALE: 12" = 1'-0"

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
DAVID M. BOON
95600
LICENSED
PROFESSIONAL ENGINEER
05-29-25

Director	Drawn By
BA	DS/LM
Designer	Quality Control
BA	DMB
Proj. Arch.	
BA	

PROJECT NO.
24-057.00

SHEET TITLE
DETAILS - ELECTRICAL

SHEET NO.
E6.01

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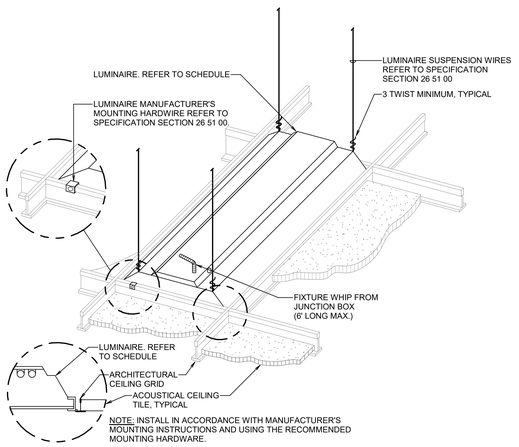
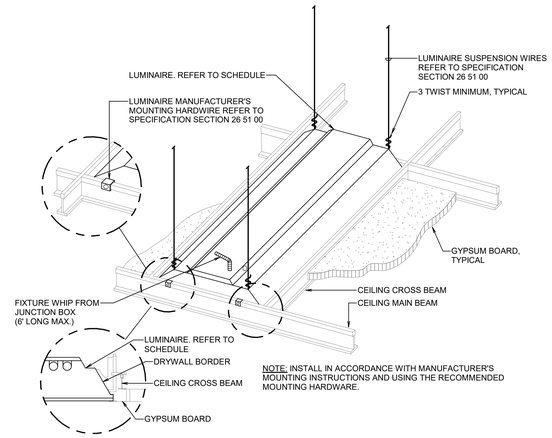
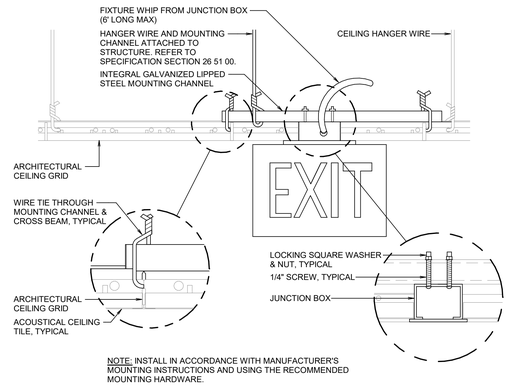


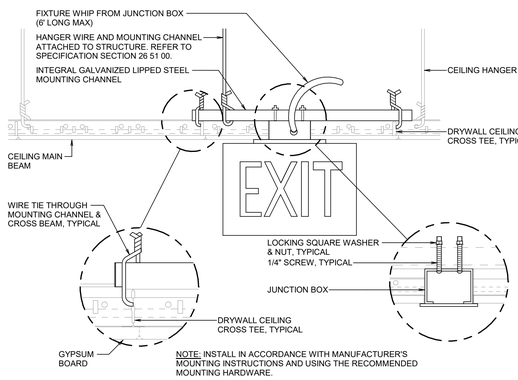
1 LAY-IN CEILING LUMINAIRE MOUNTING DETAIL
NO SCALE



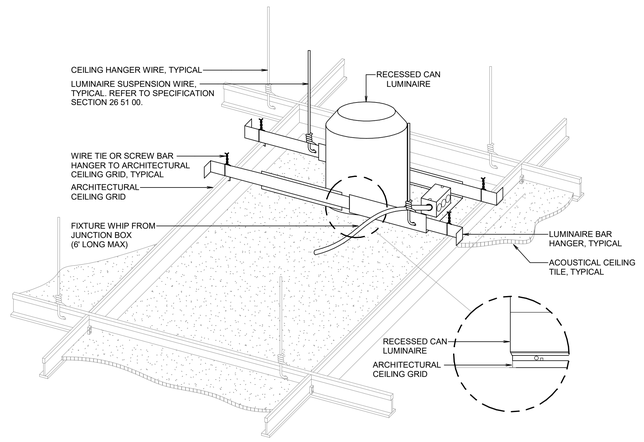
2 GYPBOARD CEILING LUMINAIRE MOUNTING DETAIL
NO SCALE



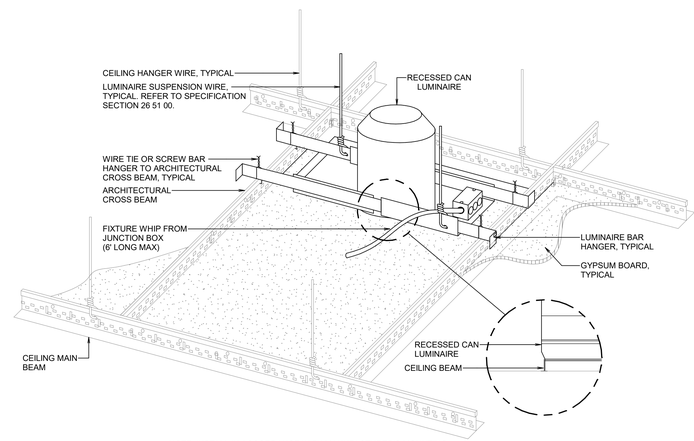
3 LAY-IN CEILING EXIT SIGN MOUNTING DETAIL
NO SCALE



5 EXIT SIGN MOUNTING DETAIL - GYPBOARD CEILING
NO SCALE



4 LAY-IN CEILING DOWNLIGHT MOUNTING DETAIL
NO SCALE



6 GYPBOARD CEILING DOWNLIGHT MOUNTING DETAIL
NO SCALE

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS — DAVID M. BOON — 95600 — LICENSED PROFESSIONAL ENGINEER — 2025-05-21

Director BA	Drawn By DS/LM
Designer BA	Quality Control DMB
Proj. Arch. BA	

PROJECT NO.
24-057.00

SHEET TITLE
DETAILS - ELECTRICAL

SHEET NO.
E6.02

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PLOT SCALE: 12" = 1'-0"

FEEDER SCHEDULE - COPPER

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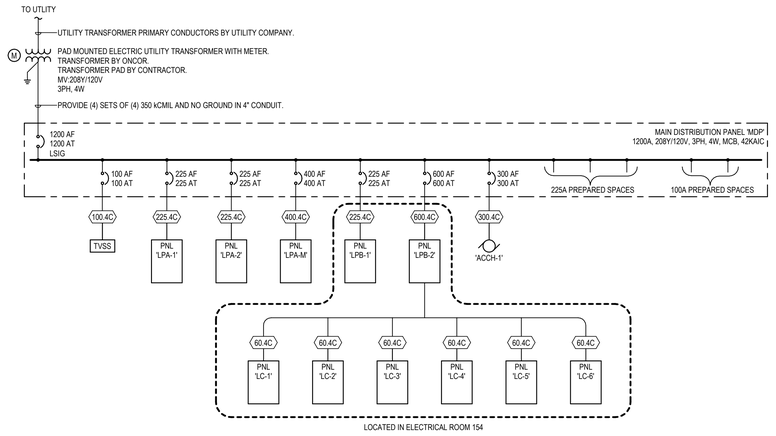
30.3C	3#10, #10G, 3/4"C	30.4C	4#10, #10G, 3/4"C
35.3C	3#8, #10G, 3/4"C	35.4C	4#8, #10G, 1"C
40.3C	3#8, #10G, 3/4"C	40.4C	4#8, #10G, 1"C
45.3C	3#6, #10G, 3/4"C	45.4C	4#6, #10G, 1"C
50.3C	3#6, #10G, 3/4"C	50.4C	4#6, #10G, 1"C
60.3C	3#4, #10G, 1"C	60.4C	4#4, #10G, 1 1/2"C
70.3C	3#4, #8G, 1"C	70.4C	4#4, #8G, 1 1/2"C
80.3C	3#3, #8G, 1"C	80.4C	4#3, #8G, 1 1/2"C
90.3C	3#2, #8G, 1 1/2"C	90.4C	4#2, #8G, 1 1/2"C
100.3C	3#1, #8G, 1 1/2"C	100.4C	4#1, #8G, 1 1/2"C
110.3C	3#2, #6G, 1 1/2"C	110.4C	4#2, #6G, 1 1/2"C
125.3C	3#1, #6G, 1 1/2"C	125.4C	4#1, #6G, 1 1/2"C
150.3C	3#1/0, #6G, 1 1/2"C	150.4C	4#1/0, #6G, 2"C
175.3C	3#2/0, #6G, 2"C	175.4C	4#2/0, #6G, 2"C
200.3C	3#3/0, #6G, 2"C	200.4C	4#3/0, #6G, 2"C
225.3C	3#4/0, #4G, 2"C	225.4C	4#4/0, #4G, 3"C
250.3C	3-250, #4G, 3"C	250.4C	4-250, #4G, 3"C
300.3C	3-350, #4G, 3"C	300.4C	4-350, #4G, 3"C
350.3C	3-500, #3G, 3"C	350.4C	4-500, #3G, 4"C
400.3C	3-600, #3G, 4"C	400.4C	4-600, #3G, 4"C
	2 SETS OF 3#3/0, #3G, 2"C		2 SETS OF 4#3/0, #3G, 3"C
450.3C	2 SETS OF 3#4/0, #2G, 2"C	450.4C	2 SETS OF 4#4/0, #2G, 3"C
500.3C	2 SETS OF 3-250, #2G, 3"C	500.4C	2 SETS OF 4-250, #2G, 3"C
600.3C	2 SETS OF 3-350, #1G, 3"C	600.4C	2 SETS OF 4-350, #1G, 3"C
700.3C	2 SETS OF 3-500, #1/0G, 3"C	700.4C	2 SETS OF 4-500, #1/0G, 4"C
800.3C	3 SETS OF 3-300, #1/0G, 3"C	800.4C	3 SETS OF 4-300, #1/0G, 3"C
1000.3C	4 SETS OF 3-250, #2/0G, 3"C	1000.4C	4 SETS OF 4-250, #2/0G, 3"C
1200.3C	4 SETS OF 3-350, #3/0G, 3"C	1200.4C	4 SETS OF 4-350, #3/0G, 3"C
1600.3C	5 SETS OF 3-400, #4/0G, 3"C	1600.4C	5 SETS OF 4-400, #4/0G, 4"C
2000.3C	6 SETS OF 3-400, 250G, 3"C	2000.4C	6 SETS OF 4-400, 250G, 4"C
2500.3C	7 SETS OF 3-500, 350G, 4"C	2500.4C	7 SETS OF 4-500, 350G, 4"C
3000.3C	8 SETS OF 3-500, 400G, 4"C	3000.4C	8 SETS OF 4-500, 400G, 4"C
4000.3C	12 SETS OF 3-400, 500G, 3"C	4000.4C	12 SETS OF 4-400, 500G, 4"C



1 ELECTRICAL ONE-LINE DIAGRAM
NO SCALE

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
DAVID M. BOON
95600
LICENSED
PROFESSIONAL ENGINEER
2025-05-29

Director	Drawn By
BA	DS/LM
Designer	Quality Control
BA	DMB
Proj. Arch.	
BA	

PROJECT NO.
24-057.00

SHEET TITLE
ONE-LINE DIAGRAMS - ELECTRICAL

SHEET NO.
E7.01

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FILE PATH: Autodesk Docs://E_EMS ISD_24-057.00_Agricultural Science Center/24117.EMS ISD New Agricultural Science-MEP-24.rvt
DATE/TIME: 5/29/2025 1:48:20 PM
PLOT SCALE: 12" = 1'-0"

LIGHTING CONTROL NARRATIVE

INTERNATIONAL ENERGY CONSERVATION CODE (IECC):
- THIS PROJECT IS FOLLOWING IECC 2015, PER CITY OF FORT WORTH MUNICIPAL CODE.

GENERAL LIGHTING
- UPON ENTERING THE SPACE THE OCCUPANT WILL BE ABLE TO MANUALLY TURN 'ON' THE LIGHT FIXTURES BY PRESSING THE "GENERAL LIGHTING" BUTTON AT ONE OF THE CONTROL STATIONS, THE SYSTEM WILL THEN TURN ON THE LIGHT FIXTURES.
- THE LIGHT FIXTURES WILL REMAIN 'ON' UNTIL THE OCCUPANT LEAVES THE SPACE AND THE VACANCY SENSOR NO LONGER DETECTS THAT THE SPACE IS OCCUPIED FOR SET PERIOD OF TIME, OR THE OCCUPANT MANUALLY TURNS 'OFF' THE LIGHTS AT THE SWITCH.
- IN THIS MODE WHEN THE DAYLIGHT SENSOR DETECTS THAT ADEQUATE NATURAL LIGHT IS ENTERING THE PRIMARY DAYLIGHTING ZONE, THE SYSTEM SHALL CONTINUOUSLY DIM ALL FIXTURES LOCATED PARTIALLY OR COMPLETELY WITHIN THE PRIMARY DAYLIGHT ZONE TO MAINTAIN THE PRESET ILLUMINATION LEVEL.
- WHEN THE SECONDARY DAYLIGHT SENSOR DETECTS THAT ADEQUATE NATURAL LIGHT IS ENTERING THE SECONDARY DAYLIGHTING ZONE, THE SYSTEM SHALL CONTINUOUSLY DIM ALL FIXTURES LOCATED PARTIALLY OR COMPLETELY WITHIN THE PRIMARY AND SECONDARY DAYLIGHTING ZONE TO MAINTAIN THE PRESET ILLUMINATION LEVEL.
- THE SYSTEM SHALL TURN ALL LIGHT FIXTURES 'OFF' WHEN THE VACANCY SENSORS DETECTS THAT THE SPACE IS UN-OCCUPIED FOR 20 MINUTES.
- THE OCCUPANT HAS THE ABILITY TO DIM THE GENERAL LIGHTING. WHEN THE GENERAL LIGHTING IS DIMMED, THE DAYLIGHT FUNCTION IS DISABLED.

CORRIDOR / COMMONS LIGHTING
- THE GENERAL CORRIDORS AND COMMONS AREA LIGHTING WILL BE CONTROLLED BY A NETWORK LIGHTING CONTROL SYSTEM, BASED ON OCCUPIED TIME SCHEDULE.
- IN ADDITION TO SCHEDULED CONTROL, CORRIDOR LIGHTING WILL BE CONTROLLED BY LOCAL OCCUPANCY SENSORS.
- AT THE DESIGNATED TIME OF THE BUILDING OCCUPIED MODE, THE GENERAL CORRIDOR AND COMMONS LIGHTING WILL TURN 'ON' TO 50% OF LIGHT OUTPUT.
- WHEN OCCUPANT ENTERS THE SPACE, AND OCCUPANCY SENSORS PICK UP THE MOTION, THE LIGHTING DIM LEVELS WILL INCREASE FROM 50% TO 100%.
- IN THIS MODE, IF DAYLIGHTING ZONE IS PRESENT WITHIN THE SPACE, WHEN THE DAYLIGHT SENSOR DETECTS THAT ADEQUATE NATURAL LIGHT IS ENTERING THE PRIMARY DAYLIGHTING ZONE, THE SYSTEM SHALL DIM ALL FIXTURES LOCATED PARTIALLY OR COMPLETELY WITHIN THE PRIMARY DAYLIGHT ZONE TO MAINTAIN THE PRESET ILLUMINATION LEVEL.
- WHEN THE SECONDARY DAYLIGHT SENSOR DETECTS THAT ADEQUATE NATURAL LIGHT IS ENTERING THE SECONDARY DAYLIGHTING ZONE, THE SYSTEM SHALL DIM ALL FIXTURES LOCATED PARTIALLY OR COMPLETELY WITHIN THE PRIMARY OR SECONDARY DAYLIGHTING ZONE TO MAINTAIN THE PRESET ILLUMINATION LEVEL.
- THE SYSTEM SHALL DIM ALL LIGHT FIXTURES TO 50% LEVEL, WHEN THE OCCUPANCY SENSORS DETECTS THAT THE SPACE IS UN-OCCUPIED FOR 20 MINUTES.
- THE SYSTEM SHALL TURN ALL LIGHT FIXTURES 'OFF' BASED ON TIME SCHEDULE.
- A MANUAL OVERRIDE IN RECEPTION AREA SHALL BE PROVIDED WITH PROVISIONS FOR INDICATING WHEN THE LIGHTS ARE 'ON'.
- DURING SCHEDULED TIME OFF, LIGHTS SHALL BE CONTROLLED VIA MANUAL OVERRIDE SWITCHES.

CLASSROOMS
- THE CLASSROOMS WILL BE LOCALLY CONTROLLED BY AN OCCUPANCY/VACANCY SENSOR AND LOCAL LOW VOLTAGE SWITCH.
- THE OCCUPANCY/VACANCY SENSOR SHALL TURN LIGHT FIXTURES 'ON' TO 50% LIGHT OUTPUT WHEN THE SPACE OCCUPANCY SENSORS DETECTS THAT THE SPACE BECOMES OCCUPIED.
- UPON ENTERING THE SPACE THE OCCUPANT WILL BE ABLE TO MANUALLY TURN 'ON' THE LIGHT FIXTURES TO 100% LIGHT OUTPUT BY PRESSING THE "GENERAL LIGHTING" BUTTON.
- THE OCCUPANCY/VACANCY SENSOR SHALL TURN ALL LIGHT FIXTURES 'OFF' WHEN THE SPACE HAS BEEN UNOCCUPIED FOR 20 MINUTES.
- LIGHT FIXTURES ADJACENT TO TEACHING WALL SHALL BE CONTROLLED SEPARATELY.
- ALL LIGHTING ZONES WITHIN THE CLASSROOMS SHALL BE SEPARATELY DIMMABLE

GROUP RESTROOM LIGHTING
- THE GROUP RESTROOM WILL BE LOCALLY CONTROLLED BY A OCCUPANCY/VACANCY SENSOR AND LOCAL OVERRIDE SWITCH.
- THE OCCUPANCY/VACANCY SENSOR SHALL TURN LIGHT FIXTURES 'ON' TO 50% LIGHT OUTPUT WHEN THE SPACE OCCUPANCY SENSORS DETECTS THAT THE SPACE BECOMES OCCUPIED.
- UPON ENTERING THE SPACE THE OCCUPANT WILL BE ABLE TO MANUALLY TURN 'ON' THE LIGHT FIXTURES TO 100% LIGHT OUTPUT BY PRESSING THE "ON" BUTTON.
- THE OCCUPANCY/VACANCY SENSOR SHALL TURN ALL LIGHT FIXTURES 'OFF' WHEN THE SPACE HAS BEEN UNOCCUPIED FOR 20 MINUTES.

DISPLAY AND ACCENT LIGHTING
- LIGHTING MUST BE INDEPENDENTLY CONTROLLED FROM OTHER LIGHTING IN THE SPACE. LIGHTING WILL BE TURNED "OFF" WITH EITHER VACANCY SENSOR OR TIME SWITCH CONTROL. CONTROL OF THESE LIGHTS SHALL MATCH THE CONTROL OF OTHER LIGHTING IN THE SPACE.
- ALL TROPHY CASE/DISPLAY LIGHTING SHALL BE ON AND OFF BASED ON PROGRAMMABLE SCHEDULE. OVERRIDE FUNCTIONALITY SHALL PROVIDED AT NETWORK SWITCH LOCATIONS WITH OVERRIDE FUNCTIONING ON A TIMER. WHEN FIXTURE IS ON IN OVERRIDE, THERE WILL BE AN AUTOMATIC OFF TIMER BASED ON A PROGRAMMABLE TIME VALUE SET BY THE OWNER.

PARKING LOT LIGHTING
- PARKING LOT LIGHT FIXTURES WILL BE CONTROLLED BY A WIRELESS NETWORK LIGHTING CONTROL SYSTEM.
- PARKING LOT LIGHT FIXTURES WILL BE TURNED 'ON' WITH A CENTRAL PHOTOCELL, AND THE LIGHTING LEVEL WILL BE AUTOMATICALLY REDUCED AT MIDNIGHT BY 30%, UNTIL 6 AM, AT WHICH TIME THE LIGHTING MAY BE SCHEDULED TO TURN 'ON'.
- THE LIGHTING WILL REMAIN ON UNTIL TURNED 'OFF' AT DAWN BY PHOTOCELL.
- THERE IS MANUAL OVERRIDE SWITCH LOCATED IN RECEPTION AREA FOR DISTRICT STAFF USE ONLY.
- MANUAL OVERRIDE SWITCH SHALL CLEARLY BE LABELED TO INDICATE THE LIGHT GROUP IT CONTROLS

BUILDING FACADE AND LANDSCAPING LIGHTING
- BUILDING FACADE AND LANDSCAPE LIGHT FIXTURES WILL BE CONTROLLED BY A NETWORK LIGHTING CONTROL SYSTEM.
- BUILDING FACADE AND LANDSCAPE LIGHT FIXTURES WILL BE TURNED 'ON' WITH A CENTRAL PHOTOCELL AT DAWN. THE LIGHTING WILL REMAIN ON UNTIL TURNED 'OFF' AT DAWN BY PHOTOCELL.
- THERE IS MANUAL OVERRIDE SWITCH LOCATED IN RECEPTION AREA FOR DISTRICT STAFF USE ONLY.
- MANUAL OVERRIDE SWITCH SHALL CLEARLY BE LABELED TO INDICATE THE LIGHT GROUP IT CONTROLS

SPECIALTY LIGHTING
- MAIN BUILDING FLAGPOLE LIGHTING WILL BE CONTROLLED BY NETWORK LIGHTING CONTROL SYSTEM. LIGHT FIXTURES WILL BE TURNED 'ON' WITH A CENTRAL PHOTOCELL AT DAWN. THE FIXTURES WILL REMAIN ON UNTIL TURNED 'OFF' AT DAWN BY PHOTOCELL.
- MONUMENT SIGN LIGHTING WILL BE CONTROLLED BY NETWORK LIGHTING CONTROL SYSTEM. LIGHT FIXTURES WILL BE TURNED 'ON' WITH A CENTRAL PHOTOCELL AT DAWN. THE FIXTURES WILL REMAIN ON UNTIL TURNED 'OFF' AT DAWN BY PHOTOCELL.
- THERE IS MANUAL OVERRIDE SWITCH LOCATED IN ELECTRICAL ROOM FOR DISTRICT STAFF USE ONLY.
- MANUAL OVERRIDE SWITCH SHALL BE CLEARLY LABELED TO INDICATE THE LIGHT GROUP IT CONTROLS.

LIGHTING FIXTURE SCHEDULE

TYPE	FIXTURE DESCRIPTION	MANUFACTURER	MODEL	LAMP	VOLTAGE	WATTAGE	MOUNTING
A1	2x4 RECESSED LED TROFFER	ACUITY	2BLT4-48L-ADP-EZ1-LP840	LED	MVOLT	39.3 W	RECESSED
B1	4FT LED VAPOR TIGHT FIXTURE	ACUITY	FEM-L48-12000LM-IMAFL-MD-MVOLT-GZ10-40K-80CRI	LED	MVOLT	75 W	CONDUIT STEM AT 12'-6"
B2	4FT SURFACE WRAPAROUND	ACUITY	BLWP4-40L-ADP-LP840	LED	MVOLT	35 W	WALL @ 10' AFF
B4	4FT LED VAPOR TIGHT FIXTURE	ACUITY	FEM-L48-8000LM-IMAFL-MD-MVOLT-GZ10-40K-80CRI	LED	MVOLT	39 W	CONDUIT STEM AT 12'-6"
B6	6FT LONG RECESSED LINEAR LED	ACUITY	OPRS-G-LOP-6FT-90CRI-40K-500LMF-MIN1-120-SCT	LED	120 V	33 W	RECESSED
B8	8FT LONG RECESSED LINEAR LED	ACUITY	OPRS-G-LOP-8FT-90CRI-40K-500LMF-MIN1-120-SCT	LED	120 V	44 W	RECESSED
B12	12FT LONG RECESSED LINEAR LED	ACUITY	OPRS-G-LOP-10FT-90CRI-40K-500LMF-MIN1-120-SCT	LED	120 V	55 W	RECESSED
BD	BOLLARD LED	ACUITY	KBA8-LED-16C-350-40K-SYM-MVOLT	LED	120 V	20 W	
C1	4 FT RECESSED LED CANOPY LIGHT	A LIGHT	D5-4-LS-40-U-HE-Q	LED	MVOLT	39 W	RECESSED
C2	8FT LONG RECESSED LINEAR LED	A LIGHT	D5-8-LS-40-U-HE-Q	LED	120 V	44 W	RECESSED
C3	12FT LONG RECESSED LINEAR LED	A LIGHT	D5-12-LS-40-U-HE-Q	LED	120 V	44 W	RECESSED
D	6" LED DOWNLIGHT	ACUITY	LDN6-40/25-L06-AR-LSS-MVOLT-GZ10	LED	MVOLT	28.3 W	RECESSED
D1	4" SQUARE LED DOWNLIGHT	ACUITY	LBR4SQ NCH-ALO3-40K-LSS-MWD-120-UGZ-	LED	120 V	39 W	RECESSED
E2	EMERGENCY LED DIE CAST WALL PACK	SIGNTEX	MLW-RE-10-W	LED	MVOLT	10 W	RECESSED
E5	EMERGENCY LED DIE CAST WALL PACK	SIGNTEX	MAE-RE-10-A-W	LED	MVOLT	10 W	RECESSED
HB	LED HIGH BAY	ACUITY	JHBL-30000LM-ACL-WD-208-GZ10-40K-90CRI	LED	MVOLT	221 W	RECESSED
L1	LED FLAG POLE LIGHT	ACUITY	M9720C A LED P3 40K MFL FLC	LED		46 W	
L2	LED MONUMENT SIGN LIGHT	TARGETTI	KPLM 41 WW L1 40	LED		14 W	
S1	POLE MOUNTED LED AREA LIGHT	ACUITY	DSX1 LED-P3-40K-70CRI-T3M-208-SPA-NLTAIR2 PIRHN	LED	MVOLT	68 W	
S2	POLE MOUNTED LED AREA LIGHT	ACUITY	DSX1 LED-P3-40K-70CRI-T5W-208-SPA-NLTAIR2 PIRHN	LED	MVOLT	68 W	
W	LED WALL PACK	ACUITY	WDGE3 LED P2 40K 80CRI R3 MVOLT SRM E15WH	LED	MVOLT	59 W	

SIGNTEX FIXTURE SCHEDULE

TYPE	FIXTURE DESCRIPTION	MANUFACTURER	MODEL	LAMP	VOLTAGE	WATTAGE	MOUNTING	REMARKS
B4	4FT LED VAPOR TIGHT FIXTURE	ACUITY	FEM-L48-8000LM-IMAFL-MD-MVOLT-GZ10-40K-80CRI	LED	MVOLT	39 W	CONDUIT STEM AT 12'-6"	
B4E	SAME AS B4 WITH SIGNTEX DRIVER	ACUITY	ELC-10-P2-39W-X	LED	MVOLT	39 W	CONDUIT STEM AT 12'-6"	
E1	EMERGENCY LED	SIGNTEX	MLE-4-11L-RE-5CCT-ELC 10 P6	LED	MVOLT	10 W	RECESSED	
E2	EMERGENCY LED DIE CAST WALL PACK	SIGNTEX	MLW-RE-10-W	LED	MVOLT	10 W	RECESSED	
E5	EMERGENCY LED DIE CAST WALL PACK	SIGNTEX	MAE-RE-10-A-W	LED	MVOLT	10 W	RECESSED	
E7	LED PENDANT	SIGNTEX	MHE-RE-30-S-W-WA-PENX	LED	MVOLT	90 W	RECESSED	
X	SIGNTEX LED EXIT SIGN	SIGNTEX	RPR-REC-1RA/2RA	LED	120 V	2 W	SURFACE	

LIGHTING FIXTURE SCHEDULE REMARKS:
1. COORDINATE FINAL STYLE AND FINISH WITH ARCHITECT PRIOR TO PURCHASE.
2. COORDINATE FINAL MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS.
3. COORDINATE FINAL LENGTH OF FIXTURES WITH ARCHITECTURAL ELEVATION DRAWINGS.
4. COORDINATE FINAL DISTRIBUTION OPTION WITH OWNER PRIOR TO PURCHASE.
5. COORDINATE FINAL AIMING DIRECTION WITH OWNER ON THE FIELD.
6. PROVIDE ALL SECTION TERMINATIONS SPECIFIED BY MANUFACTURER TO ALLOW FOR A COMPLETE AND FUNCTIONING INSTALLATION.
7. PROVIDE POWER SUPPLY SPECIFIED BY MANUFACTURER TO SUPPLY ADEQUATE POWER TO FIXTURE.
8. PROVIDE ALL POWER FEED SECTIONS FOR A COMPLETE, FUNCTIONING INSTALLATION.

