NEW MAINTENANCE & OPERATIONS WAREHOUSE

WHITE SETTLEMENT ISD

WHITE SETTLEMENT ISD

ARCHITECURE, CIVIL, STRUCTURAL, MEP, TECHNOLOGY

TDLR PROJECT REGISTRATION NUMBER - TABS2025018535

VLK

ARCHITECT

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

CIVIL ENGINEER

MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER

L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER

Salas O'Brien
12655 North Central Expressway Suite 720
Dallas, Texas 75243
Main Phone: 972.812.1270
www.salasobrien.com

TECHNOLOGY CONSULTANT

Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER

BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

REGISTERED ARCHITECT KAREN V. BROWN 23211 STATE OF TEXAS

05/20/2025

ISSUED: May 20, 2025

REVISIONS

Revision No.	Revision Date

Director LAH	Drawn By MO
Designer EA	Quality Control
Proj. Arch. Checker	

PROJECT NO.

24-103.00

SHEET TITLE

COVER

SHEET NO.

COVER

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE & OPERATIONS WAREHOUSE

NEW MAINTENANCE & OPERATIONS WAREHOUSE

WHITE SETTLEMENT ISD

WHITE SETTLEMENT ISD

ABBREVIATIONS

A

AFF	ABOVE FINISH FLOOR
ACT	ACOUSTICAL CEILING TILE
ADDL.	ADDITIONAL
AB	AIR BARRIER
ACM	ALUMINUM COMPOSITE PANEL
ADA	AMERICANS WITH DISABILITIES ACT
AL/ALUM.	ALUMINUM
APPROX.	APPROXIMATE OR APPROXIMATELY
ARCH.	ARCHITECT OR ARCHITECTURAL

B

BD	BOARD
BOW	BOTTOM OF WALL
BUR	BUILT-UP ROOFING
BLDG	BUILDING

C

℄	CENTER LINE
CR	CLASSROOM
CFS	COLD-FORMED STEEL
CONC.	CONCRETE
CMU	CONCRETE MASONRY UNIT
CM	CONSTRUCTION MANAGER
CONT.	CONTINUOUS
CI.	CONTINUOUS INSULATION
CJ	CONTROL JOINT
COORD.	COORDINATE
CORR.	CORRIDOR

D

DIA.	DIAMETER
DO.	DOOR OPENING
DN	DOWN
DS	DOWNSPOUT

E

EA	EACH
EW	EACH WAY
ELEC.	ELECTRICAL
EWC	ELECTRIC WATER COOLER
ELEV.	ELEVATION
EQ	EQUAL
EQUIP.	EQUIPMENT
EXIST.	EXISTING
EJ	EXPANSION JOINT
EXT.	EXTERIOR
EIFS	EXTERIOR INSULATION & FINISH SYSTEM

F

FT.	FEET or FOOT
FRP	FIBERGLASS REINFORCED PLASTIC
FV	FIELD-VERIFY
FIN.	FINISH
FF	FINISH FLOOR
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER & CABINET
FHC	FIRE HOSE CABINET
FHCS	FLAT-HEAD COUNTERSUNK
FLR.	FLOOR
FD	FLOOR DRAIN
FLUOR.	FLUORESCENT

G / H

GALV.	GALVANIZED
GA	GAGE
GC	GENERAL CONTRACTOR
GO	GLAZED OPENING
GYP	GYPSUM
HT	HEIGHT
HP	HIGH POINT
HM	HOLLOW METAL
HORIZ.	HORIZONTAL
HB	HORIZONTAL BLINDS
HDG	HOT-DIP GALVANIZED
HR.	HOUR

I / J / K

ID	INSIDE DIAMETER
INSUL.	INSULATION
IFP	INTERACTIVE FLAT PANEL
IMB	INTERACTIVE MARKERBOARD
INT.	INTERIOR
IBC	INTERNATIONAL BUILDING CODE

L

LAV.	LAVATORY
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP.	LOW POINT
LVT	LUXURY VINYL TILE

M

MFR.	MANUFACTURER
MFG.	MANUFACTURING
MB	MARKER BOARD
MO	MASONRY OPENING
MAX.	MAXIMUM
MECH.	MECHANICAL

M (CONT.)

MOD BIT	MODIFIED BITUMEN
MULL.	MULLION
MEP	MECHANICAL-ELECTRICAL-PLUMBING
MCM	METAL COMPOSITE MATERIAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS

N

NOM.	NOMINAL
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO./#	NUMBER

O

OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OPPOSITE HAND
OHD.	OVERHEAD
OFCI	OWNER-FURNISHED, CONTRACTOR-INSTALLED
OFOI	OWNER-FURNISHED, OWNER INSTALLED

P / Q

PR.	PAIR
P.LAM.	PLASTIC LAMINATE
PL.	PLATE
PLUMB.	PLUMBING
PT.	POINT
PCF.	POUNDS PER CUBIC FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PREFAB.	PREFABRICATED
PROJ.	PROJECTOR or PROJECTION
QT	QUARRY TILE

R

R.	RADIUS
REBAR	REINFORCING BAR
REF.	REFERENCE or REFER TO
RCP	REFLECTED CEILING PLAN
RE:	REGARDING
REFG.	REFRIGERATOR
REINF.	REINFORCE or REINFORCING
REQD.	REQUIRED
R.	RISER (STAIR)
RS	ROLLING WINDOW SHADES
RD	ROOF DRAIN
RO	ROUGH OPENING

S

SIM.	SIMILAR
SC	SOLID CORE
SAB	SOUND ATTENUATION BLANKET
SAFB	SOUND ATTENUATION FIRE BLANKET
STC	SOUND TRANSMISSION CLASS
SPEC.	SPECIFICATION
SQ.	SQUARE
SF	SQUARE FOOT
SS	STAINLESS STEEL
STRUC.	STRUCTURAL
SUSP.	SUSPENDED

T

TB	TACKBOARD
TS	TACKSTRIP
TW	TACK WALL
TC	TEACHER'S CABINET
TAS	TEXAS ACCESSIBILITY STANDARDS
T.	TREAD (STAIR)
T&B	TOP & BOTTOM
TO	TOP OF
TC	TOP OF CURB
TOD	TOP OF DECK
TOJ	TOP OF JOIST
TOS	TOP OF STEEL
TOW	TOP OF WALL
TYP.	TYPICAL

U / V

U/C	UNDER COUNTER
U.L.	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
VERT.	VERTICAL
VCT	VINYL COMPOSITION TILE
VWC	VINYL WALL COVERING

W / X / Y / Z

WC	WATER CLOSET
WRB	WATER-RESISTIVE BARRIER
WT.	WEIGHT
W.	WIDE
W/	WITH
W/O	WITHOUT
WP	WORKING POINT
WWF	WELDED WIRE FABRIC

BUILDING INFORMATION

APPROXIMATE BUILDING AREAS

Building A

GROSS SQ. FT:	10,612 SQ. FT
NET SQ. FT:	10,072 SQ. FT

Building B

GROSS SQ. FT:	10,559 SQ. FT
NET SQ. FT:	10,072 SQ. FT

LEGAL DISCRIPTION : 1316 MARY K LANE, WHITE SETTLEMENT, TEXAS 76108

BUILDING CONSTRUCTION INFORMATION

Building A

Primary Occupancy:	Storage - S1
Accessory Occupancy	Manufacturing - F1
Accessory Occupancy	Business – B

Building B

Occupancy	Storage - S1

GENERAL NOTES

1. Refer to the CODE-series sheets tor 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.

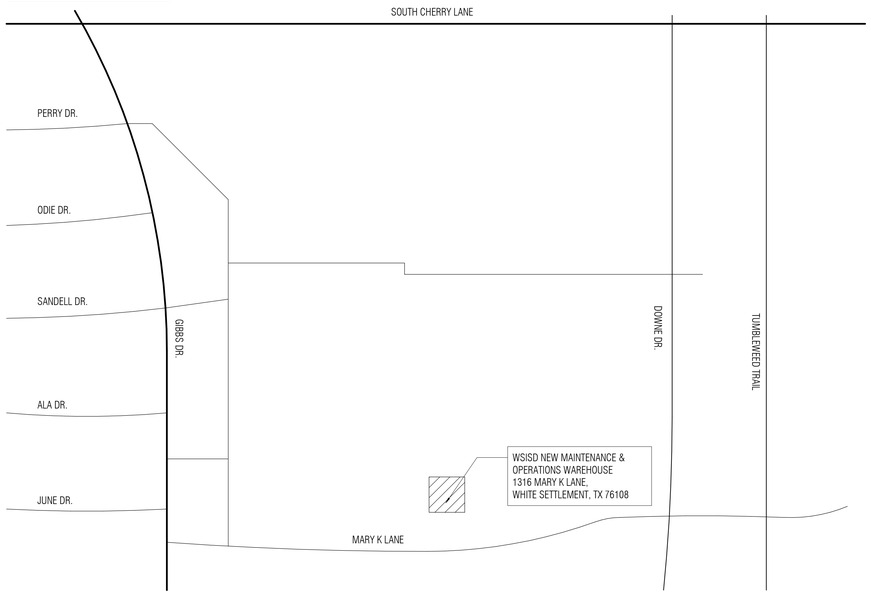
MATERIAL LEGEND

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

SYMBOLS LEGEND

Room name / 101	ROOM NUMBER
101	DOOR NUMBER
AC	ACESS CONTROL
Room name / 150 SF	AREA TAG
1 / A101 SIM	CALLOUT HEAD
	DEMOLITION
1	ALUMINUM-FRAMED GLAZED OPENING SYSTEM
2.0 / 1	HOLLOW METAL-FRAMED GLAZED OPENING SYSTEM
1	PARTITION TYPE
1	TOILET ACCESSORY
XX	SPECIALY EQUIPMENT
1 Ref / A101 Ref / 1/ A101 Ref / 1 Ref	1/ A101 Ref
1	
A101 Ref / 1/ A101 Ref / A101 Ref / 1/ A101 Ref	

SITE LOCATION MAP



INDEX OF DRAWINGS

INDEX OF DRAWINGS

TDLR PROJECT REGISTRATION NUMBER - TABS2025018535

VLK

ARCHITECT

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

CIVIL ENGINEER

MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER

L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
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Salas O'Brien
12655 North Central Expressway Suite 720
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Main Phone: 512.468.8300
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1450 N. Jim Wright Freeway
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Main Phone: 817.467.4981
www.btcbuilders.com

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE & OPERATIONS WAREHOUSE

REGISTERED ARCHITECT
STEVEN V. BROWN
23211
STATE OF TEXAS

05/20/2025

ISSUED: May 20, 2025

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Designer | Quality Control

Proj. Arch.

PROJECT NO.

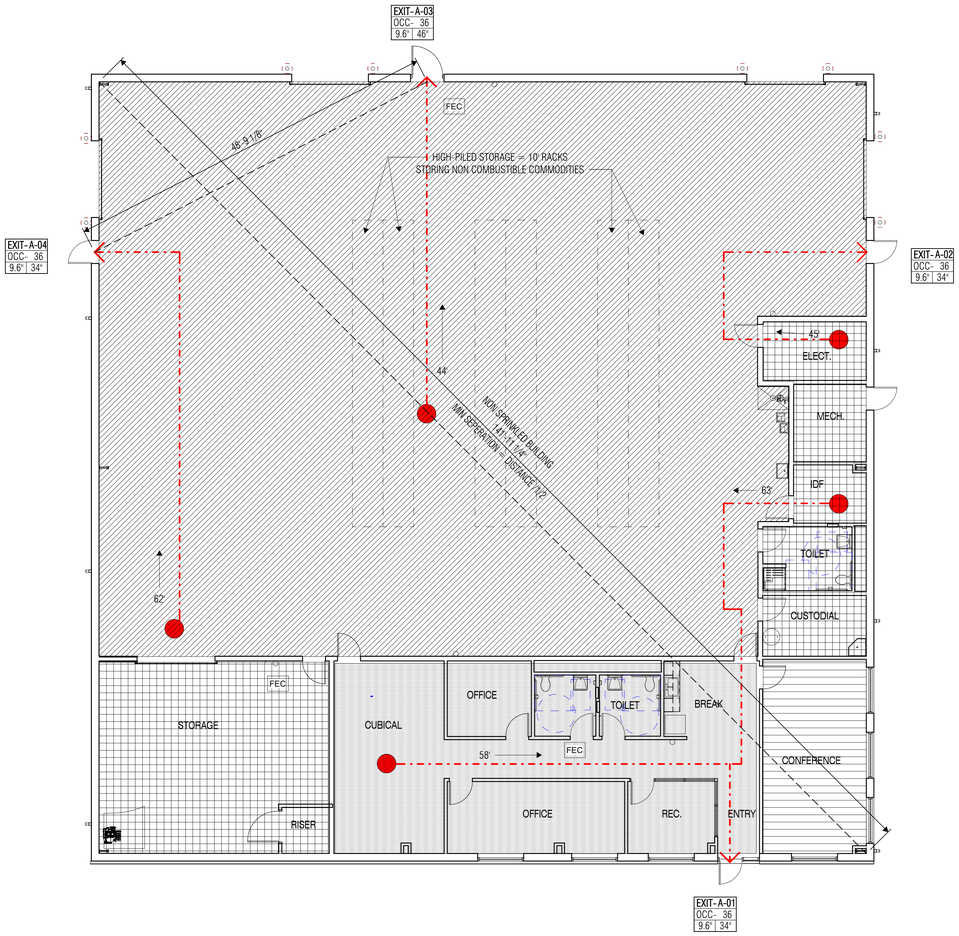
24-103.00

SHEET TITLE

INDEX, GENERAL NOTES, AND ABBREVIATIONS

SHEET NO.

INDEX



N
PLAN NORTH = TRUE NORTH

1 FIRE SAFETY PLAN
SCALE: 1/8" = 1'-0"

BUILDING CRITERIA

PROJECT INFORMATION
Project name - New Maintenance and Operations Warehouse
Owner – White Settlement ISD
Project Location - 1316 Mary K Lane, White Settlement, TX, United States
Construction Type – IIB / Non Sprinklered

APPLICABLE CODES
- 2018 International Building Code (IBC)
- 2018 International Plumbing Code (IPC)
- 2018 International Mechanical Code (IMC)
- 2018 International Fuel Gas Code (IFGC)
- 2018 International Energy Conservation Code(IECC)
- 2018 International Property Maintenance Code (IPMC)
- 2017 National Electrical Code(NEC)
- 2018 International Fire Code (IFC)

APPROXIMATE BUILDING AREAS
GROSS SQ. FT - 10,567 SQ. FT
NET SQ. FT. - 8,875 SQ. FT
Allowable Building Height – 55'
Allowable Stories Above Grade - 2

New Maintenance and Operations Warehouse - Type IIB – Construction
Maximum Allowable Building Area
Aa = At + (NS x If)

Warehouse - S1 – Type IIB Construction
Aa= 17500 + (17500 x 0.63) = Aa=28,525
Designed 10,567 SQ FT

Fire Resistive Requirements – Construction Type IIB
- Primary Structural Frame – 0hr
- Exterior Bearing Walls – 0hr
- Interior Bearing Walls – 0hr
- Interior Non-Bearing Walls and Partitions – 0hr
- Floor Construction and Secondary Members – 0hr
- Roof Construction and Secondary Members – 0hr

No separation is required between occupancies per Table 508.4

Occupancy Classification
Primary Occupancy – Storage - S1
Accessory Occupancy – Manufacturing - F1
Accessory Occupancy – Business – B
Total Occupancy – 48 occupants

Means of egress
Total Occupants - 48
Exits Required (Per Table 1006.3.3) – 2 Exits
Exits Provided - 4 Exits
Exits Width Required - 9.6"
Exits Width Provided - 34" & 46"

Minimum Capacity in inches per IBC 1005.3.2 – (48 OCC) (0.2) =9.6"
Maximum Travel Distance per table 1006.2.1 – 75'

LIFE SAFETY PLAN LEGEND

PATH OF EGRESS

EXIT NUMBER → EXIT- 00
NUMBER OF OCCUPANTS THRU EXIT → OCC- # #
EGRESS WIDTH REQUIRED/PROVIDED → XX" | XX"
MEANS OF EGRESS EXIT AT DOOR (w/ Occupant Load)

FEC — FIRE EXTINGUISHER CABINET

KB — KNOX BOX

BUILDING A OCCUPANCY TABULATION PER 2018 IBC

AREA	SQUARE FOOTAGE	OCCUPANCY COUNT	
WAREHOUSE AREA (500 GROSS)	6,944 SF	6,944 SF / 500 GROSS	13
ACCESSORY AREA (300 GROSS) STORAGE, ELEC. MECH, IDF, TOILET, CUSTODIAL	1,257 SF	1,257 SF / 300 GROSS	4
BUSINESS AREA (150 GROSS) CUBICAL, OFFICE, TOILET, BREAK, RECEPTION, ENTRY	1,364 SF	1,364 SF / 150 GROSS	9
ASSEMBLY AREA (15 NET) CONFERENCE	338 SF	338 SF / 15 NET	22
TOTAL OCCUPANTS			48

PLUMBING FIXTURE COUNTS

BUILDING S1 - 48 OCC.	WATER CLOSETS	LAVATORIES	DRINKING FOUNTAIN	SERVICE SINK
REQUIRED	1 PER 100 MALE & FEMALE	1 PER 100 MALE & FEMALE	1 PER 1000 OCC	1
PROVIDED	3	3	1	1

CALQULATIONS BASED ON TABLE IBC 2018 - TABLE 2902.1 - BUILDING USE = WAREHOUSE

IECC CODE 2018	CLIMATE ZONE: 3A	BUILDING GROUP: WAREHOUSE
LOCATION	REQUIRED	PROVIDED
OPAQUE BUILDING ENVELOPE		
ROOFS		
Insulated Entirely Above Deck	R-19 + R-11LS	R-19 + R-11LS
WALLS - ABOVE GRADE		
Metal Building	R-13 + R-6.5ci	R-13 + R-6.5ci
FLOORS		
Mass (Concrete) - Slab on Grade	Not Required	Not Required
DOORS - OPAQUE		
Swinging	U-0.61	U-0.29
Insulated Metal Rolling	U-0.90 / R-4.75	U-0.29 / R-10
FENESTRATION		
FIXED FENESTRATION - TYPE		
Fixed (Storefront)	U-0.46	U-0.29

ABBREVIATIONS
- R = R-VALUE
- U = U-VALUE
- ci = CONTINUOUS INSULATION
- SHGC = SOLAR HEAT GAIN COEFFECIENT

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
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Salas O'Brien
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WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE & OPERATIONS WAREHOUSE

REGISTERED ARCHITECT — LAUREN V. BROWN — 33211 — STATE OF TEXAS
05/20/2025

ISSUED: May 20, 2025

REVISIONS

Revision No.	Revision Date

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Designer Designer
Proj. Arch. LH
Drawn By MO
Quality Control

PROJECT NO.
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SHEET TITLE
CODE REVIEW, BUILDING DESIGN CRITERIA & DIAGRAMS

SHEET NO.
CODE.1

NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108

NOTE:

ALL OVERHEAD ELECTRIC LINES SHALL MEET THE HEIGHT REQUIREMENTS SET FORTH BY THE CITY FIRE DEPARTMENT AND UTILITY OWNER. CONTRACTOR SHALL ADJUST/RAISE EXISTING OVERHEAD ELECTRIC LINES CROSSING FIRE LANES AS REQUIRED TO MEET THE FIRE DEPARTMENT REQUIREMENTS. CONTRACTOR SHALL LOCATE ALL EXISTING OVERHEAD ELECTRIC LINES PRIOR TO ANY CONSTRUCTION. COORDINATE WITH UTILITY OWNER.

WARNING TO CONTRACTOR:

CALL 1-800-344-8377 (DIG-TESS) OR OTHER UTILITY LOCATING SERVICES 48 HOURS PRIOR TO CONSTRUCTION ACTIVITY. MJ THOMAS ENGINEERING IS NOT RESPONSIBLE FOR KNOWING ALL EXISTING UTILITIES OR DEPICTING EXACT LOCATIONS OF UTILITIES ON DRAWINGS.

EXISTING IRRIGATION SYSTEM NOTE:

THE CONTRACTOR SHALL PROTECT ALL EXISTING SPRINKLER HEADS, LINES, ETC. DURING THE DURATION OF CONSTRUCTION. ANY SPRINKLER LINES, HEADS, METERS, VALVES, ETC. THAT ARE DAMAGED OR RELOCATED BY CONSTRUCTION SHALL BE REPAIRED AND/OR REPLACED TO ORIGINAL CONDITION OR BETTER (NO SPECIAL PAY). COORDINATE WITH OWNER AND/OR LANDSCAPE IRRIGATION PLANS.

UTILITY RELOCATION NOTE:

IF ANY EXISTING UTILITY POLES, POWER POLES, GUY WIRES, TELEPHONE UTILITIES, CABLE BOXES, FIBER OPTIC CABLE, ETC. ARE FOUND TO BE IN CONFLICT WITH THESE CONSTRUCTION PLANS, THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANY AND COORDINATE THE RELOCATION OF ANY AND/OR ALL SUCH UTILITIES (NO SPECIAL PAY).

CONTRACTOR ADVISORY:

THE CONTRACTOR, AND HIS AGENTS, SUB CONTRACTOR/ENGINEER/SURVEYOR, ARE COMPLETELY RESPONSIBLE FOR THE VERIFICATION OF THE ACCURACY OF THE DIMENSION CONTROL FURNISHED HEREIN. THE OWNER, AND HIS AGENTS, ARE NOT RESPONSIBLE FOR THE ACCURACY OF THE COORDINATES FURNISHED. THE CONTRACTOR IS REQUIRED TO VERIFY ALL OF THE COORDINATES FOR ACCURACY AND CONFIRM THE LOCATIONS OF ALL UTILITIES TO BE CONSTRUCTED, BOTH HORIZONTALLY AND VERTICALLY. DISCREPANCIES FOUND BY THE CONTRACTOR SHALL BE REPORTED IN WRITING, TO THE OWNER IMMEDIATELY FOR RECONCILIATION.

HYDROMULCH NOTE:

ALL AREAS OF THE SITE INCLUDING ANY OFF-SITE AREA THAT IS DISTURBED BY CONSTRUCTION ACTIVITIES, SHALL RECEIVE AT A MINIMUM, HYDROMULCH AND 6" OF TOP-SOIL. REFER TO LANDSCAPE, DEMOLITION, GRADING, PAVING, DRAINAGE, WATER, SEWER, IRRIGATION AND SEDIMENT CONTROL PLANS TO DETERMINE ALL LIMITS OF DISTURBANCE. CONTRACTOR SHALL PROVIDE SOD AS REQUIRED ELSEWHERE IN THE PLANS.

!!! CRITICAL !!!

LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE AND ARE BASED ON PUBLIC RECORDS. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES, BOTH HORIZONTALLY AND VERTICALLY, BEFORE THE COMMENCEMENT OF ANY CONSTRUCTION.

UNDERGROUND FACILITIES AND TELEPHONE NUMBERS

THE LOCATION OF UNDERGROUND FACILITIES INDICATED ON THE PLANS IS TAKEN FROM THE PUBLIC RECORDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE ARRANGEMENTS WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES PRIOR TO WORKING IN THE AREA TO CONFIRM THEIR EXACT LOCATION AND TO DETERMINE WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL UNDERGROUND FACILITIES.

UNDERGROUND FACILITY OWNER	TELEPHONE NUMBER
WHITE SETTLEMENT TRANSPORTATION & PUBLIC WORKS	(817)246-4971
WHITE SETTLMENT WATER DEPARTMENT	(817)246-4971
ATMOS MIDTX	(866)322-8667
ONCOR GAS & ELECTRIC	(888)313-4747
ZAYO GROUP	(888)955-6229
SPECTRUM	(888)963-6457
CONTERRA ULTRA BROADBAND LLC	(866)545-6077
AT&T	(800)331-0050

811

Know what's below.
Call before you dig.

BENCHMARKS:

BM #1: X-BOX
ELEVATION :- 741.13

BM#2: X-BOX
ELEVATION:- 740.19

THE PURPOSE OF THESE PLANS IS TO PROVIDE GUIDE FOR THE BIDDING PROCESS TO CONSTRUCT ALL ITEMS SHOWN HEREIN UNLESS DELETED BY REFERENCE.
ITEMS INCLUDING, BUT ARE BUT NOT LIMITED TO:
EXCAVATION (ALL SITE WORK SHOWN)
COMPACTED FILL (CONTROLLED DENSITY EMBANKMENT)
WATER LINES AND APPURTENANCES
SANITARY SEWER LINES AND APPURTENANCES
STORM SEWER LINES AND APPURTENANCES
DISPOSAL OF ALL DEMOLISHED MATERIALS AND TREES
STRIPING FOR FIRE LANES AND PARKING AREAS
STABILIZED SUBGRADE
CONCRETE PAVING 7", 6" & 5" THICK AND MONO CURB
CONCRETE SIDEWALKS 5" THICK WITH A.D.A. RAMPS
CONCRETE CURB STOPS AT A.D.A. PARKING SPACES WHERE REQUIRED BY CODE
EXCAVATION (ALL SITE WORK SHOWN)

LEGEND

—— OIL ——	EXISTING OIL LINE
——\\\\——\\\\——	EXISTING ASPHALT PAVEMENT
——— – – ———	PROPERTY LINES
—— – ——— – ——	CENTERLINE OF ROAD
— — — — — — —	SAWCUT/EASEMENT
———————	EXISTING GAS LINE
—— OHE —— OHE ——	EXISTING OVERHEAD ELECTRIC LINES
—— UGE —— UGE ——	EXISTING UNDERGROUND ELECTRIC LINES
——CATV——CATV——	EXISTING CABLE/TELEVISION LINES
——F/O——F/O——	EXISTING FIBER-OPTIC LINES
——T——T——	EXISTING TELEPHONE LINES
——SS——SS——	EXISTING SANITARY SEWER LINES
——W——W——	EXISTING WATER LINES
—X—X—X—X—	BARBED-WIRE FENCE
—○—○—○—○—	CHAIN-LINK FENCE
—[E]—[E]—[E]—	ELECTRIC FENCE
—//—//—//—	WOOD FENCE
—□—□—□—□—	MISC. FENCES (AS APPLICABLY NOTED)
═══ – ═══ – ═══	STORM SEWER PIPE (OUTSIDE PIPE DIA. SHOWN)

EXISTING FEATURES		PROPOSED FEATURES	
-○-	FIRE HYDRANT	-●-	FIRE HYDRANT
WV ⋈	WATER VALVE	⧓	WATER VALVE
G	GAS METER	⧫	FIRE RISER
W	WATER METER	▶[	PLUG
⊡	TELEPHONE RISER	WM	WATER METER
⌁	POWER POLE	IR	IRRIGATION METER
⊠	MAIL BOX	DC	DETECTOR CHECK
∘	IRON PIN	▭●	CURB INLET
△	TRAVERSE POINT	■	GRATE INLET
-∘-	SIGN	◙	STORM SEWER MANHOLE
●	FENCE CORNER	●	SANITARY SEWER MANHOLE
☼	LIGHT POLE		
←——	GUY WIRE ANCHOR		
⊙	TREE		
○	BUSH		
⊠	TRANSMISSION TOWER		

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION METHODS OF THE CONTRACT SHALL BE AS STATED IN THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) AND IN STRICT ACCORDANCE WITH THE STANDARDS OF THE CITY IN WHICH THE CONSTRUCTION OCCURS.
2. THE CONTRACTOR SHALL FIELD VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES WITHIN THE LIMITS OF THE CONSTRUCTION AREA BEFORE COMMENCING CONSTRUCTION. THE LOCATIONS OF ALL SPRINKLER SYSTEM LINES SHALL BE LOCATED BEFORE ANY EXCAVATION OCCURS. ANY DAMAGE TO SPRINKLER SYSTEM SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR AND SHALL BE INCLUDED IN THE CONTRACT PRICE.
3. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY THE CONSTRUCTION TO THE ORIGINAL CONDITION OR BETTER. RESTORED AREAS INCLUDE BUT ARE NOT LIMITED TO TRENCH BACK FILL, SIDE SLOPES, FENCES, IRRIGATION SYSTEMS, CULVERT PIPES, DRAINAGE DITCHES, DRIVEWAYS, PRIVATE YARDS, AND ROADWAYS. THE CONTRACTOR SHALL INCLUDE PAVEMENT RESTORATION AND SHALL BE CONSIDERED SUBSIDIARY TO HIS BID PRICE.
4. ALL FENCES REMOVED TO FACILITATE CONSTRUCTION SHALL BE REPLACED AT THE EXISTING OR PROPOSED LOCATION AS DIRECTED BY THE OWNER'S PROJECT REPRESENTATIVE.
5. REMOVAL OF EXISTING CULVERTS AND DRAINAGE STRUCTURES WILL BE SUBSIDIARY TO THE BID PRICE.
6. IN THE EVENT THAT EXISTING UTILITIES SUCH AS WATER, GAS, TELEPHONE, ELECTRIC, ETC. MUST BE TAKEN OUT OF SERVICE TO FACILITATE CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE TEMPORARY UTILITIES TO THE SATISFACTION OF THE OWNER. BACK FILL FOR WATER AND SEWER LINES SHALL BE PER CITY DETAILS.
7. IF GROUNDWATER IS ENCOUNTERED WHEN LAYING UTILITY LINES, 3/4" WASHED ROCK MUST BE PLACED 6" BELOW AND 6" ABOVE THE UTILITY LINE.
8. ONE LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. ALL TRAFFIC CONTROL SIGNS, BARRICADES, AND FLAGGING SHALL BE INSTALLED IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. CONTRACTOR SHALL BE RESPONSIBLE FOR THE TRAFFIC CONTROL PLAN.
9. ADEQUATE MEASURES SHALL BE TAKEN TO PREVENT EROSION. IN THE EVENT THAT EROSION OCCURS AS A RESULT OF CONSTRUCTION, THE CONTRACTOR SHALL RESTORE THE ERODED AREA TO ORIGINAL CONDITION PRIOR TO HYDROMULCHING. HYDROMULCHING SHALL INCLUDE ALL TEMPORARY WATER COSTS.
10. CONTRACTOR SHALL STRIP TOP SOIL & STORE IN DESIGNATED STOCK PILE AREA SHOWN ON THE PLAN, OR AS DIRECTED BY THE OWNERS PROJECT REPRESENTATIVE.
11. CONTRACTOR SHALL IDENTIFY ALL TREES TO BE SAVED AS INDICATED ON THE CONSTRUCTION DRAWINGS WITH PINK RIBBONS AND SHALL PROTECT AND SAVE ALL TREES AS MARKED. NO EXCAVATION, STOPPING, STANDING, STAGING, STORING, DRIVING OR PARKING ALLOWED IN DRIP LINE OF TREES UNLESS SHOWN ON THE CONSTRUCTION PLANS.
12. ROUGH GRADING SHALL BE WITHIN 0.1 FT. + OR - OF FINISHED GRADES SHOWN ON THE SITE GRADING. UNDER PAVEMENT FINISHED GRADES WILL BE CONSTRUCTED TO THE TOP OF SUBGRADE. FINISHED GRADE SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS, WITHIN + OR - 0.02'.
13. THE CONTRACTOR SHALL INSTALL ALL GRAVITY LINES (SANITARY SEWER, STORM SEWER AND FRENCH DRAINS) BEFORE INSTALLATION OF WATER LINES AND APPURTENANCES.
14. THE CONTRACTOR, AND HIS AGENTS, SUB-CONTRACTOR/ENGINEER/SURVEYOR, ARE COMPLETELY RESPONSIBLE FOR THE VERIFICATION OF THE ACCURACY OF THE DIMENSION CONTROL FURNISHED HEREIN. THE OWNER, AND HIS AGENTS, ARE NOT RESPONSIBLE FOR THE ACCURACY OF THE COORDINATES FURNISHED. THE CONTRACTOR IS REQUIRED TO VERIFY ALL THE COORDINATES FOR ACCURACY AND CONFIRM THE LOCATIONS OF ALL UTILITIES TO BE CONSTRUCTED, BOTH HORIZONTALLY AND VERTICALLY. DISCREPANCIES FOUND BY THE CONTRACTOR SHALL BE REPORTED, IN WRITING, TO THE OWNER IMMEDIATELY FOR RECONCILIATION.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIRED FOR THIS PROJECT. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SWPPP IN ACCORDANCE WITH THE REQUIREMENTS OF THE TPDES GENERAL PERMIT TXR 1500000. THE CONTRACTOR SHALL SPECIFY THE PLAN AS A JOINT SWPPP FOR BOTH THE CONTRACTOR AND THE OWNER. THE OWNER WILL PREPARE THE OWNER'S N.O.I., BUT THE CONTRACTOR SHALL SUBMIT BOTH THE CONTRACTOR'S AND THE OWNER'S N.O.I. AFTER COMPLETION OF THE SWPPP TO THE TCEQ. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR SUBMITTING OTHER DOCUMENTS REQUIRED BY THE TPDES GENERAL PERMIT TXR 1500000, INCLUDING THE N.O.T. ALL DOCUMENTS SHALL BE SUBMITTED ACCORDING TO THE SCHEDULE INDICATED IN THE TPDES GENERAL PERMIT TXR 1500000.
16. ALL TREES WITHIN THE CONSTRUCTION ZONE SHALL BE WARRANTED FOR SURVIVAL BY THE CONTRACTOR FOR ONE YEAR AFTER THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY TO THE OWNER. ANY TREES THAT DIE PRIOR TO OR WITHIN THE WARRANTY PERIOD SHALL BE REPLACED WITHIN 10 DAYS OF A WRITTEN REQUEST FROM THE OWNER WITH THE SAME SIZE AND SPECIES OF TREES. THE CONTRACTOR SHALL INCLUDE THIS COST IN HIS BID PRICE.
17. CONTRACTOR SHALL PROVIDE TO THE ENGINEER, COPIES OF ALL DENSITY TESTS AND CYLINDER BREAKS. INCLUDING REPORTS OF DENSITY TESTS ON ALL BACK FILL FOR THE UTILITY LINES.
18. BEFORE SUBMITTING THEIR BID, EACH BIDDER MUST: (A) EXAMINE THE CONTRACT DOCUMENTS THOROUGHLY, (B) VISIT THE SITE TO FAMILIARIZE THEMSELVES WITH LOCAL CONDITIONS THAT MAY IN ANY MANNER AFFECT PERFORMANCE OF THE WORK, (C) FAMILIARIZE THEMSELVES WITH FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES, RULES, AND REGULATIONS WHICH MAY IN ANY MANNER AFFECT PERFORMANCE OF THE WORK, AND (D) CAREFULLY CORRELATE THEIR OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. REFERENCE IS MADE TO THE SUPPLEMENTARY CONDITIONS FOR THE IDENTIFICATION OF THE SURVEYS AND INVESTIGATION REPORTS OF SUBSURFACE OR LATENT EXISTING PHYSICAL CONDITIONS AFFECTING THE CONTRACT DOCUMENTS OR SPECIFICATIONS. THE DATA IS FURNISHED FOR INFORMATION ONLY AND NEITHER THE OWNER NOR ENGINEER GUARANTEES THE ACCURACY OF SUCH DATA. BEFORE SUBMITTING THEIR BID EACH BIDDER WILL, AT THEIR OWN EXPENSE, MAKE SUCH ADDITIONAL SURVEYS AND INVESTIGATIONS AS THEY MAY DEEM NECESSARY TO DETERMINE THEIR BID PRICE FOR PERFORMANCE OF THE WORK WITHIN THE TERMS OF THE CONTRACT DOCUMENTS.
19. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL UTILITIES.
20. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EROSION CONTROL MEASURES ONCE FINAL GROUND STABILIZATION IS ESTABLISHED.
21. A TRAFFIC CONTROL PLAN THAT COMPLIES WITH THE REQUIREMENTS SET FORTH IN THE WORK AREA TRAFFIC CONTROL MANUAL SHALL BE SUBMITTED BY THE CONTRACTOR TO AND APPROVED BY THE DEPARTMENT OF PUBLIC WORKS, TRAFFIC ENGINEERING MANAGER PRIOR TO THE INSTALLATION OF THE DRIVE APPROACHES.
22. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION OF THIS PROJECT WITH THE CONSTRUCTION SERVICES MANAGER. NOTIFICATION SHOULD BE MADE AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION SO THAT AN INSPECTOR MAY BE ASSIGNED TO THIS PROJECT.
23. CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT CITY STANDARD DETAILS.
24. IN THE CASE OF AN INCONSISTENCY BETWEEN DRAWINGS AND SPECIFICATIONS OR WITHIN EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM, THE BETTER QUALITY OR GREATER QUANTITY OF WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE ENGINEERS INTERPRETATION.
25. ALL EXISTING UTILITY LINE REPLACEMENTS SHALL BE COMPLETED WITH THE SAME MATERIAL AS THE EXISTING FACILITY OR PER CURRENT CITY REQUIREMENTS.
26. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DISPOSE OF ALL SURPLUS SOIL AND EXCAVATED MATERIAL NOT SUITABLE OR REQUIRED FOR FILL AND BACK FILL. THE MATERIAL SHALL BE HAULED OFF SITE AND DISPOSED OF IN A LEGAL MANNER, NO SPECIAL PAY.
27. THE CONTRACTOR SHALL USE EXTREME "CAUTION" WHEN WORKING IN AREAS ADJACENT TO GAS LINES, UNDERGROUND ELECTRIC CABLE, FIBER OPTIC CABLE AND UNDERGROUND TELEPHONE CABLE. ANY UTILITY FOUND IN CONFLICT WITH PROPOSED NEW GRADING, OR UTILITY INFRASTRUCTURE, SHALL BE ADJUSTED, MOVED, OR RELOCATED TO FACILITATE NEW CONSTRUCTION.
28. ALL DITCHES WILL BE BACK FILLED AT THE END OF EACH DAY. NO TRENCHES WILL BE LEFT OPEN OVERNIGHT.
29. WHEN THE PROPOSED UTILITIES CONFLICT WITH AN EXISTING STRUCTURE (CULVERT, MAILBOX, ETC.), THE CONTRACTOR MAY BORE OR REPLACE SAID STRUCTURE AT NO EXTRA COST IF NOT CALLED FOR IN PLANS TO BE REPLACED.
30. ALL DITCHES WILL BE REGRADED AFTER THE CONSTRUCTION HAS BEEN COMPLETED. NO EXTRA PAYMENT WILL BE MADE FOR THIS. ALL DISTURBED AREAS SHALL BE HYDRO-MULCHED UPON COMPLETION OF GRADE WORK.
31. TxDOT APPROVAL MUST BE OBTAINED PRIOR TO CONSTRUCTION IN STATE HIGHWAY RIGHT-OF-WAY.
32. WHERE EXISTING UTILITIES OR SERVICE LINES ARE CUT, BROKEN OR DAMAGED, THE CONTRACTOR SHALL REPLACE OR REPAIR THE UTILITIES OR SERVICE LINES WITH THE SAME TYPE OF ORIGINAL MATERIAL AND CONSTRUCTION, OR BETTER UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS, AT HIS OWN COST AND EXPENSE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS IN GRADES AND ALIGNMENT.
33. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING AND ADMINISTERING THE TRENCH SAFETY PLAN FOR THIS PROJECT PRIOR TO COMMENCING ANY UTILITY CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN THE TRENCH SAFETY PLAN AS PREPARED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED WITHIN THE STATE OF TEXAS. THE TRENCH SAFETY PLAN SHALL BE SPECIFIC TO THIS PROJECT, AND SUBMITTED TO THE ENGINEER, AND APPROPRIATE CITY OFFICIAL WITHIN THE CITY IN WHICH THE WORK OCCURS. ALL EXCAVATION, TRENCHING, AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR, OSHA, AND ANY LOCAL, STATE OR FEDERAL REGULATIONS FOR SAFETY THAT ARE IN EFFECT. "CONST. SAFETY AND HEALTH REGULATIONS," VOL. 29, SUB PART P, PG. 128-137, AND ANY AMENDMENTS THERETO.
34. THE CONTRACTOR SHALL NOT SCALE THE PLANS.
35. STATE LAW REQUIRES THAT DIG-TESS (1-800-344-8377) BE CONTACTED 48 HOURS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
36. CONTRACTOR SHALL VIDEO TAPE "ALL" AREAS ALONG THE PERIMETER OF ALL CONSTRUCTION AND AREAS TO BE USED FOR STAGING PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL PROVIDE THE OWNER & ENGINEER WITH A COPY OF THIS VIDEO ON DVD FOR THEIR RECORDS AT THE PRE-CONSTRUCTION MEETING. ITEMS DAMAGED BY CONSTRUCTION NOT INTENDED FOR DEMOLITION SHALL BE REPLACED TO "AS GOOD AS" OR "BETTER THAN" CONDITION PRIOR TO CONSTRUCTION.
37. CONTRACTOR SHALL INCLUDE IN HIS BID PRICE, ALL COSTS ASSOCIATED WITH PROVIDING TEMPORARY DE-WATERING OF THE SITE UNTIL THE STORM DRAINAGE IMPROVEMENTS ARE COMPLETED. THE DRAINAGE SYSTEM & SITE SHALL REMAIN AS DRY AS POSSIBLE AT ALL TIMES DURING CONSTRUCTION. THE METHOD OF DE-WATERING SHALL BE SUFFICIENT ENOUGH AS TO PREVENT THE FORMATION OF MUCK, SLUDGE, ETC. IN THE LOW AREAS.
38. ALL AREAS GRADED SHALL BE "BLUE-TOPPED" ON A 25' GRID PRIOR TO FINAL GRADING TO INSURE COMPLIANCE WITH THE GRADING PLAN. NO LOW POINTS IN THE GRADING SHALL BE ACCEPTABLE WITH THE EXCEPTIONS OF INLETS. ALL GRADED AND OR DISTURBED AREAS OF THE SITE SHALL BE HYDRO-MULCHED WITH A SEED MIX OR SODDED AS SHOWN ON THE LANDSCAPE & DEMOLITION PLANS.
39. THE CONTRACTOR SHALL RE-ESTABLISH ANY PROPERTY MARKER, BENCHMARK, ETC. DISTURBED DURING CONSTRUCTION TO ITS ORIGINAL LOCATION AND ELEVATION. NO ADDITIONAL PAY.
40. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE VERTICAL AND HORIZONTAL CONTROL SHOWN ON THE PLANS THROUGHOUT THE PROJECT.
41. THE CONTRACTOR SHALL NOT PLACE FILL OR WASTE MATERIAL ON ANY PRIVATE PROPERTY WITHOUT PRIOR WRITTEN AGREEMENT WITH SAID OWNER.
42. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING SIGNS, UTILITY POLES, SPRINKLER SYSTEMS, ETC. INCLUDING BUT NOT LIMITED TO, RELOCATION OF GUY WIRES, UTILITY POLES, ETC. AS REQUIRED DURING CONSTRUCTION. THIS WORK SHALL BE SUBSIDIARY TO THE BID PRICE.
43. ALL PAVEMENT CUTS SHALL BE NEAT SAW CUT LINES. ALL PAVEMENT SHALL BE SAW CUT PRIOR TO EXCAVATION.
44. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES, JURISDICTIONAL AGENCIES AND/OR UTILITY SERVICE COMPANIES SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.
45. CONTRACTOR SHALL VERIFY BENCHMARKS AND DATUM PRIOR TO COMMENCING CONSTRUCTION OR STAKING OF IMPROVEMENTS.
46. CONTRACTOR SHALL THOROUGHLY CHECK COORDINATION OF CIVIL, LANDSCAPE, MEP, ARCHITECTURAL, AND OTHER PLANS PRIOR TO COMMENCING CONSTRUCTION. OWNER AND ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY PRIOR TO COMMENCING WITH CONSTRUCTION.
47. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.
48. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE CIVIL ENGINEER A COPY OF RECORD DRAWINGS IDENTIFYING ALL DEVIATIONS OR VARIATIONS FROM THE ORIGINAL PLANS.
49. CONTRACTOR SHALL CONTACT CITY BUILDING OFFICIAL TO LEARN OF ANY UNUSUAL CONSTRUCTION SEQUENCING REQUIREMENTS THAT THE CITY MAY REQUIRE. THE CONTRACTOR IS CAUTIONED THAT THIS AND PERHAPS OTHER SUCH REQUIREMENTS MAY EXIST AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO INVESTIGATE AND COMPLY WITH THEM.
50. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING ALL FIELD CHANGES TO THE PLANS. THE PROJECT ENGINEER SHALL INCORPORATE THESE CHANGES INTO RECORD DRAWINGS AS REQUIRED.
51. THE CONTRACTOR SHALL PROVIDE AN "AS-BUILT" SURVEY OF THE SITE, OR ANY AREA THEREOF IF REQUESTED BY THE ENGINEER OR THE CITY OR FOR GRADE VERIFICATION. THE "AS-BUILT" SHALL PROVIDE ELEVATIONS WITH AN ACCURACY OF 0.01', WITH A MINIMUM SHOT GRID OF 25'. IT SHALL BE ON THE SAME COORDINATE PLANE AS THE ORIGINAL DRAWINGS, SHALL SHOW ALL PHYSICAL FEATURES AND UTILITIES BOTH ABOVE AND BELOW GRADE AND SHALL BE SIGNED AND SEALED BY A LICENSED SURVEYOR IN THE STATE OF TEXAS.
52. CONTRACTOR IS STRICTLY PROHIBITED FROM PLACING SPOILS FROM PIERS, GRADE BEAMS AND OTHER CUT MATERIALS BELOW 3' UNDER ANY PAVING/SIDEWALKS ADJACENT TO BUILDING OR BACKFILL FOR GRADE BEAMS.
53. ALL FENCING ADJACENT TO SIDEWALKS SHALL BE CONSTRUCTED INTEGRAL WITH SIDEWALK PAVING.
54. ALL EXISTING TREES TO REMAIN EITHER ADJACENT TO OR WITHIN THE LIMITS OF DEMOLITION SHALL HAVE TREE PROTECTION FENCING INSTALLED TO INCLUDE FULL CANOPY OF TREE.

EROSION CONTROL NOTES:

1. EROSION CONTROL MEASURES SHALL FOLLOW THE STORM WATER POLLUTION PREVENTION PLAN (S.W.P.P.P.) THAT IS KEPT ONSITE AT ALL TIMES WITH THESE CONSTRUCTION DOCUMENTS FOR COMPLIANCE WITH THE T.P.D.E.S. GENERAL PERMIT
2. IN ORDER TO MINIMIZE EROSION CONTROL PROBLEMS, GENERAL CONTRACTOR SHALL COORDINATE WITH EXCAVATOR, LANDSCAPE, AND IRRIGATION CONTRACTORS TO DETERMINE EARLIEST POSSIBLE DATE TO INSTALL GRASSING AS NOTED ON THE LANDSCAPE PLAN
3. THE STABILIZED CONSTRUCTION ENTRANCE HAS BEEN SHOWN ARBITRARILY. IT IS THE GENERAL CONTRACTOR'S CHOICE (IN COMPLIANCE WITH ALL CITY AND STATE REGULATIONS) TO DETERMINE THE LOCATION(S) OF PROJECT INGRESS / EGRESS POINTS. HOWEVER ALL ENTRANCES AT ALL TIMES SHALL BE PREPARED IN ACCORDANCE WITH THE STABILIZED CONSTRUCTION ENTRANCE DETAILS AND CONTINUOUSLY MAINTAINED UNTIL FINAL PAVING IS ESTABLISHED. CHANGES TO THIS EROSION CONTROL PLAN ARE TO BE LOGGED IN THE SWPPP
4. STABILIZED SLOPES (CURLEX BLANKET AND 70% COVER OF VEGETATION) ACHIEVING EROSION-FREE CONDITIONS MUST BE IN PLACE AND EFFECTIVE BY THE PROJECT "POSSESSION DATE".
5. A TEMPORARY ALL-WEATHER SURFACE TO AND COMPLETELY AROUND THE BUILDING PAD SHALL BE REQUIRED DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH FIRE MARSHALL TO DETERMINE ANY VEHICULAR FIRE ACCESS REQUIRED DURING CONSTRUCTION
6. THE EROSION CONTROL PLAN WILL INCORPORATE EROSION CONTROL MEASURES AND TECHNIQUES TO PREVENT SEDIMENTATION AND ERODED SOIL FROM LEAVING THE SITE EITHER IN EXISTING STORM DRAIN SYSTEM OR ONTO ADJACENT PRIVATE AND PUBLIC PROPERTY. CONSTRUCT TEMPORARY EROSION CONTROL SYSTEMS AS SHOWN ON THE PLANS TO PROTECT ADJACENT PROPERTIES AND WATER RESOURCES FROM EROSION AND SEDIMENTATION. CONTRACTOR SHALL NOTIFY CONSULTING ENGINEER AT ONCE IF SITE CONDITIONS WARRANT ADDITIONAL EROSION CONTROL MEASURES. CONTRACTOR IS RESPONSIBLE FOR TAKING IMMEDIATE ACTION TO REMEDY EROSION CONTROL WHILE CONSULTING ENGINEER IS PREPARING RESPONSE
7. THE CONTRACTOR SHALL STABILIZE THE EARTHEN SLOPE AREAS IN ACCORDANCE WITH THE LANDSCAPE PLAN WITHIN 72 HOURS AFTER FINAL GRADE AND TOPSOIL HAS BEEN ESTABLISHED IN ACCORDANCE WITH THE PROJECT SITEWORK SPECS
8. PRIOR TO COMMENCING ANY CONSTRUCTION, A CONSTRUCTION ENTRANCE AND PERIMETER SILT FENCE SHALL BE INSTALLED AT THE LOCATION(S) SHOWN
9. AS INLETS ARE COMPLETED, TEMPORARY SEDIMENT BARRIERS SHALL BE INSTALLED
10. AT THE COMPLETION OF THE PAVING AND FINAL GRADING, THE DISTURBED AREA(S) SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS
11. SILT FENCE AND INLET SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL REVEGETATION HAS BEEN COMPLETED
12. DISTURBED AREAS THAT ARE SEEDED OR SODDED SHALL BE CHECKED PERIODICALLY TO SEE THAT GRASS COVERAGE IS PROPERLY MAINTAINED. DISTURBED AREAS SHALL BE WATERED, FERTILIZED, AND RESEEDED OR RESODDED, IF NECESSARY
13. ALL EROSION CONTROL MEASURES TO BE PLACED BASED ON CONTRACTOR'S BEST JUDGMENT AND CONSTRUCTION PHASING TO MINIMIZE SILT RUNOFF TO THE MAXIMUM EXTENT PRACTICABLE
14. TEMPORARY INLET PROTECTION TO BE REMOVED OR ADDED BASED ON EXISTING STORM SEWER REMOVAL AND/OR PROPOSED STORM SEWER CONSTRUCTION. FUNCTIONING INLETS SHALL BE INLET PROTECTED AT ALL TIMES. (USE PIPE INLET PROTECTION IF NEEDED)
15. SHOWN CONSTRUCTION ENTRANCES TO BE PLACED, MODIFIED ON THIS PLAN AND LOGGED IN THE SWPPP BASED ON CONSTRUCTION MANAGER'S ON-SITE DECISIONS TO CONTROL EROSION TO THE MAXIMUM EXTENT PRACTICABLE CONSTRUCTION ENTRANCES TO BE PLACED BASED ON CONSTRUCTION PHASING
16. CONTRACTOR SHALL DESIGN AND CONSTRUCT THE WASH-OUT PIT AND CONTAINMENT BASIN IN ACCORDANCE WITH THE STORM WATER POLLUTION PLAN FOR THE PROJECT AND SUBMIT PROPOSED LOCATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO BEGINNING ANY CONSTRUCTION

STORM SEWER GENERAL NOTES

1. ALL STORM SEWER LINES AND APPURTENANCES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THESE PLANS, THE RULES, REGULATIONS, POLICIES AND PROCEDURES OF THE CITY IN WHICH THE CONSTRUCTION OCCURS.
2. MANHOLE TOPS & CLEAN-OUTS SHALL BE SET TO THE GRADE ESTABLISHED BY THE SITE GRADING PLAN OR APPLICABLE PLAN-PROFILE SHEETS AND SHALL BE FLUSH WITH FINISHED GRADE.
3. OMNI-FLEX JOINT SEALER, OR APPROVED EQUAL, AND PREFABRICATED BENDS AND WYES SHALL BE USED ON ALL STORM SEWER PIPE CONNECTIONS AND JUNCTIONS FOR RCP PIPE. ALL HDPE PIPE SHALL USE WATER TIGHT JOINTS.
4. CONTRACTOR MAY ELECT TO USE CORRUGATED, SMOOTH INTERIOR LINED HIGH-DENSITY POLYETHYLENE (HDPE) STORM SEWER PIPE IN PLACE OF CLASS III, C-76 RCP STORM SEWER PIPE WHEN THE FOLLOWING CONDITIONS APPLY:
   - A. PIPE IS NOT IN PUBLIC RIGHT-OF-WAY.
   - B. ALL PIPE JOINTS SHALL BE WATER-TIGHT.
5. THE CONNECTIONS OF THE PRIVATE STORM SEWER LINES TO THE PUBLIC SYSTEM WILL NEED TO BE INSPECTED BY THE DEPARTMENT OF PUBLIC WORKS INSPECTORS AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CITY STANDARD DETAILS.
6. ALL MANHOLES COVERS SHALL BE EJIW 1480 WITH HEAVY DUTY COVER AS SPECIFIED.
8. STORM SEWER SYSTEM SHALL BE VIDEOED AFTER COMPLETED TO ENSURE COMPLIANCE AND A COPY SHALL BE PROVIDED TO THE OWNER AND ENGINEER.

SANITARY SEWER GENERAL NOTES

1. THE CONTRACTOR SHALL INSTALL WATER AND SEWER LINES SO AS TO AVOID CONFLICTS WITH OTHER UTILITIES. WATER/SEWER LINE SEPARATIONS SHALL BE MAINTAINED PER TEXAS COMMISSION ON ENVIRONMENTAL QUALITY.
2. MANHOLE TOPS & CLEAN-OUTS SHALL BE SET TO THE GRADE ESTABLISHED BY THE SITE GRADING PLAN OR APPLICABLE PLAN-PROFILE SHEETS AND SHALL BE FLUSH WITH FINISHED GRADE.
3. THE CONTRACTOR SHALL USE OSHA APPROVED CONFINED SPACE ENTRY PROCEDURES WHEN ENTERING SANITARY SEWER MANHOLES. THE SAFETY EQUIPMENT SHALL BE FURNISHED BY THE CONTRACTOR AND SHALL BE OSHA CERTIFIED. PERSONS WORKING IN THESE AREAS SHALL BE TRAINED IN THE PROPER USE OF THE SAFETY EQUIPMENT.
4. CONTRACTOR SHALL FOLLOW BUILDING INSPECTION RULES REGARDING THE DESIGN, MATERIALS AND INSTALLATION OF THE PRIVATE SANITARY SEWER LINE.
5. ALL PROPOSED WATER AND SANITARY SEWER LINES ARE TO BE LOCATED AS SHOWN ON THE PLANS. ALL LINES LOCATED WITHIN AREAS OF PAVEMENT SHALL HAVE THE TOP 8" OF BACK FILL REPLACED WITH CRUSHED STONE INCLUDING SERVICES. (NO SEPARATE PAY)
6. CONTRACTOR SHALL FURNISH & INSTALL CLAY PLUGS UPSTREAM OF EACH MANHOLE.
7. ALL WATER MAIN CLEARANCE FOR PARALLEL SANITARY SEWER MAIN SHALL BE A MINIMUM SEPARATION OF 2 FEET VERTICAL AND 9 FEET HORIZONTAL.
8. ALL FORCE MAIN SEWER PIPE WILL BE DR-18 (C-900) PVC PIPE, COLOR CODED FOR SEWERAGE APPLICATIONS. ALL GRAVITY SEWER PIPE SHALL BE SDR-35 (ASTM D-3034) FOR 4' TO 11'-9" DEPTHS, OR SDR-26 FOR 12' TO 20' DEPTHS UNLESS NOTED OTHERWISE. ALL OTHER DEPTHS SHALL BE DIP CL. 51 UNLESS NOTED OTHERWISE. MATERIALS SHALL MEET REQUIREMENTS OF THE CITY. FORCE MAIN SEWER PIPE SHALL BE INSTALLED WITH A MINIMUM OF 42" OF COVER MEASURED FROM THE TOP OF THE PIPE TO THE PROPOSED GROUND OR EXISTING GRADE.
9. WHEN A PROPOSED SEWER LINE CROSSES AN EXISTING WATER LINE, THE CONTRACTOR SHALL INSTALL ONE 20 FOOT JOINT OF DR-18 (C-900) ON THE SEWER LINE. CENTERED ON THE WATER LINE, USING SDR-26 TO C-900 ADAPTERS. NO SPECIAL PAY WILL BE PERMITTED FOR THIS ITEM.
10. UPON COMPLETION OF SEWER LINE CONSTRUCTION, THE CONTRACTOR WILL BE REQUIRED TO HAVE THE LINES TESTED, INCLUDING MANDREL TEST, AIR TEST, AND A T.V. INSPECTION AT NO COST TO THE OWNER. ALL TESTS SHALL BE DOCUMENTED WITH OWNER PERSONNEL PRESENT. DOCUMENTATION OF ALL TESTS SHALL BE PROVIDED TO THE PROJECT ENGINEER.
11. FOR PROPOSED SEWER SERVICE LOCATIONS WHERE THE SEWER MAIN EXCEEDS A FLOW LINE DEPTH OF 8', THE CONTRACTOR SHALL INSTALL THE DEEP SERVICE CONNECTION IN LIEU OF THE STANDARD SERVICE CONNECTION. (NO SPECIAL PAY)
12. THE CONTRACTOR SHALL FIELD LOCATE EXISTING GRAVITY SEWER LINES TO BE CONNECTED PRIOR TO COMMENCING WORK. IF A DISCREPANCY EXISTS BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. SUCH VERIFICATION SHALL BE CONSIDERED SUBSIDIARY TO THE BID PRICE WITH NO SPECIAL PAY.
13. ALL MANHOLES SHALL BE EJIW HINGED V-2230ZPT WITH HEAVY DUTY COVER.
14. THE CONTRACTOR SHALL MAINTAIN IN OPERATING CONDITION ALL ACTIVE PIPES ENCOUNTERED DURING THE PIPELINE REHABILITATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUITY OF SERVICE TO EACH FACILITY CONNECTED TO THE SECTION OF PIPE BEING RECONSTRUCTED DURING EXECUTION OF THE WORK. THE CONTRACTOR, WHEN NECESSARY, SHALL PROVIDE FOR THE FLOW AROUND THE SECTION OF PIPE DESIGNATED FOR REHABILITATION. AT NO TIME SHALL WASTEWATER BE PUMPED INTO THE STREETS, ALLEYS, WATERWAYS, OR STORM DRAIN SYSTEMS. BYPASS SHALL BE MADE BY PLUGGING THE LINE AT AN EXISTING UPSTREAM MANHOLE AND PUMPING THE FLOW INTO A DOWNSTREAM MANHOLE OR ADJACENT SYSTEM. PUMP AND BYPASS LINES SHALL BE OF ADEQUATE CAPACITY AND SIZE TO HANDLE THE FLOW. THE CONTRACTOR SHALL ENSURE THAT NO WASTEWATER OVERFLOWS FROM THE EXISTING PIPE INTO ACCESS PIT(S). IF WASTEWATER DOES OVERFLOW, THE CONTRACTOR SHALL PROVIDE SUITABLE MEANS TO CONTAIN THE WASTEWATER AND RETURN IT TO THE EXISTING PIPE. IF FLOW BACKUP OCCURS AND ENTERS BUILDINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP, REPAIR, PROPERTY DAMAGE COST, AND CLAIMS. CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGES INCURRED AS A RESULT OF INADEQUATE FLOW BYPASS MEASURES.
15. CONTRACTOR SHALL PROVIDE ALL BY-PASS PUMPING AS REQUIRED TO FACILITATE CONSTRUCTION AND SHALL BE CONSIDERED SUBSIDIARY TO THE BID PRICE.
16. ANY SERVICES CROSSED WITH MAIN SHALL BE RECONNECTED TO THE SEWER LINE AND SHALL BE CONSIDERED SUBSIDIARY TO THE BID PRICE.

TREE PRESERVATION NOTE

IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PRESERVE AND PROTECT THE EXISTING IRRIGATION SYSTEM. THE SYSTEM SHALL REMAIN IN OPERATION UNLESS SPECIFIC WRITTEN PERMISSION FROM THE OWNER IS RECEIVED TO TEMPORARILY SUSPEND USE OF THE SYSTEM. ALL IRRIGATION LINES SHALL BE ADJUSTED AS REQUIRED TO ACCOMMODATE PROPOSED SITE GRADING. THE CONTRACTOR SHALL HAVE A LICENSED IRRIGATION CONTRACTOR TO REWORK THE EXISTING IRRIGATION SYSTEM AT THE LOCATION OF NEW CONSTRUCTION. CONTRACTOR SHALL SUBMIT DRAWINGS FOR REVIEW BY ARCHITECT FOR PROPOSED MODIFICATIONS TO THE EXISTING IRRIGATION SYSTEM, ALL IRRIGATION HEADS SHALL BE ADJUSTED TO FINISHED GRADE AS SHOWN ON THE SITE GRADING PLAN. THE IRRIGATION SYSTEM SHALL BE TESTED BY THE CONTRACTOR AND SHALL BE FULLY OPERATIONAL PRIOR TO HYDROMULCHING.

① **GENERAL NOTES**
SCALE: SEE PLAN

MJ THOMAS
★ ENGINEERING, LLC ★
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-9839
FAX - (817) 736-0017
MJT NO. - 511-047

B

A

KEY PLAN

VLK

ARCHITECT

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

CIVIL ENGINEER

MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER

L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER

RWB Consulting Engineers
12222 Merit Drive, Suite 400
Dallas, Texas 75251
Main Phone: 972.788.4222
www.rwb.net

TECHNOLOGY CONSULTANT

Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER

BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND
OPERATION WAREHOUSE

100% Construction
Documents Review

Date of Statement: 18 Aug. 2019

NOT FOR REGULATORY
APPROVAL, PERMITTING
OR CONSTRUCTION.

LAUREN V. BROWN
TEXAS LICENSE #23211

Project Issued: MAY 19,2025

REVISIONS

Revision No.	Revision Date

MICHAEL A. THOMAS
93640
5/19/2025

Director
LVB
DESIGNER
JMR
PROJECT ARCH.
JCL
DRAWN BY
DRW
QUALITY CONTROL
QC

PROJECT NO.
24-103.00

SHEET TITLE
GENERAL NOTES

SHEET NO.
C1.01

NEW MAINTENANCE & OPERATIONS WAREHOUSE

NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108

WATER GENERAL NOTES

1. THE CONTRACTOR SHALL INSTALL WATER AND SEWER LINES SO AS TO AVOID CONFLICTS WITH OTHER UTILITIES. WATER/SEWER LINE SEPARATIONS SHALL BE MAINTAINED PER TEXAS COMMISSION ON ENVIRONMENTAL QUALITY.
2. HORIZONTAL BLOCKING HAS BEEN OMITTED FOR CLARITY. HOWEVER, BLOCKING SHALL BE CONSTRUCTED PER CITY STANDARDS, CONCRETE BLOCKING SHALL BE PLACED AT ALL VALVES, BENDS, TEES AND PLUGS.
3. ALL GATE VALVES FROM 1.5 INCH TO 18 INCHES SHALL BE OF THE RESILIENT SEAT TYPE.
4. THE UTILITY CONTRACTOR SHALL CONTACT THE CONSTRUCTION SERVICES MANAGER IN PUBLIC WORKS DEPARTMENT/INSPECTIONS PRIOR TO BEGINNING CONSTRUCTION ON ANY PRIVATE WATER LINES.
5. THE UTILITY CONTRACTOR SHALL CONTACT THE PUBLIC WORKS DEPARTMENT/INSPECTIONS, PRIOR TO INSTALLING THE DETECTOR CHECK.
6. APPROVED PERMANENT BLUE REFLECTIVE FIRE HYDRANT MARKERS SHALL BE PROVIDED ON THE PAVING ADJACENT TO EACH HYDRANT IN THE CENTER OF THE STREET OR FIRE LANE TO ASSIST FIREFIGHTERS WITH LOCATING ON-SITE FIRE HYDRANTS.
7. PROVIDE LICENSED FIRE SPRINKLER CONTRACTORS SHOP DRAWINGS AND HYDRAULIC CALCULATIONS FOR THE AUTOMATIC SPRINKLER SYSTEM FOR REVIEW AND APPROVAL BY THE FIRE DEPARTMENT AS SOON AS POSSIBLE AND PRIOR TO STARTING INSTALLATION.
8. THE FIRE DEPARTMENT CONNECTION FOR THE SPRINKLER SYSTEM IS A 4" STORZ CONNECTION AND SHALL BE WITHIN 50 FEET OF THE FIRE LANE AND WITHIN 150 FEET OF A FIRE HYDRANT, UNLESS OTHERWISE REQUIRED BY THE CITY.
9. ALL PROPOSED WATER AND SANITARY SEWER LINES ARE TO BE LOCATED AS SHOWN ON THE PLANS. ALL LINES LOCATED WITHIN AREAS OF PAVEMENT SHALL HAVE THE TOP 8" OF BACK FILL REPLACED WITH CRUSHED STONE INCLUDING SERVICES. (NO SEPARATE PAY)
10. ALL WATER MAIN CLEARANCE FOR PARALLEL SANITARY SEWER MAIN SHALL BE A MINIMUM SEPARATION OF 2 FEET VERTICAL AND 9 FEET HORIZONTAL.
11. SERVICE LOCATION TO BE STAMPED ON CURB WITH 2" HIGH LETTER "W"
12. UTILITY CONTRACTOR TO FURNISH AND INSTALL WATER METER BOXES AFTER THE PAVING CONTRACTOR HAS COMPLETED.
13. CORPORATION STOPS SHOULD BE TESTED FOR LEAKAGE AND FULL FLOW WHEN SYSTEM IS PRESSURE TESTED.
14. ANY CHANGES FROM APPROVED CONSTRUCTION PLANS SHALL BE APPROVED BY THE WATER UTILITY DEPARTMENT AND A CHANGE ORDER MUST BE OBTAINED FROM THE DESIGN ENGINEER. ANY DERIVATIONS FROM THE STATE REGULATIONS SHALL BE APPROVED BY THE DIRECTOR OF PUBLIC WORKS.
15. SERVICE LINE PAY ITEMS WILL INCLUDE TAPPING OF WATER MAIN AND NECESSARY SERVICE LINE AND FITTINGS AS PER STANDARD DETAIL.
16. THE BID ITEM FOR REMOVAL AND THE SALVAGING OF FIRE HYDRANTS WILL INCLUDE REMOVAL IN A WORKMANLIKE MANNER SO THAT THE FIRE HYDRANT MAY BE REINSTALLED ELSEWHERE IN THE CITY OR ON SITE. THE REMOVAL WILL INCLUDE PLUGGING THE EXISTING WATER LINE, TRANSPORTING THE HYDRANT WITH AUXILIARY VALVE, IF APPLICABLE, TO THE LOCATION DETERMINED BY THE PROJECT OWNER OR AUTHORIZED PROJECT OWNER'S REPRESENTATIVE.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISINFECTION AND FLUSHING REQUIREMENTS OF THE CITY. THIS SHALL INCLUDE PROVIDING TEMPORARY ISOLATION VALVES, PLUGS, INJECTION PORTS, FLUSHING VALVES, TOOLS AND EQUIPMENT NECESSARY TO COMPLETE THE TASK.
18. ALL PVC PIPE AND APPURTENANCES (FITTINGS,VALVES, NIPPLES, ETC.) 3" DIA. AND SMALLER SHALL BE CONSTRUCTED AS SHOWN. (NO SEPARATE PAY)
19. CONTRACTOR SHALL LOCATE/ PRESERVE AND PROTECT EXISTING WATER SERVICES. ANY WATER SERVICES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED ENTIRELY FROM THE WATER METER TO THE MAIN LINE AT THE CONTRACTOR'S EXPENSE. NO SPLICING IS ALLOWED.
20. CONTRACTOR SHALL FIELD LOCATE EXISTING WATER LINES TO BE CONNECTED TO PRIOR TO COMMENCING WORK. IF A DISCREPANCY EXISTS BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. SUCH VERIFICATION SHALL BE CONSIDERED SUBSIDIARY TO THE BID PRICE WITH NO SPECIAL PAY.
21. ALL WATER LINES AND APPURTENANCES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THESE PLANS, THE RULES, REGULATIONS, POLICIES, AND PROCEDURES OF THE CITY IN WHICH THE CONSTRUCTION OCCURS.
22. ALL RPZ TYPE BACKFLOW PREVENTERS SHALL BE INSTALLED IN A FREEZE-PROOF ENCLOSURE WITH HEATER AND THERMOSTAT. CONTRACTOR SHALL ENSURE THAT ELECTRICITY IS PROVIDED FOR THE HEATER IN COMPLIANCE WITH ALL APPLICABLE BUILDING CODES.
23. ALL WATER SERVICES SHALL BE RECONNECTED TO THE MAIN AND SHALL BE CONSIDERED SUBSIDIARY TO THE BID PRICE.
24. ALL ABOVE GROUND RPZ'S THAT ARE EXTERIOR TO THE BUILDING SHALL HAVE AN ENCLOSED INSULATED AND HEATED BOX WITH POWER. POWER SHALL BE PROVIDE AS DESIGN BUILD TO THE CLOSEST CIRCUIT CAPABLE OF POWER REQUIREMENTS.
25. ALL SERVICE TAPS TO MAINS SHALL INCLUDE FULL DEPTH, SAWCUT, REMOVAL OF EXISTING PAVEMENT AND REPLACEMENT OF PAVEMENT FULL PANEL AND AS REQUIRED BY GOVERNING ENTITY.
26. ALL SERVICE TAPS SHALL BE INSTALLED AS REQUIRED BY GOVERNING ENTITY
27. ALL FIRE HYDRANT ASSEMBLIES SHALL INCLUDE A FIRE HYDRANT, 6" DR-14, C-900 PVC WATER PIPE, TEE AND RESILIENT SEAT GATE VALVE AND VALVE BOX.
28. ALL WATER LINES SHALL BE PVC PIPE CONFORMING TO AWWA STANDARD C900 DR-14 MINIMUM, WITH NSF SEAL UNLESS STATED DIFFERENTLY ON CONSTRUCTION PLANS, PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH THE NCTCOG STD. SPECS. WATER MAINS TO HAVE A MINIMUM OF 42" COVER TO TOP OF PIPE AS MEASURED FROM THE TOP OF PIPE TO THE EXISTING GROUND OR PROPOSED FINISHED GRADE, WHICHEVER IS GREATER. SERVICE LINE CONNECTORS SHALL BE COMPRESSION-TYPE WITH STAINLESS STEEL TUBE LINERS.
29. FIRE HYDRANTS SHALL BE LOCATED OUTSIDE OF SIDEWALK.
30. ALL WATER LINES TO BE ENCASED IN SAND. BACK FILL SHALL BE SELECT MATERIAL COMPACTED TO 95% STANDARD PROCTOR DENSITY.
31. ALL WATER METERS INSTALLED UNDER THIS CONTRACT SHALL ADHERE TO TCEQ REGULATIONS. ALL METERS SHALL BE INSTALLED WITH DOUBLE CHECK VALVES IN ACCORDANCE WITH TCEQ REGULATIONS.
32. FIRE HYDRANT ASSEMBLY BID ITEMS WILL INCLUDE THE FIRE HYDRANT, THE PIPE EXTENSION FROM THE TEE, AND ALL NECESSARY FITTINGS INCLUDING THE 6" GATE VALVE AND BOX. ALL VALVES AND FIRE HYDRANTS TO BE PER CITY SPECIFICATIONS. HYDRANTS TO BE PAINTED PER CITY STANDARD.
33. ANY WATER VALVES LOCATED WITHIN PAVEMENT AREAS SHALL BE ADJUSTED TO FINAL GRADE BY THE PAVING CONTRACTOR. THE PAVING CONTRACTOR SHALL CONSTRUCT A TYPICAL CONCRETE BLOCK OUT PER DETAILS.
34. WATER LINES WILL BE INSTALLED AS SHOWN ON THE PLANS. HOWEVER, FILED ADJUSTMENTS APPROVED BY THE INSPECTOR OR ENGINEER MAY BE MADE TO LESSEN DAMAGE TO THE ROAD PAVEMENT OR WHEN OTHER UTILITY LOCATIONS, TREES, OR STRUCTURES WARRANT SUCH AN ADJUSTMENT.
35. ALL FITTINGS TO BE DUCTILE IRON MECHANICAL JOINT W/ MEGA LUGS. THE BID ITEM FOR D.I.M.J. FITTINGS WILL INCLUDE ALL NECESSARY BLOCKING.
36. VALVES, FIRE HYDRANTS, BENDS, AND ASSOCIATED APPURTENANCES SHALL BE INSTALLED WHERE DESIGNATED ON THESE PLANS. ANY DEVIATION FROM THE PLANS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE AND ENGINEER.

PAVING AND STRIPING GENERAL NOTES

1. NO SAND SHALL BE USED UNDER ANY PAVEMENT – NO EXCEPTIONS.
2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT DETAILING LOCATION AND LAYOUT OF CONSTRUCTION JOINTS, EXPANSION JOINTS AND SAW CUTS FOR ALL CONCRETE PAVING ON THE SITE. (DRIVES, SIDEWALKS, ETC.)
3. AN EXPANSION JOINT AS DETAILED, WITH A CONCRETE HEADER, SHALL BE CONSTRUCTED AT THE END OF EACH DAY'S CONCRETE PLACEMENT.
4. CONTRACTOR SHALL REPAIR ALL HONEYCOMBING PRIOR TO BACK FILL.
5. THE CONTRACTOR SHALL NOT STAND, PARK, DRIVE ON, OR IN ANY WAY DISTURB OR DAMAGE STEEL REINFORCING FOR SITE WORK. ALL REINFORCEMENT SHALL BE CHAIRED UP ACCORDING TO PLANS AND SPECIFICATIONS.
6. SUBGRADE SHALL BE MAINTAINED TO WITHIN THE SPECIFIED REQUIREMENTS OF MOISTURE AND DENSITY UNTIL PAVING IS PLACED. PRIOR TO PLACING PAVEMENT, THE CONTRACTOR SHALL RE-TEST THE AREAS SELECTED BY THE CONSTRUCTION MATERIALS TESTING LAB PERSONNEL AT THE CONTRACTORS OWN EXPENSE, OR IF REQUESTED BY THE OWNER, ARCHITECT OR ENGINEER, AND IF THE SUBGRADE HAS BEEN PLACED AND ACCEPTED FOR LONGER THAN TEN (10) DAYS AND NO PAVEMENT HAS BEEN CONSTRUCTED.
7. ALL SITE EXPANSION JOINTS SHALL BE CONSTRUCTED OF REDWOOD.
8. ALL SIDEWALKS, SEPARATE CURBS, FLUMES AND MOW STRIPS SHALL HAVE TOOLED JOINTS AT A MAXIMUM SPACING OF 5' CCEW AND EXPANSION JOINTS AT A MAXIMUM OF 30' CCEW. ALL JOINTS SHALL BE INSTALLED WITHIN 10 HOURS OF PLACEMENT.
9. ALL SITE PAVING SHALL HAVE SAW CUT JOINTS ON A MAXIMUM OF 12' CCEW AND EXPANSION JOINTS ON A MAXIMUM OF 90' CCEW. ALL JOINTS SHALL BE INSTALLED WITHIN 10 HOURS OF PLACEMENT.
10. WHERE REINFORCING IS NOT SPECIFICALLY DETAILED, REINFORCING FOR PAVING SHALL BE AT A MINIMUM, NO. 4 REBARS AT 12" O.C.E.W.
11. UNLESS SPECIFICALLY NOTED ON PLANS, ALL CONCRETE PAVING, SIDEWALKS, SLABS, AND MISCELLANEOUS UTILITY INFRASTRUCTURES SHALL BE AT A MINIMUM, 4,000 PSI PORTLAND CEMENT CONCRETE AT 28 DAYS.
12. THE CONTRACTOR SHALL BACK FILL ALL CURBS WITHIN 48 TO 72 HOURS OF PLACEMENT.
13. STREET CUT PERMIT (ISSUED BY PUBLIC WORKS DEPARTMENT) IS REQUIRED BEFORE CUTTING IN ANY CITY STREET.
14. ALL EXISTING DRIVEWAYS SHALL BE CONNECTED TO THE PROPOSED PAVEMENT AS DETAILED.
15. THE SIDEWALKS AND/OR PEDESTRIAN ROUTES, AS SHOWN ON THESE PLANS, SHALL BE CONSTRUCTED TO COMPLY WITH ALL ADA REQUIREMENTS. BARRIER FREE RAMPS SHALL BE CONSTRUCTED AT THE LOCATIONS SHOWN ON THE PLANS. ALL RAMPS LONGER THAN 6' LONG SHALL INCLUDE HANDRAILS WITH EDGE PROTECTION AS REQUIRED BY TDLR.
16. ALL TALL CURBS OR RETAINING WALLS WITH AN ELEVATION CHANGE OF 30" OR GREATER SHALL BE CONSTRUCTED WITH GUARDRAILS PER TDLR AND OSHA REQUIREMENTS. CONTRACTOR TO PROVIDE SUBSIDIARY TO BID PRICE..
17. ALL STAIRS SHALL HAVE HANDRAILS AS REQUIRED BY TDLR.
18. ALL REINFORCING STEEL AND DOWEL BARS IN PAVEMENT SHALL BE SUPPORTED AND MAINTAINED AT THE CORRECT CLEARANCES BY THE USE OF BAR CHAIRS.
19. ALL CONSTRUCTION JOINTS SHALL BE SAWED, CLEANED OF DEBRIS, BLOWN DRY AND IMMEDIATELY SEALED WITH SILICONE JOINT SEALING COMPOUND.
20. ALL SIDEWALKS SHALL HAVE TOOLED JOINTS AT MAX 5' SPACING.
21. FOR ALL PAVING AND SIDEWALKS: IN AREAS WHERE SUBGRADE IS NOT SPECIFIED ON PLANS, THE CONTRACTOR SHALL FURNISH AND INSTALL 12" THICK FLEXIBLE BASE, TxDOT ITEM 247, GRADE 'A', TYPE 1, COMPACTED TO A MINIMUM 95% ASTM D-698 STD PROCTOR DENSITY.
22. EXPANSION JOINTS SHALL BE CONSTRUCTED AT A MAXIMUM OF 90' CENTERS AND SHALL BE LOCATED AT ALL STRUCTURES, INTERSECTION POINTS, POINTS OF CURVATURE, POINTS OF TANGENCY, AND AT ALL REDUCTIONS IN PAVEMENT WIDTHS.
23. CONTRACTOR SHALL FILL IN ALL HOLES, OPENINGS, AND TRENCH REPAIR LEFT CONCRETE STRUCTURES PAVEMENT FOR PASSAGE OF WORK BY OTHER TRADES NOT SPECIFIED ON THE PLANS. AFTER WORK OF OTHER TRADES IS COMPLETED, MIX, PLACE, AND CURE CONCRETE HEREIN SPECIFIED, TO BLEND WITH IN-PLACE CONSTRUCTION. PROVIDE OTHER MISCELLANEOUS CONCRETE FILLING SHOWN OR REQUIRED AS INTERPRETED BY THE ENGINEER OR ARCHITECT TO COMPLETE THE WORK.L COMPLETED WORK SHALL RESULT IN FULLY FUNCTIONAL PROJECT WITH NO HOLES, OPENINGS, OR GAPS IN PAVING/STRUCTURES.
24. ALL PAVING IN DRIVE-ABLE AREAS THAT DO NOT HAVE CURB AND GUTTER SHALL BE CONSTRUCTED WITH THICKENED EDGE AS DETAILED.
25. ALL PAVING WITHOUT CURBS ALONG THE PERIMETER OF THE PAVING SHALL BE INSTALLED WITH A THICKENED EDGE, MINIMUM OF 12" THICK.
26. ALL MOTORIZED GATES REQUIRING ELECTRICAL POWER TO OPERATE SHALL INCLUDE CONDUITS AND POWER AS REQUIRED TO OPERATE GATE. POWER DESIGN SHALL BE PROVIDED BY THE CONTRACTOR AS DESIGN BUILD AND ROUTED TO THE CLOSEST CIRCUIT CAPABLE OF PROVIDING POWER TO OPERATE GATE PROPERLY. ALL MOTORIZED GATES SHALL INCLUDE CONDUIT, VIDEO AND VOICE COMMUNICATION LINES FROM THE BUILDING TO THE GATE KEY PAD AND CONTROLLERS AS DESIGN BUILD BY CONTRACTOR.
27. ALL CALL OUTS ON THE GRADING PLAN THAT INDICATE EITHER TW OR BW SHALL INDICATE A NEW RETAINING WALL TO BE CONSTRUCTED WITH GUARDRAILS. IF NO DETAILS ARE PROVIDED IN PLANS, CONTRACTOR SHALL PROVIDE A DESIGN BUILD FOR THE RETAINING WALL TO BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER WITHIN THE STATE OF TEXAS. DESIGN BASIS OF THE RETAINING WALL SHALL BE A MINIMUM OF 4,000PSI CONCRETE AND SHALL INCLUDE A 6" DIA PERFORATED FRENCH DRAINAGE TO BE TIED TO THE CLOSEST STORM SEWER WITHIN 100' OF THE WALL OR WEEPS THROUGH THE FACE OF WALL IF STORM SEWER IS NOT AVAILABLE WITHIN 100' OR UNAVAILABLE TO GRAVITY DRAIN TO.

GRADING AND EROSION CONTROL GENERAL NOTES

1. CONSTRUCTION OPERATIONS SHALL BE MANAGED SO THAT AS MUCH OF THE SITE AS POSSIBLE IS LEFT COVERED WITH EXISTING TOP SOIL AND VEGETATION.
2. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH. THE AREAS SHALL THEN BE SEEDED (OR SODDED), IRRIGATED, AND MAINTAINED UNTIL A PERMANENT STAND OF GRASS IS ACHIEVED WITH A MINIMUM OF 70% COVERAGE. UNLESS OTHERWISE NOTED, PRIVATE LAWN AREAS AND PARKWAYS IN FRONT OF PRIVATE LAWN AREAS DISTURBED BY CONSTRUCTION SHALL BE REPLACED WITH BLOCK SOD SIMILAR TO EXISTING CONDITIONS.
3. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION TRAFFIC UTILIZES THE STABILIZED ENTRANCE AT ALL TIMES FOR INGRESS/EGRESS TO THE SITE.
4. CONSTRUCTION ENTRANCE:
   - MINIMUM SIZE STONE: 3-INCHES DIAMETER
   - THICKNESS: NOT LESS THAN 8-INCHES
   - LENGTH: AS SHOWN ON PLAN AND IN DETAILS
   - WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS AND EGRESS, OR A MINIMUM OF 25 FEET.
   - MAINTENANCE REQUIREMENTS: AS NECESSARY TO PREVENT TRACKING OR FLOWING MUD INTO PUBLIC RIGHT-OF-WAY OR PARKING AREAS.
5. SITE ENTRY AND EXIT LOCATIONS SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON A PUBLIC ROADWAY SHALL BE REMOVED IMMEDIATELY. WHEN WASHING IS REQUIRED TO REMOVE SEDIMENT PRIOR TO ENTRANCE TO A PUBLIC ROADWAY, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN. ALL FINES IMPOSED FOR TRACKING ONTO PUBLIC ROADS SHALL BE PAID BY THE CONTRACTOR.
6. CONTRACTOR IS RESPONSIBLE FOR PROPER MAINTENANCE OF THE REQUIRED EROSION CONTROL DEVICES THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. EROSION CONTROLS SHALL BE REPAIRED OR REPLACED AS INSPECTION DEEMS NECESSARY, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. ACCUMULATED SILT IN ANY EROSION CONTROL DEVICE SHALL BE REMOVED AND SHALL BE DISTRIBUTED ON SITE IN A MANNER NOT CONTRIBUTING TO ADDITIONAL SILTATION. THE CONTRACTOR IS RESPONSIBLE FOR RE-ESTABLISHING ANY EROSION CONTROL DEVICE WHICH IS DISTURBED.
7. CONTRACTOR STAGING AREA TO BE AGREED UPON BY OWNER PRIOR TO BEGINNING CONSTRUCTION.
8. IF A GRADING PERMIT IS REQUIRED FROM THE CITY PRIOR TO STARTING CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR OBTAINING PERMIT AND PAYING ALL ASSOCIATED FEES.
9. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FROM THE EXISTING AND PROPOSED BUILDINGS AND NO PONDING IN PAVED AREAS. CONTRACTOR ADJUSTMENTS TO SPOT GRADES TO MAINTAIN POSITIVE DRAINAGE ARE ALLOWED WITH THE PRIOR APPROVAL OF THE ENGINEER. CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO ANY PAVING IF ANY AREAS OF POOR DRAINAGE ARE ENCOUNTERED.
10. ALL CLEARING, GRADING, COMPACTION AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
11. BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY THAT SUITABLE HANDICAPPED ROUTES (PER A.D.A. AND T.A.S.) EXIST TO AND FROM EVERY DOOR. IN NO CASE SHALL ADA RAMP SLOPES EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPES EXCEED 2.0 PERCENT. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPES EXCEED 5.0 PERCENT. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAVING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR A.D.A. AND T.A.S. COMPLIANCE ISSUES.
12. ALL AREAS OF THE SITE INCLUDING ANY OFF-SITE AREA THAT IS DISTURBED BY CONSTRUCTION ACTIVITIES, SHALL RECEIVE AT A MINIMUM, HYDROMULCH AND 6" OF TOP-SOIL. REFER TO LANDSCAPE, DEMOLITION, GRADING, PAVING, DRAINAGE, WATER, SEWER, IRRIGATION AND SEDIMENT CONTROL PLANS TO DETERMINE ALL LIMITS OF DISTURBANCE. CONTRACTOR SHALL PROVIDE SOD AS REQUIRED ELSEWHERE IN THE PLANS.
13. SUPPLY THE SEEDED AREAS WITH ADEQUATE MOISTURE (4" PENETRATION) AT TEN (10) DAY INTERVALS, IF NEEDED, FOR SEED GERMINATION AND PLANT GROWTH UNTIL ACCEPTANCE BY THE OWNER. WATER THE SEED IN A MANNER WHICH WILL PREVENT EROSION OF THE SOIL. FURNISH ALL WATER TO BE USED. REPAIR WASHOUTS AND OTHER BARE SOIL AREAS IN A SEEDED AREA EITHER BY RE-SEEDING, SPRIGGING, OR SPOT-SODDING, AND PERFORM MAINTENANCE AS NEEDED TO ESTABLISH GRASS IN THE AREA. CONTROL COMPETITIVE WEED GROWTH DURING THE ESTABLISHMENT PERIOD WITH HERBICIDES. CHEMICAL USAGE SHALL BE IN ACCORDANCE WITH THE CURRENT RECOMMENDATIONS OF THE TEXAS AGRICULTURAL EXPERIMENT STATION OR LOCAL SOIL CONSERVATION SERVICE FIELD OFFICE TECHNICAL GUIDES. STRICTLY ADHERE TO ALL FEDERAL, STATE, AND LOCAL LAWS GOVERNING HERBICIDES. WEED CONTROL SHALL BE THE CONTRACTOR'S RESPONSIBILITY WHETHER TOPSOIL IS FROM ON-SITE OR OFF-SITE SOURCES AND ALSO FOR SEEDED AREAS WHICH ARE SPECIFIED NOT TO RECEIVE TOPSOIL.
14. ANY AREAS WHICH ARE DISTURBED BY THE CONTRACTOR WHICH ARE NOT SHOWN ON THE DRAWINGS OR SPECIFIED TO REQUIRE DISTURBANCE INCLUDING ANY APPROVED AREAS NOT SHOWN ON THE DRAWINGS, SHALL BE CONSIDERED AS UNAUTHORIZED DISTURBED AREAS. ANY SUCH AREAS SHALL BE SEEDED AS SPECIFIED IN THIS SECTION AT THE CONTRACTOR'S EXPENSE AND NO SEPARATE PAY.

SPECIAL INSTRUCTIONS COVERING TESTING OF COMPACTION OF TRENCH BACK FILL

1. TRENCH BACK FILL COMPACTION SHALL BE TESTED AT THE MORE STRINGENT OF THE GEOTECHNCIAL REPORT OR AT THE RATE OF ONE (1) TEST PER 100 LINEAR FEET PER 12 INCH LIFT (LOOSE). TESTS SHALL BE STAGGERED SO THAT TESTS OF ADJACENT LIFTS ARE NOT DIRECTLY OVER TEST LOCATION OF PREVIOUS LIFT.
2. WHERE CONNECTING DISTANCE BETWEEN MANHOLES EXCEEDS 100 FEET, A MINIMUM OF TWO (2) TESTS PER LIFT, AS OUTLINED ABOVE, SHALL BE REQUIRED.
3. THE CONTRACTOR SHALL USE METHODS OF CONSTRUCTION THAT MEET OR EXCEED OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS AND OTHER LOCAL, STATE, OR FEDERAL REGULATIONS FOR SAFETY THAT ARE IN EFFECT. THE CONTRACTOR SHALL HAVE A TRENCH SAFETY PLAN PREPARED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
4. TESTING LABORATORY SHALL MAKE ONE IN PLACE DENSITY TEST FOR EACH 5,000 SQ FT OF AREA PER LIFT (8" LOOSE LIFTS.) BUT IN NO CASE LESS THAN TWO TESTS, AND ONE TEST PER 100 LINEAR FEET OF BACKFILL AREA ADJACENT TO GRADE BEAMS, TO INSURE THAT THE SPECIFIED DENSITY IS OBTAINED. IF THE GEOTECHNICAL REPORT REQUIRES A MORE STRINGENT TESTING REGIMEN, THE GEOTECHNCIAL RECOMMENDATIONS SHALL BE FOLLOWED.

FIRE LANES AND FIRE LANE STRIPING

1. FIRE LANES SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 24 FEET OR 26 FEET WHEN LOCATED WITHIN 35 FEET OF ANY STRUCTURE IN EXCESS OF 36 FEET IN HEIGHT, UNLESS OTHERWISE REQUIRED BY THE CITY. AN UNOBSTRUCTED VERTICAL CLEARANCE OF NOT LESS THAN 13 FEET 6 INCHES IS REQUIRED, UNLESS OTHERWISE REQUIRED BY THE CITY.
2. WHERE RED STRIPE INTERSECTS WITH A CURB LINE, PAINT FACE AND TOP OF CURB RETURN.
3. PAINT 4 INCH HIGH LETTERING WITH A 1 INCH STROKE CENTERED ON RED STRIPE TO READ: "NO PARKING" – "FIRE LANE". THIS LETTERING SHALL BE PAINTED EVERY 20 FEET OR AS REQUIRED BY THE CITY, AS MEASURED FROM THE END OF ONE LETTERING GROUP TO THE BEGINNING OF THE NEXT GROUP, WITH A 1 FOOT SPACE BETWEEN "NO PARKING" AND "FIRE LANE". (NOTE: QUOTES ARE USED IN THIS DESCRIPTION FOR EMPHASIS ONLY AND ARE NOT TO BE PAINTED WITH THE LETTERING)

② **GENERAL NOTES 2**
SCALE: SEE PLAN

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KEY PLAN

MJ THOMAS ENGINEERING, LLC
4700 BRYANT IRVIN CT. SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-8839
FAX - (817) 736-0317
MJT NO. - 511-047

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
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M.E.P. ENGINEER
RWB Consulting Engineers
12222 Merit Drive, Suite 400
Dallas, Texas 75251
Main Phone: 972.788.4222
www.rwb.net

TECHNOLOGY CONSULTANT
Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER
BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

100% Construction Documents Review

Date of Statement: 18 Aug, 2019

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION.

LAUREN V. BROWN
TEXAS LICENSE #23211

Project Issued: MAY 19,2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
MICHAEL A. THOMAS
9364O
LICENSED
PROFESSIONAL ENGINEER
5/19/2025

Director LVB	DRAWN BY DRW
DESIGNER JMR	QUALITY CONTROL QC
PROJECT ARCH. JCL	

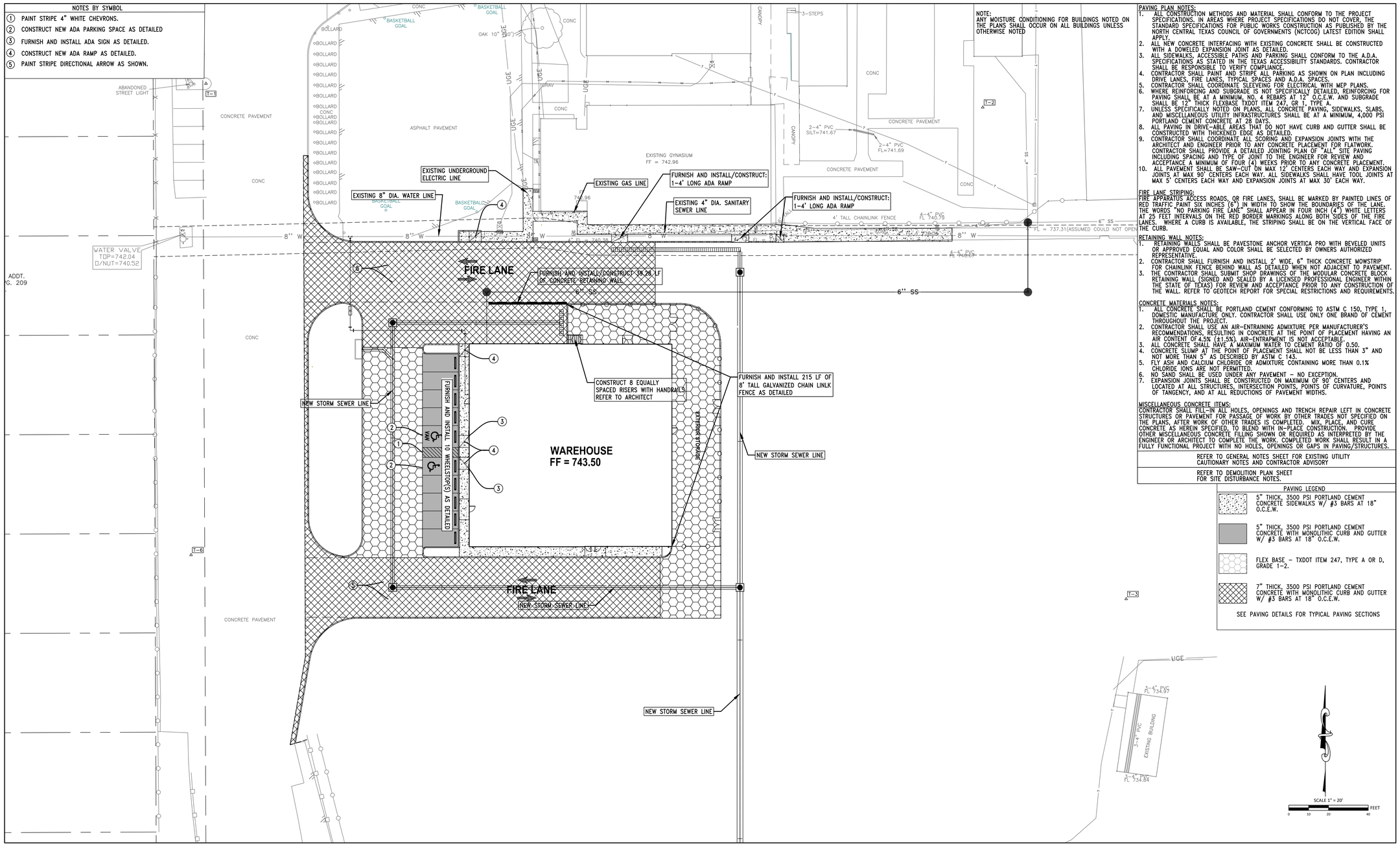
PROJECT NO.
24-103.00

SHEET TITLE
GENERAL NOTES 2

SHEET NO.
C1.02

NEW MAINTENANCE & OPERATIONS WAREHOUSE

NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108



PAVING PLAN NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIAL SHALL CONFORM TO THE PROJECT SPECIFICATIONS. IN AREAS WHERE PROJECT SPECIFICATIONS DO NOT COVER, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS PUBLISHED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) LATEST EDITION SHALL APPLY.
2. ALL NEW CONCRETE INTERFACING WITH EXISTING CONCRETE SHALL BE CONSTRUCTED WITH A DOWELED EXPANSION JOINT AS DETAILED.
3. ALL SIDEWALKS, ACCESSIBLE PATHS AND PARKING SHALL CONFORM TO THE A.D.A. SPECIFICATIONS AS STATED IN THE TEXAS ACCESSIBILITY STANDARDS. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY COMPLIANCE.
4. CONTRACTOR SHALL PAINT AND STRIPE ALL PARKING AS SHOWN ON PLAN INCLUDING DRIVE LANES, FIRE LANES, TYPICAL SPACES AND A.D.A. SPACES.
5. CONTRACTOR SHALL COORDINATE SLEEVEING FOR ELECTRICAL WITH MEP PLANS.
6. WHERE REINFORCING AND SUBGRADE IS NOT SPECIFICALLY DETAILED, REINFORCING FOR PAVING SHALL BE AT A MINIMUM, NO. 4 REBARS AT 12" O.C.E.W. AND SUBGRADE SHALL BE 12" THICK FLEXBASE TXDOT ITEM 247, GR 1, TYPE A.
7. UNLESS SPECIFICALLY NOTED ON PLANS, ALL CONCRETE PAVING, SIDEWALKS, SLABS, AND MISCELLANEOUS UTILITY INFRASTRUCTURES SHALL BE AT A MINIMUM, 4,000 PSI PORTLAND CEMENT CONCRETE AT 28 DAYS.
8. ALL PAVING IN DRIVE-ABLE AREAS THAT DO NOT HAVE CURB AND GUTTER SHALL BE CONSTRUCTED WITH THICKENED EDGE AS DETAILED.
9. CONTRACTOR SHALL COORDINATE ALL SCORING AND EXPANSION JOINTS WITH THE ARCHITECT AND ENGINEER PRIOR TO ANY CONCRETE PLACEMENT FOR FLATWORK. CONTRACTOR SHALL PROVIDE A DETAILED JOINTING PLAN OF "ALL" SITE PAVING INCLUDING SPACING AND TYPE OF JOINT TO THE ENGINEER FOR REVIEW AND ACCEPTANCE A MINIMUM OF FOUR (4) WEEKS PRIOR TO ANY CONCRETE PLACEMENT.
10. ALL PAVEMENT SHALL BE SAW-CUT ON MAX 12' CENTERS EACH WAY AND EXPANSION JOINTS AT MAX 90' CENTERS EACH WAY. ALL SIDEWALKS SHALL HAVE TOOL JOINTS AT MAX 5' CENTERS EACH WAY AND EXPANSION JOINTS AT MAX 30' EACH WAY.

FIRE LANE STRIPING:

FIRE APPARATUS ACCESS ROADS, OR FIRE LANES, SHALL BE MARKED BY PAINTED LINES OF RED TRAFFIC PAINT SIX INCHES (6") IN WIDTH TO SHOW THE BOUNDARIES OF THE LANE. THE WORDS "NO PARKING FIRE LANE" SHALL APPEAR IN FOUR INCH (4") WHITE LETTERS AT 25 FEET INTERVALS ON THE RED BORDER MARKINGS ALONG BOTH SIDES OF THE FIRE LANES. WHERE A CURB IS AVAILABLE, THE STRIPING SHALL BE ON THE VERTICAL FACE OF THE CURB.

RETAINING WALL NOTES:

1. RETAINING WALLS SHALL BE PAVESTONE ANCHOR VERTICA PRO WITH BEVELED UNITS OR APPROVED EQUAL AND COLOR SHALL BE SELECTED BY OWNERS AUTHORIZED REPRESENTATIVE.
2. CONTRACTOR SHALL FURNISH AND INSTALL 2' WIDE, 6" THICK CONCRETE MOWSTRIP FOR CHAINLINK FENCE BEHIND WALL AS DETAILED WHEN NOT ADJACENT TO PAVEMENT.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE MODULAR CONCRETE BLOCK RETAINING WALL (SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER WITHIN THE STATE OF TEXAS) FOR REVIEW AND ACCEPTANCE PRIOR TO ANY CONSTRUCTION OF THE WALL. REFER TO GEOTECH REPORT FOR SPECIAL RESTRICTIONS AND REQUIREMENTS.

CONCRETE MATERIALS NOTES:

1. ALL CONCRETE SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C 150, TYPE 1, DOMESTIC MANUFACTURE ONLY. CONTRACTOR SHALL USE ONLY ONE BRAND OF CEMENT THROUGHOUT THE PROJECT.
2. CONTRACTOR SHALL USE AN AIR-ENTRAINING ADMIXTURE PER MANUFACTURER'S RECOMMENDATIONS, RESULTING IN CONCRETE AT THE POINT OF PLACEMENT HAVING AN AIR CONTENT OF 4.5% (±1.5%). AIR-ENTRAPMENT IS NOT ACCEPTABLE.
3. ALL CONCRETE SHALL HAVE A MAXIMUM WATER TO CEMENT RATIO OF 0.50.
4. CONCRETE SLUMP AT THE POINT OF PLACEMENT SHALL NOT BE LESS THAN 3" AND NOT MORE THAN 5" AS DESCRIBED BY ASTM C 143.
5. FLY ASH AND CALCIUM CHLORIDE OR ADMIXTURE CONTAINING MORE THAN 0.1% CHLORIDE IONS ARE NOT PERMITTED.
6. NO SAND SHALL BE USED UNDER ANY PAVEMENT – NO EXCEPTION.
7. EXPANSION JOINTS SHALL BE CONSTRUCTED ON MAXIMUM OF 90' CENTERS AND LOCATED AT ALL STRUCTURES, INTERSECTION POINTS, POINTS OF CURVATURE, POINTS OF TANGENCY, AND AT ALL REDUCTIONS OF PAVEMENT WIDTHS.

MISCELLANEOUS CONCRETE ITEMS:

CONTRACTOR SHALL FILL-IN ALL HOLES, OPENINGS AND TRENCH REPAIR LEFT IN CONCRETE STRUCTURES OR PAVEMENT FOR PASSAGE OF WORK BY OTHER TRADES NOT SPECIFIED ON THE PLANS, AFTER WORK OF OTHER TRADES IS COMPLETED. MIX, PLACE, AND CURE CONCRETE AS HEREIN SPECIFIED, TO BLEND WITH IN-PLACE CONSTRUCTION. PROVIDE OTHER MISCELLANEOUS CONCRETE FILLING SHOWN OR REQUIRED AS INTERPRETED BY THE ENGINEER OR ARCHITECT TO COMPLETE THE WORK. COMPLETED WORK SHALL RESULT IN A FULLY FUNCTIONAL PROJECT WITH NO HOLES, OPENINGS OR GAPS IN PAVING/STRUCTURES.

REFER TO GENERAL NOTES SHEET FOR EXISTING UTILITY CAUTIONARY NOTES AND CONTRACTOR ADVISORY

REFER TO DEMOLITION PLAN SHEET FOR SITE DISTURBANCE NOTES.

PAVING LEGEND

- 5" THICK, 3500 PSI PORTLAND CEMENT CONCRETE SIDEWALKS W/ #3 BARS AT 18" O.C.E.W.
- 5" THICK, 3500 PSI PORTLAND CEMENT CONCRETE WITH MONOLITHIC CURB AND GUTTER W/ #3 BARS AT 18" O.C.E.W.
- FLEX BASE – TXDOT ITEM 247, TYPE A OR D, GRADE 1-2.
- 7" THICK, 3500 PSI PORTLAND CEMENT CONCRETE WITH MONOLITHIC CURB AND GUTTER W/ #3 BARS AT 18" O.C.E.W.

SEE PAVING DETAILS FOR TYPICAL PAVING SECTIONS

3 SITE PLAN
SCALE: SEE PLAN

B

A

KEY PLAN

MJ THOMAS ENGINEERING, LLC
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-9839
FAX - (817) 736-0017
MJT NO. - 511-047

VLK

ARCHITECT
VLK
1320 Hemphill Street, Suite 400
Fort Worth, Texas 76104
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LVB	DRW
DESIGNER	QUALITY CONTROL
JMR	QC
PROJECT ARCH.	
JCL	

PROJECT NO.
24-103.00

SHEET TITLE
SITE PLAN

SHEET NO.
C1.03

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

NEW MAINTENANCE & OPERATIONS WAREHOUSE

NEW MAINTENANCE AND OPERATION WAREHOUSE
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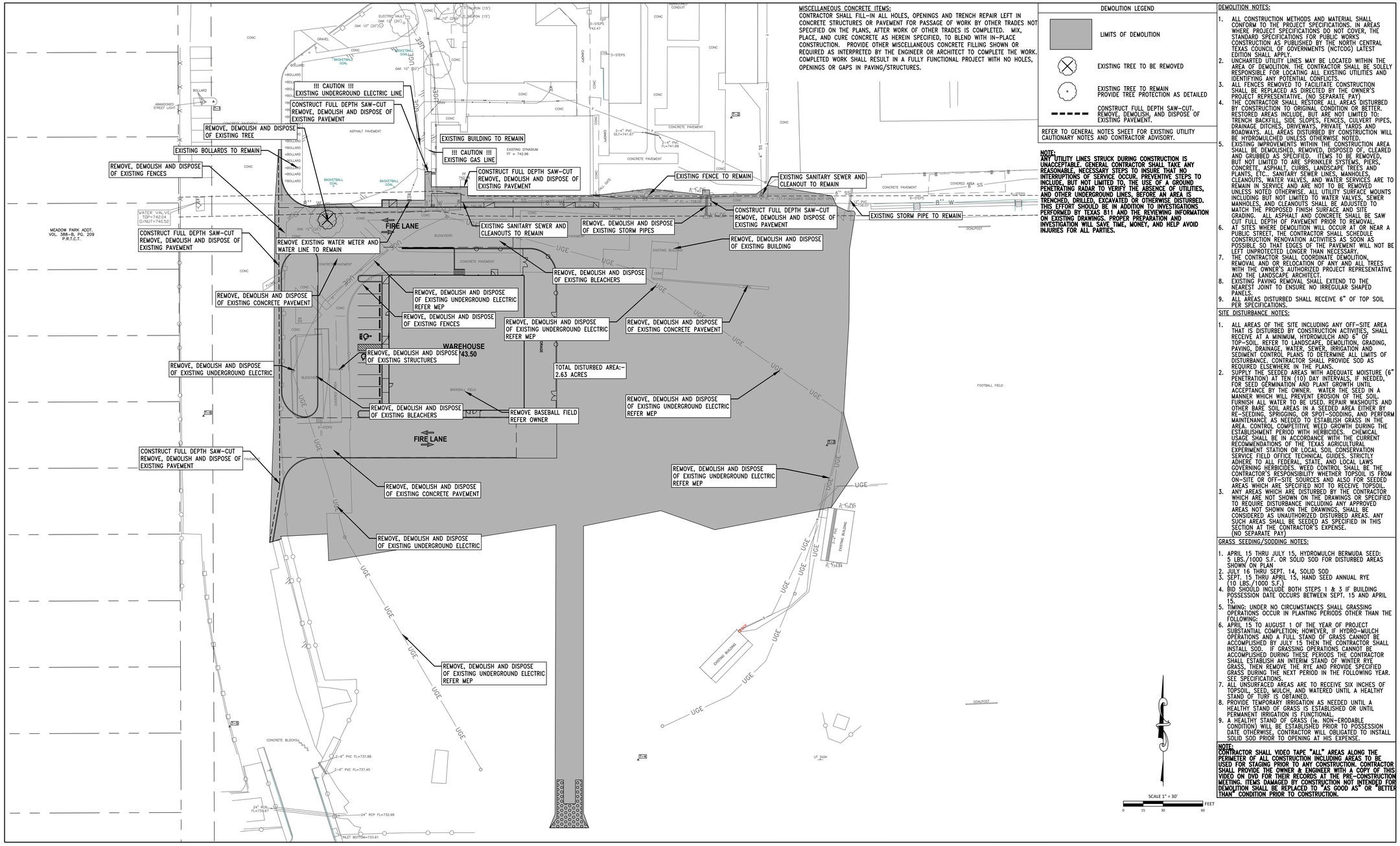

MISCELLANEOUS CONCRETE ITEMS:
CONTRACTOR SHALL FILL-IN ALL HOLES, OPENINGS AND TRENCH REPAIR LEFT IN CONCRETE STRUCTURES OR PAVEMENT FOR PASSAGE OF WORK BY OTHER TRADES NOT SPECIFIED ON THE PLANS, AFTER WORK OF OTHER TRADES IS COMPLETED. MIX, PLACE, AND CURE CONCRETE AS HEREIN SPECIFIED, TO BLEND WITH IN-PLACE CONSTRUCTION. PROVIDE OTHER MISCELLANEOUS CONCRETE FILLING SHOWN OR REQUIRED AS INTERPRETED BY THE ENGINEER OR ARCHITECT TO COMPLETE THE WORK. COMPLETED WORK SHALL RESULT IN A FULLY FUNCTIONAL PROJECT WITH NO HOLES, OPENINGS OR GAPS IN PAVING/STRUCTURES.

DEMOLITION LEGEND

- LIMITS OF DEMOLITION
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO REMAIN PROVIDE TREE PROTECTION AS DETAILED
- CONSTRUCT FULL DEPTH SAW-CUT. REMOVE, DEMOLISH, AND DISPOSE OF EXISTING PAVEMENT.

REFER TO GENERAL NOTES SHEET FOR EXISTING UTILITY CAUTIONARY NOTES AND CONTRACTOR ADVISORY.

NOTE:
ANY UTILITY LINES STRUCK DURING CONSTRUCTION IS UNACCEPTABLE. GENERAL CONTRACTOR SHALL TAKE ANY REASONABLE, NECESSARY STEPS TO INSURE THAT NO INTERRUPTIONS OF SERVICE OCCUR. PREVENTIVE STEPS TO INCLUDE, BUT NOT LIMITED TO, THE USE OF A GROUND PENETRATING RADAR TO VERIFY THE ABSENCE OF UTILITIES, AND OTHER UNDERGROUND LINES. BEFORE AN AREA IS TRENCHED, DRILLED, EXCAVATED OR OTHERWISE DISTURBED. THIS EFFORT SHOULD BE IN ADDITION TO INVESTIGATIONS PERFORMED BY TEXAS 811 AND THE REVIEWING INFORMATION ON EXISTING DRAWINGS. PROPER PREPARATION AND INVESTIGATION WILL SAVE TIME, MONEY, AND HELP AVOID INJURIES FOR ALL PARTIES.

DEMOLITION NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIAL SHALL CONFORM TO THE PROJECT SPECIFICATIONS. IN AREAS WHERE PROJECT SPECIFICATIONS DO NOT COVER, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS PUBLISHED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) LATEST EDITION SHALL APPLY.
2. UNCHARTED UTILITY LINES MAY BE LOCATED WITHIN THE AREA OF DEMOLITION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES AND IDENTIFYING ANY POTENTIAL CONFLICTS.
3. ALL FENCES REMOVED TO FACILITATE CONSTRUCTION SHALL BE REPLACED AS DIRECTED BY THE OWNER'S PROJECT REPRESENTATIVE. (NO SEPARATE PAY)
4. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO ORIGINAL CONDITION OR BETTER. RESTORED AREAS INCLUDE, BUT ARE NOT LIMITED TO: TRENCH BACKFILL, SIDE SLOPES, FENCES, CULVERT PIPES, DRAINAGE DITCHES, DRIVEWAYS, PRIVATE YARDS AND ROADWAYS. ALL AREAS DISTURBED BY CONSTRUCTION WILL BE HYDROMULCHED UNLESS OTHERWISE NOTED.
5. EXISTING IMPROVEMENTS WITHIN THE CONSTRUCTION AREA SHALL BE DEMOLISHED, REMOVED, DISPOSED OF, CLEARED AND GRUBBED AS SPECIFIED. ITEMS TO BE REMOVED, BUT NOT LIMITED TO ARE SPRINKLER SYSTEMS, PIERS, CONCRETE, ASPHALT, CURBS, LANDSCAPE TREES AND PLANTS, ETC., SANITARY SEWER LINES, MANHOLES, CLEANOUTS, WATER VALVES, AND WATER SERVICES ARE TO REMAIN IN SERVICE AND ARE NOT TO BE REMOVED UNLESS NOTED OTHERWISE. ALL UTILITY SURFACE MOUNTS INCLUDING BUT NOT LIMITED TO WATER VALVES, SEWER MANHOLES, AND CLEANOUTS SHALL BE ADJUSTED TO MATCH THE PROPOSED FINISH SURFACE AND SITE GRADING. ALL ASPHALT AND CONCRETE SHALL BE SAW CUT FULL DEPTH OF PAVEMENT PRIOR TO REMOVAL.
6. AT SITES WHERE DEMOLITION WILL OCCUR AT OR NEAR A PUBLIC STREET, THE CONTRACTOR SHALL SCHEDULE CONSTRUCTION RENOVATION ACTIVITIES AS SOON AS POSSIBLE SO THAT EDGES OF THE PAVEMENT WILL NOT BE LEFT UNPROTECTED LONGER THAN NECESSARY.
7. THE CONTRACTOR SHALL COORDINATE DEMOLITION, REMOVAL AND OR RELOCATION OF ANY AND ALL TREES WITH THE OWNER'S AUTHORIZED PROJECT REPRESENTATIVE AND THE LANDSCAPE ARCHITECT.
8. EXISTING PAVING REMOVAL SHALL EXTEND TO THE NEAREST JOINT TO ENSURE NO IRREGULAR SHAPED PANELS.
9. ALL AREAS DISTURBED SHALL RECEIVE 6" OF TOP SOIL PER SPECIFICATIONS.

SITE DISTURBANCE NOTES:

1. ALL AREAS OF THE SITE INCLUDING ANY OFF-SITE AREA THAT IS DISTURBED BY CONSTRUCTION ACTIVITIES, SHALL RECEIVE, AT A MINIMUM, HYDROMULCH AND 6" OF TOP-SOIL. REFER TO LANDSCAPE, DEMOLITION, GRADING, PAVING, DRAINAGE, WATER, SEWER, IRRIGATION AND SEDIMENT CONTROL PLANS TO DETERMINE ALL LIMITS OF DISTURBANCE. CONTRACTOR SHALL PROVIDE SOD AS REQUIRED ELSEWHERE IN THE PLANS.
2. SUPPLY THE SEEDED AREAS WITH ADEQUATE MOISTURE (6" PENETRATION) AT TEN (10) DAY INTERVALS, IF NEEDED, FOR SEED GERMINATION AND PLANT GROWTH UNTIL ACCEPTANCE BY THE OWNER. WATER THE SEED IN A MANNER WHICH WILL PREVENT EROSION OF THE SOIL. FURNISH ALL WATER TO BE USED. REPAIR WASHOUTS AND OTHER BARE SOIL AREAS IN A SEEDED AREA EITHER BY RE-SEEDING, SPRIGGING, OR SPOT-SODDING, AND PERFORM MAINTENANCE AS NEEDED TO ESTABLISH GRASS IN THE AREA. CONTROL COMPETITIVE WEED GROWTH DURING THE ESTABLISHMENT PERIOD WITH HERBICIDES. CHEMICAL USAGE SHALL BE IN ACCORDANCE WITH THE CURRENT RECOMMENDATIONS OF THE TEXAS AGRICULTURAL EXPERIMENT STATION OR LOCAL SOIL CONSERVATION SERVICE FIELD OFFICE TECHNICAL GUIDES. STRICTLY ADHERE TO ALL FEDERAL, STATE, AND LOCAL LAWS GOVERNING HERBICIDES. WEED CONTROL SHALL BE THE CONTRACTOR'S RESPONSIBILITY WHETHER TOPSOIL IS FROM ON-SITE OR OFF-SITE SOURCES AND ALSO FOR SEEDED AREAS WHICH ARE SPECIFIED NOT TO RECEIVE TOPSOIL.
3. ANY AREAS WHICH ARE DISTURBED BY THE CONTRACTOR WHICH ARE NOT SHOWN ON THE DRAWINGS OR SPECIFIED TO REQUIRE DISTURBANCE INCLUDING ANY APPROVED AREAS NOT SHOWN ON THE DRAWINGS, SHALL BE CONSIDERED AS UNAUTHORIZED DISTURBED AREAS. ANY SUCH AREAS SHALL BE SEEDED AS SPECIFIED IN THIS SECTION AT THE CONTRACTOR'S EXPENSE. (NO SEPARATE PAY)

GRASS SEEDING/SODDING NOTES:

1. APRIL 15 THRU JULY 15, HYDROMULCH BERMUDA SEED: 5 LBS./1000 S.F. OR SOLID SOD FOR DISTURBED AREAS SHOWN ON PLAN
2. JULY 16 THRU SEPT. 14, SOLID SOD
3. SEPT. 15 THRU APRIL 15, HAND SEED ANNUAL RYE (10 LBS./1000 S.F.)
4. BID SHOULD INCLUDE BOTH STEPS 1 & 3 IF BUILDING POSSESSION DATE OCCURS BETWEEN SEPT. 15 AND APRIL 15.
5. TIMING: UNDER NO CIRCUMSTANCES SHALL GRASSING OPERATIONS OCCUR IN PLANTING PERIODS OTHER THAN THE FOLLOWING:
6. APRIL 15 TO AUGUST 1 OF THE YEAR OF PROJECT SUBSTANTIAL COMPLETION; HOWEVER, IF HYDRO-MULCH OPERATIONS AND A FULL STAND OF GRASS CANNOT BE ACCOMPLISHED BY JULY 15 THEN THE CONTRACTOR SHALL INSTALL SOD. IF GRASSING OPERATIONS CANNOT BE ACCOMPLISHED DURING THESE PERIODS THE CONTRACTOR SHALL ESTABLISH AN INTERIM STAND OF WINTER RYE GRASS, THEN REMOVE THE RYE AND PROVIDE SPECIFIED GRASS DURING THE NEXT PERIOD IN THE FOLLOWING YEAR. SEE SPECIFICATIONS.
7. ALL UNSURFACED AREAS ARE TO RECEIVE SIX INCHES OF TOPSOIL, SEED, MULCH, AND WATERED UNTIL A HEALTHY STAND OF TURF IS OBTAINED.
8. PROVIDE TEMPORARY IRRIGATION AS NEEDED UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED OR UNTIL PERMANENT IRRIGATION IS FUNCTIONAL.
9. A HEALTHY STAND OF GRASS (ie. NON-ERODABLE CONDITION) WILL BE ESTABLISHED PRIOR TO POSSESSION DATE OTHERWISE, CONTRACTOR WILL OBLIGATED TO INSTALL SOLID SOD PRIOR TO OPENING AT HIS EXPENSE.

NOTE:
CONTRACTOR SHALL VIDEO TAPE "ALL" AREAS ALONG THE PERIMETER OF ALL CONSTRUCTION INCLUDING AREAS TO BE USED FOR STAGING PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL PROVIDE THE OWNER & ENGINEER WITH A COPY OF THIS VIDEO ON DVD FOR THEIR RECORDS AT THE PRE-CONSTRUCTION MEETING. ITEMS DAMAGED BY CONSTRUCTION NOT INTENDED FOR DEMOLITION SHALL BE REPLACED TO "AS GOOD AS" OR "BETTER THAN" CONDITION PRIOR TO CONSTRUCTION.

4 DEMOLITION PLAN
SCALE: SEE PLAN

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KEY PLAN

MJ THOMAS ★ ENGINEERING, LLC ★
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-8839
FAX - (817) 736-0017
MJT NO. - 511-047

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
RWB Consulting Engineers
12222 Merit Drive, Suite 400
Dallas, Texas 75251
Main Phone: 972.788.4222
www.rwb.net

TECHNOLOGY CONSULTANT
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LAUREN V. BROWN
TEXAS LICENSE #23211

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REVISIONS

Revision No.	Revision Date

LAUREN V. BROWN 93640 LICENSED PROFESSIONAL ENGINEER
5/19/2025

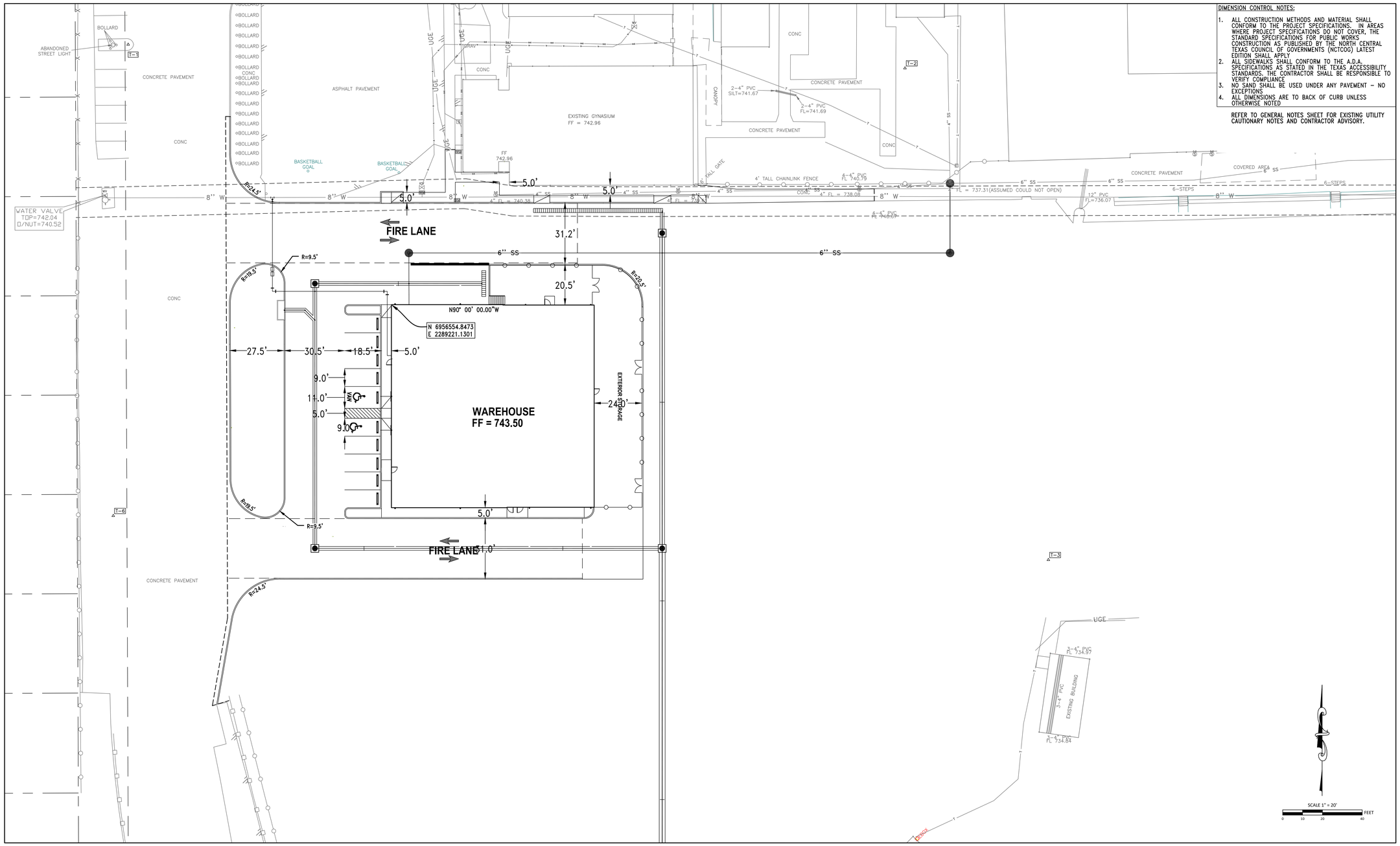
Director	DRAWN BY
LVB	DRW
DESIGNER	QUALITY CONTROL
JMR	QC
PROJECT ARCH.	
JCL	

PROJECT NO.
24-103.00

SHEET TITLE
DEMOLITION PLAN

SHEET NO.
C1.04

NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108



5 **DIMENSION CONTROL PLAN**
SCALE: SEE PLAN

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
RWB Consulting Engineers
12222 Merit Drive, Suite 400
Dallas, Texas 75251
Main Phone: 972.788.4222
www.rwb.net

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5/19/2025

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DESIGNER JMR	QUALITY CONTROL QC
PROJECT ARCH. JCL	

PROJECT NO.
24-103.00

SHEET TITLE
DIMENSION CONTROL PLAN

SHEET NO.
C1.05

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KEY PLAN

MJ THOMAS ★ ENGINEERING, LLC ★
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
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FAX - (817) 736-0017
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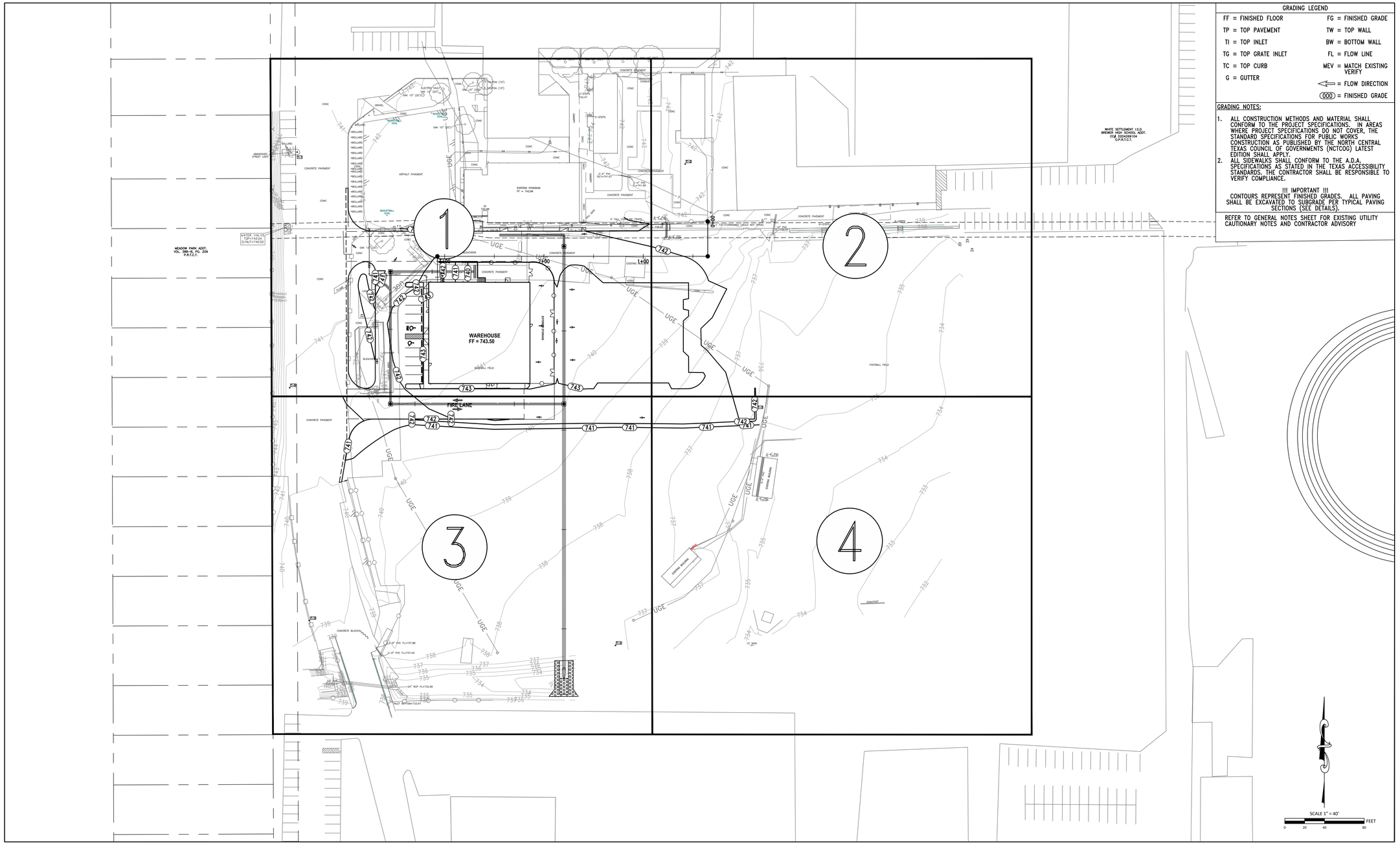

GRADING LEGEND

FF = FINISHED FLOOR	FG = FINISHED GRADE
TP = TOP PAVEMENT	TW = TOP WALL
TI = TOP INLET	BW = BOTTOM WALL
TG = TOP GRATE INLET	FL = FLOW LINE
TC = TOP CURB	MEV = MATCH EXISTING VERIFY
G = GUTTER	⇦ = FLOW DIRECTION
	(000) = FINISHED GRADE

GRADING NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIAL SHALL CONFORM TO THE PROJECT SPECIFICATIONS. IN AREAS WHERE PROJECT SPECIFICATIONS DO NOT COVER, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS PUBLISHED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) LATEST EDITION SHALL APPLY.
2. ALL SIDEWALKS SHALL CONFORM TO THE A.D.A. SPECIFICATIONS AS STATED IN THE TEXAS ACCESSIBILITY STANDARDS. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY COMPLIANCE.

!!! IMPORTANT !!!
CONTOURS REPRESENT FINISHED GRADES. ALL PAVING SHALL BE EXCAVATED TO SUBGRADE PER TYPICAL PAVING SECTIONS (SEE DETAILS).

REFER TO GENERAL NOTES SHEET FOR EXISTING UTILITY CAUTIONARY NOTES AND CONTRACTOR ADVISORY

6 OVERALL GRADING PLAN
SCALE: SEE PLAN

B

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MJ THOMAS ★ ENGINEERING, LLC ★
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO, F-9435
PHONE - (817) 732-9839
FAX - (817) 736-0317
MJT NO. - 511-047

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Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
RWB Consulting Engineers
12222 Merit Drive, Suite 400
Dallas, Texas 75251
Main Phone: 972.788.4222
www.rwb.net

TECHNOLOGY CONSULTANT
Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER
BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

100% Construction Documents Review

Date of Statement: 18 Aug, 2019

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION.

LAUREN V. BROWN
TEXAS LICENSE #23211

Project Issued: MAY 19,2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
MICHAEL A. THOMAS
93640
LICENSED PROFESSIONAL ENGINEER
5/19/2025

Director LVB	DRAWN BY DRW
DESIGNER JMR	QUALITY CONTROL QC
PROJECT ARCH. JCL	

PROJECT NO.
24-103.00

SHEET TITLE
OVERALL GRADING PLAN

SHEET NO.
C1.06

NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108

GRADING LEGEND	
FF = FINISHED FLOOR	FG = FINISHED GRADE
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G = GUTTER	⇦ = FLOW DIRECTION
	(000) = FINISHED GRADE

GRADING NOTES:

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2. ALL SIDEWALKS SHALL CONFORM TO THE A.D.A. SPECIFICATIONS AS STATED IN THE TEXAS ACCESSIBILITY STANDARDS. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY COMPLIANCE.

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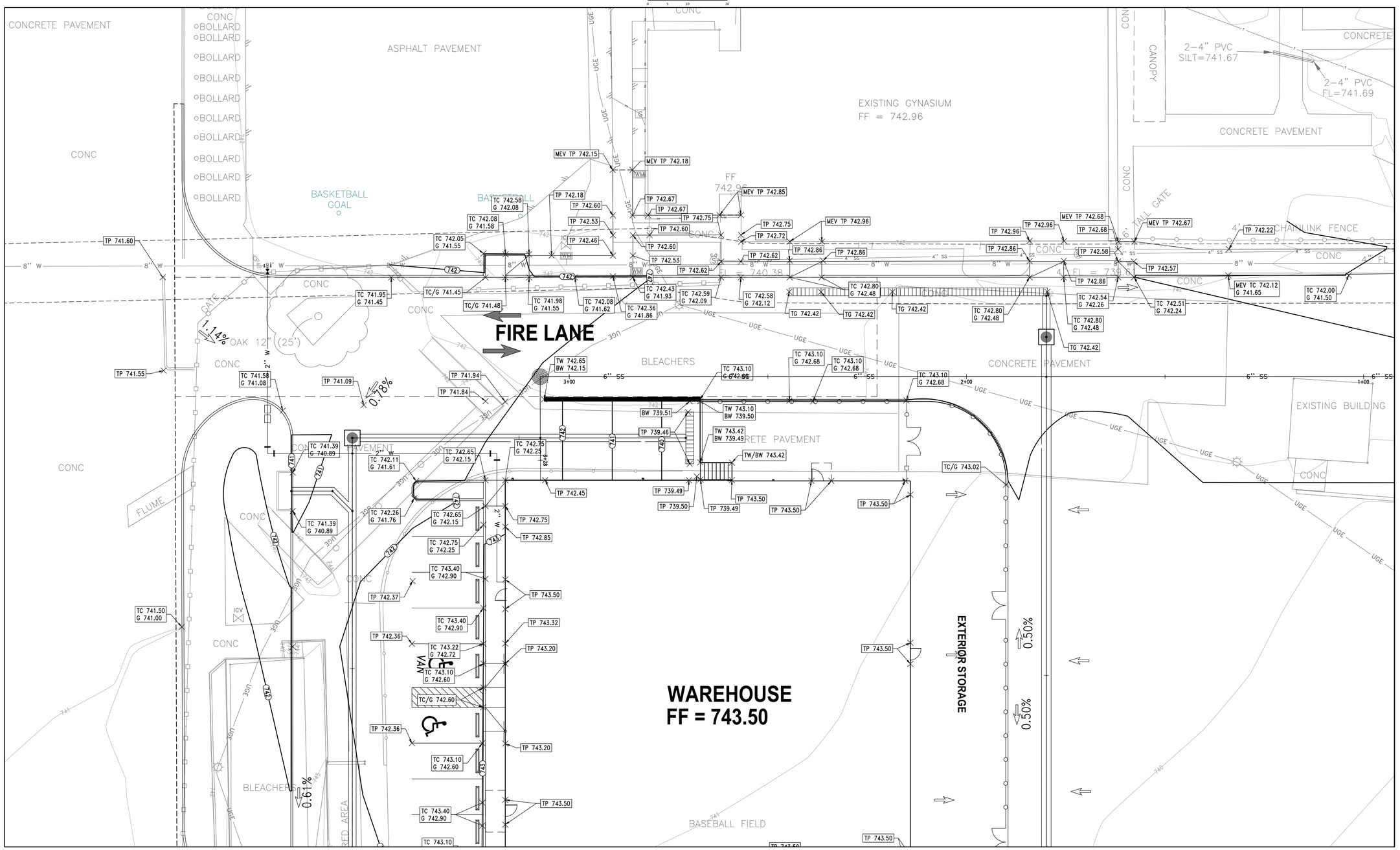
REFER TO GENERAL NOTES SHEET FOR EXISTING UTILITY CAUTIONARY NOTES AND CONTRACTOR ADVISORY

SCALE 1" = 10'
0 5 10 20 FEET



⑦ GRADING PLAN 1
SCALE: SEE PLAN

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

CIVIL ENGINEER
MJ Thomas
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Fort Worth, Texas 76107
Main Phone: 817.732.9839
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WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

NEW MAINTENANCE & OPERATIONS WAREHOUSE

100% Construction Documents Review

Date of Statement: 18 Aug, 2019

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LAUREN V. BROWN
TEXAS LICENSE #23211

Project Issued: MAY 19,2025

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LICENSED
PROFESSIONAL ENGINEER
5/19/2025

Director	DRAWN BY
LVB	DRW
DESIGNER	QUALITY CONTROL
JMR	QC
PROJECT ARCH.	
JCL	

PROJECT NO.
24-103.00

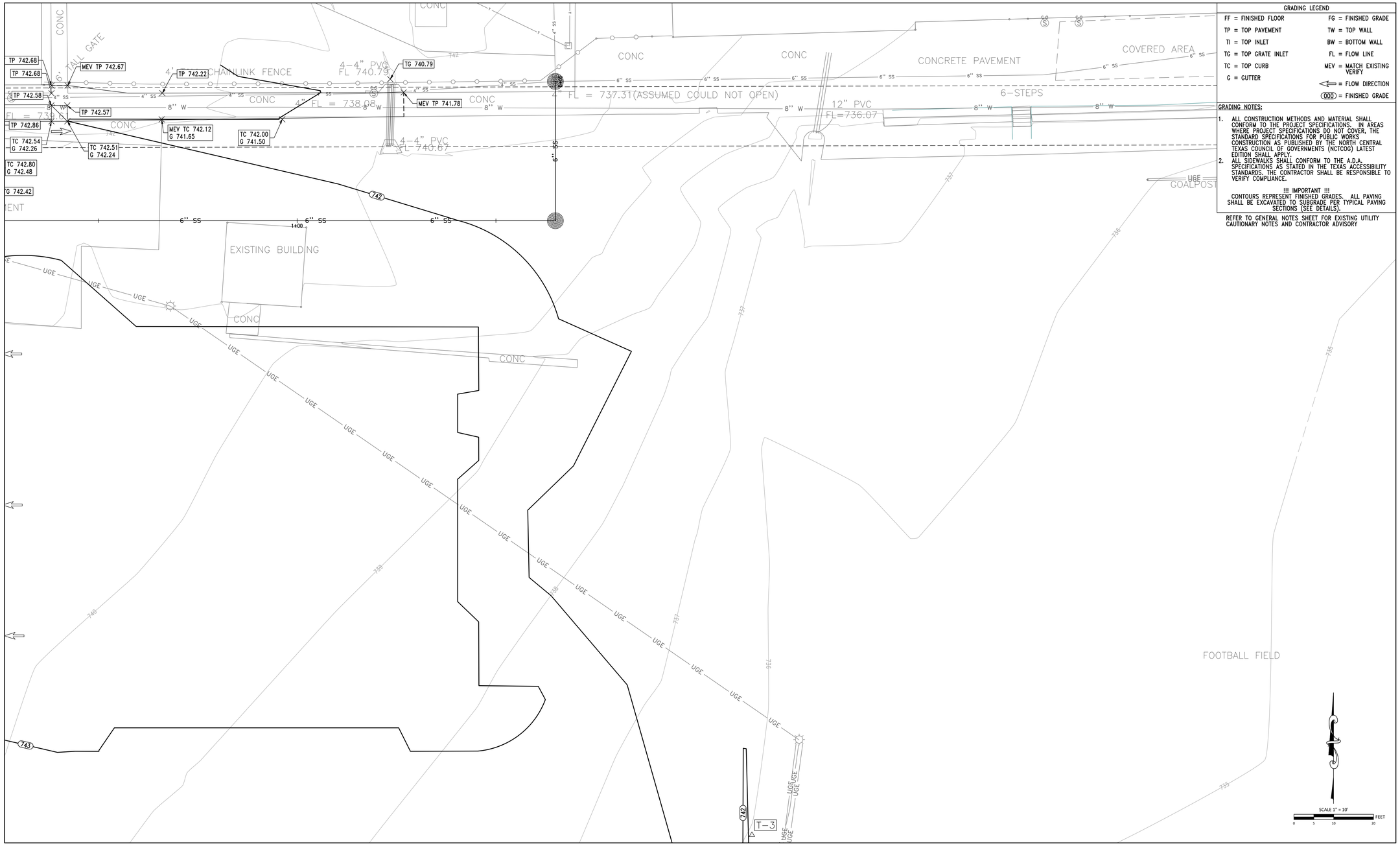
SHEET TITLE
GRADING PLAN 1

SHEET NO.
C1.07

MJ THOMAS ★ ENGINEERING, LLC ★
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-9839
FAX - (817) 736-0317
MJT NO. - 511-047

B
A
KEY PLAN

NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108



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REFER TO GENERAL NOTES SHEET FOR EXISTING UTILITY CAUTIONARY NOTES AND CONTRACTOR ADVISORY

8 GRADING PLAN 2
SCALE: SEE PLAN

B

A

KEY PLAN

MJ THOMAS ★ ENGINEERING, LLC ★
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO, F-9435
PHONE - (817) 732-9839
FAX - (817) 736-0017
MJT NO. - 511-047

VLK

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

CIVIL ENGINEER
MJ Thomas
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100% Construction Documents Review

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LAUREN V. BROWN
TEXAS LICENSE #23211

Project Issued: MAY 19,2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
MICHAEL A. THOMAS
93640
LICENSED
PROFESSIONAL ENGINEER
5/19/2025

Director	DRAWN BY
LVB	DRW
DESIGNER	QUALITY CONTROL
JMR	QC
PROJECT ARCH.	
JCL	

PROJECT NO.
24-103.00

SHEET TITLE
GRADING PLAN 2

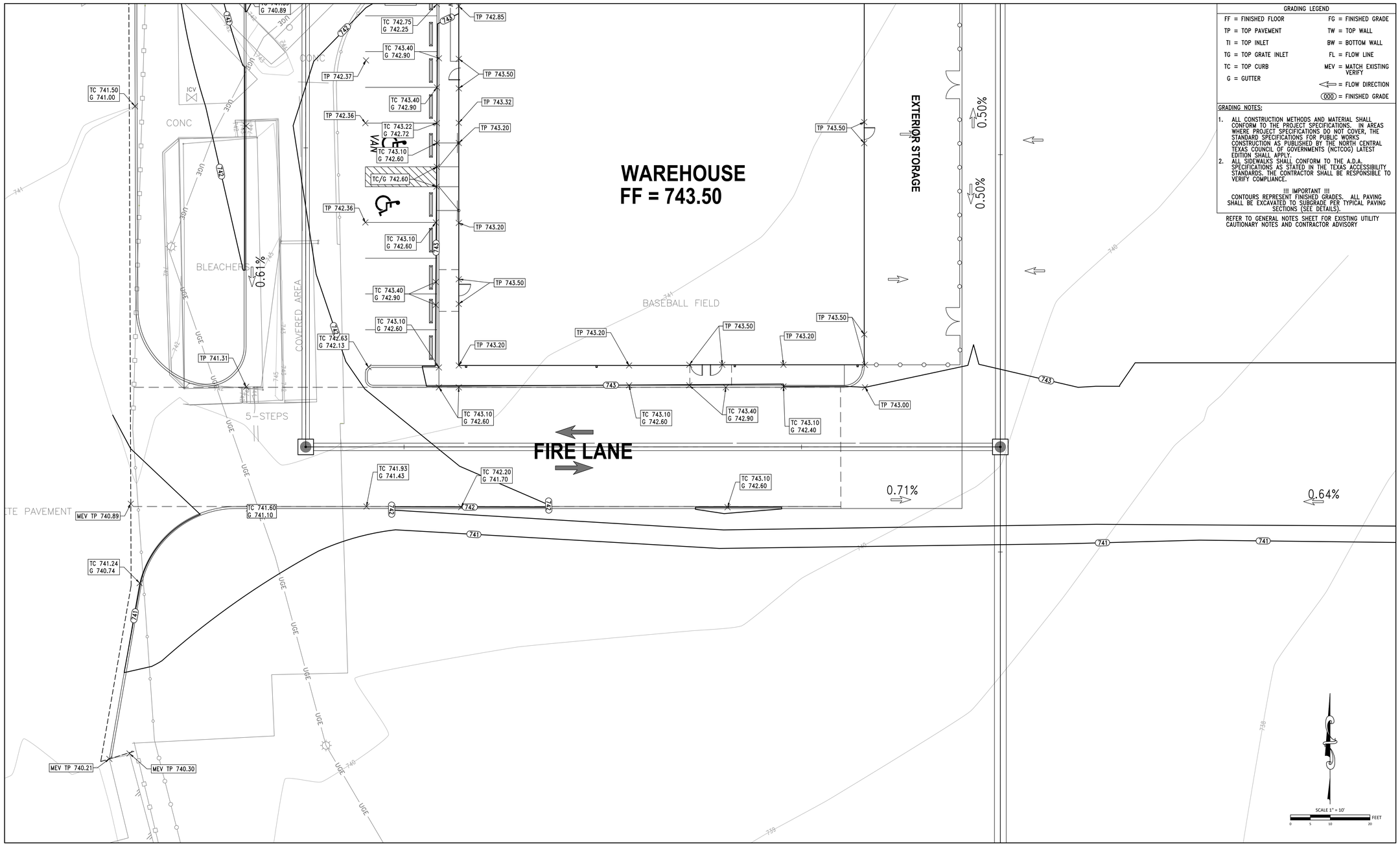
SHEET NO.
C1.08

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

NEW MAINTENANCE & OPERATIONS WAREHOUSE

NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108



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9 **GRADING PLAN 3**
SCALE: SEE PLAN

B

A

KEY PLAN

MJ THOMAS ★ ENGINEERING, LLC ★
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-9839
FAX - (817) 736-0017
MJT NO. - 511-047

VLK

ARCHITECT
VLK
1320 Hemphill Street, Suite 400
Fort Worth, Texas 76104
Main Phone: 817.633.1600
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LAUREN V. BROWN
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REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
MICHAEL A. THOMAS
93640
LICENSED
PROFESSIONAL ENGINEER
5/19/2025

Director	DRAWN BY
LVB	DRW
DESIGNER	QUALITY CONTROL
JMR	QC
PROJECT ARCH.	
JCL	

PROJECT NO.
24-103.00

SHEET TITLE
GRADING PLAN 3

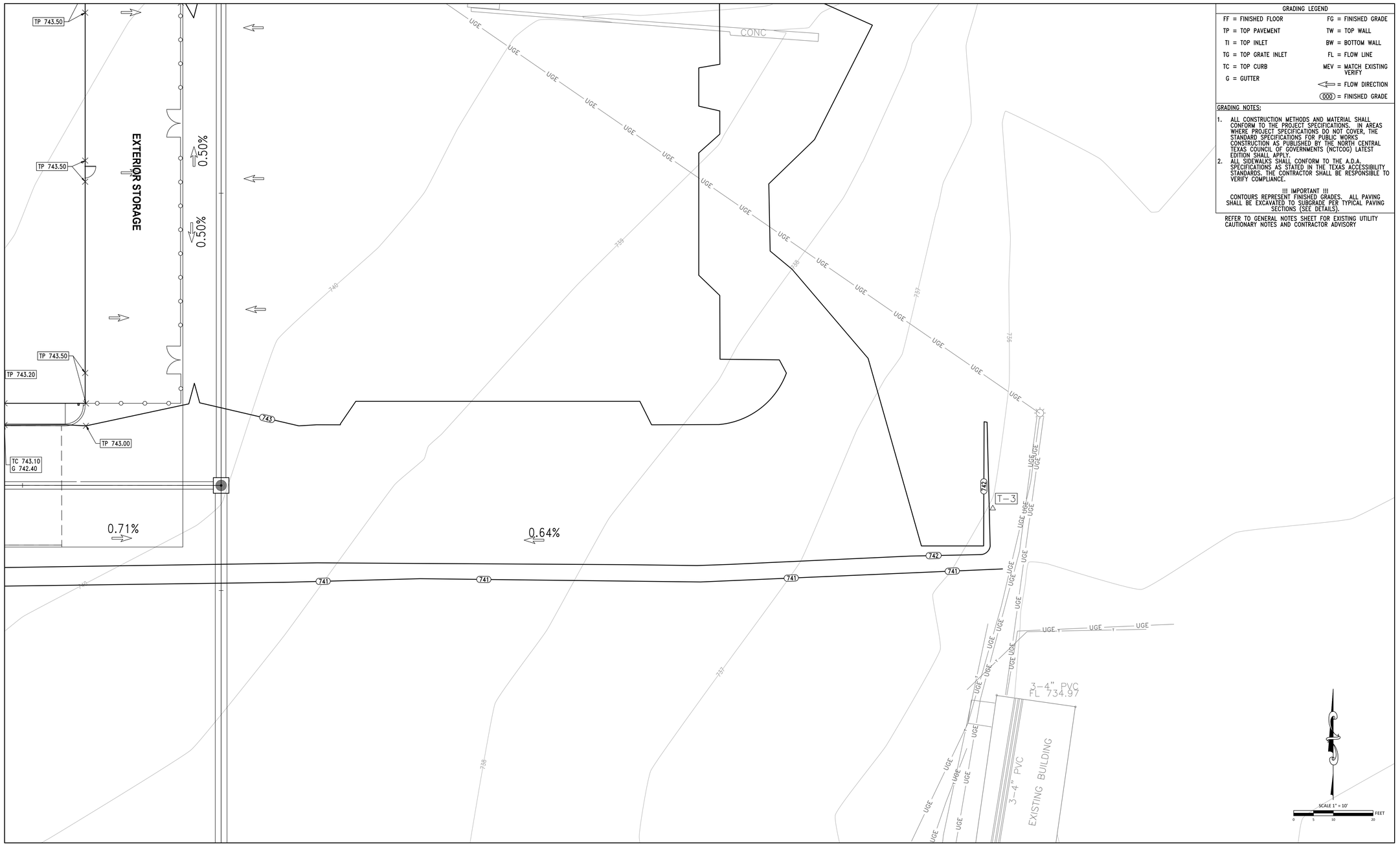
SHEET NO.
C1.09

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

NEW MAINTENANCE & OPERATIONS WAREHOUSE

NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108



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⑩ **GRADING PLAN 4**
SCALE: SEE PLAN

B

A

KEY PLAN

VLK

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

CIVIL ENGINEER
MJ Thomas
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REVISIONS

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LICENSED PROFESSIONAL ENGINEER
5/19/2025

Director LVB	DRAWN BY DRW
DESIGNER JMR	QUALITY CONTROL QC
PROJECT ARCH. JCL	

PROJECT NO.
24-103.00

SHEET TITLE
GRADING PLAN 4

SHEET NO.
C1.10

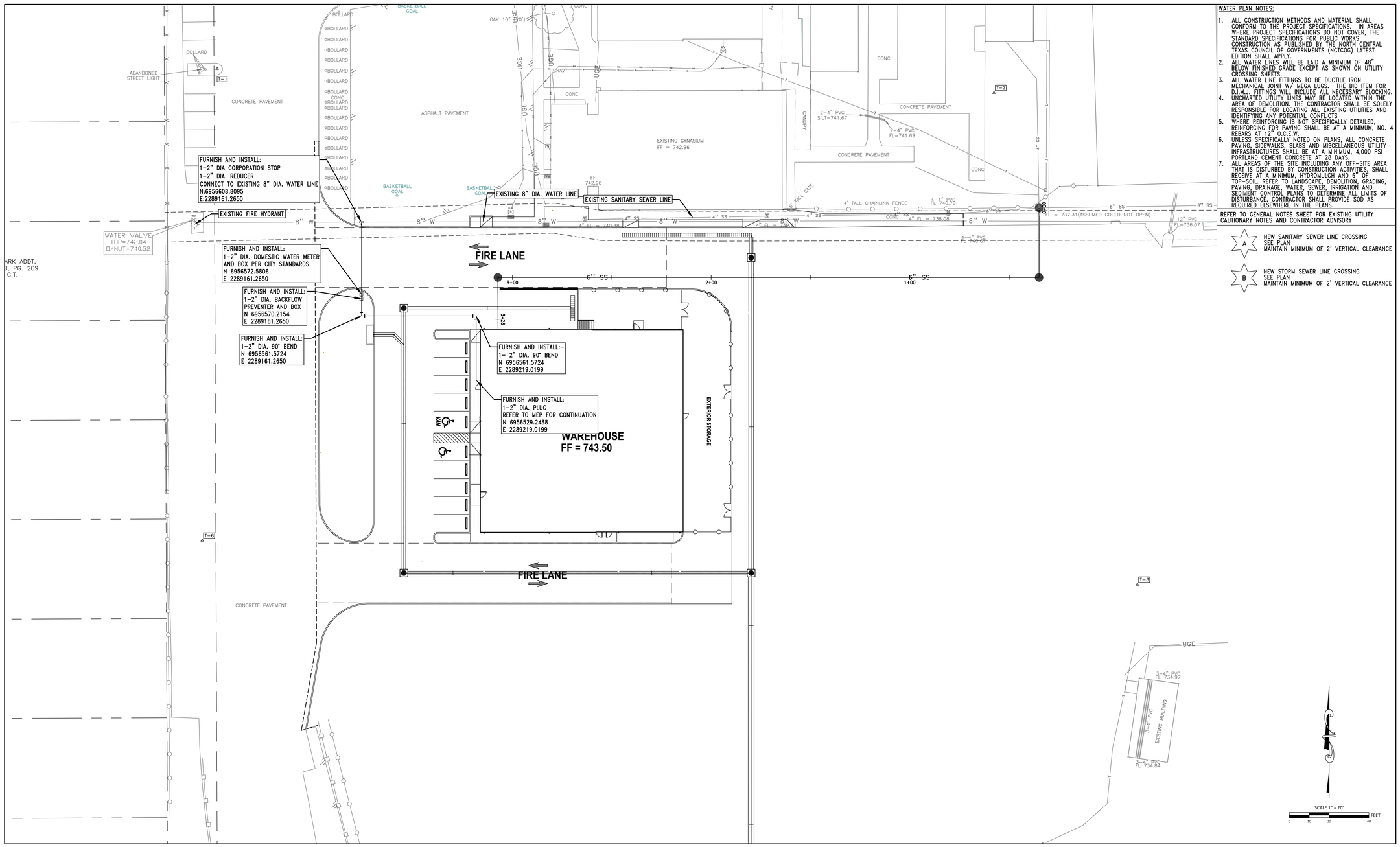
WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

NEW MAINTENANCE & OPERATIONS WAREHOUSE

MJ THOMAS ★ ENGINEERING, LLC ★
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-9839
FAX - (817) 736-0017
MJT NO. - 511-047

NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108



WATER PLAN NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIAL SHALL CONFORM TO THE PROJECT SPECIFICATIONS. IN AREAS WHERE PROJECT SPECIFICATIONS DO NOT COVER, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS PUBLISHED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) LATEST EDITION SHALL APPLY.
2. ALL WATER LINES WILL BE LAID A MINIMUM OF 48" BELOW FINISHED GRADE EXCEPT AS SHOWN ON UTILITY CROSSING SHEETS.
3. ALL WATER LINE FITTINGS TO BE DUCTILE IRON MECHANICAL JOINT W/ MEGA LUGS. THE BID ITEM FOR D.I.M.J. FITTINGS WILL INCLUDE ALL NECESSARY BLOCKING.
4. UNCHARTED UTILITY LINES MAY BE LOCATED WITHIN THE AREA OF DEMOLITION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES AND IDENTIFYING ANY POTENTIAL CONFLICTS
5. WHERE REINFORCING IS NOT SPECIFICALLY DETAILED, REINFORCING FOR PAVING SHALL BE AT A MINIMUM, NO. 4 REBARS AT 12" O.C.E.W.
6. UNLESS SPECIFICALLY NOTED ON PLANS, ALL CONCRETE PAVING, SIDEWALKS, SLABS AND MISCELLANEOUS UTILITY INFRASTRUCTURES SHALL BE AT A MINIMUM, 4,000 PSI PORTLAND CEMENT CONCRETE AT 28 DAYS.
7. ALL AREAS OF THE SITE INCLUDING ANY OFF-SITE AREA THAT IS DISTURBED BY CONSTRUCTION ACTIVITIES, SHALL RECEIVE AT A MINIMUM, HYDROMULCH AND 6" OF TOP-SOIL. REFER TO LANDSCAPE, DEMOLITION, GRADING, PAVING, DRAINAGE, WATER, SEWER, IRRIGATION AND SEDIMENT CONTROL PLANS TO DETERMINE ALL LIMITS OF DISTURBANCE. CONTRACTOR SHALL PROVIDE SOD AS REQUIRED ELSEWHERE IN THE PLANS.