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS — DAVID M. BOON — 95600 — LICENSED — PROFESSIONAL ENGINEER
2025-05-21

Director BA	Drawn By DS/LM
Designer BA	Quality Control DMB
Proj. Arch. BA	

PROJECT NO.
24-057.00

SHEET TITLE
SCHEDULES - ELECTRICAL

SHEET NO.
E8.01

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FILE PATH: Autodesk Docs://E_EMS ISD_24-057.00_Agriculture Science Center/24117-EMS ISD New Agricultural Science-MEP-r24.rvt
DATE/TIME:5/29/2025 1:48:23 PM
PLOT SCALE: 12" = 1'-0"

PANEL: LPA-1

Location: ELEC. 111
Supply From: MDP
Mounting: SURFACE
Enclosure: NEMA 1

Volts: 208Y/120V
Phases: 3
Wires: 4
Sections: 4

A.I.C. Rating: 10,000 A.I.C.
Mains Type: MLO
Mains Rating: 225.0 A

CKT	REM	Load Name	BKR	Poles	Wire Size	A		B		C		Wire Size	Poles	BKR	Load Name	REM	CKT
1		LIGHTING PANEL	20	1	2#12, #12G, 3/4"C	180	720					2#12, #12G, 3/4"C	1	20	CORRIDOR 111		2
3		CLASSROOM RCPT	20	1	2#12, #12G, 3/4"C			900	360			2#12, #12G, 3/4"C	1	20	CLASSROOM TV		4
5		CASH REGISTER	20	1	2#12, #12G, 3/4"C					180	180	2#12, #12G, 3/4"C	1	20	CONCESSIONS 123		6
7		EQUIPMENT STG...	20	1	2#12, #12G, 3/4"C	540	900					2#12, #12G, 3/4"C	1	20	CLASSROOM RCPT		8
9		CLASSROOM TV	20	1	2#12, #12G, 3/4"C			360	720			2#12, #12G, 3/4"C	1	20	WORKROOM		10
11		EXT/STOR RCPT	20	1	2#12, #12G, 3/4"C					720	180	2#12, #12G, 3/4"C	1	20	RECEPTACLE		12
13		EQ STOR RCPT	20	1	2#12, #12G, 3/4"C	900	720					2#12, #12G, 3/4"C	1	20	ELEC/MECH/RISER...		14
15		RECEPTACLE	20	1	2#12, #12G, 3/4"C			180	360			2#12, #12G, 3/4"C	1	20	WOMENS RR RCPT		16
17		MENS RR RCPT	20	1	2#12, #12G, 3/4"C					360	900	2#12, #12G, 3/4"C	1	20	OFFICE 104		18
19		RESTROOM 105 &...	20	1	2#12, #12G, 3/4"C	360	360					2#12, #12G, 3/4"C	1	20	OFFICE 104		20
21		OFFICE 104	20	1	2#12, #12G, 3/4"C			540	900			2#12, #12G, 3/4"C	1	20	RECEPTACLE		22
23		MDF 113	20	1	2#12, #12G, 3/4"C					360	360	2#12, #12G, 3/4"C	1	20	MDF 113		24
25		MDF 113	20	1	2#12, #12G, 3/4"C	360	360					2#12, #12G, 3/4"C	1	20	MDF 113		26
27		STG 115 & CUST 114	20	1	2#12, #12G, 3/4"C			540	882			2#12, #12G, 3/4"C	1	20	CORRIDOR LTNG		28
29		LTNG - MEZZ/STOR	20	1	2#12, #12G, 3/4"C					1333	396	2#12, #12G, 3/4"C	1	20	LIGHTING		30
31		LIGHTING	20	1	2#12, #12G, 3/4"C	1745	720					2#12, #12G, 3/4"C	1	20	CLASSROOM 120		32
33		CLASSROOM 120	20	1	2#12, #12G, 3/4"C			720	180			2#12, #12G, 3/4"C	1	20	REFRIGERATOR		34
35		ARENA LTNG	20	2	2#12, #12G, 3/4"C					663	720	2#12, #12G, 3/4"C	1	20	MEZZANINE...		36
37						663	553										38
39		REFRIGERATED...	20	1	2#12, #12G, 3/4"C			756	553			2#12, #12G, 3/4"C	2	20	ARENA LTNG		40
41		MDF 113	20	1	2#12, #12G, 3/4"C					360	756	2#12, #12G, 3/4"C	1	20	REFRIGERATED...		42
43		MDF 113	20	1	2#12, #12G, 3/4"C	360	540					2#12, #12G, 3/4"C	1	20	MDF 113		44
45		MDF 113	20	1	2#12, #12G, 3/4"C			180	360			2#12, #12G, 3/4"C	1	20	MDF 113		46
47		CONCESSIONS 123	20	1	2#12, #12G, 3/4"C					180	180	2#12, #12G, 3/4"C	1	20	MDF 113		48
49		CONCESSIONS 123	20	1	2#12, #12G, 3/4"C	180	1276					2#12, #12G, 3/4"C	1	20	CANOPY LTNG		50
51		AIR SCREEN	20	1	2#12, #12G, 3/4"C			612	180			2#12, #12G, 3/4"C	1	20	CONCESSIONS 123		52
53		TABLE RECEP	20	1	2#12, #12G, 3/4"C					180	180	2#12, #12G, 3/4"C	1	20	CONCESSIONS 123		54
55		FREEZER	20	1	2#12, #12G, 3/4"C	500	1428					2#12, #12G, 3/4"C	1	20	ICE MACHINE		56
57		REFRIGERATOR	20	1	2#12, #12G, 3/4"C			500	180			2#12, #12G, 3/4"C	1	20	TABLE RECEP		58
59		WH-1	20	1	2#12, #12G, 3/4"C					180	180	2#12, #12G, 3/4"C	1	20	CASH REGISTER		60
61		MDF RECEPTACLE	20	1	2#12, #12G, 3/4"C	360	600					2#12, #12G, 3/4"C	1	20	VIDEO/DATA...		62
63		MDF RECEPTACLE	20	1	2#12, #12G, 3/4"C			360	0			2#12, #12G, 3/4"C	1	20	GREENHOUSE WP		64
65		RECEPTACLE	20	1	2#12, #12G, 3/4"C					180	360	2#12, #12G, 3/4"C	1	20	TV		66
67		TV	20	1	2#12, #12G, 3/4"C	360	180					2#12, #12G, 3/4"C	1	20	FACP		68
69		TV	20	1	2#12, #12G, 3/4"C			180	360			2#12, #12G, 3/4"C	1	20	RECEPTACLE		70
71		SWITCH FOR 119C	20	1	2#12, #12G, 3/4"C					500	206	2#12, #12G, 3/4"C	1	20	MONUMENT LTNG		72
73		SITE POLE LTNG	20	2	2#12, #12G, 3/4"C	1268	180					2#12, #12G, 3/4"C	1	20	SOUND SYSTEM		74
75								1268	1000			2#12, #12G, 3/4"C	1	20	DOOR HARWARE		76
77		DOOR HARWARE	20	1	2#12, #12G, 3/4"C					1000	1000	2#12, #12G, 3/4"C	1	20	DOOR HARWARE		78
79		DOOR HARWARE	20	1	2#12, #12G, 3/4"C	1000	1000					2#12, #12G, 3/4"C	1	20	DOOR HARWARE		80
81		DOOR HARWARE	20	1	2#12, #12G, 3/4"C			1000	1500			2#12, #12G, 3/4"C	1	20	DOOR HARWARE		82
83		DOOR HARWARE	20	1	2#12, #12G, 3/4"C					1500	503	2#12, #12G, 3/4"C	1	20	MDF/STOR LTNG		84
85		ARENA LTNG	20	2	2#12, #12G, 3/4"C	663	663					2#12, #12G, 3/4"C	2	20	ARENA LTNG		86
87								663	663								88
89		NIGHT LIGHTING	20	1	2#12, #12G, 3/4"C					234	308	2#12, #12G, 3/4"C	1	20	NIGHT LIGHTING		90
91		NIGHT LIGHTING	20	1	2#12, #12G, 3/4"C	353	1468					2#12, #12G, 3/4"C	1	20	STALL LTNG		92
93		RECEPTACLE	20	1	2#12, #12G, 3/4"C			180	1054			2#12, #12G, 3/4"C	1	20	STALL LTNG		94
95										4030	180	2#12, #12G, 3/4"C	1	20	CONV RECPT		96
97		LED DISPLAY	30	3	3#10, #10G, 3/4"C	4030	180					2#12, #12G, 3/4"C	1	20	CONV RECPT		98
99								4030	180			2#12, #12G, 3/4"C	1	20	CONV RECPT		100
101	--	SPARE	20	1	--					0	245	2#12, #12G, 3/4"C	1	20	LIGHTING		102
103	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	104
105	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	106
107	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	108
109	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	110
111	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	112
113	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	114
115	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	116
117	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	118
119	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	120
121	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	122
123	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	124
125	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	126
127	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	128
129	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	130
131	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	132
133	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	134
135	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	136
137	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	138
139	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	140
141	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	142
143	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	144
145	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	146
147	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	148
149	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	150
151	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	152
153	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	154
155	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	156
157	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	158
159	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	160
161	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	162
163	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	164
165	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	166
167	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	168
					Total Load:	25,670 VA		22,400 VA		18,794 VA							
					Total Amps:	218.5 A		191.3 A		156.6 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	17,553 VA	125.00%	21,941 VA		
Other	68 VA	100.00%	68 VA	**Total Conn. Load:**	66,864 VA
Receptacle	37,152 VA	63.46%	23,576 VA	**Total Est. Demand:**	57,676 VA
Power	12,091 VA	100.00%	12,091 VA	**Total Conn. Current:**	185.6 A
				Total Est. Demand Current:	160.1 A

General Notes:
A. PROVIDE FEED-THROUGH LUGS FOR FUTURE EXPANSION.
B. PROVIDE FULL SIZED PHASE, NEUTRAL AND GROUND BUSSES.
C. THE CONTRACTOR SHALL UPDATE ROOM NAMES AND ROOM NUMBERS ON FINAL PANEL SCHEDULE TO REFLECT FINAL BUILDING CONDITIONS.

Remarks:
1. PROVIDE GFCI CIRCUIT BREAKER.
2. PROVIDE CIRCUIT BREAKER AND / OR FUSES PER EQUIPMENT MANUFACTURER'S SPECIFICATIONS.
3. BRANCH CIRCUIT SHALL BE 2 #12 & #12 GROUND IN 3/4" CONDUIT.
4. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY SECONDARY CONTACTOR.
5. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY UTILITY LAB CONTROLLER.
6. PROVIDE CIRCUIT BREAKER CAPABLE OF BEING LOCKED IN THE OFF POSITION.

Distribution Panel: MDP

Location: ELEC. 111
Supply From:
Mounting: SURFACE
Enclosure: NEMA 1

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

A.I.C. Rating: 42,000 A.I.C.
Mains Type: MCB
Mains Rating: 1,200.0 A
MCB Rating: 1,200.0 A

CKT	Circuit Description	Poles	Frame Size	Trip Rating	Load	Wire Size	Remarks
1	TVSS	3	100.0 A	100.0 A	0 VA	REFER TO ONE-LINE DIAGRAM	
2	LPA-1	3	225.0 A	225.0 A	66,864 VA	REFER TO ONE-LINE DIAGRAM	
3	LPA-2	3	400.0 A	400.0 A	50,058 VA	REFER TO ONE-LINE DIAGRAM	
4	LPA-M	3	400.0 A	400.0 A	114,423 VA	REFER TO ONE-LINE DIAGRAM	
5	LPB-1	3	225.0 A	225.0 A	31,577 VA	REFER TO ONE-LINE DIAGRAM	
6	LPB-2	3	600.0 A	600.0 A	126,162 VA	REFER TO ONE-LINE DIAGRAM	
7	ACCH-1	3	300.0 A	300.0 A	51,900 VA	REFER TO ONE-LINE DIAGRAM	
8	PREPARED SPACE	3	225.0 A	225.0 A	0 VA	--	
9	PREPARED SPACE	3	225.0 A	225.0 A	0 VA	--	
10	PREPARED SPACE	3	225.0 A	225.0 A	0 VA	--	
11	PREPARED SPACE	3	100.0 A	100.0 A	0 VA	--	
12	PREPARED SPACE	3	100.0 A	100.0 A	0 VA	--	
				Total Conn. Load:	440,984 VA		
				Total Amps:	1,224.0 A		

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	21,850 VA	125.00%	27,312 VA		
Motor	86,294 VA	101.45%	87,544 VA	**Total Conn. Load:**	440,984 VA
Other	68 VA	100.00%	68 VA	**Total Est. Demand:**	406,793 VA
Receptacle	88,912 VA	55.62%	49,456 VA	**Total Conn. Current:**	1,224.0 A
Water Heating	1,056 VA	125.00%	1,320 VA	**Total Est. Demand Current:**	1,129.1 A
Non-Coincidental	14,688 VA	0.01%	1 VA		
HVAC	215,937 VA	106.01%	228,912 VA		
Power	12,091 VA	100.00%	12,091 VA		
Heating	88 VA	100.00%	88 VA		

Notes:

PANEL: LPA-2

Location: ELEC. 111
Supply From: MDP
Mounting: SURFACE
Enclosure: NEMA 1

Volts: 208Y/120V
Phases: 3
Wires: 4
Sections: 1

A.I.C. Rating: 10,000 A.I.C.
Mains Type: MLO
Mains Rating: 225.0 A

CKT	REM	Load Name	BKR	Poles	Wire Size	A		B		C		Wire Size	Poles	BKR	Load Name	REM	CKT
1		EF-01, 04, 08	20	1	2#12, #12G, 3/4"C	108	88					2#12, #12G, 3/4"C	1	20	EF-09		2
3		UH-01	30	2	2#10, #10G, 3/4"C			1500	180			2#12, #12G, 3/4"C	1	20	B-1		4
5										1500	1500	2#10, #10G, 3/4"C	2	30	UH-03		6
7		UH-02	30	2	2#10, #10G, 3/4"C	1500	1500										8
9								1500	2738								10
11		CU-02	60	3	3#4, #10, 1"C					4563	2738	3#4, #10, 1"C	3	60	CU-01		12
13						4563	2738										14
15								4563	1352								16
17		CU-03	60	3	3#4, #10, 1"C					4558	1352	2#12, #12G, 3/4"C	2	20	CU-04		18
19						4558	528					2#12, #12G, 3/4"C	1	20	CP-1		20
21								4558	936			2#12, #12G, 3/4"C	2	20	ACU-01		22
23	--	SPARE	20	1	--					0	936						24
25	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	26
27	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	28
29	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	30
31	--	SPACE	--	1	--	--	0					--	1	20	SPARE	--	32
33	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	34
35	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	36
37	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	38
39	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	40
41	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	42
					Total Load:	15,583 VA		17,327 VA		17,147 VA							
					Total Amps:	129.9 A		146.4 A		144.9 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Water Heating	528 VA	125.00%	660 VA		
Motor	108 VA	108.33%	117 VA	**Total Conn. Load:**	50,058 VA
Non-Coincidental	13,690 VA	0.01%	1 VA	**Total Est. Demand:**	39,929 VA
HVAC	35,644 VA	109.59%	39,062 VA	**Total Conn. Current:**	138.9 A
Heating	88 VA	100.00%	88 VA	**Total Est. Demand Current:**	110.8 A

General Notes:
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C. THE CONTRACTOR SHALL UPDATE ROOM NAMES AND ROOM NUMBERS ON FINAL PANEL SCHEDULE TO REFLECT FINAL BUILDING CONDITIONS.

Remarks:
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2. PROVIDE CIRCUIT BREAKER AND / OR FUSES PER EQUIPMENT MANUFACTURER'S SPECIFICATIONS.
3. BRANCH CIRCUIT SHALL BE 2 #12 & #12 GROUND IN 3/4" CONDUIT.
4. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY SECONDARY CONTACTOR.
5. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY UTILITY LAB CONTROLLER.
6. PROVIDE CIRCUIT BREAKER CAPABLE OF BEING LOCKED IN THE OFF POSITION.

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
DAVID M. BOON
95600
LICENSED
PROFESSIONAL ENGINEER
2025-05-21

Director	Drawn By
BA	DS/LM
Designer	Quality Control
BA	DMB
Proj. Arch.	
BA	

PROJECT NO.
24-057.00

SHEET TITLE
PANEL SCHEDULES - ELECTRICAL

SHEET NO.
E9.01

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FILE PATH: Autodesk Docs://E_EMS ISD_24-057.00_Agricultural Science Center/24117.EMS ISD New Agricultural Science-ABDP-r24.rvt
DATE/TIME:5/29/2025 1:48:28 PM
PLOT SCALE:

PANEL: LPB-1

Location: ELECTRICAL 154
Supply From: MDP
Mounting: SURFACE
Enclosure: NEMA 1

Volts: 208Y/120V
Phases: 3
Wires: 4
Sections: 4

A.I.C. Rating: 22,000 A.I.C.
Mains Type: MLO
Mains Rating: 225.0 A

CKT	REM	Load Name	BKR	Poles	Wire Size	A		B		C		Wire Size	Poles	BKR	Load Name	REM	CKT
1		IDF 152	20	1	2#12, #12G, 3/4"C	540	720					2#12, #12G, 3/4"C	1	20	RR RCPT		2
3		ELEC RCPT	20	1	2#12, #12G, 3/4"C			180	720			2#12, #12G, 3/4"C	1	20	FEED STG 148		4
5		ALLEY 148	20	1	2#12, #12G, 3/4"C					1080	360	2#12, #12G, 3/4"C	1	20	RECEPTACLE		6
7		TRAINING 147	20	1	2#12, #12G, 3/4"C	720	360					2#12, #12G, 3/4"C	1	20	STORAGE 155		8
9		RCPT...	20	1	2#12, #12G, 3/4"C			1080	180			2#12, #12G, 3/4"C	1	20	IDF 152		10
11		TRIM AREA 135	20	1	2#12, #12G, 3/4"C					360	540	2#12, #12G, 3/4"C	1	20	ROOM 127		12
13		WASH AREA 137	20	1	2#12, #12G, 3/4"C	360	360					2#12, #12G, 3/4"C	1	20	TRIM AREA 136		14
15		LTNG - WASHTRIM	20	1	2#12, #12G, 3/4"C			1514	360			2#12, #12G, 3/4"C	1	20	WASH AREA 134		16
17		WATER CONDIT	20	1	2#12, #12G, 3/4"C					360	360	2#12, #12G, 3/4"C	1	20	IDF 152		18
19		VET 153	20	1	2#12, #12G, 3/4"C	360	360					2#12, #12G, 3/4"C	1	20	TRIM AREA 136		20
21		WH-2	20	1	2#12, #12G, 3/4"C			180	360			2#12, #12G, 3/4"C	1	20	WASH AREA 134		22
23		STORAGE RCPT	20	1	2#12, #12G, 3/4"C					180	180	2#12, #12G, 3/4"C	1	20	RECEPTACLE		24
25		LIGHT POLE	20	1	2#12, #12G, 3/4"C	720	360					2#12, #12G, 3/4"C	1	20	WASH AREA 137		26
27		BOLLARD LTNG	20	1	2#12, #12G, 3/4"C			0	360			2#12, #12G, 3/4"C	1	20	TRIM AREA 135		28
29		RECEPTACLE	20	1	2#12, #12G, 3/4"C					1000	360	2#12, #12G, 3/4"C	1	20	IDF 152		30
31		RECEPTACLE	20	1	2#12, #12G, 3/4"C	360	720					2#12, #12G, 3/4"C	1	20	RECEPTACLE		32
33		RECEPTACLE	20	1	2#12, #12G, 3/4"C			360	360			2#12, #12G, 3/4"C	1	20	RECEPTACLE		34
35		RECEPTACLE	20	1	2#12, #12G, 3/4"C					720	573	2#12, #12G, 3/4"C	1	20	LTNG - EXTERIOR		36
37		RECEPTACLE	20	1	2#12, #12G, 3/4"C	360	360					2#12, #12G, 3/4"C	1	20	RECEPTACLE		38
39		RECEPTACLE	20	1	2#12, #12G, 3/4"C			360	360			2#12, #12G, 3/4"C	1	20	RECEPTACLE		40
41		SHOW SHAKER	20	1	2#12, #12G, 3/4"C			180	360			2#12, #12G, 3/4"C	1	20	RECEPTACLE		42
43		WALL PACKS	20	1	2#12, #12G, 3/4"C	0	780					2#12, #12G, 3/4"C	2	20	SITE POLE LTNG		44
45		RECEPTACLE	20	1	2#12, #12G, 3/4"C			720	780								46
47		DOOR HARDWARE	20	1	2#12, #12G, 3/4"C					1500	1000	2#12, #12G, 3/4"C	1	20	DOOR HARDWARE		48
49		DOOR HARDWARE	20	1	2#12, #12G, 3/4"C	1000	1000					2#12, #12G, 3/4"C	1	20	DOOR HARDWARE		50
51		DOOR HARDWARE	20	1	2#12, #12G, 3/4"C			1500	1000			2#12, #12G, 3/4"C	1	20	DOOR HARDWARE		52
53		DOOR HARDWARE	20	1	2#12, #12G, 3/4"C					500	1000	2#12, #12G, 3/4"C	1	20	DOOR HARDWARE		54
55						167	46					2#12, #12G, 3/4"C	1	20	WINDMILL LTNG		56
57		MOTORIZED GATE	20	3	3#12, #12G, 3/4"C			167	604			2#12, #12G, 3/4"C	1	20	LIGHTING		58
59										167	0	--	1	20	SPARE	--	60
61	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	62
63	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	64
65	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	66
67	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	68
69	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	70
71	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	72
73	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	74
75	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	76
77	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	78
79	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	80
81	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	82
83	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	84
85	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	86
87	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	88
89	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	90
91	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	92
93	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	94
95	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	96
97	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	98
99	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	100
101	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	102
103	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	104
105	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	106
107	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	108
109	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	110
111	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	112
113	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	114
115	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	116
117	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	118
119	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	120
121	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	122
123	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	124
125	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	126
					Total Load:	9,653 VA		11,144 VA		10,780 VA							
					Total Amps:	80.4 A		94.3 A		91.3 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	4,297 VA	125.00%	5,371 VA		
Receptacle	27,100 VA	68.45%	18,550 VA	**Total Conn. Load:**	31,577 VA
HVAC	180 VA	125.00%	225 VA	**Total Est. Demand:**	24,146 VA
				Total Conn. Current:	87.6 A
				Total Est. Demand Current:	67.0 A

General Notes:
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C. THE CONTRACTOR SHALL UPDATE ROOM NAMES AND ROOM NUMBERS ON FINAL PANEL SCHEDULE TO REFLECT FINAL BUILDING CONDITIONS.

Remarks:
1. PROVIDE GFCI CIRCUIT BREAKER.
2. PROVIDE CIRCUIT BREAKER AND / OR FUSES PER EQUIPMENT MANUFACTURER'S SPECIFICATIONS.
3. BRANCH CIRCUIT SHALL BE 2 #12 & #12 GROUND IN 3/4" CONDUIT.
4. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY SECONDARY CONTACTOR.
5. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY UTILITY LAB CONTROLLER.
6. PROVIDE CIRCUIT BREAKER CAPABLE OF BEING LOCKED IN THE OFF POSITION.

PANEL: LPB-2

Location: ELECTRICAL 154
Supply From: MDP
Mounting: SURFACE
Enclosure: NEMA 1

Volts: 208Y/120V
Phases: 3
Wires: 4
Sections: 3

A.I.C. Rating: 22,000 A.I.C.
Mains Type: MLO
Mains Rating: 600.0 A

CKT	REM	Load Name	BKR	Poles	Wire Size	A		B		C		Wire Size	Poles	BKR	Load Name	REM	CKT
1						420	420										2
3		CF-01	20	3	3#12, #12G, 3/4"C			420	420			3#12, #12G, 3/4"C	3	20	CF-02		4
5										420	420						6
7		EF-05, 06, 07	20	1	2#12, #12G, 3/4"C	191	696					2#12, #12G, 3/4"C	1	20	GUH-02		8
9		GUH-01	20	1	2#12, #12G, 3/4"C			696	696			2#12, #12G, 3/4"C	1	20	GUH-04		10
11		GUH-03	20	1	2#12, #12G, 3/4"C					696	696	2#12, #12G, 3/4"C	1	20	GUH-06		12
13		GUH-05	20	1	2#12, #12G, 3/4"C	696	696					2#12, #12G, 3/4"C	1	20	GUH-08		14
15		GUH-07	20	1	2#12, #12G, 3/4"C			696	528			2#12, #12G, 3/4"C	1	20	GUH-10		16
17		GUH-09	20	1	2#12, #12G, 3/4"C					528	1872	2#10, #10G, 3/4"C	2	25	CU-05		18
19		GUH-11	20	1	2#12, #12G, 3/4"C	528	1872										20
21		CU-06	25	2	2#10, #10G, 3/4"C			1872	1872			2#10, #10G, 3/4"C	2	25	CU-07		22
23										1872	1872						24
25		VFD-VF-01	20	1	2#12, #12G, 3/4"C	180	180					2#12, #12G, 3/4"C	1	20	VFD-VF-02		26
27		VFD-VF-03	20	1	2#12, #12G, 3/4"C			180	180			2#12, #12G, 3/4"C	1	20	VFD-VF-04		28
29		VFD-VF-05	20	1	2#12, #12G, 3/4"C					180	180	2#12, #12G, 3/4"C	1	20	VFD-VF-06		30
31		VFD-VF-07	20	1	2#12, #12G, 3/4"C	180	180					2#12, #12G, 3/4"C	1	20	VFD-VF-08		32
33		CP-2	20	1	2#12, #12G, 3/4"C			528	1500			2#10, #10G, 3/4"C	2	30	UH-04		34
35		WINDMILL	20	1	2#12, #12G, 3/4"C					180	1500						36
37		BOOSTER PANEL	20	1	2#12, #12G, 3/4"C	360	1667										38
39								1667	1667			3#12, #12G, 3/4"C	3	20	VF-01		40
41		VF-02	20	3	3#12, #12G, 3/4"C					1667	1667						42
43						1667	1667										44
45								1667	1667			3#12, #12G, 3/4"C	3	20	VF-03		46
47		VF-04	20	3	3#12, #12G, 3/4"C					1667	1667						48
49						1667	1667										50
51								1667	1667			3#12, #12G, 3/4"C	3	20	VF-05		52
53		VF-06	20	3	3#12, #12G, 3/4"C					1667	1667						54
55						1667	1667										56
57								1667	1667			3#12, #12G, 3/4"C	3	20	VF-07		58
59		VF-08	20	3	3#12, #12G, 3/4"C					1667	1667						60
61						1667	2880										62
63		LC-2	60	3	REFER TO ONE-LINE DIAGRAM			2880	1680			REFER TO ONE-LINE DIAGRAM	3	60	LC-1		64
65										1440	1680						66
67						1920	2880										68
69		LC-4	60	3	REFER TO ONE-LINE DIAGRAM			2880	1440			REFER TO ONE-LINE DIAGRAM	3	60	LC-3		70
71										1680	1920						72
73						1680	3600										74
75		LC-6	60	3	REFER TO ONE-LINE DIAGRAM			5520	2640			REFER TO ONE-LINE DIAGRAM	3	60	LC-5		76
77										5280	1440						78
79						6000	1040										80
81		GOAT TREADMILLS	20	2	3#12, #12G, 3/4"C			1040	1040			3#12, #12G, 3/4"C	2	20	GOAT TREADMILLS		82
83										1040	1040						84
85		GOAT TREADMILLS	20	2	3#12, #12G, 3/4"C	1040	1040					3#12, #12G, 3/4"C	2	20	SHEEP/GOAT...		86
87								1040	1800			2#12, #12G, 3/4"C	1	20	SHEEP/GOAT...		88
89	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	90
91	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	92
93	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	94
95	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	96
97	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	98
99	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	100
101	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	102
103	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	104
105	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	106
107	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	108
109	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	110
111	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	112
113	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	114
115	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	116
117	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	118
119	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	120
121	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	122
123	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	124
125	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	126
					Total Load:	42,012 VA		44,881 VA		39,269 VA							
					Total Amps:	353.6 A		377.5 A		327.2 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Water Heating	528 VA	125.00%	660 VA		
Motor	79,950 VA	101.56%	81,200 VA	**Total Conn. Load:**	126,162 VA
Receptacle	24,300 VA	70.58%	17,150 VA	**Total Est. Demand:**	121,330 VA
HVAC	21,384 VA	104.38%	22,320 VA	**Total Conn. Current:**	350.2 A
				Total Est. Demand Current:	336.8 A

General Notes:
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Remarks:
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2. PROVIDE CIRCUIT BREAKER AND / OR FUSES PER EQUIPMENT MANUFACTURER'S SPECIFICATIONS.
3. BRANCH CIRCUIT SHALL BE 2 #12 & #12 GROUND IN 3/4" CONDUIT.
4. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY SECONDARY CONTACTOR.
5. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY UTILITY LAB CONTROLLER.
6. PROVIDE CIRCUIT BREAKER CAPABLE OF BEING LOCKED IN THE OFF POSITION.