REFER TO GENERAL NOTES SHEET FOR EXISTING UTILITY CAUTIONARY NOTES AND CONTRACTOR ADVISORY

A — NEW SANITARY SEWER LINE CROSSING SEE PLAN MAINTAIN MINIMUM OF 2' VERTICAL CLEARANCE

B — NEW STORM SEWER LINE CROSSING SEE PLAN MAINTAIN MINIMUM OF 2' VERTICAL CLEARANCE

(11) WATER PLAN
SCALE: SEE PLAN

B

A

KEY PLAN

MJ THOMAS ★ ENGINEERING, LLC ★
4700 BRYANT IRVIN CT, SUITE 204
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5/19/2025

Director	DRAWN BY
LVB	DRW
DESIGNER	QUALITY CONTROL
JMR	QC
PROJECT ARCH.	
JCL	

PROJECT NO.
24-103.00

SHEET TITLE
WATER PLAN

SHEET NO.
C1.11

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

NEW MAINTENANCE & OPERATIONS WAREHOUSE

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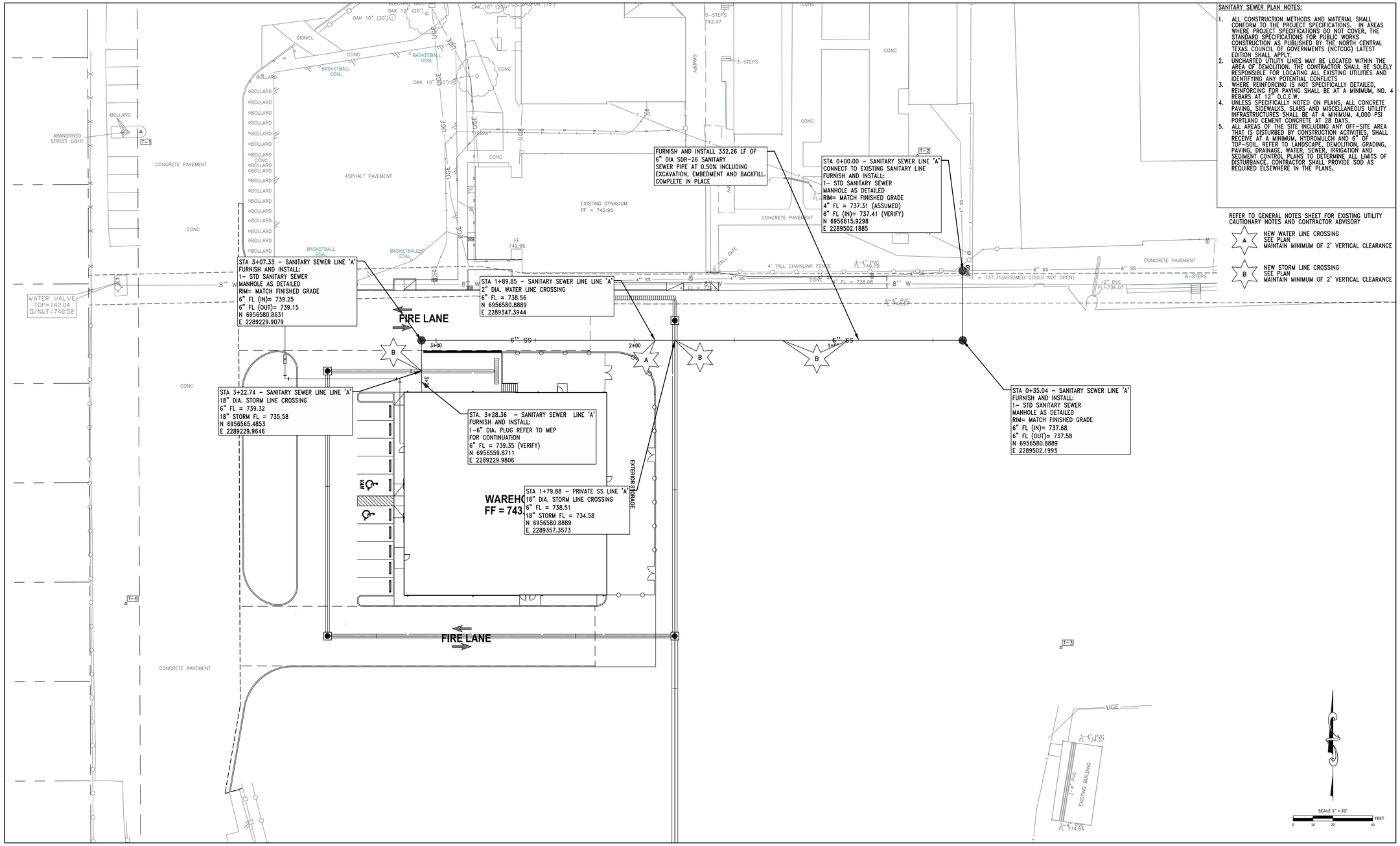

12 SANITARY SEWER PLAN
SCALE: SEE PLAN

ARCHITECT
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JMR	QC
PROJECT ARCH.	
JCL	

PROJECT NO.
24-103.00

SHEET TITLE
SANITARY SEWER PLAN

SHEET NO.
C1.12

B

A

KEY PLAN

MJ THOMAS ★ ENGINEERING, LLC ★
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-9839
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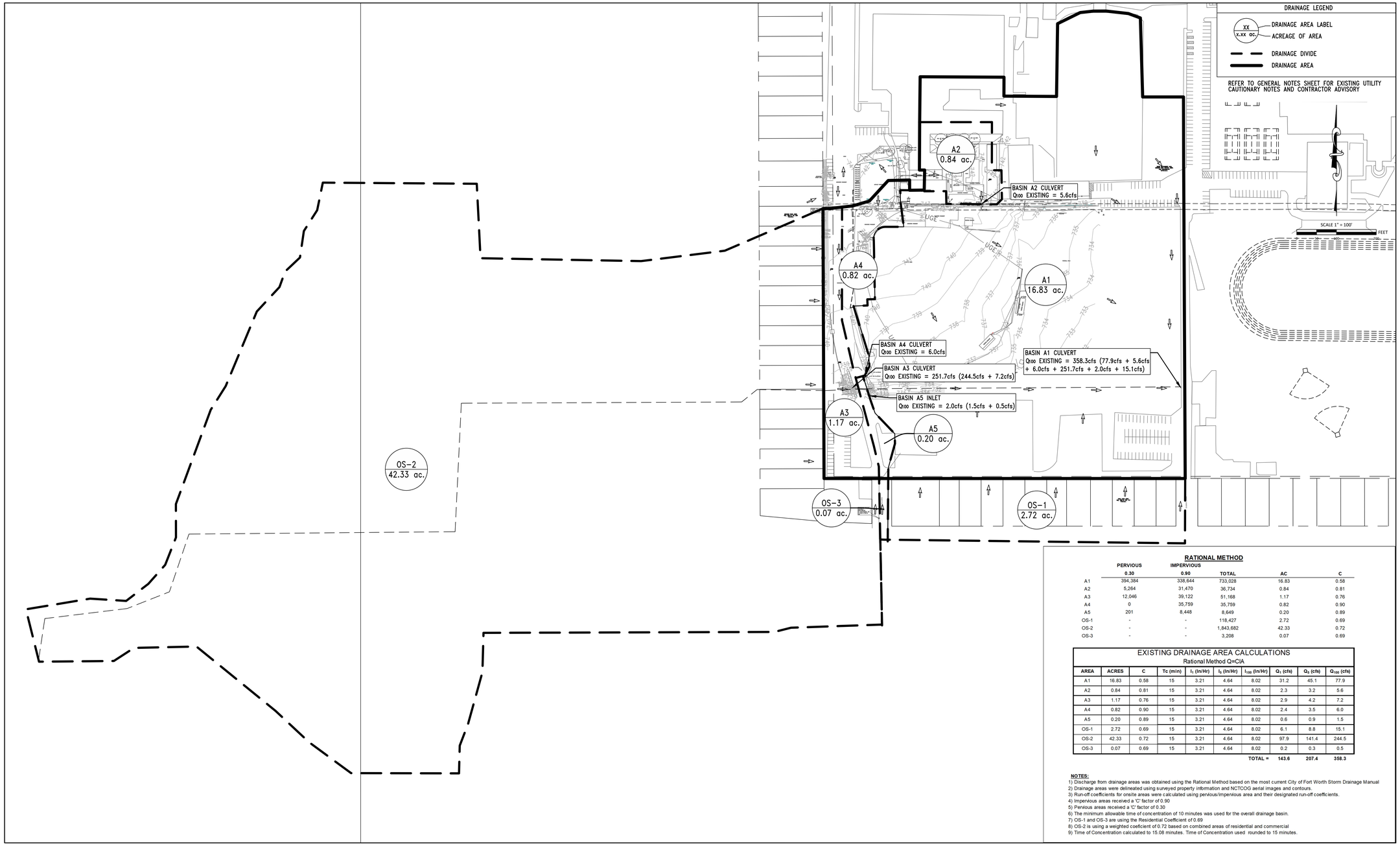


RATIONAL METHOD

	PERVIOUS	IMPERVIOUS			
	0.30	0.90	TOTAL	AC	C
A1	394,384	338,644	733,028	16.83	0.58
A2	5,264	31,470	36,734	0.84	0.81
A3	12,046	39,122	51,168	1.17	0.76
A4	0	35,759	35,759	0.82	0.90
A5	201	8,448	8,649	0.20	0.89
OS-1	-	-	118,427	2.72	0.69
OS-2	-	-	1,843,682	42.33	0.72
OS-3	-	-	3,208	0.07	0.69

EXISTING DRAINAGE AREA CALCULATIONS
Rational Method Q=CIA

AREA	ACRES	C	Tc (min)	I_1 (In/Hr)	I_5 (In/Hr)	I_{100} (In/Hr)	Q_1 (cfs)	Q_5 (cfs)	Q_{100} (cfs)
A1	16.83	0.58	15	3.21	4.64	8.02	31.2	45.1	77.9
A2	0.84	0.81	15	3.21	4.64	8.02	2.3	3.2	5.6
A3	1.17	0.76	15	3.21	4.64	8.02	2.9	4.2	7.2
A4	0.82	0.90	15	3.21	4.64	8.02	2.4	3.5	6.0
A5	0.20	0.89	15	3.21	4.64	8.02	0.6	0.9	1.5
OS-1	2.72	0.69	15	3.21	4.64	8.02	6.1	8.8	15.1
OS-2	42.33	0.72	15	3.21	4.64	8.02	97.9	141.4	244.5
OS-3	0.07	0.69	15	3.21	4.64	8.02	0.2	0.3	0.5
						TOTAL =	143.6	207.4	358.3

NOTES:
1) Discharge from drainage areas was obtained using the Rational Method based on the most current City of Fort Worth Storm Drainage Manual
2) Drainage areas were delineated using surveyed property information and NCTCOG aerial images and contours.
3) Run-off coefficients for onsite areas were calculated using pervious/impervious area and their designated run-off coefficients.
4) Impervious areas received a 'C' factor of 0.90
5) Pervious areas received a 'C' factor of 0.30
6) The minimum allowable time of concentration of 10 minutes was used for the overall drainage basin.
7) OS-1 and OS-3 are using the Residential Coefficient of 0.69
8) OS-2 is using a weighted coefficient of 0.72 based on combined areas of residential and commercial
9) Time of Concentration calculated to 15.08 minutes. Time of Concentration used rounded to 15 minutes.

13 **EXISTING DRAINAGE AREA MAP**
SCALE: SEE PLAN

B

A

KEY PLAN

MJ THOMAS ENGINEERING, LLC
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-9839
FAX - (817) 735-0017
MJT NO. - 511-047

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
RWB Consulting Engineers
12222 Merit Drive, Suite 400
Dallas, Texas 75251
Main Phone: 972.788.4222
www.rwb.net

TECHNOLOGY CONSULTANT
Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER
BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

100% Construction Documents Review

Date of Statement: 18 Aug, 2019

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION.

LAUREN V. BROWN
TEXAS LICENSE #23211

Project Issued: MAY 19,2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
MICHAEL A. THOMAS
93640
LICENSED PROFESSIONAL ENGINEER
5/19/2025

Director LVB
DESIGNER JMR
PROJECT ARCH. JCL
DRAWN BY DRW
QUALITY CONTROL QC

PROJECT NO.
24-103.00

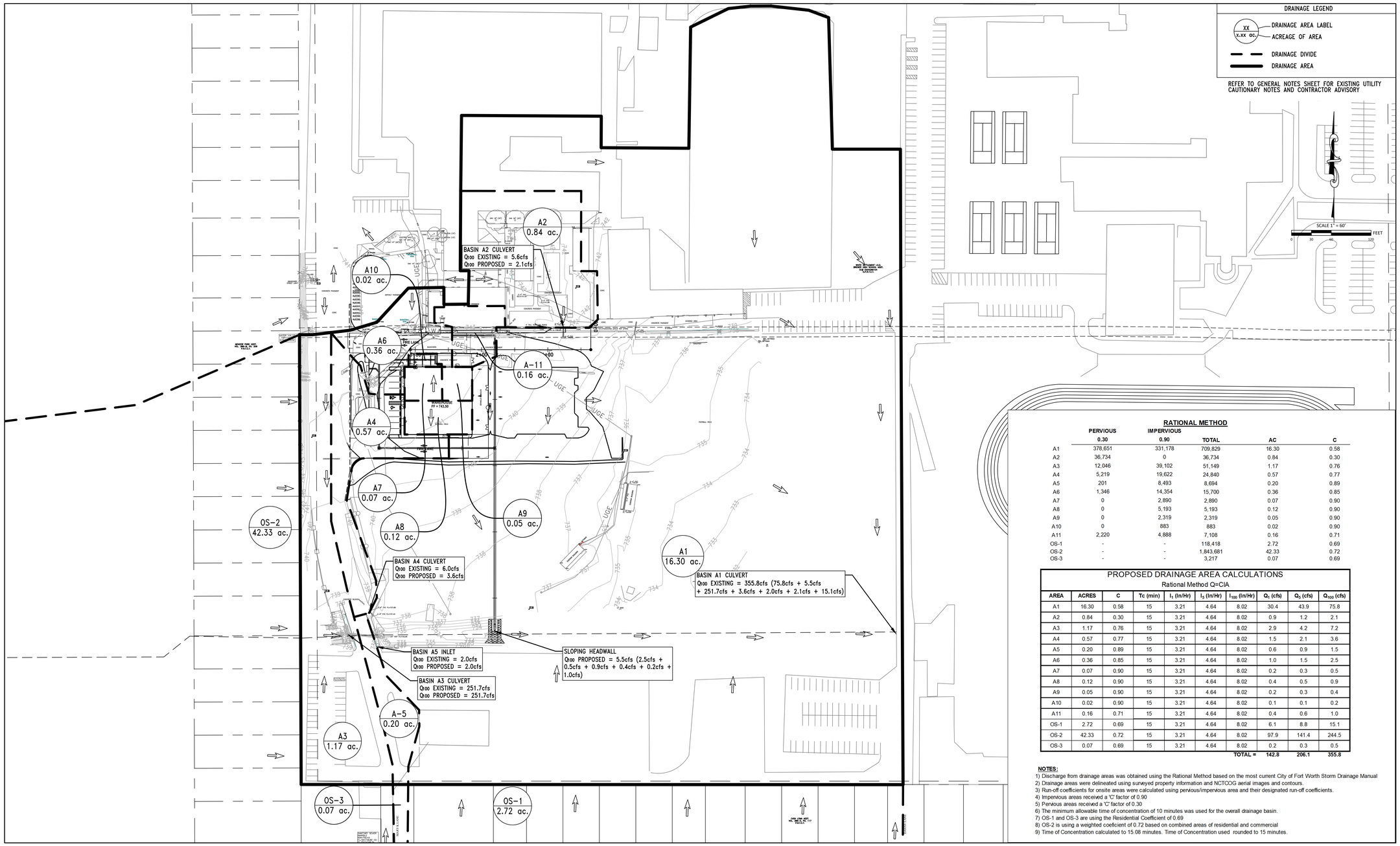
SHEET TITLE
EXISTING DRAINAGE AREA MAP

SHEET NO.
C1.13

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108



RATIONAL METHOD

	PERVIOUS 0.30	IMPERVIOUS 0.90	TOTAL	AC	C
A1	378,651	331,178	709,829	16.30	0.58
A2	36,734	0	36,734	0.84	0.30
A3	12,046	39,102	51,149	1.17	0.76
A4	5,219	19,622	24,840	0.57	0.77
A5	201	8,493	8,694	0.20	0.89
A6	1,346	14,354	15,700	0.36	0.85
A7	0	2,890	2,890	0.07	0.90
A8	0	5,193	5,193	0.12	0.90
A9	0	2,319	2,319	0.05	0.90
A10	0	883	883	0.02	0.90
A11	2,220	4,888	7,108	0.16	0.71
OS-1	-	-	118,418	2.72	0.69
OS-2	-	-	1,843,681	42.33	0.72
OS-3	-	-	3,217	0.07	0.69

PROPOSED DRAINAGE AREA CALCULATIONS
Rational Method Q=CIA

AREA	ACRES	C	Tc (min)	I_1 (In/Hr)	I_2 (In/Hr)	I_{100} (In/Hr)	Q_1 (cfs)	Q_5 (cfs)	Q_{100} (cfs)
A1	16.30	0.58	15	3.21	4.64	8.02	30.4	43.9	75.8
A2	0.84	0.30	15	3.21	4.64	8.02	0.9	1.2	2.1
A3	1.17	0.76	15	3.21	4.64	8.02	2.9	4.2	7.2
A4	0.57	0.77	15	3.21	4.64	8.02	1.5	2.1	3.6
A5	0.20	0.89	15	3.21	4.64	8.02	0.6	0.9	1.5
A6	0.36	0.85	15	3.21	4.64	8.02	1.0	1.5	2.5
A7	0.07	0.90	15	3.21	4.64	8.02	0.2	0.3	0.5
A8	0.12	0.90	15	3.21	4.64	8.02	0.4	0.5	0.9
A9	0.05	0.90	15	3.21	4.64	8.02	0.2	0.3	0.4
A10	0.02	0.90	15	3.21	4.64	8.02	0.1	0.1	0.2
A11	0.16	0.71	15	3.21	4.64	8.02	0.4	0.6	1.0
OS-1	2.72	0.69	15	3.21	4.64	8.02	6.1	8.8	15.1
OS-2	42.33	0.72	15	3.21	4.64	8.02	97.9	141.4	244.5
OS-3	0.07	0.69	15	3.21	4.64	8.02	0.2	0.3	0.5
						TOTAL =	142.8	206.1	355.8

NOTES:
1) Discharge from drainage areas was obtained using the Rational Method based on the most current City of Fort Worth Storm Drainage Manual
2) Drainage areas were delineated using surveyed property information and NCTCOG aerial images and contours.
3) Run-off coefficients for onsite areas were calculated using pervious/impervious area and their designated run-off coefficients.
4) Impervious areas received a 'C' factor of 0.90
5) Pervious areas received a 'C' factor of 0.30
6) The minimum allowable time of concentration of 10 minutes was used for the overall drainage basin.
7) OS-1 and OS-3 are using the Residential Coefficient of 0.69
8) OS-2 is using a weighted coeficient of 0.72 based on combined areas of residential and commercial
9) Time of Concentration calculated to 15.08 minutes. Time of Concentration used rounded to 15 minutes.

(14) PROPOSED DRAINAGE AREA MAP
SCALE: SEE PLAN

B

A

KEY PLAN

MJ THOMAS ENGINEERING, LLC
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO, F-9435
PHONE - (817) 732-9839
FAX - (817) 736-0017
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VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
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L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
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Main Phone: 214.871.7010
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M.E.P. ENGINEER
RWB Consulting Engineers
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Dallas, Texas 75251
Main Phone: 972.788.4222
www.rwb.net

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180 State Street, Suite 225,
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www..atlas-consulting.co

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BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

100% Construction Documents Review

Date of Statement: 18 Aug, 2019

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION.

LAUREN V. BROWN
TEXAS LICENSE #23211

Project Issued: MAY 19,2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
MICHAEL A. THOMAS
93640
LICENSED
PROFESSIONAL ENGINEER
5/19/2025

Director	DRAWN BY
LVB	DRW
DESIGNER	QUALITY CONTROL
JMR	QC
PROJECT ARCH.	
JCL	

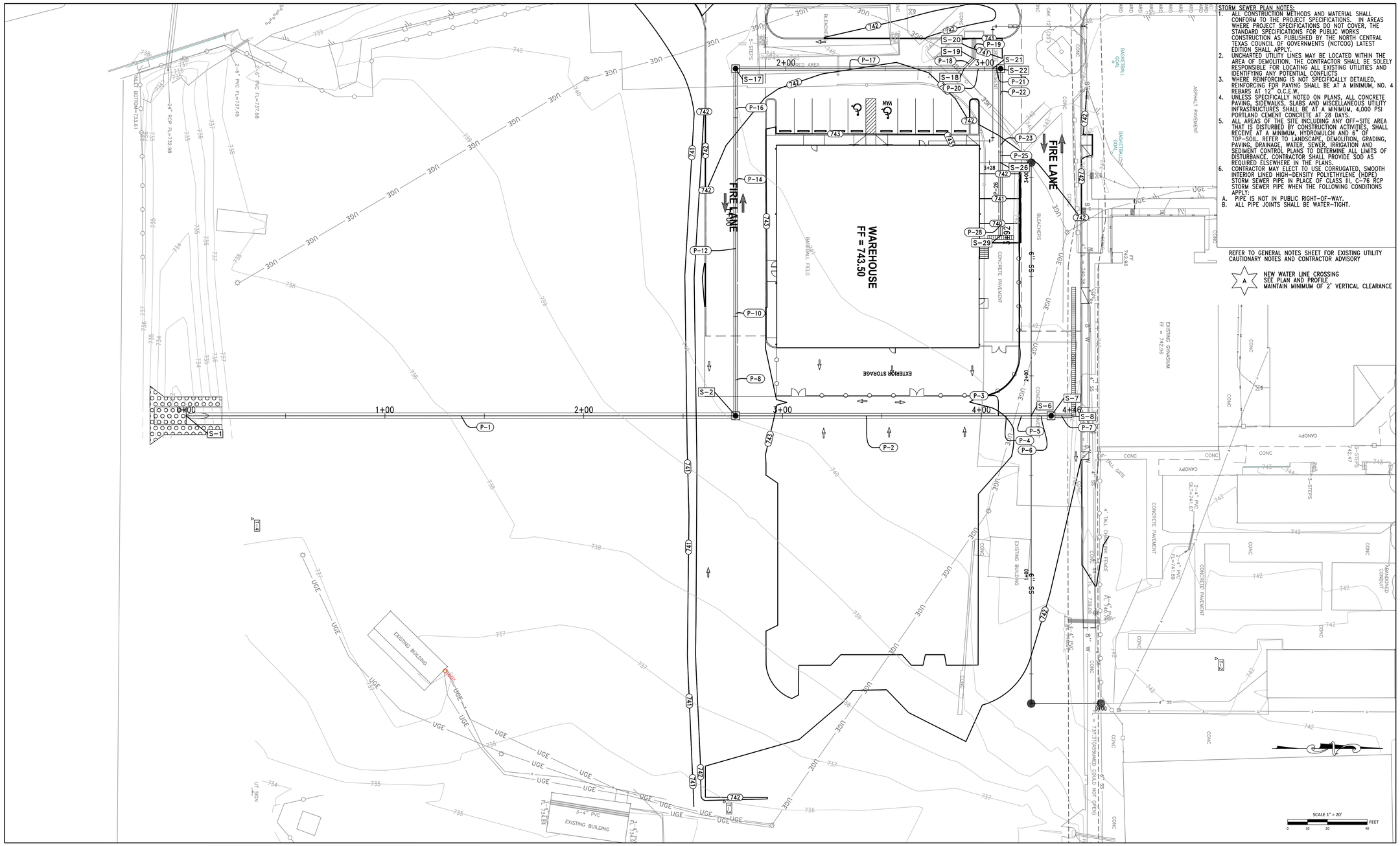
PROJECT NO.
24-103.00

SHEET TITLE
PROPOSED DRAINAGE AREA MAP

SHEET NO.
C1.14

NEW MAINTENANCE & OPERATIONS WAREHOUSE

NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108



STORM SEWER PLAN NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIAL SHALL CONFORM TO THE PROJECT SPECIFICATIONS. IN AREAS WHERE PROJECT SPECIFICATIONS DO NOT COVER, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS PUBLISHED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) LATEST EDITION SHALL APPLY.
2. UNCHARTED UTILITY LINES MAY BE LOCATED WITHIN THE AREA OF DEMOLITION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES AND IDENTIFYING ANY POTENTIAL CONFLICTS
3. WHERE REINFORCING IS NOT SPECIFICALLY DETAILED, REINFORCING FOR PAVING SHALL BE AT A MINIMUM, NO. 4 REBARS AT 12" O.C.E.W.
4. UNLESS SPECIFICALLY NOTED ON PLANS, ALL CONCRETE PAVING, SIDEWALKS, SLABS AND MISCELLANEOUS UTILITY INFRASTRUCTURES SHALL BE AT A MINIMUM, 4,000 PSI PORTLAND CEMENT CONCRETE AT 28 DAYS.
5. ALL AREAS OF THE SITE INCLUDING ANY OFF-SITE AREA THAT IS DISTURBED BY CONSTRUCTION ACTIVITIES, SHALL RECEIVE AT A MINIMUM, HYDROMULCH AND 6" OF TOP-SOIL. REFER TO LANDSCAPE, DEMOLITION, GRADING, PAVING, DRAINAGE, WATER, SEWER, IRRIGATION AND SEDIMENT CONTROL PLANS TO DETERMINE ALL LIMITS OF DISTURBANCE. CONTRACTOR SHALL PROVIDE SOD AS REQUIRED ELSEWHERE IN THE PLANS.
6. CONTRACTOR MAY ELECT TO USE CORRUGATED, SMOOTH INTERIOR LINED HIGH-DENSITY POLYETHYLENE (HDPE) STORM SEWER PIPE IN PLACE OF CLASS III, C-76 RCP STORM SEWER PIPE WHEN THE FOLLOWING CONDITIONS APPLY:
   A. PIPE IS NOT IN PUBLIC RIGHT-OF-WAY.
   B. ALL PIPE JOINTS SHALL BE WATER-TIGHT.

REFER TO GENERAL NOTES SHEET FOR EXISTING UTILITY CAUTIONARY NOTES AND CONTRACTOR ADVISORY

A NEW WATER LINE CROSSING
SEE PLAN AND PROFILE
MAINTAIN MINIMUM OF 2' VERTICAL CLEARANCE

15 STORM SEWER PLAN
SCALE: SEE PLAN

B

A

KEY PLAN

MJ THOMAS ENGINEERING, LLC
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
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VLK

ARCHITECT
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100% Construction Documents Review

Date of Statement: 18 Aug, 2019

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION.

LAUREN V. BROWN
TEXAS LICENSE #23211

Project Issued: MAY 19,2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
MICHAEL A. THOMAS
93640
LICENSED PROFESSIONAL ENGINEER
5/19/2025

Director	DRAWN BY
LVB	DRW
DESIGNER	QUALITY CONTROL
JMR	QC
PROJECT ARCH.	
JCL	

PROJECT NO.
24-103.00

SHEET TITLE
STORM SEWER PLAN

SHEET NO.
C1.15

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

NEW MAINTENANCE & OPERATIONS WAREHOUSE

NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108

STRUCTURE TABLES	
NO.	NOTE
S-1	STA. 0+00.00 ~ STORM LINE A FURNISH AND INSTALL/CONSTRUCT: 1-SLOPING ENDWALL AS DETAILED 63 SY OF GROUTED ROCK RIP RAP 30" FL=732.00 N=6956155.7358 E=2289357.3573
S-2	STA. 2+76.44 ~ STORM LINE A STA 0+00.00 ~ STORM LINE A-1 STA 0+00.00 ~ STORM LINE A-2 FURNISH AND INSTALL:- 1- STD. MANHOLE AS DETAILED 30" FL=733.38 18" FL=734.37 N=6956432.1806 E=2289357.3572 18" FL=733.50 N=6956432.1806 E=2289357.3572
S-6	STA. 4+25.15 ~ STORM LINE A 6" DIA. SANITARY SEWER LINE CROSSING 6" FL = 738.50 18" FL=735.62 18" FL=735.62 N=6956580.8889 E=2289357.3573
S-7	STA. 4+35.15 ~ STORM LINE A STA 0+00.00 ~ STORM LINE A-5 FURNISH AND INSTALL:- 1- SRD. MANHOLE AS DETAILED 18" FL=735.71 18" FL=735.71 N=6956590.8889 E=2289357.3573
S-8	STA. 4+45.51 ~ STORM LINE A FURNISH & INSTALL/CONSTRUCT 87 LF OF 24" WIDE H-20 HEAVY DUTY TRENCH DRAIN, FRAME, AND GRATE NEENAH FOUNDRY R-4999-HX TYP "C" BOLT DOWN AS DETAILED. BOTTOM SLOPE @ MIN 1.00% REF GRADING PLANS FOR ELEVATIONS CONNECT TO TRENCHDRAIN 18" FL=738.26
S-17	STA. 1+74.73 ~ STORM LINE A-1 FURNISH AND INSTALL:- 1- STD. MANHOLE AS DETAILED 18" FL=734.37 18" FL=734.37 N=6956432.1806 E=2289182.6301
S-18	STA. 2+89.65 ~ STORM LINE A-1 STA 0+00.00 ~ STORM LINE A-1-5 FURNISH AND INSTALL:- 1- 18" DIA. 45° BEND 18" FL=734.95 18" FL=734.95 N=6956547.1016 E=2289182.6301 18" FL=734.95 N=6956547.1016 E=2289182.6301
S-19	STA. 0+07.07 ~ STORM LINE A-1-5 FURNISH AND INSTALL:- 1- 18" DIA. 45° BEND 18" FL=735.74 18" FL=736.89 N=6956552.1016 E=2289177.6301
S-20	STA. 0+17.43 ~ STORM LINE A-1-5 FURNISH AND INSTALL/CONSTRUCT: 1-STD. 10' CURB INLET AS DETAILED 18" FL=735.74
S-21	STA. 3+04.12 ~ STORM LINE A-1 2" DIA. WATER LINE CROSSING MAINTAIN MINIMUM OF 2" VERTICAL CLEARANCE 18" FL=735.02 18" FL=735.02 N=6956561.5724 E=2289182.6301

STRUCTURE TABLES	
NO.	NOTE
S-22	STA. 3+08.03 ~ STORM LINE A-1 FURNISH AND INSTALL:- 1- STD. MANHOLE AS DETAILED 18" FL=735.04 18" FL=735.04 N=6956565.4853 E=2289182.6301
S-26	STA. 3+55.35 ~ STORM LINE A-1 6" DIA. SANITARY SEWER LINE CROSSING 6" FL = 739.34 18" FL=735.28 18" FL=735.28 N=6956565.4853 E=2289229.9510
S-29	STA. 3+91.99 ~ STORM LINE A-1 FURNISH & INSTALL/CONSTRUCT 13 LF OF 24" WIDE H-20 HEAVY DUTY TRENCH DRAIN, FRAME, AND GRATE NEENAH FOUNDRY R-4999-HX TYP "C" BOLT DOWN AS DETAILED. BOTTOM SLOPE @ MIN 1.00% REF GRADING PLANS FOR ELEVATIONS CONNECT TO TRENCHDRAIN 18" FL=735.46

PIPE TABLES	
NO.	NOTES
P-1	FURNISH AND INSTALL 276.44 LF OF 30" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.50% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-2	FURNISH AND INSTALL 131.24 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.84% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-3	FURNISH AND INSTALL 2.05 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.84% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-4	FURNISH AND INSTALL 5.45 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.84% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-5	FURNISH AND INSTALL 9.96 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.84% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-6	FURNISH AND INSTALL 10.00 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.84% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-7	FURNISH AND INSTALL 10.36 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 24.65% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-8	FURNISH AND INSTALL 35.90 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.50% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-10	FURNISH AND INSTALL 30.89 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.50% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-12	FURNISH AND INSTALL 34.76 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.50% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-14	FURNISH AND INSTALL 32.83 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.50% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-16	FURNISH AND INSTALL 40.34 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.50% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-17	FURNISH AND INSTALL 114.92 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.50% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-18	FURNISH AND INSTALL 7.07 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 11.13% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-19	FURNISH AND INSTALL 10.36 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 11.14% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-20	FURNISH AND INSTALL 14.47 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.50% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-21	FURNISH AND INSTALL 3.91 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.50% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-22	FURNISH AND INSTALL 26.08 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.50% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-22 (1)	FURNISH AND INSTALL 10.31 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.50% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-23	FURNISH AND INSTALL 3.95 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.50% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE

PIPE TABLES	
NO.	NOTES
P-25	FURNISH AND INSTALL 6.98 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.50% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-26	FURNISH AND INSTALL 25.85 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.50% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE
P-28	FURNISH AND INSTALL 10.79 LF OF 18" DIA. CL III, C-76 RCP STORM SEWER PIPE AT 0.50% INCLUDING EXCAVATION, EMBEDMENT AND BACKFILL. COMPLETE IN PLACE

16 STORM SEWER NOTES
SCALE: SEE PLAN

B

A

KEY PLAN

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

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

100% Construction Documents Review

Date of Statement: 18 Aug, 2019

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION.

LAUREN V. BROWN
TEXAS LICENSE #23211

Project Issued: MAY 19,2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
MICHAEL A. THOMAS
93640
LICENSED
PROFESSIONAL ENGINEER
5/19/2025

Director LVB DESIGNER JMR PROJECT ARCH. JCL	DRAWN BY DRW QUALITY CONTROL QC

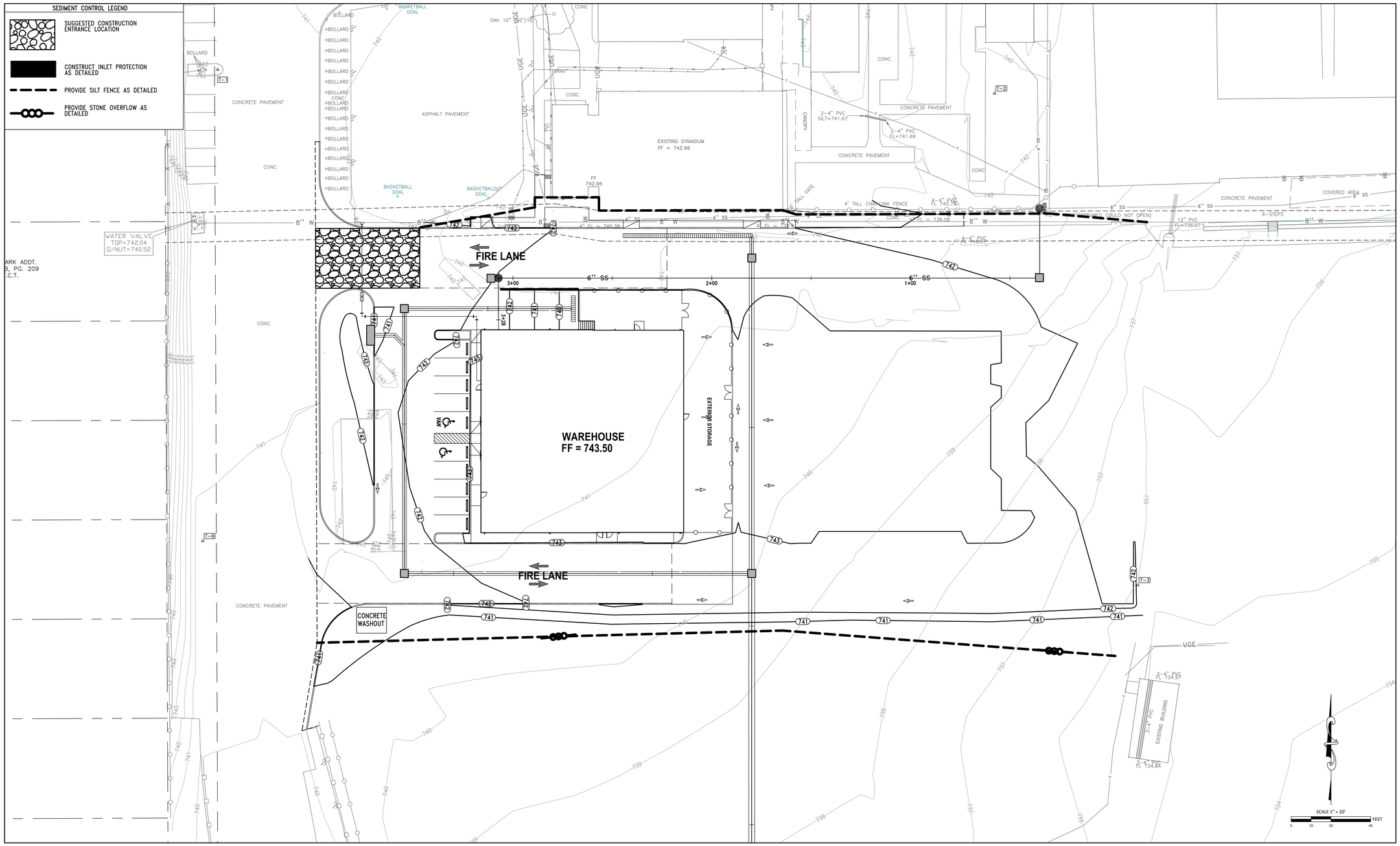
PROJECT NO.
24-103.00

SHEET TITLE
STORM SEWER NOTES

SHEET NO.
C1.16

MJ THOMAS ★ ENGINEERING, LLC ★
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-9839
FAX - (817) 736-0017
MJT NO. - 511-047

NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108



17 SEDIMENT CONTROL PLAN

SCALE: SEE PLAN

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
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M.E.P. ENGINEER
RWB Consulting Engineers
12222 Merit Drive, Suite 400
Dallas, Texas 75251
Main Phone: 972.788.4222
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TECHNOLOGY CONSULTANT
Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER
BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
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SHEET NO.
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B

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KEY PLAN

MJ THOMAS ★ ENGINEERING, LLC ★
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-9839
FAX - (817) 736-0017
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CONSTRUCTION ACTIVITY	SCHEDULE CONSIDERATION
CONSTRUCTION ACCESS--ENTRANCE TO SITE, CONSTRUCTION ROUTES, AREAS DESIGNATED FOR EQUIPMENT PARKING	THIS IS THE FIRST LAND-DISTURBING ACTIVITY. AS SOON AS CONSTRUCTION BEGINS, STABILIZE ANY BARE AREAS WITH GRAVEL AND TEMPORARY VEGETATION.
SEDIMENT TRAPS AND BARRIERS--BASIN TRAPS, SEDIMENT FENCES AND OUTLET PROTECTION	AFTER CONSTRUCTION SITE IS ACCESSED, PRINCIPAL BASIN SHOULD BE INSTALLED, WITH THE ADDITION OF MORE TRAPS AND BARRIERS AS NEEDED DURING GRADING.
RUNOFF CONTROL--DIVERSION, PERIMETER DIKES, WATER BARS, OUTLET PROTECTION	KEY PRACTICES SHOULD BE INSTALLED AFTER THE INSTALLATION OF PRINCIPAL SEDIMENT TRAPS AND BEFORE LAND GRADING. ADDITIONAL RUNOFF CONTROL MEASURES MAY BE INSTALLED DURING GRADING.
RUNOFF CONVEYANCE SYSTEM--STABILIZE STREAM BANKS, STORM DRAINS, CHANNELS, INLET AND OUTLET PROTECTION, SLOPE DRAINS	IF NECESSARY, STABILIZE STREAM BANKS AS SOON AS POSSIBLE, AND INSTALL PRINCIPAL RUNOFF CONVEYANCE SYSTEM WITH RUNOFF CONTROL MEASURES. THE REMAINDER OF THE SYSTEMS MAY BE INSTALLED AFTER GRADING.
LAND CLEARING AND GRADING--SITE PREPARATION (CUTTING, FILLING, AND GRADING, SEDIMENT TRAPS, BARRIERS, DIVERSION, DRAINS, SURFACE ROUGHENING)	IMPLEMENT MAJOR CLEARING AND GRADING AFTER INSTALLATION OF PRINCIPAL SEDIMENT AND KEY RUNOFF-CONTROL MEASURES, AND INSTALL ADDITIONAL CONTROL MEASURES AS GRADING CONTINUES. CLEAR BORROW AND DISPOSAL AREAS AS NEEDED, AND MARK TREES AND BUFFER AREAS FOR PRESERVATION.
SURFACE STABILIZATION--TEMPORARY AND PERMANENT SEEDING, MULCHING, SODDING, RIP RAP	TEMPORARY OR PERMANENT STABILIZING MEASURES SHOULD BE APPLIED IMMEDIATELY TO ANY DISTURBED AREAS WHERE WORK HAS BEEN EITHER COMPLETED OR DELAYED.
BUILDING CONSTRUCTION--BUILDINGS, UTILITIES, PAVING	DURING CONSTRUCTION, INSTALL ANY EROSION AND SEDIMENTATION CONTROL MEASURES THAT ARE NEEDED.
LANDSCAPING AND FINAL STABILIZATION--TOPSOILING, TREES AND SHRUBS, PERMANENT SEEDING, MULCHING, SODDING, RIP RAP	THIS IS THE LAST CONSTRUCTION PHASE. STABILIZE ALL OPEN AREAS, INCLUDING BORROW AND SPOIL AREAS, AND REMOVE AND STABILIZE ALL TEMPORARY CONTROL MEASURES.
CONTRACTOR ADVISORY: THE CONTRACTOR, AND HIS AGENTS, SUB CONTRACTOR/ENGINEER/SURVEYOR, ARE COMPLETELY RESPONSIBLE FOR THE VERIFICATION OF THE ACCURACY OF THE DIMENSION CONTROL FURNISHED HEREIN. THE OWNER, AND HIS AGENTS, ARE NOT RESPONSIBLE FOR THE ACCURACY OF THE COORDINATES FURNISHED. THE CONTRACTOR IS REQUIRED TO VERIFY ALL OF THE COORDINATES FOR ACCURACY AND CONFIRM THE LOCATIONS OF ALL UTILITIES TO BE CONSTRUCTED, BOTH HORIZONTALLY AND VERTICALLY. DISCREPANCIES FOUND BY THE CONTRACTOR SHALL BE REPORTED IN WRITING, TO THE OWNER IMMEDIATELY FOR RECONCILIATION.	NOTE: 1. ALL CONSTRUCTION METHODS AND MATERIAL SHALL CONFORM TO THE PROJECT SPECIFICATIONS. IN AREAS WHERE PROJECT SPECIFICATIONS DO NOT COVER, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS PUBLISHED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) LATEST EDITION SHALL APPLY. 2. CONTRACTOR SHALL PROVIDE A CONCRETE WASH OUT PIT PER NCTCOG BEST MANAGEMENT PRACTICES.
EXISTING IRRIGATION SYSTEM NOTE: THE CONTRACTOR SHALL PROTECT ALL EXISTING SPRINKLER HEADS, LINES, ETC. DURING THE DURATION OF CONSTRUCTION. ANY SPRINKLER LINES, HEADS, METERS, VALVES, ETC. THAT ARE DAMAGED OR RELOCATED BY CONSTRUCTION SHALL BE REPAIRED AND/OR REPLACED TO ORIGINAL CONDITION OR BETTER (NO SPECIAL PAY). COORDINATE WITH OWNER AND/OR LANDSCAPE IRRIGATION PLANS.	

SEDIMENT CONTROL NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIAL SHALL CONFORM TO THE PROJECT SPECIFICATIONS. IN AREAS WHERE PROJECT SPECIFICATIONS DO NOT COVER, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS PUBLISHED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) LATEST EDITION SHALL APPLY.
2. EROSION CONTROL MEASURES SHALL FOLLOW THE STORM WATER POLLUTION PREVENTION PLAN (S.W.P.P.P.) THAT IS KEPT ONSITE AT ALL TIMES WITH THESE CONSTRUCTION DOCUMENTS FOR COMPLIANCE WITH THE T.P.D.E.S. GENERAL PERMIT
3. IN ORDER TO MINIMIZE EROSION CONTROL PROBLEMS, GENERAL CONTRACTOR SHALL COORDINATE WITH EXCAVATOR, LANDSCAPE, AND IRRIGATION CONTRACTORS TO DETERMINE EARLIEST POSSIBLE DATE TO INSTALL GRASSING AS NOTED ON THE LANDSCAPE PLAN
4. THE STABILIZED CONSTRUCTION ENTRANCE HAS BEEN SHOWN ARBITRARILY. IT IS THE GENERAL CONTRACTOR'S CHOICE (IN COMPLIANCE WITH ALL CITY AND STATE REGULATIONS) TO DETERMINE THE LOCATION(S) OF PROJECT INGRESS / EGRESS POINTS. HOWEVER ALL ENTRANCES AT ALL TIMES SHALL BE PREPARED IN ACCORDANCE WITH THE STABILIZED CONSTRUCTION ENTRANCE DETAILS AND CONTINUALLY MAINTAINED UNTIL FINAL PAVING IS ESTABLISHED. CHANGES TO THIS EROSION CONTROL PLAN ARE TO BE LOGGED IN THE SWPPP
5. STABILIZE SLOPES (CURLEX BLANKET AND 70% COVER OF VEGETATION) ACHIEVING EROSION-FREE CONDITIONS MUST BE IN PLACE AND EFFECTIVE BY THE PROJECT "POSSESSION DATE".
6. A TEMPORARY ALL-WEATHER SURFACE TO AND COMPLETELY AROUND THE BUILDING PAD SHALL BE REQUIRED DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH FIRE MARSHALL TO DETERMINE ANY VEHICULAR FIRE ACCESS REQUIRED DURING CONSTRUCTION
7. THE EROSION CONTROL PLAN WILL INCORPORATE EROSION CONTROL MEASURES AND TECHNIQUES TO PREVENT SEDIMENTATION AND ERODED SOIL FROM LEAVING THE SITE EITHER IN EXISTING STORM DRAIN SYSTEM OR ONTO ADJACENT PRIVATE AND PUBLIC PROPERTY. CONSTRUCT TEMPORARY EROSION CONTROL SYSTEMS AS SHOWN ON THE PLANS TO PROTECT ADJACENT PROPERTIES AND WATER RESOURCES FROM EROSION AND SEDIMENTATION. CONTRACTOR SHALL NOTIFY CONSULTING ENGINEER AT ONCE IF SITE CONDITIONS WARRANT ADDITIONAL EROSION CONTROL MEASURES. CONTRACTOR IS RESPONSIBLE FOR TAKING IMMEDIATE ACTION TO REMEDY EROSION CONTROL WHILE CONSULTING ENGINEER IS PREPARING RESPONSE
8. THE CONTRACTOR SHALL STABILIZE THE EARTHEN SLOPE AREAS IN ACCORDANCE WITH THE LANDSCAPE PLAN WITHIN 72 HOURS AFTER FINAL GRADE AND TOPSOIL HAS BEEN ESTABLISHED IN ACCORDANCE WITH THE PROJECT SITEWORK SPECS
9. THE SPECIFIC PLANT MATERIALS PROPOSED TO PROTECT FILL AND EXCAVATED SLOPES SHALL BE AS INDICATED ON THE PLANS. PLANT MATERIALS MUST BE SUITABLE FOR USE UNDER LOCAL CLIMATE AND SOIL CONDITIONS. IN GENERAL, HYDRO SEEDING OR SODDING BERMUDA GRASS IS ACCEPTABLE DURING THE SUMMER MONTHS (MAY 1 TO AUGUST 30). WINTER RYE OR FESCUE GRASS MAY BE PLANTED DURING TIMES OTHER THAN THE SUMMER MONTHS AS A TEMPORARY MEASURE UNTIL SUCH TIME AS THE PERMANENT PLANTING CAN BE MADE
10. PRIOR TO COMMENCING ANY CONSTRUCTION, A CONSTRUCTION ENTRANCE AND PERIMETER SILT FENCE SHALL BE INSTALLED AT THE LOCATION(S) SHOWN
11. AS INLETS ARE COMPLETED, TEMPORARY SEDIMENT BARRIERS SHALL BE INSTALLED
12. AT THE COMPLETION OF THE PAVING AND FINAL GRADING, THE DISTURBED AREA(S) SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS
13. SILT FENCE AND INLET SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL REVEGETATION HAS BEEN COMPLETED
14. DISTURBED AREAS THAT ARE SEEDED OR SODDED SHALL BE CONTINUALLY AND PERIODICALLY TO SEE THAT GRASS COVERAGE IS PROPERLY MAINTAINED. DISTURBED AREAS SHALL BE WATERED, FERTILIZED, AND RESEEDED OR RESODDED, IF NECESSARY
15. ALL EROSION CONTROL MEASURES TO BE PLACED BASED ON CONTRACTOR'S BEST JUDGMENT AND CONSTRUCTION PHASING TO MINIMIZE SILT RUNOFF TO THE MAXIMUM EXTENT PRACTICABLE
16. TEMPORARY INLET PROTECTION TO BE REMOVED OR ADDED BASED ON EXISTING STORM SEWER REMOVAL AND/OR PROPOSED STORM SEWER CONSTRUCTION. FUNCTIONING INLETS SHALL BE INLET PROTECTED AT ALL TIMES. (USE PIPE INLET PROTECTION IF NEEDED)
17. SHOWN CONSTRUCTION ENTRANCES TO BE PLACED, MODIFIED ON THIS PLAN AND LOGGED IN THE SWPPP BASED ON CONSTRUCTION MANAGER'S ON-SITE DECISIONS TO CONTROL EROSION TO THE MAXIMUM EXTENT PRACTICABLE CONSTRUCTION ENTRANCES TO BE PLACED BASED ON CONSTRUCTION PHASING
18. CONTRACTOR SHALL DESIGN AND CONSTRUCT THE WASH-OUT PIT AND CONTAINMENT BASIN IN ACCORDANCE WITH THE STORM WATER POLLUTION PLAN FOR THE PROJECT AND SUBMIT PROPOSED LOCATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO BEGINNING ANY CONSTRUCTION

CONCRETE WASH-OUT PIT NOTES:

1. CONTRACTOR SHALL PROVIDE A WASH-OUT AREA, AS SPECIFIED IN THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) ISWM MANUAL FOR CONSTRUCTION LATEST EDITION, WITH A MINIMUM OF 6 CUBIC FEET OF CONTAINMENT AREA VOLUME FOR EVERY 10 CUBIC YARDS OF CONCRETE POURED
2. CONTRACTOR SHALL NOT DUMP WASTE CONCRETE ILLICITLY OR WITHOUT PROPERTY OWNER'S KNOWLEDGE AND CONSENT
3. OVERFLOW OF WASHDOWN WATER SHALL BE DISCHARGED IN AN AREA PROTECTED BY ONE OR MORE SEDIMENT REMOVAL BMPS AND SHALL BE DONE IN MANNER THAT DOES NOT RESULT IN A VIOLATION OF GROUNDWATER OR SURFACE WATER QUALITY STANDARDS
4. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS SET FORTH IN TPDES GENERAL PERMIT TXR 150000

MAINTENANCE:

ALL MEASURES STATED ON THIS EROSION CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE
4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND
6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%

EROSION CONTROL AND SLOPE PROTECTION IMPLEMENTATION:

1. PLACE EROSION CONTROL SYSTEMS IN ACCORDANCE WITH CONSTRUCTION DRAWINGS AND STORM WATER POLLUTION PREVENTION PLAN OR AS MAY BE DICTATED BY SITE CONDITIONS IN ORDER TO MAINTAIN THE INTENT OF THE SPECIFICATIONS AND PERMITS AT NO ADDITIONAL COST TO OWNER
2. DEFICIENCIES OR CHANGES ON CONSTRUCTION DRAWINGS OR STORM WATER POLLUTION PREVENTION PLAN SHALL BE IMPLEMENTED AS SITE CONDITIONS CHANGE
3. OWNER HAS AUTHORITY TO LIMIT SURFACE AREA OF ERODIBLE EARTH MATERIAL EXPOSED BY CLEARING AND GRUBBING, EXCAVATION, BORROW AND EMBANKMENT OPERATIONS AND TO DIRECT CONTRACTOR TO PROVIDE IMMEDIATE PERMANENT OR TEMPORARY POLLUTION CONTROL MEASURES
4. MAINTAIN TEMPORARY EROSION CONTROL SYSTEMS AS DIRECTED BY OWNER OR GOVERNING AUTHORITIES TO CONTROL SILTATION DURING LIFE OF CONTRACT. CONTRACTOR SHALL RESPOND TO MAINTENANCE OR ADDITIONAL WORK ORDERED BY OWNER OR GOVERNING AUTHORITIES WITHIN 48 HOURS OR SOONER IF REQUIRED AT NO ADDITIONAL COST TO THE OWNER
5. CONTRACTOR WILL BE REQUIRED TO INCORPORATE PERMANENT EROSION CONTROL FEATURES INTO PROJECT AT EARLIEST PRACTICAL TIME TO MINIMIZE NEED FOR TEMPORARY CONTROLS
6. PERMANENTLY SEED AND MULCH CUT SLOPES AS EXCAVATION PROCEEDS TO EXTENT CONSIDERED DESIRABLE AND PRACTICAL
7. SLOPES THAT ERODE EASILY OR THAT WILL NOT BE GRADED FOR A PERIOD OF 14 DAYS OR MORE SHALL BE TEMPORARILY SEEDED AS WORK PROGRESSES WITH WHEAT, RYE, OR OATS APPLICATION IN ACCORDANCE WITH SECTION 02900 UNLESS OTHERWISE SPECIFIED ON THE CONSTRUCTION DRAWINGS

EROSION CONTROL BLANKET:

BLANKETS, BIODEGRADABLE, ENCLOSED IN A PHOTODEGRADABLE PLASTIC MESH, INCLUDING STEEL WIRE STAPLES, 6 INCHES LONG. CURLEX I BLANKETS, 8" STITCHING BY AMERICAN EXCELSIOR COMPANY, OR POLYJUTE STYLE 465 GT BY SYNTHETIC INDUSTRIES

SITE DISTURBANCE NOTES:

1. ALL AREAS OF THE SITE INCLUDING ANY OFF-SITE AREA THAT IS DISTURBED BY CONSTRUCTION ACTIVITIES, SHALL RECEIVE AT A MINIMUM, HYDROMULCH AND 6" OF TOP-SOIL. REFER TO LANDSCAPE, DEMOLITION, GRADING, PAVING, DRAINAGE, WATER, SEWER, IRRIGATION AND SEDIMENT CONTROL PLANS TO DETERMINE ALL LIMITS OF DISTURBANCE. CONTRACTOR SHALL PROVIDE SOD AS REQUIRED ELSEWHERE IN THE PLANS.
2. SUPPLY THE SEEDED AREAS WITH ADEQUATE MOISTURE (6" PENETRATION) AT TEN (10) DAY INTERVALS, IF NEEDED, FOR SEED GERMINATION AND PLANT GROWTH UNTIL ACCEPTANCE BY THE OWNER. WATER THE SEED IN A MANNER WHICH WILL PREVENT EROSION OF THE SOIL. FURNISH ALL WATER TO BE USED. REPAIR WASHOUTS AND OTHER BARE SOIL AREAS IN A SEEDED AREA EITHER BY RE-SEEDING, SPRIGGING, OR SPOT-SODDING, AND PERFORM MAINTENANCE AS NEEDED TO ESTABLISH GRASS IN THE AREA. CONTROL COMPETITIVE WEED GROWTH DURING THE ESTABLISHMENT PERIOD WITH HERBICIDES. CHEMICAL USAGE SHALL BE IN ACCORDANCE WITH THE CURRENT RECOMMENDATIONS OF THE TEXAS AGRICULTURAL EXPERIMENT STATION OR LOCAL SOIL CONSERVATION SERVICE FIELD OFFICE TECHNICAL GUIDES. STRICTLY ADHERE TO ALL FEDERAL, STATE, AND LOCAL LAWS GOVERNING HERBICIDES. WEED CONTROL SHALL BE THE CONTRACTOR'S RESPONSIBILITY WHETHER TOPSOIL IS FROM ON-SITE OR OFF-SITE SOURCES AND ALSO FOR SEEDED AREAS WHICH ARE SPECIFIED NOT TO RECEIVE TOPSOIL.
3. ANY AREAS WHICH ARE DISTURBED BY THE CONTRACTOR WHICH ARE NOT SHOWN ON THE DRAWINGS OR SPECIFIED TO REQUIRE DISTURBANCE INCLUDING ANY APPROVED AREAS NOT SHOWN ON THE DRAWINGS, SHALL BE CONSIDERED AS UNAUTHORIZED DISTURBED AREAS. ANY SUCH AREAS SHALL BE SEEDED AS SPECIFIED IN THIS SECTION AT THE CONTRACTOR'S EXPENSE. (NO SEPARATE PAY)

SEQUENCE OF CONSTRUCTION:

PHASE I:
1. INSTALL STABILIZED CONSTRUCTION ENTRANCES
2. PREPARE TEMPORARY PARKING AND STORAGE AREA
3. CONSTRUCT THE SILT FENCES ONSITE
4. CONSTRUCT THE SEDIMENTATION BASINS
5. CLEAR AND GRUB THE SITE
6. START CONSTRUCTION OF BUILDING PAD AND STRUCTURES
7. BEGIN GRADING THE SITE

PHASE II:
1. TEMPORARILY SEED DENUDED AREAS
2. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS
3. INSTALL RIP-RAP AROUND OUTLET STRUCTURES
4. INSTALL INLET PROTECTION AROUND ALL STORM SEWER STRUCTURES
5. PREPARE SITE FOR PAVING
6. PAVE SITE
7. INSTALL INLET PROTECTION DEVICES
8. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING
9. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED)

INLET PROTECTION NOTES:

1. FOR DROP INLETS, USE TEMPORARY INSERTS AND BLOCK GRAVEL PROTECTION AS DETAILED.
2. FOR CURB INLETS, USE TEMPORARY INSETS.
3. FOR TRENCH AND GRATE INLETS, USE TEMPORARY INSERTS AND BLOCK GRAVEL PROTECTION AS DETAILED.
   -TEMPORARY INSERTS SHALL BE IPC, CURB GUARD, FILTREXX SOXX, WEIGHTED WATTLE, ETC.
   -TEMPORARY INSERTS AND OTHER SEDIMENT CONTROL MEASURES SHALL BE CLEANED OUT ON A REGULAR BASIS BY THE CONTRACTOR.

18 SEDIMENT CONTROL NOTES
SCALE: SEE PLAN

B

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KEY PLAN

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VLK

ARCHITECT
VLK
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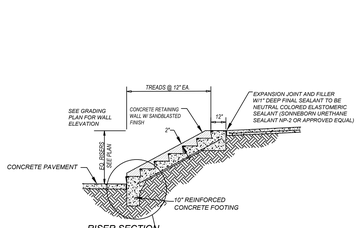

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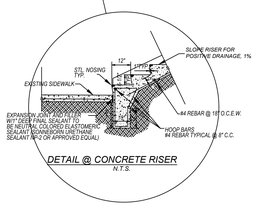
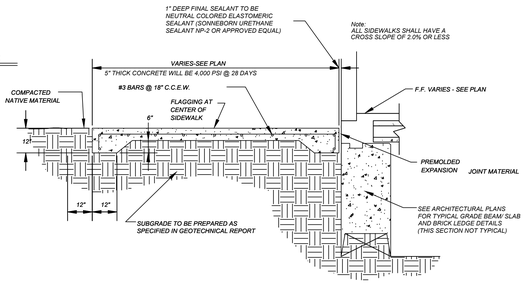
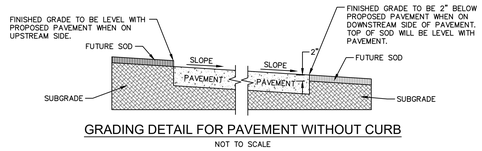


DETAIL @ CONCRETE RISER
N.T.S.

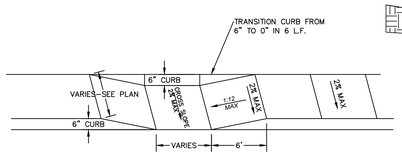
TYPICAL CONCRETE STEPS



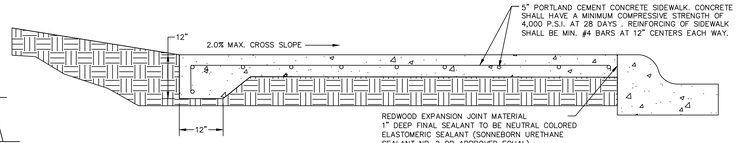
TYPICAL SIDEWALK ADJACENT TO BUILDING
NOT TO SCALE



GRADING DETAIL FOR PAVEMENT WITHOUT CURB
NOT TO SCALE

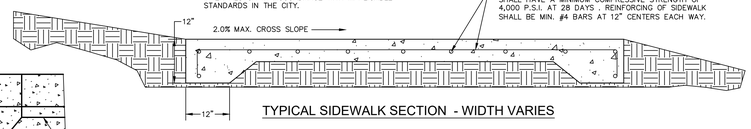


SIDEWALK RAMP TYPE 6
NOT TO SCALE

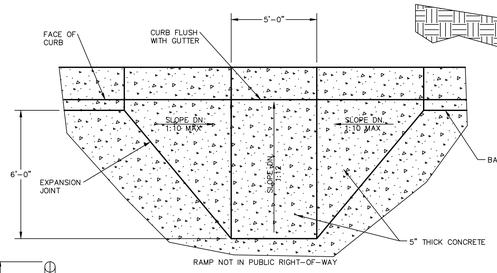


TYPICAL SIDEWALK SECTION - ADJACENT TO CURB - WIDTH VARIES
NOT TO SCALE

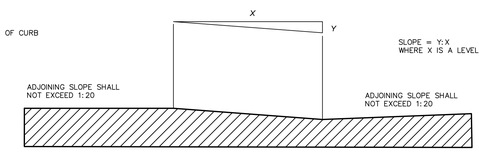
NOTE:
EXPANSION JOINTS AT ANY DIRECTION CHANGE AND 30' MAXIMUM ON STRAIGHT RUNS. JOINTS TO BE CONSTRUCTED IN ACCORDANCE WITH DETAILS THIS SHEET. SIDEWALK WILL BE TOOL JOINTED AT MAX 5' INTERVALS OR IN ACCORDANCE WITH APPLICABLE STANDARDS IN THE CITY.