PANEL: LC-1

Location: ALLEY 125
Supply From: LPB-2
Mounting: RECESSED
Enclosure: NEMA 1

Volts: 208Y/120V
Phases: 3
Wires: 4
Sections: 1

A.I.C. Rating: 10,000 A.I.C.
Mains Type: MLO
Mains Rating: 60.0 A

CKT	REM	Load Name	BKR	Poles	Wire Size	A		B		C		Wire Size	Poles	BKR	Load Name	REM	CKT
1		RECPT - PIG STALLS	20	1	2#12, #12G, 3/4"C	1440	1440					2#12, #12G, 3/4"C	1	20	RECPT - PIG STALLS		2
3		OF FANS	20	1	2#12, #12G, 3/4"C			720	960			2#12, #12G, 3/4"C	1	20	OF FANS		4
5		OF FANS	20	1	2#12, #12G, 3/4"C					720	960	2#12, #12G, 3/4"C	1	20	OF FANS		6
7	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	8
9	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	10
11	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	12
13	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	14
15	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	16
17	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	18
19	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	20
21	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	22
23	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	24
					Total Load:	2,880 VA		1,680 VA		1,680 VA							
					Total Amps:	24.0 A		14.0 A		14.0 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	3,360 VA	101.79%	3,420 VA		
Receptacle	2,880 VA	100.00%	2,880 VA	**Total Conn. Load:**	6,240 VA
				Total Est. Demand:	6,300 VA
				Total Conn. Current:	17.3 A
				Total Est. Demand Current:	17.5 A

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Remarks:
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4. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY SECONDARY CONTACTOR.
5. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY UTILITY LAB CONTROLLER.
6. PROVIDE CIRCUIT BREAKER CAPABLE OF BEING LOCKED IN THE OFF POSITION.

PANEL: LPA-M

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

Volts: 208Y/120V
Phases: 3
Wires: 4
Sections: 1

A.I.C. Rating: 10,000 A.I.C.
Mains Type: MLO
Mains Rating: 400.0 A

CKT	REM	Load Name	BKR	Poles	Wire Size	A		B		C		Wire Size	Poles	BKR	Load Name	REM	CKT
1		EF-03	20	1	2#12, #12G, 3/4"C	667	1127					2#12, #12G, 3/4"C	1	20	EF-02		2
3		AHU-01	125	3	3#1, #6G, 1 1/4"C			16080	312			2#12, #12G, 3/4"C	2	20	ACU-04		4
5										16080	312						6
7						16080	636										8
9		ACU-03	20	3	2#12, #12G, 3/4"C			636	636			3#12, #12G, 3/4"C	3	20	ACU-02		10
11										636	636						12
13						636	1271										14
15		HWP-1	20	3	3#12, #12G, 3/4"C			792	1271			3#12, #12G, 3/4"C	3	20	CHP-1		16
17										792	1271						18
19						792	499										20
21		ACU-02 HEATING COIL	20	3	3#12, #12G, 3/4"C			8733	499			2#12, #12G, 3/4"C	2	20	ACU-04 HEATING COIL		22
23										8733	8733						24
25						8733	8733					3#12, #12G, 3/4"C	3	20	ACU-03 HEATING COIL		26
27		VFD-HWP-1	20	1	2#12, #12G, 3/4"C			180	8733								28
29		VFD-CHP-1	20	1	2#12, #12G, 3/4"C					180	0	--	1	20	SPARE	--	30
31	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	32
33	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	34
35	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	36
37	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	38
39	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	40
41	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	42
					Total Load:	39,175 VA		37,873 VA		37,374 VA							
					Total Amps:	327.1 A		316.3 A		311.5 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	6,236 VA	107.65%	6,713 VA		
Non-Coincidental	998 VA	0.01%	0 VA	**Total Conn. Load:**	114,423 VA
Receptacle	360 VA	100.00%	360 VA	**Total Est. Demand:**	125,963 VA
HVAC	106,829 VA	111.29%	118,889 VA	**Total Conn. Current:**	317.6 A
				Total Est. Demand Current:	349.6 A

General Notes:
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5. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY UTILITY LAB CONTROLLER.
6. PROVIDE CIRCUIT BREAKER CAPABLE OF BEING LOCKED IN THE OFF POSITION.

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
DAVID M. BOOH
95600
LICENSED
PROFESSIONAL ENGINEER
2025-05-21

Director	Drawn By
BA	DS/LM
Designer	Quality Control
BA	DMB
Proj. Arch.	
BA	

PROJECT NO.

24-057.00

SHEET TITLE

PANEL SCHEDULES - ELECTRICAL

SHEET NO.

E9.02

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FILE PATH: Autodesk Docs://E_EMS ISD_24-057.00_Agricultural Science Center/24117.EMS ISD New Agricultural Science/MEP-24.rvt
DATE/TIME:5/28/2025 1:48:33 PM
PLOT SCALE:

PANEL: LC-5

Location: ALLEY 138 **Volts:** 208Y/120V **A.I.C. Rating:** 10,000 A.I.C.
Supply From: LPB-2 **Phases:** 3 **Mains Type:** MLO
Mounting: RECESSED **Wires:** 4 **Mains Rating:** 60.0 A
Enclosure: NEMA 1 **Sections:** 1

CKT	REM	Load Name	BKR	Poles	Wire Size	A		B		C		Wire Size	Poles	BKR	Load Name	REM	CKT
1		RECPT - GOAT...	20	1	2#12, #12G, 3/4"C	1080	1080					2#12, #12G, 3/4"C	1	20	RECPT - GOAT...		2
3		RECPT - STEER...	20	1	2#12, #12G, 3/4"C			720	720			2#12, #12G, 3/4"C	1	20	RECPT - STEER...		4
5		OF FANS	20	1	2#12, #12G, 3/4"C					720	720	2#12, #12G, 3/4"C	1	20	OF FANS		6
7		OF FANS	20	1	2#12, #12G, 3/4"C	720	720					2#12, #12G, 3/4"C	1	20	OF FANS		8
9		OF FANS	20	1	2#12, #12G, 3/4"C			240	960			2#12, #12G, 3/4"C	1	20	OF FANS		10
11	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	12
13	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	14
15	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	16
17	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	18
19	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	20
21	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	22
23	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	24
					Total Load:	3,600 VA		2,640 VA		1,440 VA							
					Total Amps:	31.5 A		23.5 A		12.0 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	4,080 VA	101.47%	4,140 VA		
Receptacle	3,600 VA	100.00%	3,600 VA	**Total Conn. Load:**	7,680 VA
				Total Est. Demand:	7,740 VA
				Total Conn. Current:	21.3 A
				Total Est. Demand Current:	21.5 A

General Notes:
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2. PROVIDE CIRCUIT BREAKER AND / OR FUSES PER EQUIPMENT MANUFACTURER'S SPECIFICATIONS.
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4. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY SECONDARY CONTACTOR.
5. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY UTILITY LAB CONTROLLER.
6. PROVIDE CIRCUIT BREAKER CAPABLE OF BEING LOCKED IN THE OFF POSITION.

PANEL: LC-2

Location: ALLEY 125 **Volts:** 208Y/120V **A.I.C. Rating:** 10,000 A.I.C.
Supply From: LPB-2 **Phases:** 3 **Mains Type:** MLO
Mounting: RECESSED **Wires:** 4 **Mains Rating:** 60.0 A
Enclosure: NEMA 1 **Sections:** 1

CKT	REM	Load Name	BKR	Poles	Wire Size	A		B		C		Wire Size	Poles	BKR	Load Name	REM	CKT
1		RECPT - PIG STALLS	20	1	2#12, #12G, 3/4"C	1440	1440					2#12, #12G, 3/4"C	1	20	RECPT - PIG STALLS		2
3		OF FANS	20	1	2#12, #12G, 3/4"C			720	720			2#12, #12G, 3/4"C	1	20	OF FANS		4
5		OF FANS	20	1	2#12, #12G, 3/4"C					960	960	2#12, #12G, 3/4"C	1	20	OF FANS		6
7	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	8
9	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	10
11	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	12
13	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	14
15	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	16
17	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	18
19	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	20
21	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	22
23	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	24
					Total Load:	2,880 VA		1,440 VA		1,920 VA							
					Total Amps:	24.6 A		12.0 A		16.6 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	3,360 VA	101.79%	3,420 VA		
Receptacle	2,880 VA	100.00%	2,880 VA	**Total Conn. Load:**	6,240 VA
				Total Est. Demand:	6,300 VA
				Total Conn. Current:	17.3 A
				Total Est. Demand Current:	17.5 A

General Notes:
A. PROVIDE FEED-THROUGH LUGS FOR FUTURE EXPANSION.
B. PROVIDE FULL SIZED PHASE, NEUTRAL AND GROUND BUSSES.
C. THE CONTRACTOR SHALL UPDATE ROOM NAMES AND ROOM NUMBERS ON FINAL PANEL SCHEDULE TO REFLECT FINAL BUILDING CONDITIONS.

Remarks:
1. PROVIDE GFCI CIRCUIT BREAKER.
2. PROVIDE CIRCUIT BREAKER AND / OR FUSES PER EQUIPMENT MANUFACTURER'S SPECIFICATIONS.
3. BRANCH CIRCUIT SHALL BE 2 #12 & #12 GROUND IN 3/4" CONDUIT.
4. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY SECONDARY CONTACTOR.
5. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY UTILITY LAB CONTROLLER.
6. PROVIDE CIRCUIT BREAKER CAPABLE OF BEING LOCKED IN THE OFF POSITION.

PANEL: LC-6

Location: ALLEY 138 **Volts:** 208Y/120V **A.I.C. Rating:** 10,000 A.I.C.
Supply From: LPB-2 **Phases:** 3 **Mains Type:** MLO
Mounting: RECESSED **Wires:** 4 **Mains Rating:** 60.0 A
Enclosure: NEMA 1 **Sections:** 1

CKT	REM	Load Name	BKR	Poles	Wire Size	A		B		C		Wire Size	Poles	BKR	Load Name	REM	CKT
1		RECPT - GOAT...	20	1	2#12, #12G, 3/4"C	1080	1080					2#12, #12G, 3/4"C	1	20	RECPT - GOAT...		2
3		RECPT - GOAT...	20	1	2#12, #12G, 3/4"C			720	720			2#12, #12G, 3/4"C	1	20	RECPT - GOAT...		4
5		RECPT - GOAT...	20	1	2#12, #12G, 3/4"C					1080	1080	2#12, #12G, 3/4"C	1	20	RECPT - GOAT...		6
7		RECPT - GOAT...	20	1	2#12, #12G, 3/4"C	720	720					2#12, #12G, 3/4"C	1	20	RECPT - GOAT...		8
9		OF FANS	20	1	2#12, #12G, 3/4"C			960	960			2#12, #12G, 3/4"C	1	20	OF FANS		10
11		OF FANS	20	1	2#12, #12G, 3/4"C					960	960	2#12, #12G, 3/4"C	1	20	OF FANS		12
13		OF FANS	20	1	2#12, #12G, 3/4"C	960	960					2#12, #12G, 3/4"C	1	20	OF FANS		14
15		OF FANS	20	1	2#12, #12G, 3/4"C			960	960			2#12, #12G, 3/4"C	1	20	OF FANS		16
17		OF FANS	20	1	2#12, #12G, 3/4"C					960	960	2#12, #12G, 3/4"C	1	20	OF FANS		18
19	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	20
21	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	22
23	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	24
					Total Load:	5,520 VA		5,280 VA		6,000 VA							
					Total Amps:	46.3 A		44.0 A		50.3 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	9,600 VA	100.63%	9,660 VA		
Receptacle	7,200 VA	100.00%	7,200 VA	**Total Conn. Load:**	16,800 VA
				Total Est. Demand:	16,860 VA
				Total Conn. Current:	46.6 A
				Total Est. Demand Current:	46.8 A

General Notes:
A. PROVIDE FEED-THROUGH LUGS FOR FUTURE EXPANSION.
B. PROVIDE FULL SIZED PHASE, NEUTRAL AND GROUND BUSSES.
C. THE CONTRACTOR SHALL UPDATE ROOM NAMES AND ROOM NUMBERS ON FINAL PANEL SCHEDULE TO REFLECT FINAL BUILDING CONDITIONS.

Remarks:
1. PROVIDE GFCI CIRCUIT BREAKER.
2. PROVIDE CIRCUIT BREAKER AND / OR FUSES PER EQUIPMENT MANUFACTURER'S SPECIFICATIONS.
3. BRANCH CIRCUIT SHALL BE 2 #12 & #12 GROUND IN 3/4" CONDUIT.
4. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY SECONDARY CONTACTOR.
5. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY UTILITY LAB CONTROLLER.
6. PROVIDE CIRCUIT BREAKER CAPABLE OF BEING LOCKED IN THE OFF POSITION.

PANEL: LC-3

Location: ALLEY 125 **Volts:** 208Y/120V **A.I.C. Rating:** 10,000 A.I.C.
Supply From: LPB-2 **Phases:** 3 **Mains Type:** MLO
Mounting: RECESSED **Wires:** 4 **Mains Rating:** 60.0 A
Enclosure: NEMA 1 **Sections:** 1

CKT	REM	Load Name	BKR	Poles	Wire Size	A		B		C		Wire Size	Poles	BKR	Load Name	REM	CKT
1		RECPT - PIG STALLS	20	1	2#12, #12G, 3/4"C	1440	1440					2#12, #12G, 3/4"C	1	20	RECPT - PIG STALLS		2
3		OF FANS	20	1	2#12, #12G, 3/4"C			720	720			2#12, #12G, 3/4"C	1	20	OF FANS		4
5		OF FANS	20	1	2#12, #12G, 3/4"C					960	960	2#12, #12G, 3/4"C	1	20	OF FANS		6
7	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	8
9	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	10
11	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	12
13	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	14
15	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	16
17	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	18
19	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	20
21	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	22
23	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	24
					Total Load:	2,880 VA		1,440 VA		1,920 VA							
					Total Amps:	24.6 A		12.0 A		16.6 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	3,360 VA	101.79%	3,420 VA		
Receptacle	2,880 VA	100.00%	2,880 VA	**Total Conn. Load:**	6,240 VA
				Total Est. Demand:	6,300 VA
				Total Conn. Current:	17.3 A
				Total Est. Demand Current:	17.5 A

General Notes:
A. PROVIDE FEED-THROUGH LUGS FOR FUTURE EXPANSION.
B. PROVIDE FULL SIZED PHASE, NEUTRAL AND GROUND BUSSES.
C. THE CONTRACTOR SHALL UPDATE ROOM NAMES AND ROOM NUMBERS ON FINAL PANEL SCHEDULE TO REFLECT FINAL BUILDING CONDITIONS.

Remarks:
1. PROVIDE GFCI CIRCUIT BREAKER.
2. PROVIDE CIRCUIT BREAKER AND / OR FUSES PER EQUIPMENT MANUFACTURER'S SPECIFICATIONS.
3. BRANCH CIRCUIT SHALL BE 2 #12 & #12 GROUND IN 3/4" CONDUIT.
4. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY SECONDARY CONTACTOR.
5. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY UTILITY LAB CONTROLLER.
6. PROVIDE CIRCUIT BREAKER CAPABLE OF BEING LOCKED IN THE OFF POSITION.

PANEL: LC-4

Location: ALLEY 125 **Volts:** 208Y/120V **A.I.C. Rating:** 10,000 A.I.C.
Supply From: LPB-2 **Phases:** 3 **Mains Type:** MLO
Mounting: RECESSED **Wires:** 4 **Mains Rating:** 60.0 A
Enclosure: NEMA 1 **Sections:** 1

CKT	REM	Load Name	BKR	Poles	Wire Size	A		B		C		Wire Size	Poles	BKR	Load Name	REM	CKT
1		RECPT - PIG STALLS	20	1	2#12, #12G, 3/4"C	1440	1440					2#12, #12G, 3/4"C	1	20	RECPT - PIG STALLS		2
3		OF FANS	20	1	2#12, #12G, 3/4"C			720	960			2#12, #12G, 3/4"C	1	20	OF FANS		4
5		OF FANS	20	1	2#12, #12G, 3/4"C					720	960	2#12, #12G, 3/4"C	1	20	OF FANS		6
7	--	SPARE	20	1	--	0	0					--	1	20	SPARE	--	8
9	--	SPARE	20	1	--			0	0			--	1	20	SPARE	--	10
11	--	SPARE	20	1	--					0	0	--	1	20	SPARE	--	12
13	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	14
15	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	16
17	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	18
19	--	SPACE	--	1	--	--	--					--	1	--	SPACE	--	20
21	--	SPACE	--	1	--			--	--			--	1	--	SPACE	--	22
23	--	SPACE	--	1	--					--	--	--	1	--	SPACE	--	24
					Total Load:	2,880 VA		1,680 VA		1,680 VA							
					Total Amps:	24.0 A		14.0 A		14.0 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	3,360 VA	101.79%	3,420 VA		
Receptacle	2,880 VA	100.00%	2,880 VA	**Total Conn. Load:**	6,240 VA
				Total Est. Demand:	6,300 VA
				Total Conn. Current:	17.3 A
				Total Est. Demand Current:	17.5 A

General Notes:
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Remarks:
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3. BRANCH CIRCUIT SHALL BE 2 #12 & #12 GROUND IN 3/4" CONDUIT.
4. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY SECONDARY CONTACTOR.
5. BRANCH CIRCUIT ROUTED THROUGH AND CONTROLLED BY UTILITY LAB CONTROLLER.
6. PROVIDE CIRCUIT BREAKER CAPABLE OF BEING LOCKED IN THE OFF POSITION.

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No. Revision Date

STATE OF TEXAS
DAVID M. BOON
95600
LICENSED PROFESSIONAL ENGINEER
2025-05-29

Director: BA
Drawn By: DS/LM
Designer: BA
Quality Control: DMB
Proj. Arch.: BA

PROJECT NO.
24-057.00

SHEET TITLE
PANEL SCHEDULES - ELECTRICAL

SHEET NO.
E9.03

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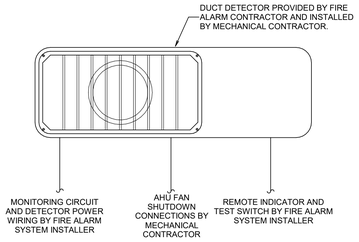
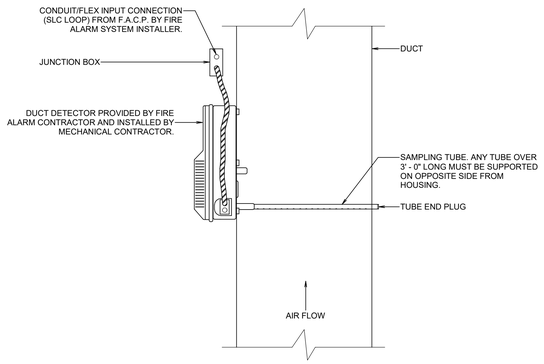
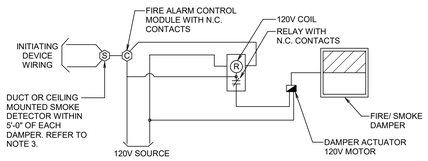


1 DUCT SMOKE DETECTOR CONNECTION DIAGRAM
NO SCALE

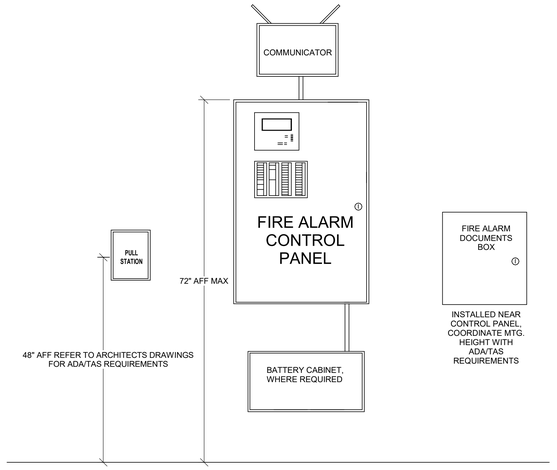


2 DUCT DETECTOR MOUNTING DETAIL
NO SCALE

NOTES:
1. DIVISION 26 CONTRACTOR SHALL COORDINATE WITH DIVISION 23 CONTRACTOR AND PROVIDE SMOKE DETECTOR, CONTROL MODULE, RELAY, 120 VOLT CIRCUIT AND WIRING. SEE MECHANICAL DRAWINGS FOR EXACT QUANTITY AND LOCATION. 120 VOLT CIRCUIT SHALL BE FROM NEAREST 120 VOLT, CONTROL POWER J-BOX.
2. GENERAL CONTRACTOR MAY ASSIGN THE ABOVE WORK TO EACH DIVISION AS DESIRED. CONTRACTOR SHALL BE REQUIRED TO PROVIDE A COMPLETE, OPERATING FIRE MARSHAL APPROVED SYSTEM.
3. WITH FULL COVERAGE SMOKE DETECTION & APPROVAL FROM FIRE MARSHALL THIS REQUIREMENT MAY BE DELETED AND DAMPER MAY BE CONTROLLED BY AN ALTERNATE SMOKE DETECTOR LOCATION.



3 FIRE/SMOKE DAMPER WIRING DETAIL
NO SCALE



4 WALL ELEVATION FIRE ALARM CONTROL PANEL
NO SCALE

NOTES BY SYMBOL '◯':

1. FIRE ALARM CONTROL PANEL. REFER TO SPECIFICATIONS. COORDINATE WITH ELECTRICAL.
2. FIRE ALARM PULL STATION WITH PRE-ACTION COVER MOUNTED AT 48" AFF. REFER TO SPECIFICATIONS.
3. CEILING MOUNTED FIRE ALARM DEVICE.
4. WALL MOUNTED FIRE ALARM DEVICE AT 80" AFF.
5. DUCT MOUNTED SMOKE DETECTOR ON RETURN AIR DUCT FOR FAN SHUTDOWN. INCLUDE ALL SCOPE REQUIRED FOR CONNECTION TO UNIT FAN CONTROL RELAY. COORDINATE LOCATION AND INSTALLATION REQUIREMENTS WITH MECHANICAL CONTRACTOR. REFER TO DETAILS ON SHEET FA0.01.
6. CEILING MOUNTED HEAT DETECTOR. FIELD VERIFY EXACT MOUNTING LOCATION.
7. CEILING MOUNTED SMOKE DETECTOR. FIELD VERIFY EXACT MOUNTING LOCATION.
8. APPROXIMATE LOCATION OF FLOW AND TAMPER SWITCHES AT FIRE SPRINKLER RISER. COORDINATE WITH FIRE SPRINKLER INSTALLER.
9. APPROXIMATE LOCATION OF LOCAL SOUND SYSTEM. PROVIDE INTERLOCK WITH FIRE ALARM TO MUTE ON ALARM.
10. WALL MOUNTED EXTERIOR FIRE ALARM DEVICE AT 96" AFF. PROVIDE WITH WEATHERPROOF COVER.
11. PROVIDE INTERLOCK WITH HVLS FAN CONTROL FOR FAN SHUT-DOWN UPON ALARM ACTIVATION.
12. FIRE ALARM NOTIFICATION DEVICE TO BE MOUNTED ON THE STRUCTURAL COLUMN.

FIRE ALARM LEGEND

F	FIRE ALARM MANUAL PULL STATION
F	FIRE ALARM AUDIO/VISUAL DEVICE - WALL / CEILING MOUNTED
S S	FIRE ALARM STROBE ASSEMBLY - WALL / CEILING MOUNTED
S	SMOKE DETECTOR - CEILING MOUNTED
H	HEAT DETECTOR - CEILING MOUNTED
CO	CARBON MONOXIDE DETECTOR - CEILING MOUNTED
S_D	DUCT MOUNTED SMOKE DETECTOR/FIRE SMOKE DAMPER
FS	FIRE ALARM SPRINKLER SYSTEM WATER FLOW SENSOR
TS	FIRE ALARM SPRINKLER SYSTEM VALVE TAMPER SENSOR
DH	DOOR HOLD DEVICE INTERLOCKED WITH FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR

NOT ALL SYMBOLS USED

GENERAL FIRE ALARM NOTES:

1. REFER TO ARCHITECT CODE DRAWINGS FOR APPLICABLE CODE INFORMATION, AS WELL AS ADDITIONAL INFORMATION FOR CONSTRUCTION TYPE AND RATINGS, TO BE USED IN THE FINAL DESIGN OF THE FIRE ALARM SYSTEMS.
2. FIRE ALARM DEVICES SHOWN ON THESE DRAWINGS ARE OFFERED AS A GUIDE TO THE DESIGN INTENT AND TO COORDINATE WITH ARCHITECTURAL FEATURES. THE EXACT QUANTITIES, LOCATIONS, AND TYPES OF DEVICES SHALL BE DETERMINED BY THE DETAILED DESIGN PREPARED BY A LICENSED FIRE ALARM SYSTEM CONTRACTOR. CONTRACTOR TO FAMILIARIZE THEMSELF WITH BUILDING, AND ACTUAL LAY-OUT. REFER TO SPECIFICATIONS FOR THE REQUIRED CONTRACTOR QUALIFICATIONS.
3. REFER TO THE ARCHITECTURAL DRAWINGS AND ELEVATIONS FOR COORDINATION OF DEVICE LOCATIONS AND ADDITIONAL DIMENSIONAL REQUIREMENTS.
4. PROVIDE CONDUIT FROM WALL MOUNTED DEVICES TO ABOVE AN ACCESSIBLE CEILING SPACE AND IN AREAS WITHOUT CEILINGS.
5. LOCATE FIRE ALARM MANUAL PULL STATIONS AT 48" A.F.F. TO CENTER OF BOX OR ADA/TAS COMPLIANCE AS STATED ON ARCHITECT SHEETS.
6. LOCATE WALL MOUNTED FIRE ALARM AV DEVICES AT 80" TO TOP OF BOX.
7. EXTERIOR WEATHERPROOF FIRE ALARM AV DEVICES SHALL BE MOUNTED AT 96" A.F.F.
8. MAINTAIN MINIMUM 36" CLEARANCE FOR ANY SMOKE/HEAT DETECTORS FROM ALL AIR DISTRIBUTION DEVICES.
9. PROVIDE DUCT MOUNTED SMOKE DETECTORS AND FIRE ALARM INTERLOCK AT ALL FIRE/SMOKE DAMPERS. (REFER TO DETAILS). REFER TO MECHANICAL PLANS FOR ALL FIRE AND FIRE/SMOKE DAMPER LOCATIONS. COORDINATE ALL POWER REQUIREMENTS AND OBTAINING 120V CIRCUIT WITH ELECTRICAL CONTRACTOR.
10. REFER TO PLUMBING AND FIRE PROTECTION DRAWINGS FOR ALL SPRINKLER SYSTEM FLOW ALARM VALVES AND TAMPER SWITCH LOCATIONS. (CONNECT TO FACP).
11. WHEN REQUIRED, PROVIDE CONTROL WIRE, CONDUCTORS, CONDUIT, TRANSFORMERS AND DEVICES FOR A COMPLETE AND WORKING DOOR HOLD OPEN SYSTEM. DOOR HOLD OPEN SHALL RELEASE WHEN THE FIRE ALARM SYSTEM IS ACTIVATED. REFER TO ARCHITECTURAL DOOR SCHEDULE FOR LOCATIONS.
12. COORDINATE ALL WALL MOUNTED DEVICES WITH THE OWNER PROVIDED WALL ELEMENTS. VERIFY THE LOCATION OF ALL WALL ELEMENTS PRIOR TO DEVICE ROUGH-IN.
13. PROVIDE HILTI FIRE STOP SPEED SLEEVE OR FIRE STOP SEALANT FOR ALL FIREWALL PENETRATIONS.
14. DUCT DETECTORS ARE TO BE PROVIDED BY FIRE ALARM CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR. INCLUDE ALL SCOPE REQUIRED FOR CONNECTION TO EXISTING UNIT FAN CONTROL RELAY. COORDINATE LOCATION AND INSTALLATION REQUIREMENTS WITH DISTRICT, HVAC, AND ENERGY MANAGEMENT DEPARTMENTS. FOLLOW RECOMMENDED INSTALLATION INSTRUCTIONS FROM THE MANUFACTURER.
15. ALL FIRE ALARM WIRING IN BARNS, MECHANICAL ROOMS, ELECTRICAL ROOMS, AND EXPOSED CEILING AREAS SHALL BE INSTALLED IN A COMPLETE CONDUIT SYSTEM.
16. PROVIDE FIRE ALARM BOOSTER PANELS CONNECTIONS TO A DEDICATED 20A, SINGLE POLE CIRCUIT. COORDINATE ALL POWER REQUIREMENTS AND OBTAINING 120V CIRCUIT WITH ELECTRICAL CONTRACTOR.
17. PROVIDE WIRE GUARDS FOR ALL DEVICES LOCATED IN GYMNASIUMS, ACTIVITY ROOMS, AND OTHER SIMILAR SPACES WHERE SUBJECT TO DAMAGE.
18. COORDINATE EXACT DEVICE PLACEMENT FOR DEVICES IN CEILINGS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
19. PROVIDE CEILING NOTIFICATION DEVICES WHERE POSSIBLE. CONFIRM PROPER CEILING MOUNTING APPARATUS WITH EMS ISD LIFE SAFETY DEPARTMENT FOR ALL DEVICES IN FIRE RATED CORRIDOR.
20. PROVIDE CLASS A WIRING FOR THE INITIATION CIRCUITS, AND ALL SBUS CABLING. PROVIDE CLASS B WIRING FOR NOTIFICATION CIRCUITS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