TYPICAL SIDEWALK SECTION - WIDTH VARIES



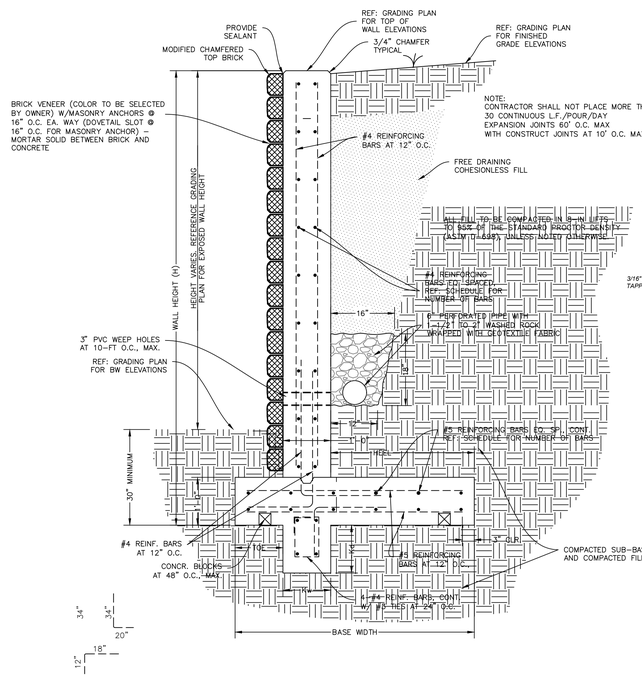
CURB RAMP PLAN - DETAIL
NOT TO SCALE



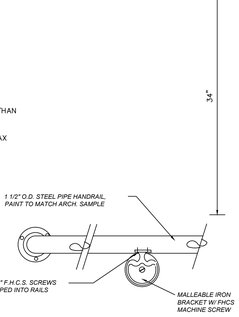
MEASUREMENT OF CURB RAMP SLOPES
NOT TO SCALE

NOTE:
NO SAND SHALL BE USED UNDER ANY PAVEMENT – NO EXCEPTIONS

NOTE:
1. CONTRACTOR SHALL ENSURE THAT SIDEWALK ACCESSIBLE ROUTES DO NOT EXCEED 5.0% RUNNING SLOPE EXCEPT ON RAMPS, AND 2.0% CROSS SLOPE AT ALL LOCATIONS.
2. CONTRACTOR SHALL ENSURE THAT CHANGES IN LEVEL BETWEEN ¼" AND ½" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2, AS SHOWN IN TAS FIGURE 7(d). CHANGES IN LEVEL GREATER THAN ½" SHALL BE ACCOMPLISHED BY MEANS OF A RAMP THAT COMPLIES WITH TAS SECTIONS 4.7 OR 4.8.
3. CONTRACTOR SHALL ENSURE THAT ALL ACCESSIBLE PARKING SPACES AND ACCESS AISLES ARE LEVEL WITH SURFACE SLOPES NOT EXCEED 2.0% IN ANY DIRECTION.
4. CURB STOPS, IF REQUIRED, SHALL BE LOCATED A MINIMUM OF 36" FROM THE CURB LINE.

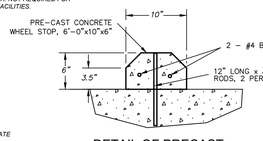


RETAINING WALL DETAIL
NTS.

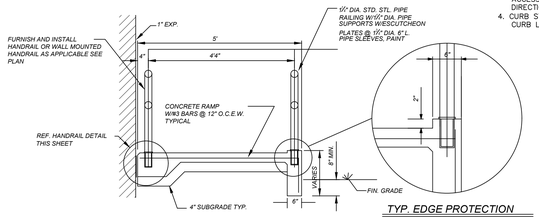


TYPICAL HANDRAIL DETAIL
NOT TO SCALE

HANDRAIL BRACKET DETAIL
NOT TO SCALE

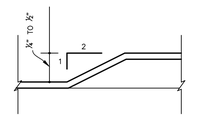


DETAIL OF PRECAST CONCRETE WHEELSTOP
NOT TO SCALE

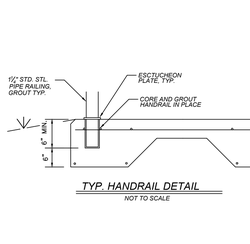


TYP. SECTION THRU RAMP

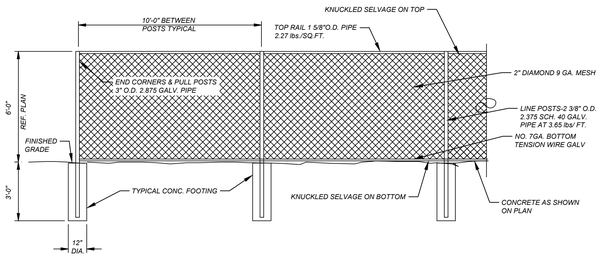
TYP. EDGE PROTECTION
NOT TO SCALE



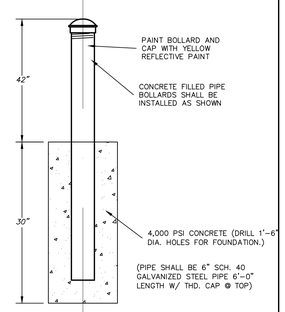
TAS FIGURE 7(d)
NOT TO SCALE



TYP. HANDRAIL DETAIL
NOT TO SCALE



GALVANIZED CHAIN LINK FENCING
NOT TO SCALE



TYPICAL CONCRETE FILLED PIPE BOLLARD DETAIL
NOT TO SCALE

19 SIDEWALK DETAILS
SCALE: SEE PLAN

B

A

KEY PLAN

MJ THOMAS ENGINEERING, LLC
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-9839
FAX - (817) 736-0017
MJT NO. - 511-047

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
RWB Consulting Engineers
12222 Merit Drive, Suite 400
Dallas, Texas 75251
Main Phone: 972.788.4222
www.rwb.net

TECHNOLOGY CONSULTANT
Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER
BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

100% Construction Documents Review

Date of Statement: 18 Aug, 2019

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION.

LAUREN V. BROWN
TEXAS LICENSE #23211

Project Issued: MAY 19,2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
MICHAEL A. THOMAS
93640
LICENSED PROFESSIONAL ENGINEER
5/19/2025

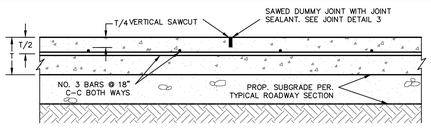
Director LVB	DRAWN BY DRW
DESIGNER JMR	QUALITY CONTROL QC
PROJECT ARCH. JCL	

PROJECT NO.
24-103.00

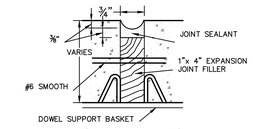
SHEET TITLE
SIDEWALK DETAILS

SHEET NO.
C2.01

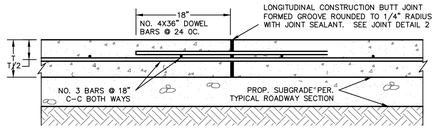
NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108



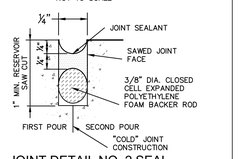
SAWED DUMMY JOINT
NOT TO SCALE



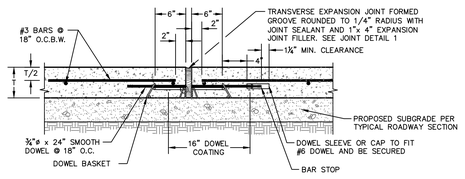
JOINT DETAIL NO. 1
SEAL FOR DOWELED EXPANSION JOINT
NOT TO SCALE



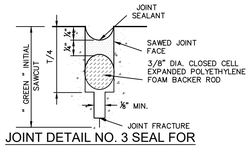
TRANSVERSE OR LONGITUDINAL CONSTRUCTION BUTT JOINT
NOT TO SCALE



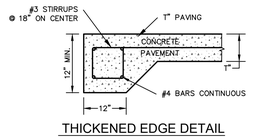
JOINT DETAIL NO. 2 SEAL
FOR LONGITUDINAL AND TRANSVERSE
CONSTRUCTION BUTT JOINT
NOT TO SCALE



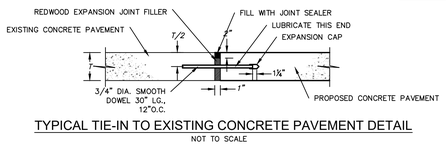
DOWELED EXPANSION JOINT
NOT TO SCALE



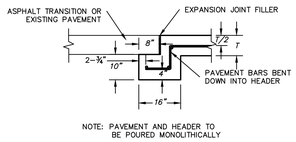
JOINT DETAIL NO. 3 SEAL FOR
SAWED DUMMY JOINT
NOT TO SCALE



THICKENED EDGE DETAIL
NOT TO SCALE

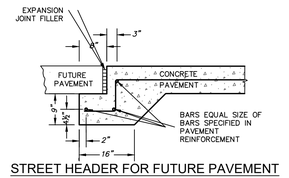


TYPICAL TIE-IN TO EXISTING CONCRETE PAVEMENT DETAIL
NOT TO SCALE

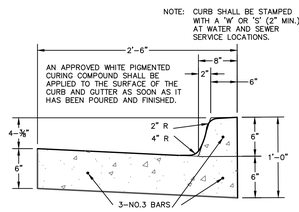


NOTE: PAVEMENT AND HEADER TO BE POURED MONOLITHICALLY

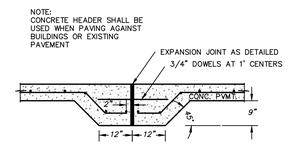
PAVEMENT HEADER
NOT TO SCALE



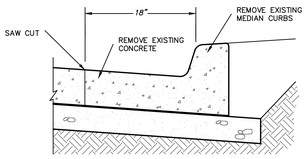
STREET HEADER FOR FUTURE PAVEMENT
NOT TO SCALE



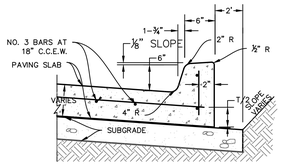
TYPICAL SECTION STANDARD 30"
CONCRETE CURB AND GUTTER
NOT TO SCALE



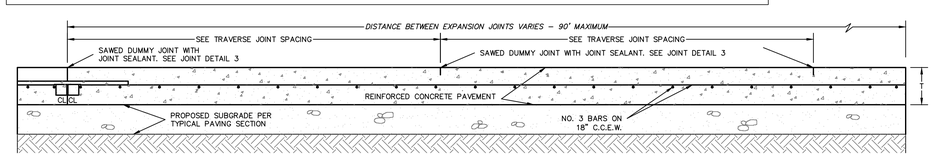
CONCRETE HEADER
NOT TO SCALE



PAVEMENT CUT SECTION
NOT TO SCALE

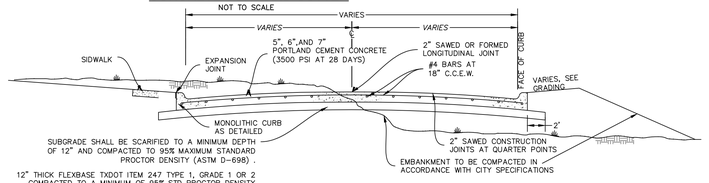


MONOLITHIC CURB
NOT TO SCALE



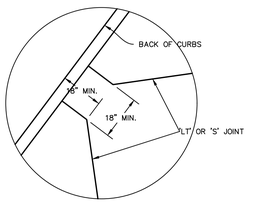
LONGITUDINAL PAVING SECTION
NOT TO SCALE

ALL SEALANT FOR PAVING AND SIDEWALKS SHALL BE SILICONE JOINT SEALANT (TYP.)



TYPICAL PAVEMENT SECTION
5", 6",AND 7" PORTLAND CEMENT CONCRETE
(WIDTH VARIES PER PLAN)
NOT TO SCALE

MISCELLANEOUS CONCRETE ITEMS:
CONTRACTOR SHALL FILL-IN ALL HOLES, OPENINGS AND TRENCH REPAIR LEFT IN CONCRETE STRUCTURES OR PAVEMENT FOR PASSAGE OF WORK BY OTHER TRADES NOT SPECIFIED ON THE PLANS, AFTER WORK OF OTHER TRADES IS COMPLETED. MIX, PLACE, AND CURE CONCRETE AS HEREIN SPECIFIED, TO BLEND WITH IN-PLACE CONSTRUCTION. PROVIDE OTHER MISCELLANEOUS CONCRETE FILLING SHOWN OR REQUIRED AS INTERPRETED BY THE ENGINEER OR ARCHITECT TO COMPLETE THE WORK. COMPLETED WORK SHALL RESULT IN A FULLY FUNCTIONAL PROJECT WITH NO HOLES, OPENINGS OR GAPS IN PAVING/STRUCTURES.



TYPICAL JOINTING AT ALL ANGLE JOINT TERMINATIONS
NOT TO SCALE

PAVEMENT JOINTING NOTES:

1. SAW CUTTING SHALL BE DONE WITHIN 8 HOURS OF POUR OR AS SOON AS CONCRETE CAN SUPPORT WEIGHT, AND PROVIDE A NEAT CUT WHICH IS TRUE IN ALIGNMENT.

2. "LT" JOINTS SHALL BE REQUIRED AT THE END OF A DAY'S WORK, UNLESS IT ENDS AT A "DE", "E", "L", OR "T" JOINT SHOWN ON THE PLANS.

3. ALL JOINTS ARE TO CONTINUE THROUGH THE CURB.

4. RADIAL JOINTS SHALL BE NO SHORTER THAN 18".

5. CONTRACTOR SHALL USE AN "E" JOINT AROUND THE PERIMETER OF ANY BLOCKOUT IN THE CONCRETE PAVING.

6. ALL CONSTRUCTION JOINTS SHALL BE SAWED, CLEANED OF DEBRIS, BLOWN DRY AND IMMEDIATELY SEALED.

7. ODD SHAPED PANELS SHALL BE REINFORCED WITH #3 BARS AT 18" EACH WAY. AN ODD SHAPED PANEL IS CONSIDERED TO BE ONE IN WHICH THE SLAB TAPERS TO A SHARP ANGLE WHEN THE LENGTH TO WIDTH RATIO EXCEEDS 3 TO 1 OR WHEN A SLAB IS NEITHER SQUARE OR RECTANGULAR.

GENERAL NOTES

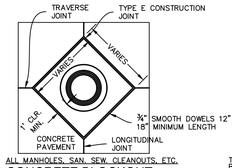
1. ON CONCRETE STREETS ALL INLETS SHALL BE SEPARATED FROM THE PAVEMENT AND CURB BY BOXING OUT AROUND INLET AS SHOWN. EXPANSION JOINT MATERIAL SHALL EXTEND COMPLETELY THROUGH CURB AND SLAB. MANHOLE CASTINGS WITHIN THE PAVEMENT LIMITS SHALL BE BOXED IN LIKE MANNER EXCEPT WHEN TELESCOPING-TYPE CASTINGS AND FIBERGLASS-TYPE ARE USED. WHEN A JOINT FALLS WITHIN 5' OF OR CONTACTS INLETS, MANHOLES OR OTHER STRUCTURES, SHORTEN ONE OR MORE PANELS EITHER SIDE OF OPENING TO PERMIT JOINT TO FALL ON ROUND STRUCTURES AND AT OR BETWEEN CORNERS OF RECTANGULAR STRUCTURES.
2. ALL REINFORCING STEEL SHALL BE DEFORMED BARS. REINFORCING STEEL SHALL BE PLACED WITH THE CENTER OF THE OUTSIDE LAYER OF BARS 2" FROM THE SURFACE OF THE CONCRETE.
3. WHERE REINFORCING BARS ARE SPLICED, A 40 DIAMETER LAP SHALL BE USED.
4. TYPE C TRANSVERSE CONTRACTION JOINTS SHALL BE ON 12' CENTERS.
5. ALL CONCRETE SHALL BE CLASS 'A' CONCRETE.
6. AN APPROVED WHITE PIGMENTED CURING COMPOUND SHALL BE APPLIED TO THE SURFACE OF THE CONCRETE AS SOON AS IT HAS BEEN POURED AND FINISHED.
7. DOWELS TO BE 12" O.C. WHEN POURED HALF STREET.
8. SUBGRADE STABILIZATION WILL DEPEND ON SOIL REPORT SUBMITTED TO CITY ENGINEER.
9. SEAL ALL VOIDS AND HONEYCOMBS AT ALL CURBS BEFORE PLACING BACKFILL.
10. NO SAND SHALL BE USED UNDER ANY PAVEMENT – NO EXCEPTIONS

NOTE:
SEE PAVING PLAN FOR PAVEMENT TYPE AND THICKNESS

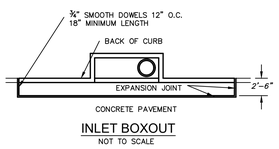
NOTE:
AN APPROVED WHITE PIGMENTED CURING COMPOUND SHALL BE APPLIED TO THE SURFACE OF THE CURB AS SOON AS IT HAS BEEN POURED AND FINISHED.

NOTE:
EXPANSION JOINTS SHALL BE CONSTRUCTED ON MAXIMUM OF 90' CENTERS. LOCATED AT ALL STRUCTURES, AT ALL INTERSECTION POINTS OF CURVATURE, AT ALL INTERSECTION POINTS OF TANGENCY, AND AT ALL REDUCTIONS OF PAVEMENT WIDTHS.

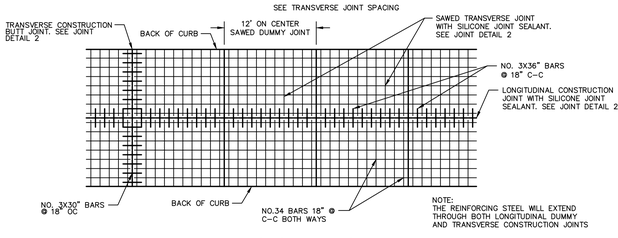
SAWED TRAVERSE CONTRACTION LONGITUDINAL JOINTS SHALL BE SPACED 12' IN PAVEMENT



CONCRETE BLOCKOUT
AT SITE STRUCTURES
NOT TO SCALE



INLET BOXOUT
NOT TO SCALE



PLAN OF STEEL LAYOUT
NOT TO SCALE

20 PAVING DETAILS
SCALE: SEE PLAN

B

A

KEY PLAN

MJ THOMAS ★ ENGINEERING, LLC ★
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-8839
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ARCHITECT
VLK
1320 Hemphill Street, Suite 400
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L.A. Fuess Partners
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Main Phone: 214.871.7010
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M.E.P. ENGINEER
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12222 Merit Drive, Suite 400
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WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND
OPERATION WAREHOUSE

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LAUREN V. BROWN
TEXAS LICENSE #23211

Project Issued: MAY 19,2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
MICHAEL A. THOMAS
93640
LICENSED
PROFESSIONAL ENGINEER
5/19/2025

Director	DRAWN BY
LVB	DRW
DESIGNER	QUALITY CONTROL
JMR	QC
PROJECT ARCH.	
JCL	

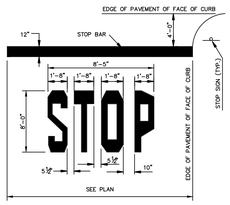
PROJECT NO.
24-103.00

SHEET TITLE
PAVING DETAILS

SHEET NO.
C2.02

NEW MAINTENANCE & OPERATIONS WAREHOUSE

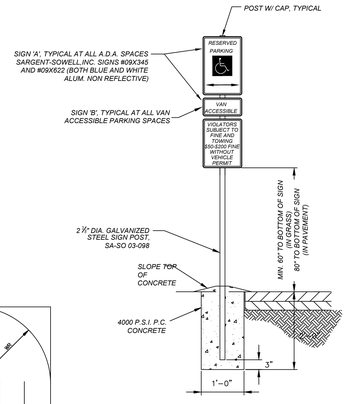
NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108



NOTE:
1. WORDS AND ARROWS FOR DRIVEWAYS SHALL BE APPLIED ACCORDING TO REQUIREMENTS AS OUTLINED IN SECTION 3B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. THESE WORDS AND BAR ARE TO BE PAINTED REFLECTIVE WHITE.

STOP BAR

N.T.S.
12/17/04

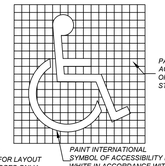


SIGNAGE DETAIL FOR ACCESSIBLE PARKING

NOT TO SCALE

COLORS:
LEGEND AND BORDER: GREEN
BACKGROUND: WHITE
SYMBOL: WHITE ON BLUE BACKGROUND

COLORS:
LEGEND AND BORDER: GREEN
BACKGROUND: WHITE



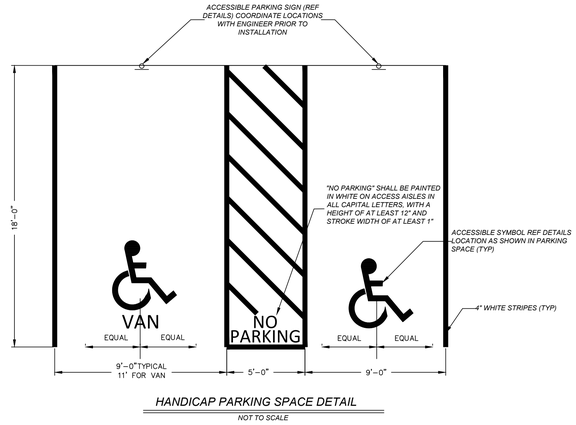
PAINT BLUE BACKGROUND IN ACCORDANCE WITH "STATE OF TEXAS ACCESSIBILITY STANDARDS"

NOTE:
GRID FOR LAYOUT PURPOSES ONLY.

PAINT INTERNATIONAL SYMBOL OF ACCESSIBILITY IN WHITE IN ACCORDANCE WITH "STATE OF TEXAS ACCESSIBILITY STANDARDS"

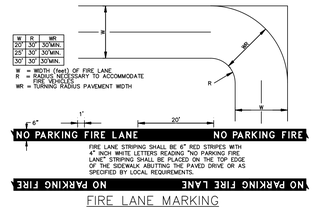
ACCESSIBLE SYMBOL DETAIL

NOT TO SCALE



HANDICAP PARKING SPACE DETAIL

NOT TO SCALE



FIRE LANE STRIPING SHALL BE 6" RED STRIPES WITH 4" INCH WHITE LETTERS READING "NO PARKING FIRE LANE" STRIPING SHALL BE PLACED ON THE TOP EDGE OF THE SIDEWALK ABUTTING THE PAVED DRIVE OR AS SPECIFIED BY LOCAL REQUIREMENTS.

FIRE LANE MARKING

FIRE LANES

FIRE LANES SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 24 FEET OR 26 FEET WHEN LOCATED WITHIN 35 FEET OF ANY STRUCTURE IN EXCESS OF 36 FEET IN HEIGHT. AN UNOBSTRUCTED VERTICAL CLEARANCE OF NOT LESS THAN 13 FEET 6 INCHES IS REQUIRED.

FIRE LANE STRIPING:
WHERE RED STRIPE INTERSECTS WITH A CURB LINE, PAINT FACE AND TOP OF CURB RETURN.

PAINT 4 INCH HIGH LETTERING WITH A 1 INCH STROKE CENTERED ON RED STRIPE SHALL READ: "NO PARKING" - "FIRE LANE". THIS LETTERING SHALL BE PAINTED EVERY 20 FEET AS MEASURED FROM THE END OF ONE LETTERING GROUP TO THE BEGINNING OF THE NEXT GROUP WITH A 1 FOOT SPACE BETWEEN "NO PARKING" AND "FIRE LANE". (NOTE: QUOTES ARE USED IN THIS DESCRIPTION FOR EMPHASIS ONLY AND ARE NOT TO BE PAINTED WITH THE LETTERING)

COLORS:
BORDER: WHITE
BACKGROUND: RED
TEXT: WHITE

COLORS:
BORDER: WHITE
BACKGROUND: BLACK
TEXT: WHITE

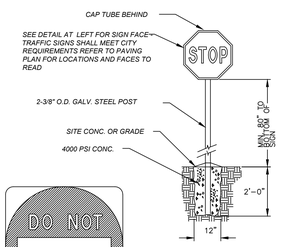
B

COLORS:
BORDER: WHITE
BACKGROUND: BLACK
TEXT: WHITE

D

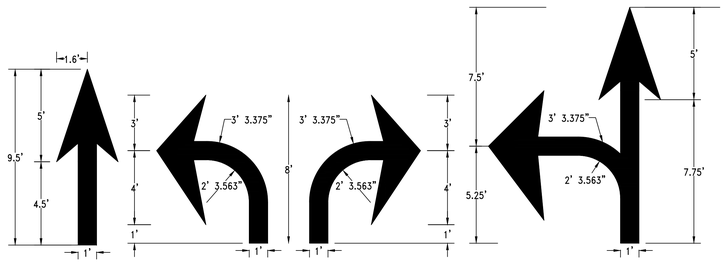
COLORS:
BORDER: WHITE
BACKGROUND: RED
TEXT: WHITE

C



ROAD SIGNS

NOT TO SCALE



NOTE: ALL TRAFFIC FLOW ARROWS TO BE REFLECTIVE YELLOW PAINT PER SPECS.

SMALLER SIZES MAY BE REDUCED BY APPROXIMATELY ONE-THIRD FOR LOW-SPEED URBAN CONDITIONS

TRAFFIC FLOW ARROW

N.T.S.

ALL STRIPING SHALL BE INSTALLED TO CURRENT TEXAS MUTCD STANDARDS AND SPECIFICATIONS

21 **SIGNAGE & STRIPING DETAILS**
SCALE: SEE PLAN

B

A

KEY PLAN

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
RWB Consulting Engineers
12222 Merit Drive, Suite 400
Dallas, Texas 75251
Main Phone: 972.788.4222
www.rwb.net

TECHNOLOGY CONSULTANT
Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER
BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

100% Construction Documents Review

Date of Statement: 18 Aug, 2019

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION.

LAUREN V. BROWN
TEXAS LICENSE #23211

Project Issued: MAY 19,2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
MICHAEL A. THOMAS
93640
LICENSED
PROFESSIONAL ENGINEER
5/19/2025

Director LVB	DRAWN BY DRW
DESIGNER JMR	QUALITY CONTROL QC
PROJECT ARCH. JCL	

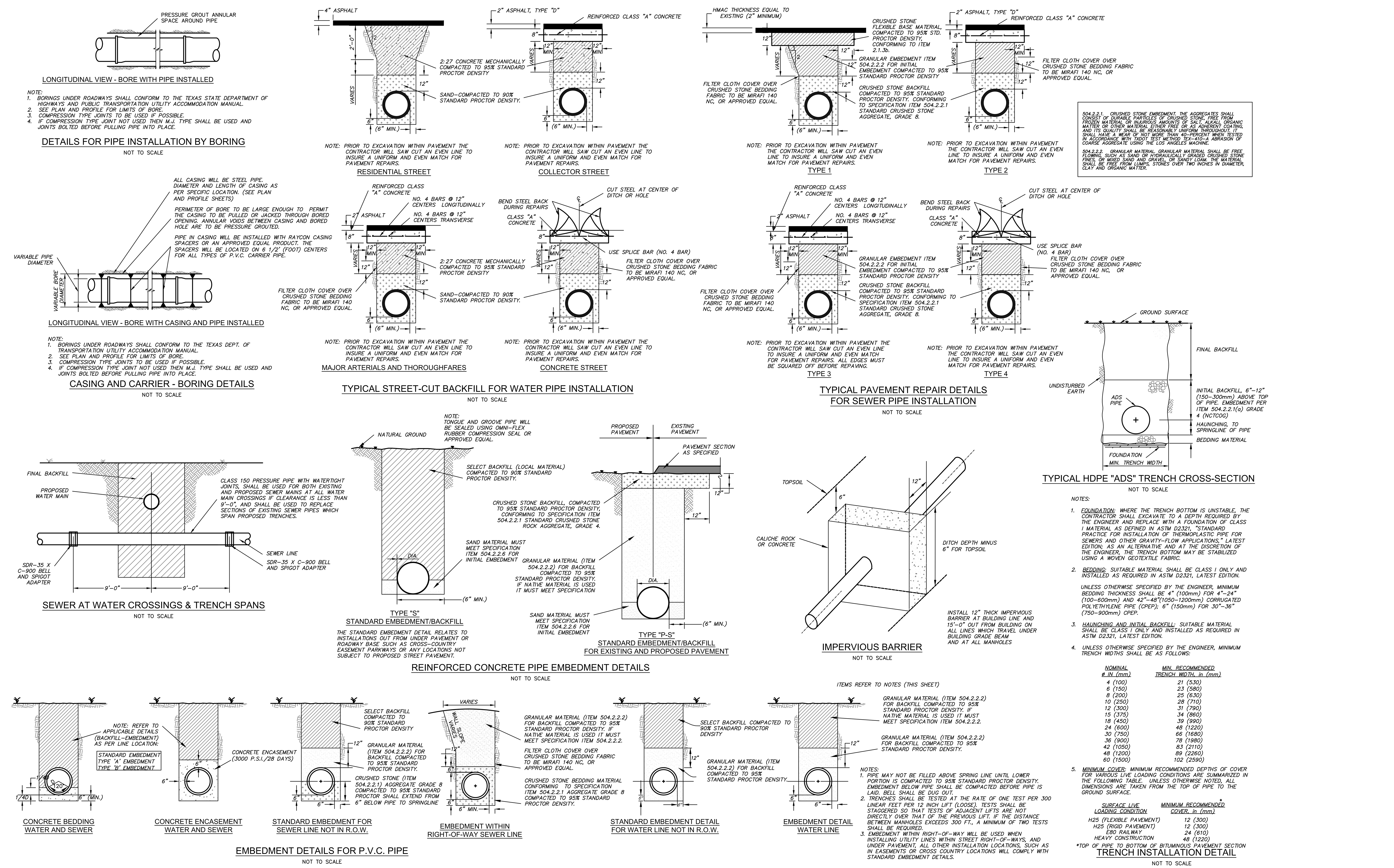
PROJECT NO.
24-103.00

SHEET TITLE
SIGNAGE & STRIPING DETAILS

SHEET NO.
C2.03

MJ THOMAS ★ ENGINEERING, LLC ★
4700 BRYANT IRVIN CT. SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE • (817) 732-9839
FAX • (817) 735-0017
MJT NO. • 511-047

NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108



NOTES:
1. PIPE MAY NOT BE FILLED ABOVE SPRING LINE UNTIL LOWER PORTION IS COMPACTED TO 95% STANDARD PROCTOR DENSITY. EMBEDMENT BELOW PIPE SHALL BE COMPACTED BEFORE PIPE IS LAID. BELL SHALL BE DUG OUT.
2. TRENCHES SHALL BE TESTED AT THE RATE OF ONE TEST PER 300 LINEAR FEET PER 12 INCH LIFT (LOOSE). TESTS SHALL BE STAGGERED SO THAT TESTS OF ADJACENT LIFTS ARE NOT DIRECTLY OVER THAT OF THE PREVIOUS LIFT. IF THE DISTANCE BETWEEN MANHOLES EXCEEDS 300 FT., A MINIMUM OF TWO TESTS SHALL BE REQUIRED.
3. EMBEDMENT WITHIN RIGHT-OF-WAY WILL BE USED WHEN INSTALLING UTILITY LINES WITHIN STREET RIGHT-OF-WAYS, AND UNDER PAVEMENT, ALL OTHER INSTALLATION LOCATIONS, SUCH AS IN EASEMENTS OR CROSS COUNTRY LOCATIONS WILL COMPLY WITH STANDARD EMBEDMENT DETAILS.

NOTES:
1. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS," LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.
2. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I ONLY AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

   UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100-600mm) AND 42"-48"(1050-1200mm) CORRUGATED POLYETHYLENE PIPE (CPEP); 6" (150mm) FOR 30"-36" (750-900mm) CPEP.
3. HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I ONLY AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
4. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:

NOMINAL ø IN (mm)	MIN. RECOMMENDED TRENCH WIDTH, in (mm)
4 (100)	21 (530)
6 (150)	23 (580)
8 (200)	25 (630)
10 (250)	28 (710)
12 (300)	31 (790)
15 (375)	34 (860)
18 (450)	39 (990)
24 (600)	48 (1220)
30 (750)	66 (1680)
36 (900)	78 (1980)
42 (1050)	83 (2110)
48 (1200)	89 (2260)
60 (1500)	102 (2590)

5. MINIMUM COVER: MINIMUM RECOMMENDED DEPTHS OF COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF PIPE TO THE GROUND SURFACE.

SURFACE LIVE LOADING CONDITION	MINIMUM RECOMMENDED* COVER, in (mm)
H25 (FLEXIBLE PAVEMENT)	12 (300)
H25 (RIGID PAVEMENT)	12 (300)
E80 RAILWAY	24 (610)
HEAVY CONSTRUCTION	48 (1220)

*TOP OF PIPE TO BOTTOM OF BITUMINOUS PAVEMENT SECTION

TRENCH INSTALLATION DETAIL

NOT TO SCALE

22 **EMBEDMENT DETAILS**

SCALE: SEE PLAN

MJ THOMAS ENGINEERING, LLC
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-9839
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B

A

KEY PLAN

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WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

100% Construction Documents Review

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Revision No. | Revision Date

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PROJECT ARCH. JCL	

PROJECT NO.
24-103.00

SHEET TITLE
EMBEDMENT DETAILS

SHEET NO.
C2.04

NEW MAINTENANCE & OPERATIONS WAREHOUSE

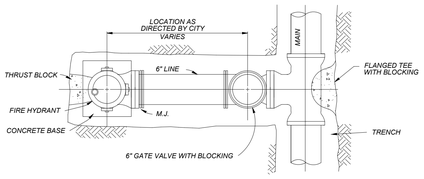
NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108

NOTE:

(MARKING) BLUE MARKER SHALL BE PLACED AS CLOSE TO THE CENTERLINE OF THE ROAD AS POSSIBLE. IF THE HYDRANT IS LOCATED AT AN INTERSECTION, THE MARKER SHALL BE PLACED AS NEAR TO THE CENTER POINT OF THE INTERSECTION AS POSSIBLE. THE MARKER SHALL BE OCTAGON OR HEXAGON SHAPED SO AS TO BE VISIBLE FROM ALL SIDES OF AN INTERSECTION. (CHECK WITH THE FIRE SERVICE IF THERE ARE ANY QUESTIONS)

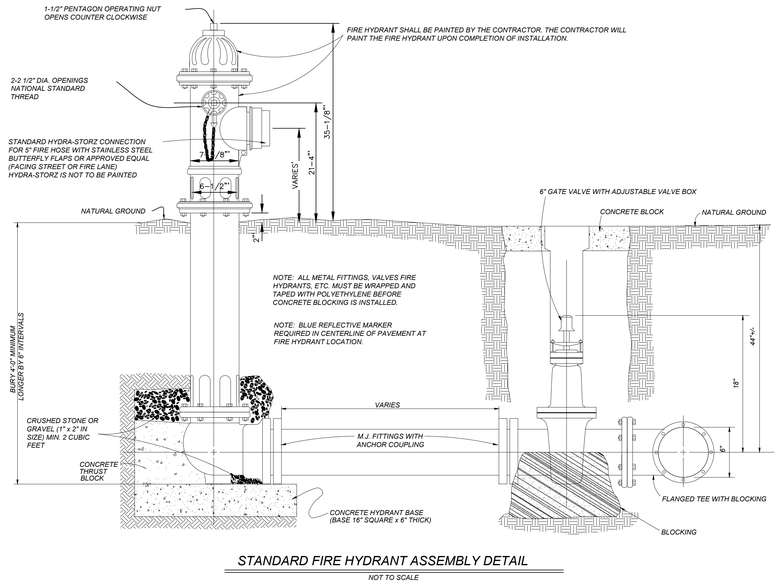
NOTE:

(PAINTING) THE BONNET OR TOP OF THE HYDRANT SHALL BE PAINTED WITH A BASE COAT OF ALUMINUM OXIDE BASE WHITE OR SILVER PAINT AND COATED WITH A REFLECTIVE WHITE PAINT SUCH AS SCOTCHLITE REFLECTIVE LIQUID #43252 OR EQUIVALENT. THE BARREL OF THE HYDRANT SHALL BE PAINTED BRIGHT RED WITH A GOOD GRADE OF INDUSTRIAL PAINT. NO OBSTRUCTION OF ANY TYPE WILL BE ALLOWED WITHIN THREE FEET OF THE HYDRANT IN ANY DIRECTION. THE HYDRANT WILL BE TESTED BY THE FIRE DEPT. AND THE CAPS SHALL BE PAINTED THE NFPA COLOR WHICH THE TEST INDICATES. THIS WILL BE DONE BY THE FIRE SERVICE.



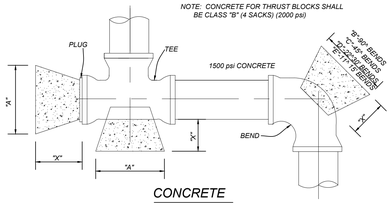
PLAN VIEW

NOTE:
ALL FITTINGS TO BE DUCTILE IRON MECHANICAL JOINT W/ MEGA LUGS. THE BID ITEM FOR D.I.M.J. FITTINGS WILL INCLUDE ALL NECESSARY BLOCKING.



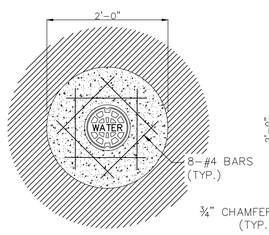
STANDARD FIRE HYDRANT ASSEMBLY DETAIL

NOT TO SCALE

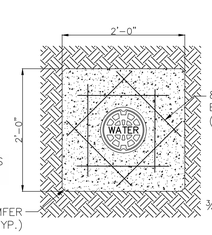


CONCRETE THRUST BLOCKING

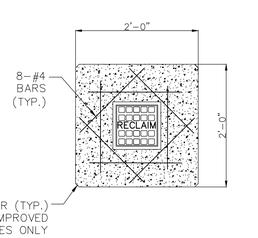
NOT TO SCALE



CONCRETE COLLAR (ASPHALT)



CONCRETE COLLAR (UNIMPROVED SURFACES)



CONCRETE COLLAR (RECLAIMED WATER – ALL LOCATIONS)

APPROVED MATERIALS
FOR WATER DISTRIBUTION SYSTEM

BRASS
CORPORATION STOP
1. ONE INCH STOP AWWA TAPER (C.C.) THREAD. FORD TYPE f1000 OR APPROVED EQUIVALENT MUELLER H-15008.
2. TWO INCH CORPORATION STOP MUELLER B25008, FORD fB1000 OR APPROVED EQUIVALENT

CURB STOP (VALVE)
1. ONE-INCH ANGLE STOP. MUELLER B-24258. FORD TYPE BA43-444W-G OR APPROVED EQUIVALENT

ALL COMPRESSION TYPE TUBING CONNECTORS WILL BE USED WITH STAINLESS STEEL TUBE LINER OR STIFFENER WHEN USED ON POLYETHYLENE TUBING.

METER SERVICE LINE MATERIAL
1. METER SERVICE LINE WILL BE ONE-INCH SIZE AND BE POLYETHYLENE TUBING TUBING S.D.R. 9 - 200 PSI RATING.
2. ONE INCH TYPE K SOFT COPPER

SERVICE TAPPING SADDLES
1. SERVICE SADDLES SHALL BE DUCTILE IRON ASTM 653, COATED WITH A NYLON FUSED BONDED COATING 10-12 MILS THICK WITH A STAINLESS STEEL STRAP. MANUFACTURED BY THE FOLLOWING MANUFACTURERS OR APPROVED EQUIVALENTS. ROMAC INDUSTRIES, INC. AND SMITH-BLAIR, INC.

GATE VALVES - 4" THRU 12"
1. RESILIENT WEDGE TYPE VALVE WITH CONNECTION CONFIGURATION, i.e. FLGD, OR M.J. FITTINGS SHALL BE LISTED BY THE ENGINEER. APPROVED VALVE MANUFACTURERS ARE LISTED AS FOLLOWS: MUELLER, INC., M & H VALVE AND CLOW VALVE, INC.

PRIOR CITY APPROVAL MUST BE OBTAINED BEFORE VALVES ARE ORDERED BY THE CONTRACTOR. THE CITY WILL DETERMINE IF AN EQUIVALENT PRODUCT MANUFACTURER IS ACCEPTABLE AS AN APPROVED EQUAL.

FIRE HYDRANT
1. FIRE HYDRANTS SHALL HAVE 5 1/4" MAIN VALVE, 4 1/2" DIA. PUMPER NOZZLE AND 2-2 1/2" DIA. HOSE NOZZLES WITH NST THREADS AND OPEN COUNTER-CLOCK WISE. THE BURY DEPTH SHALL BE DETERMINED BY ENGINEERS. HYDRANTS TO BE FURNISHED SHALL BE MANUFACTURED BY THE FOLLOWING MANUFACTURERS OR APPROVED EQUALS.

M & H VALVE, MUELLER, INC. AND CLOW VALVE, INC.

2. ALL FIRE HYDRANTS SHALL BE FURNISHED WITH A STANDARD 4-1/2" x 5" STORZ CONNECTION

GENERAL NOTE:

WHEN A CONTRACTOR MAKES A CONNECTION BETWEEN A NEW LINE AND THE EXISTING CITY LINE, SOME TYPE OF RESTRAINING DEVICE WILL BE USED. THESE DEVICES CAN BE:

1. TEMPORARY BLOCK WITH TIMBER.
2. 4000 LBS. 6 SACK CONCRETE WITH A QUICK SET AGENT.
3. APPROVED RETAINER GLANDS.

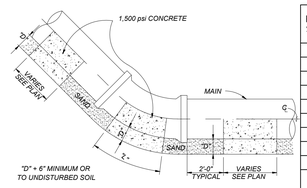
THIS SHOULD ENABLE SHUT DOWN OF EXISTING MAIN FOR A MINIMUM TIME.

DIMENSION "X" TO BE A MINIMUM OF 1', BUT IS TO BE INCREASED WHERE NECESSARY TO PROVIDE BEARING AGAINST UNDISTURBED TRENCH WALL.

PIPE SIZE	"X" DIM.	PLUGS AND TEES "A"	MIN. AREA	MAX. VOL.	90d BENDS "B"	MIN. AREA	MAX. VOL.	45d BENDS "C"	MIN. AREA	MAX. VOL.	22d30' BENDS "D"	MIN. AREA	MAX. VOL.	11d15' BENDS "E"	MIN. AREA	MAX. VOL.
4"	1'-0"	1'-0"	0.83	0.05	1'-0"	0.83	0.05	1'-0"	0.83	0.05	1'-0"	0.83	0.05	1'-0"	0.83	0.05
6"	1'-0"	1'-0"	1.06	0.09	1'-2"	1.50	0.09	1'-0"	0.83	0.05	1'-0"	0.83	0.05	1'-0"	0.83	0.05
8"	1'-0"	1'-3"	1.89	0.11	1'-6"	2.66	0.16	1'-3"	1.44	0.08	1'-0"	0.83	0.05	1'-0"	0.83	0.05
10"	1'-0"	1'-9"	2.95	0.17	2'-0"	4.17	0.24	1'-6"	2.26	0.13	1'-3"	1.15	0.07	1'-0"	0.83	0.05
12"	2'-0"	2'-0"	4.25	0.24	2'-3"	6.00	0.34	1'-9"	3.25	0.18	1'-3"	1.65	0.10	1'-0"	0.83	0.05
16"	2'-0"	2'-7"	7.34	0.56	3'-0"	10.65	0.79	2'-3"	5.76	0.43	1'-8"	2.94	0.22	1'-2"	1.48	0.11
18"	2'-0"	2'-11"	7.70	0.57	3'-8"	10.89	0.82	2'-6"	5.89	0.44	1'-10"	3.01	0.22	1'-5"	1.51	0.11
20"	2'-0"	3'-3"	3.70	0.59	3'-9"	11.12	0.59	2'-9"	6.01	0.45	2'-0"	3.07	0.23	1'-7"	1.54	0.12
24"	2'-0"	3'-8"	11.33	0.84	4'-3"	16.00	1.20	3'-2"	8.65	0.65	2'-6"	4.42	0.33	1'-10"	2.22	0.17

NOTE: CALCULATIONS IN MINIMUM AREA COLUMN ARE IN SQUARE FEET. CALCULATIONS IN MAXIMUM VOLUME COLUMN ARE IN CUBIC YARDS.

BLOCKING TABLE



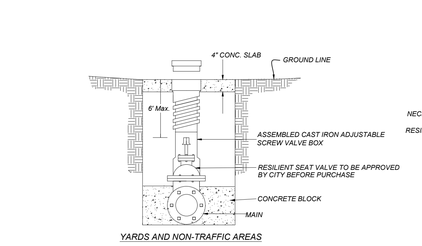
CONCRETE CRADLE AT VERTICAL BENDS

NOT TO SCALE

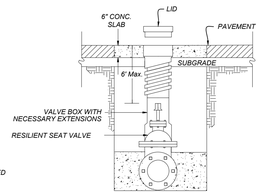
PIPE SIZE	11d–15' L	MAX. VOL.	22d–30d L	MAX. VOL.	45d L	MAX. VOL.	90d L	MAX. VOL.
6"	0.42	0.02	0.45	0.02	0.50	0.02	1.00	0.04
8"	0.42	0.02	0.45	0.02	0.80	0.04	1.40	0.06
10"	0.42	0.03	0.58	0.03	1.15	0.06	2.03	0.11
12"	0.42	0.04	0.73	0.05	1.43	0.09	2.53	0.17
16"	0.42	0.08	0.74	0.14	1.48	0.27	2.61	0.48
18"	0.66	0.14	1.30	0.28	SEE PLAN SHEET FOR BLOCKING		SEE PLAN SHEET FOR BLOCKING	
20"	0.77	0.18	1.53	0.36				
18"	0.88	0.18	1.74	0.37				
20"	1.03	0.24	2.04	0.38				
18"	1.05	22.00	2.03	0.43				
20"	1.20	0.28	2.38	0.56				

NOTE: RETAINER GLANDS SHALL BE USED ON ALL FITTINGS 45° OR GREATER.

BLOCKING DETAILS



YARDS AND NON-TRAFFIC AREAS



ROADWAYS AND SURFACED AREAS

TYPICAL VALVE SETTING AND VALVE BOX

NOT TO SCALE

NOTE: IN THE EVENT THE TOP OF THE OPERATING NUT IS MORE THAN THREE FEET (3') DEEP FROM THE EXISTING GROUND ELEVATION, VALVE STEM AND VALVE BOX EXTENSIONS SHALL BE FURNISHED BY THE CONTRACTOR TO BRING THE OPERATING NUT TO WITHIN THREE FEET (3') OF THE EXISTING GROUND LEVEL. DUCTILE IRON PIPE CAN BE USED FOR VALVES DEEPER THAN SIX FEET (6). HOWEVER, IN ALL CASES THE TOP SIX FEET SHALL BE AN ADJUSTABLE VALVE BOX.

(23) **WATER DETAILS**
SCALE: SEE PLAN

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
RWB Consulting Engineers
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Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER
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WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

100% Construction Documents Review

Date of Statement: 18 Aug. 2019

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LAUREN V. BROWN
TEXAS LICENSE #23211

Project Issued: MAY 19,2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
MICHAEL A. THOMAS
93640
LICENSED PROFESSIONAL ENGINEER
5/19/2025

Director LVB
DESIGNER JMR
PROJECT ARCH. JCL
DRAWN BY DRW
QUALITY CONTROL QC

PROJECT NO.
24-103.00

SHEET TITLE
WATER DETAILS

SHEET NO.
C2.05

B

A

KEY PLAN

MJ THOMAS ENGINEERING, LLC
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-0839
FAX - (817) 736-0017
MJT NO. - 511-047

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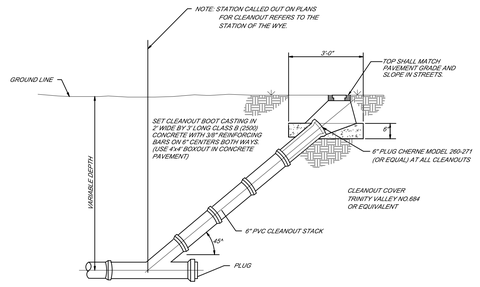
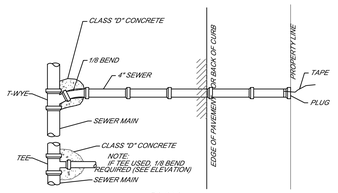
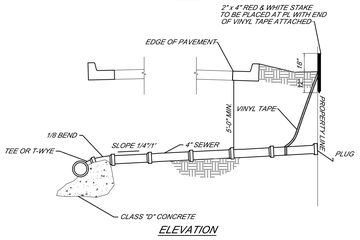


CLEAN-OUT

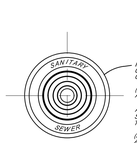


PLAN



ELEVATION

STANDARD SERVICE CONNECTION



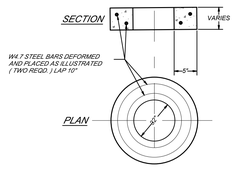
MANHOLE FRAME AND 32" DIA. COVER TO BE APPROVED BY THE CITY PRIOR TO PURCHASE.

(PAMREX 32" CDPA836HSSE OR APPROVED EQUAL)

A WATERTIGHT RING & SEALED COVER SHALL BE USED IN AREAS SUBJECT TO WATER INTRUSION.

(PAMREX 32" CDPA836HSSE OR APPROVED EQUAL)

MANHOLE COVER

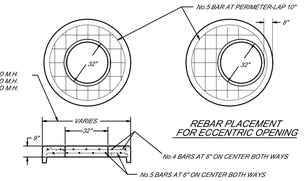


GRADE RINGS

NOTE: MAXIMUM OF 18" FOR GRADE RINGS FOR GRADE ADJUSTMENT.

ECCENTRIC CONE

CONCENTRIC CONE

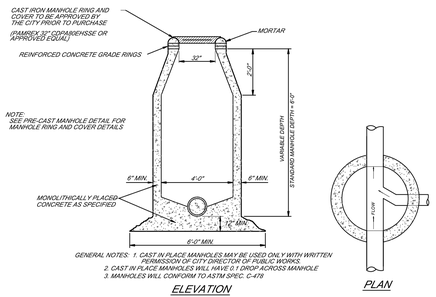


REBAR PLACEMENT FOR ECCENTRIC OPENING

CONCENTRIC FLATTOP FOR SEWER MANHOLE

NOTE: CONCRETE TO BE 5000 psi REINFORCEMENT BARS TO BE GRADE 60 DESIGN FOR H-20 LOADING

NOTES:
1. WHEN 4" SEWER SERVICE LINE ROADWAY CROSSINGS ARE MADE BY BORING THE UPPER VERTICAL BEND SHALL BE ELIMINATED. THE BORE PORTION OF THE ROADWAY CROSSING SHALL BE GRADED ON 3.00% (MIN.) ASCENDING GRADE.
2. SEWER LINES 15 FEET DEEP OR GREATER SHALL BE PVC SDR 26 MINIMUM.
3. CURB SHALL BE STAMPED WITH A "W" OR "S" (2" MIN.) AT WATER AND SEWER SERVICE LOCATIONS.
4. USE SAME DETAIL FOR ALL SIZE SERVICE. VARY LOCATIONS SHOWN TO FIT FIELD CONDITIONS.
5. IN AREAS WHERE CONSTRUCTION CONDITIONS VARY FROM THOSE SHOWN, ADJUST LOCATIONS TO CONFORM TO ACTUAL FIELD CONDITIONS.
6. CONCRETE UNDER CURB IS REQUIRED WHERE SERVICE IS INSTALLED BY OPEN CUT UNDER EXISTING CURB.
7. SEWER SERVICE TO BE EXTENDED TO EASEMENT LINE IF EASEMENT IS PRESENT ADJACENT TO PROPERTY LINE.

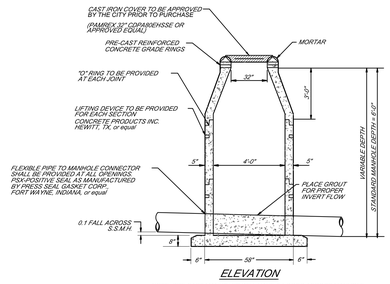


GENERAL NOTES: 1. CAST IN PLACE MANHOLES MAY BE USED ONLY WITH WRITTEN PERMISSION OF CITY DIRECTOR OF PUBLIC WORKS.
2. CAST IN PLACE MANHOLES WILL HAVE 0.1 DROP ACROSS MANHOLE
3. MANHOLES WILL CONFORM TO ASTM SPEC. C-478

ELEVATION

PLAN

CAST-IN-PLACE

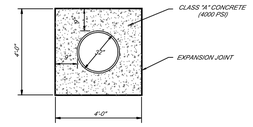


ELEVATION

NOTE: PRE-CAST MANHOLES WILL HAVE 0.1 DROP ACROSS MANHOLE MANHOLES WILL CONFORM TO ASTM SPEC. C-478 CONCRETE TO BE Min. 4,000 psi.

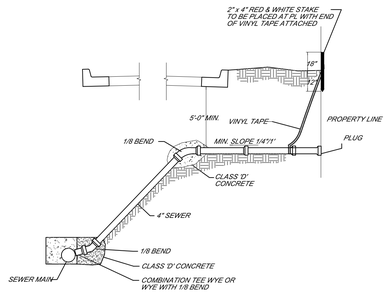
PRE-CAST

ILLUSTRATION TYPICAL FOR 4' DIA. MANHOLE - ADJUST DIMENSIONS AS NECESSARY FOR LARGER MANHOLES



MANHOLE BOXOUT DETAIL

BOXOUT REQUIRED IN ASPHALT OR CONCRETE PAVEMENT.
CONCRETE SHALL BE 4000 PSI
1" MIN. THICKNESS OR MATCH PAVEMENT.
REINFORCING - No.4 BARS ON 6" CENTERS BOTH WAYS.
CONCRETE PAVEMENT.
3/4' DOWELS AT 12" OC INTO CONCRETE PAVEMENT
DOWEL MIN. LENGTH 18"
EXPANSION JOINTS REQUIRED



DEEP SERVICE CONNECTION
(WHERE SEWER MAIN EXCEEDS 8' FLOW LINE DEPTH)

NOTE:
SEWER SERVICES WILL BE BACKFILLED WITH 2-2? CONCRETE WHERE CROSSING UNDER CURB & GUTTER. TYPE "B" EMBEDMENT SHALL BE USED FOR SERVICE TRENCHED WITHIN THE STREET.

24 **SANITARY SEWER DETAILS**
SCALE: SEE PLAN

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

CIVIL ENGINEER
MJ Thomas
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WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

100% Construction Documents Review

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LAUREN V. BROWN
TEXAS LICENSE #23211

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REVISIONS

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STATE OF TEXAS
MICHAEL A. THOMAS
93640
LICENSED PROFESSIONAL ENGINEER
5/19/2025

Director	DRAWN BY
LVB	DRW
DESIGNER	QUALITY CONTROL
JMR	QC
PROJECT ARCH.	
JCL	

PROJECT NO.
24-103.00

SHEET TITLE
SANITARY SEWER DETAILS

SHEET NO.
C2.06

B

A

KEY PLAN

MJ THOMAS ENGINEERING, LLC
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-9839
FAX - (817) 736-0017
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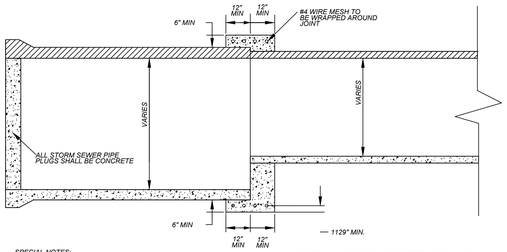
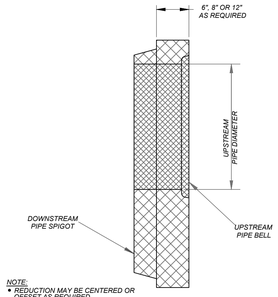


SPECIAL NOTES:
1. THE CONCRETE COLLAR FOR PIPE CONNECTIONS SHALL BE USED FOR ALL LOCATIONS WHERE A CONCRETE PIPE SIZE CHANGE OCCURS. (NO SPECIAL PAY)

DETAIL OF CONCRETE COLLAR FOR PIPE CONNECTIONS
NOT TO SCALE

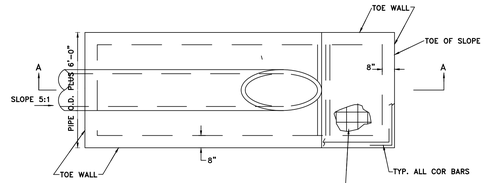
GENERAL NOTES:

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



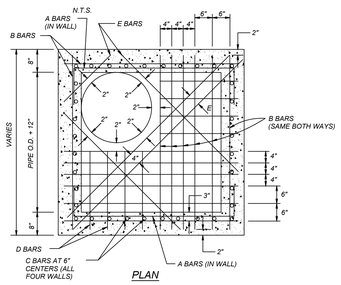
NOTE:
• REDUCTION MAY BE CENTERED OR OFFSET AS REQUIRED.

REDUCING STOPPER
N.T.S.



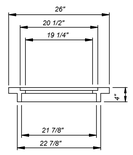
SLOPING ENDWALL
NOT TO SCALE

NOTES:
THIN WALL KNOCKOUTS WILL ONLY BE ALLOWED AT LOCATIONS WHERE PIPES WILL CONNECT. IF NO PIPE CONNECTION THIN WALL KNOCKOUT SHALL **NOT** BE ALLOWED

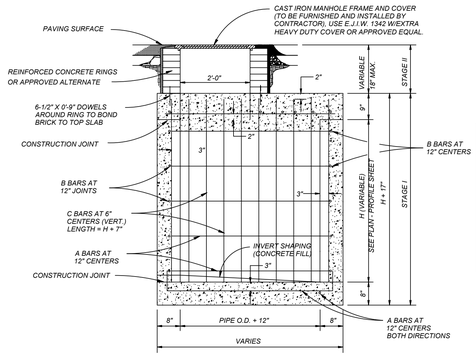


PLAN

NOTE:
LID TO BE FURNISHED WITH A CHAIN RETENTION DEVICE



STORM SEWER LID



ELEVATION

NOTE: STORM DRAIN PIPE TO BE REINFORCED CONCRETE RUBBER GASKET OR TONGUE AND GROOVE PIPE USING OMNI-FLEX GASKETS AS MANUFACTURED BY DELTA-SOUTHWEST, INC., FT. WORTH, TEXAS, OR APPROVED EQUAL.

STORM SEWER MANHOLE DETAILS
NOT TO SCALE

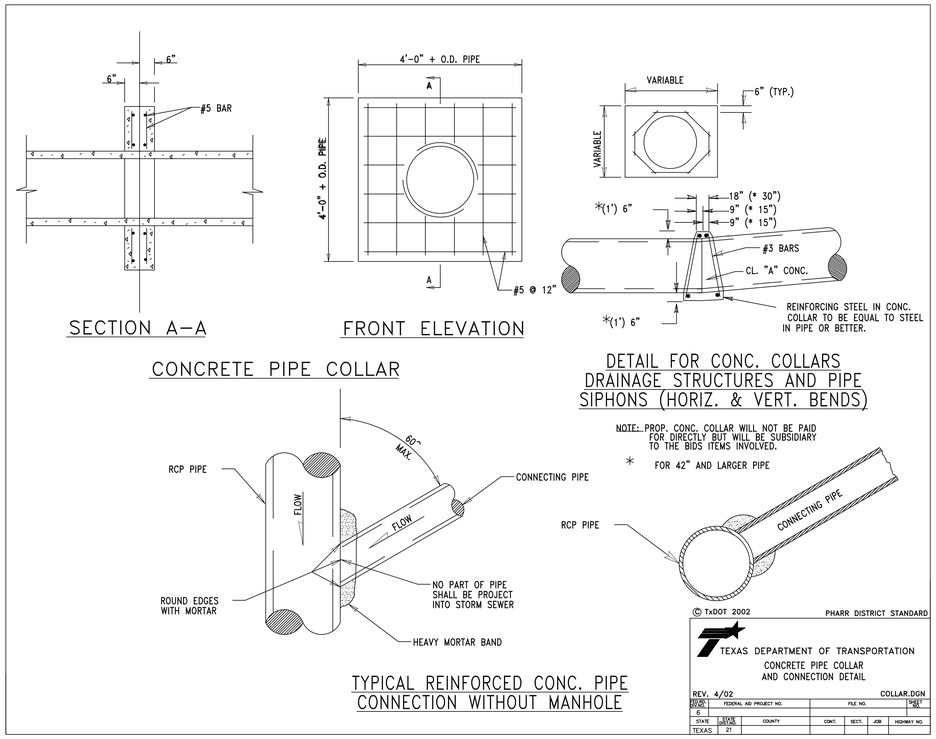
BAR	BAR SIZE	LENGTH	NO. REQUIRED	SPACING
A	#4	6'-8"	10 IN BOTTOM 2 X "H" IN WALLS	± 12"
B	#4	5'-0"	14 IN BOTTOM 2 X "H" IN WALLS	± 12" IN WALLS VARIABLE IN DECK SEE DETAIL
C	#4	"H"+7"	36	± 6"
D	#4	2'-3"	8	± 6"
E	#4	1 @ 2'-0" 2 @ 4'-8" 1 @ 6'-6"	5	SEE DETAIL

NOTE: A TEMPORARY METAL COVER SHALL BE INSTALLED AFTER STAGE I IS COMPLETED AND WILL REMAIN IN PLACE UNTIL STAGE II IS BEGUN. STAGE III WILL NOT BE BUILT UNTIL APPROVED BY THE ENGINEER. APPROVAL WILL NOT BE NORMALLY GIVEN UNTIL THE SUBGRADE AND BASE COURSES HAVE BEEN COMPLETED.

FIELD BEND OR CUT BARS AS REQUIRED TO ACCOMMODATE SEWER PIPE.

DIMENSIONS RELATING TO REINFORCING STEEL ARE TO THE CENTER OF BARS.

ALL CONCRETE SHALL BE CLASS "A" CONCRETE.



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TEXAS DEPARTMENT OF TRANSPORTATION
CONCRETE PIPE COLLAR AND CONNECTION DETAIL

REV. 4/02 COLLAR.DGN

DIST.	COUNTY	FEDERAL AID PROJECT NO.	FILE NO.	SHEET NO.
6				

STATE	STATE CONTROL	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TEXAS	21					

25 **STORM SEWER DETAILS**
SCALE: SEE PLAN

MJ THOMAS ENGINEERING, LLC
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
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SHEET TITLE
STORM SEWER DETAILS

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C2.07

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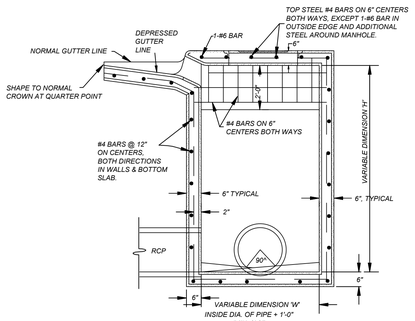
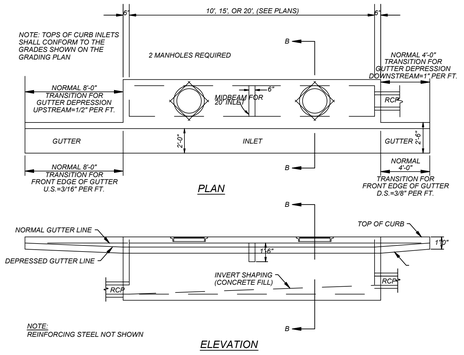
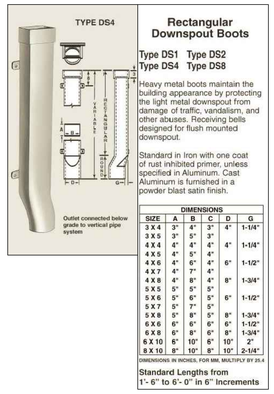
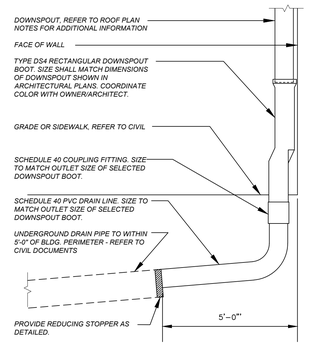


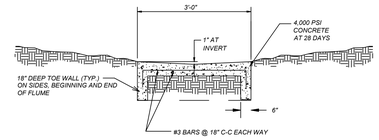


STANDARD CURB INLET DETAIL
NOT TO SCALE





SUBGRADE DOWNSPOUT BOOT DETAIL
NOT TO SCALE



TYPICAL CONCRETE V-SHAPED FLUME
NOT TO SCALE

■ Note: The suggested forming procedures shown in this catalog are general suggestions to qualified professionals, and may not be appropriate for every installation.

Forming Procedures, Bolted Trench

Materials
Under normal situations, use 3/4 inch plywood for forming walls. 2x4's are suitable for studs, plates, bracing and spreaders. A typical installation is shown in Figure 1a. Details and suggestions are based on using the Neenah Foundry Type "X" frame.

Bolted frames and grates/lids are furnished assembled (see Figure 4a) and therefore require appropriate forming procedures. AT NO TIME SHOULD THE UNITS BE DISASSEMBLED DURING INSTALLATION! VERIFY THAT THE 3/16" PER SIDE MAXIMUM GAP BETWEEN FRAME AND LID HAS NOT CHANGED DURING TRANSPORT. WHEN SATISFIED THE GAP IS CORRECT, TORQUE BOLTS TO ASSURE THE PIECES REMAIN IN THAT ORIENTATION.

Pour the trench bottom to the proper depth and slope and allow curing time. Construct the forms per Figure 4a. For properly fitting covers, the forms must be PLUMB, STRAIGHT, LEVEL and SOLID. The width of the forms establishes the trench wall. This dimension must correspond with the "C" dimension on Figure 1a.

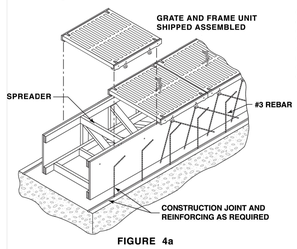


FIGURE 4a

Construct the forms. (see Figure 4a) The grate/lid top surface establishes the final grade elevation when the assembled iron casting unit is set on the form. (See Figure 4b) Accordingly, form side wall elevation is set at final grade elevation less the seat depth "B" dimension. (Note: "B" dimensions vary per catalog number. Neenah recommends checking dimensions on the catalog line item of page 266 If unsure, contact product engineering or your Neenah representative).

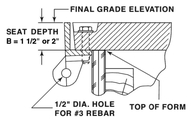


FIGURE 4b

Set frame and grate/lid assembled sections on the forms, taking care to keep the sections tight to one another to eliminate creep. When the sections are in the proper position, wire them to the bracing as show. (See Figure 5) Number 3 rebar can be installed through the anchor holes provided on the iron frames.

Check measurements. The grate/lid opening dimension must correspond to the "A" dimension plus 3/16" maximum per side. (see Figure 1a)

Pour concrete using the top edge of the iron frame pieces as a final elevation guide. When concrete is properly cured, unbolt and remove grates/lids, retaining their position and orientation. GRATES/LIDS MUST BE REINSTALLED IN THE EXACT WAY THEY CAME OUT TO ASSURE PROPER BOLTHOLE ALIGNMENT. DO NOT ALLOW DEBRIS TO FALL INTO THE FRAME BOLTHOLES AS IT MAY PROHIBIT PROPER TIGHTENING OF BOLTS. Strip forms and replace grates/lids in the same location and orientation as they came out. Reinstall bolts, tightening them to the specifiers desired torque. The completed installation should resemble Figure 1a.

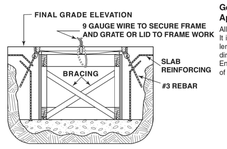


FIGURE 5

General Comments for Non-bolted and Bolted Applications
All frame sections are manufactured and furnished in standard lengths. It is the responsibility of the installer to cut frame pieces to the proper length and miter corners where applicable. In cases where trench direction must change, special drawings can be furnished by our Product Engineering Department. These prints will show special lengths and cuts of grates/lids, and other essential information.

■ Note: The suggested forming procedures shown in this catalog are general suggestions to qualified professionals, and may not be appropriate for every installation.

Suggested Forming Procedures for R-4990 and R-4999 Series With Type X Frame

For those who are not experienced in the installation of Neenah drainage structures (R-4990 or R-4999 Series), the following procedures are one method of achieving desirable results.

Forming Procedures, Non-Bolted Units

Materials
Under normal situations, use 3/4 inch plywood for forming walls. 2x4's are suitable for studs, plates, bracing and spreaders. A typical installation is shown in Figure 1a. Details and suggestions are based on using the Neenah Foundry Type "X" frame.

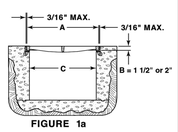


FIGURE 1a

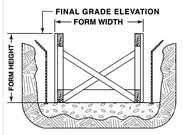


FIGURE 1b

Pour the trench bottom to the proper depth and slope and allow curing time. Construct the forms. For properly fitting covers, the forms must be PLUMB, STRAIGHT, LEVEL and SOLID. The width of the forms (see Figure 1b) establishes the trench wall. This dimension must correspond with the "C" dimension on Figure 1a. The top of the form (see Figure 1b) corresponds to the final grade elevation when installing non-bolted frame and grates/lids. Spreaders are installed, extending them beyond the edge of the form, to provide a stop for the wood seat forms. (see Figure 2 and 3)

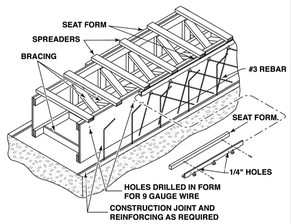


FIGURE 2

Cut the wood seat forms to the exact inside horizontal and vertical dimension of the iron frame seat. (Note: all Neenah frames have a slight radius at the corner of the seat and vertical face of the iron frame sections so the wood seat form pieces should be beveled to accommodate this radius.) The wood seat form is nailed flush to the top of the form walls, and the iron frame pieces are nailed to the wood seat forms through the holes provided in the side wall of the iron frame sections. In proper orientation, the anchor lugs on the iron frame pieces are positioned downward. Iron frame sections should be butted together snuggly, leaving as little gap as possible. The iron frame seat form and plywood sides of the form are then secured with 9 gauge tie wire tied through a drilled hole in the plywood side wall. (see Figure 3) Number 3 rebar can be installed through the anchor holes provided on the iron frames.

Check measurements. The grate/lid opening dimension must correspond to the "A" dimension plus 3/16" maximum per side. (see Figure 1a and 3)

Pour concrete using the top edge of the iron frame pieces as a final elevation guide. Strip forms after concrete is properly cured. Install grates/lids. The completed installation should resemble Figure 1a.

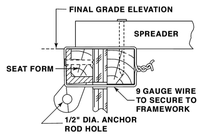


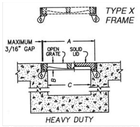
FIGURE 3

■ Note: When specifying/ordering grates, refer to "Choosing the proper inlet grate" on pages 117-118. For a complete listing of FREE OPEN AREAS and WEIR PERIMETERS of all NEENAH grates, refer to pages 306-311.

R-4990 and R-4999 Series
Heavy Duty Trench

Materials: All frames and grates/lids are furnished standard in Gray Iron, Class 35-B for heavy-duty use. For extra heavy-duty use or superior durability requirements, see our Airport and Port Grating Series on page 198 and our R-4993 & R-4994 Series on page 269.

Neenah recommends project designers avoid the use of light duty trench installations because it is likely that applications will be subjected to heavy delivery vehicle traffic at some time. Furthermore, the use of a site could be changed to heavy duty use patterns at some unanticipated future date.

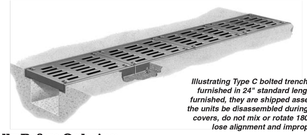


General schematic shown may not apply to all designs. Bar and rib depths, plate thicknesses, and seating widths vary on different sizes and styles. If your project has design restrictions, contact your sales representative or product engineering.

Dimensions in inches

Un-Bolted Catalog No.	Bolted Catalog No.	A	B	C	Type A	Type C	Type D	Type E	Type P	Type Q
R-4990-AX	R-4999-AX	8	1 1/2	6	x	x	x	x	x	
R-4990-BX	R-4999-BX	10	1 1/2	8	x	x	x	x	x	
R-4990-CX	R-4999-CX	12	1 1/2	10	x	x	x	x	x	x
R-4990-DX	R-4999-DX	14	1 1/2	12	x	x	x	x	x	x
R-4990-EX	R-4999-EX	17	1 1/2	15	x	x	x	x	x	
R-4990-FX	R-4999-FX	20	1 1/2	18	x	x	x	x	x	
R-4990-GX	R-4999-GX	23	1 1/2	21	x	x	x			
R-4990-HX	R-4999-HX	26	1 1/2	24	x	x	x	x		x
R-4990-JX	R-4999-JX	30	2	27	x	x	x			
R-4990-KX	R-4999-KX	33	2	30	x	x	x	x		
R-4990-LX	R-4999-LX	36	2	33	x	x	x			
R-4990-MX	R-4999-MX	39	2	36	x	x	x			
R-4990-NX	R-4999-NX	45	2	42	x	x	x			
R-4990-OX	R-4999-OX	51	2	48	x		x			

x - Indicates availability



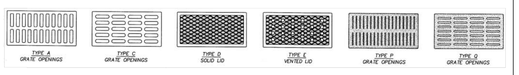
Illustrating Type C bolted trench. Bolted trench sections are furnished in 24" standard lengths. When bolted trench is furnished, they are shipped assembled - AT NO TIME should the units be disassembled during installation. When removing covers, do not mix or rotate 180 degrees as bolt holes may lose alignment and improper bearing may occur.

Read Carefully Before Ordering

The various standard trench drains are available with a number of alternatives. It is important to examine all of the variables carefully and specify your requirements fully. Your order will be entered correctly and promptly if it includes the following information:

- Complete catalog number
- Frame end pieces, when required
- Type of Lid or Grate: A, C, D, E, P or Q
- Length of trench sections
- Angles and intersections *
- Load requirements

*Trenches with angles, intersections, size changes, or other special requirements require detail drawings prior to ordering. Contact your sales representative or product engineering for assistance.



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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
RWB Consulting Engineers
12222 Merit Drive, Suite 400
Dallas, Texas 75251
Main Phone: 972.788.4222
www.rwb.net

TECHNOLOGY CONSULTANT
Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER
BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE AND OPERATION WAREHOUSE

100% Construction Documents Review

Date of Statement: 18 Aug, 2019

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION.

LAUREN V. BROWN
TEXAS LICENSE #23211

Project Issued: MAY 19,2025

REVISIONS

Revision No.	Revision Date

STATE OF TEXAS
MICHAEL A. THOMAS
93640
LICENSED PROFESSIONAL ENGINEER
5/19/2025

Director LVB
DESIGNER JMR
PROJECT ARCH. JCL
DRAWN BY DRW
QUALITY CONTROL QC

PROJECT NO.
24-103.00

SHEET TITLE
STORM SEWER DETAILS

SHEET NO.
C2.08

26 **STORM SEWER DETAILS**
SCALE: SEE PLAN

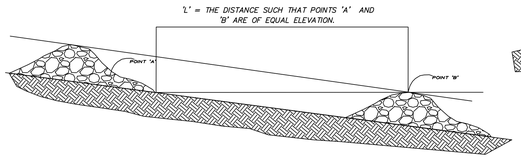
B

A

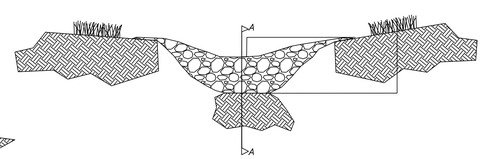
KEY PLAN

MJ THOMAS ENGINEERING, LLC
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO. F-9435
PHONE - (817) 732-9839
FAX - (817) 736-0017
MJT NO. - 511-047

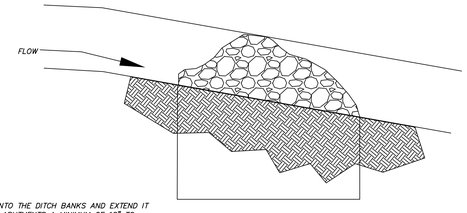
NEW MAINTENANCE AND OPERATION WAREHOUSE
WHITE SETTLEMENT ISD
1316 MARY K LN, WHITE SETTLEMENT, TX 76108



SPACING BETWEEN CHECK DAMS

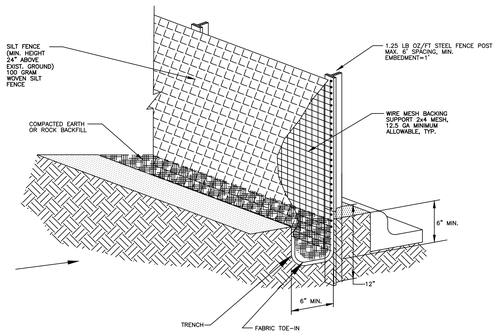


VIEW LOOKING UPSTREAM



NOTE:
KEY STONE INTO THE DITCH BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIMUM OF 18" TO PREVENT OVER FLOW AROUND DAM.

SECTION A – A

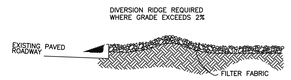


ISOMETRIC PLAN VIEW
N.T.S.

SILT FENCE GENERAL NOTES

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. 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 FLOW. WHERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. INSPECTION SHALL BE MADE EVERY TWO WEEKS AND AFTER EACH 1/2" RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

NOTE: STONE OVERFLOW STRUCTURES OF OTHER OUTLET CONTROL DEVICES SHALL BE INSTALLED AT ALL LOW POINTS ALONG THE FENCE OR EVERY 300 FEET IF THERE IS NO APPARENT LOW POINT



SECTION A – A

ESTABLISHMENT OF GROUND COVER

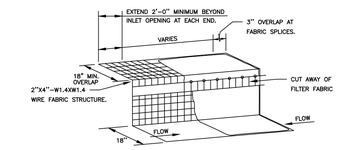
1. All areas of the site including any off-site area that is disturbed by construction activities, shall recieve at a minimum, hydromulch and 4" of top-soil. Refer to Landscape, Demolition, Grading, Paving, Drainage, Water, Sewer, Irrigation and Sediment Control Plans to determine all limits of disturbance. Contractor shall provide sod as required elsewhere in the plans.
2. Supply the seeded areas with adequate moisture (4" penetration) at ten (10) day intervals, if needed, for seed germination and plant growth until acceptance by the Owner. Water the seed in a manner which will prevent erosion of the soil. Furnish all water to be used. Repair washouts and other bare soil areas in a seeded area either by re-seeding, sprigging, or spot-sodding, and perform maintenance as needed to establish grass in the area. Control competitive weed growth during the establishment period with herbicides. Chemical usage shall be in accordance with the current recommendations of the Texas Agricultural Experiment Station or local Soil Conservation Service Field Office Technical Guides. Strictly adhere to all Federal, State, and local laws governing herbicides. Weed control shall be the Contractor's responsibility whether topsoil is from on-site or off-site sources and also for seeded areas which are specified not to receive topsoil.
3. Any areas which are disturbed by the Contractor which are not shown on the drawings or specified to require disturbance including any approved areas not shown on the drawings, shall be considered as unauthorized disturbed areas. Any such areas shall be seeded as specified in this section at the Contractor's expense and no separate pay.
4. Eighty percent (80%) evenly distributed ground cover, without large bare areas, shall be established after the designated areas have been completed to the lines, grades and cross sections shown on the plans and prior to final acceptance by the City Engineer.
5. Ground cover shall be established as per North Central Texas Council of Governments (N.C.T.C.O.G.) "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" 202.6 Seeding Turfgrass. Copies may be obtained from the "NORTH CENTRAL COUNCIL OF GOVERNMENTS", PO Drawer 5888, Arlington, Texas, 76005-5888, Phone (817) 640-3300, also available at www.publicworks.dfwinfo.com. A copy of the contract documents, plans and specifications shall be available on-site at all times by the Contractor.
6. Prior to planting, contractor shall provide the City Engineer, or his designee, with the State of Texas Certificate stating analysis of purity and germination of seed.
7. Planting season and application rates. All planting shall be done between the dates specified in Table 1, for each grass type except when specifically authorized in writing. The seeds planted per acre shall be of a type specified with the mixture, rate and planting dates as shown in the Table 1, or as specified by the Engineer.

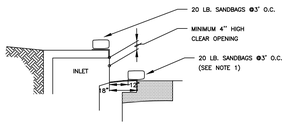
Table 1. Seeding Turfgrass

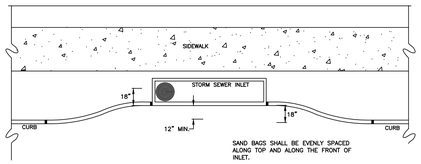
TYPE	PLANTING SEASON	SEED AND RATE
TYPE I	MARCH THROUGH SEPTEMBER	BERMUDA GRASS, HULLED 50-LB (22.7-KG) PLS[1] PER ACRE
TYPE II	OCTOBER THROUGH FEBRUARY	RYE GRASS, 100-LB (45.4-KG) PLS PER ACRE COMBINED WITH BERMUDA GRASS, HULLED 20-LB (9.1-KG) PLS[1] PER ACRE.
OTHER	AS SPECIFIED ON PLANS	AS SPECIFIED ON PLANS

[1]PLS - Pure Live Seed is determined by multiplying the grass weight times purity times the germination (For example, a 100-lb bag with 80% purity and 80% germination. (PLS=pounds in bag x Purity x germination) 100 x 0.85 x 0.8 = 68.0 =lbs of pure live seed.)

8. Seeded areas shall be maintained, including watering and mowing, at such time and in a manner and quality to establish a minimum 80% evenly distributed ground cover, without large bare areas, until completion and final acceptance of the project by the City Engineer.



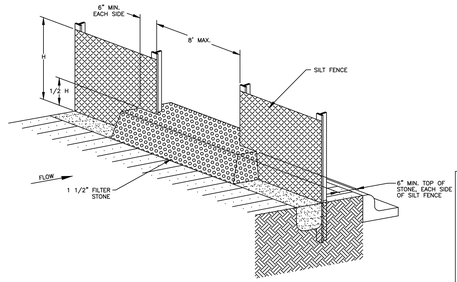




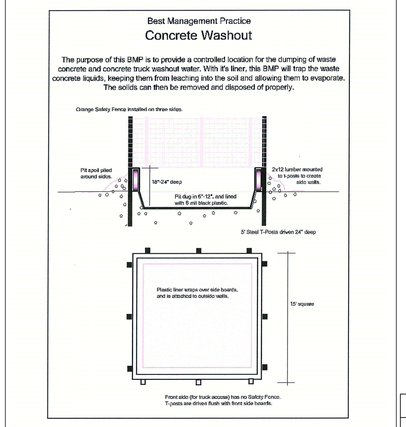
CURB INLET PROTECTION DETAIL
NOT TO SCALE

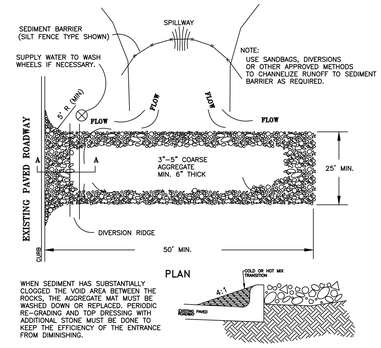
NOTES:
1. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL TO PROVIDE A 4" MINIMUM CLEAR OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
2. INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 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



SILT FENCE
STONE OVERFLOW STRUCTURE
N.T.S.





WHEN SEDIMENT HAS SUBSTANTIALLY CLOGGED THE VOID AREA BETWEEN THE ROCKS, THE AGGREGATE MAT MUST BE WASHED DOWN OR REPLACED. PERIODIC RE-GRADING AND TOP DRESSING WITH ADDITIONAL STONE MUST BE DONE TO KEEP THE EFFICIENCY OF THE ENTRANCE FROM DIMINISHING.

MINIMUM CONSTRUCTION EXIT/ENTRANCE DIMENSIONS

DISTURBED AREA	MIN. WIDTH OF EXIT	MIN. LENGTH OF EXIT
<1 ACRE	15 FEET	20 FEET
≥1 ACRE BUT <5 ACRES	25 FEET	50 FEET
≥5 ACRES	30 FEET	50 FEET

TEMPORARY STONE CONSTRUCTION ENTRANCE/EXIT
N.T.S.

27 SEDIMENT CONTROL DETAILS
SCALE: SEE PLAN

MJ THOMAS ENGINEERING, LLC
4700 BRYANT IRVIN CT, SUITE 204
FORT WORTH, TX 76107
REGISTRATION NO, F-9435
PHONE - (817) 732-9839
FAX - (817) 736-0017
MJT NO. - 511-047

B

A

KEY PLAN

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
RWB Consulting Engineers
12222 Merit Drive, Suite 400
Dallas, Texas 75251
Main Phone: 972.788.4222
www.rwb.net

TECHNOLOGY CONSULTANT
Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER
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1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
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WHITE SETTLEMENT ISD
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NEW MAINTENANCE AND OPERATION WAREHOUSE

100% Construction Documents Review

Date of Statement: 18 Aug, 2019

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION.

LAUREN V. BROWN
TEXAS LICENSE #23211

Project Issued: MAY 19,2025

REVISIONS

Revision No.	Revision Date

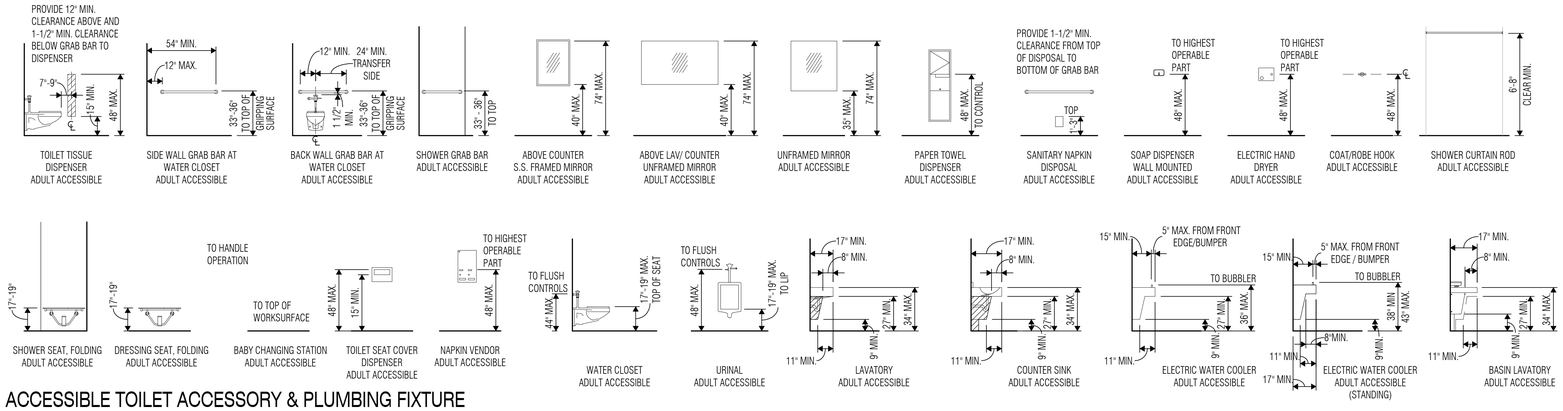
STATE OF TEXAS
MICHAEL A. THOMAS
93640
LICENSED
PROFESSIONAL ENGINEER
5/19/2025

Director LVB	DRAWN BY DRW
DESIGNER JMR	QUALITY CONTROL QC
PROJECT ARCH. JCL	

PROJECT NO.
24-103.00

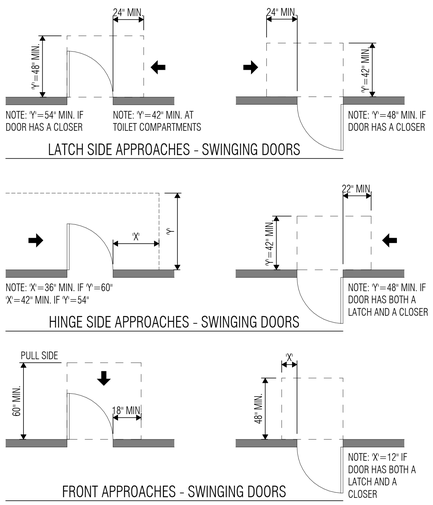
SHEET TITLE
SEDIMENT CONTROL DETAILS

SHEET NO.
C2.09



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

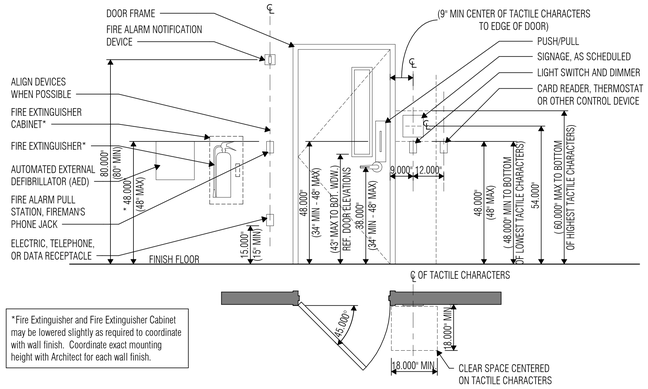
SCALE: 1/4" = 1'-0"



3 MINIMUM MANEUVERING CLEARANCES AT DOORS

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

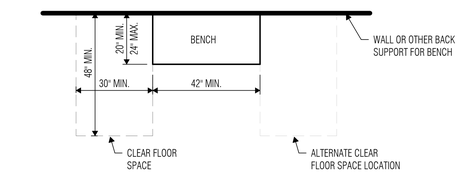
NOTES:
1. All items of the same type are to be located at the same height throughout the project, U.N.O. Notify Architect of any discrepancies.
2. Dimensions indicate project requirements. Dimensions in ( ) indicate maximum and/or minimum requirements per Authorities Having Jurisdiction.



*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.

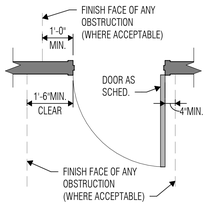
4 MISC ACCESSIBLE MOUNTING CRITERIA

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



5 TYPICAL BENCH SIZE & CLEAR FLOOR SPACE

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.

6 TYPICAL DOOR CLEARANCES AT HINGE & STRIKE SIDE

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 A2.38 for project-specific mounting criteria (if different than the TAS requirements), as well as for non-accessible mounting criteria.

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
Salas O'Brien
12655 North Central Expressway Suite 720
Dallas, Texas 75243
Main Phone: 972.812.1270
www.salasobrien.com

TECHNOLOGY CONSULTANT
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Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER
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1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE & OPERATIONS WAREHOUSE

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

05/20/2025

ISSUED: May 20, 2025

REVISIONS

Revision No.	Revision Date

Director LB	Drawn By MO
Designer Designer	Quality Control
Proj. Arch. LH	

PROJECT NO.
24-103.00

SHEET TITLE
TEXAS ACCESSIBILITY STANDARDS REQUIREMENTS

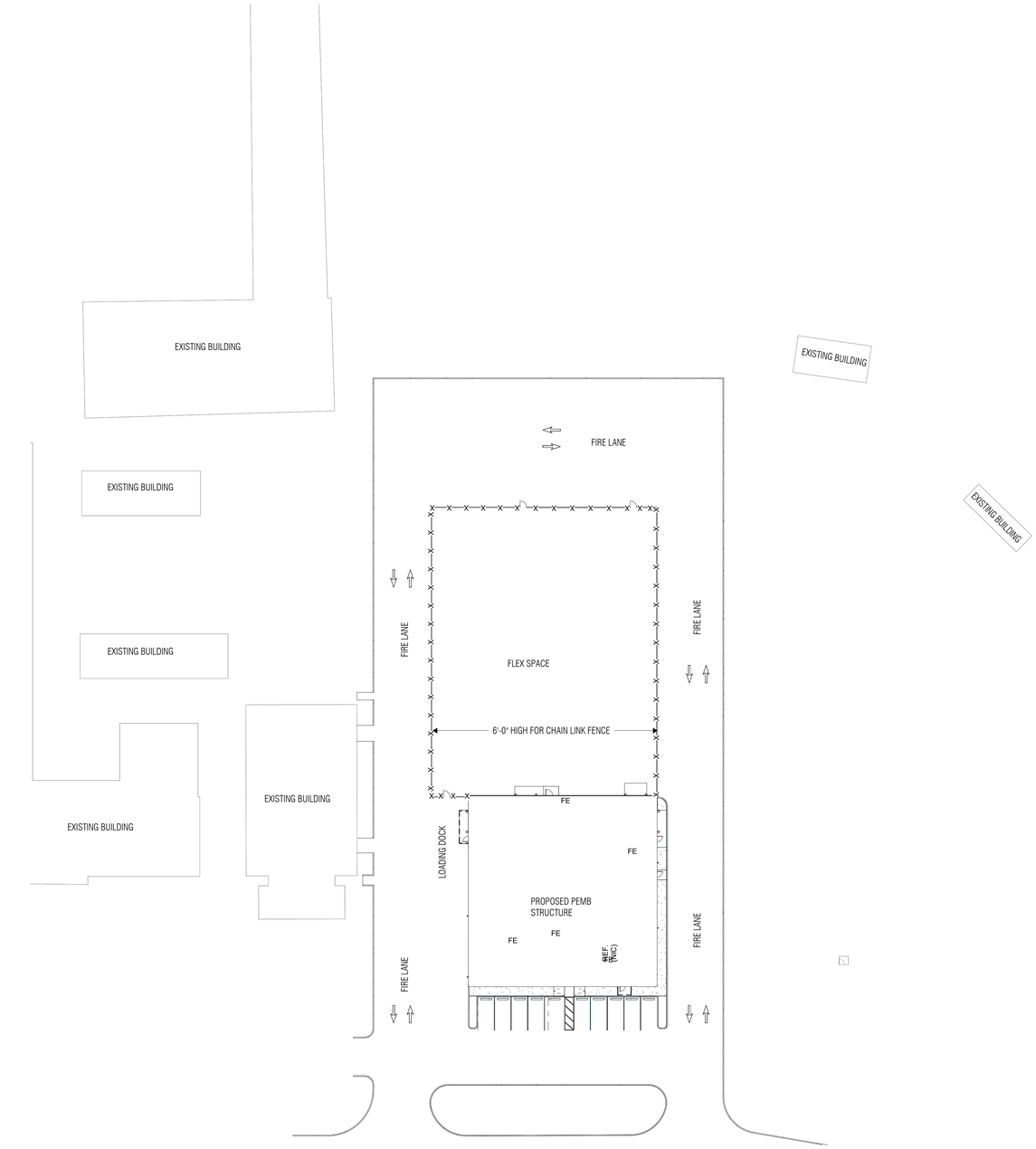
SHEET NO.
A0.31

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.

SITE PLAN LEGEND

—X——X——X— CHAIN LINK FENCE



N
PLAN NORTH

N
TRUE NORTH

1 OVERALL SITE PLAN
SCALE: 1" = 30'-0"

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

CIVIL ENGINEER
MJ Thomas
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Fort Worth, Texas 76107
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www.mjthomaseng.com

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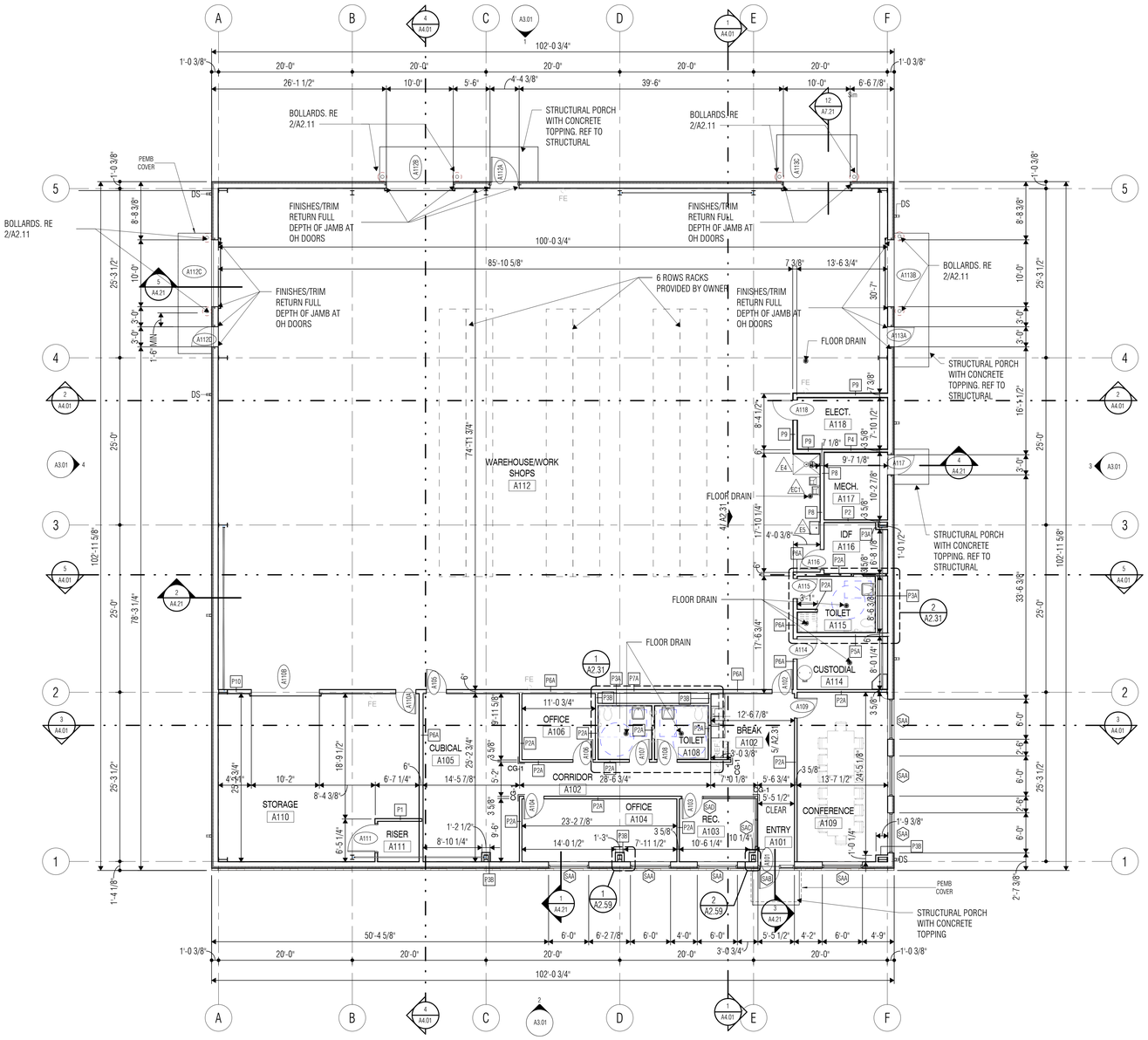
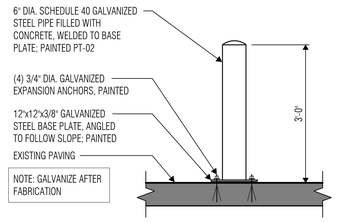
SHEET TITLE
OVERALL SITE PLAN

SHEET NO.
A1.11



N
PLAN NORTH
≈
TRUE NORTH

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



2 BOLLARD DETAIL AT EXISTING PAVING
SCALE: 3/4" = 1'-0"

FLOOR PLAN NOTES

1. Primary Ground Level floor elevation is 100.XX' (Mean Sea Level), which equals to 100'-0" datum.
2. Dimensions on Floor Plans are to face of stud 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 A4.11 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 "P1" unless noted otherwise.
8. Refer to Detail 3/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 Detail 6/A2.21 for Typical Gypsum Board Control Joint Details at all CFS and light-gage steel stud partition openings.
10. Refer to Sheet A2.21 for Typical Partition Penetration Details, including pipe, conduit and ductwork penetrations.
11. Refer to Sheet A2.21 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 5" 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 A2.21 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.
23. All metal stud must be 3/8" min. clearance from PEMB structure to allow for L/100 drift

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.
- 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
FHC	FIRE HOSE CABINET
HB	HORIZONTAL BLINDS
RS	ROLLING WINDOW SHADES
DS	DOWNSPOUT

VLK

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

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MJ Thomas
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Dallas, Texas 75243
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05/20/2025

ISSUED: May 20, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
LB	MO
Designer	Quality Control
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Proj. Arch.	
LH	

PROJECT NO.
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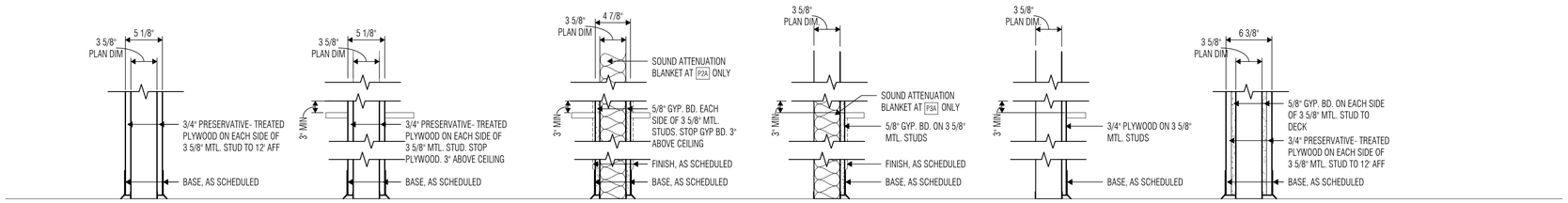
SHEET TITLE
FLOOR PLAN

SHEET NO.
A2.11



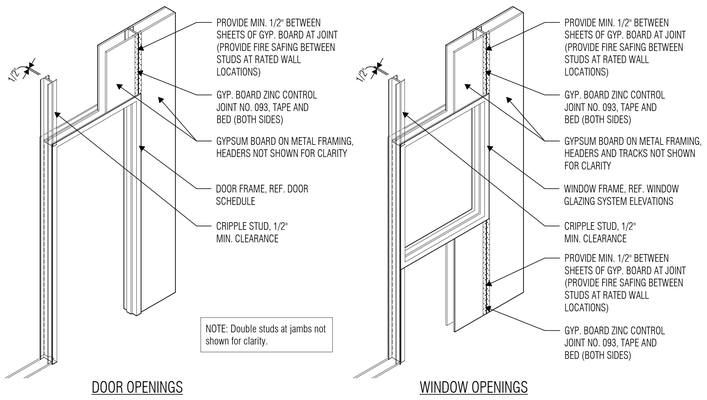
PARTITION NOTES

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 A2.21 for typical partition details.
4. Refer to Life Safety sheets for location of fire rated partitions.
5. Refer to Floor Plan Sheets 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 A2.21
   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.
11. All Non Rated Partitions to extend to 4" above ceiling, unless noted otherwise, refer to RCP Sheets. Brace partitions per Floor Plan Notes.

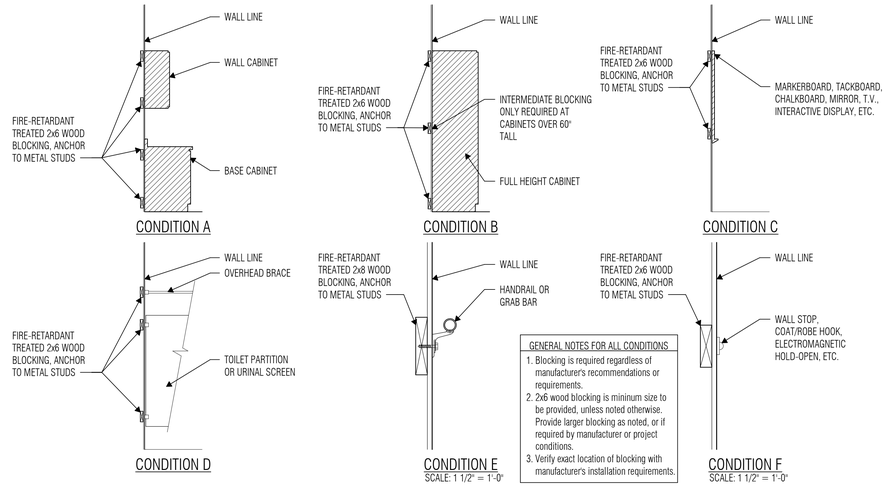
STUD PARTITION SIZING SCHEDULE

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"

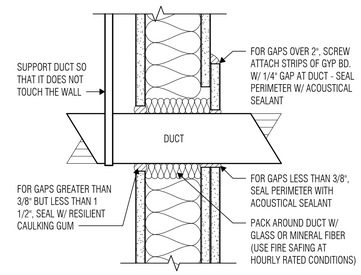
NOTES:
1. All doors shall have a minimum of 20 gage framing where required by specifications.
2. See Floor Plan Notes and Partition Notes for additional metal stud requirements at ceramic tile, plaster, anchored masonry/stone veneer, or adhered masonry/stone veneer.
3. Max. Lengths assume both sides 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.



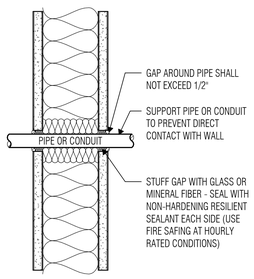
2 TYPICAL CONTROL JOINT DETAIL AT OPENINGS
SCALE: 1/2" = 1'-0"



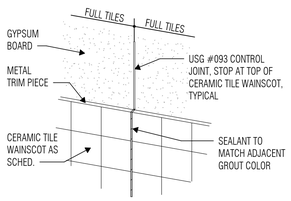
3 TYPICAL WOOD BLOCKING DETAILS
SCALE: 3/8" = 1'-0"



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



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



6 DETAIL OF GYP CONTROL JOINT
SCALE: 1 1/2" = 1'-0"

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

CIVIL ENGINEER
MJ Thomas
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NEW MAINTENANCE & OPERATIONS WAREHOUSE

REGISTERED ARCHITECT KAREN V. BROWN 29211 STATE OF TEXAS
05/20/2025

ISSUED: May 20, 2025

REVISIONS

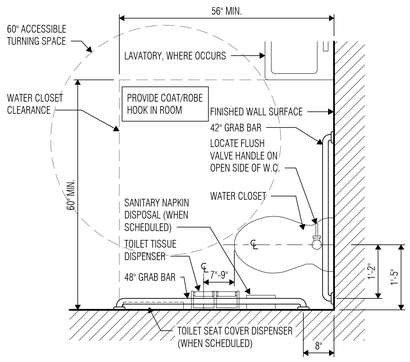
Revision No.	Revision Date

Director LAH	Drawn By MO
Designer EA	Quality Control
Proj. Arch. LB	

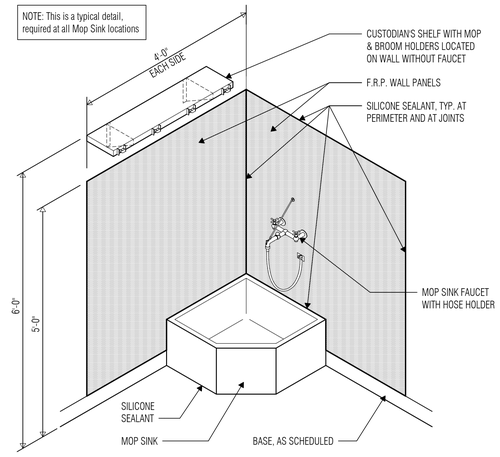
PROJECT NO.
24-103.00

SHEET TITLE
PARTITION TYPES

SHEET NO.
A2.21

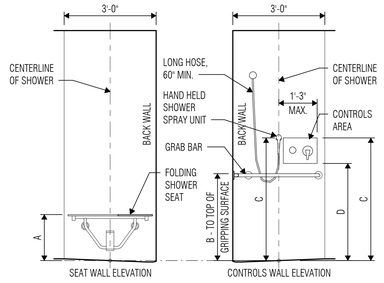


1 ACCESSIBLE TOILET ROOM
SCALE: 3/4" = 1'-0"

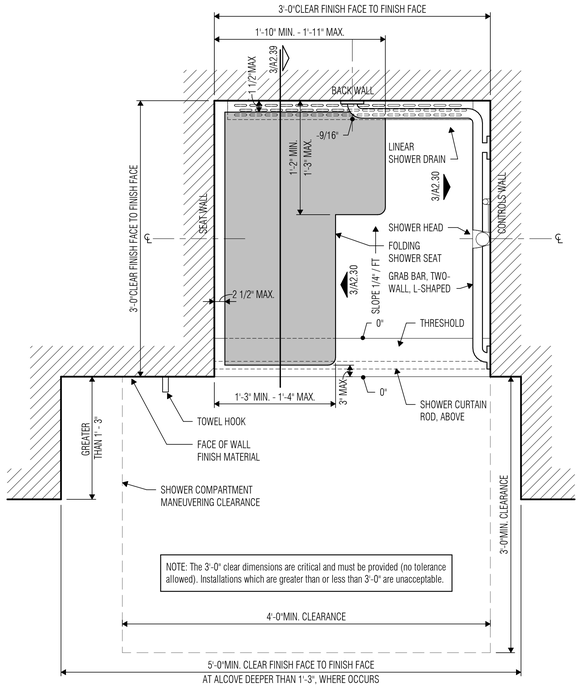


2 CUSTODIAN ROOM WAINSCOT & ACCESSORIES
SCALE: 3/4" = 1'-0"

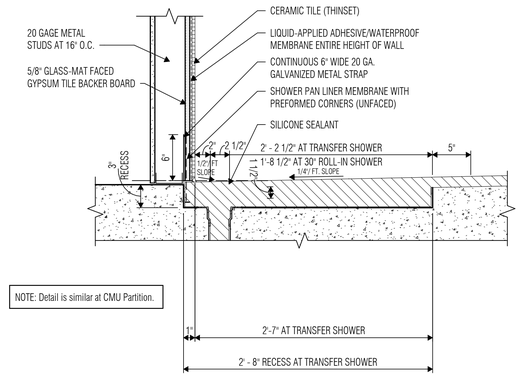
	HEIGHT ABOVE SHOWER FLOOR			
	A	B	C	D
ADULT	18"	34"	48"	38"
CHILD	18"	34"	44"	38"



3 ELEV. OF ACCESSIBLE SHOWER COMPARTMENT
SCALE: 1/2" = 1'-0"



4 ROUGH-iN DETAIL FOR ACCESSIBLE SHOWER COMPARTMENT
SCALE: 1 1/2" = 1'-0"



6 ACCESSIBLE SHOWER PAN DETAIL FOR FUTURE SHOWER
SCALE: 1 1/2" = 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
A2	TOILET TISSUE DISPENSER, MULTI-ROLL		MFR.	REF: A0.31	REF: A0.31	X		
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
E2	PAPER TOWEL DISPENSER (SURFACE-MOUNTED)		MATCH ACCESS	47" TO CTRL.	43" TO CTRL.	X		
F1	SANITARY NAPKIN DISPOSAL (SURFACE-MOUNTED)		MFR.	25" TO TOP		X		
G1	SOAP DISPENSER, WALL-MOUNTED		MATCH ACCESS	47" TO CTRL.	43" TO CTRL.	X		
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"			
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 A2.21.
3. All mounting heights are from finished flooring material at centerline of accessory.
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.

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
LA	LAVATORY- ADULT ACCESSIBLE	34" TO RIM	4
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

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
Salas O'Brien
12655 North Central Expressway Suite 720
Dallas, Texas 75243
Main Phone: 972.812.1270
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Atlas Consulting
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Southlake, Texas 76092
Main Phone: 512.468.8300
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Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

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NEW MAINTENANCE & OPERATIONS WAREHOUSE

REGISTERED ARCHITECT — KAREN V. BROWN — 23211 — STATE OF TEXAS
05/20/2025

ISSUED: May 20, 2025

REVISIONS

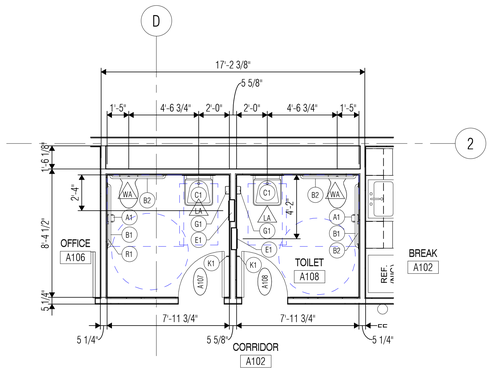
Revision No.	Revision Date

Director LB
Drawn By MO
Designer Designer
Quality Control
Proj. Arch. LH

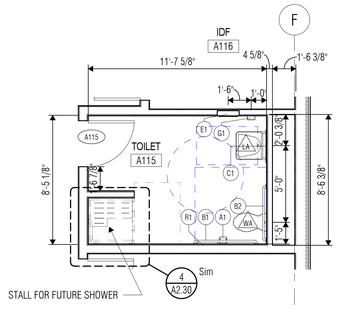
PROJECT NO.
24-103.00

SHEET TITLE
TYPICAL TOILET ROOM DETAILS, TOILET ACCESSORY LEGEND

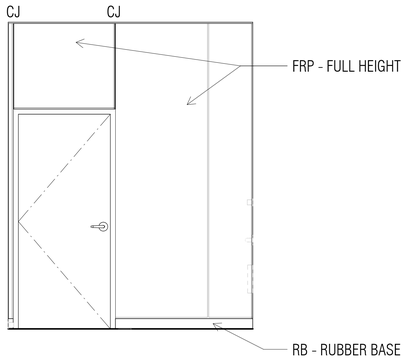
SHEET NO.
A2.30



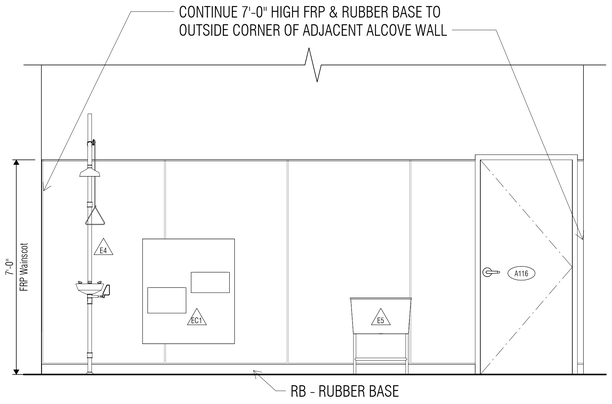
1 ENLARGED TOILET PLAN
SCALE: 1/4" = 1'-0"



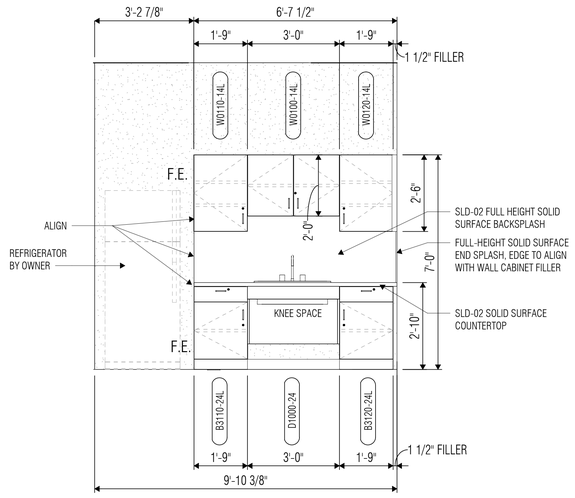
2 ENLARGED TOILET PLAN
SCALE: 1/4" = 1'-0"



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



4 INTERIOR ELEVATION - WAREHOUSE/WORK SHOP
SCALE: 1/2" = 1'-0"



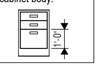
5 BREAKROOM CASEWORK
SCALE: 1/2" = 1'-0"

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.

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- U.N.O.
9. Provide fillers and finished end panels (F.E.) as required. Refer to Detail 6/A2.31 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 6/A2.31
17. Provide custom height at all file-size drawers to be a minimum of 1'-0" deep. Provide locks at all file-size drawers.

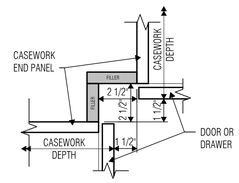


C.S.I. Catalog Casework Number

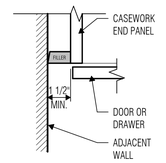
X0000ML V
WWHHHDD

- M = Modified from Standard Catalog Selection
- L = Locked Cabinet
- V = Light Valance Panel (C.S.I. #R9600-03)
- Casework Size

Note:
1. The height indicated at base cabinets includes the countertop.

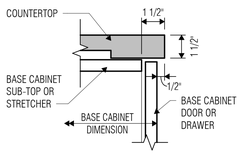


INSIDE CORNER FILLER
AT ADJACENT CABINETS

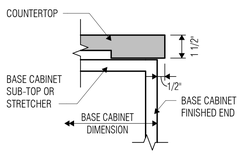


NOTE: MAX. FILLER SIZE IS 4"

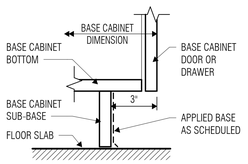
FILLER AT ADJACENT WALL



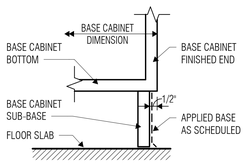
COUNTERTOP
FRONT OVERHANG



COUNTERTOP
END OVERHANG



BASE CABINET TOE KICK
AT FRONT



BASE CABINET SUB-BASE
AT FINISHED END

M830

6 TYPICAL CASEWORK DETAILS
SCALE: 3" = 1'-0"

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
Salas O'Brien
12655 North Central Expressway Suite 720
Dallas, Texas 75243
Main Phone: 972.812.1270
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Atlas Consulting
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Southlake, Texas 76092
Main Phone: 512.468.8300
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Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

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NEW MAINTENANCE & OPERATIONS WAREHOUSE

REGISTERED ARCHITECT
LAUREN V. BROWN
23211
STATE OF TEXAS

05/20/2025

ISSUED: May 20, 2025

REVISIONS

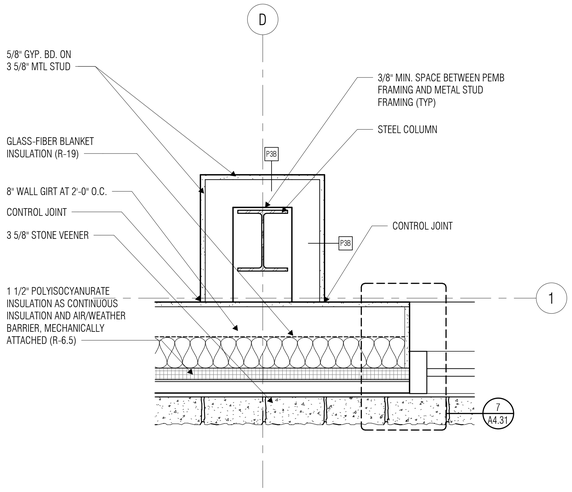
Revision No.	Revision Date

Director	Drawn By
LB	MO
Designer	Quality Control
Designer	
Proj. Arch.	
LH	

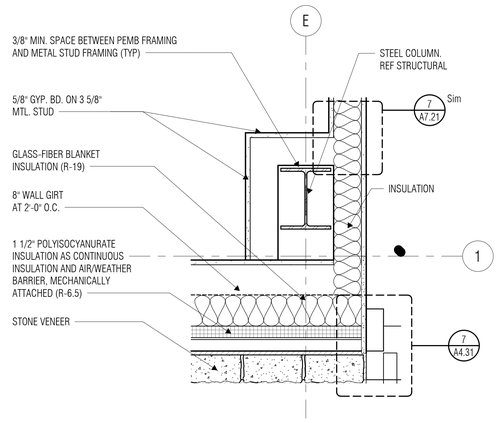
PROJECT NO.
24-103.00

SHEET TITLE
ENLARGED TOILET PLANS AND ELEVATIONS

SHEET NO.
A2.31



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



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

VLK

ARCHITECT

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

CIVIL ENGINEER

MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER

L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER

Salas O'Brien
12655 North Central Expressway Suite 720
Dallas, Texas 75243
Main Phone: 972.812.1270
www.salasobrien.com

TECHNOLOGY CONSULTANT

Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER

BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

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WHITE SETTLEMENT, TX

NEW MAINTENANCE & OPERATIONS WAREHOUSE

REGISTERED ARCHITECT
STEPHEN V. BROWN
23211
STATE OF TEXAS

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LB	MO
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Designer	
Proj. Arch.	
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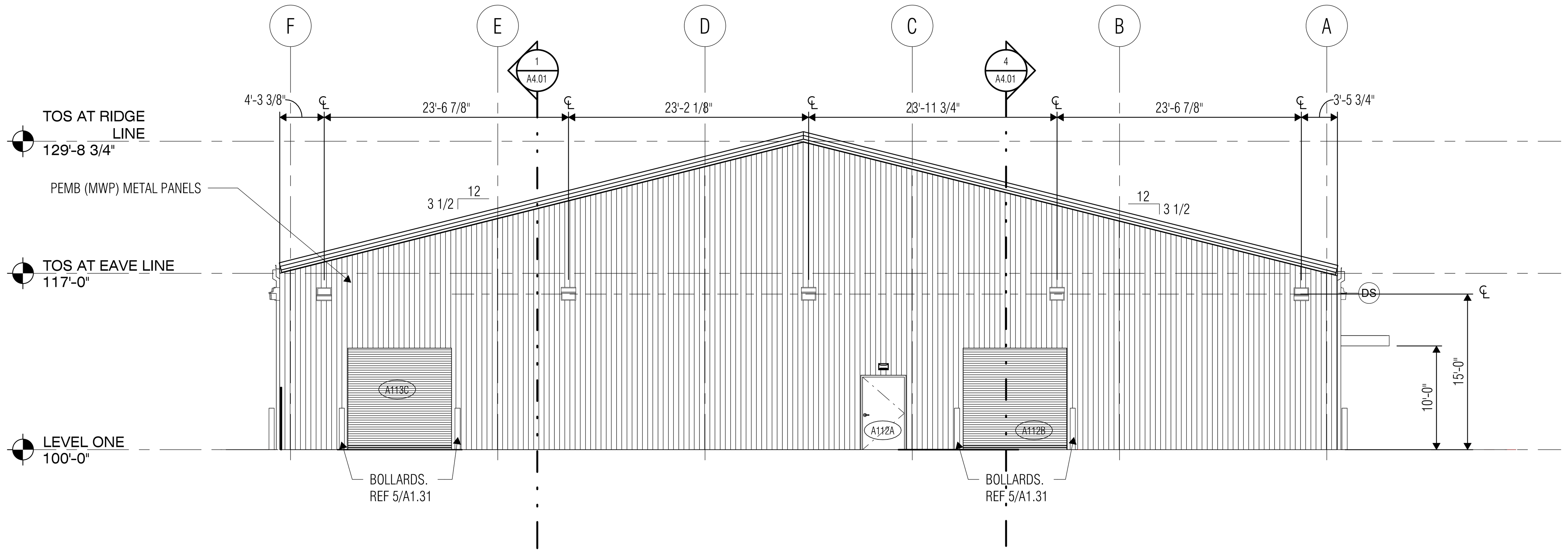
SHEET TITLE

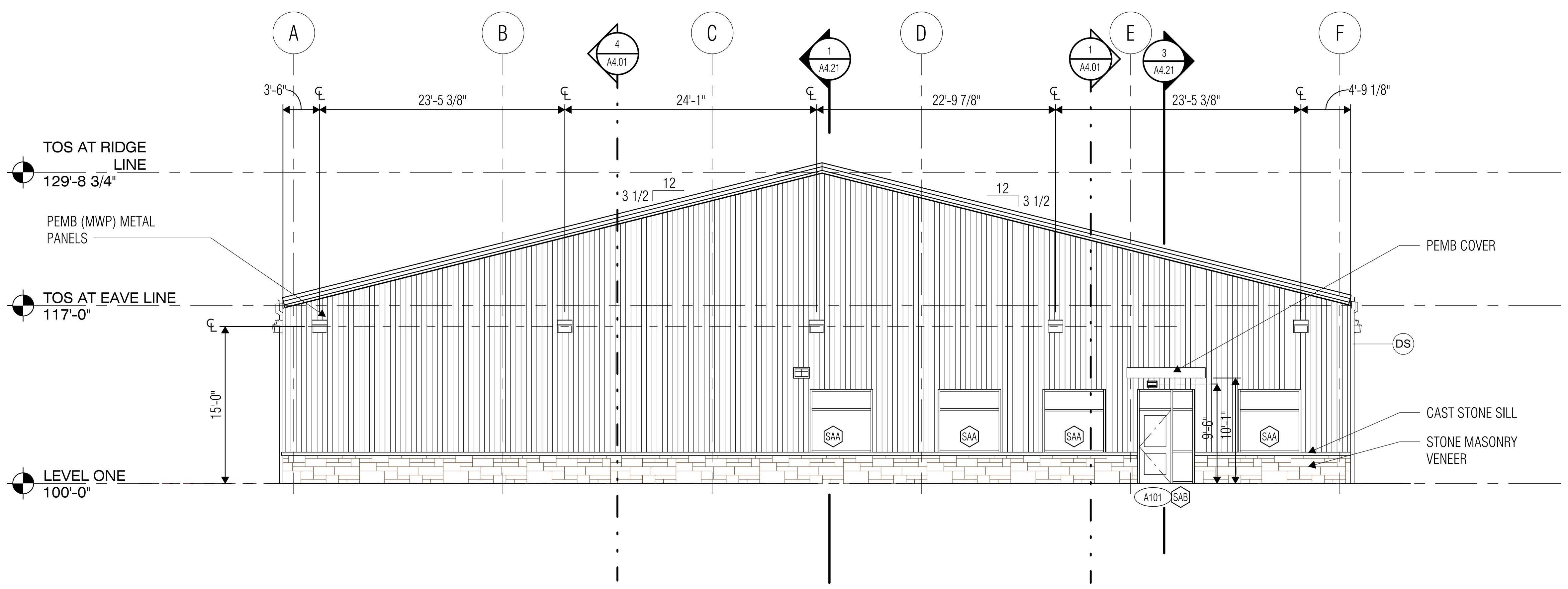
PLAN DETAILS

SHEET NO.

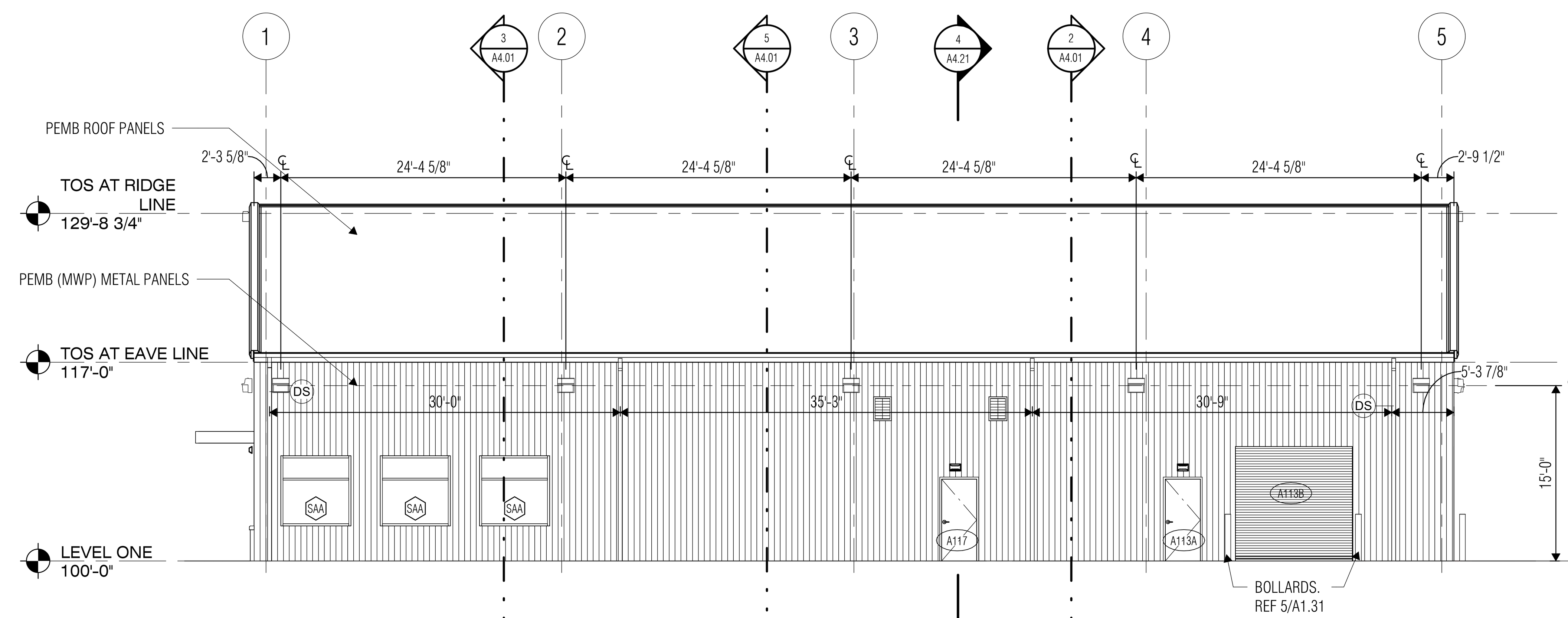
A2.59



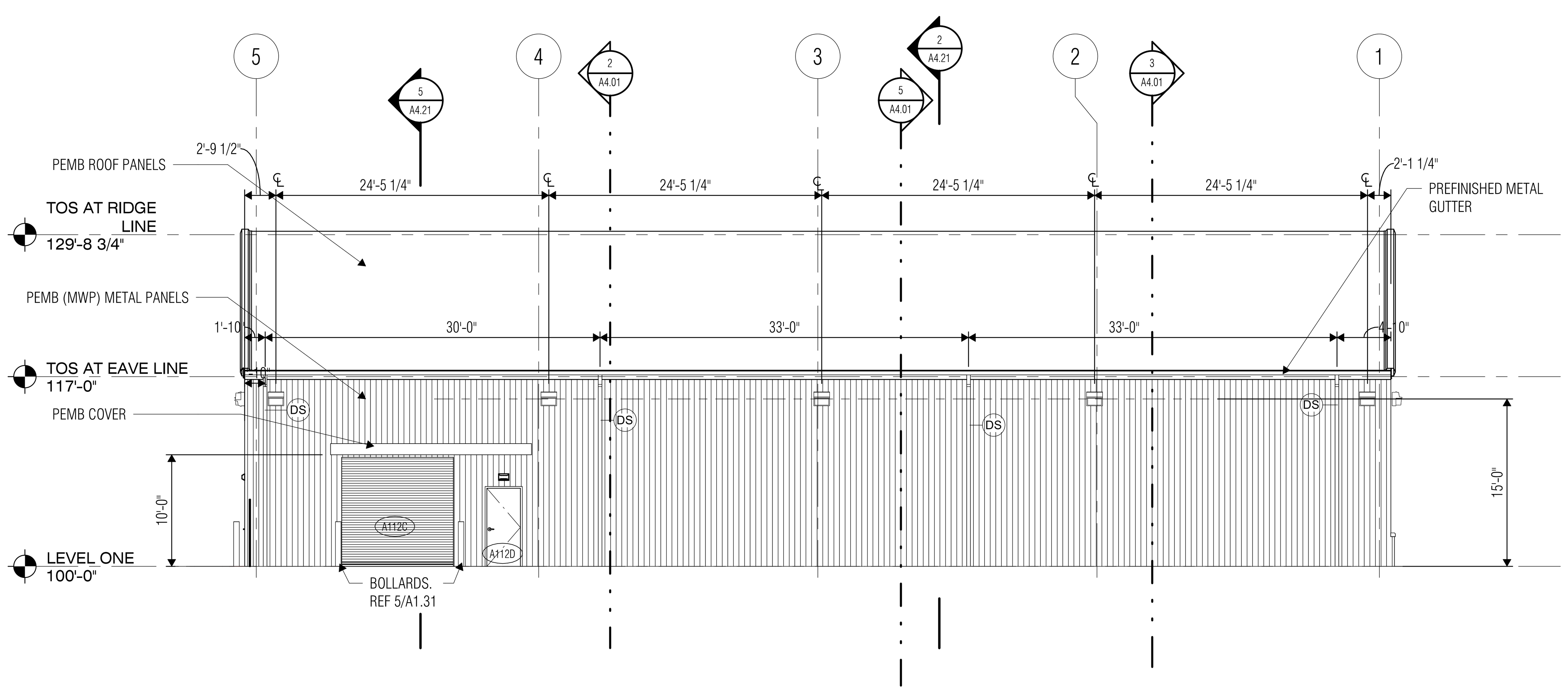
1 BUILDING ELEVATION - EAST
SCALE: 1/8" = 1'-0"



2 BUILDING ELEVATION - WEST
SCALE: 1/8" = 1'-0"



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



4 BUILDING ELEVATION - NORTH
SCALE: 1/8" = 1'-0"

EXTERIOR ELEVATION NOTES

1. Refer to Sheet 2/A2.21 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. Terminate recessed and projected masonry veneer courses at 4" from intersecting window frames, door frames, sloping roofs, etc., unless noted otherwise.

EXTERIOR ELEVATION LEGEND

DS DOWNSPOUT
CJ CONTROL JOINT, REF. 2 & 10/A2.21
1T ALUMINUM STOREFRONT, REF. SHEET A7.21

VLK

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

CIVIL ENGINEER
MJ Thomas
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Designer Designer	Quality Control
Proj. Arch. LH	

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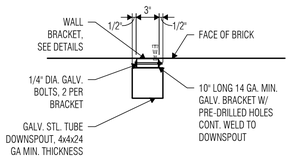
24-103.00

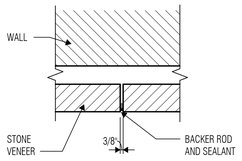
SHEET TITLE
EXTERIOR ELEVATIONS

SHEET NO.
A3.01



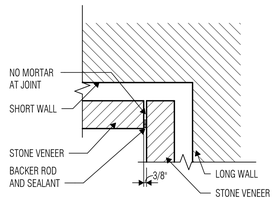
1 DOWNSPOUT HANGER

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



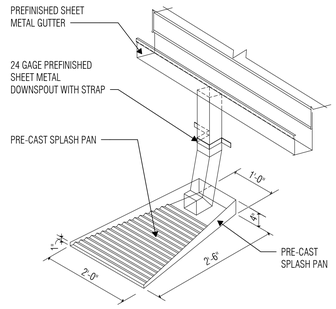
2 STONE VENEER CONTROL JOINT

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



3 STONE VENEER CONTROL JOINT_INSIDE CORNER

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



4 DOWNSPOUT & SPLASH PAN at ROOF

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

VLK

ARCHITECT

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

CIVIL ENGINEER

MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
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www.lafp.com

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CONSTRUCTION MANAGER

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NEW MAINTENANCE & OPERATIONS WAREHOUSE

REGISTERED ARCHITECT
STEVEN V. BROWN
23211
STATE OF TEXAS

05/20/2025

ISSUED: May 20, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
LB	MO
Designer	Quality Control
Designer	
Proj. Arch.	
LH	

PROJECT NO.

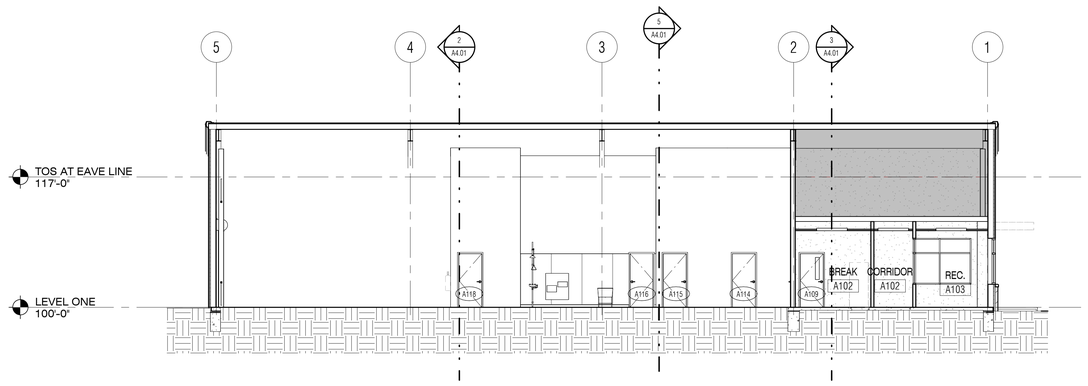
24-103.00

SHEET TITLE

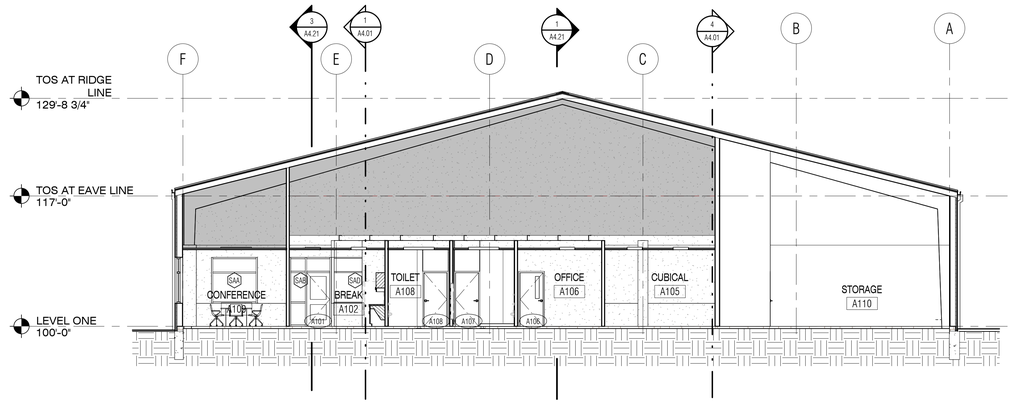
EXTERIOR ELEVATION DETAILS

SHEET NO.

A3.11



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



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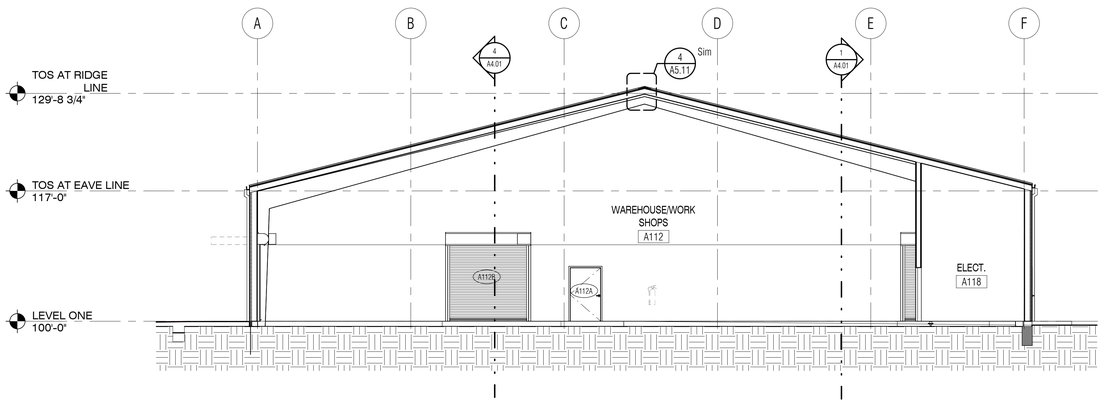
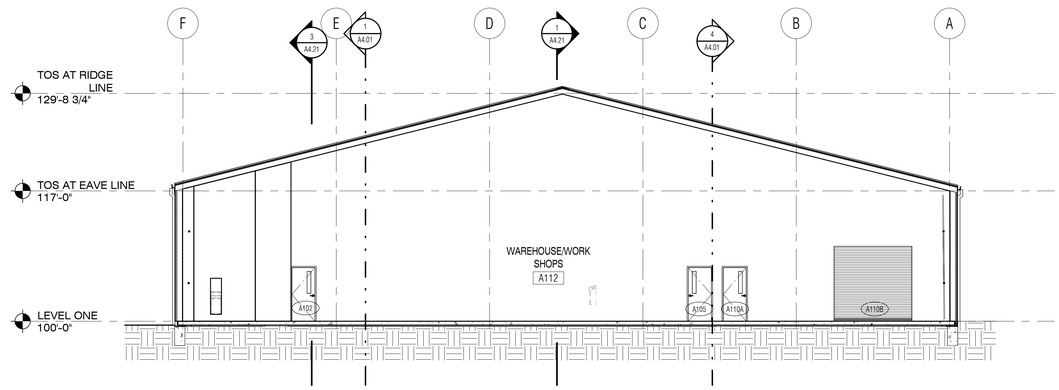


2 BUILDING SECTION
SCALE: 1/8" = 1'-0"



5 BUILDING SECTION
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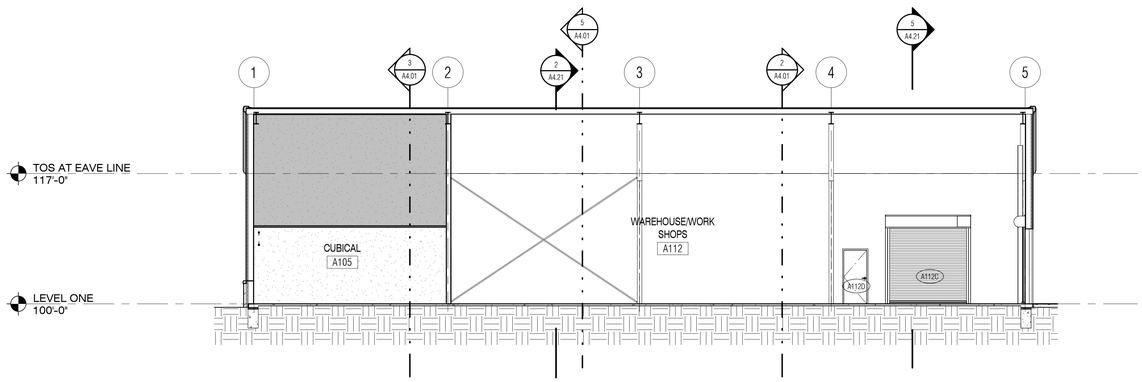

4 BUILDING SECTION
SCALE: 1/8" = 1'-0"

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
Salas O'Brien
12655 North Central Expressway Suite 720
Dallas, Texas 75243
Main Phone: 972.812.1270
www.salasobrien.com

TECHNOLOGY CONSULTANT
Atlas Consulting
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Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER
BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
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NEW MAINTENANCE & OPERATIONS WAREHOUSE

LAUREN V. BROWN
REGISTERED ARCHITECT
29211
STATE OF TEXAS
05/20/2025

ISSUED: May 20, 2025

REVISIONS

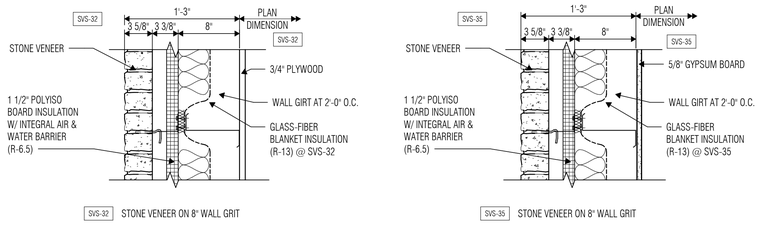
Revision No.	Revision Date

Director	Drawn By
LB	MO
Designer	Quality Control
Designer	
Proj. Arch.	
LH	

PROJECT NO.
24-103.00

SHEET TITLE
BUILDING SECTIONS

SHEET NO.
A4.01



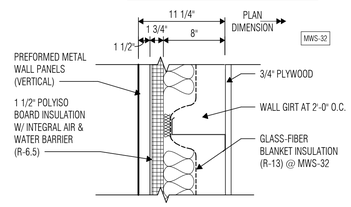
SVS-32 STONE VENEER ON 8" WALL GRIT

SVS-35 STONE VENEER ON 8" WALL GRIT

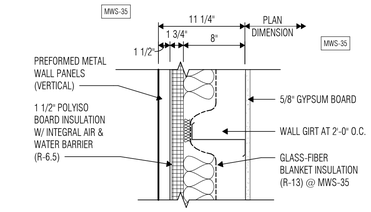
1 BUILDING ENVELOPE ASSEMBLY - WALL TYPES - STONE VENEER

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

MWS-32 SEAL PERIMETER OF BOARD INSULATION, AS WELL AS ALL JOINTS AND PENETRATIONS, AS AN AIR- & WATER-RESISTIVE BARRIER ASSEMBLY.