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EAGLE MOUNTAIN-SAGINAW ISD
FORT WORTH, TEXAS

EMS ISD AGRICULTURAL SCIENCE COMPLEX

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director LVB	Drawn By RWB
Designer ET & JMR	Quality Control RWB
Proj. Arch. RSM	

PROJECT NO.
24-057.00

SHEET TITLE
GENERAL NOTES & LEGENDS - FIRE ALARM

SHEET NO.
FA0.01

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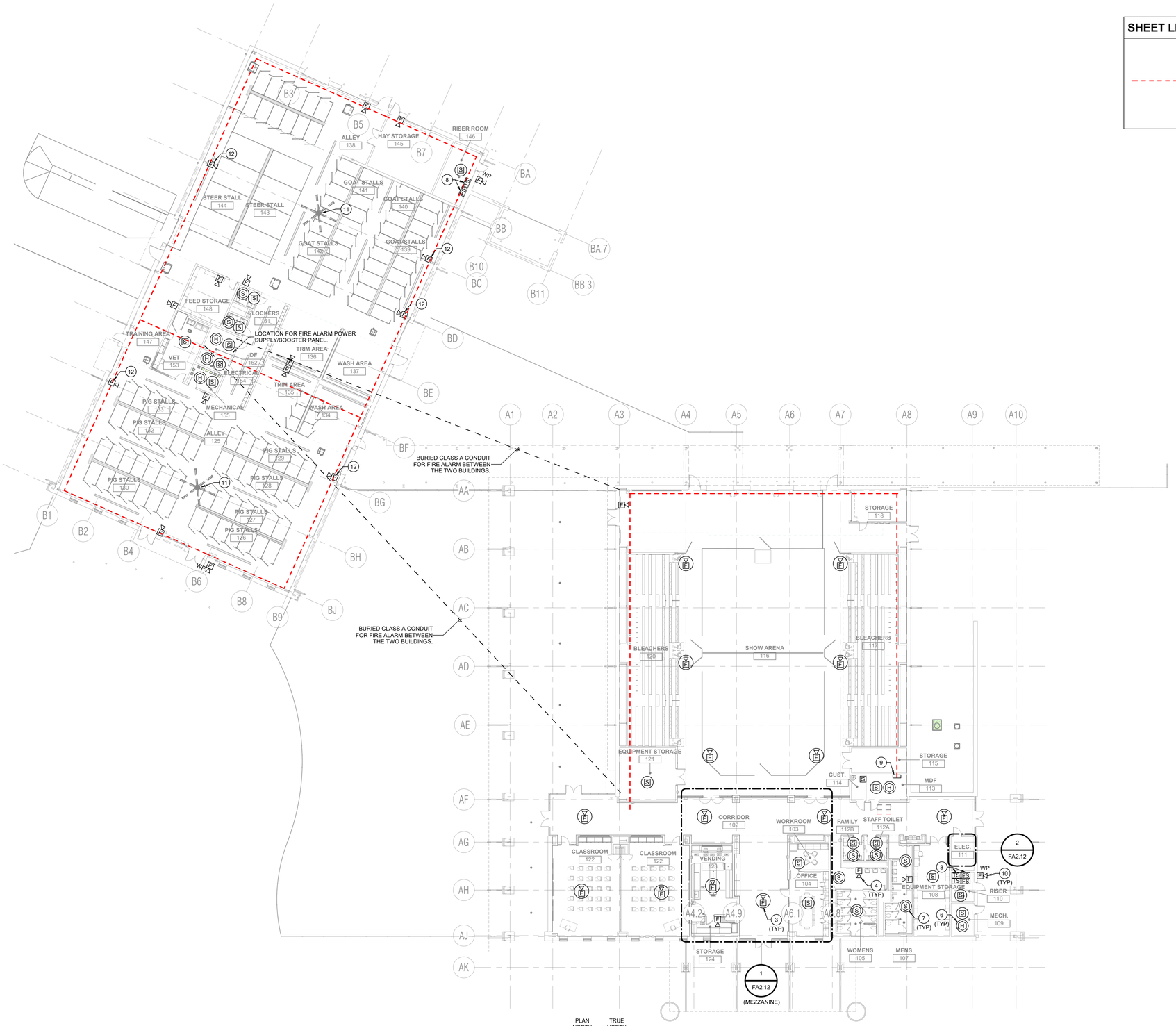
PLOT SCALE:As indicated

GENERAL SHEET NOTES

1. REFER TO SHEET FA0.01 FOR NOTES BY SYMBOL.

SHEET LEGEND:

- - - - -	CONDUIT ROUTING. SUGGESTED FIRE ALARM CABLING CONDUIT ROUTING. ALL LOW VOLTAGE CABLING (E.G., NETWORK, ACCESS CONTROL, PAGING, AUDIO/VISUAL, ETC.) SHALL BE INSTALLED IN A COMPLETE CONDUIT SYSTEM IN THE BUILDING'S ARENA AREA. CONDUIT RUNS SHALL BE INSTALLED IN THE ROUTES INDICATED, NEATLY ARRANGED PARALLEL AND PERPENDICULAR TO WALLS AND PARTITIONS, GROUPED ON COMMON TRAPEZE HANGER SUPPORTS, SUPPORTED HIGH/TIGHT TO OVERHEAD BUILDING STRUCTURE, AND COORDINATED WITH OTHER MEP SYSTEMS WHILE ADHERING TO MINIMUM SYSTEM SEPARATION (SEE SPECIFICATIONS) REQUIREMENTS BETWEEN SUCH MEP SYSTEMS.



1 FLOOR PLAN - LEVEL ONE - OVERALL - FIRE ALARM
SCALE: 1/16" = 1'-0"

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FORT WORTH, TEXAS

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STATE OF TEXAS
DAVID M. BOON
95600
LICENSED
PROFESSIONAL ENGINEER
2025-05-21

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director LVB	Drawn By RWB
Designer ET & JMR	Quality Control RWB
Proj. Arch. RSM	

PROJECT NO.
24-057.00

SHEET TITLE
FLOOR PLAN - LEVEL ONE - OVERALL - FIRE ALARM

SHEET NO.
FA2.11

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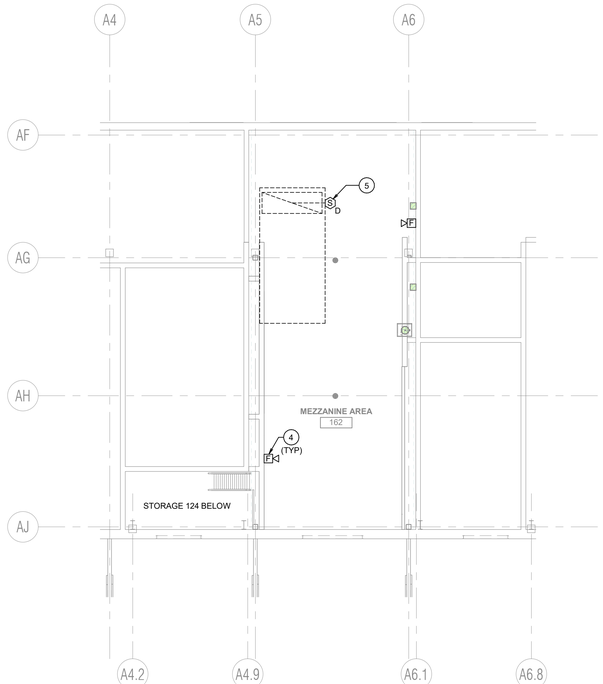
GENERAL SHEET NOTES

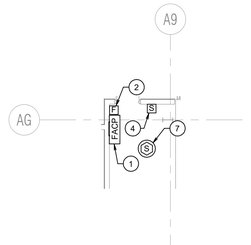
1. REFER TO SHEET FA0.01 FOR NOTES BY SYMBOL.



PLAN NORTH TRUE NORTH

1 FLOOR PLAN - MEZZANINE- FIRE ALARM

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



PLAN NORTH TRUE NORTH

2 FLOOR PLAN - ELECTRICAL ROOM - FIRE ALARM

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

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ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director LVB	Drawn By RWB
Designer ET & JMR	Quality Control RWB
Proj. Arch. RSM	

PROJECT NO.

24-057.00

SHEET TITLE

ENLARGED FLOOR PLANS - FIRE ALARM

SHEET NO.

FA2.12

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FILE PATH: Autodesk Docs://E_EMS ISD_24-057.00_Agricultural Science Center/24117.EMS ISD New Agricultural Science-MEP-24.rvt
DATE/TIME:5/28/2025 1:04:19 PM
PLOT SCALE: 1/8" = 1'-0"

ACRONYMS	
AV	AUDIO VIDEO
BBC	BONDING BACKBONE CONDUCTOR
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED
DIV 26	ELECTRICAL TRADE
DIV 27	COMMUNICATIONS AND AV TRADE
DIV 28	SECURITY TRADE
NIC	NOT IN CONTRACT
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
PBB	PRIMARY BONDING BUSBAR
PDU	POWER DISTRIBUTION UNIT
RBC	RACK BONDING CONDUCTOR
SBB	SECONDARY BONDING BUSBAR
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TBC	TELECOMMUNICATIONS BONDIGN CONDUCTOR
TEBC	TELECOMMUNICATIONS EQUIPMENT BONDING CONDUCTOR
TMBC	TELECOMMUNICATIONS MAIN BONDING CONDUCTOR
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
WAN	WIDE AREA NETWORK
WAO	WORK AREA OUTLET
WAP	WIRELESS ACCESS POINT

CAMERA TYPES (REFERENCE SPECIFICATION FOR DETAILS)	
1	5MP DOME CAMERA
2	3 X 4K (25MP) 270° OUTDOOR DOME CAMERA
3	4 X 4K (33MP) 360° OUTDOOR DOME CAMERA

LEGEND SYMBOL TAG SCHEDULE

GENERAL	
#	WAO CABLE COUNT OR TELEPHONE HANDSET MODEL
(#)	DEVICE TYPE
+x"	WAO CENTERLINE "x" INCHES AFF
AC	WAO ABOVE COUNTER TOP
MW	WAO LOCATED WITHIN MILLWORK
⊥	SURFACE MOUNT TO WALL
CONNECTIVITY - (C#)	
C1	CATEGORY 6 CABLE. REFER TO CABLING SPECIFICATIONS FOR PERFORMANCE RATING.
C2	HDMI CABLE. REFER TO SPECIFICATIONS FOR PERFORMANCE RATING.
C3	LOW VOLTAGE WIRING. REFER TO SPECIFICATIONS.
C4	SPEAKER CABLE. REFER TO SPECIFICATIONS FOR PERFORMANCE RATING.
C5	BALANCED MIC CABLE. REFER TO SPECIFICATIONS FOR PERFORMANCE RATING.
C6	COAXIAL CABLE.
C7	WIRELESS
TERMINATION - (T#)	
T1	TERMINATED TO DEVICE.
T2	HDMI PASS THROUGH WALL PLATE.
T3	HDMI OVER IP OUTLET.
T4	XLR INPUT FACE PLATE FOR MICROPHONES.
T5	HDMI PASS THROUGH PLATE IN LAY-IN CEILING.
T6	HDMI OVER IP LOCATED IN AV ENCLOSURE.
T7	HDMI PASS THROUGH LOCATED IN AV ENCLOSURE.
ROUGH-IN - (R#)	
R1	PROVIDE A 2-1/8" DEPTH 4-11/16" SQUARE BOX WITH SINGLE-GANG REDUCER, AT 48-INCHES AFF, WITH A 1-INCH CONDUIT TO THE ACCESSIBLE CEILING.
R2	PROVIDE A 2-1/8" DEPTH 4-11/16" SQUARE BOX WITH SINGLE-GANG REDUCER, AT ELECTRICAL DEVICE HEIGHT, WITH A 1-INCH CONDUIT TO THE ACCESSIBLE CEILING.
R3	PROVIDE A 2-1/8" DEPTH 4-11/16" SQUARE BOX WITH SINGLE-GANG REDUCER, AT ELECTRICAL DEVICE HEIGHT, WITH A 1.25-INCH CONDUIT TO THE ACCESSIBLE CEILING.
R4	PROVIDE MINIMUM OF 2-GANG (POWER, DATA) FLOOR DEVICE WITH 1.25-INCH (MIN) CONDUIT FOR COMMUNICATIONS. CONDUIT SHALL BE INSTALLED FROM FLOOR DEVICE TO NEAREST WALL WHERE IT TRANSTIONS UP TO THE ACCESSIBLE CEILING AREA OF THE ROOM WITH THE FLOOR DEVICE. CONDUIT FOR POWER SHALL BE SPECIFIED BY DIVISION 26.
R5	PROVIDE MINIMUM OF 3-GANG (POWER, AV, DATA) FLOOR DEVICE WITH 1.25-INCH (MIN) CONDUIT FOR COMMUNICATIONS AND 1.25-INCH CONDUIT FOR AUDIO VISUAL. CONDUIT SHALL BE INSTALLED FROM FLOOR DEVICE TO NEAREST WALL WHERE IT TRANSITIONS UP TO THE ACCESSIBLE CEILING AREA OF THE ROOM WITH THE FLOOR DEVICE. CONDUIT FOR POWER SHALL BE SPECIFIED BY DIVISION 26.
R6	PROVIDE A 2-1/8" DEPTH, 4-11/16" SQUARE BOX WITH SINGLE-GANG MUD RING AND A 1-INCH CONDUIT TO THE ACCESSIBLE CEILING. REFERENCE SECURITY OR AV REQUIREMENTS FOR ELEVATION.
R7	2-GANG J-BOX WITH SINGLE GANG MUD RING AT 86" AFF TO CENTER AND 1" CONDUIT TO ABOVE ACCESSIBLE CEILING.
R8	2-GANG J-BOX WITH SINGLE GANG MUD RING AT 48" AFF TO CENTER AND 1" CONDUIT TO ABOVE ACCESSIBLE CEILING.
R9	2-GANG J-BOX WITH SINGLE GANG MUD RING AT 151" AFF TO CENTER AND 1" CONDUIT HOMRUN TO MDF ROOM.

INFORMATION TECHNOLOGY LEGEND

(NOT ALL SYMBOLS USED)

SYMBOL	DESCRIPTION	(R#)
▼W	WALL PHONE LOCATION (1 CAT 6A CABLE)	R1 (TYP), UNO
▽#	DATA OUTLET LOCATION (# CAT 6A CABLE/S)	R2 (TYP), UNO
▽	COMMUNICATIONS J-BOX LOCATION (PASS THRU ONLY)	R3 (TYP), UNO
▽#	DATA FLOOR DEVICE LOCATION (# CAT 6A CABLE/S)	R5 (TYP), UNO
▽#	DATA CEILING DEVICE LOCATION (# CAT 6A CABLE/S)	
WAP	WIRELESS ACCESS POINT LOCATION (2 CAT 6A CABLES)	
▽#	SECURITY DATA OUTLET LOCATION (# CAT 6A CABLE/S)	R6 (TYP), UNO
▽#	SECURITY DATA CEILING DEVICE LOCATION (# CAT 6A CABLE/S)	
▼#	AV DATA OUTLET LOCATION (# CAT 6A CABLE/S)	R6 (TYP), UNO
▼#	AV DATA CEILING DEVICE LOCATION (# CAT 6A CABLE/S)	
	SECURITY CAMERA LOCATION (1 CAT 6A CABLE), CAMERA PROVIDED BY SECURITY CONTRACTOR	
	WIRE BASKET CABLE TRAY MINIMUM SIZE AS TAGGED	
#	TELEPHONE HANDSET LOCATION, WHERE "#" IS THE PHONE MODEL "1" - AVAYA MODEL J139 "2" - AVAYA MODEL J159	

AUDIO VIDEO LEGEND

(NOT ALL SYMBOLS USED)

SYMBOL	DESCRIPTION	(R#)
S(#)	AUDIO SYSTEM SPEAKER. REFER TO SPECIFICATIONS FOR SPEAKER TYPE.	
A(#)	ANTENNA. REFER TO SPECIFICATIONS FOR ANTENNA TYPES.	
FP	FLAT PANEL DISPLAY.	
LW	LED VIDEO WALL DISPLAY.	
IFP	INTERACTIVE FLAT PANEL DISPLAY.	
AV	LAY-IN CEILING AV ENCLOSURE.	
TW	TEACHERS WORK STATION LOCATION. REFER TO 3/T6.06 FOR DETAILS.	
PS(#)	PRESENTION STATION LOCATION. REFER TO T6.06 FOR DETAILS.	
M(#)	MICROPHONE OUTLET LOCATION. SEE (#) FOR NUMBER OF PORTS.	
PR	OVERHEAD PROJECTOR POLE MOUNTED TO CEILING AV ENCLOSURE.	
PR	OVERHEAD PROJECTOR LOCATION.	
CS(#)	CAMERA STATION LOCATION. REFER TO T6.08 FOR DETAILS.	

INTERCOM & PAGING LEGEND

(NOT ALL SYMBOLS USED)

SYMBOL	DESCRIPTION	(R#)
	SINGLE FACE CLOCK	R7
	DOUBLE FACE CLOCK	R7
P(#)	PAGING SYSTEM SPEAKER	
A	ADMINISTRATIVE CONSOLE	
V	VOLUME CONTROL LOCATION	R8

ACCESS CONTROL LEGEND

(NOT ALL SYMBOLS USED)

SYMBOL	DESCRIPTION
CR	CARD READER FOR ACCESS CONTROL SYSTEM. READER SHALL BE MOUNTED IN DOOR (TYP), REFERENCE DETAILS FOR ADDITIONAL INFORMATION.
IC (M)	VIDEO INTERCOM MASTER.
IC (R)	VIDEO INTERCOM REMOTE.
AC	ACCESS CONTROLLED DOOR WITH OUT CARD READER.
L	LOCK DOWN BUTTON.
D	DOOR RELEASE BUTTON.
	DOOR POSITION SWITCH.

INTRUSION DETECTION LEGEND

(NOT ALL SYMBOLS USED)

SYMBOL	DESCRIPTION
K	KEYPAD FOR INTRUSION DETECTION SYSTEM.
M	MOTION SENSOR FOR INTRUSION DETECTION SYSTEM.

VIDEO SURVEILLANCE LEGEND

(NOT ALL SYMBOLS USED)

SYMBOL	DESCRIPTION
(#)	WALL MOUNTED VIDEO SURVEILLANCE CAMERA . REFER TO SPECIFICATIONS.
(#)	CEILING MOUNTED VIDEO SURVEILLANCE CAMERA . REFER TO SPECIFICATIONS.

DIVISION 27 & 28 - RESPONSIBILITY MATRIX

SCOPE ITEM	CFCI	CFOI	OFCI	OFOI	NOTES
27-STRUCTURED CABLING					
MDF/IDF BUILDOUT (RACKS, CABLE RUNWAY, ETC.)	X				
GROUNDING OF RACKS, CABLE RUNWAY, CABLE SHEATHS, ETC.	X				
NON-CONTINUOUS CABLE SUPPORT (E.G., J-HOOKS)	X				
COMMUNICATIONS BACKBONE CABLING, TERMINATION, AND TESTING	X				
HORIZONTAL CABLING, TERMINATION, AND TESTING	X				
FIRESTOPPING (INCLUDES ANNULAR SPACE BETWEEN CONDUIT/SLEEVES PROVIDED BY OTHERS FOR COMMUNICATIONS CABLING)	X				PROVIDED BY BOTH DIVISION 26 & 27
MDF/IDF PATCH CABLES AND CORDS	X				
WORK AREA OUTLET AND EDGE PATCH CABLES	X				OWNER INSTALLED LESS WAPS, CAMERAS, VOIP PHONES, AV
27-NETWORK EQUIPMENT					
MDF/IDF ACTIVE EQUIPMENT (E.G., SWITCHES)	X				RACK, STACK, AND PATCH. CONFIGURED BY OWNER
UPS' (UNINTERRUPTIBLE POWER SUPPLIES)	X				
PDU'S (POWER DISTRIBUTION UNITS, POWER STRIPS)	X				
VOIP TELEPHONES	X				TURN KEY SYSTEM EXPANSION
COMPUTERS, PRINTERS				X	
WIRELESS ACCESS POINT HEAT MAP				X	PROVIDED BY OWNER
WIRELESS ACCESS POINTS, ANTENNAS, AND MOUNTING BRACKETS	X				MOUNT AND PATCH, CONFIGURED BY OWNER
27 - AUDIO VISUAL EQUIPMENT					
PRESENTATION LOCAL SOUND SYSTEM	X				
AV CABLING AND/OR HDBASE-T	X				
PROJECTORS	X				
PROJECTOR MOUNTS	X				
(INTERACTIVE) FLAT PANEL DISPLAYS	X				
(INTERACTIVE) FLAT PANEL DISPLAY MOUNTS	X				
DIGITAL SIGNAGE	X				
PROJECTION SCREENS	X				
27-INTERCOM / PA & CLOCK SYSTEM					
BUILDING INTERCOM/PA, BELL, AND CLOCK SYSTEM	X				
28-LIFE SAFETY AND SECURITY					
ACCESS CONTROL SYSTEM	X				DOOR HARDWARE BY DIVISION 08
INTRUSION DETECTION SYSTEM	X				
DOOR VIDEO INTERCOM SYSTEM	X				
VIDEO SURVEILLANCE SYSTEM (VSS)	X				
VSS CAMERAS	X				
VSC CABLING	X				
FIRE ALARM	X				
OTHER					
EQUIPMENT ROOM PLYWOOD BACKBOARDS	X				PROVIDED BY DIVISION 09
GROUNDING RISER BACKBONE AND BUSBARS	X				PROVIDED BY DIVISION 26
OUTSIDE PLANT UNDERGROUND CONDUIT, MANHOLES, HANDHOLES	X				PROVIDED BY DIVISION 26
CONDUIT AS INDICATED ON TECHNOLOGY DRAWINGS	X				PROVIDED BY DIVISION 26
DEVICE BOXES AND CONDUIT TO ACCESSIBLE CEILING	X				PROVIDED BY DIVISION 26
FLOOR DEVICES AND CONDUIT TO OVERHEAD ACCESSIBLE CEILING	X				PROVIDED BY DIVISION 26
SLEEVES/FIRESTOP ASSEMBLIES AS INDICATED ON TECHNOLOGY DRAWINGS	X				PROVIDED BY DIVISION 26
WIRE BASKET TRAY AND ASSOCIATED FIRESTOPPING ASSEMBLIES THROUGH FIRE/SMOKE RATED WALLS	X				PROVIDED BY DIVISION 26
ELECTRICAL POWER	X				PROVIDED BY DIVISION 26

AV GENERAL NOTES

1. THE DRAWINGS INDICATE THE SUGGESTED ROUTING OF THE CABLING SYSTEM. MINOR ADJUSTMENT IS PERMITTED PROVIDED THE MAIN ROUTING IS FOLLOWED AND CABLING IS ACCESSIBLE.
2. AV CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, CABLING, HARDWARE, CONNECTORS, PROGRAMMING, LABELING, TESTING, AND COMMISSIONING REQUIRED FOR A FULLY FUNCTIONING SYSTEM.
3. COORDINATE ALL ROUGH-IN, ELECTRICAL, AND DATA CABLING REQUIREMENTS WITH OTHER TRADES PRIOR TO ROUGH-IN.
4. ALL CABLES SHALL BE INSTALLED IN A NEAT, ORGANIZED, AND SERVICEABLE MANNER. CABLING SHALL BE SUPPORTED PER CODE AND INDUSTRY BEST PRACTICES. PROVIDE SERVICE LOOPS AT ALL EQUIPMENT LOCATIONS.
5. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, EQUIPMENT, MOUNTING HARDWARE, CABLING, CONNECTORS, TOOLS, TESTING EQUIPMENT, SOFTWARE, PROGRAMMING, AND LABOR REQUIRED TO COMPLETE THE AUDIOVISUAL SYSTEMS IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS, AND RECOGNIZED INDUSTRY STANDARDS (E.G., AVIXA, AES, IEEE, NEC).
6. AV SYSTEM ASSOCIATED CABLING (E.G., AVoIP, HDBaseT, COAXIAL, SPEAKER, CONTROL, ETC.) SHALL BE PROPERLY SUPPORTED BY CABLE PATHWAYS (E.G., J-HOOKS, LADDER RACK, BASKET TRAY) IN ACCORDANCE WITH TELECOMMUNICATIONS INDUSTRY BEST PRACTICES AND STANDARDS AS SPECIFIED IN THIS DOCUMENT
7. ALL AV CABLING SHALL BE INSTALLED CONCEALED ABOVE ACCESSIBLE CEILINGS, WITHIN CONDUIT, OR WITHIN SURFACE RACEWAY. NO AV CABLING SHALL BE EXPOSED IN FINISHED SPACES UNLESS EXPLICITLY NOTED OTHERWISE IN THE DRAWINGS OR APPROVED IN WRITING BY THE DESIGN TEAM.
8. SCHEMATIC DIAGRAMS SHOWN IN THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND DO NOT NECESSARILY ILLUSTRATE ALL REQUIRED CONNECTIONS, ADAPTERS, OR COMPONENTS FOR A FULLY FUNCTIONAL SYSTEM. THE AV CONTRACTOR SHALL PROVIDE SHOP DRAWINGS INCLUDING COMPLETE SCHEMATIC SIGNAL FLOW DIAGRAMS AND CONNECTIVITY DETAILS AS SPECIFIED.
9. ALL AV SYSTEMS EQUIPMENT RACKS SHALL BE PROVIDED WITH DEDICATED 120V, 20A POWER CIRCUITS WITH ISOLATED GROUND. COORDINATE WITH THE ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.
10. COORDINATE WITH, ARCHITECT, ELECTRICAL AND LED VIDEO WALL CONTRACTOR PRIOR TO ROUGH-IN TO DETERMINE FINAL ROUGH-IN LOCATIONS FOR POWER AND DATA.

ALL SYSTEMS LISTED:

1. THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER IS RESPONSIBLE TO ENSURE ALL CONSTRUCTION DIVISIONS/TRADES ARE AWARE OF ALL WORK AND REQUIREMENTS TO SUPPORT THE LOW VOLTAGE INFRASTRUCTURE AS PRESENTED IN THESE DRAWINGS AND SPECIFICATIONS.
2. ALL WALL/CEILING/FLOOR DEVICE BOXES (UNLESS NOTED OTHERWISE) AND ASSOCIATED TECHNOLOGY CONDUIT/S, ALL CONDUIT AND SLEEVES INDICATED ON THE TECHNOLOGY DRAWINGS, INDICATED BASKET TRAY, WALL MOUNTED GROUNDING BUSBAR, AND GROUNDING RISER CONDUCTORS (FROM BUSBAR TO BUSBAR, AND BUSBAR TO MAIN ELECTRICAL SERVICE GROUND) SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
3. TECHNOLOGY ROOM WALL MOUNTED TYPE AC ("A" SIDE FACING OUT), 3/4" THICK, FIRE RESISTANT PLYWOOD BACKBOARD SHALL BE PROVIDED BY THE DIVISION 09 FINISHES CONTRACTOR. PRIOR TO INSTALLATION, ALL SIX (6) SIDES OF EACH PLYWOOD SHEET SHALL BE PAINTED WITH TWO (2) COATS OF LIGHT-COLORED FIRE RESISTANT PAINT. COORDINATE COLOR WITH ARCHITECT.
4. THE CONTRACTOR SHALL TRAIN THE OWNER'S PERSONNEL ON OPERATION OF ALL TECHNOLOGY SYSTEMS, REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. ALL DIMENSIONS AND ELEVATIONS SHALL BE CONFIRMED WITH THE ARCHITECT PRIOR TO ROUGH-IN OR DEVICE INSTALLATION.

GENERAL ROOM TAG & LABELING NOTES:

1. CONTRACTOR SHALL USE THE FINAL ROOM NAME AND NUMBERS FOR ALL LABELS AND LABELING SCHEME. DO NOT USE CONSTRUCTION DOCUMENT ROOM NAMES AND NUMBERS. COORDINATE WITH OWNER FOR LABELING.

GENERAL ACCESS CONTROL NOTES:

1. REFER TO DOOR ROUGH-IN DETAILS FOR ALL CONDUIT ROUGH-IN AND BOX INSTALLATION.
2. PROVIDE DOOR POSITION SWITCHES ON ALL ROOF HATCHES. COORDINATE WITH ROOF HATCH INSTALLER.
3. ALL CONDUIT ENDS SHALL HAVE BUSHINGS INSTALLED.
4. CARD READERS TO BE MOUNTED IN THE DOOR UNLESS NOTED OTHERWISE. COORDINATE WITH DOOR HARDWARE INSTALLER.
5. COORDINATE OBTAINING ELECTRICAL POWER FOR DOOR CONTROLLERS WITH DIV. 26.
6. COORDINATE INTEGRATION WITH DOOR HARDWARE WITH DOOR INSTALLER.
7. ALL CONDUIT TO BE CONCEALED UNLESS OTHERWISE NOTED.
8. WHERE CONDUIT IS EXPOSED PROVIDED PAINTED CONDUITS, PAINTED AS DIRECTED BY ARCHITECT.

GENERAL VIDEO SURVEILLANCE NOTES:

1. POWER-OVER-ETHERNET SWITCH(ES) TO SUPPORT THE CAMERAS, REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. ALL CAMERA LOCATIONS SHALL BE CONFIRMED BY SHOP DRAWING SUBMITTAL, AND OWNER REVIEW PRIOR TO ANY ROUGH-IN INSTALLATION.
3. AT ALL EXTERIOR SECURITY CAMERA LOCATIONS PROVIDE AN OCTAGON BOX WITH WATER TIGHT COVER AND THREE KNOCK-OUTS COVER, STICKING OUT 1/4" FROM SURFACE. REFER TO INSTALLATION DETAILS FOR ALL CONDUIT ROUGH-IN AND BOX INSTALLATION.
4. PRIOR TO INSTALLING ROUGH-IN FOR ALL CAMERAS, COORDINATE MOUNTING HEIGHT WITH EXTERIOR CANOPIES, OVERHANGS, AND ANY OTHER ARCHITECTURAL ITEMS THAT MIGHT OBSTRUCT THE CAMERA FIELD OF VIEW.

GENERAL INTRUSION DETECTION NOTES:

1. ALL WALL MOUNTED INTRUSION DETECTION SYSTEM KEY-PADS AND INTERCOM OUTLETS SHALL HAVE 2-GANG OUTLET BOX WITH SINGLE GANG PLASTER RING. 3/4" CONDUIT STUBBED INTO AN ACCESSIBLE CEILING. MOUNTED AT 45" AFF COORDINATE EXACT LOCATIONS WITH OWNER BEFORE ANY ROUGH-IN.
2. PROVIDE PULL CORD IN ALL EMPTY CONDUITS.
3. PROVIDE BUSHINGS IN ALL CONDUITS.
4. INTRUSION DETECTION SYSTEM INSTALLER SHALL COORDINATE WITH OWNER FOR FINAL PROGRAMMING.
5. CEILING MOUNTED MOTION DETECTORS SHALL BE INSTALLED WITHIN 15' OF EVERY EXTERIOR DOOR. WALL MOUNTED MOTION DETECTORS SHALL BE INSTALLED IN THESE AREAS WHEN THE CEILING HEIGHT EXCEEDS 15' OR NO FINISHED CEILING EXISTS.

STRUCTURED CABLING GENERAL NOTES:

1. THE STRUCTURED CABLING CONTRACTOR, CABLING CONTRACTOR, OR COMMUNICATIONS CONTRACTOR SHALL BE REFERRED TO AS THE CONTRACTOR UNLESS NOTED OTHERWISE.
2. THE CONTRACTOR SHALL REVIEW ALL CONSTRUCTION DOCUMENTS AND RELATED SECTIONS WHICH MAKE UP THE CONTRACT DOCUMENTS SHALL COORDINATE ALL WORK ON THE COMMUNICATIONS PLANS WITH OTHER TRADE'S DRAWINGS AND SPECIFICATIONS (E.G., AUDIOVISUAL, SECURITY, MEP).
3. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, COMPONENTS, EQUIPMENT, TOOLS, TEST EQUIPMENT, AND LABOR TO COMPLETE THE WORK DESCRIBED IN THESE DRAWINGS AND SPECIFICATIONS TO INDUSTRY STANDARDS (E.G., ANSI, TIA, EIA, BICSI) UNLESS NOTED OTHERWISE.
4. CONTRACTOR SHALL CONFIRM ALL REQUIRED CABLE LINK LENGTHS ARE WITHIN SUCH CABLE'S PERFORMANCE STANDARDS PRIOR TO BIDDING, PROCUREMENT, AND ROUGH-IN.
5. ALL CABLING SHALL BE RATED FOR THE ENVIRONMENT IN WHICH IT IS INSTALLED. ALL CABLING INSTALLED WITHIN UNDER SLAB CONDUITS (I.E., BELOW GRADE) SHALL BE INDOOR/OUTDOOR PLENUM RATED.
6. ALL CABLING IS CONTINUOUS IN NATURE FROM FINAL TERMINATION POINT TO FINAL TERMINATION POINT (I.E., NO SPLICES) UNLESS NOTED OTHERWISE.
7. ALL INFRASTRUCTURE SHALL BE INSTALLED IN A NEAT AND HIGH QUALITY WORKMANSHIP MANNER.
8. ALL EQUIPMENT RACKS, CABINETS, CABLE RUNWAY, BASKET TRAY, AND/OR OTHER NOTED EQUIPMENT SHALL BE INDEPENDENTLY AND PROPERLY SECURED TO THE BUILDING STRUCTURE AND SHALL BE PLUMB AND LEVEL.
9. CONTRACTOR SHALL CONFIRM FINAL RACK ELEVATION/S WITH THE OWNER PRIOR TO CABLE ROUGH-IN, TERMINATION FIELD INSTALLATION, AND ASSOCIATED CABLE TERMINATION.
10. MINIMUM CABLE BEND RADIUS SHALL BE MAINTAINED THROUGHOUT THE ENTIRE CABLE LINK/CHANNEL. CONTRACTOR SHALL PROVIDE PROPER STRAIN RELIEF SYSTEM/S SO THAT CABLING IS SECURED/SUPPORTED TO MAINTAIN THE REQUIRED MINIMUM BEND RADIUS THROUGH THE CABLE PLANTS LIFE.
11. CABLING GROUPS SHALL ALWAYS FOLLOW A SINGLE PATHWAY WITHIN AND/OR THROUGH AN AREA AND THE CABLING GROUP SHALL NEVER SPLIT AROUND ANOTHER BUILDING SYSTEM.
12. OUTSIDE OF A TECHNOLOGY ROOM, CABLING SUPPORTED FROM NON-CONTINUOUS CABLE SUPPORTS SHALL BE LOOSELY BUNDLED WITH VELCRO STRAPS AND CABLING INSTALLED IN BASKET TRAY LEFT UNBUNDLED UNLESS NOTED OTHERWISE.
13. WITHIN TECHNOLOGY ROOMS, ALL LIKE TYPE CABLING SHALL BE NEATLY DRESSED AND LOOSELY BUNDLED WITH VELCRO STRAPS. CATEGORY CABLING SHALL BE BUNDLED IN GROUPS OF TWENTY-FOUR (24) CABLES.
14. ALL WALL/FLOOR CABLE PENETRATIONS SHALL BE IN EITHER A BUSHED SLEEVE OR UL APPROVED FIRE STOPPING ASSEMBLY MEETING THE BUILDING WALL/FLOOR RATING.
15. ALL CABLING SHALL HAVE A SLACK LOOP AT EACH EXTREMITY UNLESS NOTED OTHERWISE. REFERENCE THE SPECIFICATION FOR CABLE SLACK LOOP REQUIREMENTS.
16. VOICE AND DATA COMMUNICATIONS CABLING SHALL NOT SHARE A COMMON PATHWAY WITH OTHER LOW VOLTAGE CABLING SYSTEMS (E.G., ACCESS CONTROL, AUDIO/VISUAL, BROADBAND VIDEO, INTRUSION DETECTION, ETC.) UNLESS NOTED OTHERWISE OR WITHOUT WRITTEN PERMISSION FROM THE OWNER.
17. ALL CABLING SHALL BE TERMINATED, LABELED WITH MACHINE-GENERATED LABELS, AND TESTED UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL COORDINATE THE FINAL LABELING SCHEME WITH THE OWNER PRIOR TO TESTING AND FINAL LABELING IMPLEMENTATION.
18. ALL EQUIPMENT RACKS, CABINETS, CABLE RUNWAY SYSTEMS, METALLIC CABLE SHEATHS, SURGE PROTECTION DEVICES, ETC., SHALL BE BONDED TO THE LOCAL BONDING BUSBAR. CONTRACTOR IS RESPONSIBLE TO ENSURE BONDING BUSBARS ARE ULTIMATELY GROUNDED TO EARTH, IF THIS IS NOT THE CASE, THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY.
19. CONTRACTOR SHALL PROPERLY FIRE STOP ALL CABLE PENETRATIONS THROUGH FIRE-RATED BUILDING ASSEMBLIES (E.G., CONDUITS, SLOTS, SLEEVES, ETC.) CREATED BY OR MADE ON BEHALF OF THE CONTRACTOR HEATHER OR NOT IT WAS UTILIZED BY THE CONTRACTOR FOR CABLE PATHWAY.
20. CONTRACTOR SHALL PROVIDE BLANK PLATED ON ALL COMMUNICATIONS DEVICE BOXES REGARDLESS OF WHETHER OR NOT IT WAS USED FOR COMMUNICATIONS CABLING.

GENERAL COMMUNICATION PATHWAY NOTES:

1. THE DRAWINGS INDICATE THE SUGGESTED ROUTING OF THE CABLING SYSTEM. MINOR ADJUSTMENT IS PERMITTED PROVIDED THE MAIN ROUTING IS FOLLOWED AND CABLING IS ACCESSIBLE.
2. COORDINATE COMMUNICATIONS PATHWAYS WITH BUILDING SYSTEMS, AND PROVIDE MINIMUM SEPARATION TO SUCH SYSTEMS AS OUTLINED IN WRITTEN SPECIFICATIONS.
3. OUTSIDE OF BASKET TRAY OR CONDUIT, ALL CABLING SHALL BE SUPPORTED AT A 5' MAXIMUM INTERVAL WITH NON-CONTINUOUS CABLE SUPPORTS.
4. ALL CABLE PATHWAY SHALL RUN PARALLEL AND PERPENDICULAR TO MAJOR WALLS AND/OR CORRIDORS.
5. WITHIN OPEN CEILING AREAS (E.G., ARENA, BARN, ETC.) ALL LOW VOLTAGE CABLING SYSTEMS SHALL BE INSTALLED IN CONDUIT.
6. WHERE A CONDUIT ENTERS/EXITS A MDF/IDF ROOM, IT SHALL ENTER HORIZONTALLY AT AN ELEVATION LESS THAN 12-FT AFF. IF IT MUST ENTER AT AN ELEVATION GREATER THAN 12-FT AFF IT SHALL TURN DOWN VERTICALLY, NEAR THE ROOM PERIMETER, AND TERMINATE AT 12-FT AFF.
7. ALL PATHWAYS SHALL BE SIZED AND INSTALLED PER THE LATEST ANSI/TIA-569 STANDARD.
8. PROVIDE PROPER BONDING AND GROUNDING OF COMMUNICATIONS PATHWAYS IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES AND THE LATEST ANSI/TIA-607 STANDARD.

GENERAL ROUGH-IN NOTES:

1. FOR DEVICE LOCATIONS IN MECHANICAL SPACES (E.G., ELECTRICAL, MECHANICAL ROOMS) EXTEND CONDUIT OUT OF ROOM TOWARDS THE MAIN COMMUNICATIONS PATHWAY AND TOWARD THE SERVING MDF/IDF ROOM.
2. FOR ALL CABLING TERMINATED IN WALLS WHERE THE SURROUNDING CEILING TYPE IS EXPOSED OR INACCESSIBLE (E.G., GYPSUM CEILING) OR FOR CABLING TERMINATED IN EXPOSED OR INACCESSIBLE CEILING TYPES, SHALL TERMINATE IN AN APPROPRIATE DEVICE MOUNTING BOX WITH CONDUIT INSTALLED FROM THE DEVICE BOX TO AN ACCESSIBLE CEILING AREA TOWARDS THE SERVING MDF/IDF ROOM.
3. ROUGH-IN TO BE INSTALLED BY DIVISION 26.

GENERAL CONDUIT NOTES:

1. CONDUIT RUNS SHALL NOT CONTAIN 90˚CONDUIT BODIES (OR LB'S).
2. CONDUIT RUNS IN EXCESS OF 100 FEET REQUIRE AN ACCESSIBLE PULL BOX. ANY EXCEPTIONS REQUIRE WRITTEN PRE-APPROVAL BY DESIGN CONSULTANT.
3. MAINTAIN PROPER CONDUIT BEND RADIUS IN ACCORDANCE WITH ANSI/TIA-569. FOR CONDUIT WITH AN INTERNAL DIAMETER OF 2" OR LESS, MAINTAIN A BEND RADIUS OF AT LEAST 6 TIMES THE INTERNAL CONDUIT DIAMETER. FOR CONDUIT WITH AN INTERNAL DIAMETER GREATER THAN 2", MAINTAIN A BEND RADIUS OF AT LEAST 10 TIMES THE INTERNAL CONDUIT DIAMETER.
4. IF A CONDUIT REQUIRES MORE THAN TWO 90˚BENDS, PROVIDE AN ACCESSIBLE PULL BOX BETWEEN SECTIONS WITH 2 BENDS OR LESS. IF A CONDUIT RUN REQUIRES A REVERSE BEND (BETWEEN 100˚AND 180˚), INSERT AN ACCESSIBLE PULL BOX AT EACH BEND HAVING AN ANGLE FROM 100˚AND 180˚. IF A CONDUIT RUN REQUIRES MORE THAN TWO 90˚BENDS BETWEEN PULL BOXES, THEN FOR EACH ADDITIONAL BEND EITHER DE-RATE THE CONDUIT CAPACITY BE 15% OR USE THE NEXT LARGER SIZE CONDUIT, REQUIRES PRE-APPROVAL BY DESIGN CONSULTANT OF THEIR DESIGNATED REPRESENTATIVE.
5. CONDUIT RUNS SUPPORTING A SINGLE WORK-AREA-OUTLET (HORIZONTAL CABLING) MEASURING 2" OR LESS IN DIAMETER THAT 1) EXCEED 100' IN LENGTH, 2) HAVE MORE THAN TWO 90-DEGREE BENDS OR 3) REQUIRE A REVERSE BEND (BETWEEN 100-DEGREE AND 180 DEGREE) SHALL HAVE AT MINIMUM, A 4"X4"X24" WIREWAY PLACED AT EACH AND EVERY OF THESE CONDITIONS. THIS WIREWAY SHALL BE A TYPE 1 IN INDOOR CEILING SPACES AND TYPE 3R (MIN) IN NON-CONDITIONED SPACES AND/OR WHEN IN OUTDOOR SPACES.
6. REFERENCE THE PULL BOX TABLE WITHIN SPECIFICATION 27 05 28 FOR MINIMUM PULL BOX SIZING.
7. DO NOT CONSIDER A PULL BOX AS A BEND. ALL CONDUITS MUST RUN STRAIGHT THROUGH A PULL BOX WITH THE BEND EITHER BEFORE OR AFTER THE PULL BOX.
8. REAM ALL CONDUIT ENDS, FIT STUBBED CONDUITS WITH AN INSULATED BUSHING TO ELIMINATE SHARP EDGES THAT MAY DAMAGE CABLE DURING INSTALLATION OR SERVICE. EQUIP ALL CONDUIT WITH PULL CORD WITH A MINIMUM TEST RATING OF 200 LBS.
9. ALL OUTLET BOX CONDUITS SHALL BE ROUTED TO NEAREST ACCESSIBLE CEILING SPACE WHETHER OR NOT SHOWN AS SUCH ON DRAWINGS.
10. CONDUITS SHOWN TO ENTER ANY ROOM UTILIZED FOR NETWORK CABLING SHALL BE STUBBED INTO A MINIMUM OF 4" THROUGH THE WALL, OR 4" ABOVE THE FINISH FLOOR, AND SHALL BE PROVIDED WITH A MINIMUM 200 LB PULL-TAPE.
11. ALL CONDUIT SLEEVES TO BE CONCEALED WHERE POSSIBLE AND PAINTED AS DIRECTED BY ARCHITECT WHERE NOT POSSIBLE.
12. CONDUITS SHOWN TO ENTER ANY ROOM UTILIZED FOR NETWORK CABLING STUBBED UP FROM THE FLOOR SHALL BE WITHIN 4" OF THE WALL.

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2025 - 05 - 29

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	RWB
Designer	Quality Control
Designer	RF
Proj. Arch.	
Checker	

PROJECT NO.
24-057.00

SHEET TITLE
GENERAL NOTES & LEGENDS - TECHNOLOGY

SHEET NO.
T0.01

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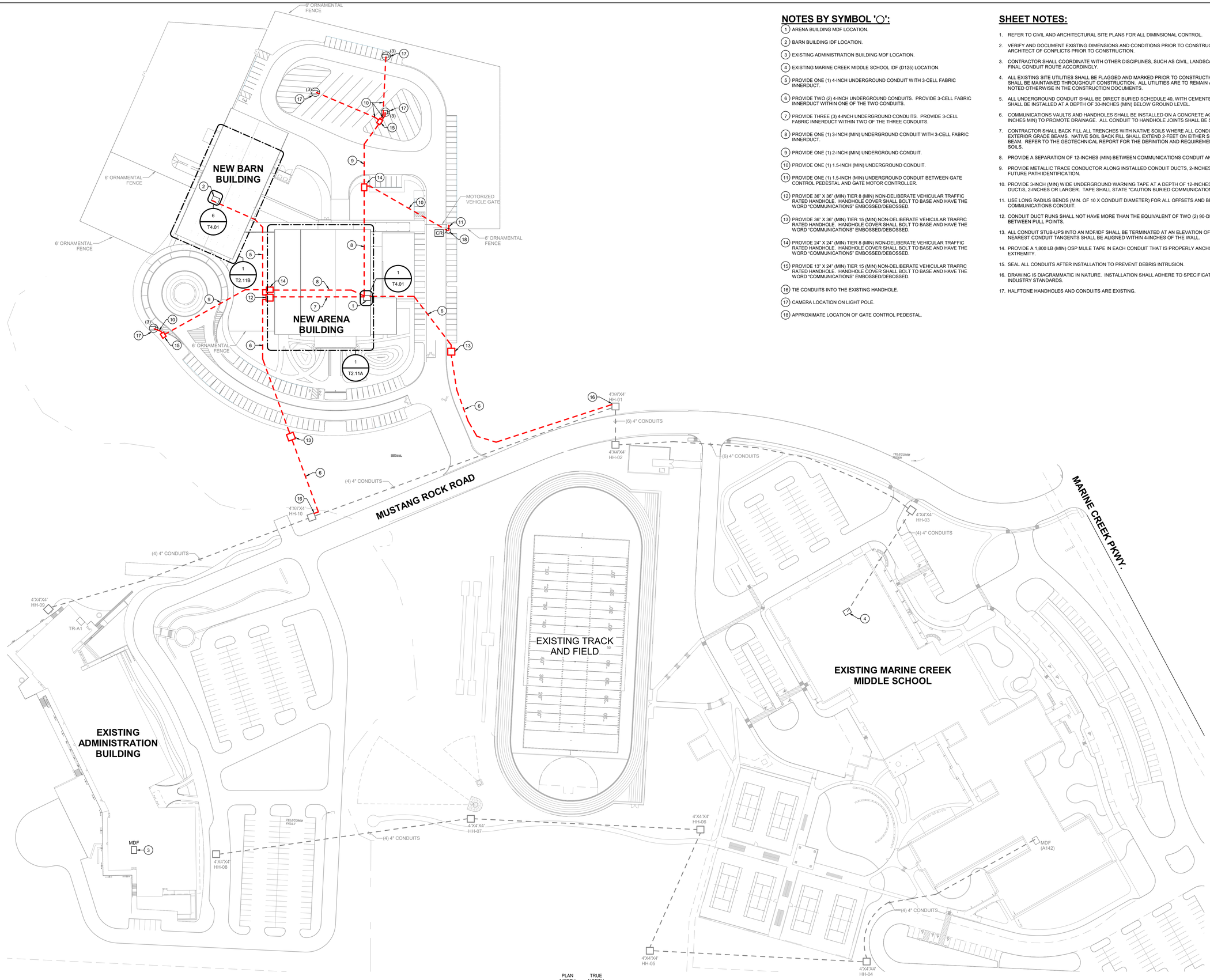

PLAN NORTH / TRUE NORTH

1 SITE PLAN - TECHNOLOGY
SCALE: 1" = 60'-0"

NOTES BY SYMBOL '◯':

1. ARENA BUILDING MDF LOCATION.
2. BARN BUILDING IDF LOCATION.
3. EXISTING ADMINISTRATION BUILDING MDF LOCATION.
4. EXISTING MARINE CREEK MIDDLE SCHOOL IDF (D125) LOCATION.
5. PROVIDE ONE (1) 4-INCH UNDERGROUND CONDUIT WITH 3-CELL FABRIC INNERDUCT.
6. PROVIDE TWO (2) 4-INCH UNDERGROUND CONDUITS. PROVIDE 3-CELL FABRIC INNERDUCT WITHIN ONE OF THE TWO CONDUITS.
7. PROVIDE THREE (3) 4-INCH UNDERGROUND CONDUITS. PROVIDE 3-CELL FABRIC INNERDUCT WITHIN TWO OF THE THREE CONDUITS.
8. PROVIDE ONE (1) 3-INCH (MIN) UNDERGROUND CONDUIT WITH 3-CELL FABRIC INNERDUCT.
9. PROVIDE ONE (1) 2-INCH (MIN) UNDERGROUND CONDUIT.
10. PROVIDE ONE (1) 1.5-INCH (MIN) UNDERGROUND CONDUIT.
11. PROVIDE ONE (1) 1.5-INCH (MIN) UNDERGROUND CONDUIT BETWEEN GATE CONTROL PEDESTAL AND GATE MOTOR CONTROLLER.
12. PROVIDE 36" X 36" (MIN) TIER 8 (MIN) NON-DELIBERATE VEHICULAR TRAFFIC RATED HANDHOLE. HANDHOLE COVER SHALL BOLT TO BASE AND HAVE THE WORD "COMMUNICATIONS" EMBOSSED/DEBOSSED.
13. PROVIDE 36" X 36" (MIN) TIER 15 (MIN) NON-DELIBERATE VEHICULAR TRAFFIC RATED HANDHOLE. HANDHOLE COVER SHALL BOLT TO BASE AND HAVE THE WORD "COMMUNICATIONS" EMBOSSED/DEBOSSED.
14. PROVIDE 24" X 24" (MIN) TIER 8 (MIN) NON-DELIBERATE VEHICULAR TRAFFIC RATED HANDHOLE. HANDHOLE COVER SHALL BOLT TO BASE AND HAVE THE WORD "COMMUNICATIONS" EMBOSSED/DEBOSSED.
15. PROVIDE 13" X 24" (MIN) TIER 15 (MIN) NON-DELIBERATE VEHICULAR TRAFFIC RATED HANDHOLE. HANDHOLE COVER SHALL BOLT TO BASE AND HAVE THE WORD "COMMUNICATIONS" EMBOSSED/DEBOSSED.
16. TIE CONDUITS INTO THE EXISTING HANDHOLE.
17. CAMERA LOCATION ON LIGHT POLE.
18. APPROXIMATE LOCATION OF GATE CONTROL PEDESTAL.

SHEET NOTES:

1. REFER TO CIVIL AND ARCHITECTURAL SITE PLANS FOR ALL DIMINSIONAL CONTROL.
2. VERIFY AND DOCUMENT EXISTING DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT OF CONFLICTS PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL COORDINATE WITH OTHER DISCIPLINES, SUCH AS CIVIL, LANDSCAPE, ETC., AND PLAN FINAL CONDUIT ROUTE ACCORDINGLY.
4. ALL EXISTING SITE UTILITIES SHALL BE FLAGGED AND MARKED PRIOR TO CONSTRUCTION. THESE FLAGS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. ALL UTILITIES ARE TO REMAIN ACTIVE UNLESS NOTED OTHERWISE IN THE CONSTRUCTION DOCUMENTS.
5. ALL UNDERGROUND CONDUIT SHALL BE DIRECT BURIED SCHEDULE 40, WITH CEMENTED JOINTS. CONDUIT SHALL BE INSTALLED AT A DEPTH OF 30-INCHES (MIN) BELOW GROUND LEVEL.
6. COMMUNICATIONS VAULTS AND HANDHOLES SHALL BE INSTALLED ON A CONCRETE AGGREGATE BASE (6-INCHES MIN) TO PROMOTE DRAINAGE. ALL CONDUIT TO HANDHOLE JOINTS SHALL BE SEALED.
7. CONTRACTOR SHALL BACK FILL ALL TRENCHES WITH NATIVE SOILS WHERE ALL CONDUITS PASS UNDER EXTERIOR GRADE BEAMS. NATIVE SOIL BACK FILL SHALL EXTEND 2-FEET ON EITHER SIDE OF THE GRADE BEAM. REFER TO THE GEOTECHNICAL REPORT FOR THE DEFINITION AND REQUIREMENTS FOR NATIVE SOILS.
8. PROVIDE A SEPARATION OF 12-INCHES (MIN) BETWEEN COMMUNICATIONS CONDUIT AND POWER.
9. PROVIDE METALLIC TRACE CONDUCTOR ALONG INSTALLED CONDUIT DUCTS, 2-INCHES OR LARGER, FOR FUTURE PATH IDENTIFICATION.
10. PROVIDE 3-INCH (MIN) WIDE UNDERGROUND WARNING TAPE AT A DEPTH OF 12-INCHES ABOVE CONDUIT DUCTS, 2-INCHES OR LARGER. TAPE SHALL STATE "CAUTION BURIED COMMUNICATIONS LINES BELOW".
11. USE LONG RADIUS BENDS (MIN. OF 10 X CONDUIT DIAMETER) FOR ALL OFFSETS AND BENDS FOR COMMUNICATIONS CONDUIT.
12. CONDUIT DUCT RUNS SHALL NOT HAVE MORE THAN THE EQUIVALENT OF TWO (2) 90-DEGREE BENDS BETWEEN PULL POINTS.
13. ALL CONDUIT STUB-UPS INTO AN MDF/IDF SHALL BE TERMINATED AT AN ELEVATION OF 4-INCHES AFF AND NEAREST CONDUIT TANGENTS SHALL BE ALIGNED WITHIN 4-INCHES OF THE WALL.
14. PROVIDE A 1,800 LB (MIN) OSP MULE TAPE IN EACH CONDUIT THAT IS PROPERLY ANCHORED AT EACH EXTREMITY.
15. SEAL ALL CONDUITS AFTER INSTALLATION TO PREVENT DEBRIS INTRUSION.
16. DRAWING IS DIAGRAMMATIC IN NATURE. INSTALLATION SHALL ADHERE TO SPECIFICATIONS, CODES, AND INDUSTRY STANDARDS.
17. HALFTONE HANDHOLES AND CONDUITS ARE EXISTING.

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ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	RWB
Designer	Quality Control
Designer	RF
Proj. Arch.	
Checker	

PROJECT NO.
24-057.00

SHEET TITLE
SITE PLAN - TECHNOLOGY

SHEET NO.
T1.11

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FILE PATH: Autodesk Docs://E_EMS ISD_24-057.00_Agricultural Science Center/24117.EMS ISD New Agricultural Science-MEP+24.rvt
DATE/TIME: 5/29/2025 3:06:11 PM
PLOT SCALE: As indicated

SHEET LEGEND:

- - - - -	CONDUIT ROUTING. ALL LOW VOLTAGE CABLING (E.G., NETWORK, ACCESS CONTROL, PAGING, AUDIOVISUAL, ETC.) SHALL BE INSTALLED IN A COMPLETE CONDUIT SYSTEM IN THE BUILDING'S ARENA AREA. CONDUIT RUNS SHALL BE INSTALLED IN THE ROUTES INDICATED, NEATLY ARRANGED PARALLEL AND PERPENDICULAR TO WALLS AND PARTITIONS, GROUPED ON COMMON TRAPEZE HANGER SUPPORTS, SUPPORTED HIGH/TIGHT TO OVERHEAD BUILDING STRUCTURE, AND COORDINATED WITH OTHER MEP SYSTEMS WHILE ADHERING TO MINIMUM SYSTEM SEPARATION (SEE SPECIFICATIONS) REQUIREMENTS BETWEEN SUCH MEP SYSTEMS.

SHEET NOTES:

1. ALL DOOR CONTACTS SHALL TERMINATE TO THE ACCESS CONTROL SYSTEM WHICH WILL, IN TURN, INTEGRATE INTO THE INTRUSION DETECTION SYSTEM.
2. COORDINATE DATA DROP LOCATIONS IN OFFICE 104 WITH ARCHITECT AND FURNITURE VENDOR PRIOR TO ROUGH-IN.