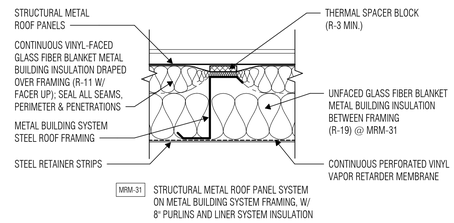
MWS-32 STRUCTURAL METAL WALL PANELS (VERTICAL) w/ THERMALLY-IMPROVED Z-GIRT SYSTEM ON 8" WALL GRIT



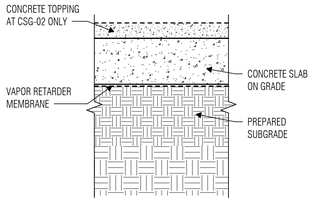
MWS-35 STRUCTURAL METAL WALL PANELS (VERTICAL) w/ THERMALLY-IMPROVED Z-GIRT SYSTEM ON 8" WALL GRIT

2 WALL TYPES_CZ2_METAL WALL PANELS

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



MRM-31 STRUCTURAL METAL ROOF PANEL SYSTEM ON METAL BUILDING SYSTEM FRAMING, W/ 8" PURLINS AND LINER SYSTEM INSULATION



CSG-01 CONCRETE SLAB ON GRADE

CSG-02 CONCRETE SLAB ON GRADE w/ CONCRETE TOPPING

3 BUILDING ENVELOPE ASSEMBLY - ROOF TYPES

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

4 BUILDING ENVELOPE ASSEMBLY - FLOOR TYPES

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

CLADDING BACKUP CLIMATE ZONE MARK

BMS-31

BUILDING ASSEMBLY LEGEND MASTER LIST

VLK_Building Assembly Legend	VLK_Building Assembly Legend Order	TYPE MARK	DESCRIPTION
Wall			
Wall		MWS-32	Metal Wall Panel (Vertical) on 8" Girt w/ 3/4" Plywood
Wall		MWS-35	Metal Wall Panel (Vertical) on 8" Girt w/ 5/8" Gyp Bd
Wall		SVS-32	Stone Veneer on 8" Grit w/ 3/4" Plywood
Wall		SVS-35	Stone Veneer on 8" Grit w/ 5/8" Gyp Bd
Floor			
Floor	1	CSG-01	Concrete Slab on Grade
Roof			
Roof	3	MRM-31	Structural Metal Roof Panel System on Metal Building System Framing, w/8" Purlins and Liner System Insulation

VLK

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

CIVIL ENGINEER
MJ Thomas
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Fort Worth, Texas 76107
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Dallas, Texas 75243
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NEW MAINTENANCE & OPERATIONS WAREHOUSE

REGISTERED ARCHITECT KIMBERLY N. BROWN 32211 STATE OF TEXAS

05/20/2025

ISSUED: May 20, 2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
LB	MO
Designer	Quality Control
Designer	
Proj. Arch.	
LH	

PROJECT NO.

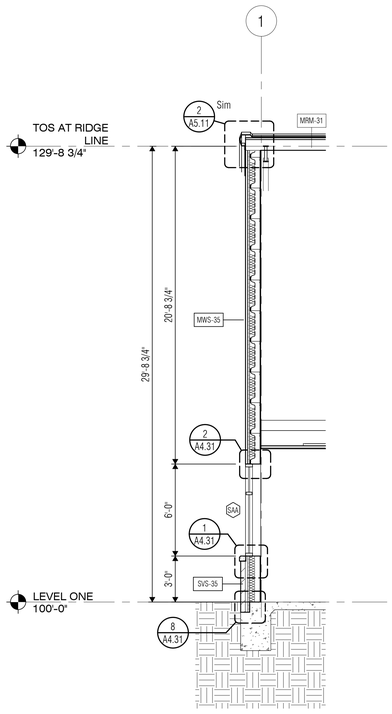
24-103.00

SHEET TITLE

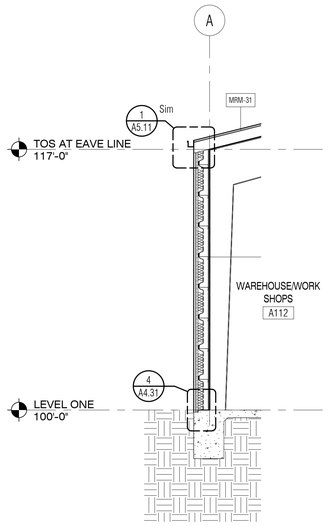
BUILDING ASSEMBLY TYPES

SHEET NO.

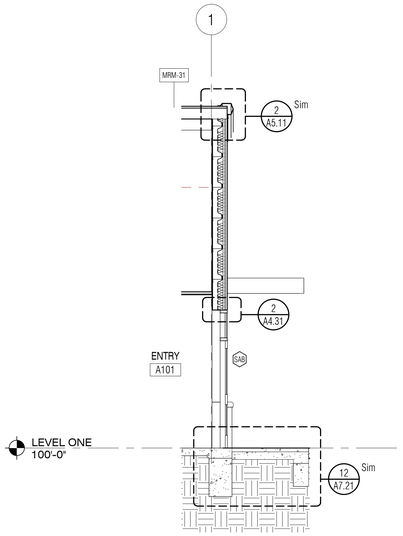
A4.11



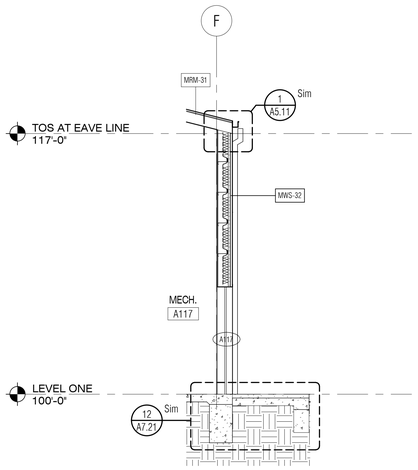
1 WALL SECTION
SCALE: 1/4" = 1'-0"



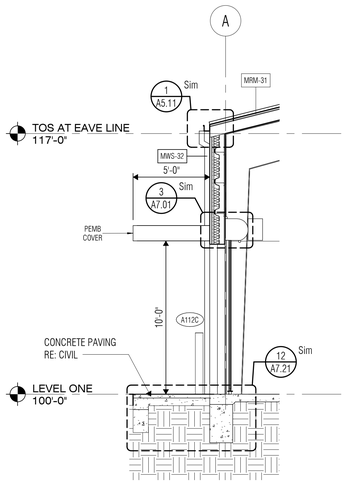
2 WALL SECTION
SCALE: 1/4" = 1'-0"



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



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



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

CLADDING BACKUP CLIMATE ZONE MARK
BMS-31

BUILDING ASSEMBLY LEGEND MASTER LIST

VLK_Building Assembly Legend	VLK_Building Assembly Legend Order	TYPE MARK	DESCRIPTION
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Floor	1	CSG-01	Concrete Slab on Grade
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Roof	3	MRM-31	Structural Metal Roof Panel System on Metal Building System Framing, w/8" Purlins and Liner System Insulation

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
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Main Phone: 817.467.4981
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NEW MAINTENANCE & OPERATIONS WAREHOUSE

REGISTERED ARCHITECT
LAUREN V. BROWN
23211
STATE OF TEXAS
05/20/2025

ISSUED: May 20, 2025

REVISIONS

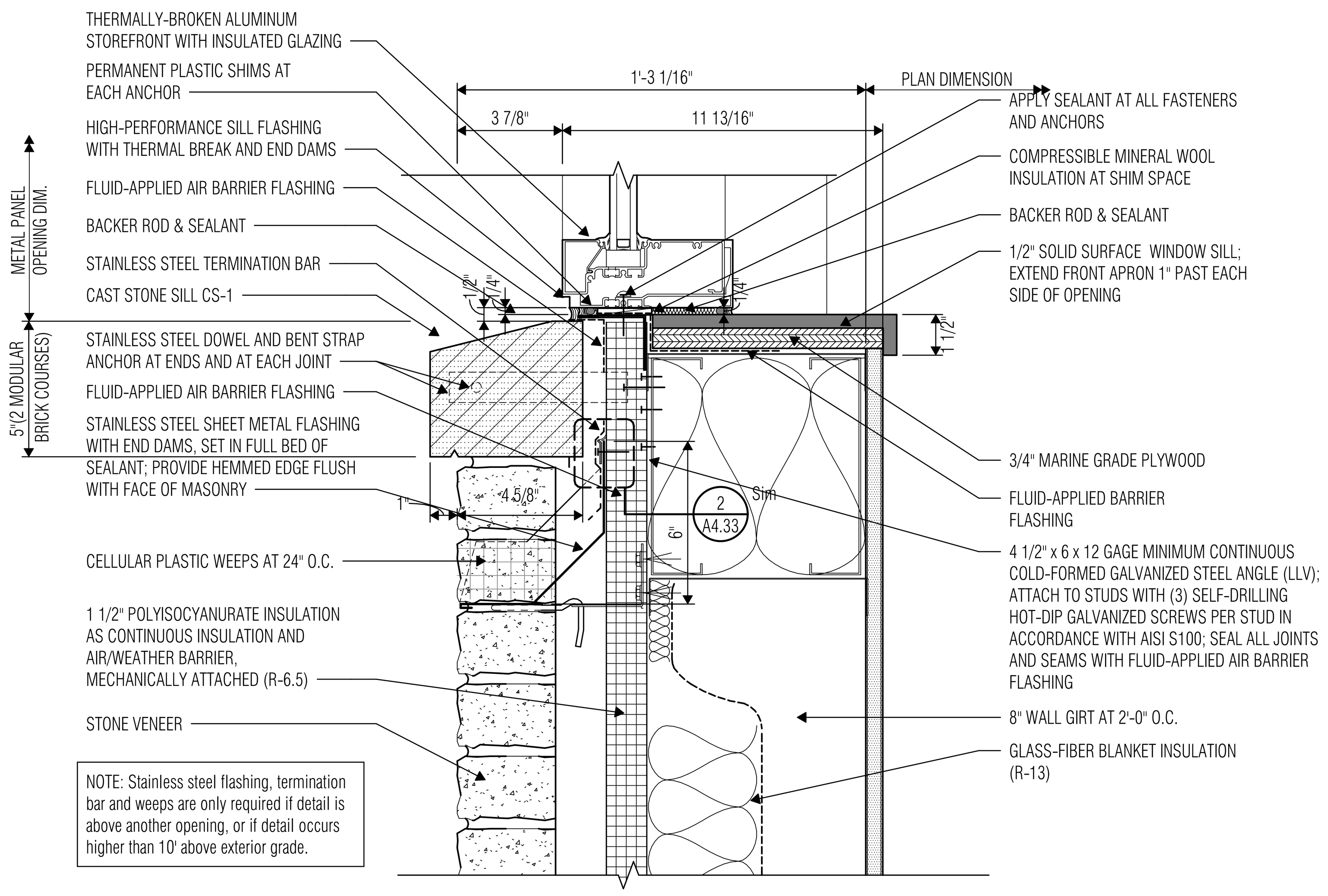
Revision No.	Revision Date

Director	Drawn By
LB	MO
Designer	Quality Control
Designer	
Proj. Arch.	
LH	

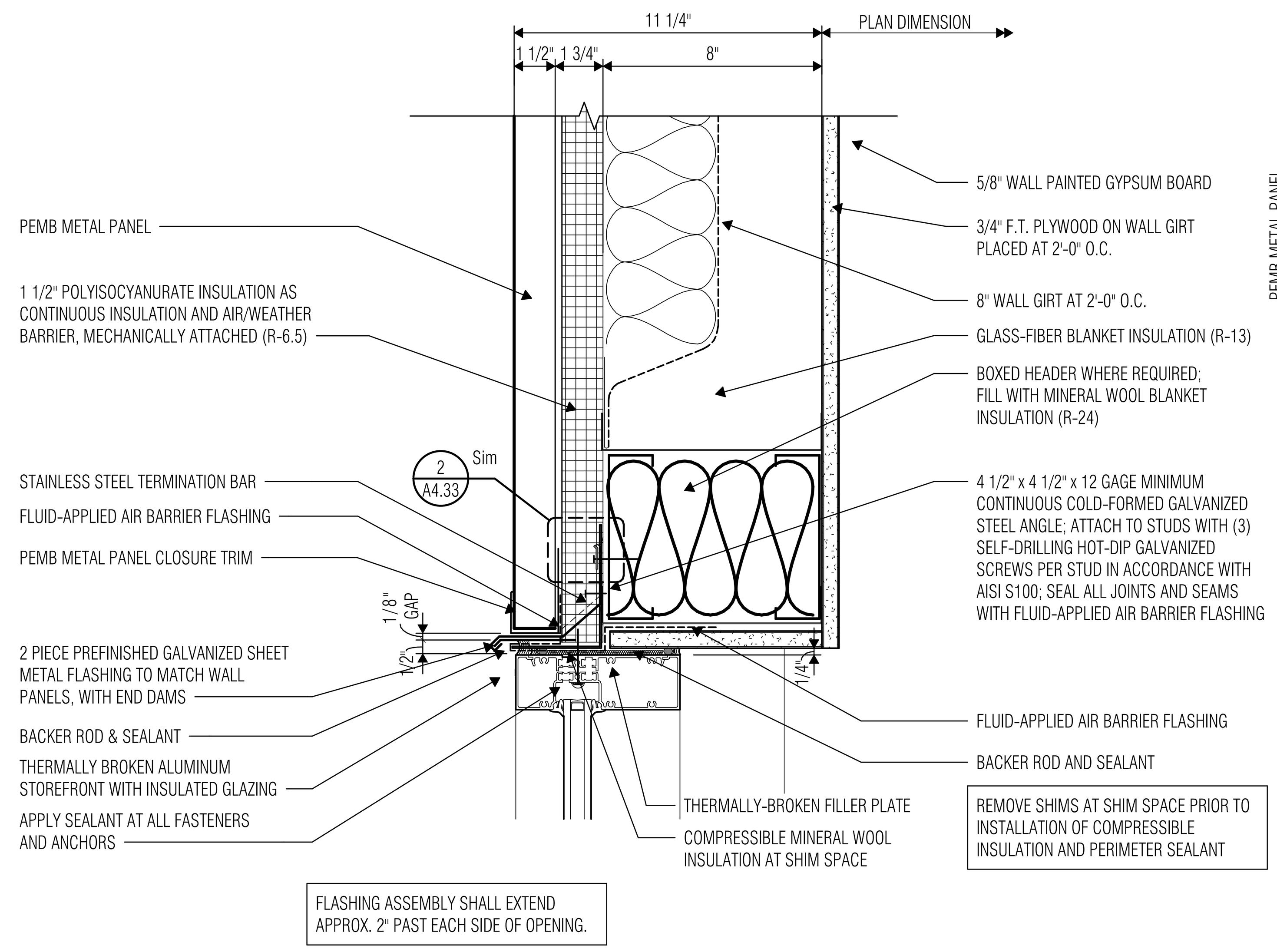
PROJECT NO.
24-103.00

SHEET TITLE
WALL SECTIONS

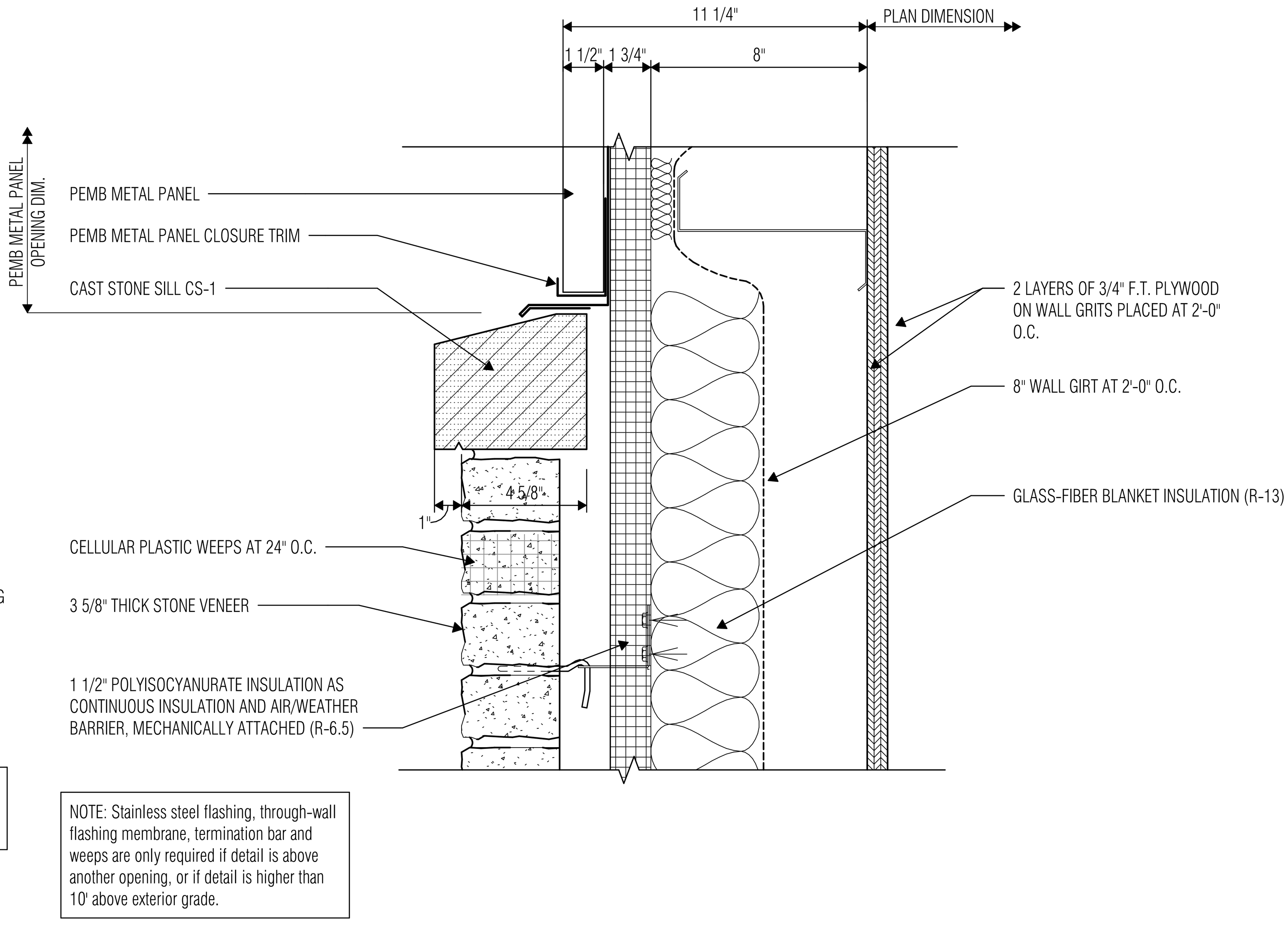
SHEET NO.
A4.21



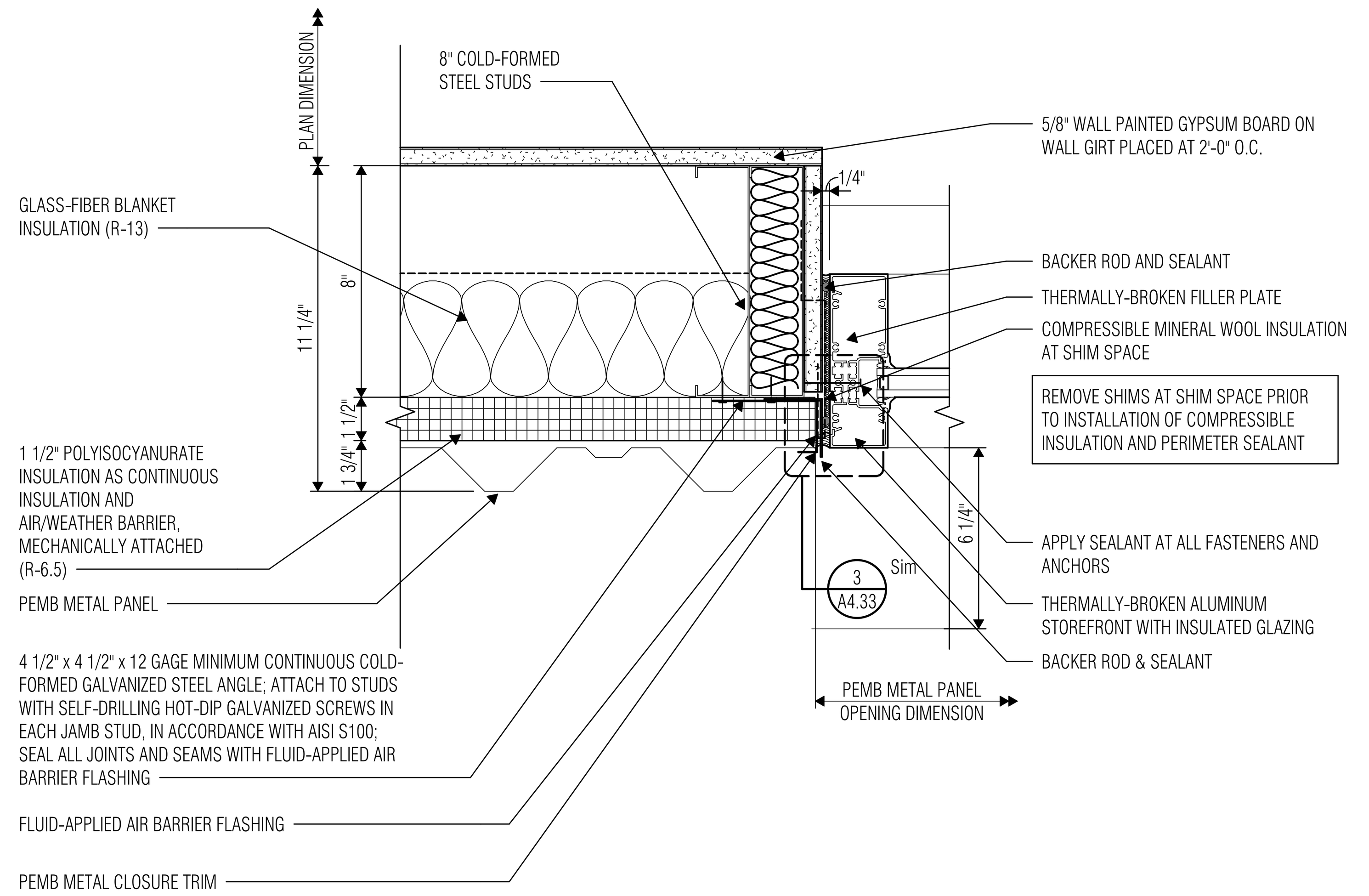
1 STONE VENEER WALL AT STOREFRONT SILL
SCALE: 3" = 1'-0"



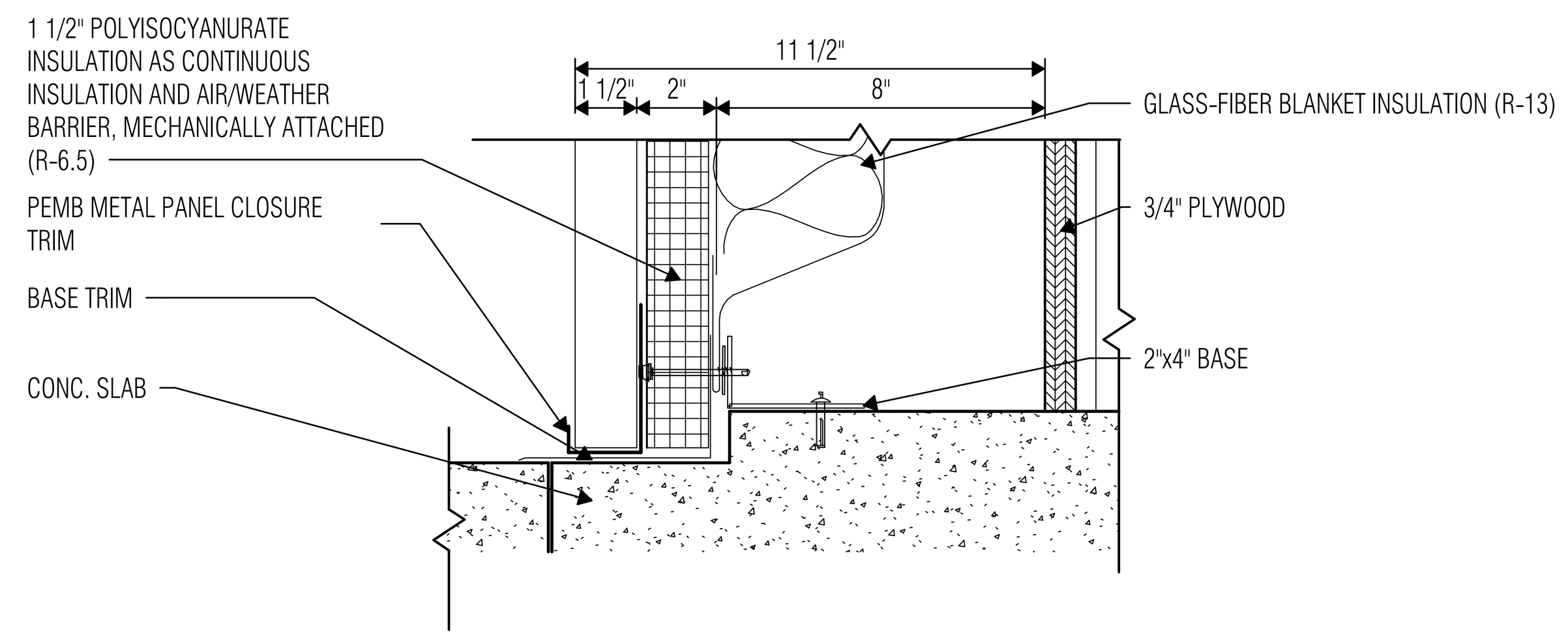
2 METAL WALL PANEL WALL AT STOREFRONT HEAD
SCALE: 3" = 1'-0"



3 METAL PANEL WALL AT STOREFRONT SILL
SCALE: 3" = 1'-0"



4 METAL PANEL WALL AT STOREFRONT JAMB
SCALE: 3" = 1'-0"



6 BASE DETAIL
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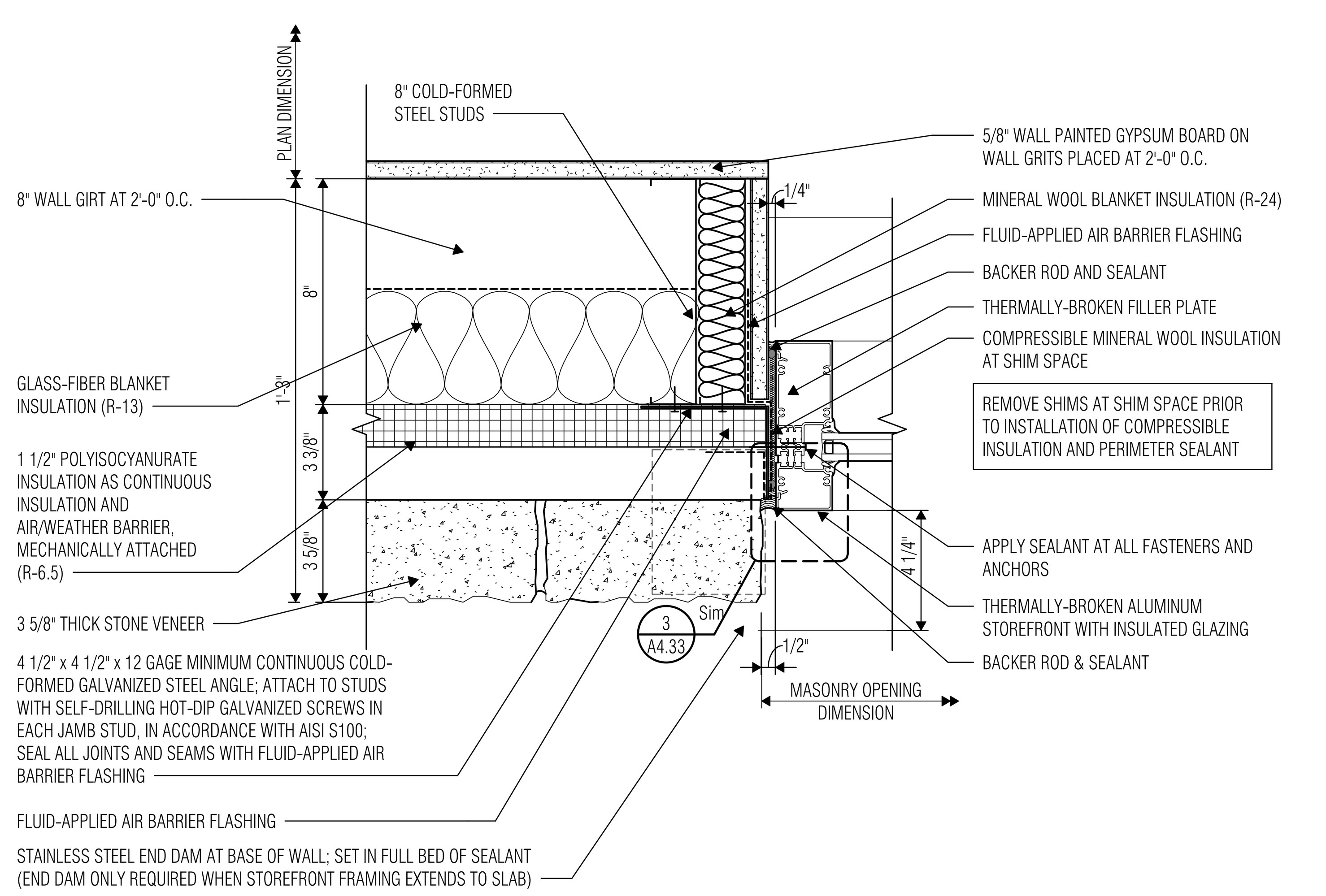
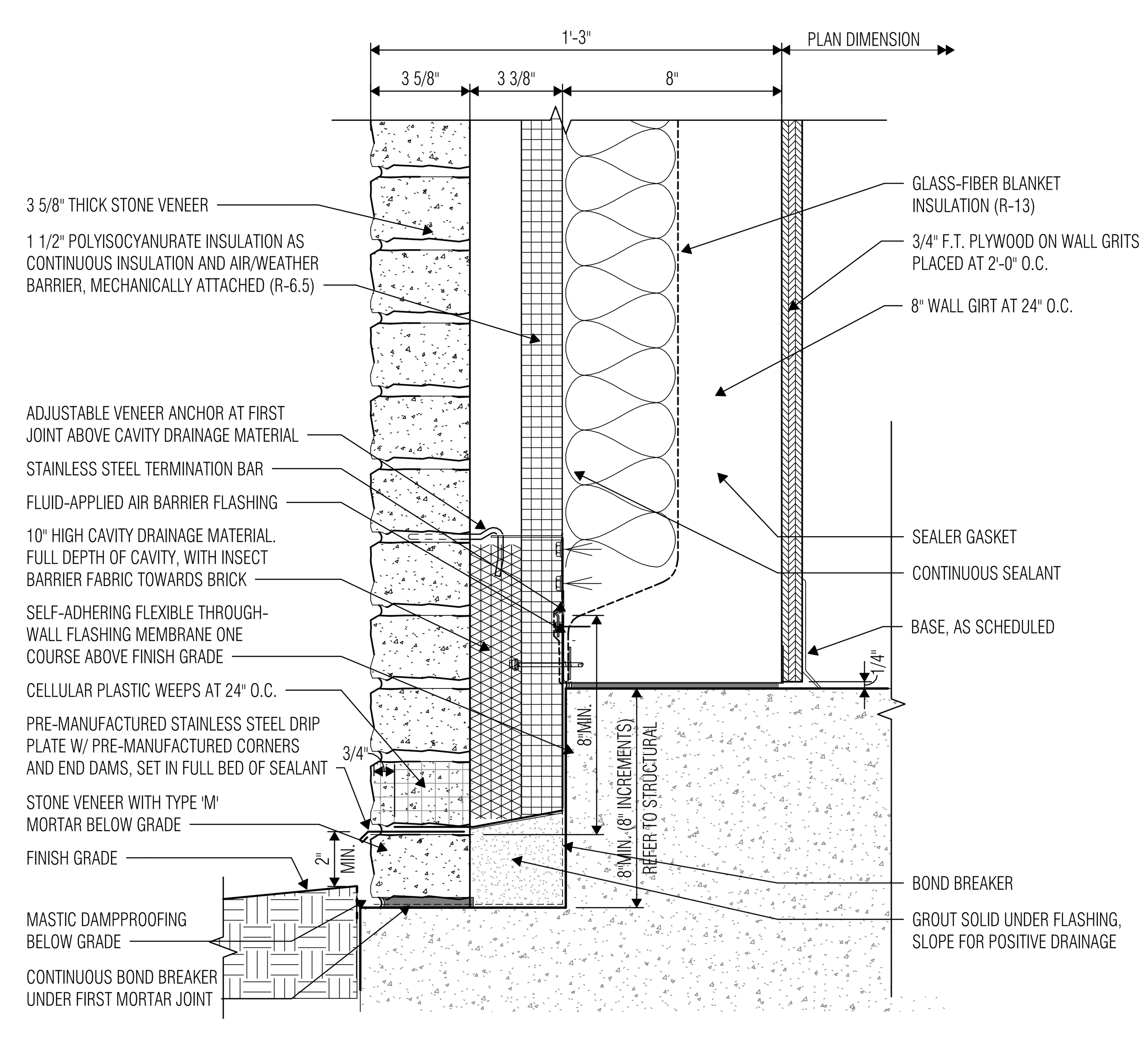


7 STONE VENEER WALL AT STOREFRONT JAMB
SCALE: 3" = 1'-0"



8 STONE VENEER WALL AT GRADE
SCALE: 3" = 1'-0"

VLK

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

CIVIL ENGINEER
MJ Thomas
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REGISTERED ARCHITECT LAUREN V. BROWN 23211 STATE OF TEXAS
05/20/2025

ISSUED: May 20, 2025

REVISIONS

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LB	MO
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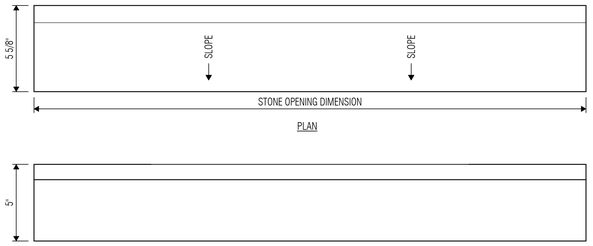
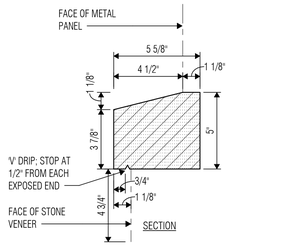
Designer	
Proj. Arch.	
LH	

PROJECT NO.
24-103.00

SHEET TITLE
BUILDING ASSEMBLY DETAILS

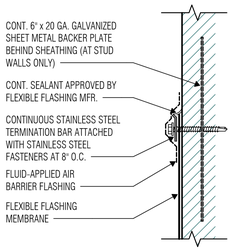
SHEET NO.
A4.31



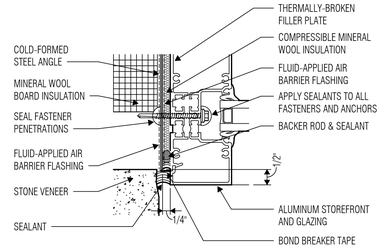


*CS-1.BM.L.30
AT 3" WINDOW SETBACK IN MASONRY VENEER w/ LUGS

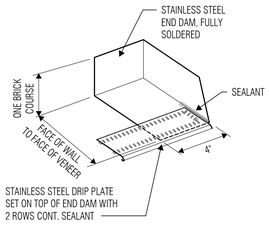
1 CAST STONE SHAPE - CS-1
SCALE: 3" = 1'-0"



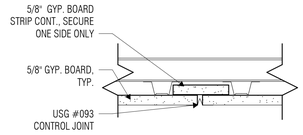
2 TERMINATION BAR DETAIL
GD010
SCALE: 6" = 1'-0"



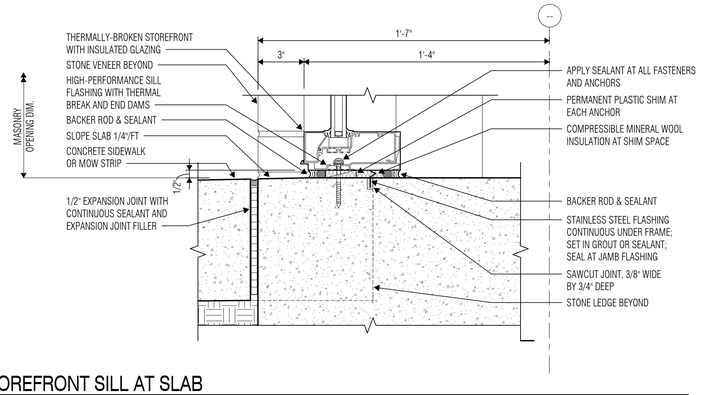
3 DETAIL at STOREFRONT JAMB FLASHING
GD014
SCALE: 6" = 1'-0"



8 STAINLESS STEEL END DAM AT DOOR & WINDOW JAMBS
SCALE: 3" = 1'-0"



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



9 STOREFRONT SILL AT SLAB
SCALE: 3" = 1'-0"

VLK

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Fort Worth, Texas 76104
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REGISTERED ARCHITECT
STEVEN V. BROWN
23211
STATE OF TEXAS
05/20/2025

ISSUED: May 20, 2025

REVISIONS

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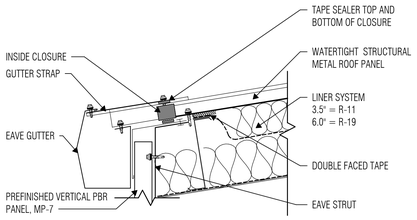
Director	Drawn By
LB	MO
Designer	Quality Control
Designer	
Proj. Arch.	
LH	

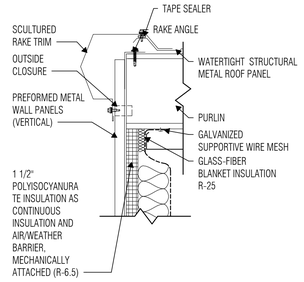
PROJECT NO.
24-103.00

SHEET TITLE
BUILDING ASSEMBLY DETAILS

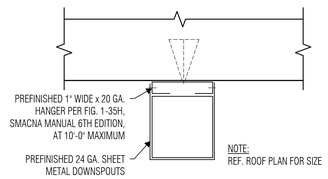
SHEET NO.
A4.33



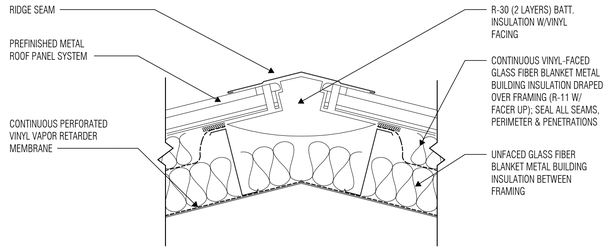
1 GUTTER DETAIL
SCALE: 1 1/2" = 1'-0"



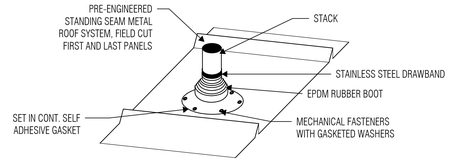
2 RAKE DETAIL
SCALE: 1 1/2" = 1'-0"



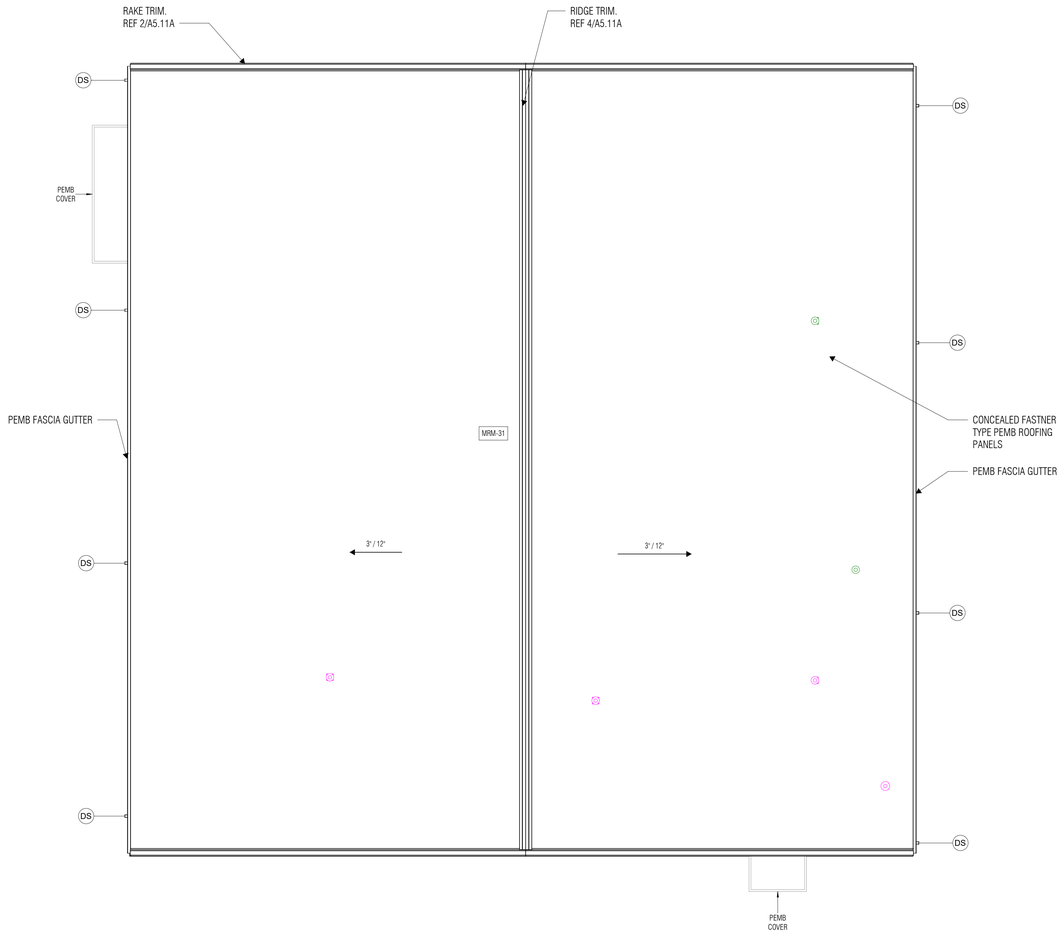
3 RECT DOWNSPOUT PLAN
SCALE: 3" = 1'-0"



4 ROOF DETAIL - RIDGE
SCALE: NTS



5 VENT STACK PREFINISHED METAL ROOF
SCALE: 1 1/2" = 1'-0"



N
PLAN NORTH ≈ TRUE NORTH

7 ROOF PLAN - UNIT A
SCALE: 1/8" = 1'-0"

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
Salas O'Brien
12655 North Central Expressway Suite 720
Dallas, Texas 75243
Main Phone: 972.812.1270
www.salasobrien.com

TECHNOLOGY CONSULTANT
Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER
BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE & OPERATIONS WAREHOUSE

REGISTERED ARCHITECT — KAREN V. BROWN — 23211 — STATE OF TEXAS
05/20/2025

ISSUED: May 20, 2025

REVISIONS

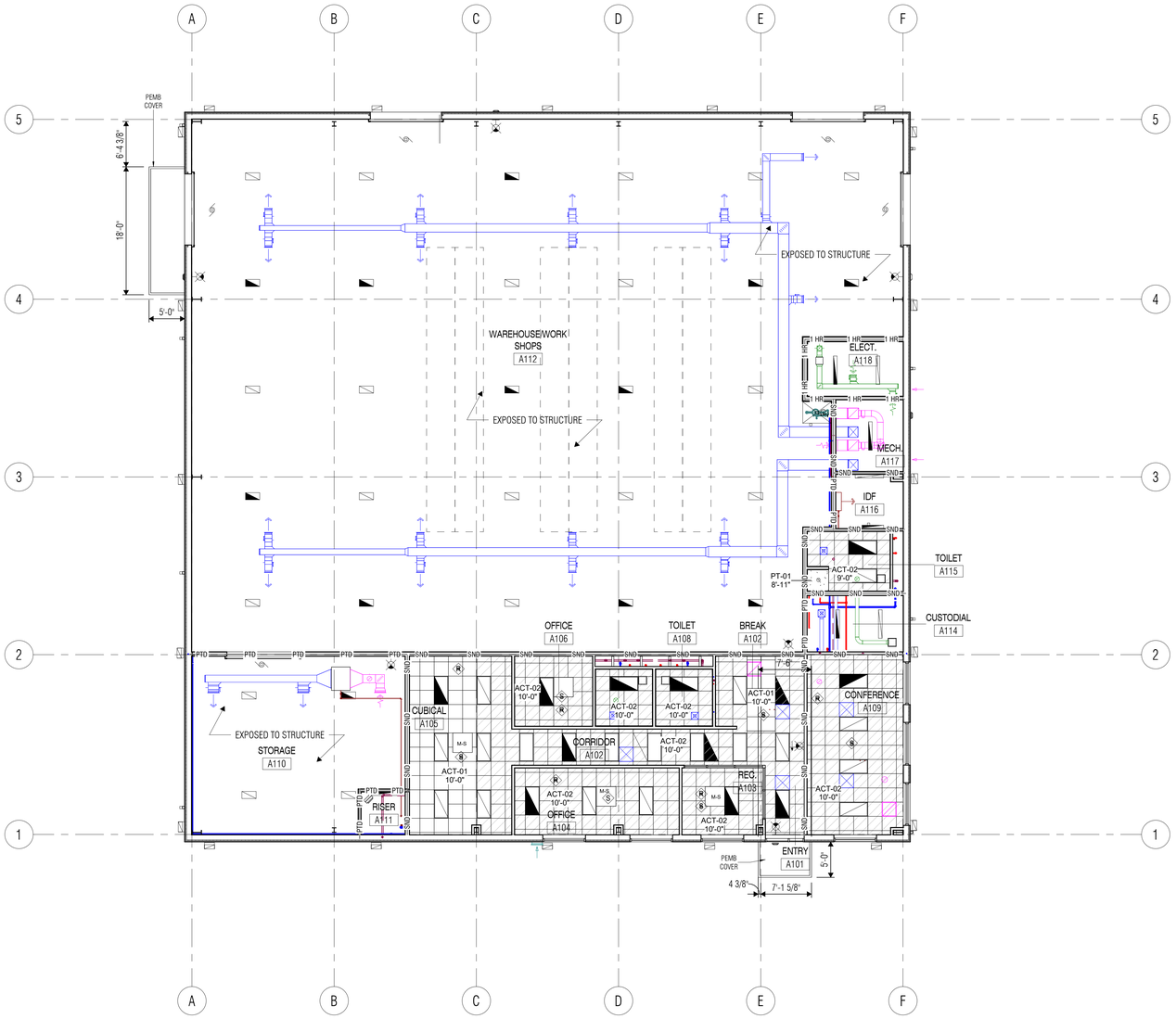
Revision No.	Revision Date

Director	Drawn By
LB	MO
Designer	Quality Control
Designer	
Proj. Arch.	
LH	

PROJECT NO.
24-103.00

SHEET TITLE
ROOF PLAN

SHEET NO.
A5.11



N
PLAN NORTH
N
TRUE NORTH

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

REFLECTED CEILING PLAN NOTES

1. All ceiling heights shall be [9'-1 1/8"] [8'-11 3/4"] [other] A.F.F. unless noted otherwise.
2. Refer to Detail10/A4.33 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 -/----). 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	ACOUSTIC LAY-IN CEILING TILE 24" X 24" W/3-1/2" THICK SOUND BATTS ABOVE
PT-01	5/8" WATERPROOF GYPSUM BOARD CEILING, PAINTED PT-01, U.N.O.
	LIGHT FIXTURES. Refer to Electrical Drawings.
	SUPPLY AND RETURN GRILLES. Shown for location purposes only. Refer to Mechanical Drawings.
M-S	MINI - SPLIT CASSETTE
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
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www.vlkarchitects.com

CIVIL ENGINEER
MJ Thomas
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Designer	Quality Control
Designer	
Proj. Arch.	
LH	

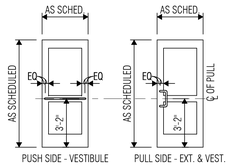
PROJECT NO.
24-103.00

SHEET TITLE
REFLECTED CEILING PLAN

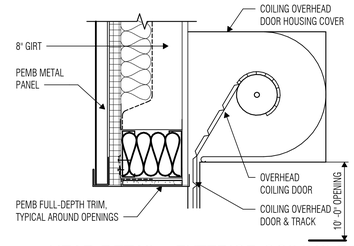
SHEET NO.
A6.11

DOOR SCHEDULE

DOOR	DOOR TYPE	FRAME TYPE	DOOR OPENING WIDTH	DOOR OPENING HEIGHT	DETAIL - REF. A7.11 U.N.O. HEAD	DETAIL - REF. A7.11 U.N.O. JAMB	DETAIL - REF. A7.11 U.N.O. SILL	HDWR SET	KEYED NOTES	REMARKS
A101	E	--	3'-0"	7'-0"	--	3/A4.33	12/A7.21		9, 10	REFER TO STOREFRONT ELEVATION SAB
A102	D	4	3'-0"	7'-0"	13/A7.01	14/A7.01	15/A7.01		10	HARDWARE TO INCLUDE WEATHERSTRIPPING
A103	E	--	3'-0"	7'-0"	10/A7.21	7/A7.21	9/A7.21		--	REFER TO STOREFRONT ELEVATION SAD
A104	C	1	3'-0"	7'-0"	9/A7.01	10/A7.01	15/A7.01		--	
A105	D	4	3'-0"	7'-0"	13/A7.01	14/A7.01	15/A7.01		9, 10	HARDWARE TO INCLUDE WEATHERSTRIPPING
A106	C	1	3'-0"	7'-0"	13/A7.01	14/A7.01	15/A7.01		--	
A107	A	1	3'-0"	7'-0"	13/A7.01	14/A7.01	15/A7.01		--	
A108	A	1	3'-0"	7'-0"	13/A7.01	14/A7.01	15/A7.01		--	
A109	C	1	3'-0"	7'-0"	13/A7.01	14/A7.01	15/A7.01		--	
A110A	D	3	3'-0"	7'-0"	11/A7.01	12/A7.01	15/A7.01		--	
A110B	P2	--	10'-2"	9'-9 3/8"	5/A7.01	6/A7.01	20/A7.01		--	
A111	A	2	4'-0"	7'-0"	17/A7.01	18/A7.01	15/A7.01		--	
A112A	B	1	4'-0"	7'-0"	7/A7.01	8/A7.01	12/A7.21		9, 10	
A112B	P1	--	10'-0"	9'-9 3/8"	3/A7.01	4/A7.01	12/A7.01		--	
A112C	P1	--	10'-0"	9'-9 3/8"	3/A7.01	4/A7.01	12/A7.01		--	
A112D	B	1	3'-0"	7'-0"	7/A7.01	8/A7.01	12/A7.21		9, 10	
A113A	B	1	3'-0"	7'-0"	7/A7.01	8/A7.01	12/A7.21		--	
A113B	P1	--	10'-0"	9'-9 3/8"	5/A7.01	3/A7.01	12/A7.21		--	
A113C	P1	--	10'-0"	9'-9 3/8"	3/A7.01	4/A7.01	12/A7.01		--	
A114	B	4	3'-0"	7'-0"	13/A7.01	14/A7.01	15/A7.01		--	
A115	B	4	3'-0"	7'-0"	13/A7.01	14/A7.01	15/A7.01		--	HARDWARE TO INCLUDE WEATHERSTRIPPING
A116	B	4	3'-0"	7'-0"	13/A7.01	14/A7.01	15/A7.01		9, 10	
A117	B	1	3'-0"	7'-0"	7/A7.01	8/A7.01	12/A7.21		10	
A118	A	3	3'-0"	7'-0"	13/A7.01	14/A7.01	15/A7.01		10	



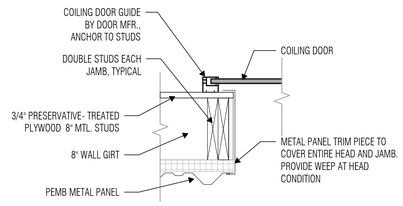
1 PUSH/ PULL HEIGHTS
SCALE: 1/4" = 1'-0"



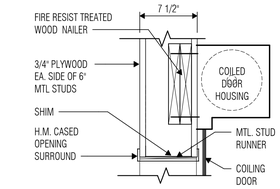
3 HEAD DETAIL - EXTERIOR COILING DOOR
SCALE: 1 1/2" = 1'-0"

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.
11. Refer to Sheet A4.33 for additional typical details



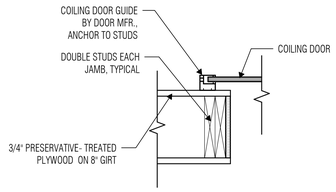
4 JAMB DETAIL - EXTERIOR COILING DOOR
SCALE: 1 1/2" = 1'-0"



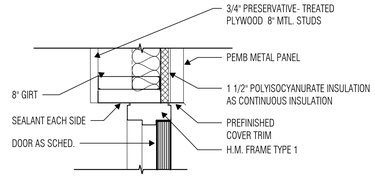
5 HEAD DETAIL COILING DOOR
SCALE: 1 1/2" = 1'-0"

DOOR KEYED NOTES

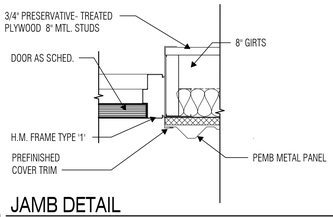
KEY NUMBER	KEYED NOTES
1	CASED OPENING
2	DOUBLE EGRESS DOORS
3	FIRE-RATED WIRED GLASS
4	FIRE-RATED CERAMIC GLASS
5	KEYED REMOVABLE MULLION
6	ELECTROMAGNETIC HOLD-OPEN
7	MANUAL HOLD-OPEN, FLOOR MOUNTED
8	MANUAL HOLD-OPEN, OVERHEAD
9	ACCESS CONTROL / CARD READER
10	DOOR POSITION SWITCH
11	APPLIED SOUND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



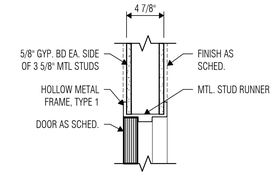
6 JAMB DETAIL - INTERIOR COILING DOOR
SCALE: 1 1/2" = 1'-0"



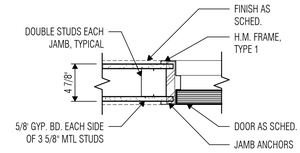
7 HEAD DETAIL
SCALE: 1 1/2" = 1'-0"



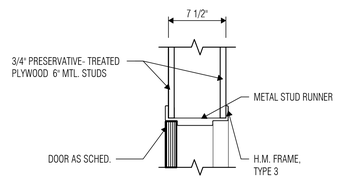
8 JAMB DETAIL
SCALE: 1 1/2" = 1'-0"



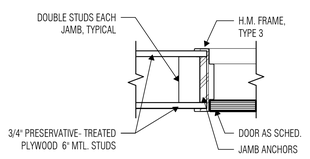
9 HEAD DETAIL - GYP @ 3 5/8" MTL. STUD
SCALE: 1 1/2" = 1'-0"



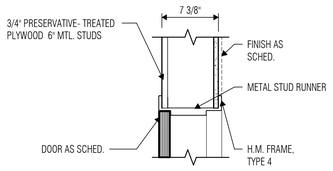
10 JAMB DETAIL - GYP @ 3 5/8" MTL. STUD
SCALE: 1 1/2" = 1'-0"



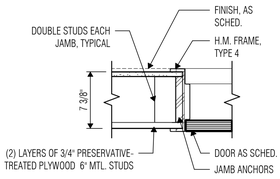
11 HEAD DETAIL - PLY ON BOTH SIDES 6" STUD
SCALE: 1 1/2" = 1'-0"



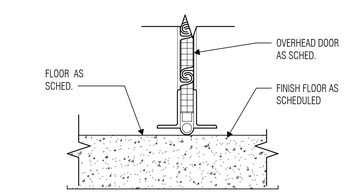
12 JAMB DETAIL - PLY ON BOTH SIDES 6" STUD
SCALE: 1 1/2" = 1'-0"



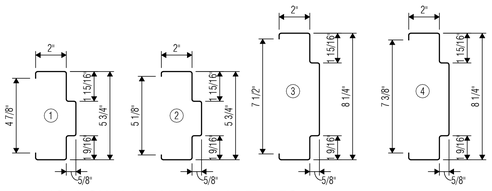
13 HEAD DETAIL - PLYWOOD ON 6" MTL. STUD
SCALE: 1 1/2" = 1'-0"



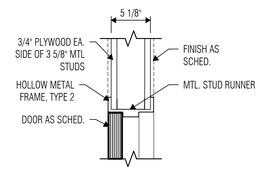
14 JAMB DETAIL - PLYWOOD ON 6" MTL. STUD
SCALE: 1 1/2" = 1'-0"



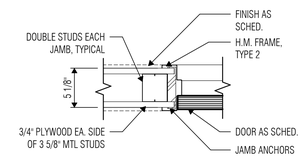
15 SILL DETAIL - CONCRETE
SCALE: 3" = 1'-0"



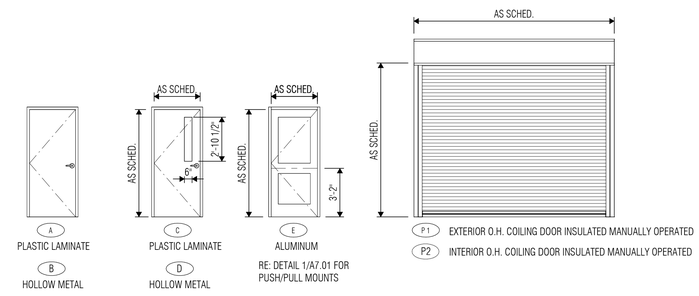
16 HOLLOW METAL FRAME TYPES
SCALE: 3" = 1'-0"



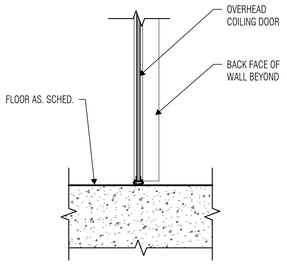
17 HEAD DETAIL - PLYWOOD @ 3 5/8" MTL. STUD
SCALE: 1 1/2" = 1'-0"



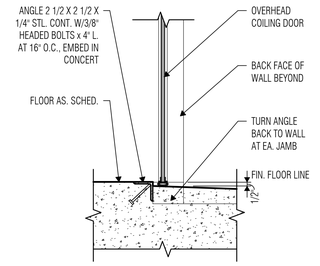
18 JAMB DETAIL - PLYWOOD @ 3 5/8" MTL. STUD
SCALE: 1 1/2" = 1'-0"



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



20 SILL DETAIL O.H. DOOR at INT
SCALE: 1 1/2" = 1'-0"



21 SILL DETAIL O.H. DOOR at EXT. LOADING DOCK
SCALE: 1 1/2" = 1'-0"

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Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER
BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

NEW MAINTENANCE & OPERATIONS WAREHOUSE

LAUREN K. BROWN
93211
REGISTERED ARCHITECT
STATE OF TEXAS
05/20/2025

ISSUED: May 20, 2025

REVISIONS

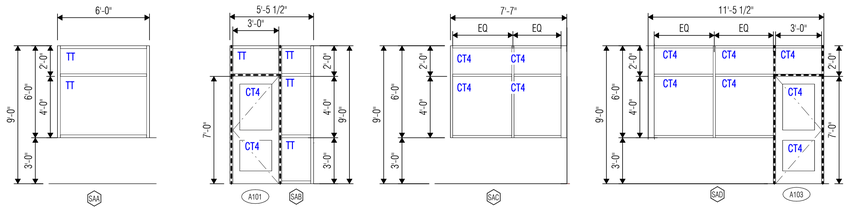
Revision No.	Revision Date

Director LB
Drawn By MO
Designer Designer
Quality Control
Proj. Arch. LH

PROJECT NO.
24-103.00

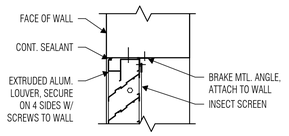
SHEET TITLE
DOOR SCHEDULE

SHEET NO.
A7.01

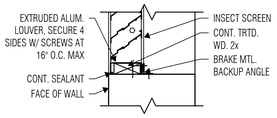


2" x 6" ALUM. STOREFRONT | 2" x 6" ALUM. STOREFRONT | 1 3/4" x 4 1/2" ALUM. STOREFRONT | 1 3/4" x 4 1/2" ALUM. STOREFRONT

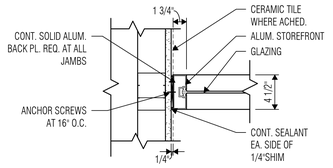
1 ALUMINUM STOREFRONT ELEVATIONS
SCALE: 1/4" = 1'-0"



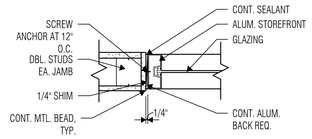
4 HEAD DETAIL
SCALE: 1 1/2" = 1'-0"



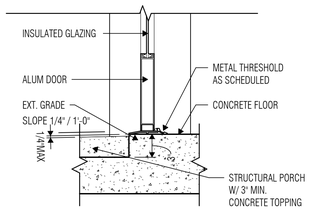
3 SILL DETAIL
SCALE: 1 1/2" = 1'-0"



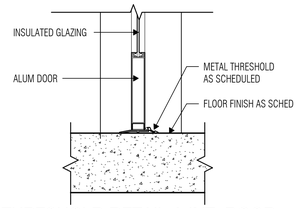
6 JAMB DETAIL INTERIOR
SCALE: 1 1/2" = 1'-0"



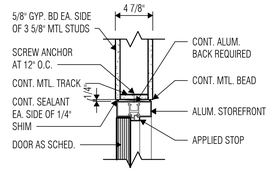
7 JAMB DETAIL INTERIOR
SCALE: 1 1/2" = 1'-0"



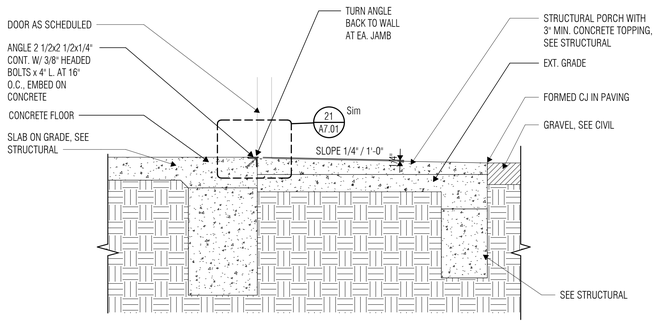
8 THRESHOLD DETAIL A EXT. DOOR
SCALE: 1 1/2" = 1'-0"



9 THRESHOLD DETAIL A INT. DOOR
SCALE: 1 1/2" = 1'-0"



10 HEAD DETAIL - INTERIOR DOOR
SCALE: 1 1/2" = 1'-0"



12 STRUCTURAL PORCH WITH CONCRETE TOPPING
SCALE: 3/4" = 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 1/A7.01 for Typical Push/Pull Mounting Heights Detail for aluminum/glass doors
6. Refer to Sheet A4.33 for additional typical details

GLASS TYPE LEGEND

TT	TINTED, TEMPERED, 1" GLASS
CT4	CLEAR, TEMPERED, 1/4" 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
VLK
1320 Hemphill Street, Suite 400
Fort Worth, Texas 76104
Main Phone: 817.633.1600
www.vlkarchitects.com

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
Salas O'Brien
12655 North Central Expressway Suite 720
Dallas, Texas 75243
Main Phone: 972.812.1270
www.salasobrien.com

TECHNOLOGY CONSULTANT
Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
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REGISTERED ARCHITECT — JAMES V. BROWN — 23211 — STATE OF TEXAS

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LB	MO
Designer	Quality Control
Designer	
Proj. Arch.	
LH	

PROJECT NO.
24-103.00

SHEET TITLE
GLAZING ASSEMBLY ELEVATIONS

SHEET NO.
A7.21

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	
.EXTERIOR FINISH							
CS-1	Cast Stone	04 72 00	Advanced Architectural Stone	Smooth Texture	Natural Limestone	5" x 5 5/8"*	*Refer 1/A4.33
MG	Metal Gutter	13 34 19	Chief Buildings	Standard Finish	FS Fieldstone		
MRP	Metal Roof Panel	13 34 19	Chief Buildings	Standard Finish	FS Fieldstone		
MWP	Metal - Wall Panel	13 34 19	Chief Buildings	Standard Finish	FS Fieldstone		
SF	Storefront	08 41 13	As Specified	Standard Finish	Clear Anodized		
ST	Stone Veneer	04 43 00	Acme, Brookstone	Natural Stone, Limestone	Cavern Limestone	Varies	
.FLOOR FINISH							
CO	Concrete - Sealed	03 30 00	As Specified	As Specified	---		
BASE FINISH							
RB	Rubber Base	09 65 00	Roppe	Pinnacle - Coved	193 Black Brown	4" high roll	At all gypsum board and FRP partitions
CEILING FINISH							
ACT	Acoustic Ceiling Tile (24x24) with Sound Batts Above	09 51 00	As Specified				
EXP	Exposed Structure - Painted	09 91 00	As Specified	As Specified	Paint PT-01		
GB	Gypsum Wall Board	09 21 16	As Specified	As Specified	Paint PT-01		
PAINT FINISH							
PT-01	Paint - Typical	09 91 00	Sherwin Williams	As Specified	SW7653 Silverpointe (239-C1)		
PT-02	Paint - Hollow Metal	09 91 00	Sherwin Williams	As Specified	SW7069 Iron Ore (251-C7)		Hollow Metal doors and frames
SURFACE FINISH							
CG-1	Corner Guard	10 26 13	As Specified	90 Degree	Stainless Steel	1/2" Wide Legs	Full height, top of base to ceiling. At storefront, run CG from top of base to storefront sill
HPL	Plastic Laminate - HPL	06 40 00/ 12 32 16	Formica	HPL, -58 Matte Texture	5883-58 Pecan Woodline		Cabinets
SLD-01	Solid Surface - Window Sill	06 40 00	Corian	Concrete Series	Carbon Concrete	1/2" Thick	Window Sills
SLD-02	Solid Surface - Countertop	06 40 00	Corian	Aggregate Series	Carbon Aggregate	1/2" Thick	Countertop and Backsplash, Miter outside corners
TR-01	Solid Surface - Threshold	06 40 00	Grifform Industries	TT2	Corian, Carbon Concrete	1/2" Thick	Toilet Door Threshold, Typical
WALL FINISH							
FRP	Sanitary Wall Panel (FRP)	09 72 21	Marlite	Pebbled Texture	P151 Light Grey		
PLYWD	Plywood Panel - Marine-Grade	06 10 00	As Specified			3/4" Thick	Butt joints, Sand smooth exposed edges

ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL	CEILING FINISH	REMARKS
A101	ENTRY	CO	RB	PT-01	ACT	
A102	BREAK	CO	RB	PT-01	ACT	
A102	CORRIDOR	CO	RB	PT-01	ACT	
A103	REC.	CO	RB	PT-01	ACT	
A104	OFFICE	CO	RB	PT-01	ACT	
A105	OFFICE	CO	RB	PT-01	ACT	
A105	CUBICAL	CO	RB	PT-01	ACT	
A106	OFFICE	CO	RB	PT-01	ACT	
A107	TOILET	CO	RB	FRP	ACT	
A108	TOILET	CO	RB	FRP	ACT	
A109	CONFERENCE	CO	RB	PT-01	ACT	
A110	STORAGE	CO	---	PLYWD	EXP	
A111	RISER	CO	---	PLYWD	EXP	
A112	WAREHOUSE/WORK SHOPS	CO	RB/ ---	FRP/ PLYWD	EXP	RB & FRP at Shower / Sink Alcove - Refer 4/A2.31
A114	CUSTODIAL	CO	RB	FRP/ PT-01	ACT	FRP at Sink - Refer 2/A2.30
A115	TOILET	CO	RB	FRP	ACT/ PT-01	
A116	IDF	CO	---	PLYWD	EXP	
A117	MECH.	CO	---	PLYWD	EXP	
A118	ELECT.	CO	---	PLYWD	EXP	

FINISH SCHEDULE NOTES

A. General Finish Notes
   1. Any finish conflict between finish schedules and finish floor plans to be brought to the architect's attention for resolution.
   2. Expansion joints shall be continuous through all finish materials.

B. Interior Surfaces
   1. Typical Casework/Millwork cabinet body, doors, and drawer fronts shall be HPL, unless noted otherwise.
   2. Provide RB base at all casework/millwork
   3. Countertops shall be SLD-02.
   4. Window Sills shall be SLD-01.
   5. Electrical / Data Outlets and Switches shall be gray devices with stainless steel cover plate.

C. Ceiling Finishes
   1. Refer to Reflected Ceiling Plans for scheduled finish.
   2. Except as noted, at ceilings with exposed structure, all exposed elements shall be painted PT-01, including mechanical ductwork, electrical, piping, conduit, J-boxes, etc. All elements shall be run and oriented orthogonally to the architecture.
   3. All interior gyp. bd. ceilings to be painted PT-01, unless noted otherwise.
   4. Provide sound batts continuous over lay-in ceiling tiles and light fixtures.

D. Floor Finishes
   1. All toilets and other areas capable of water mitigation shall have a 2" x ½" solid surface threshold with double bevel edge. The thresholds shall be held in place with thin set.
   2. Hold wall finish, including plywood, FRP, and gyp bd, off foundation 1/4" - 3/8". Provide sealant between flooring and wall finish.

E. Base Finishes
   1. Provide RB rubber base at all gypsum board and FPR.

F. Wall Finishes
   1. Paint all exposed metal structure, as specified.

G. Paint Information:
   1. Interior Paint
      a. All interior gypsum board shall be painted PT-01, unless noted otherwise.
   2. Hollow Metal Doors and Windows:
      a. Hollow metal doors and frames to be painted PT-02, unless noted otherwise
   3. Interior Architectural Metal Elements:
      a. All exposed metal shall be painted PT-01, unless noted otherwise.

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
Salas O'Brien
12655 North Central Expressway Suite 720
Dallas, Texas 75243
Main Phone: 972.812.1270
www.salasobrien.com

TECHNOLOGY CONSULTANT
Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
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Fort Worth, Texas 76108
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Designer Designer	Quality Control
Proj. Arch. LH	

PROJECT NO.
24-103.00

SHEET TITLE
MATERIAL FINISH SCHEDULES

SHEET NO.
A9.01

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 TABLE 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 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 1705.8: CAST-IN-PLACE DEEP FOUNDATIONS

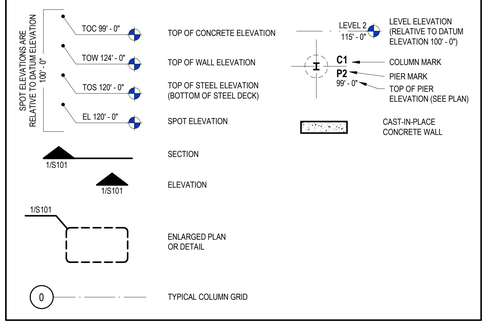
CHECK IF REQD	MINIMUM VERIFICATIONS AND INSPECTIONS	FREQUENCY	REFERENCED STANDARD
☒	1. Inspect drilling operations and maintain complete and accurate records for each element.	CONTINUOUS	IBC Table 1705.8
☒	2. Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), 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 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.