NOTES BY SYMBOL '⬡':

1. NETWORK DROP FOR PA SYSTEM. COORDINATE FINAL LOCATION WITH PA SYSTEM CONTRACTOR.
2. NETWORK DROP FOR AV CABINET AT 50" AFF. COORDINATE FINAL LOCATION WITH AV CONTRACTOR.
3. NETWORK DROP FOR ACCESS CONTROL CABINET. COORDINATE FINAL LOCATION WITH SECURITY CONTRACTOR.
4. CONDUIT SHALL BE INSTALLED FROM A WALL DEVICE BOX TO CORRIDOR 102 OR MDF 113 AS INDICATED.
5. CAMERA MOUNTED UNDER COVERED AWNING. CONDUIT SHALL BE INSTALLED FROM THE CAMERA DEVICE BOX TO ACCESSIBLE CEILING AREA, CORRIDOR 102 AS INDICATED, OR MDF 113 AS INDICATED.
6. SUGGESTED UNDER SLAB CONDUIT ROUTING.
7. CARD READER FOR OVERHEAD DOOR. INTERFACE ACCESS CONTROL SYSTEM WITH OVERHEAD DOOR MOTOR CONTROLLER.
8. 119C OVERHEAD DOOR ACCESS CONTROL OVERRIDE SWITCH LOCATED WITHIN STORAGE 118.
9. 119C OVERHEAD DOOR ACCESS CONTROL OVERRIDE SWITCH LOCATION. PROVIDE SINGLE-GANG DEVICE BOX AT 42-INCHES AFF WITH ½-INCH CONDUIT TO THE 119C OVERHEAD DOOR MOTOR CONTROLLER.
10. PROVIDE NETWORK DROPS FOR SIGNTEX PANEL. COORDINATE FINAL LOCATION WITH DIV 26 CONTRACTOR.
11. PROVIDE OBERON #1020-12125 WIRELESS ACCESS POINT ENCLOSURE.
12. NETWORK DROP FOR "HUDL CAMERA".
13. NETWORK DROPS FOR MENU BOARD.
14. FLAT PANEL DISPLAY WITH ARTICULATING EXTENSION WALL MOUNT FOR AUXILLIARY PROGRAM VIDEO. REFER TO DETAIL 2/T6.07. COORDINATE POWER AND ROUGH-IN WITH ELECTRICAL CONTRACTOR. VERIFY EXACT HEIGHT AND LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
15. PROVIDE HDMI PASSTHROUGH INPUT PLATE IN FLOOR BOX. PROVIDE HDMI PASSTHROUGH CABLE ROUTED TO HDMI OUTPUT BEHIND FLAT PANEL FOR AV SOURCE TO DISPLAY. COORDINATE WITH ELECTRICAL CONTRACTOR. REFER TO SPECIFICATIONS.
16. ONE OF THE FOUR CABLES WILL BE FOR A PRINTER.
17. TURN CONDUITS DOWN AND TERMINATE CONDUITS AT 12-FEET AFF.

PLAN NORTH / TRUE NORTH

1 FLOOR PLAN - LEVEL ONE - AREA A - TECHNOLOGY
SCALE: 1/8" = 1'-0"

KEY PLAN

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RCDD
2025-05-29

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	RWB
Designer	Quality Control
Designer	RF
Proj. Arch.	
Checker	

PROJECT NO.
24-057.00

SHEET TITLE
FLOOR PLAN - LEVEL ONE - AREA A - TECHNOLOGY

SHEET NO.
T2.11A

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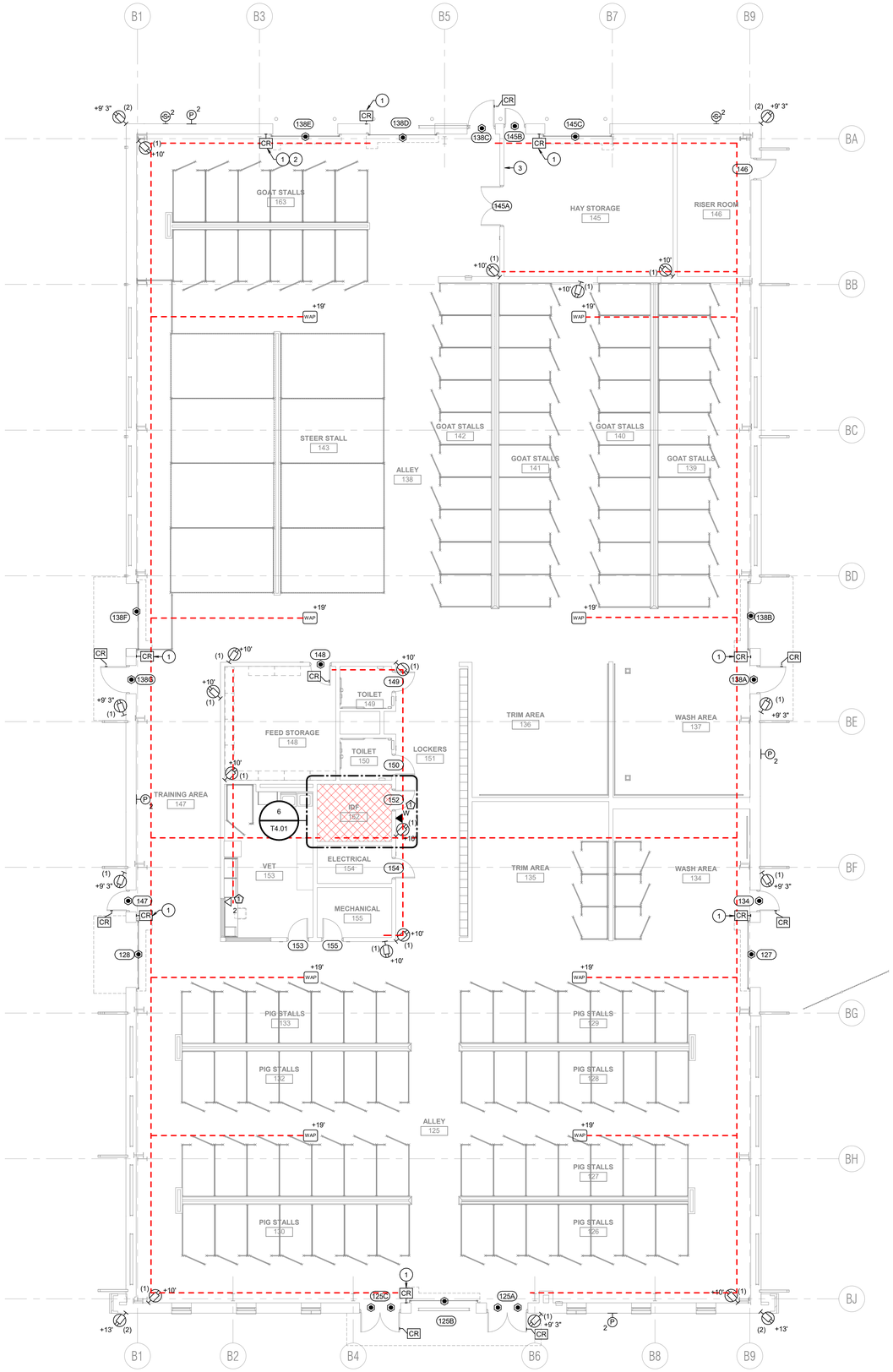
PLOT SCALE:As indicated

SHEET LEGEND:

- - - - -	CONDUIT ROUTING. ALL LOW VOLTAGE CABLING (E.G., NETWORK, ACCESS CONTROL, PAGING, AUDIOVISUAL, ETC.) SHALL BE INSTALLED IN A COMPLETE CONDUIT SYSTEM. CONDUIT RUNS SHALL BE INSTALLED IN THE ROUTES INDICATED, NEATLY ARRANGED PARALLEL AND PERPENDICULAR TO WALLS AND PARTITIONS, GROUPED ON COMMON TRAPEZE HANGER SUPPORTS, SUPPORTED HIGH/TIGHT TO OVERHEAD BUILDING STRUCTURE, AND COORDINATED WITH OTHER MEP SYSTEMS WHILE ADHERING TO MINIMUM SYSTEM SEPARATION (SEE SPECIFICATIONS) REQUIREMENTS BETWEEN SUCH MEP SYSTEMS.

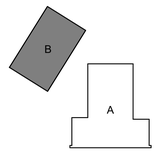
NOTES BY SYMBOL '◯':

1. CARD READER FOR OVERHEAD DOOR. INTERFACE ACCESS CONTROL SYSTEM WITH OVERHEAD DOOR MOTOR CONTROLLER.
2. 138E OVERHEAD DOOR ACCESS CONTROL OVERRIDE SWITCH LOCATED WITHIN HAY STORAGE 145.
3. 138E OVERHEAD DOOR ACCESS CONTROL OVERRIDE SWITCH LOCATION. PROVIDE SINGLE-GANG DEVICE BOX AT 42-INCHES AFF WITH ½-INCH CONDUIT TO THE 138E OVERHEAD DOOR MOTOR CONTROLLER.



PLAN NORTH / TRUE NORTH

1 FLOOR PLAN - LEVEL ONE - AREA B - TECHNOLOGY
SCALE: 1/8" = 1'-0"



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2025-05-29

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	RWB
Designer	Quality Control
Designer	RF
Proj. Arch.	
Checker	

PROJECT NO.
24-057.00

SHEET TITLE
FLOOR PLAN - LEVEL ONE - AREA B - TECHNOLOGY

SHEET NO.
T2.11B

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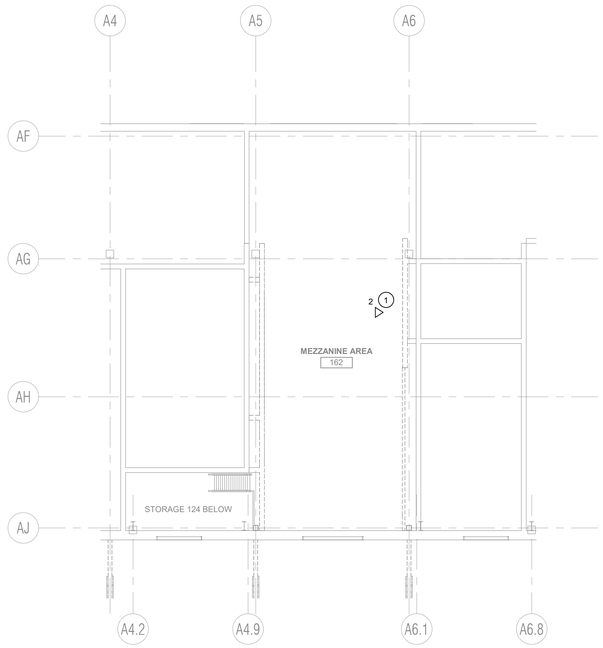
NOTES BY SYMBOL '⬡':

(1) NETWORK DROP FOR BAS PANEL. COORDINATE BAS PANEL LOCATION WITH MECHANICAL CONTRACTOR.



PLAN NORTH

TRUE NORTH

1 FLOOR PLAN - MEZZANINE - TECHNOLOGY

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

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EXPIRES 12-31-26
2025-05-29

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	RWB
Designer	Quality Control
Designer	RF
Proj. Arch.	
Checker	

PROJECT NO.

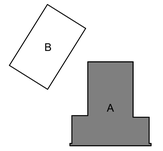
24-057.00

SHEET TITLE

FLOOR PLAN - MEZZANINE - TECHNOLOGY

SHEET NO.

T2.12A



KEY PLAN

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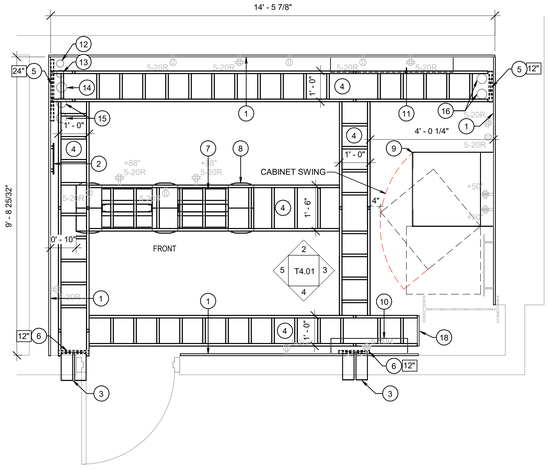
SHEET NOTES:

1. FOR ADDITIONAL POWER INFORMATION WITHIN MDF 113, REFERENCE ELECTRICAL DETAIL 4/E5.01.
2. FOR ADDITIONAL POWER INFORMATION WITHIN IDF 152, REFERENCE ELECTRICAL DETAIL 2/E5.01.

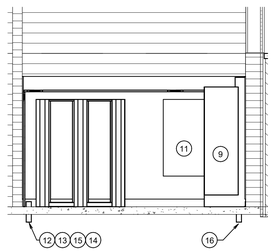
NOTES BY SYMBOL '⬡':

1. ¾" PLYWOOD BACKBOARD FROM 0.5' AFF TO 8.5' AFF ALONG WALL/S INDICATED.
2. ¼" COPPER BONDING BUSBAR MOUNTED AT 7'-2" AFF. MDF PRIMARY BONDING BUSBAR (PBB) IS 4" X 12" (MIN) AND IDF SBB (SECONDARY BONDING BUSBAR) IS 2" X 12" (MIN).
3. MDF/IDF ROOM LOW VOLTAGE CABLE ENTRANCE/EXIT LOCATION. PROVIDE RE-ENTERABLE, UL LISTED, FIRE-STOPPING ASSEMBLY. SIZE QUANTITY (2 MIN) AND CROSS-SECTIONAL AREA (12.5 SQ. IN. MIN) AS REQUIRED. PROVIDE VERTICAL CABLE RUNWAY, SECURED TO WALL, DOWN TO HORIZONTAL CABLE RUNWAY, SIZE AS NOTED. PROVIDE RADIUS BEND CONTROL BETWEEN TRANSITION BETWEEN FIRE STOPPING ASSEMBLY AND VERTICAL CABLE RUNWAY.
4. HORIZONTALLY INSTALLED CABLE RUNWAY. SIZE AS INDICATED.
5. VERTICAL CABLE RUNWAY, SECURED TO WALL, FROM FLOOR UP. SIZE AS INDICATED.
6. VERTICAL CABLE RUNWAY, SECURED TO WALL, FROM 7.5" AFF UP PAST CEILING PLANE TO ROOM ENTRANCE CONDUIT/SLEEVE/FIRESTOPPING DEVICE. SIZE AS INDICATED.
7. 19" X 7'. 2-POST EQUIPMENT RACK. ATTACH RACK TO OVERHEAD CABLE RUNWAY VIA RACK-TO-RUNWAY PLATE AND 6" ELEVATION KIT (TYPICAL).
8. VERTICAL WIRE MANAGER, DOUBLE-SIDED, 10" WIDE (TYPICAL).
9. LEGRAND SR28-46-32 PIVOTING WALL/FLOOR MOUNTED AV EQUIPMENT CABINET. PROVIDED BY AV CONTRACTOR.
10. DOOR ACCESS CONTROL PANEL LOCATION.
11. EMERGENCY RESPONDER RADIO COMMUNICATIONS SYSTEM EQUIPMENT SPACE.
12. 3-INCH UNDERGROUND CONDUIT TO HANDHOLE NORTH OF BUILDING FOR SECURITY.
13. 3-INCH UNDERGROUND CONDUIT TO HANDHOLE WEST OF BUILDING FOR SECURITY.
14. 4-INCH UNDERGROUND CONDUIT TO BARN BUILDING IDF.
15. TWO (2) 4-INCH UNDERGROUND CONDUITS TO HANDHOLE WEST OF THE BUILDING FOR WAN CONNECTIVITY.
16. TWO (2) 4-INCH UNDERGROUND CONDUITS TO HANDHOLE EAST OF THE BUILDING FOR WAN CONNECTIVITY.
17. 4-INCH UNDERGROUND CONDUIT TO ARENA BUILDING MDF.
18. PROVIDE CABLE RUNWAY END CLOSING KIT

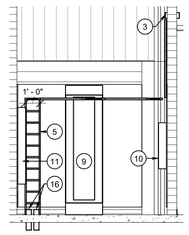


PLAN NORTH / TRUE NORTH

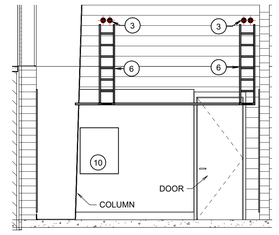
1 ENLARGED VIEW - MDF 113 - TECHNOLOGY
SCALE: 1/2" = 1'-0"



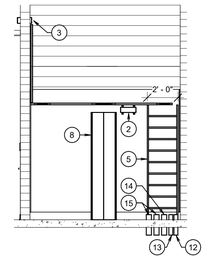
2 MDF WALL ELEVATION - NORTH
SCALE: 1/4" = 1'-0"



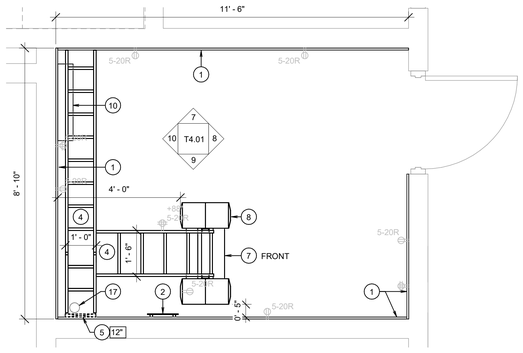
3 MDF WALL ELEVATION - EAST
SCALE: 1/4" = 1'-0"



4 MDF WALL ELEVATION - SOUTH
SCALE: 1/4" = 1'-0"

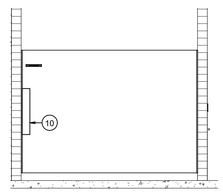


5 MDF WALL ELEVATION - WEST
SCALE: 1/4" = 1'-0"

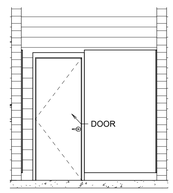


PLAN NORTH / TRUE NORTH

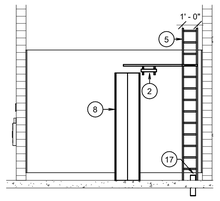
6 ENLARGED VIEW - IDF 152 - TECHNOLOGY
SCALE: 1/2" = 1'-0"



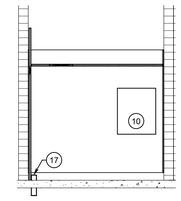
7 IDF WALL ELEVATION - NORTH
SCALE: 1/4" = 1'-0"



8 IDF WALL ELEVATION - EAST
SCALE: 1/4" = 1'-0"



9 IDF WALL ELEVATION - SOUTH
SCALE: 1/4" = 1'-0"



10 IDF WALL ELEVATION - WEST
SCALE: 1/4" = 1'-0"

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BICSI
ROBERT L. FRICK
BICSI ID # 3822809
EXPIRES 12-31-26
2025-05-29

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	RWB
Designer	Quality Control
Designer	RF
Proj. Arch.	
Checker	

PROJECT NO.
24-057.00

SHEET TITLE
ENLARGED FLOOR PLANS - TECHNOLOGY

SHEET NO.
T4.01

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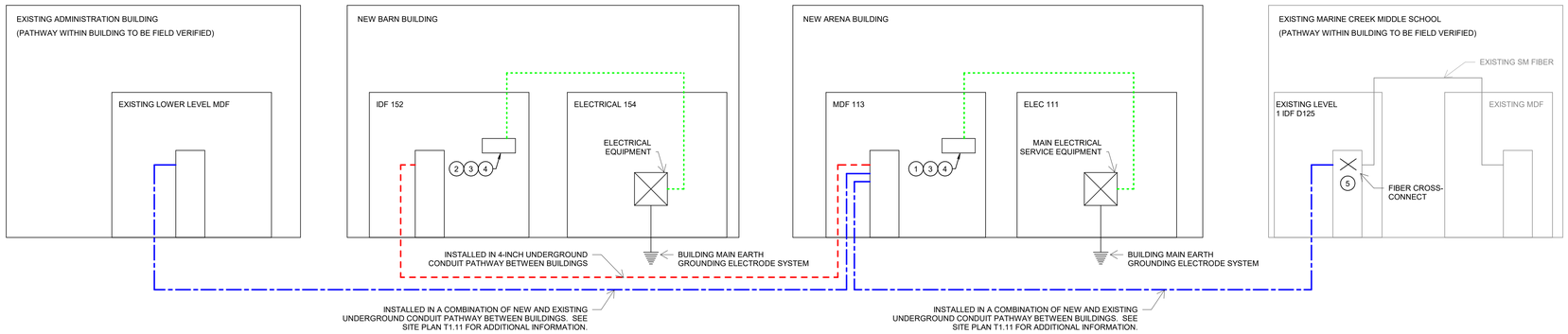
FILE PATH: Autodesk Docs://E_EMS ISD_24-057.00_Agricultural Science Center/24117-EMS ISD New Agricultural Science-MEP-r24.rvt
DATE/TIME: 5/29/2025 3:06:23 PM
PLOT SCALE: As indicated

COMMUNICATIONS & GROUNDING DETAIL LEGEND

- - - -	24-STRAND SINGLE-MODE, LOOSE-TUBE, OUTSIDE PLANT RATED FIBER OPTIC CABLE
———	12-STRAND SINGLE-MODE, LOOSE-TUBE, OUTSIDE PLANT RATED FIBER OPTIC CABLE
·····	#3/0 AWG, INSULATED COPPER BONDING CONDUCTOR CABLE



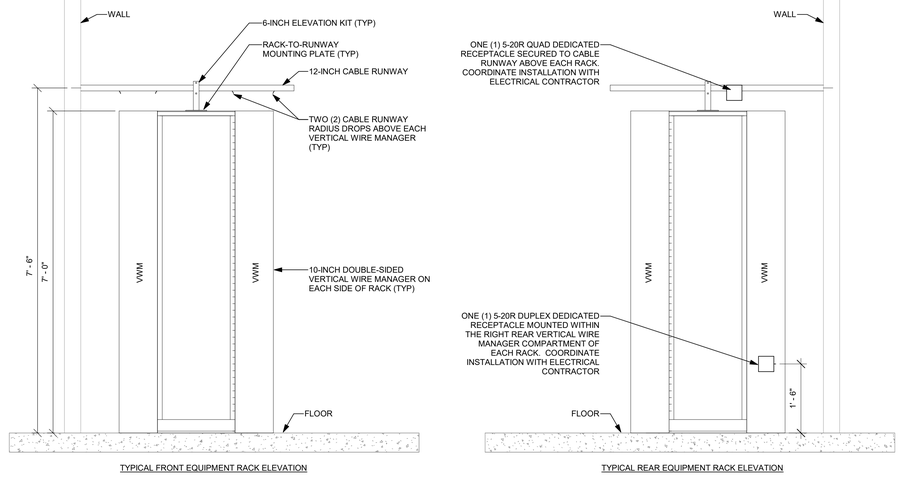
1 COMMUNICATIONS AND GROUNDING RISER
NO SCALE

SHEET NOTES:

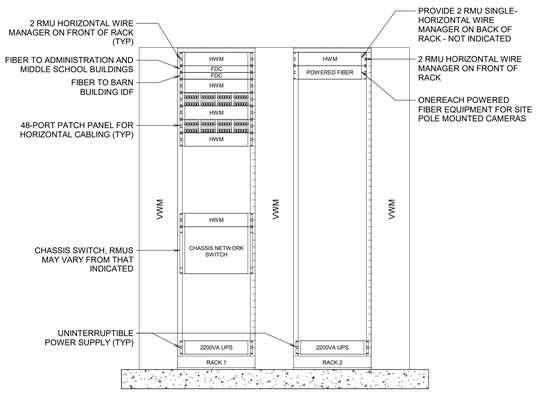
1. DETAIL SHEETS ARE FOR GENERAL INFORMATION ONLY AND DO NOT NECESSARILY INDICATE THE PARTS AND COMPONENTS REQUIRED. REFER TO DRAWINGS AND SPECIFICATIONS FOR REQUIRED QUANTITIES, LOCATIONS, SPECIFIC PARTS, AND COMPONENTS REQUIRED.
2. QUANTITIES AND/OR SIZES INDICATED ON NON-DETAIL DRAWINGS AND/OR THE WRITTEN SPECIFICATIONS TAKE PRECEDENCE OVER THOSE INDICATED ON THE DETAIL SHEETS. SHEET DETAILS ARE FOR GENERAL REFERENCE ONLY AND DO NOT NECESSARILY INDICATE QUANTITIES AND/OR SIZES REQUIRED IF NOTED OTHERWISE WITHIN THE DRAWINGS AND SPECIFICATIONS.
3. RACK ELEVATIONS ARE FOR GENERAL DESIGN INTENT ONLY.
4. PROVIDE THE NEEDED QUANTITY OF TERMINATION FIELDS (E.G., PATCH PANELS, HORIZONTAL WIRE MANAGEMENT, ETC.) AS REQUIRED TO TERMINATE ALL CABLING REQUIREMENT INDICATED ON THE DRAWINGS.
5. COORDINATE FINAL RACK ELEVATION LAYOUT WITH OWNER PRIOR TO INSTALLATION.

NOTES BY SYMBOL '◯':

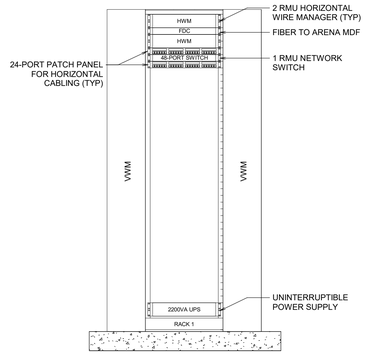
1. PRIMARY BONDING BUSBAR, 1/4" X 4" X 12" MOUNTED AT 7 FT. AFF.
2. SECONDARY BONDING BUSBAR, 1/4" X 2" X 12" MOUNTED AT 7 FT. AFF.
3. IF LOCAL BUILDING STEEL (E.G., STEEL COLUMN, OVERHEAD STEEL, ETC.) IS AVAILABLE, PROVIDE #2/0 AWG CONDUCTOR BETWEEN BUSBAR AND BUILDING STEEL.
4. WHERE A LOCAL ELECTRICAL DISTRIBUTION PANEL IS INSTALLED WITHIN THE MDF/IDF, PROVIDE A #6 AWG CONDUCTOR BETWEEN THE BUSBAR AND THE PANEL GROUNDING BUSBAR.
5. CROSS-CONNECT NEW FIBER TO EXISTING FIBER FOR CONNECTION BACK TO EXISTING MDF.



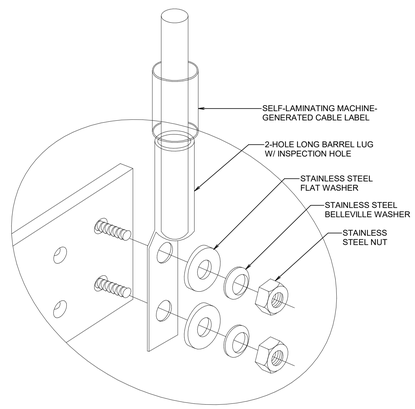
2 EQUIPMENT ROOM - RACK DETAILS (TYP)
NO SCALE



5 RACK ELEVATION - ARENA MDF
NO SCALE

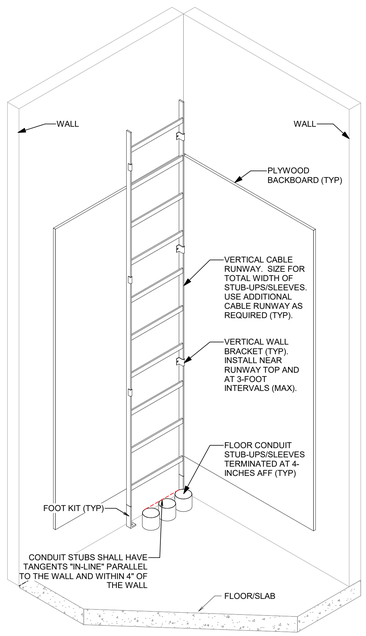


6 RACK ELEVATION - BARN IDF
NO SCALE

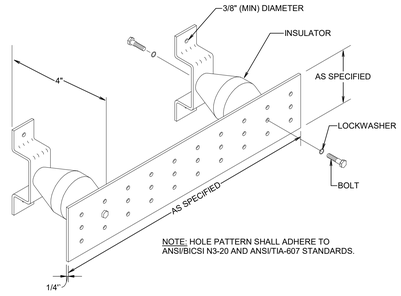


NOTE: ALL CONNECTIONS TO BE IRREVERSIBLE DOUBLE COMPRESSION (CRIMP) TYPE. NO MECHANICAL CONNECTIONS, MINIMUM 4 CRIMPS FOR DOUBLE COMPRESSION FITTING.

3 BUSBAR - CONDUCTOR TERMINATION (TYP)
NO SCALE

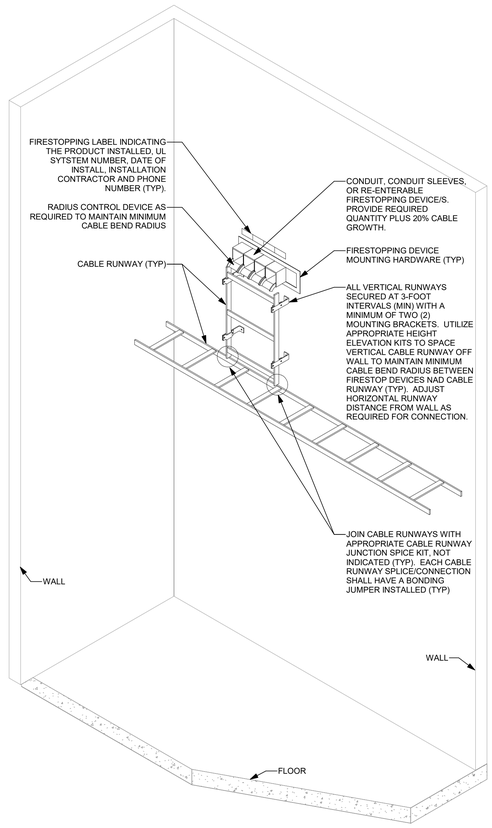


7 EQUIPMENT ROOM - FLOOR CONDUIT/SLEEVE DETAILS (TYP)
NO SCALE



NOTE: HOLE PATTERN SHALL ADHERE TO ANSI/BICSI N3-20 AND ANSI/TIA-607 STANDARDS.

4 BUSBAR - WALL MOUNT DETAIL
NO SCALE



8 EQUIPMENT ROOM - CABLING ENTRANCE (TYP)
NO SCALE

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EXPIRES 03-31-26
2025-05-29

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	RWB
Designer	Quality Control
Designer	RF
Proj. Arch.	
Checker	

PROJECT NO.
24-057.00

SHEET TITLE
DETAILS - TECHNOLOGY

SHEET NO.
T6.01

EMS ISD AGRICULTURAL SCIENCE COMPLEX
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FORT WORTH, TEXAS

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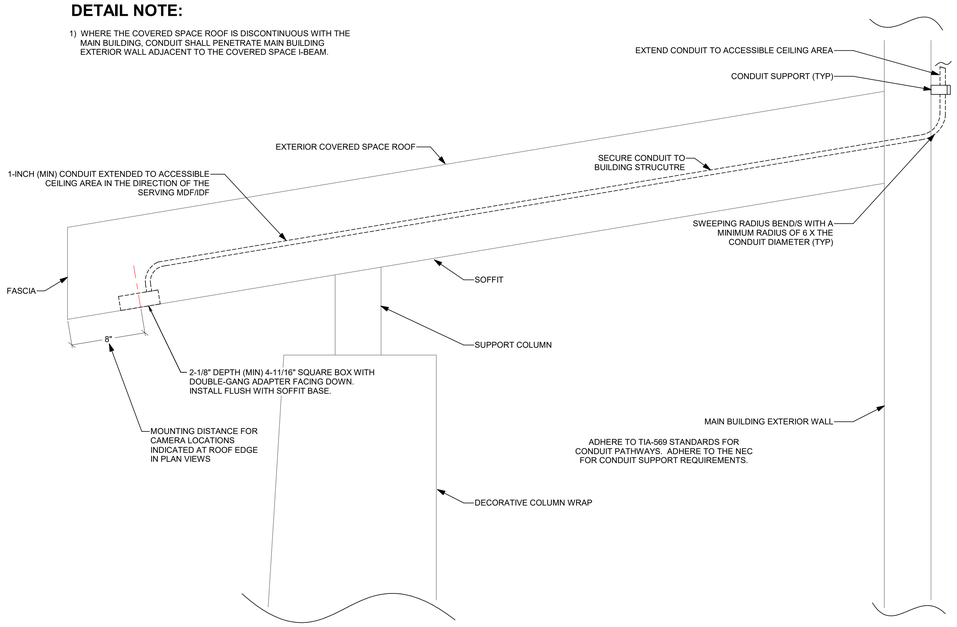
PLOT SCALE:As indicated

DETAIL NOTE:

1) WHERE THE COVERED SPACE ROOF IS DISCONTINUOUS WITH THE MAIN BUILDING, CONDUIT SHALL PENETRATE MAIN BUILDING EXTERIOR WALL ADJACENT TO THE COVERED SPACE I-BEAM.



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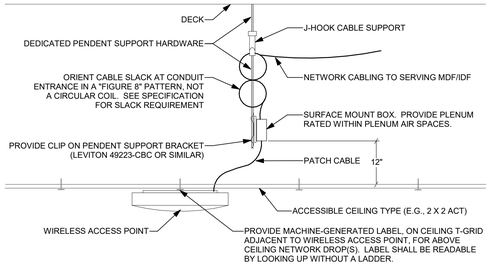
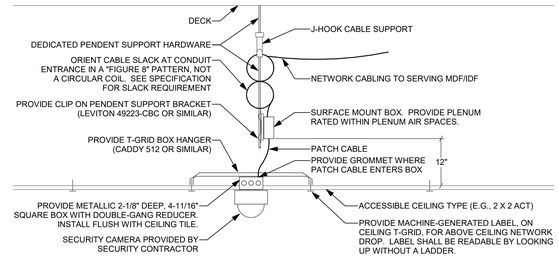
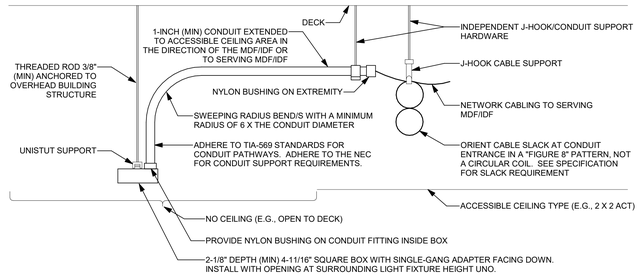


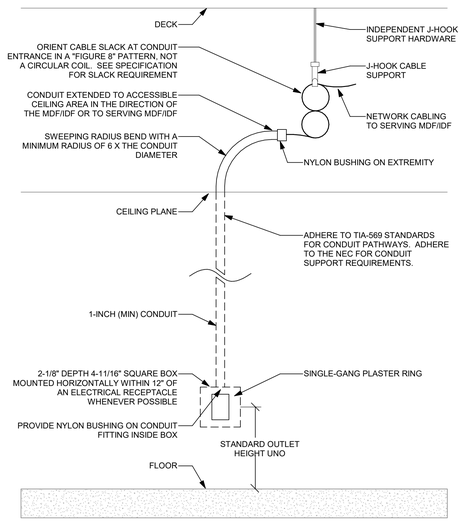
2 CEILING GRID MOUNTED WIRELESS ACCESS POINT
NO SCALE



3 CEILING GRID MOUNTED SECURITY CAMERA
NO SCALE



4 CEILING DEVICE ROUGH-IN - NO CEILING
NO SCALE



5 WALL DEVICE ROUGH-IN - DATA
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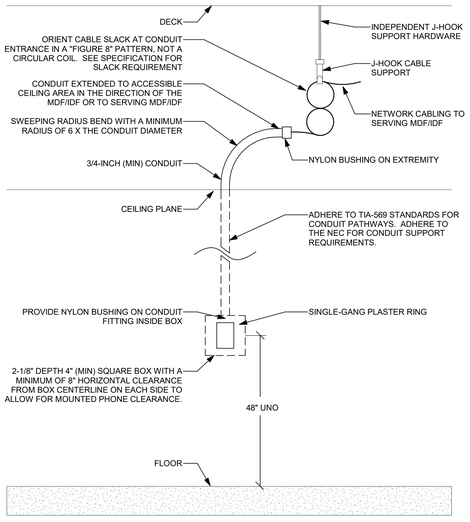
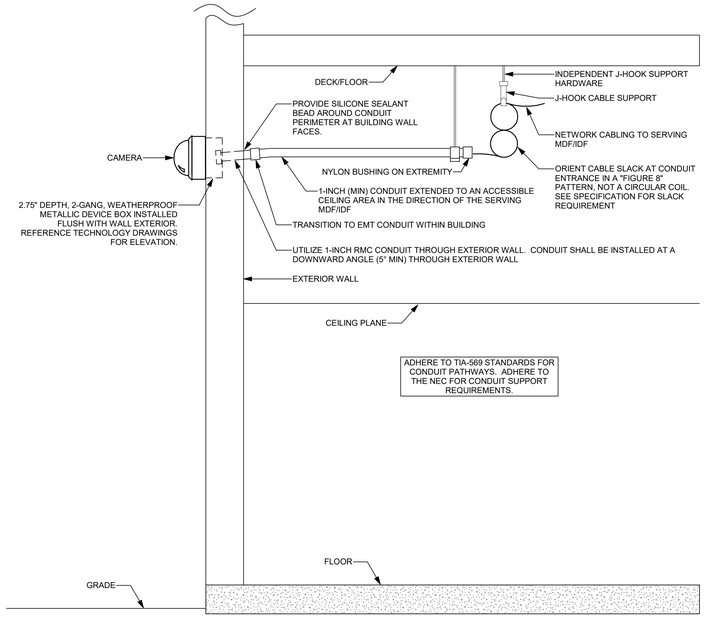


6 WALL DEVICE ROUGH-IN - WALL PHONE
NO SCALE



7 EXTERIOR CAMERA NEW WALL MOUNT DETAIL
NO SCALE

VLK

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FORT WORTH, TEXAS

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ROBERT L FRICK
BICSI ID # 382809
EXPIRES 12-31-26
2025-05-29

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	RWB
Designer	Quality Control
Designer	RF
Proj. Arch.	
Checker	

PROJECT NO.
24-057.00

SHEET TITLE
DETAILS - TECHNOLOGY

SHEET NO.
T6.02

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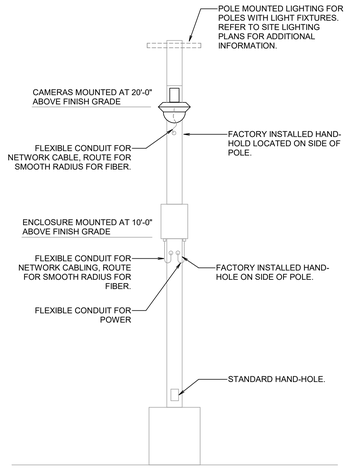

1 POLE MOUNTED CAMERA AND ENCLOSURE
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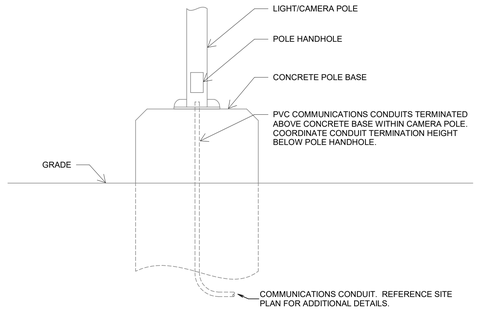

2 POLE BASE DETAIL
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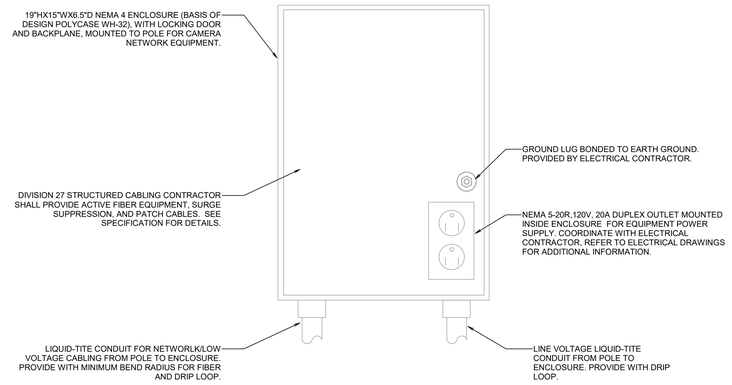

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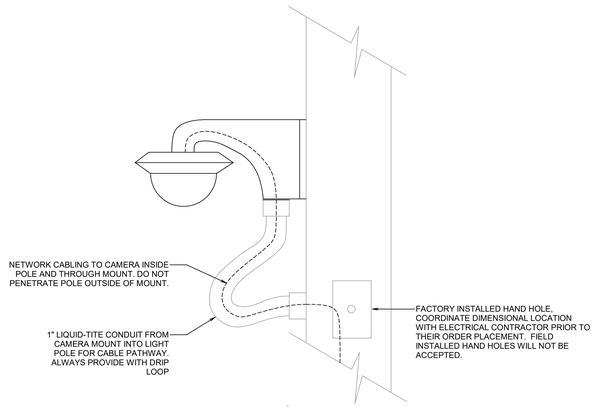

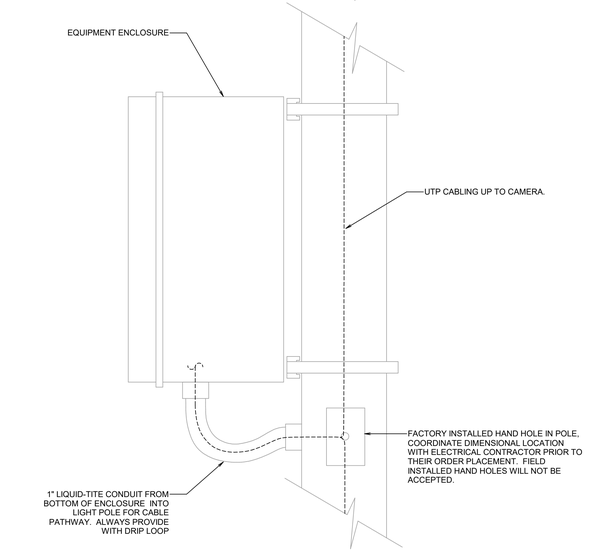

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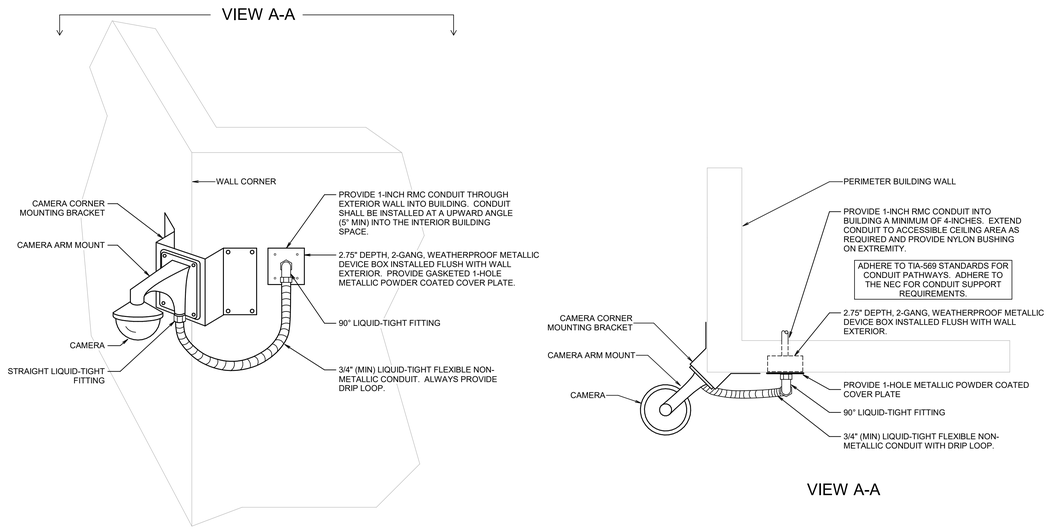

5 EXTERIOR CAMERA CORNER MOUNT DETAIL
NO SCALE

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Proj. Arch.	
Checker	

PROJECT NO.
24-057.00

SHEET TITLE
DETAILS - TECHNOLOGY

SHEET NO.
T6.03

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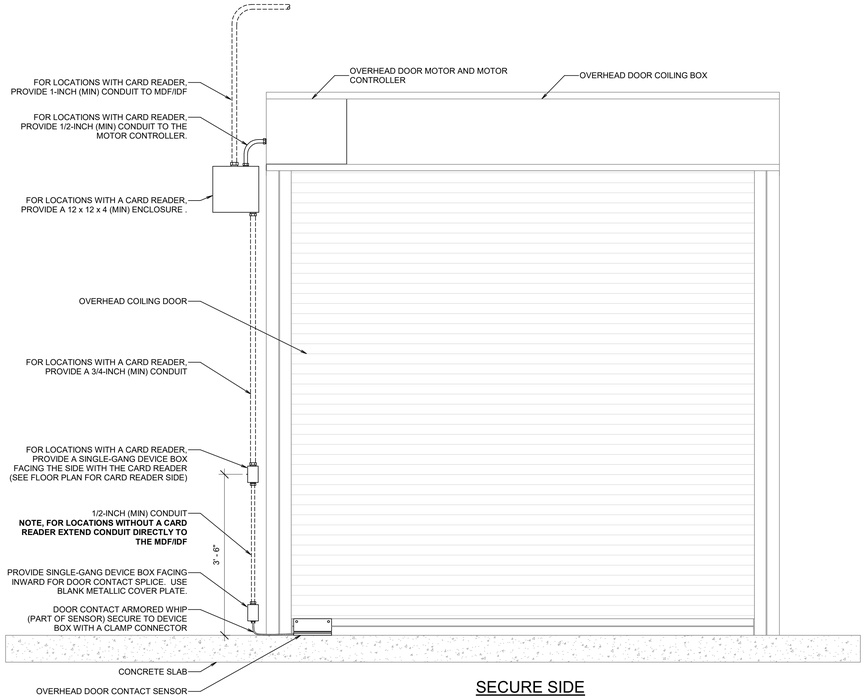
PLOT SCALE:As indicated

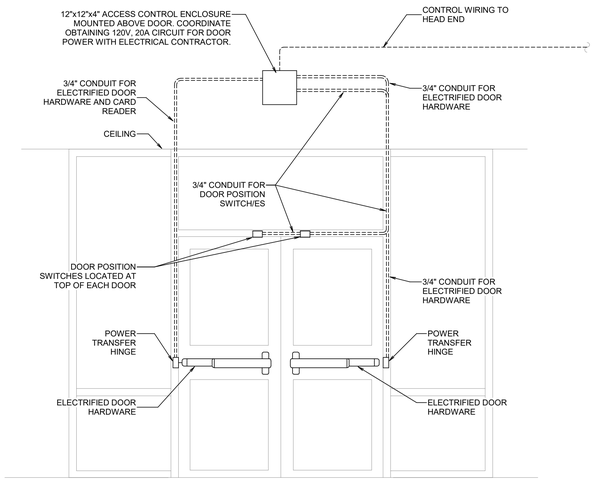
SHEET NOTES

1. ACTUAL DOOR CONDITIONS SUCH AS ORIENTATION, NUMBER OF LEAFS, AND TYPE OF ELECTRIFIED DOOR HARDWARE MAY DIFFER FROM WHAT IS SHOWN IN THE DETAILS. DOORS WITH OTHER ALTERNATE CONDITIONS ARE SIMILAR. CONTRACTOR SHALL VERIFY DOOR CONDITIONS WITH DOOR INSTALLER PRIOR TO ROUGH IN. REFERENCE DOOR HARDWARE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. COORDINATE WITH ARCHITECT AND OWNER FOR EXACT HEIGHT AFF AND LOCATION OF CARD READER PRIOR TO ROUGH-IN.
3. CARD READER TO BE INSTALLED PLUMB AND LEVEL. ENSURE A CLEAN INSTALLATION WITH NO VISIBLE GAPS, HOLES, OR EXPOSED WIRING.
4. CARD READER LOCATIONS SHOWN ARE TYPICAL UNLESS NOTED OTHERWISE. VERIFY HEIGHT AND DISTANCE FROM DOOR FRAME WITH OWNER AND ARCHITECT PRIOR TO ROUGH-IN.
5. ALL BACKBOXES SHALL BE PROVIDED WITH SCREW SECURED FACEPLATES AS REQUIRED BY THE OWNER AND ARCHITECT FOR ACCEPTABLE APPEARANCE AND PROPER ORIENTATION.
6. ALL CONDUIT SHALL BE CONCEALED INSIDE THE WALL/DOOR FRAME. IN SCENARIOS WHERE SURFACE MOUNTED CONDUIT CANNOT BE CONCEALED, IT SHALL BE INSTALLED ON THE SECURED SIDE. THE MAIN JUNCTION BOX ENCLOSURE, INDICATED ABOVE THE DOOR, SHALL BE INSTALLED ON THE SECURE SIDE WITH THE COVER ACCESSIBLE FROM THE SECURE SIDE AND LOCATED ABOVE THE ACCESSIBLE CEILING WHERE APPLICABLE.



SECURE SIDE

1 OVERHEAD DOOR ROUGH-IN
NO SCALE



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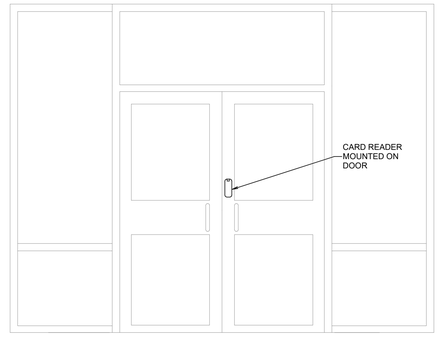

NON-SECURE SIDE

2 DOUBLE DOOR ROUGH-IN DETAIL
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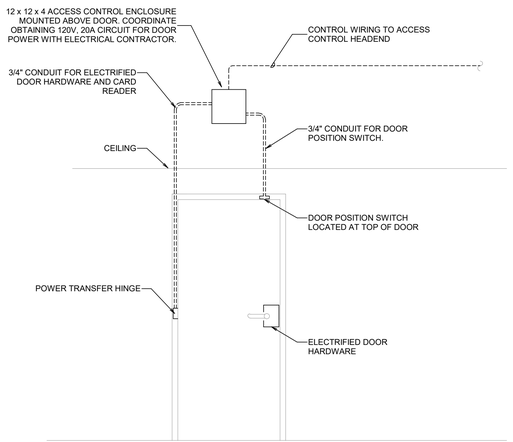
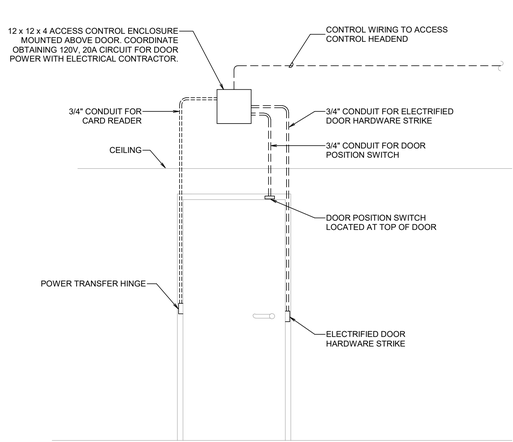


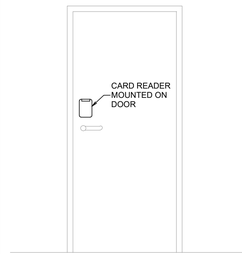
SECURE SIDE

NON-SECURE SIDE

3 DOOR ROUGH-IN DETAIL
NO SCALE



SECURE SIDE



NON-SECURE SIDE

4 DOOR ROUGH-IN DETAIL
NO SCALE

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ROBERT L FRICK
BICSI ID # 382809
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2025-05-29

ISSUED: May 29, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	RWB
Designer	Quality Control
Designer	RF
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Checker	

PROJECT NO.
24-057.00

SHEET TITLE
DETAILS - TECHNOLOGY

SHEET NO.
T6.04

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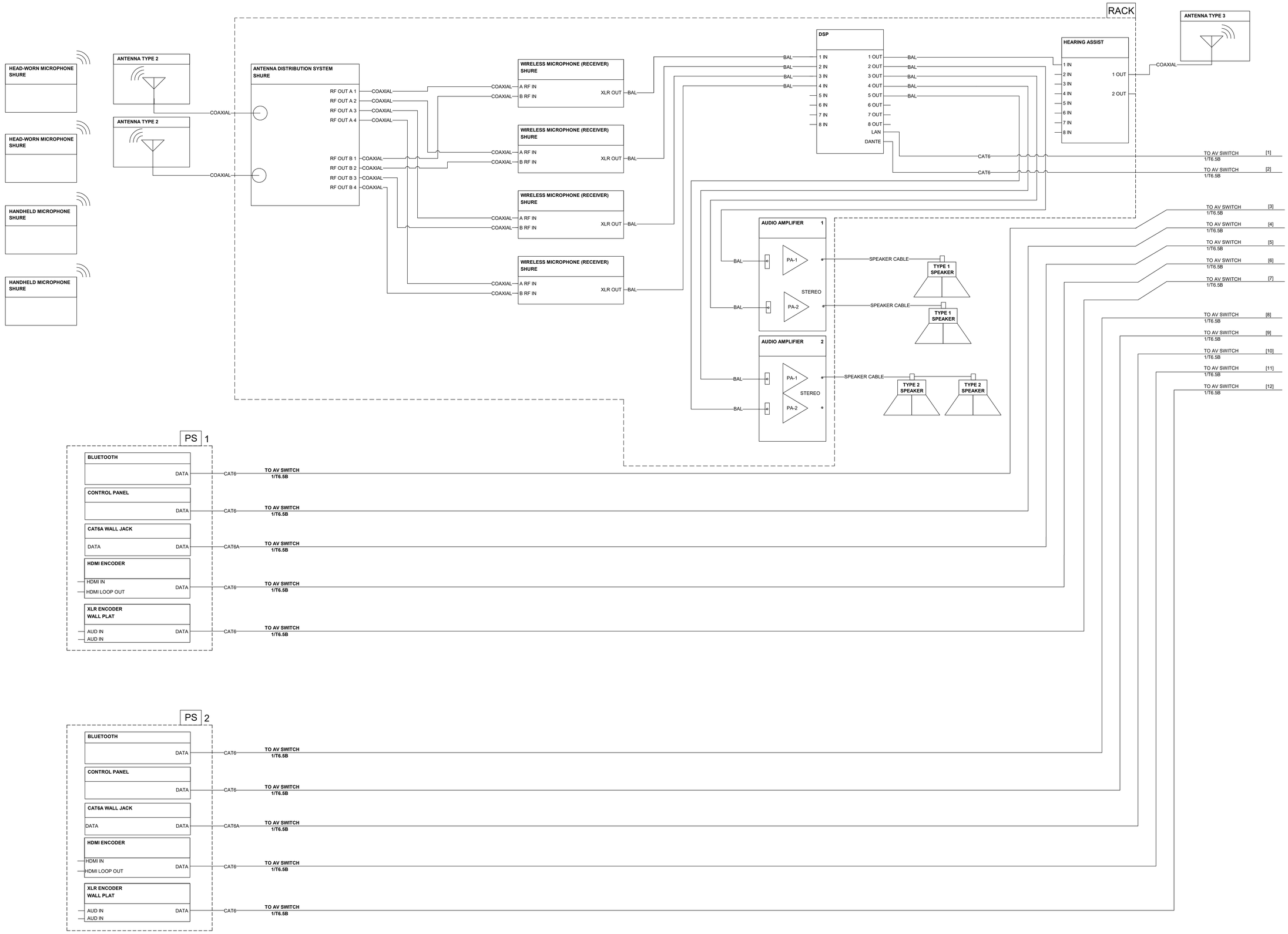