SYMBOL LEGEND



STANDARD ABBREVIATIONS

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	KIFT	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	PEN	Penetration
CONT	Continuous	PJP	Partial Joint Penetration
COORD	Coordinate	PI	Plasticity Index
CTR	Center	PIL	Pilaster
CW	Curtain Wall	PL	Plate
db	Bar Diameter(s)	PNL	Panel
DBA	Deformed Bar Anchor	PSF	Pounds Per Square Foot
DBL	Double	PSI	Pounds Per Square Inch
DEG	Degree(s)	PT	Point or Pressure Treated
DET	Detail		
DIA	Diameter	R	Radius
DIM	Dimension	RECT	Rectangle(ular)
DWG	Drawing	REF	Refer (to)
DWL	Dowel	REINF	Reinforcing
EA	Each	REQD	Required
EF	Each Face	RT	Right
EJ	Expansion Joint	RTU	Rooftop Unit
EL	Elevation	SC	Slip-Critical
ELEV	Elevator	SCHED	Schedule
ENGR	Engineer	SECT	Section
EOD	Edge of Deck	SHT	Sheet
EOS	Edge of Slab	SIM	Similar
EQ	Equal	SOG	Slab on Grade
EQUIP	Equipment	SOV	Slab on Void Cartons
EW	Each Way	SPA	Space(ing)
EXP BT	Expansion Bolt	SPEC	Specifications
EXIST	Existing	SQ	Square
EXT	Exterior	SSH	Short-Slotted Hole(s)
F	Force (Axial)	ST	Stirrup(s)
FABR	Fabricator	STD	Standard
FDN	Foundation	STIF	Stiffener
Fe	Force (Effective)	STL	Steel
FIN	Finish	STRUCT	Structure(al)
FIN FLR, FF	Finish Floor	SUPPT	Support
FLR	Floor	SYM	Symmetrical
FRT	Fire Retardant Treated	T	Top
FS	Far Side	T&B	Top and Bottom
FTG	Footing	TCX	Top Chord Extension
FV	Field Verify	TEMP	Temperature
GA	Gauge, Gage	TOC	Top of Concrete
GALV	Galvanize(ing)	TOF	Top of Footing
GC	General Contractor	TOJ	Top of Joist
GN	General Notes	TOP	Top of Pier
GR	Grade	TOPCC	Top of Precast Concrete
GR BM	Grade Beam	TOS	Top of Steel
HORIZ, H	Horizontal	TOW	Top of Wall
HSA	Headed Stud Anchor	TYP	Typical
HSS	Hollow Structural Section	ULT	Ultimate (force)
HT	Height	UNO	Unless Noted Otherwise
ICF	Insulating Concrete Form	V	Shear
IF	Inside Face	VERT, V	Vertical
INFO	Information	WD	Wood
INT	Interior	WF	Wide Flange
INTERM	Intermediate	WP	Working or Work Point

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 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.

1.1.3 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.

1.1.4 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

1.1.5 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.

1.1.6 Contractor to verify dimensional location and depth of slab recesses and offsets with Architectural Drawings.

1.1.7 Contractor to verify size, weights, location, and details of structurally supported equipment and associated openings prior to fabrication of the supporting structure.

1.1.8 Contractor to verify size and location of floor and roof penetrations shown on structural drawings with other disciplines.

1.1.9 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.

1.1.10 Do not scale plans, details and sections for quantity, length or fit of materials.

REFERENCE ELEVATIONS

1.1.11 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 743.50. Contractor to verify against Civil grading plans and report discrepancies to Architect for resolution prior to construction.

TEMPORARY BRACING

1.1.12 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.

1.1.13 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 - 2018 International Building Code

1.2.2 Structural Concrete Code - American Concrete Institute (ACI) 318

1.2.3 Structural Steel Code - American Institute of Steel Construction (AISC) 360 (and 341 where applicable)

SECTION 1.3- DESIGN CRITERIA

1.3.1 Structure Risk Category II

1.3.2 Live Loads

Occupancy or Use	Uniform (psf)
Roof, Typical	20

1.3.3 Roof Snow Loads

Ground Snow Load, Pg	5	psf
Flat Roof Snow Load, Pf	3.5	psf
Snow Exposure Factor, Ce	1.0	
Snow Importance Factor, Is	1.0	
Snow Thermal Factor, Ct	1.0	
Roof Slope Factor, Cs	1.0	

1.3.4 Superimposed Dead Loads

PEMB Roof Collateral	5	psf
Typical Attached Canopy	20	psf

Notes:
Superimposed dead loads do not include self-weight of members shown in structural drawings.

1.3.5 Wind Loads

Ultimate design wind speed, Vult	106	mph
Allowable design wind speed, Vasd	83	mph
Serviceability wind speed	75	mph
Exposure Classification	C	
Wind Importance Factor	1.0	
Internal Pressure Coefficient	0.18	
Windborne Debris Region	No	

1.3.6 Seismic Loads

Seismic Importance Factor, Ie	1.00
Mapped Spectral Acceleration, Ss	0.120
Mapped Spectral Acceleration, S1	0.055
Site Class	C
Design Spectral Acceleration, Sds	0.081
Design Spectral Acceleration, Sd1	0.051
Seismic Design Category	A
Analysis Procedure Used:	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 Heavy Vehicle Loads
Basis of design: TX35M Forklift Model
Maximum Axle Load: 9,433 lbf

1.3.8 Assumed weights and locations of structurally supported equipment are indicated on the framing plans.

STRUCTURAL DEFLECTIONS

1.3.9 Live Load - Floor and roof systems are designed to limit vertical deflections due to live loads to (Clear Span)/360 or less. 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.

1.3.10 Dead Load - Floor and roof systems are designed to limit vertical deflections due to total loads to (Clear Span)/240 or less. 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 recommendations given in the following:

Report Author	: Terracon
Report Number	: 94255043
Date of Report	: March 12, 2025

2.1.2 Refer to the Geotechnical Report for subgrade conditions that may be encountered during foundation installation and site preparation.

SUBGRADE CRITERIA UNDER BUILDING SLABS

2.1.3 Refer to the Geotechnical Report for soil improvement to limit potential movement under building slabs. Design of soil-supported building slabs is based on vertical soil movement as follows:
Limit movement potential to 1 inch by approved method described within Geotechnical Report.

2.1.4 Coordinate under-floor drainage and waterproofing requirements with architectural and plumbing drawings and recommendations of the geotechnical report.

EARTH RETENTION SYSTEMS

2.1.5 Design of earth retention systems is not included in Structural Documents. Refer to Geotechnical Report for requirements.

SECTION 2.2- STRAIGHT SHAFT PIERS

2.2.1 Design Criteria:

Bearing Stratum	: Gray Limestone
Top of Stratum Elevation (for Bidding Purposes Only)	: 723.00
Allowable End Bearing	: 40,000 psf
Positive Side Friction	: 6,500 psf
Upheaval Side Friction	: 1,800 psf
Upheaval Design Depth	: 10 ft
Negative Side Friction	: 4,900 psf

2.2.2 Pier depths indicated are for bidding purposes only. Actual pier depths may vary depending on depth to bearing stratum.

2.2.3 Remove overpour at tops of piers ("mushrooms") to the required 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	12"
Pier Caps	12"

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 and slabs shall be spliced at midspan between supports, unless noted otherwise.

3.2.3 Bottom bars in beams and slabs 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, Pilasters	1 1/2" top, 2" sides, 3" bottom

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.

SECTION 3.3- CONCRETE MIX DESIGNS

3.3.1 Concrete Mix Schedule:
a. Concrete type is NWC unless noted otherwise. NWC refers to normalweight concrete having 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	3500	1"	0.55	4.5%	F1	---
Slab on Grade (Interior)	3500	1"	---	---	--	---
Slab on Voids (Exterior)	4500	1"	0.45	6%	F2	---

SECTION 3.4- CONCRETE SLABS

3.4.1 Slab Placed on Grade – See typical details.

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

3.5.8 Perform anchor installation in accordance with manufacturer's printed installation instructions (MPII).

3.5.9 Protect threads from damage during anchor installation.

3.5.10 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.

3.5.11 Adhesive anchors installed horizontally or upwardly inclined shall be qualified in accordance with ACI 355.4 requirements for sensitivity to installation direction.

SECTION 5 - STRUCTURAL STEEL

SECTION 5.1- STRUCTURAL FRAME

5.1.1 Structural Steel Properties:
Anchor Rods ASTM F1554 Gr. 55

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/100
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
S2.01	FOUNDATION PLAN
S3.01	CONCRETE DETAILS

FADED BACKGROUNDS OF OTHER 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 & SPECIFICATIONS FOR REQUIRMENTS OF OTHER DISCIPLINES.

L.A. FUESS PARTNERS, INC.
Structural Engineers
3333 Lee Parkway, Suite 300 • Dallas, TX 75219
214.871.7200 • www.lafp.com
LAFP PROJ. NO. 25020 FIRM REG. NO. F-537

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
RWB Consulting Engineers
12222 Merit Drive, Suite 400
Dallas, Texas 75251
Main Phone: 972.788.4222
www.rwb.net

TECHNOLOGY CONSULTANT
Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER
BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

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WHITE SETTLEMENT, TX

NEW MAINTENANCE & OPERATIONS WAREHOUSE

5-19-2025

ISSUED: 05/19/2025

REVISIONS

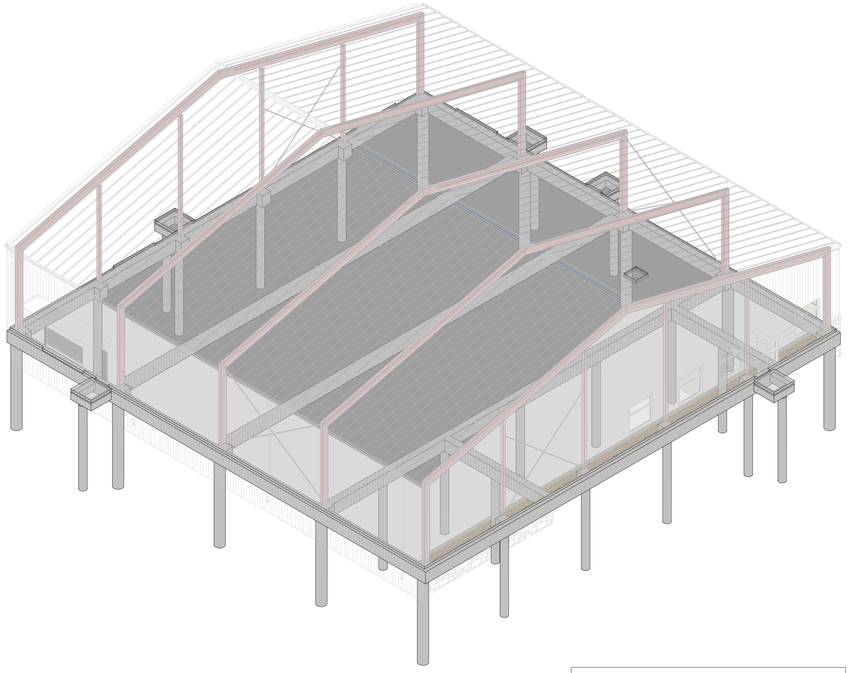
Revision No.	Revision Date

Director	Drawn By
Approver	Author
Designer	Quality Control
Designer	
Proj. Arch.	
Checker	

PROJECT NO.

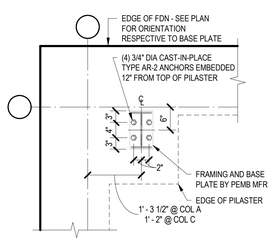
SHEET TITLE
STRUCTURAL GENERAL NOTES

SHEET NO.
S1.01

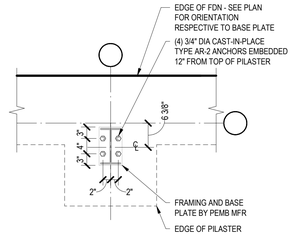


2 AXONOMETRIC VIEW - UNIT A OVERALL

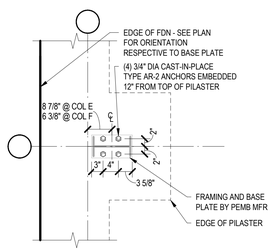
3D VIEWS INCLUDED IN THE STRUCTURAL DRAWINGS ARE PROVIDED FOR REFERENCE ONLY AND DO NOT SUPERSEDE THE INFORMATION PRESENTED IN THE 2D PLANS AND DETAILS. PEMB COMPONENTS ARE PROVIDED FOR REFERENCE ONLY AND SHOULD BE VERIFIED WITH FINAL PEMB DRAWINGS.



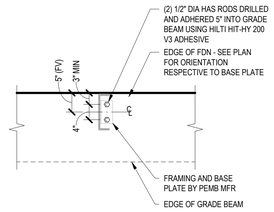
PEMB COLUMNS A & C



PEMB COLUMNS B & D



PEMB COLUMNS E & F

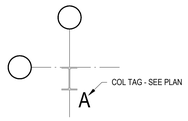


PEMB COLUMNS G - L

SEE PEMB DRAWINGS FOR LOCATION ON PLAN - NOT SHOWN ON 1/S2.01

PRE-ENGINEERED METAL BUILDING ANCHOR BOLT NOTES:

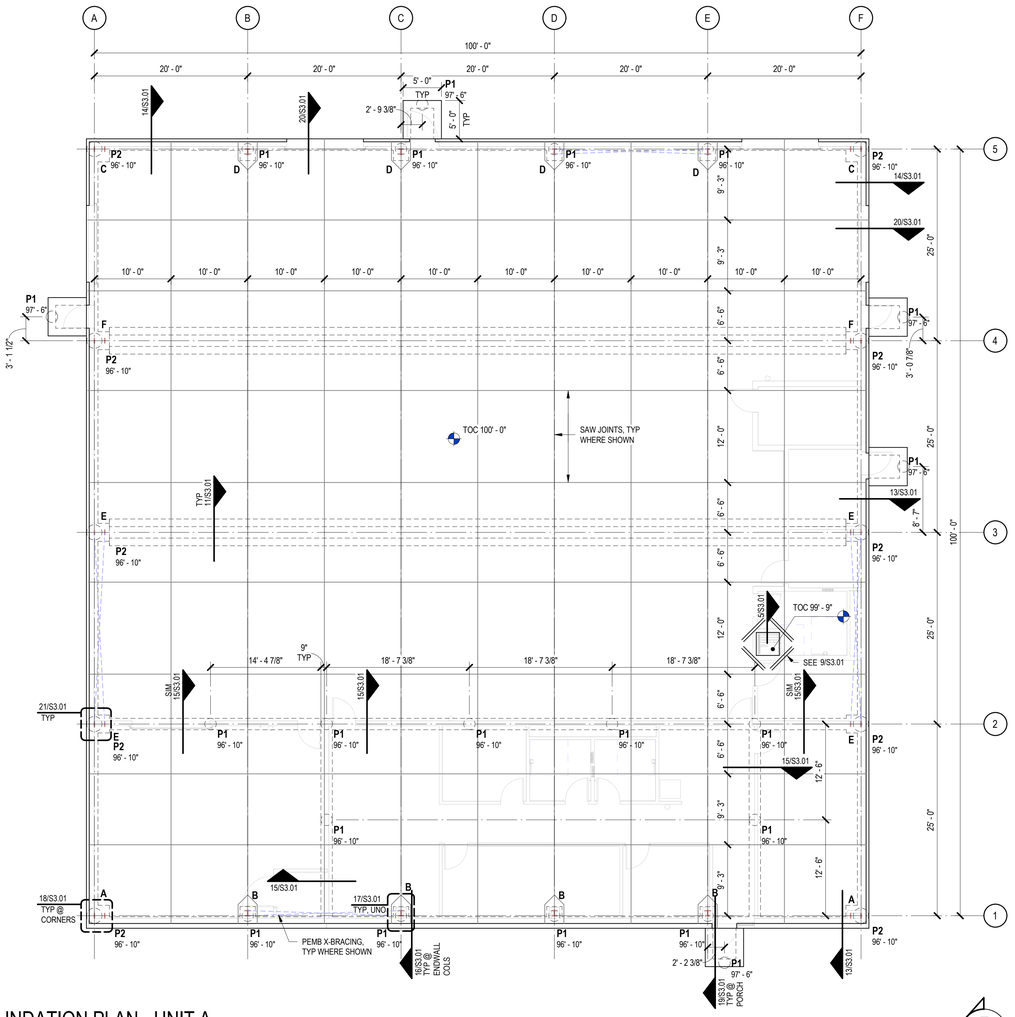
1. PROVIDED ANCHOR EMBEDMENT LENGTHS ARE MEASURED FROM TOP OF GRADE BEAMS AND PILASTERS WHERE TOP OF CONCRETE ELEVATION = 99' - 2". ADD 8" TO PROVIDED ANCHOR EMBEDMENT LENGTHS IF MEASURING FROM TOP OF FINISHED SLAB (ELEVATION = 100' - 0"). SEE 8/S3.01 FOR ADDITIONAL ANCHOR ROD INFORMATION.
2. BASED ON PRELIMINARY PEMB MANUFACTURER (CHIEF BUILDINGS) DRAWINGS DATED 04/09/2025
3. PEMB MANUFACTURER AND GC TO VERIFY ANCHOR BOLT PATTERNS PRIOR TO COLUMN BASE PLATE FABRICATION AND ANCHOR BOLT INSTALLATION.



PLAN VIEW

3 PRE-ENGINEERED METAL BUILDING - COLUMN ANCHOR BOLTS TYPICAL DETAIL

NO SCALE



1 FOUNDATION PLAN - UNIT A

1/8" = 1'-0"

FOUNDATION AND GROUND FLOOR FRAMING PLAN NOTES

1. SEE CIVIL AND ARCHITECTURAL DRAWINGS FOR LOCATION OF NEW BUILDING ON SITE PLAN.
2. TOP OF CONCRETE INDICATED ON PLAN OR SECTIONS IS RELATIVE TO DATUM ELEVATION 100'-0" (LEVEL 1) UNLESS NOTED OTHERWISE. SEE GENERAL NOTES FOR MEAN SEA LEVEL ELEVATION.
3. PIER MARKS ARE GIVEN ON PLAN WITH TOP OF PIER ELEVATION NOTED BELOW MARKS. SEE PIER SCHEDULE FOR ADDITIONAL INFORMATION.
4. TYPICAL FLOOR SLAB IS A 6"THICK SLAB-ON-GRADE. REFER TO GENERAL NOTES AND TYPICAL DETAILS FOR REINFORCING AND ADDITIONAL SLAB INFORMATION.
5. MAINTAIN CONSTANT SLAB THICKNESSES WHERE SLOPES TO DRAIN EXIST. SEE ARCHITECTURAL PLANS FOR LOCATIONS OF SLOPES.
6. REFER TO PROJECT SPECIFICATIONS FOR BUILDING PAD PREPARATION REQUIREMENTS.
7. IF NEW FOUNDATION ELEMENTS ARE FOUND TO INTERFERE WITH EXISTING AND ACTIVE UTILITIES, NOTIFY AOR AND EOR IMMEDIATELY FOR REVIEW.
8. SUBMIT FINAL, SEALED, PRE-ENGINEERED METAL BUILDING DRAWINGS AND CALCULATIONS (INCLUDING FOUNDATION REACTIONS) TO AOR AND EOR PRIOR TO CONSTRUCTION FOR VERFICATION OF FOUNDATION DESIGN.
9. SHEET INDEX:
   GENERAL NOTES -S1.01
   TYPICAL CONCRETE DETAILS -S3.01

VLK

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

CIVIL ENGINEER
MJ Thomas
4700 Bryant Irvin Ct, Suite 204
Fort Worth, Texas 76107
Main Phone: 817.732.9839
www.mjthomaseng.com

STRUCTURAL ENGINEER
L.A. Fuess Partners
7300 State Highway 121 SB, Suite 670
McKinney, Texas 75070
Main Phone: 214.871.7010
www.lafp.com

M.E.P. ENGINEER
RWB Consulting Engineers
12222 Merit Drive, Suite 400
Dallas, Texas 75251
Main Phone: 972.788.4222
www.rwb.net

TECHNOLOGY CONSULTANT
Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

CONSTRUCTION MANAGER
BTC Builds
1450 N. Jim Wright Freeway
Fort Worth, Texas 76108
Main Phone: 817.467.4981
www.btcbuilders.com

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3-19-2025

ISSUED: 05/19/2025

REVISIONS

Revision No.	Revision Date

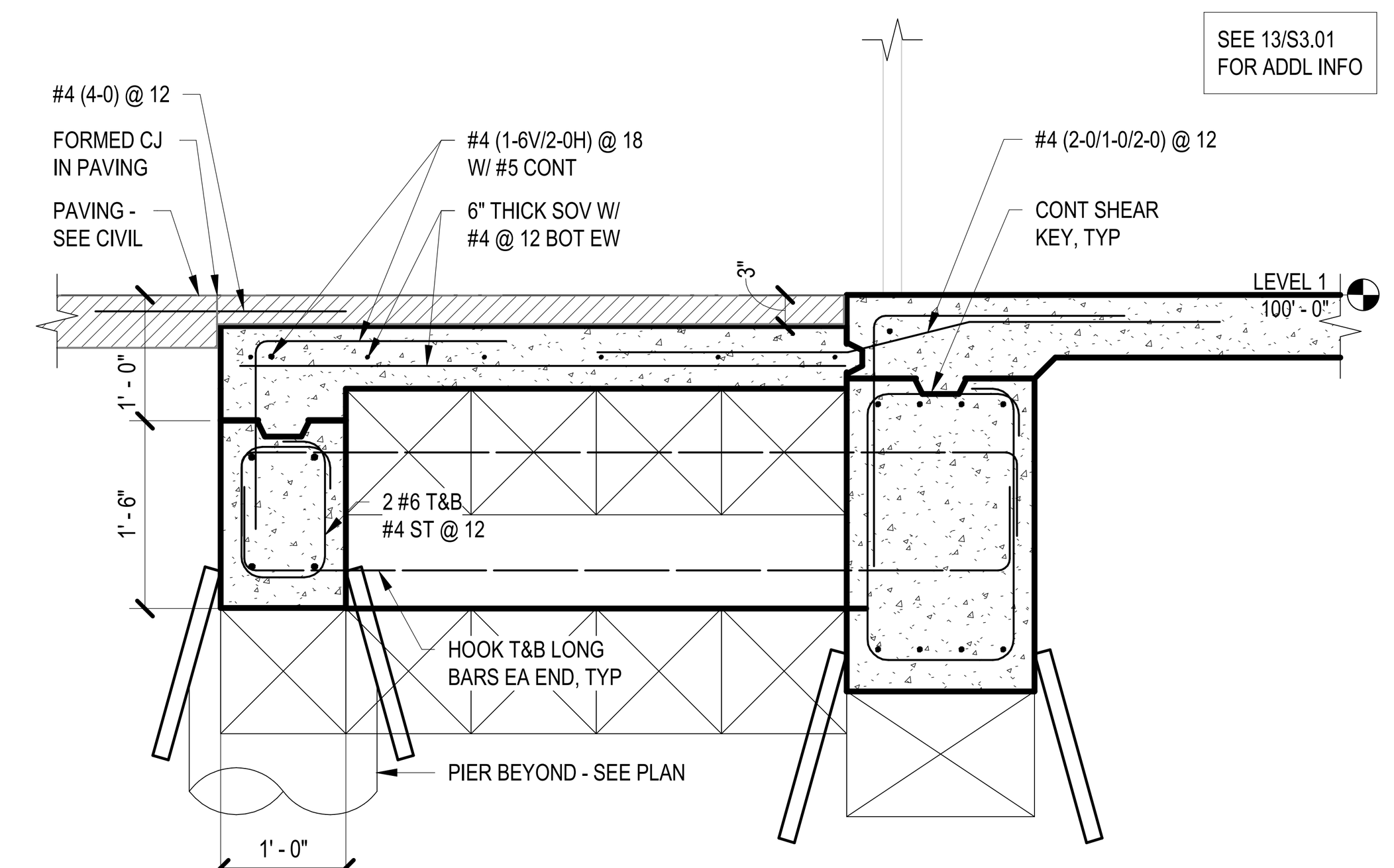
Director	Drawn By
Approver	Author
Designer	Quality Control
Designer	
Proj. Arch.	
Checker	

PROJECT NO.

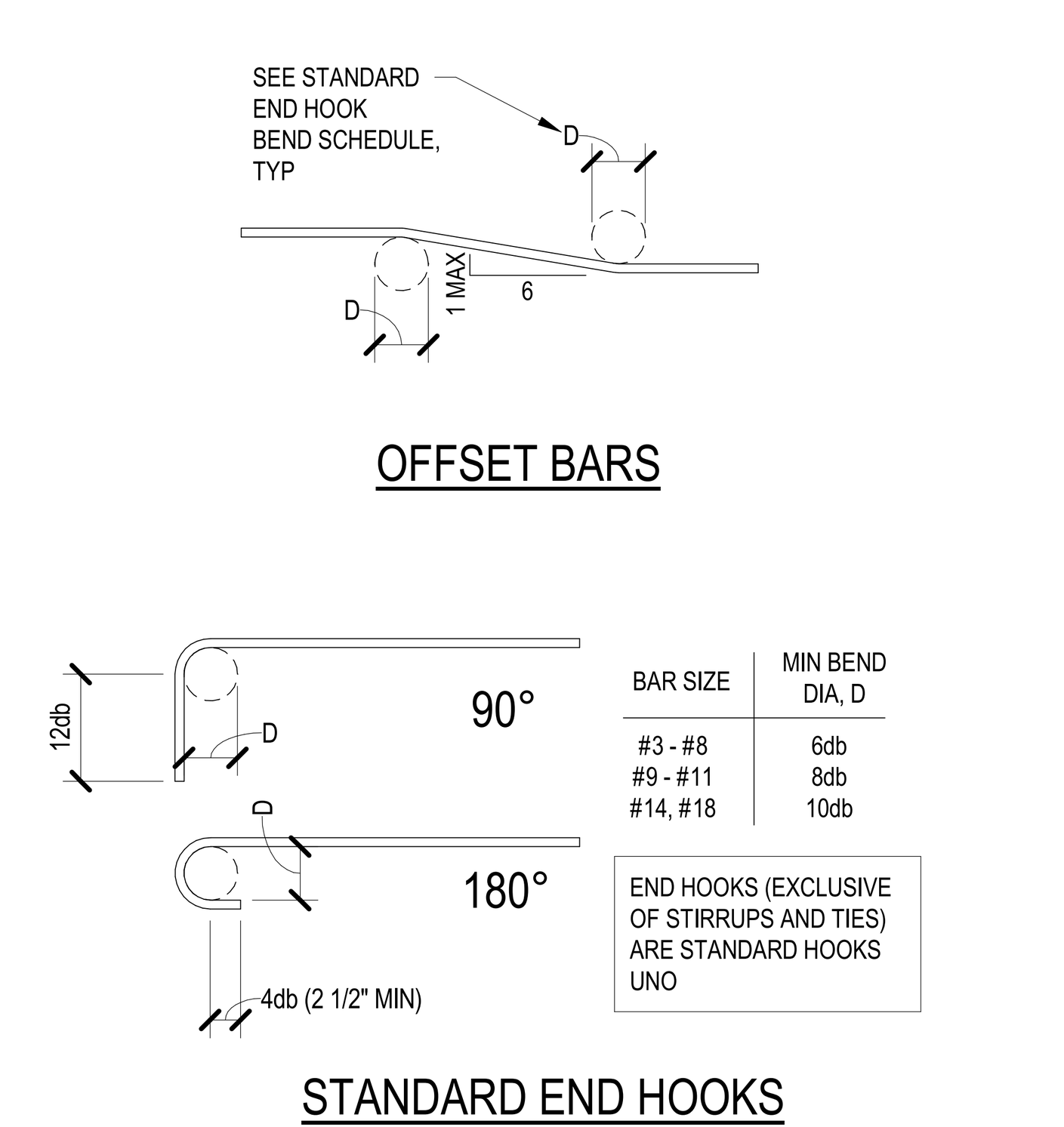
SHEET TITLE
FOUNDATION PLAN

SHEET NO.
S2.01

L.A. FUESS PARTNERS, INC.
Structural Engineers
3333 Lee Parkway, Suite 300 • Dallas, TX 75219
214.871.7010 • www.lafp.com
LAFP PROJ. NO. 25020 FIRM REG. NO. F-537

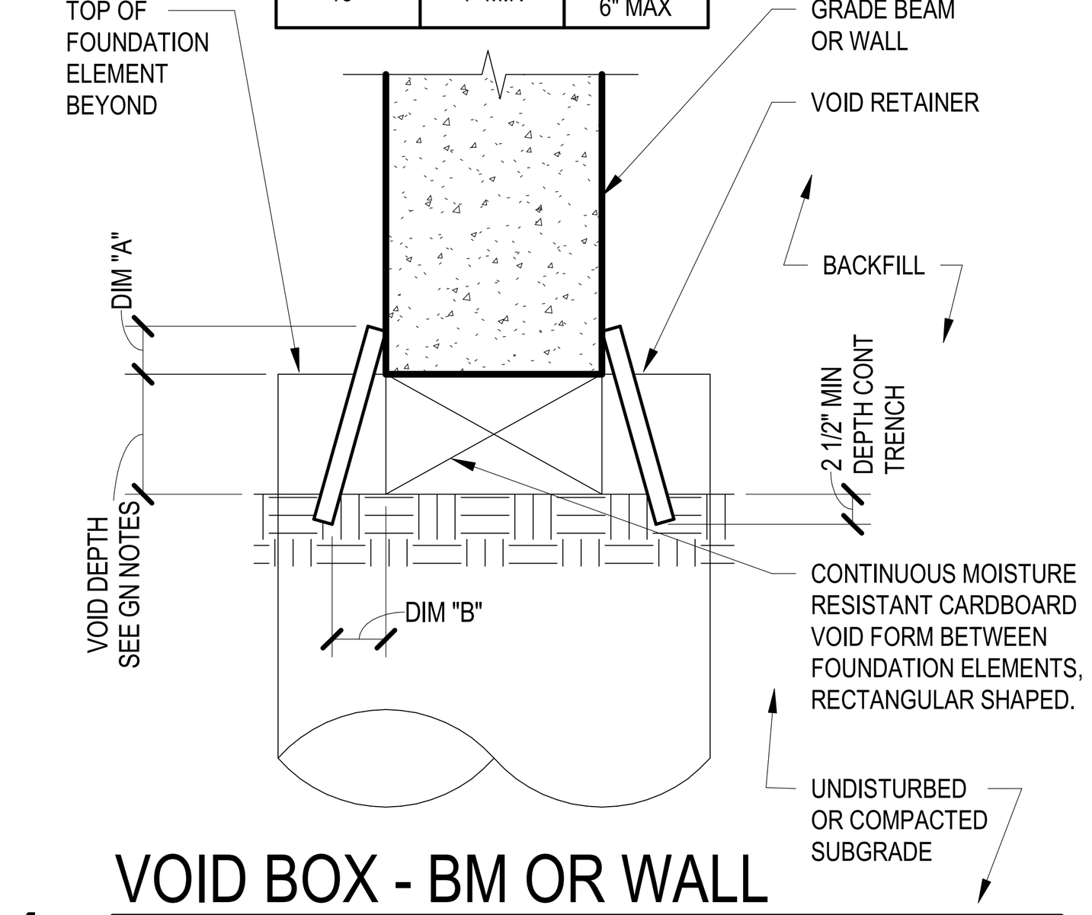


19
3/4" = 1'-0"



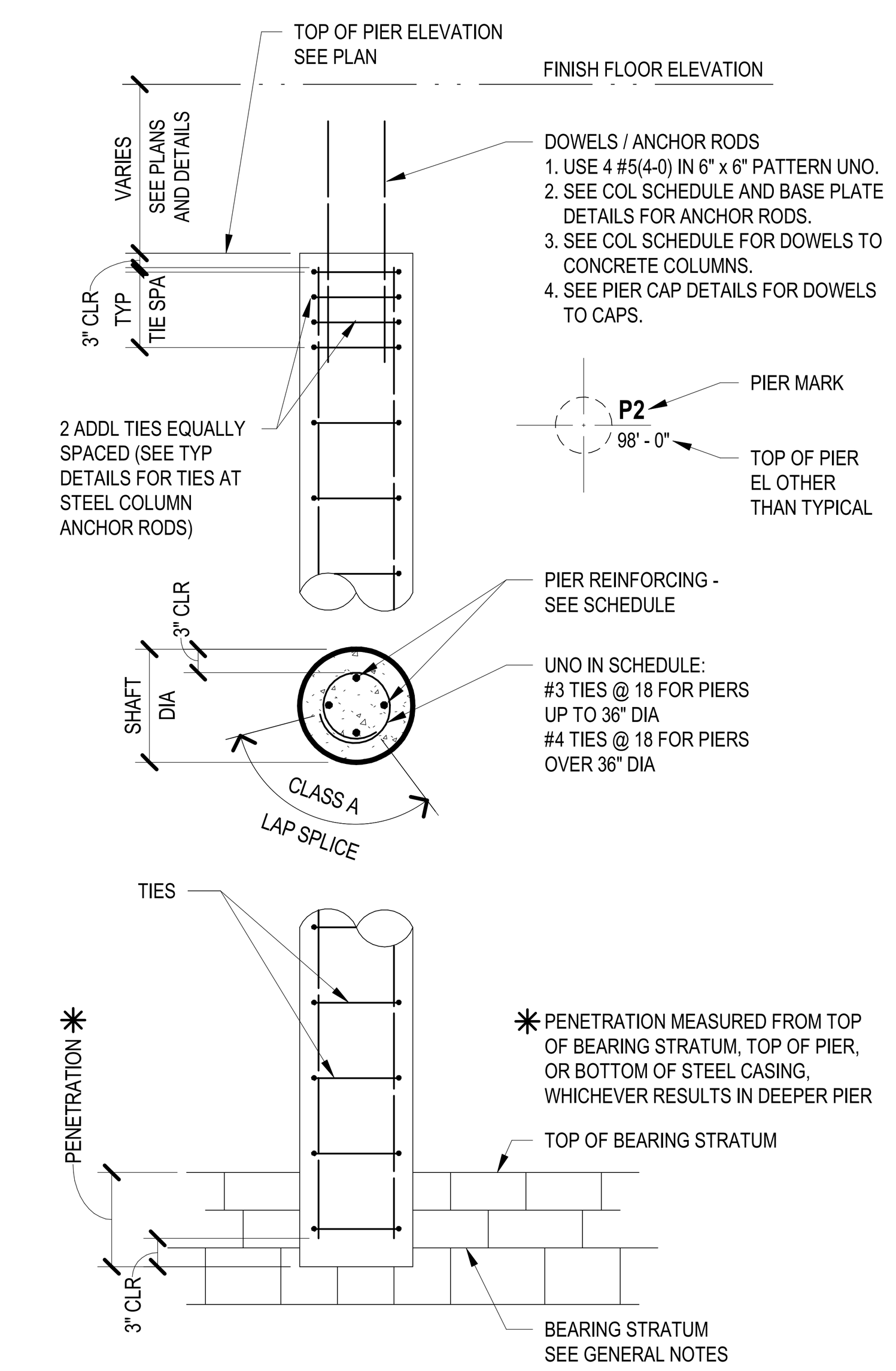
12 REBAR BENDS AND HOOKS
TYPICAL DETAIL
NO SCALE TD03201

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

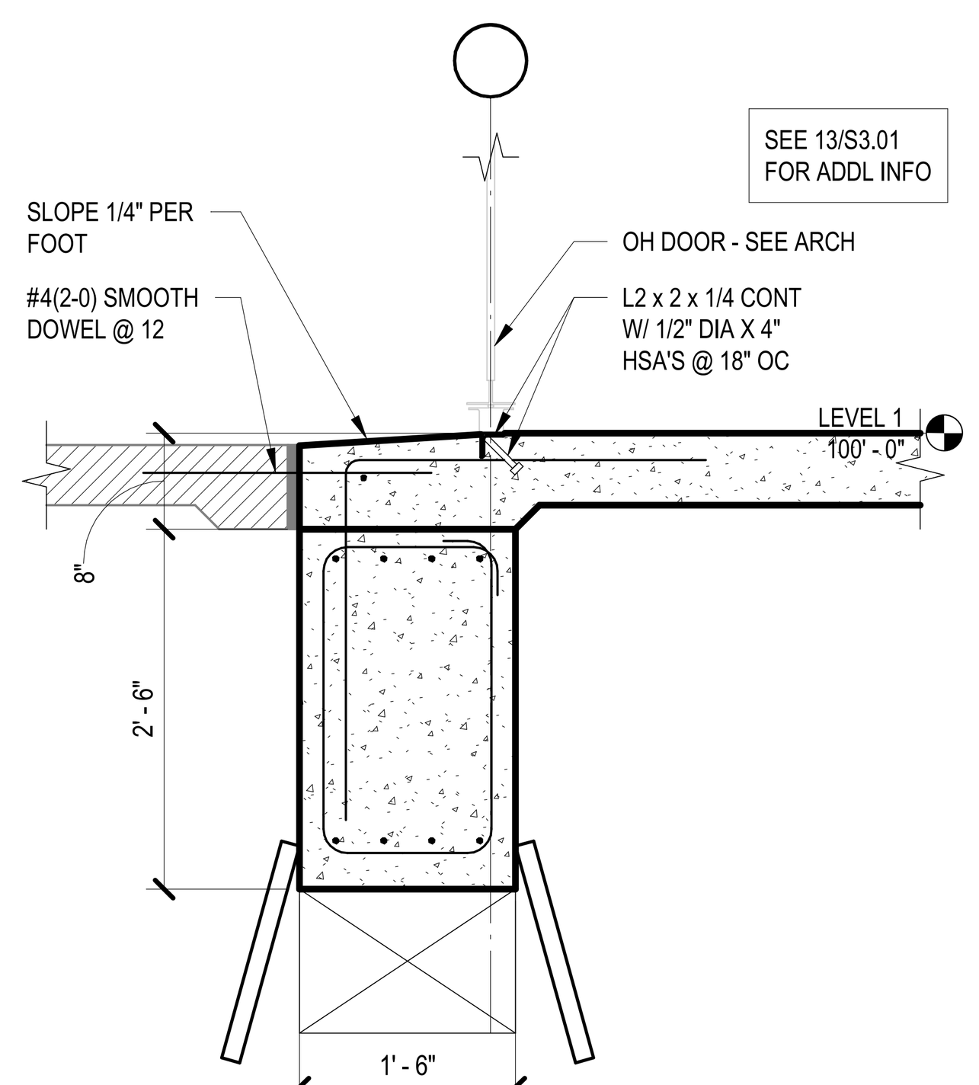


4 VOID BOX - BM OR WALL
TYPICAL DETAIL
NO SCALE TD02526

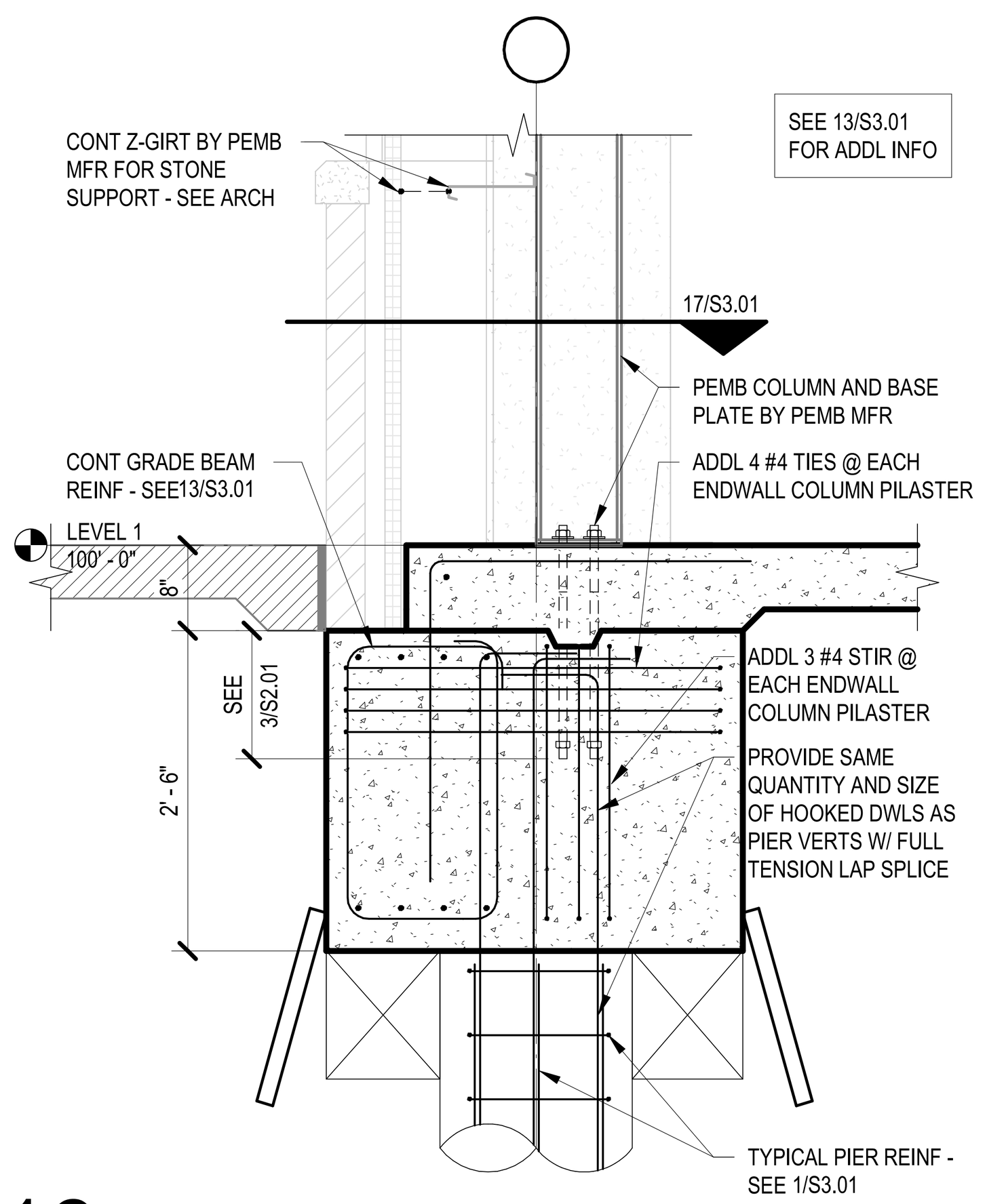
STRAIGHT SHAFT DRILLED PIER SCHEDULE					
PIER MARK	SHAFT DIAMETER	VERTICAL REINF	TIES / SPIRALS	MINIMUM PENETRATION	DESIGN CAPACITY (COMPRESSION) - KIPS
P1	18"	6 #9	PER 1/S3.01	6' - 0"	190
P2	24"	6 #9	PER 1/S3.01	6' - 0"	290



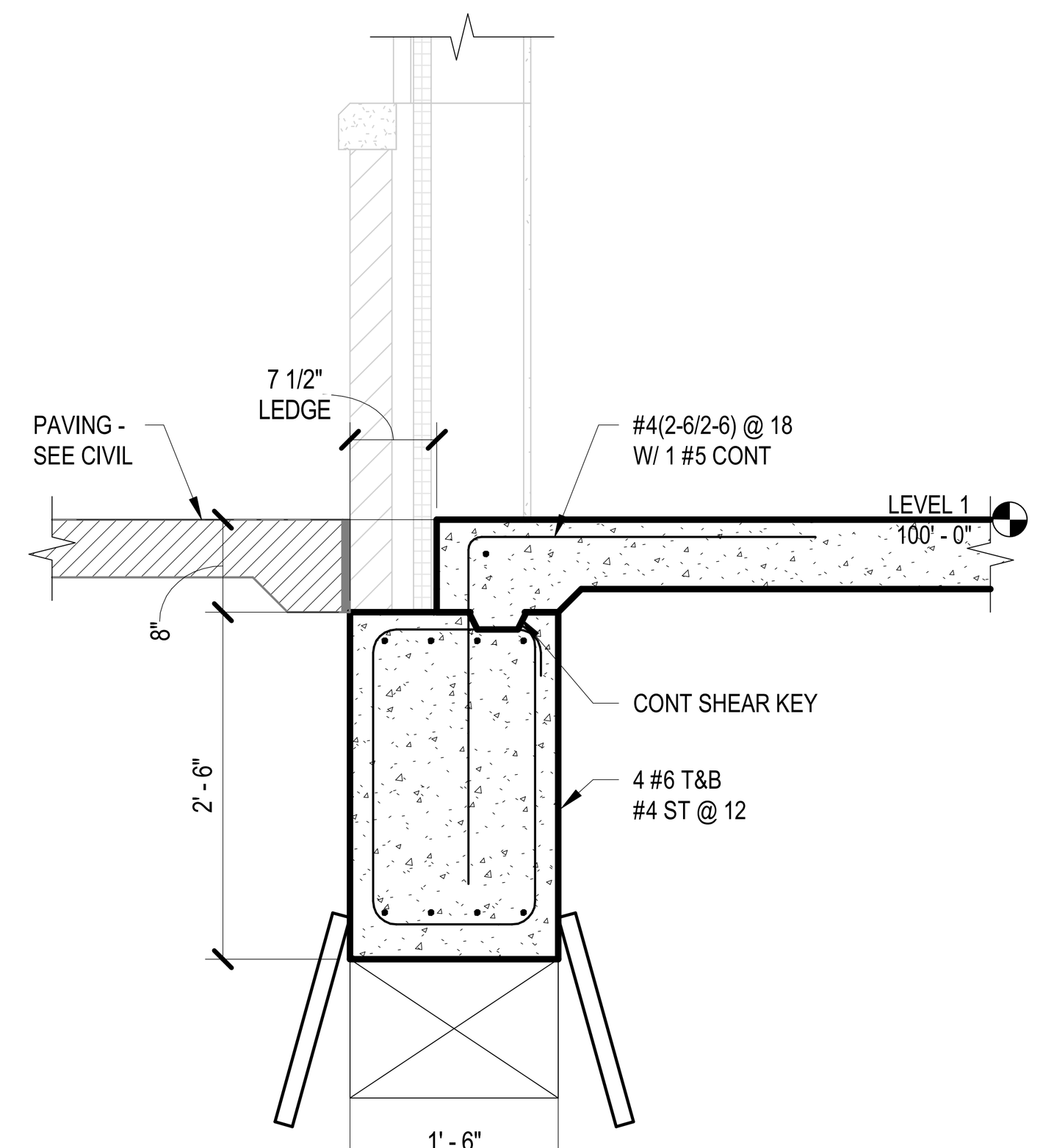
1 STRAIGHT SHAFT PIER
TYPICAL DETAIL
NO SCALE TD02110



20
3/4" = 1'-0"



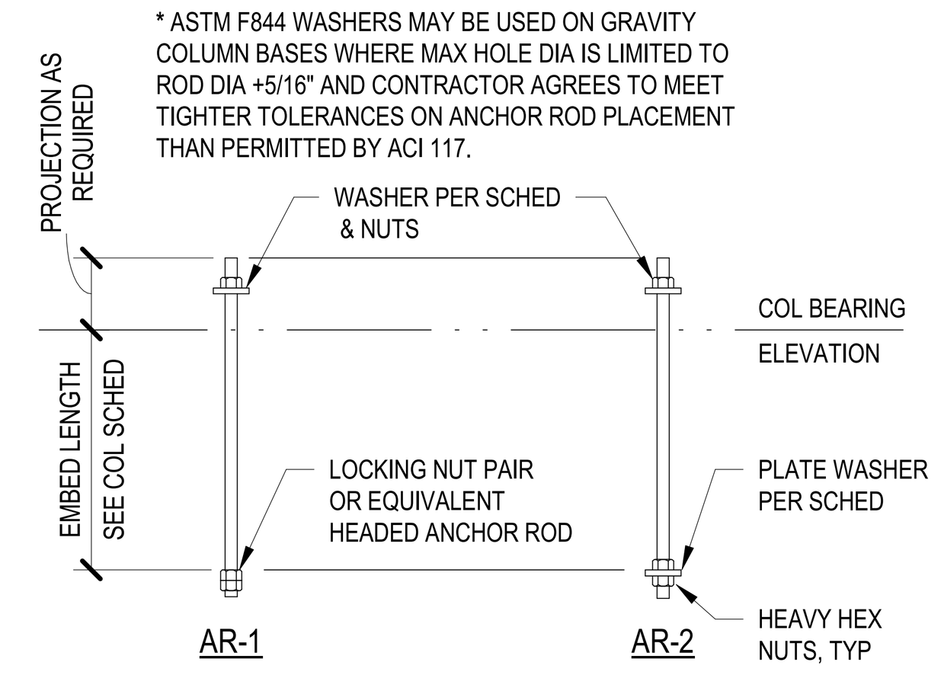
16
3/4" = 1'-0"



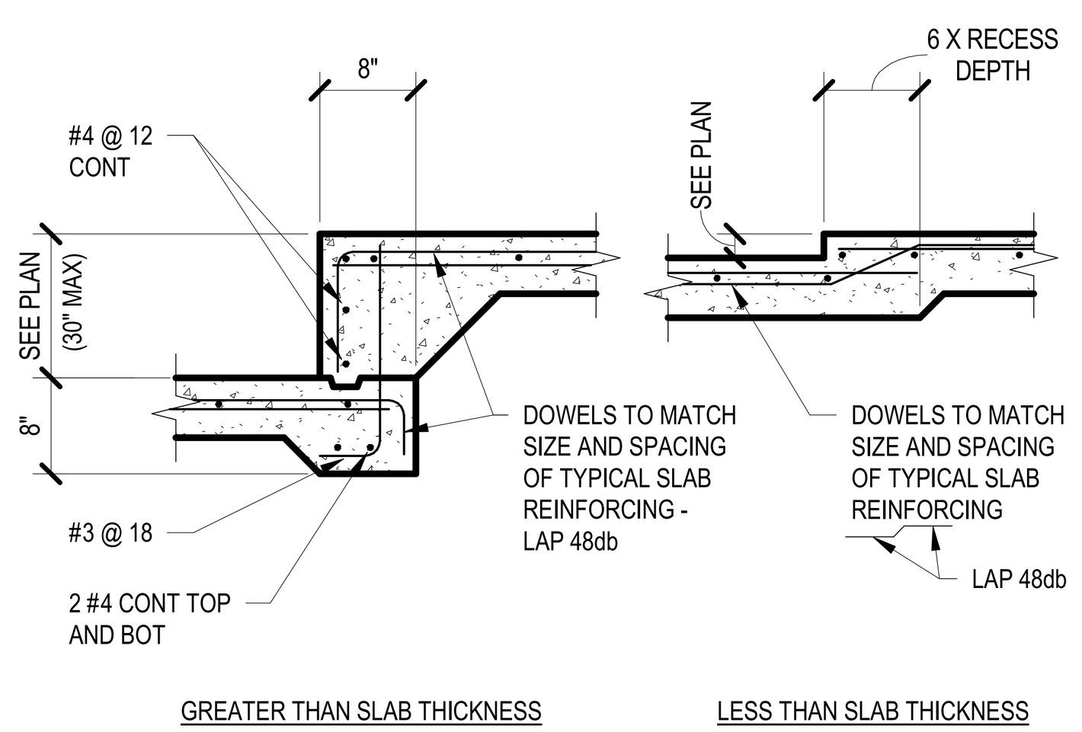
13
3/4" = 1'-0"

ROD DIA	MAX HOLE DIA IN BASE PL	PLATE WASHER THICKNESS	PLATE WASHER SIZE OR DIA
3/4" *	1 5/16"	1/4"	2"

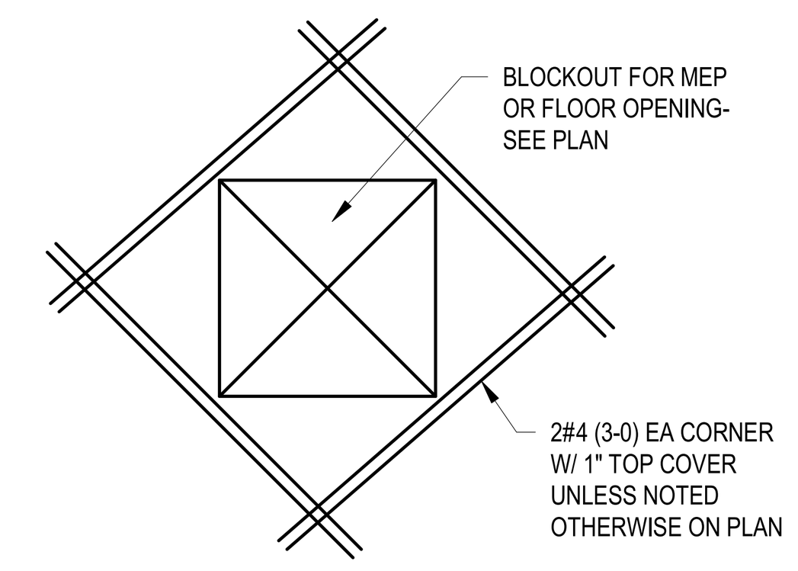
* ASTM F844 WASHERS MAY BE USED ON GRAVITY COLUMN BASES WHERE MAX HOLE DIA IS LIMITED TO ROD DIA +5/16" AND CONTRACTOR AGREES TO MEET TIGHTER TOLERANCES ON ANCHOR ROD PLACEMENT THAN PERMITTED BY ACI 117.



8 ANCHOR ROD TYPES
TYPICAL DETAIL
NO SCALE TD05102

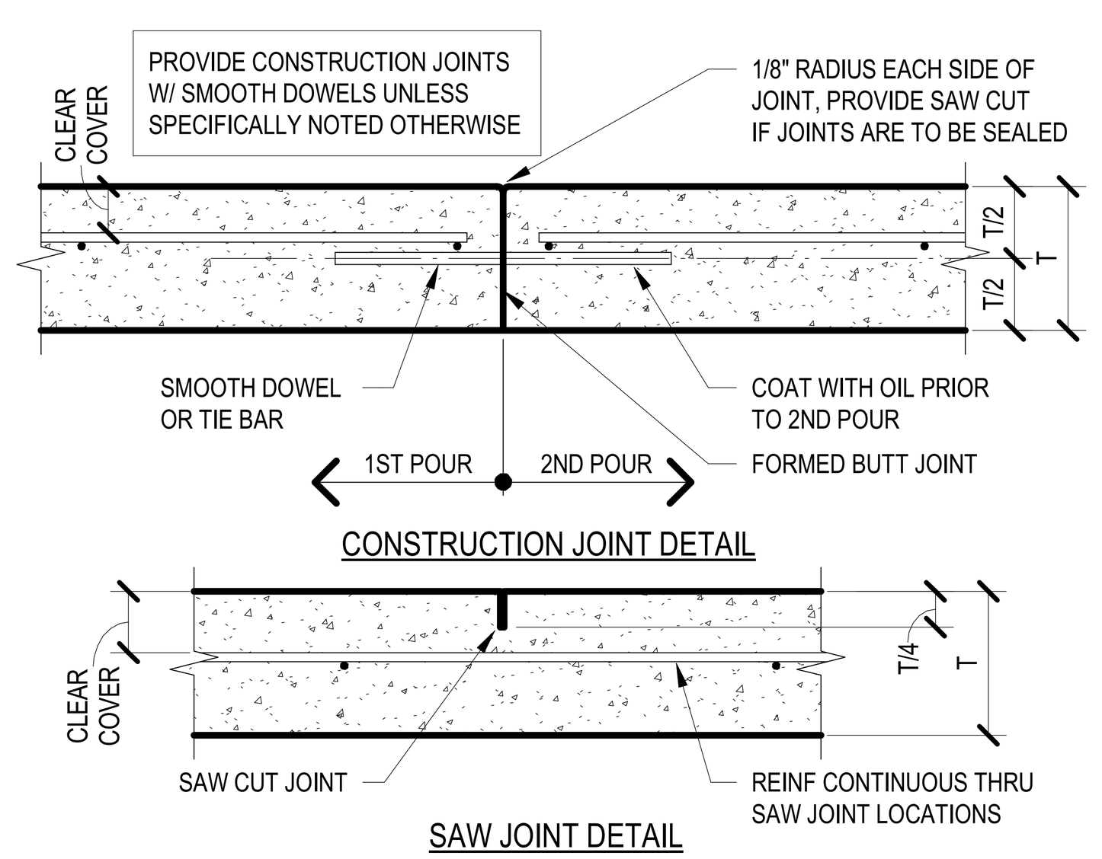


5 SLAB ON GRADE RECESSES
TYPICAL DETAIL
NO SCALE TD03103

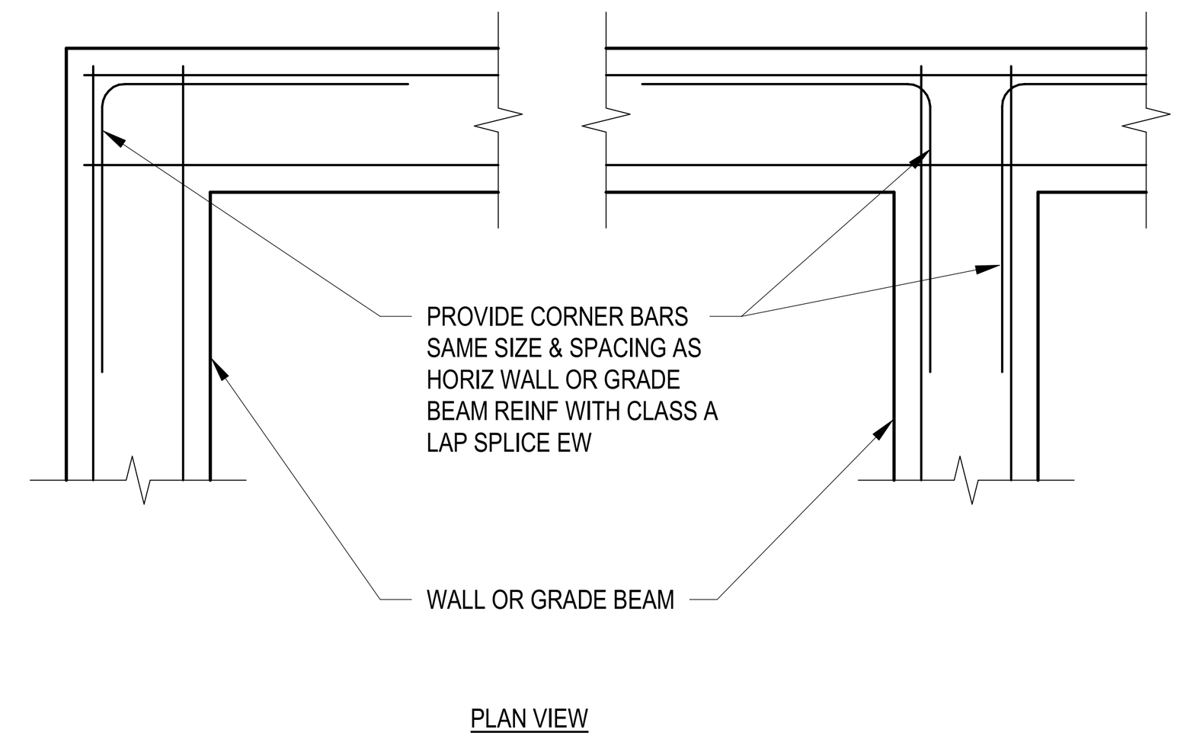


9 SLAB ON GRADE BLOCKOUT REINFORCING
TYPICAL DETAIL
NO SCALE

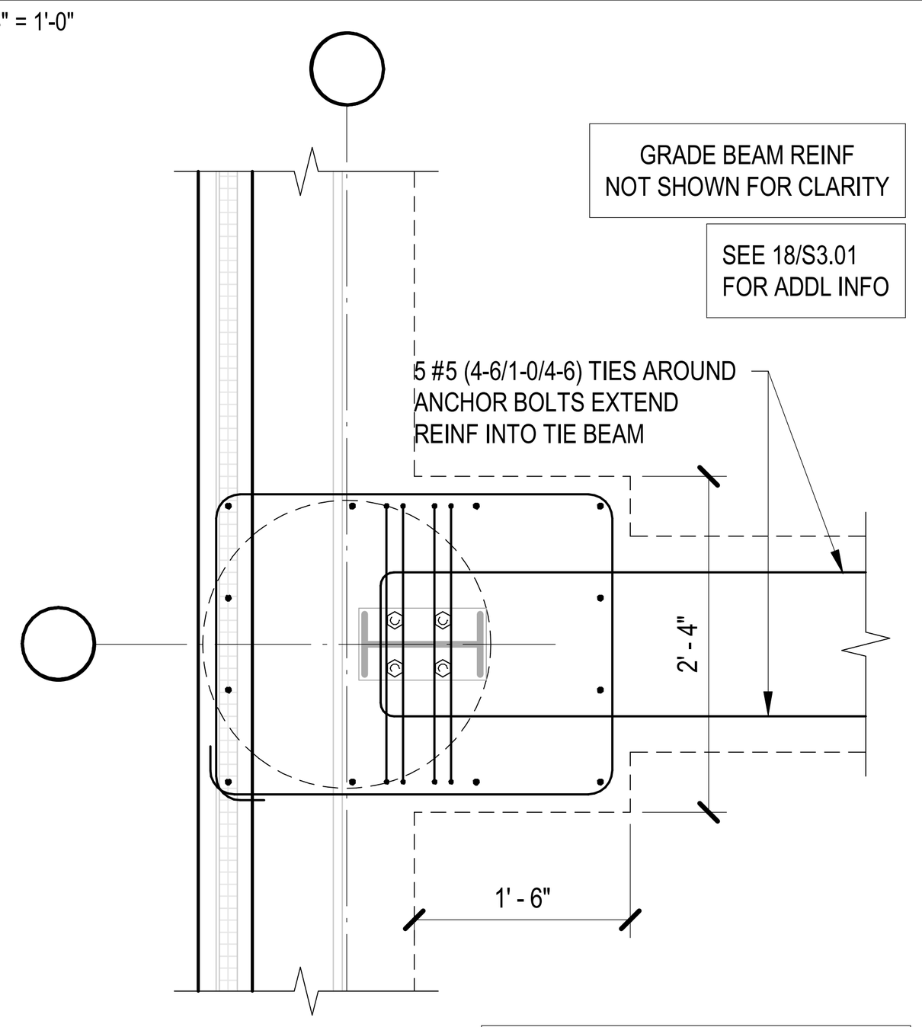
SLAB-ON-GRADE SCHEDULE				
SLAB THICKNESS (T)	CLEAR COVER	SLAB REINFORCING	CONSTRUCTION JOINTS	
			SMOOTH DOWELS	TIE BARS
6"	2"	#3 @ 16 EW	3/4" DIA X 1' - 2" @ 12	#6(3-9) @ 12



6 SLAB ON GRADE
TYPICAL DETAIL
NO SCALE TD03101



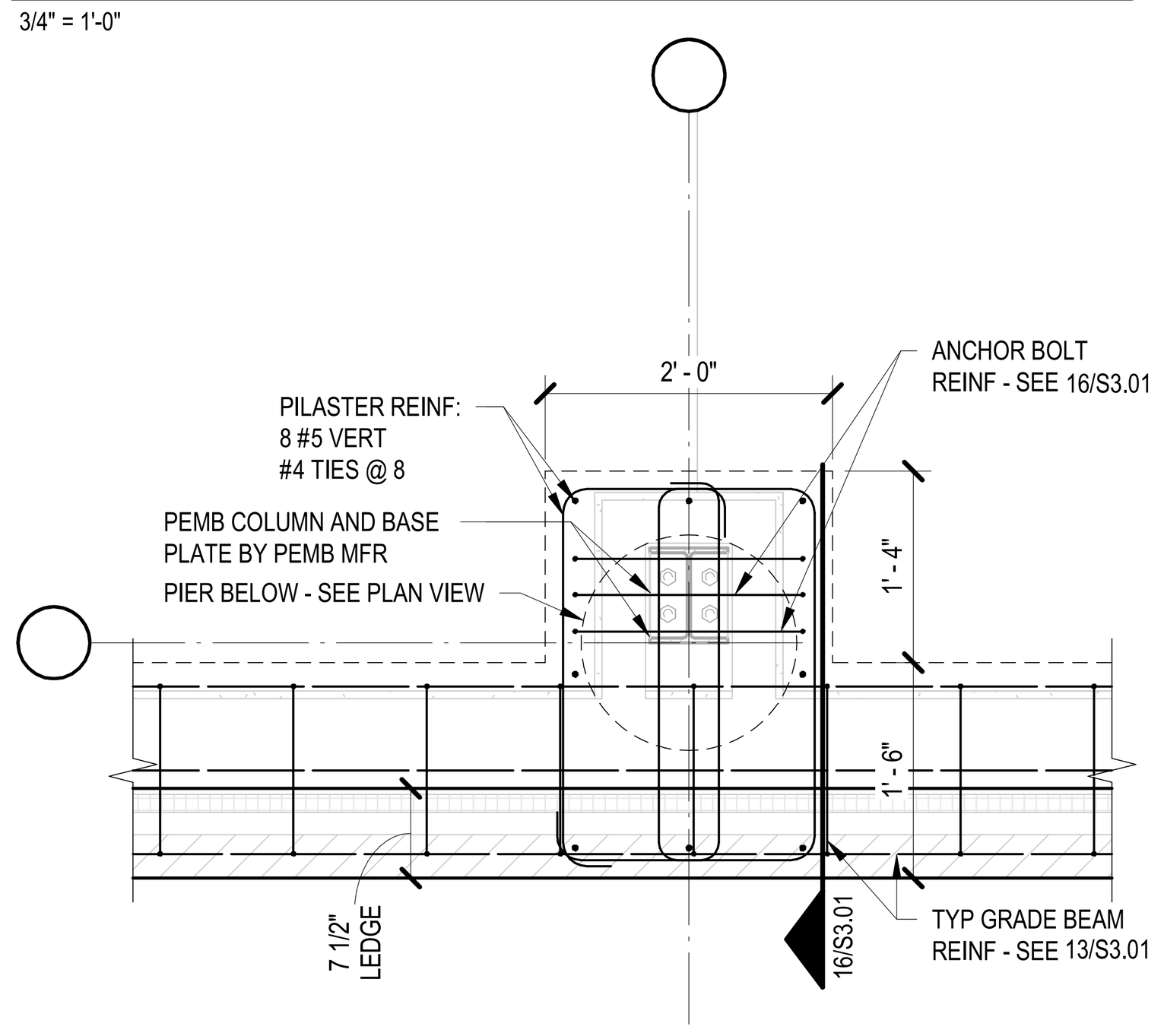
2 CORNER BARS
TYPICAL DETAIL
NO SCALE TD03026



PLAN VIEW

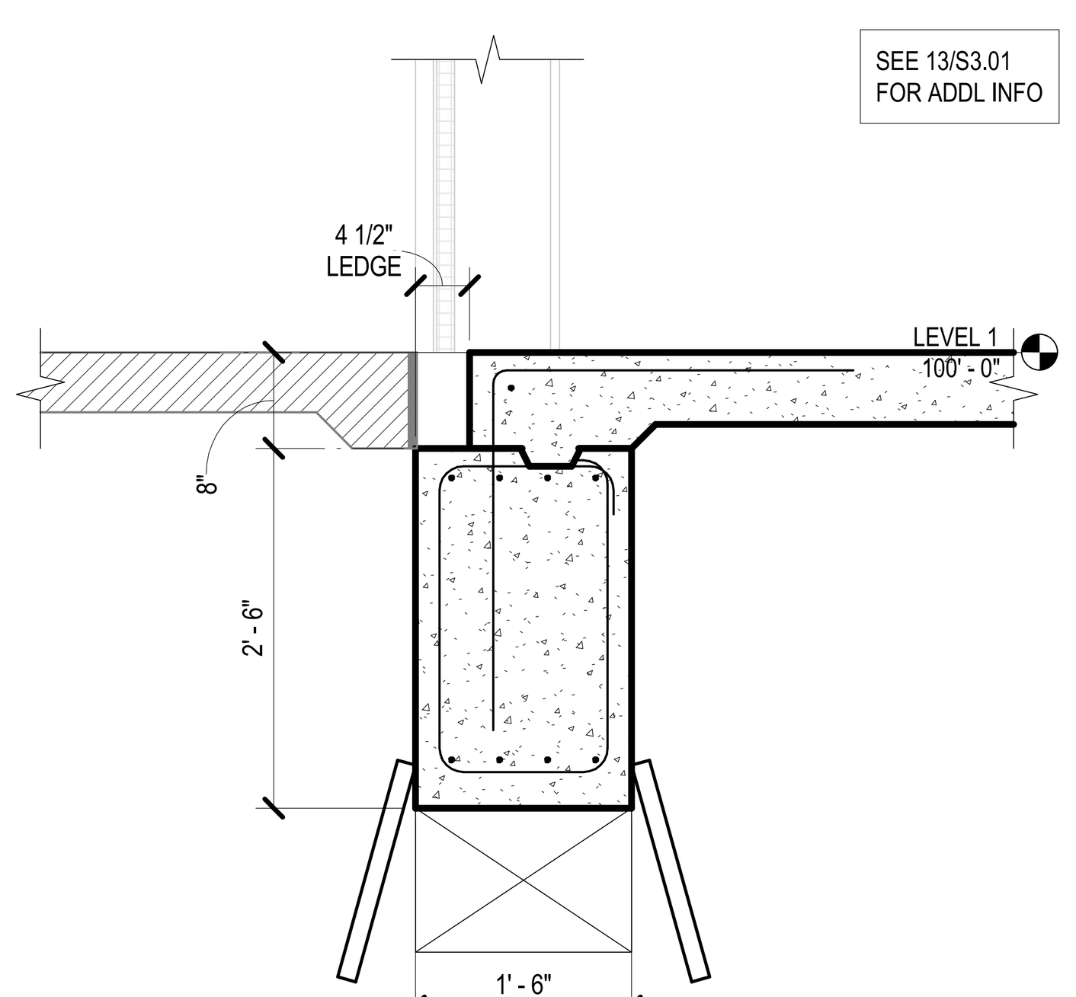
PROVIDE SAME QUANTITY AND SIZE OF HOOKED DWLS AS PIER VERTS W/ FULL TENSION LAP SPLICE

21
3/4" = 1'-0"