1 ARENA AV SYSTEM DIAGRAM
NO SCALE

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ISSUED: May 29, 2025

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Revision No.	Revision Date

Director	Drawn By
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Designer	Quality Control
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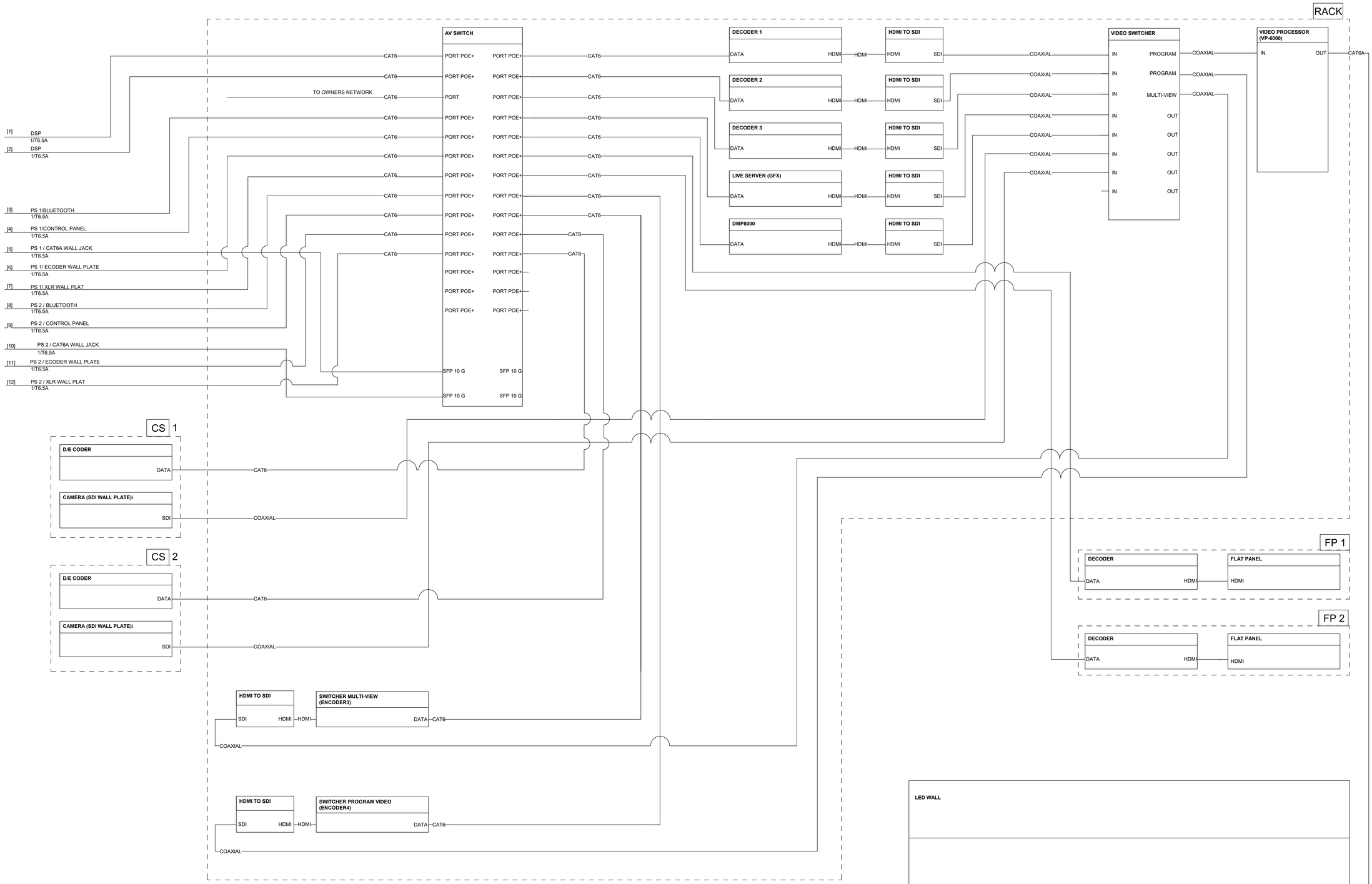

1 ARENA AV SYSTEM DIAGRAM 2
NO SCALE

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Designer	Quality Control
Designer	RF
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24-057.00

SHEET TITLE
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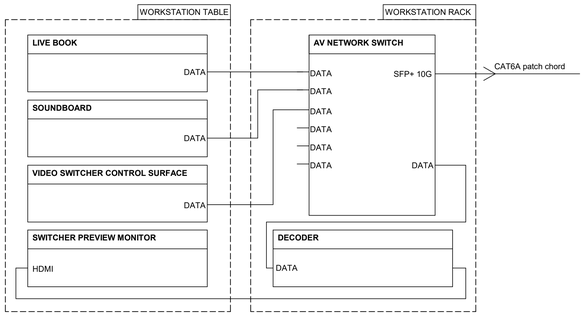
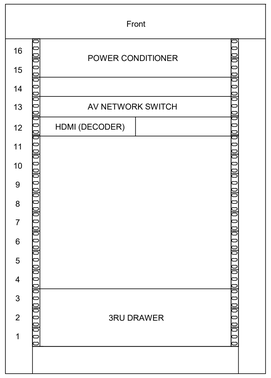
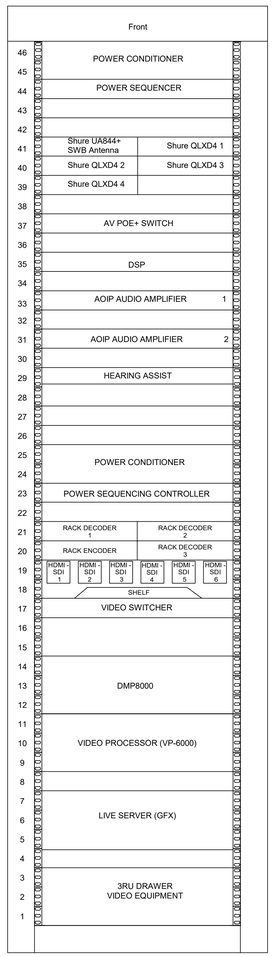


1 PORTABLE WORKSTATION DIAGRAM
NO SCALE



2 MOBILE RACK ELEVATION
NO SCALE



3 ARENA RACK ELEVATION
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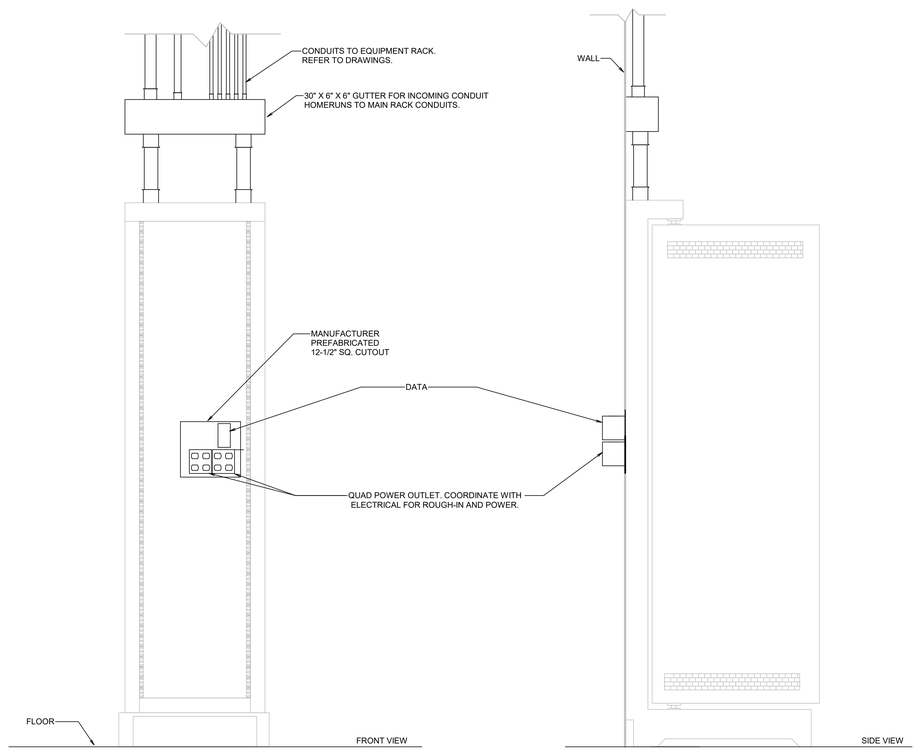

4 ARENA RACK ELEVATION ROUGH-IN
NO SCALE

VLK

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RCDD
Robert Frick
2025-05-29

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REVISIONS

Revision No.	Revision Date

Director	Drawn By
Approver	RWB
Designer	Quality Control
Designer	RF
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PROJECT NO.
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SHEET TITLE
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T6.05C

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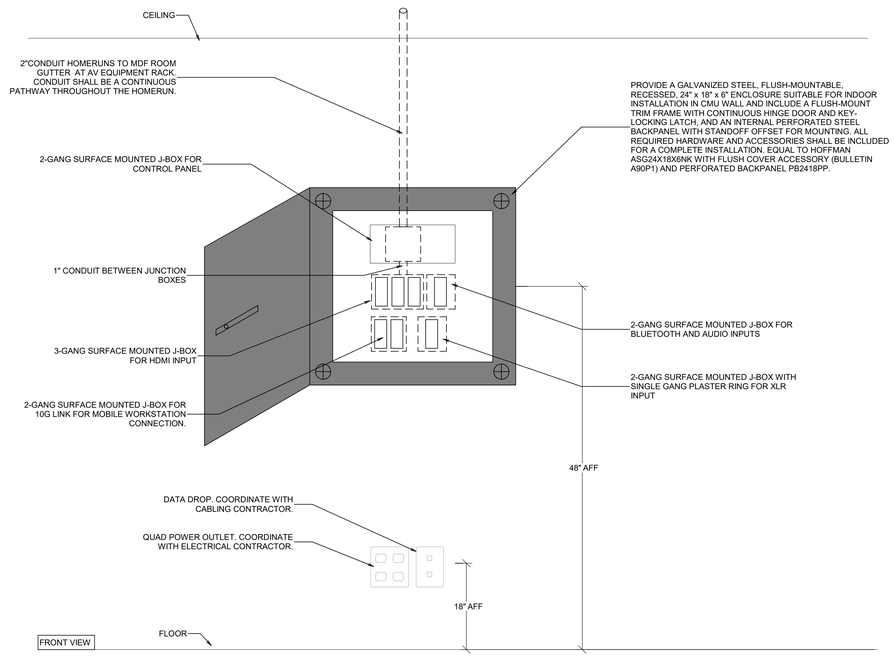
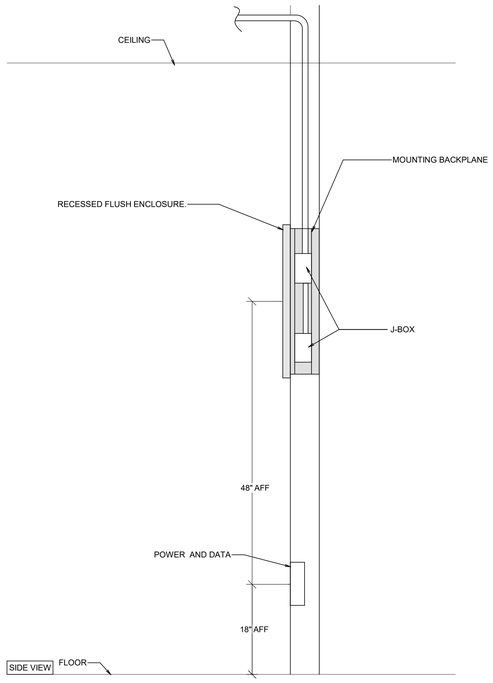


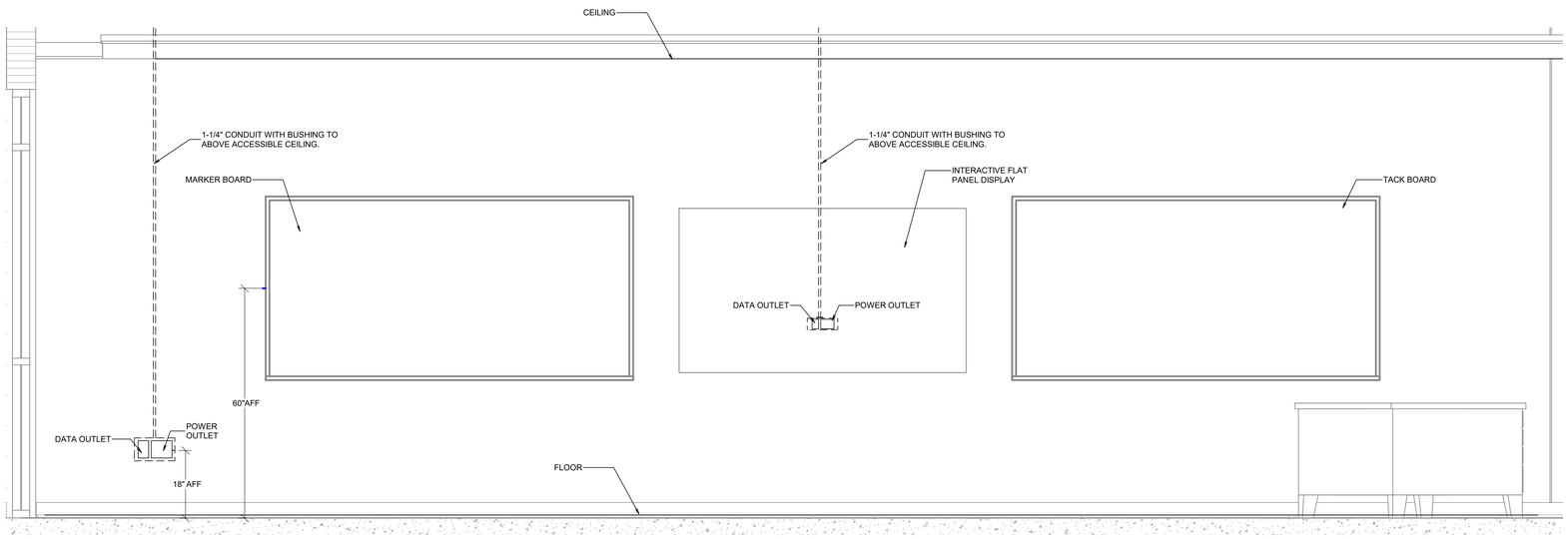
1 PRESENTER STATION ROUGH-IN FRONT VIEW
NO SCALE



2 PRESENTER STATION ROUGH-IN SIDE VIEW
NO SCALE

SHEET NOTES:

1. VERIFY MOUNTING HEIGHT AND LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
2. REFER TO TECHNOLOGY SHEETS FOR DEVICE LOCATIONS.
3. COORDINATE ROUGH-IN OF POWER & DATA OUTLET WITH OTHER TRADES.
4. ALL BACKBOXES SHALL BE PROVIDED WITH SCREW SECURED FACEPLATES AS REQUIRED BY THE OWNER AND ARCHITECT FOR ACCEPTABLE APPEARANCE AND PROPER ORIENTATION.
5. ROUGH-IN DETAILS ARE FOR REFERENCE ONLY. REFER TO DRAWINGS FOR LOCATIONS AND ORIENTATIONS.



3 TEACHING WALL ELEVATION
NO SCALE

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2025-05-29

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Director	Drawn By
Approver	RWB
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IMPORTANT NOTES:

1. VERIFY MOUNTING HEIGHT AND LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
2. REFER TO TECHNOLOGY SHEETS FOR DEVICE LOCATIONS.
3. COORDINATE ROUGH-IN OF POWER & DATA OUTLET WITH OTHER TRADES.
4. ALL BACKBOXES SHALL BE PROVIDED WITH SCREW SECURED FACEPLATES AS REQUIRED BY THE OWNER AND ARCHITECT FOR ACCEPTABLE APPEARNCE AND PROPER ORIENTATION.
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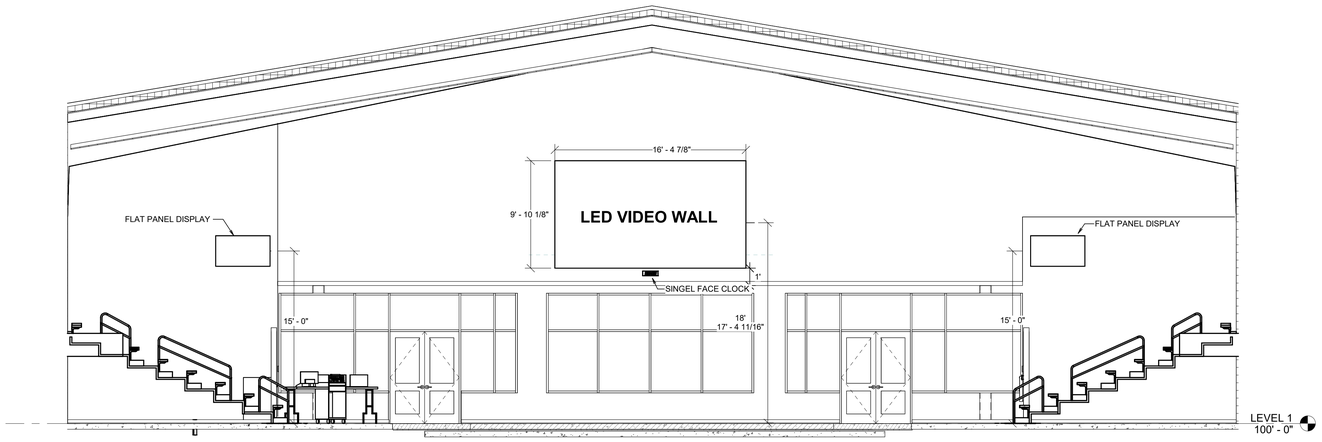

1 VIDEO WALL ELEVATION
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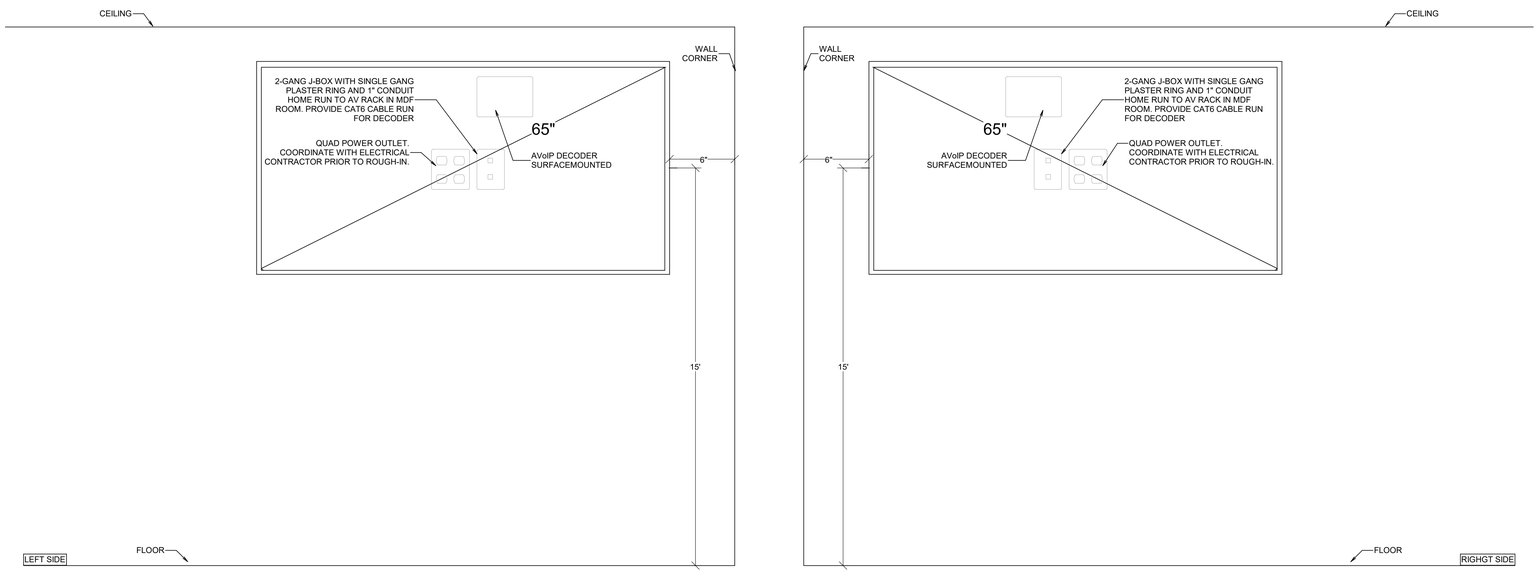

2 ARENA FLAT PANEL DISPLAY WALL
NO SCALE

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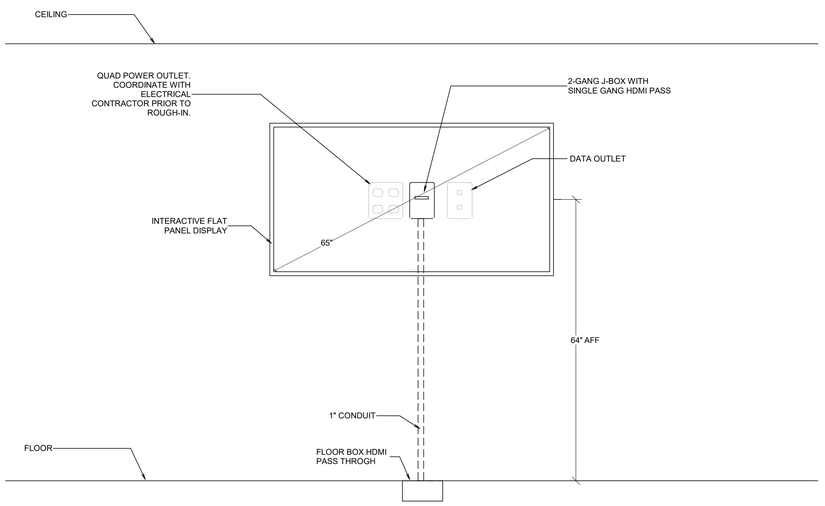
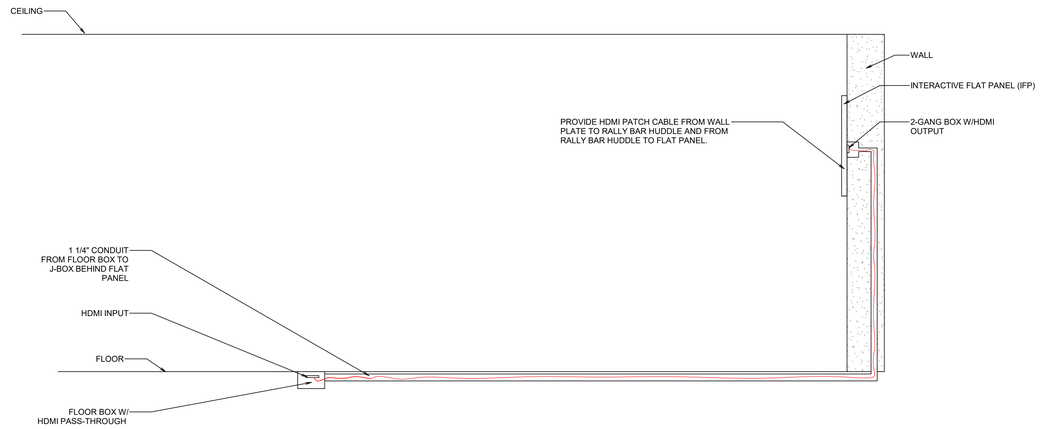


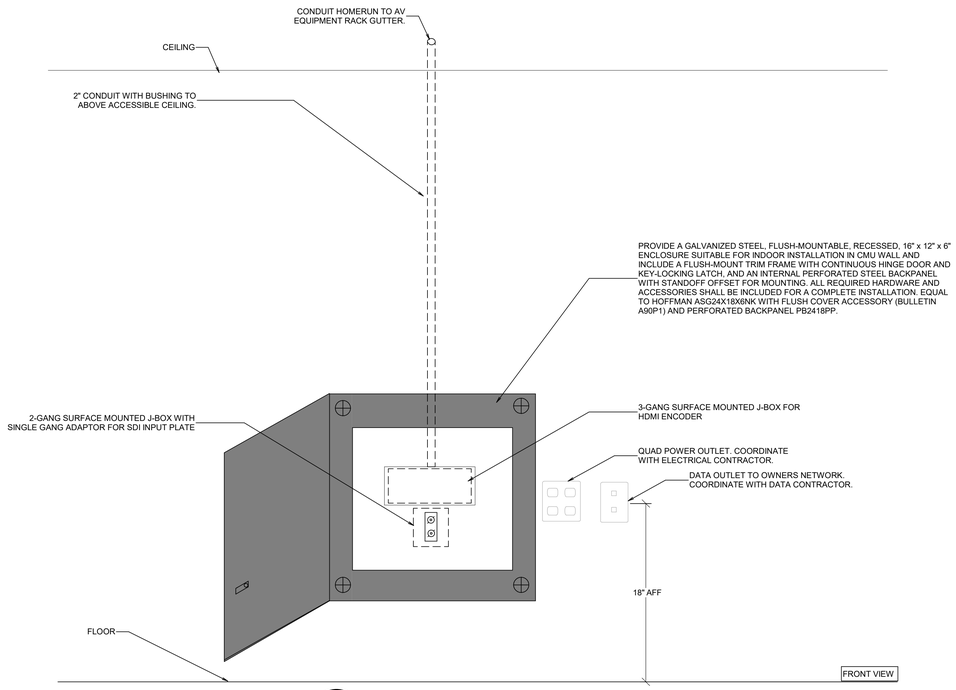
1 OFFICE ROOM AV FRONT VIEW
NO SCALE

IMPORTANT NOTES:

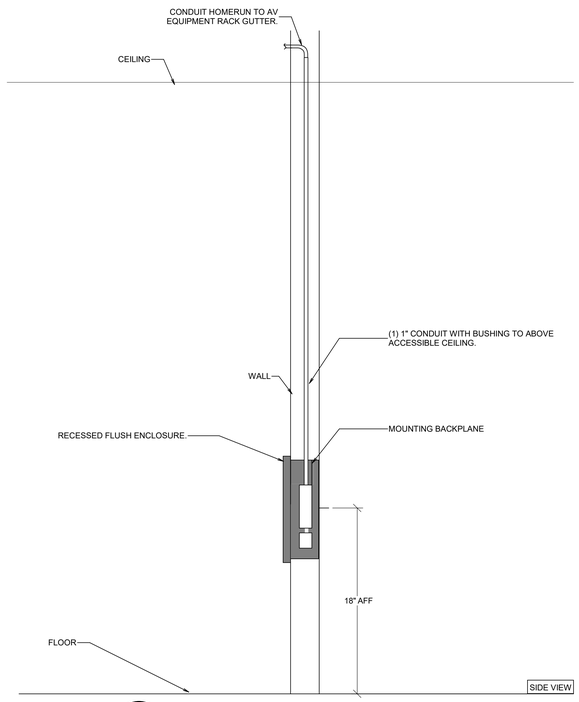
1. VERIFY MOUNTING HEIGHT AND LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
2. REFER TO TECHNOLOGY SHEETS FOR DEVICE LOCATIONS.
3. COORDINATE ROUGH-IN OF POWER & DATA OUTLET WITH OTHER TRADES.
4. ALL BACKBOXES SHALL BE PROVIDED WITH SCREW SECURED FACEPLATES AS REQUIRED BY THE OWNER AND ARCHITECT FOR ACCEPTABLE APPEARNCE AND PROPER OPERATION.
5.ROUGH-IN DETAILS ARE FOR REFERNCE ONLY. REFER TO DRAWINGS FOR LOCATIONS AND ORIENTATIONS.



2 OFFICE ROOM AV SIDE VIEW
NO SCALE



3 CAMERA STATION ROUGH-IN FRONT VIEW
NO SCALE



4 CAMERA STATION ROUGH-IN SIDE VIEW
NO SCALE

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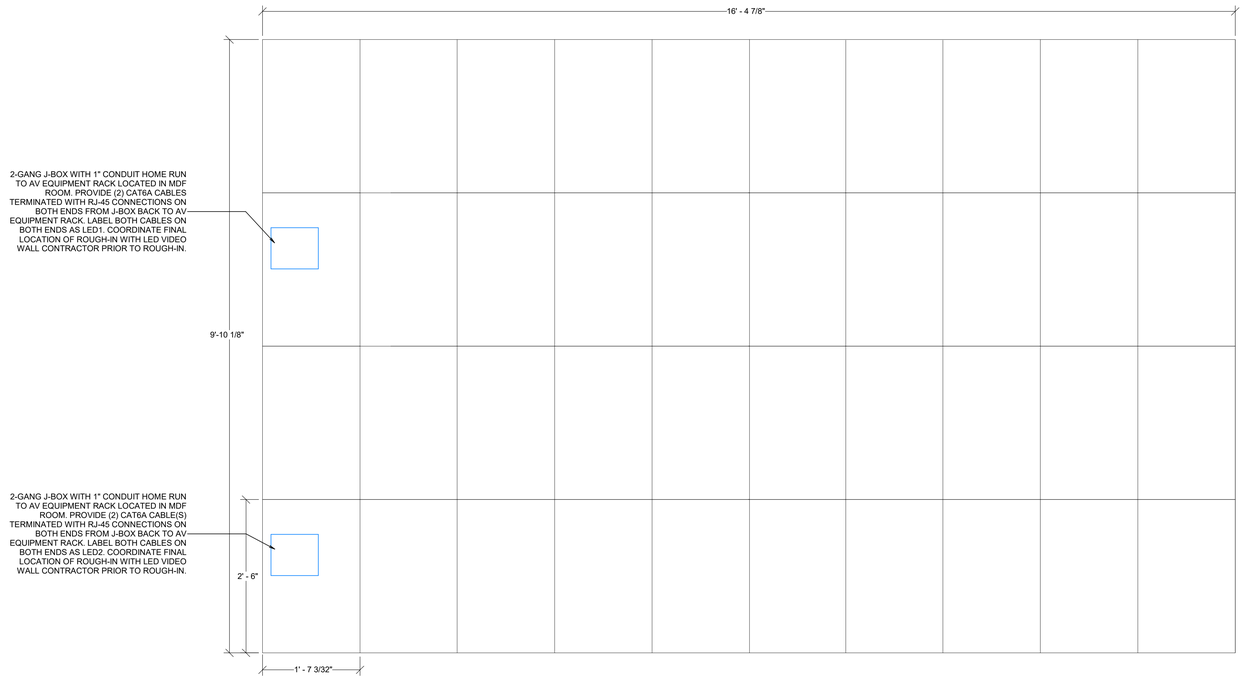

1 Electrical Rough-In Detail at Large LED Display
NO SCALE

VLK

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ISSUED: May 29, 2025

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