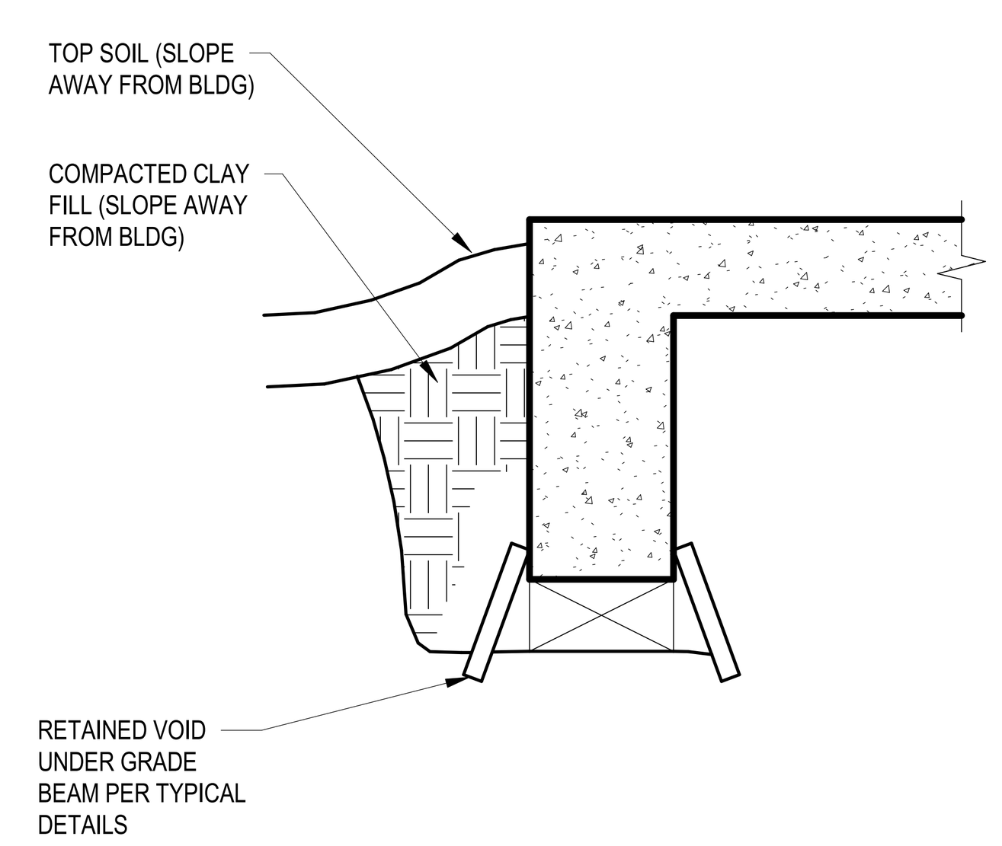


PLAN VIEW

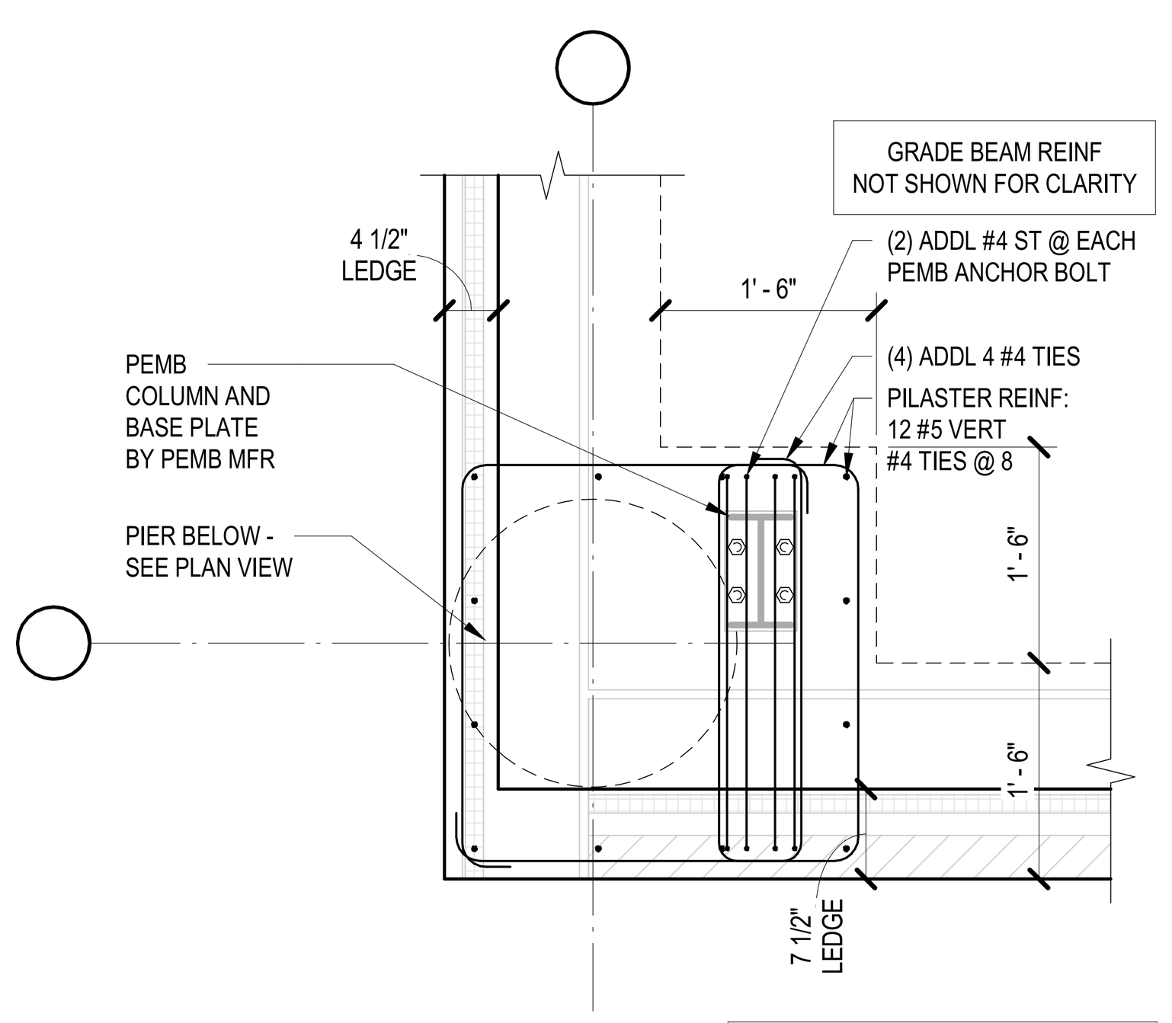
17
3/4" = 1'-0"



14
3/4" = 1'-0"



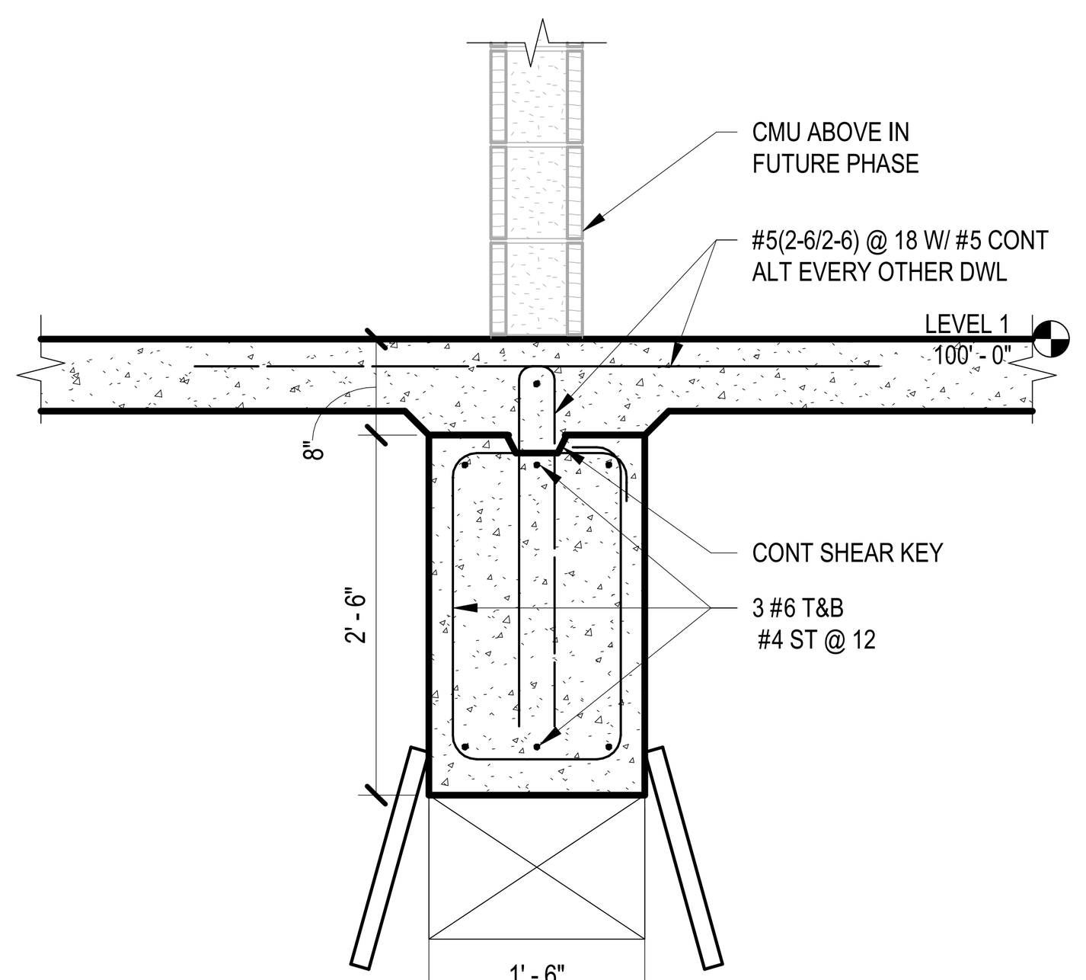
10 BACKFILL @ GRADE BEAM
TYPICAL DETAIL
NO SCALE TD02420



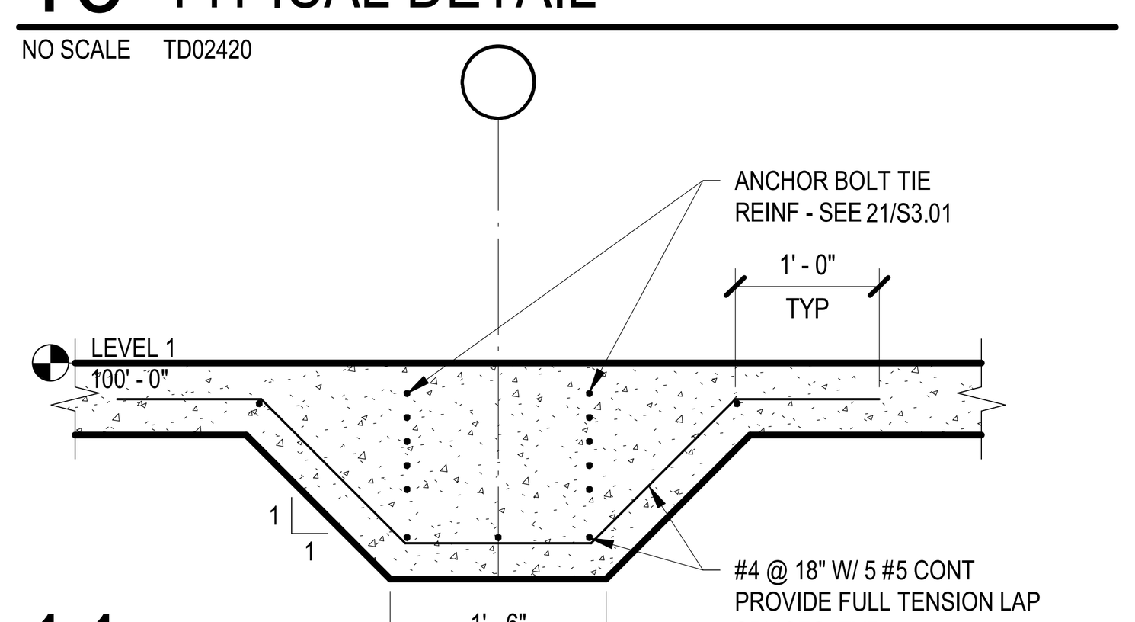
PLAN VIEW

PROVIDE SAME QUANTITY AND SIZE OF HOOKED DWLS AS PIER VERTS W/ FULL TENSION LAP SPLICE

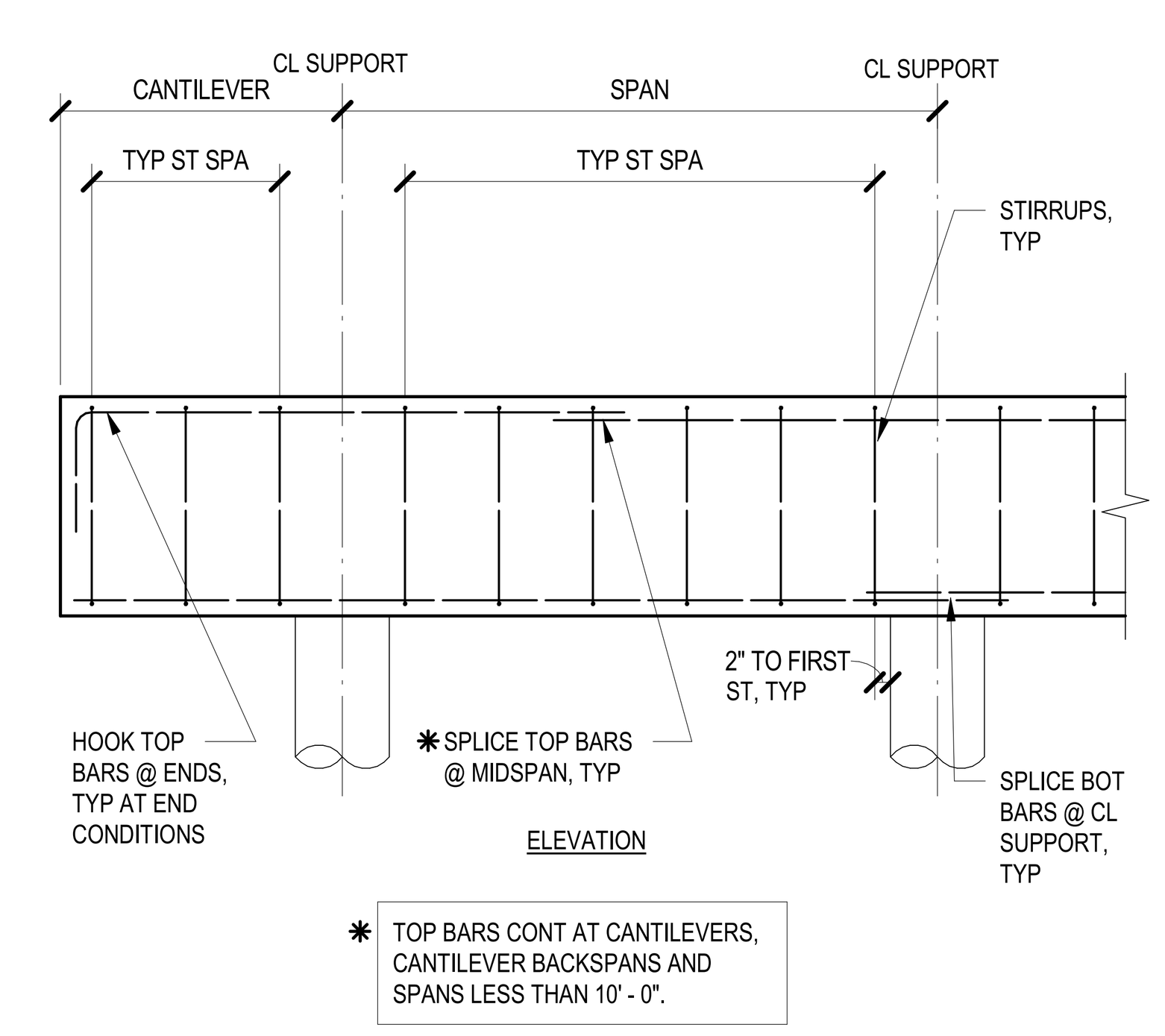
18
3/4" = 1'-0"



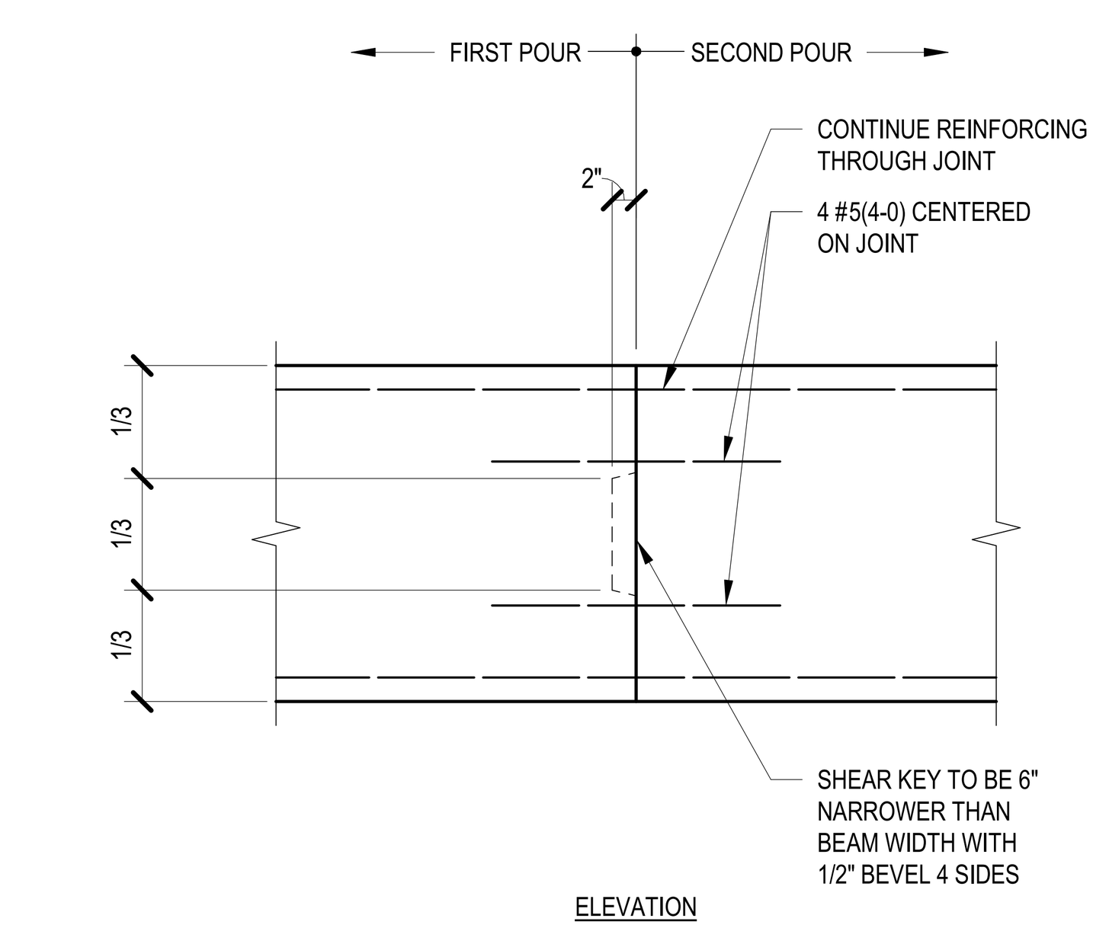
15
3/4" = 1'-0"



11
3/4" = 1'-0"



7 GRADE BEAM REINF
TYPICAL DETAIL
NO SCALE TD03141



3 GRADE BEAM CONSTR JOINT
TYPICAL DETAIL
NO SCALE TD03140

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Structural Engineers
3333 Lee Parkway, Suite 300 • Dallas, TX 75219
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ARCHITECT
VLK
1320 Hemphill Street, Suite 400
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Main Phone: 817.633.1600
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NEW MAINTENANCE & OPERATIONS WAREHOUSE

WHITE SETTLEMENT ISD
WHITE SETTLEMENT, TX

STATE OF TEXAS
LANCE W. MUNGER
98237
REGISTERED PROFESSIONAL ENGINEER
5-19-2025

ISSUED: 05/19/2025

REVISIONS

Revision No.	Revision Date

Director Approver
Drawn By Author
Designer Designer
Quality Control
Proj. Arch. Checker

PROJECT NO.

SHEET TITLE
CONCRETE DETAILS

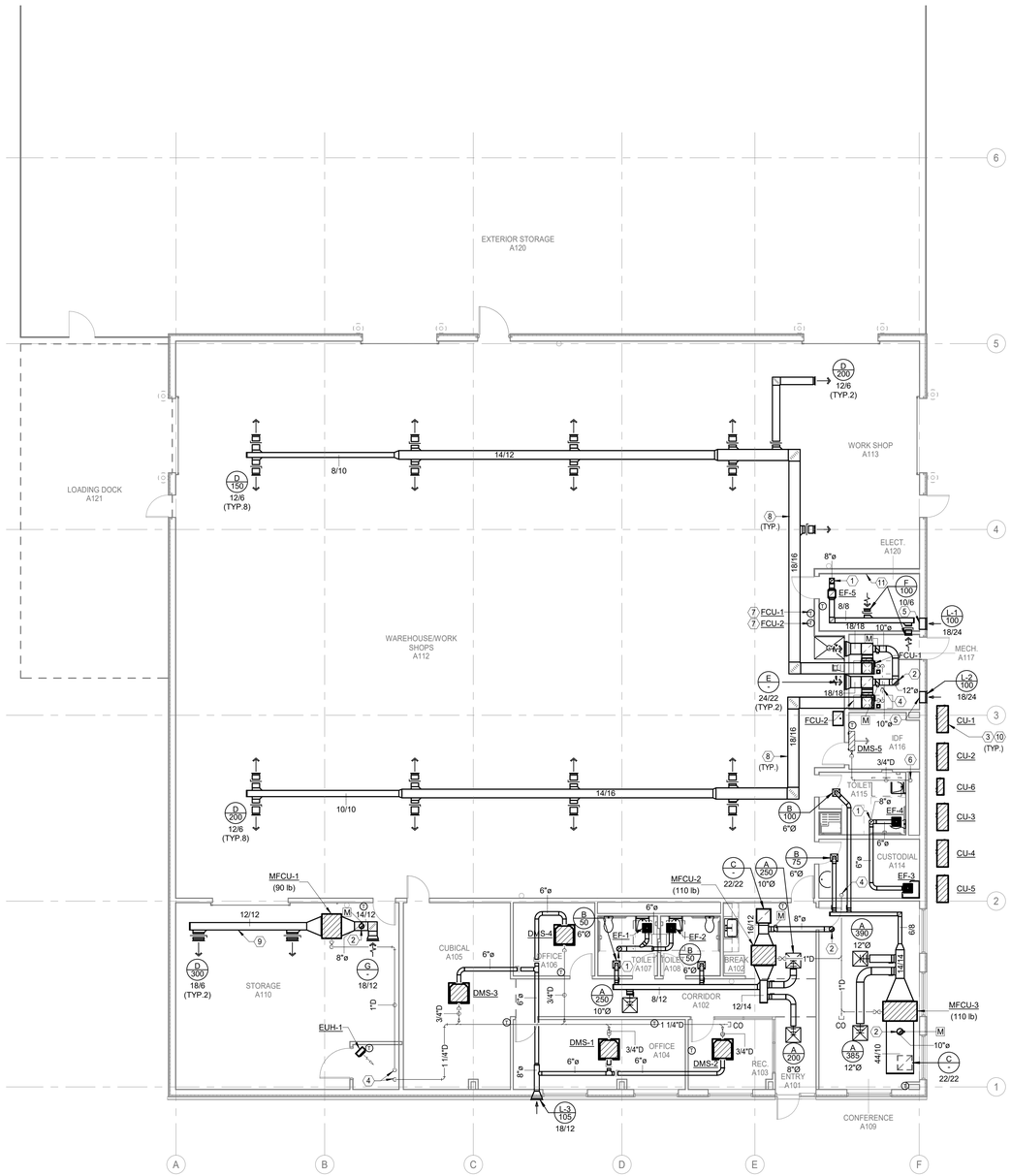
SHEET NO.
S3.01

MECHANICAL GENERAL NOTES

1. REFER TO HEATING, VENTILATION AND AIR CONDITIONING SPECIFICATIONS AND GENERAL CONDITIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL DIFFUSERS AND CEILING GRILLES SHALL BE COORDINATED WITH ARCHITECTURAL REFLECTED CELING PLANS. RE: GRILLE SCHEDULE ON SCHEDULE SHEET.
3. PROVIDE TURNING VANES IN ALL RECTANGULAR 90 DEGREE MITRED ELBOWS.
4. ALL DUCT SIZES SHOWN ARE INSIDE CLEAR, INCREASE ACCORDINGLY WHERE INTERIOR LINER IS SHOWN OR SPECIFIED.
5. COORDINATE IN FIELD THE EXACT LOCATION OF ROOF MOUNTED EQUIPMENT WITH STRUCTURAL ENGINEER AND ROOFING CONTRACTOR.
6. SENSORS SHALL BE MOUNTED AT +48" A.F.F. (ABOVE FINISHED FLOOR) UNLESS OTHERWISE NOTED.
7. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
8. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
9. MECHANICAL CONTRACTOR SHALL MAINTAIN MINIMUM 10'-0" CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND ANY BUILDING EXHAUSTS OR VENTS ON THE ROOF.
10. MECHANICAL CONTRACTOR SHALL MAINTAIN MINIMUM 10'-0" CLEARANCE BETWEEN MECHANICAL EQUIPMENT AND ROOF EDGES.

⬡ MECHANICAL KEYED NOTES ⬡

1	ROUTE EXHAUST DUCT UP THRU ROOF AND TERMINATE WITH WEATHERPROOF ROOF CAP.
2	ROUTE OUTSIDE AIR DUCT UP THRU ROOF AND TERMINATE WITH WEATHERPROOF ROOF CAP.
3	PROVIDE UNIT WITH CONCRETE HOUSEKEEPING PAD. RE: SPECIFICATIONS FOR MORE INFORMATION.
4	CONDENSATE DRAIN PIPING DOWN TO APPROVED INDIRECT WASTE RECEPTOR. RE: PLUMBING DRAWINGS FOR DRAIN LOCATION.
5	COVER OPENING WITH 1/4" HARDWARE CLOTH.
6	CONDENSATE DRAIN PIPING DOWN TO SINK/LAVATORY TAILPIECE. RE: PLUMBING DRAWINGS FOR DRAIN LOCATION.
7	PROVIDE THERMOSTAT WITH NON-LOCKABLE PLASTIC GUARD.
8	EXPOSED DUCT SHALL BE DOUBLE-WALL LINED ACOUSTICAL DUCTWORK WITH PAINT GRIP FINISH. COORDINATE PAINTING REQUIREMENTS WITH ARCHITECT. RE: SPECIFICATIONS FOR MORE INFORMATION.
9	EXPOSED DUCTWORK TO BE DOUBLE WALL INTERNALLY LINED.
10	EXTERIOR PIPING SHALL BE INSULATED AND JACKETED PER SPECIFICATIONS.
11	PROPOSED LOCATION OF BMCS PANEL. COORDINATE WITH ELECTRICAL CONTRACTOR.



N

1 **MECHANICAL PLAN - LEVEL 1 - UNIT A**
Scale: 1/8" = 1'-0"

VLK

Issued For Permit

STATE OF TEXAS
KEITH W. GASSMAN
89636
REGISTERED
ENGINEER
05/19/2025

ISSUED: May 19, 2025

Revision No.	Revision Date

Director	Drawn By
Approver	Author
Designer	Quality Control
Designer	
Proj. Arch.	
Checker	

24-103.00

WAREHOUSE - MECHANICAL PLAN - UNIT A

M3.11

MECHANICAL GENERAL NOTES

1. REFER TO HEATING, VENTILATION AND AIR CONDITIONING SPECIFICATIONS AND GENERAL CONDITIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL DIFFUSERS AND CEILING GRILLES SHALL BE COORDINATED WITH ARCHITECTURAL REFLECTED CELING PLANS. RE: GRILLE SCHEDULE ON SCHEDULE SHEET.
3. PROVIDE TURNING VANES IN ALL RECTANGULAR 90 DEGREE MITRED ELBOWS.
4. ALL DUCT SIZES SHOWN ARE INSIDE CLEAR, INCREASE ACCORDINGLY WHERE INTERIOR LINER IS SHOWN OR SPECIFIED.
5. COORDINATE IN FIELD THE EXACT LOCATION OF ROOF MOUNTED EQUIPMENT WITH STRUCTURAL ENGINEER AND ROOFING CONTRACTOR.
6. SENSORS SHALL BE MOUNTED AT +48" A.F.F. (ABOVE FINISHED FLOOR) UNLESS OTHERWISE NOTED.
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10. MECHANICAL CONTRACTOR SHALL MAINTAIN MINIMUM 10'-0" CLEARANCE BETWEEN MECHANICAL EQUIPMENT AND ROOF EDGES.

⬡ MECHANICAL KEYED NOTES ⬡

1	TERMINATE EXHAUST DUCT WITH WEATHERPROOF ROOF CAP.
2	TERMINATE OUTSIDE AIR DUCT WITH WEATHERPROOF ROOF CAP.

N

1 **MECHANICAL PLAN - ROOF - UNIT A**
Scale: 1/8" = 1'-0"

VLK

Issued For Permit

STATE OF TEXAS
KEITH W. GASSMAN
89638
REGISTERED
ENGINEER
05/19/2025

ISSUED: May 19, 2025

Revision No.	Revision Date

Director	Drawn By
Approver	Author
Designer	Quality Control
Designer	
Proj. Arch.	
Checker	

24-103.00

WAREHOUSE - MECHANICAL PLAN - UNIT A - ROOF

M3.21

SYMBOL LEGEND

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
GENERAL	
(#)	KEY NOTE TAG
(#)	REVISION TAG
	NEW EQUIPMENT
DUCTWORK	
	SUPPLY AIR DUCTWORK
	RETURN AIR AND OUTSIDE AIR DUCTWORK
	EXHAUST AIR DUCTWORK
	FLEXIBLE DUCTWORK
	SUPPLY AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	RETURN AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	EXHAUST AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	FIRE DAMPER (VERTICAL)
	FIRE DAMPER (HORIZONTAL)
SD	SMOKE DAMPER (VERTICAL)
SD	SMOKE DAMPER (HORIZONTAL)
FS	COMBINATION FIRE & SMOKE DAMPER (VERTICAL)
FS	COMBINATION FIRE & SMOKE DAMPER (HORIZONTAL)
	MANUAL BALANCING DAMPER (SEE DAMPER SCHEDULE)
M	MOTORIZED DAMPER (SEE DAMPER SCHEDULE)
SENSORS	
(T)	THERMOSTAT AND TEMPERATURE SENSOR
(H)	HUMIDISTAT
SD	SMOKE DETECTOR
CO2	CO2 DETECTOR
AIR DEVICES	
	GRILLE SIZE TAG (REFER TO GRILLE SIZE LEGEND)
	SUPPLY AIR GRILLE WITH FOUR-WAY THROW
	SUPPLY AIR GRILLE WITH THREE-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY CORNER THROW
	SUPPLY AIR GRILLE WITH ONE-WAY THROW
	RETURN AIR GRILLE
	RETURN AIR GRILLE WITH SOUND BOOT
	EXHAUST AIR GRILLE
	SUPPLY AIR SIDEWALL GRILLE
	RETURN AIR SIDEWALL GRILLE
20X12	RETURN AIR OPENING ABOVE CEILING
PIPING	
–CWS&R–	CONDENSER WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–CWS–	CONDENSER WATER SUPPLY
–CWR–	CONDENSER WATER RETURN
–CHWS&R–	CHILLED WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–CHWS–	CHILLED WATER SUPPLY
–CHWR–	CHILLED WATER RETURN
–HWS&R–	HOT WATER FOR HYDRONIC HEATING SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–HWS–	HOT WATER FOR HYDRONIC HEATING SUPPLY
–HWR–	HOT WATER FOR HYDRONIC HEATING RETURN
—D—	CONDENSATE DRAIN LINE
—AD—	AUXILLARY CONDENSATE DRAIN LINE
—RLR—	REFRIGERANT LIQUID & GAS RECIRCULATION LINE (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
—RL—	REFRIGERANT LIQUID LINE
—HG—	REFRIGERANT HOT GAS LINE
—RS—	REFRIGERANT SUCTION LINE
—HO	ELBOW UP

	ELBOW DOWN
	90° ELBOW
	45° ELBOW
	TEE
	TEE DOWN
	TEE UP
	TOP BRANCH CONNECTION
	BOTTOM BRANCH CONNECTION
	FLANGE
	CAP
	CONTINUATION
	FLOOR DRAIN (REFER TO PLUMBING DRAWINGS)
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	BUTTERFLY VALVE WITH OPERATOR
	PLUG VALVE
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	BALL VALVE
	STRAINER
	UNION
	THERMOMETER WELL
	PETE'S PLUG
	PRESSURE GAUGE
	TEMPERATURE SENSOR IN PIPE
	VENTURI FLOW METER
	FLOW SWITCH
FM	FLOW MEASURING STATION
	EXPANSION JOINT
	FLEXIBLE CONNECTION
G.C.	GAUGE COCK
	SITE GLASS
	DIFFERENTIAL PRESSURE SENSOR
	TURBINE FLOW METER
	ANCHOR
	PIPE GUIDE

SUBSCRIPTS AND ABREVIATIONS

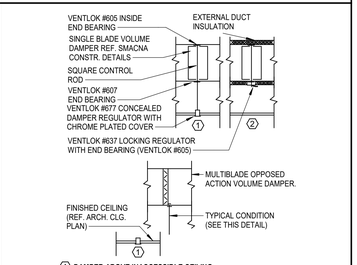
AFF	ABOVE FINISHED FLOOR
BBS	BELOW BOTTOM OF STRUCTURE
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
CA	COMBUSTION AIR
CFM	CUBIC FEET PER MINUTE
EA	EXHAUST AIR
FPM	FEET PER MINUTE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTSIDE AIR
RA	RETURN AIR
SA	SUPPLY AIR
RENOVATIONS	
	POINT OF CONNECTION FROM NEW TO EXISTING
	ITEM TO REMAIN
	ITEM TO BE REMOVED

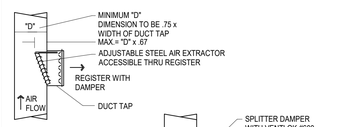
DAMPER

MARK	ACTUATOR	DUTY	BLADE ACTION	MANUFACTURER	MODEL NUMBER	REMARKS
D-1	MANUAL BALANCING	UNDER 9" WIDE	N/A	N/A	N/A	SEE SMACNA CONSTRUCTION DETAILS REFERENCED "TYPICAL CONSTRUCTION DETAILS FOR LOW VELOCITY DUCTS."
D-2	MANUAL BALANCING	OVER 9" WIDE	OPPOSED	RUSKIN	MD-35	MANUAL DAMPER WITH STANDARD CONSTRUCTION FEATURES AND VENTLOCK #639 LOCKING REGULATOR.
D-3	MOTORIZED	OVER 9" WIDE	OPPOSED	RUSKIN	CD-60	LOW LEAKAGE DAMPER WITH BLADE SEALS

NOTES:
N/A - NOT APPLICABLE

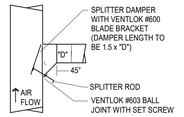
DUCTWORK CONSTRUCTION DETAILS



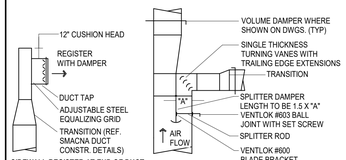


NOTES:
1. MAX. WIDTH OF DUCT TAP SHALL BE 48". PROVIDE BOTTOM BRACKET FOR SUPPORT WHERE EXTRACTOR EXCEEDS 16".
2. MAX. HEIGHT OF DUCT TAP SHALL BE 12" (MIN.= 4")

EXTRACTOR SIDEWALL REGISTER



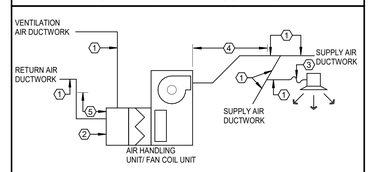
DUCT TAP



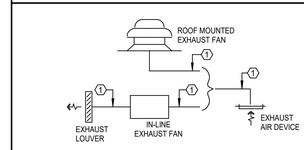
SIDEWALL REGISTER AT END OF DUCT

SPLITTER

DUCT LINER AND INSULATION



AIR HANDLING UNITS AND FAN COIL UNITS

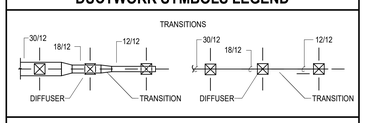


EXHAUST AIR SYSTEMS

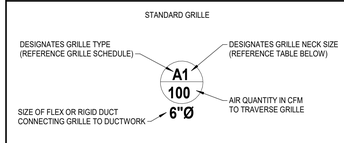
KEYED NOTES:

1. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
2. SHEETMETAL DUCTWORK RETURN AIR PLENUM WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
3. FLEXIBLE DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
4. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT DISCHARGE TO 10'-0" DOWNSTREAM.
5. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT INLET TO 10'-0" UPSTREAM.

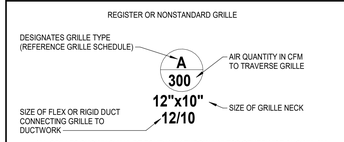
DUCTWORK SYMBOLS LEGEND



GRILLE SIZING SCHEDULE



ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE SHOWN.



ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE SHOWN. ALL REGISTERS SHALL HAVE A 45° HORIZONTAL DEFLECTION UNLESS OTHERWISE SHOWN.

GRILLE SIZE DESIGNATION	GRILLE NECK SIZE	GRILLE SIZE DESIGNATION	GRILLE NECK SIZE
1	6" x 6"	7	15" x 15"
2	8" x 8"	8	16" x 16"
3	9" x 9"	9	18" x 18"
4	10" x 10"	10	20" x 20"
5	12" x 12"	11	22" x 22"
6	14" x 14"	12	24" x 24"

VLK

Issued For Permit

STATE OF TEXAS
KEITH W. GASSMAN
89636
REGISTERED
ENGINEER
05/19/2025

ISSUED: May 19, 2025

Revision No. Revision Date

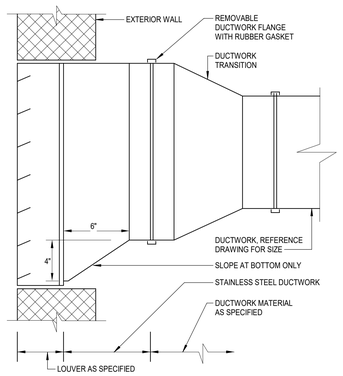
Director
Approver
Designer
Designer
Proj. Arch.
Checker

Drawn By
Author
Quality Control

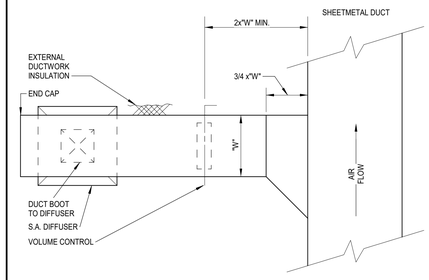
24-103.00

MECHANICAL LEGENDS

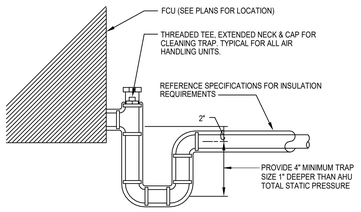
M6.11



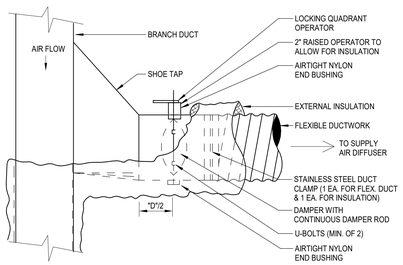
11 DUCTWORK AT LOUVER
SCALE: NONE



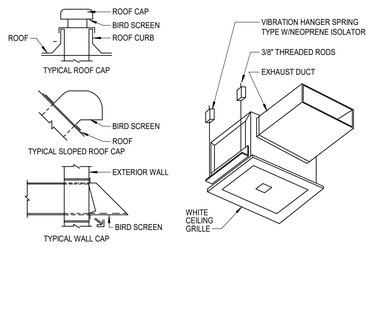
7 RIGID DUCT TAP TO SINGLE SUPPLY AIR DIFFUSER
SCALE: NONE



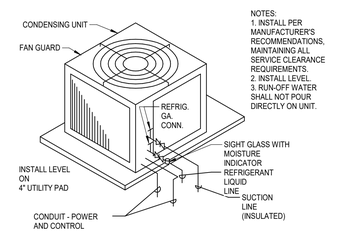
3 CONDENSATE DRAIN PIPING AT FCU
SCALE: NONE



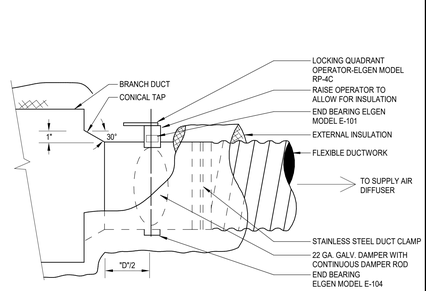
10 FLEXIBLE DUCT TAP - SHOE
SCALE: NONE



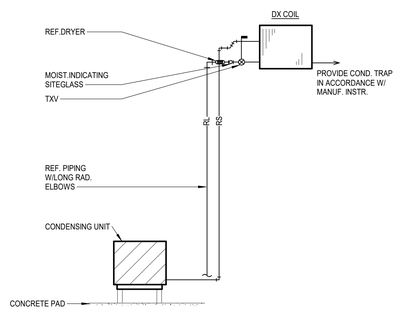
6 CABINET CEILING FAN
SCALE: NONE



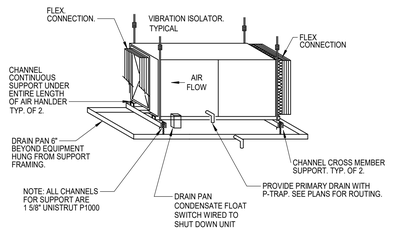
2 CONDENSING UNIT ON UTILITY PAD
SCALE: NONE



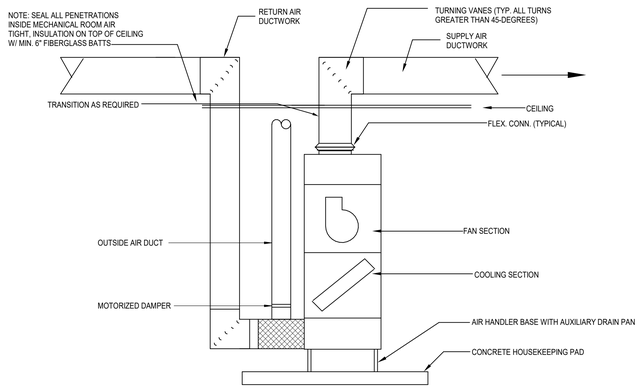
9 FLEXIBLE DUCT TAP - CONICAL
SCALE: NONE



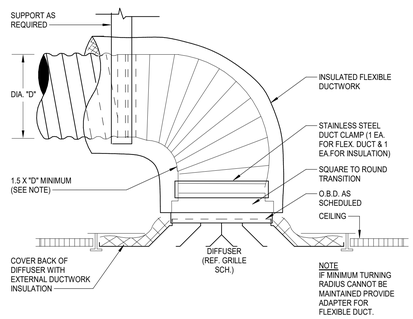
5 REFRIGERANT PIPING DIAGRAM
SCALE: NONE



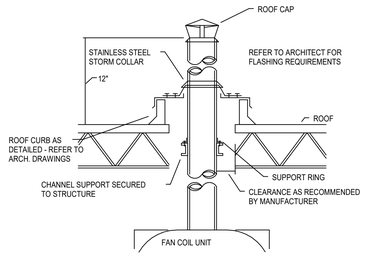
1 AIR HANDLING UNIT HUNG FROM STRUCTURE
SCALE: NONE



12 VERTICAL AIR HANDLING UNIT
SCALE: NONE



8 FLEX DUCT CONNECTION AT SUPPLY AIR DIFFUSER
SCALE: NONE



4 AIR INTAKE/EXHAUST THRU ROOF
SCALE: NONE

VLK

Issued For Permit

STATE OF TEXAS
KEITH W. GASSMAN
89636
LICENSED PROFESSIONAL ENGINEER
05/19/2025

ISSUED: May 19, 2025

Revision No.	Revision Date

Director	Drawn By
Approver	Author
Designer	Quality Control
Designer	
Proj. Arch.	
Checker	

24-103.00

MECHANICAL DETAILS

M6.21

BASIS OF DESIGN
THE MANUFACTURER AND MODEL NUMBER LISTED IN THE DRAWINGS OR SPECIFICATIONS ARE THE BASIS OF DESIGN. WHEN PROVIDING EQUIPMENT BY AN ACCEPTABLE MANUFACTURER THAT IS NOT BASIS OF DESIGN, THE CONTRACTOR SHALL PROVIDE AS A PART OF THE SUBMITTAL AND/OR SHOP DRAWING AN ITEMIZED LIST OF ALL MODIFICATIONS REQUIRED TO INSTALL THE NON-BASIS OF DESIGN EQUIPMENT FROM THE INFORMATION DETAILED IN BOTH THE SPECIFICATION SECTION AND EQUIPMENT SCHEDULE. ADDITIONALLY, THE EQUIPMENT MUST ADDRESS THE PHYSICAL CONSTRAINTS OF SPACE INCLUDING COORDINATION WITH OTHER TRADES AND ALL EQUIPMENT CLEARANCES. FINALLY, THE CONTRACTOR SHALL PROVIDE AT NO ADDITIONAL COST TO THE PROJECT ANY SCOPE INCREASE BASED ON THE NON-BASIS OF DESIGN EQUIPMENT FOR THE FOLLOWING MINIMUM ITEMS:

- ELECTRICAL MODIFICATIONS, INCLUDING WIRING, CONDUIT, DISCONNECTS, OVERCURRENT PROTECTION, PANELS, MOTORS, ETC.
- PLUMBING MODIFICATIONS, INCLUDING DOMESTIC WATER, SANITARY, CONDENSATE, AND GAS PIPING, ETC.
- STRUCTURAL MODIFICATIONS
- CIVIL MODIFICATIONS
- DUCT AND PIPE CONNECTIONS OR ARRANGEMENTS
- SPACE HEATING AND COOLING REQUIREMENTS
- EXHAUST OR VENTILATION REQUIREMENTS
- VIBRATION ISOLATION REQUIREMENTS
- CONTROLS REQUIREMENTS TO MEET SPECIFICATIONS

GRILLE

MARK	SERVICE	TYPE	DAMPER	CONSTRUCTION MATERIAL	FINISH COLOR	MANUFACTURER	MODEL NUMBER	DESCRIPTION
A	SUPPLY AIR	DIFFUSER	-	STEEL	WHITE	TITUS	OMNI	EXPOSED T-BAR CEILING FRAME STYLE WITH 24"X24" PLAQUE FACE.
B	SUPPLY AIR	DIFFUSER	-	STEEL	WHITE	TITUS	OMNI	SURFACE MOUNT CEILING FRAME STYLE WITH 12"X12" PLAQUE FACE.
C	RETURN AIR	GRILLE	-	ALUMINUM	WHITE	TITUS	50FF	EXPOSED T-BAR CEILING FRAME STYLE WITH A 24"X24" EGGCRATE FACE AND 1" HINGED FILTER RACK.
D	SUPPLY AIR	DIFFUSER	-	STEEL	WHITE	TITUS	300RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1). FACE SIZE AS NOTED.
E	RETURN AIR	GRILLE	-	STEEL	WHITE	TITUS	350RL	FIXED DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1). FACE SIZE AS NOTED.
F	EXHAUST AIR	GRILLE	-	STEEL	WHITE	TITUS	350RL	FIXED DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1). FACE SIZE AS NOTED.
G	RETURN AIR	GRILLE	-	STEEL	WHITE	TITUS	350RLF	FIXED DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1) WITH 1" HINGED FILTER RACK. FACE SIZE AS NOTED.

GENERAL NOTES:
1. DIFFUSER MOUNTING STYLE SHALL BE CONFIRMED WITH ARCHITECTURAL DRAWINGS, REFLECTED CEILING PLAN.
2. COORDINATE DIFFUSER DISCHARGE PATTERN WITH DRAWINGS.
3. OMIT SCREW HOLES FOR AY-IN STYLE CEILING.
4. PROVIDE SQUARE/RECTANGLE TO ROUND TRANSITION AS NEEDED.
5. COORDINATE FINISH WITH ARCHITECT.
6. PROVIDE VENTLOK CONCEALED DAMPER REGULATOR WITH REMOTE CABLE CONTROLFOR BALANCING DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS. COORDINATE CONTROL LOCATIONS WITH ARCHITECT. REFER TO DUCTWORK CONSTRUCTION DETAILS FOR MORE INFORMATION.
7. MOUNT SIDEWALL RETURN AND EXHAUST GRILLES WITH BLADES DIRECTED UPWARD TO PREVENT LINE OF SIGHT THROUGH GRILLE.

LOUVER SCHEDULE

MARK	SIZE (HxW)	MINIMUM FREE AREA (SQ. FT.)	ELEVATION (FROM BOTTOM)	CFM	MANUFACTURER	MODEL NO.	LOUVER TYPE	LOUVER REMARKS
L-1	18/24	0.39	11'-11"	100	GREENHECK	EACC-601	ALUMINUM DRAINABLE	1,2,3
L-2	18/24	0.39	11'-11"	100	GREENHECK	EACC-601	ALUMINUM DRAINABLE	1,2,3
L-3	18/12	0.32	9'-11"	105	GREENHECK	ESD-635	ALUMINUM DRAINABLE	1,2

REMARKS:
1. PROVIDE WITH BIRD SCREEN.
2. COORDINATE EXACT MOUNTING HEIGHT AND FINISH WITH THE ARCHITECT.
3. PROVIDE INTEGRAL MOTORIZED DAMPER AND CONCEALED LOW VOLTAGE ACTUATOR BY BMCS FOR INTERLOCK WITH EXHAUST FAN. RE: FAN SCHEDULE FOR MORE INFORMATION.

UNIT HEATER - ELECTRIC

MARK	MINIMUM CAPACITY (BTUH)	KW	NUMBER OF STAGES	CURRENT CHAR. V	P	F	CFM	MANUFACTURER	MODEL	REMARKS
EUH-1	10,236	3	1	208	1	60	350	QMARK	MUH0381	1,2

REMARKS:
1. PROVIDE WITH PENDANT MOUNTED THERMOSTAT.
2. PROVIDE WITH UNIVERSAL MOUNTING BRACKET. MOUNT MINIMUM 7'-0" TO BOTTOM OF HEATER.

DX FAN/COIL UNIT

MARK	FAN					AIR TEMPERATURE (°F)		COOLING				HEATING			BASIS OF DESIGN				REMARKS
	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT.STATIC PRESSURE (IN. W.C.)	HORSE POWER	CURRENT CHAR. V	P	F	ENTERING DRY BULB	ENTERING WET BULB	NOM. TOTAL CAPACITY (BTUH)	NOM. SENS. CAPACITY (BTUH)	MINIMUM EER2/ SEER2	NUMBER OF STAGES	ENTERING AIR TEMP.(°F)	MINIMUM CAPACITY (BTUH)	NUMBER OF STAGES	MANUFACTURER	MODEL	MCA	MOCP	
FCU-1	1,600	210	0.50	0.5	208	1	60	78.5	64.3	45,000	29,000	9.0/16.0	MOD	62.4	47,500	MOD	DAIKIN	FXTA48A	6.5	15	1,2,3,4,5,6
FCU-2	1,600	210	0.50	0.5	208	1	60	78.5	64.3	45,000	29,000	9.0/16.0	MOD	62.4	47,500	MOD	DAIKIN	FXTA48A	6.5	15	1,2,3,4,5,6

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. PROVIDE WITH WALL-MOUNTED WIRED THERMOSTAT WITH GATEWAY FOR BMCS INTEGRATION.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE VERTICAL UNIT.
5. PROVIDE FILTER RACK.
6. PROVIDE AUXILIARY DRAIN PAN WITH FLOAT SWITCH.

DUCTLESS MINI-SPLIT - INDOOR UNIT

MARK	FAN				CURRENT CHARAC.			AIR TEMPERATURE (°F)		COOLING				HEATING			BASIS OF DESIGN		REMARKS
	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT.STATIC PRESSURE (IN. W.C.)	HORSE POWER	V	P	F	ENTERING DRY BULB	ENTERING WET BULB	TOTAL COOLING (BTUH)	SENSIBLE COOLING (BTUH)	MINIMUM EER2/ SEER2	NUMBER OF STAGES	ENTERING AIR TEMP.(°F)	MINIMUM CAPACITY (BTUH)	NUMBER OF STAGES	MANUFACTURER	MODEL	
DMS-1	350	25	0.20	0.01	208	1	60	75.0	67.0	10,200	8,500	12.0/20.0	MOD	70.0	13,600	MOD	DAIKIN	FXFA12A	1,2,3,4,7
DMS-2	350	15	0.20	0.01	208	1	60	75.0	67.0	6,500	5,100	12.0/20.0	MOD	70.0	8,500	MOD	DAIKIN	FXFA07A	1,2,3,4,7
DMS-3	512	50	0.20	0.01	208	1	60	75.0	67.0	12,100	9,300	14.0/23.0	MOD	70.0	17,000	MOD	DAIKIN	FXFA15A	1,2,3,4,7
DMS-4	350	15	0.20	0.01	208	1	60	75.0	67.0	6,500	5,100	12.0/20.0	MOD	70.0	8,500	MOD	DAIKIN	FXFA07A	1,2,3,4,7
DMS-5	400	0	0.20	0.01	208	1	60	75.0	67.0	10,900	7,700	12.0/21.0	MOD	-	-	-	DAIKIN	FTKF12AXVJU	1,2,3,5,6,8

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. PROVIDE WITH WALL-MOUNTED WIRED THERMOSTAT WITH GATEWAY FOR BMCS INTEGRATION.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE UNIT WITH INTEGRAL CONDENSATE PUMP.
5. PROVIDE WITH CONDENSATE PUMP EQUAL TO ASPEN MINI WHITE. PUMP REQUIRES A SEPARATE 120V POWER SOURCE.
6. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT.
7. PROVIDE CEILING MOUNTED CASSETTE UNIT.
8. PROVIDE WALL MOUNTED UNIT.

DUCTED MINI-SPLIT - INDOOR UNIT

MARK	FAN				CURRENT CHARAC.			AIR TEMPERATURE (°F)		COOLING				HEATING			BASIS OF DESIGN		REMARKS
	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT.STATIC PRESSURE (IN. W.C.)	HORSE POWER	V	P	F	ENTERING DRY BULB	ENTERING WET BULB	MIN. TOTAL CAPACITY (BTUH)	MIN. SENS. CAPACITY (BTUH)	MINIMUM EER2/ SEER2	NUMBER OF STAGES	ENTERING AIR TEMP.(°F)	MINIMUM CAPACITY (BTUH)	NUMBER OF STAGES	MANUFACTURER	MODEL	
MFCU-1	600	90	0.20	0.1	208	1	60	79.0	64.6	18,000	12,200	11.3/16.0	MOD	61.3	20,000	MOD	DAIKIN	FXSA18A	1,2,3,4,5,6
MFCU-2	800	150	0.20	0.1	208	1	60	80.0	65.1	30,000	20,300	11.3/16.0	MOD	59.2	34,000	MOD	DAIKIN	FXSA30A	1,2,3,4,5,6
MFCU-3	950	225	0.20	0.1	208	1	60	81.4	65.7	34,200	23,100	11.3/16.0	MOD	56.4	37,000	MOD	DAIKIN	FXSA36A	1,2,3,4,5,6

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. PROVIDE WITH WALL-MOUNTED WIRED THERMOSTAT WITH GATEWAY FOR BMCS INTEGRATION.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. SUSPEND UNIT WITH FOUR THREADED HANGER RODS ATTACHED TO TWO UNISTRUT RUNNERS SECURED TO STRUCTURE. PROVIDE SPRING ISOLATION. REFER TO MANUFACTURER FOR MORE DETAILS.
5. PROVIDE UNIT WITH INTEGRAL CONDENSATE PUMP.
6. PROVIDE WITH AUXILIARY DRAIN PAN AND CONDENSATE OVERFLOW SWITCH.

AIR COOLED CONDENSING UNIT

MARK	MIN. TOTAL CAPACITY (BTUH)	OUTDOOR AIR TEMP (°F)	MINIMUM EER2/ SEER2	MIN HEAT CAPACITY (BTUH)	MIN COP	CURRENT CHARAC. V	P	F	RELATED UNIT MARK	BASIS OF DESIGN MANUFACTURER	MODEL	MCA	MOCP	REMARKS
CU-1	45,000	103	9.0/16.0	47,500	8.5	208	1	60	FCU-1	DAIKIN	RXTA48A	29.4	30	1,2,3,4
CU-2	45,000	103	9.0/16.0	47,500	8.5	208	1	60	FCU-2	DAIKIN	RXTA48A	29.4	30	1,2,3,4
CU-3	45,000	103	9.0/16.0	47,500	8.5	208	1	60	MFCU-2/DMS-1/DMS-2/ DMS-4	DAIKIN	RXTA48A	29.4	30	1,2,3,4,6
CU-4	34,200	103	11.3/16.0	37,000	8.5	208	1	60	MFCU-3	DAIKIN	RXTA36A	19.8	20	1,2,3,4
CU-5	34,200	103	11.3/16.0	37,000	8.5	208	1	60	MFCU-1/DMS-3	DAIKIN	RXTA36A	19.8	20	1,2,3,4,6
CU-6	10,900	103	12.0/21.0	-	-	208	1	60	DMS-5	DAIKIN	RKF12A	12.4	15	1,2,3,5

GENERAL NOTES:
1. MINIMUM RECOMMENDED CLEARANCE AROUND ROOFTOP UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR CONDENSER AIR FLOW AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH WIND BAFFLES AND LOW AMBIENT CONTROL DOWN TO 17°F.
2. PROVIDE WITH DISCONNECT SWITCH.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE HEAT PUMP UNIT.
5. PROVIDE COOLING ONLY UNIT.
6. PROVIDE MANUFACTURER'S BRANCH JOINT PIPING KIT AS REQUIRED FOR MULTI-PORT SYSTEM.

FAN SCHEDULE

MARK	LOCATION	CFM	EXT. STATIC PRESSURE (IN.W.C.)	MAX RPM	HORSE POWER	CURRENT CHAR. V	P	F	LOCALLY SWITCHED	INTERLOCK WITH	FAN TYPE	DRIVE TYPE	MANUFACTURER	MODEL NUMBER	REMARKS
EF-1	TOILET - A107	75	0.20	824	0.01	120	1	60	LIGHTS	-	CEILING	DIRECT	GREENHECK	SP-A90	1,2,3,4,5,6
EF-2	TOILET - A108	75	0.20	824	0.01	120	1	60	LIGHTS	-	CEILING	DIRECT	GREENHECK	SP-A90	1,2,3,4,5,6
EF-3	CUSTODIAL - A114	100	0.20	927	0.01	120	1	60	LIGHTS	-	CEILING	DIRECT	GREENHECK	SP-A110	1,2,3,4,5,6
EF-4	TOILET - A115	100	0.20	614	0.01	120	1	60	LIGHTS	-	CEILING	DIRECT	GREENHECK	SP-A200	1,2,3,4,5,6
EF-5	ELECT. - A120	200	0.20	1,241	0.05	120	1	60	THERMOSTAT (BMCS)	L-1/L-2	INLINE	DIRECT	GREENHECK	CSP-A390-VG	1,2,3,4,5

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MINIMUM RECOMMENDED CLEARANCE AROUND UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. REFERENCE MANUFACTURER FOR INSTALLATION GUIDE.
2. PROVIDE BACKDRAFT DAMPER.
3. PROVIDE WITH DISCONNECT SWITCH.
4. SUSPEND UNIT WITH FOUR THREADED HANGER RODS ATTACHED TO TWO UNISTRUT RUNNERS SECURED TO STRUCTURE. PROVIDE NEOPRENE ISOLATION. REFER TO MANUFACTURER FOR MORE DETAILS.
5. PROVIDE WITH FAN SPEED CONTROLLER.
6. PROVIDE WITH DECORATIVE FACE GRILLE.

VLK

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STATE OF TEXAS
KEITH W. GASSMAN
89636
LICENSED
PROFESSIONAL ENGINEER
05/19/2025

ISSUED: May 19, 2025

Revision No. Revision Date

Director
Approver
Designer
Designer
Proj. Arch.
Checker

Drawn By
Author
Quality Control

24-103.00

MECHANICAL SCHEDULES

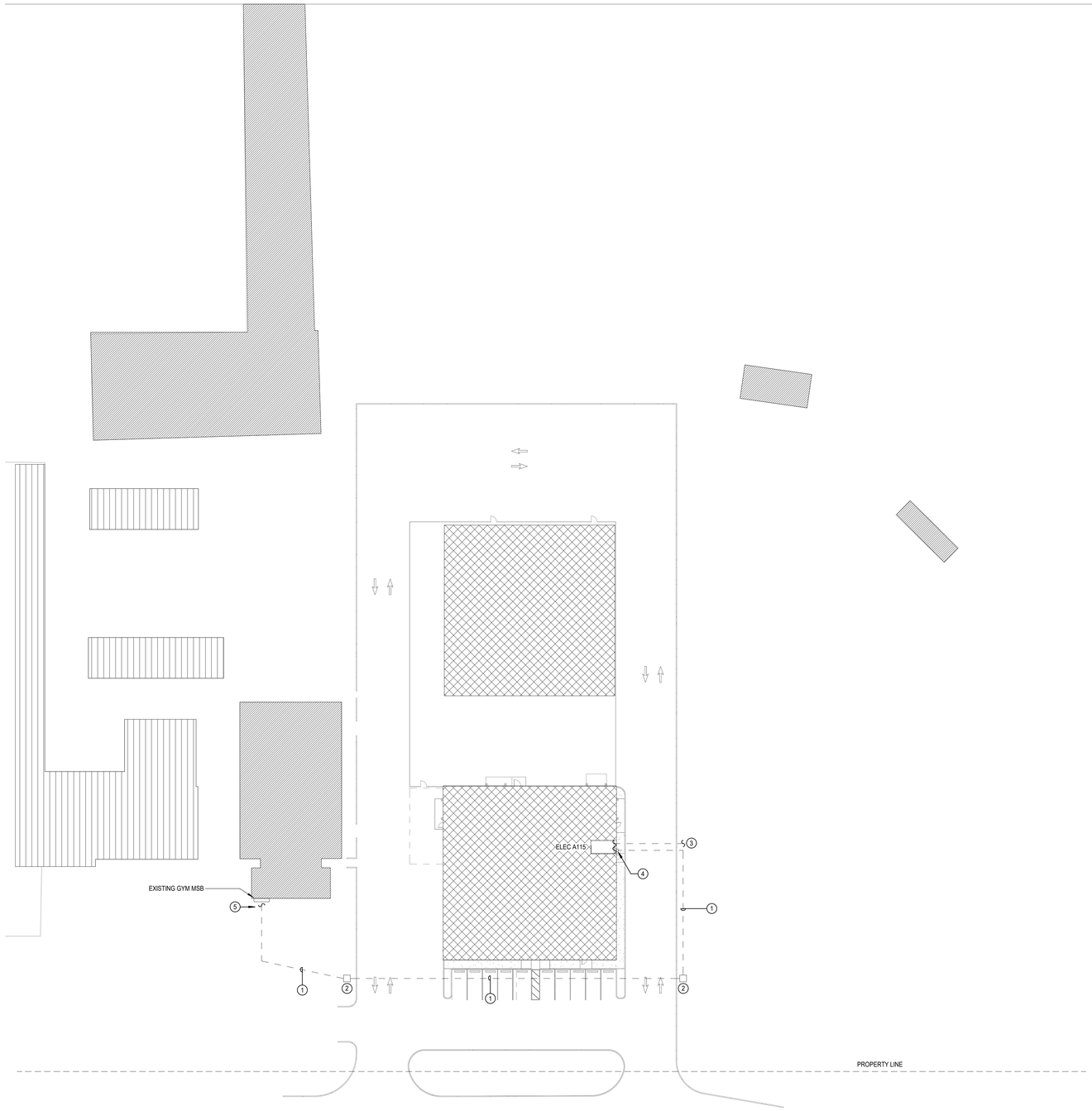
M7.11

POWER GENERAL NOTES

1	ELECTRICAL CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PROBLEMS PERTAINING TO CIRCUIT AVAILABILITY OR LOAD CAPACITY PRIOR TO INSTALLATION.
2	CONTRACTOR SHALL REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATION OF MECHANICAL AND PLUMBING EQUIPMENT AND SCHEDULES. CONTRACTOR SHALL PROVIDE ALL ELECTRICAL DISCONNECTS, BRANCH CIRCUITRY, STARTERS/CONTROLS, CIRCUIT BREAKERS AND CONNECTIONS REQUIRED TO POWER EQUIPMENT.
3	CONTRACTOR TO COORDINATE EXACT LOCATION OF DISCONNECT SWITCHES, JUNCTION BOXES AND SINGLE POLE TOGGLE SWITCHES FOR MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.
4	ALL RECEPTACLES LOCATED WITHIN 6'-0" OF SINK SHALL BE GFCI TYPE.
5	CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF RECEPTACLES AND SWITCHES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ELECTRICAL ROUGH-IN. ADJUST DEVICES AS REQUIRED SO THAT NO DEVICES ARE INSTALLED BEHIND CABINETS OR SHELVES.
6	ALL BLANK FACE GFCI DEVICES SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION AND NOT BEHIND EQUIPMENT.
7	CONTRACTOR SHALL REFER TO TECHNOLOGY SERIES CONSTRUCTION DOCUMENTS FOR EXACT LOCATION AND REQUIREMENTS OF ALL LOW VOLTAGE BACK BOXES, FITTINGS, AND CONDUITS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
8	ALL EXTERIOR OUTLETS SHALL BE WP GFI IN METAL WHILE-IN -USE LOCKABLE ENCLOSURE WITH EXCEPTION TO INTEGRAL RTU RECEPTACLES.

ELECTRICAL KEYED NOTES

1	CONDUITS FOR ADP. REFER TO ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
2	PULL BOX WITH HEAVY DUTY COVER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3	PROVIDE UNDERGROUND CONDUIT WITH STUB-UP AND PULLSTRING FOR 2ND PHASE WAREHOUSE FROM PANEL ADP IN ELEC A115. CONDUIT ROUTING AND DEPTH TO ABIDE BY NEC 230.6.
4	APPROXIMATE LOCATION OF SERVICE DISCONNECT. REFER TO ONE LINE AND FLOOR PLANS FOR EACH PROJECT FOR MORE INFORMATION.
5	INTERCEPT EXISTING STUB-UP CONDUITS WITH PULLWIRE IN THIS APPROXIMATE LOCATION FROM EXISTING GYM MSB TO ROUTE NEW FEEDER TO PANEL 'ADP.' REFER TO ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION.



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1 **ELECTRICAL SITE PLAN**
Scale: 1" = 30'-0"

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KEITH W. GASSMAN
89636
LICENSED
PROFESSIONAL ENGINEER
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ELECTRICAL SITE PLAN

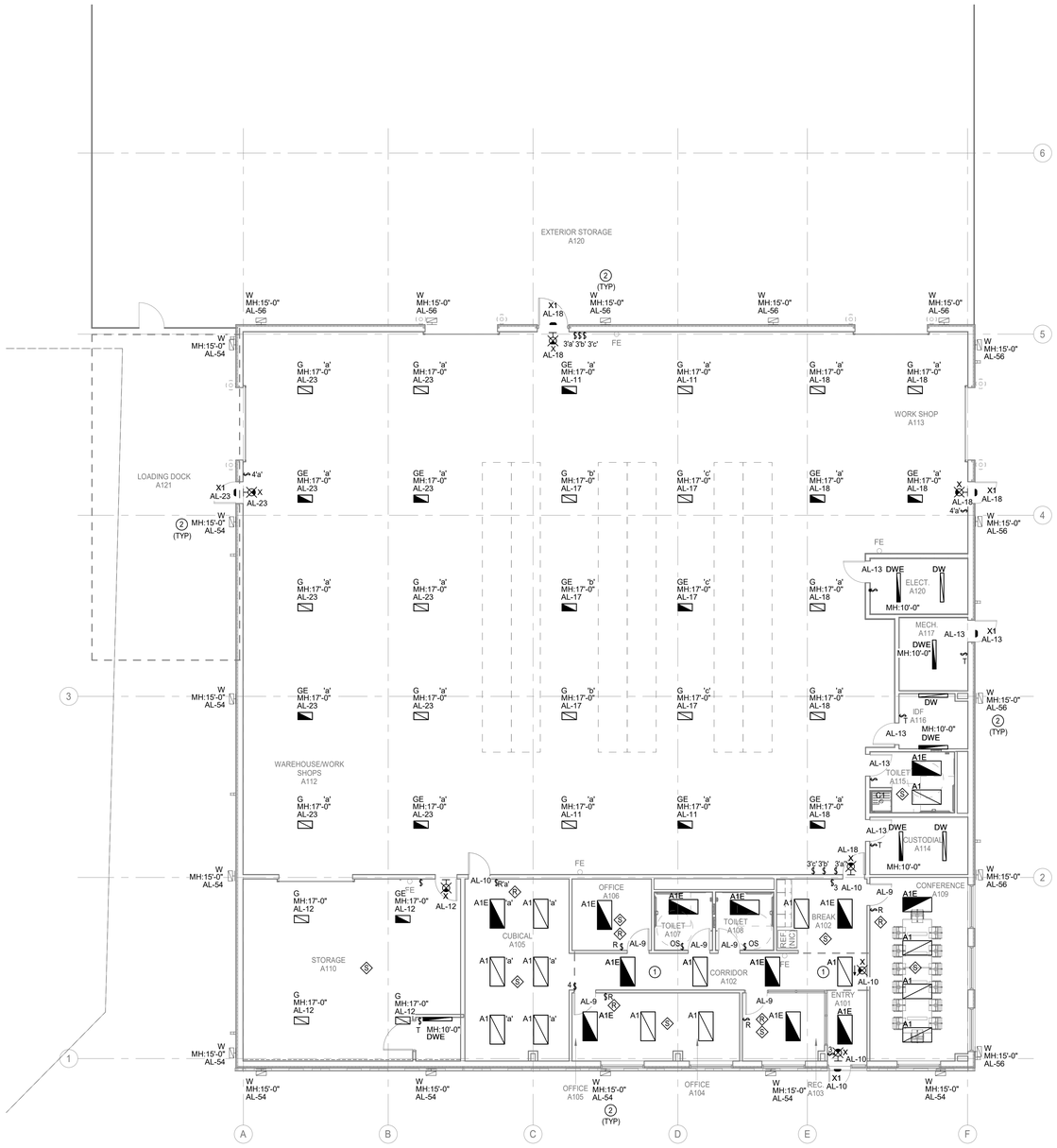
E1.00

ELECTRICAL KEYED NOTES

1	LIGHTING CONTROLS IN THIS AREA TO BE FULL AUTOMATIC ON PER 2018 IECC C405.2.1.1
2	EXTERIOR LIGHTING CIRCUIT TO BE CONTROLLED VIA BMCS ROUTED THROUGH CONTACTOR.

LIGHTING GENERAL NOTES

1	PROVIDE PULL STRINGS IN ALL EMPTY CONDUITS.
2	ALL JUNCTION BOXES, CONDUITS, AND WIRES SHALL BE SIZED PER NEC.
3	CONNECT ALL EXIT LIGHTS AHEAD OF ANY LOCAL OR AUTOMATIC SWITCHING DEVICE. PROVIDE POWER VIA NEAREST LIGHTING CIRCUIT NOT TO EXCEED 16A.
4	REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION & MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES SHOWN ON THIS DRAWING.
5	REFER TO SHEETS E6.00 FOR LIGHTING FIXTURE SCHEDULE AND LIGHTING CONTACTOR SCHEDULE.
6	ELECTRICAL CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PROBLEMS PERTAINING TO CIRCUIT AVAILABILITY OR LOAD CAPACITY PRIOR TO INSTALLATION.
7	ELECTRICAL CONTRACTOR SHALL CONFIRM COMPATIBILITY OF ALL LIGHTING CONTROL SYSTEMS.
8	PROVIDE A CONSTANT HOT FROM PANEL BOARD DIRECTLY TO ALL EMERGENCY BATTERY PACKS IN EMERGENCY LIGHTING FIXTURES AND EXIT SIGNS. EMERGENCY LIGHTING FIXTURES SHALL TURN ON TO FULL BRIGHTNESS IN CASE OF POWER LOSS.
9	ALL CLASSROOMS AND SPACES DO NOT REQUIRE DAYLIGHT HARVESTING CONTROLS, UNLESS NOTED ON PLAN, PER 2018 IECC C405.2.3 WATTAGE REQUIREMENT.
10	CORRIDOR LIGHTING DOES NOT REQUIRE OCCUPANCY SENSING DEVICES AND/OR DAYLIGHT HARVESTING CONTROLS PER 2018 IECC C405.2 REGARDING EXIT PASSAGEWAYS AND SAFETY/SECURITY REQUIREMENTS.
11	LOWER CASE LETTER INDICATES SWITCHING SCHEME.
12	ALL ABOVE CEILING POWER PACKS TO BE MOUNTED ABOVE ROOM DOORS REGARDLESS OF SCHEMATIC DESIGN SHOWN ON FLOOR PLANS. E.C. SHALL ENSURE INSTALLATION OF ALL POWER PACKS OCCUR ABOVE ROOM DOORS.



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1 **LIGHTING PLAN - LEVEL 1 - UNIT A**
Scale: 1/8" = 1'-0"

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KEITH W. GASSMAN
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ARCHITECT
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WAREHOUSE - LIGHTING PLAN - UNIT A

E3.11

MECHANICAL EQUIPMENT SCHEDULE

TAG	CIRCUIT	DISCONNECT	REMARKS
CU-1	AL-109,111	2P/30A/NF/WP	E
CU-2	AL-112,114	2P/30A/NF/WP	E
CU-3	AL-113,115	2P/30A/NF/WP	E
CU-4	AL-43,45	2P/20A/NF/WP	E, H
CU-5	AL-46,48	2P/20A/NF/WP	E, H
CU-6	AL-42,44	2P/20A/NF/WP	D, E, H
DMS-1	AL-39,41	2P/20A/NF	E, H
DMS-2	AL-97,99	2P/20A/NF	E, H
DMS-3	AL-100,102	2P/20A/NF	E, H
DMS-4	AL-101,103	2P/20A/NF	E, H
DMS-5		2P/30A/NF/WP	G
EF-1	AL-2	1P/20A/NF	C
EF-2	AL-26	1P/20A/NF	C
EF-3	AL-21	1P/20A/NF	C
EF-4	AL-29	1P/20A/NF	C
EF-5	AL-4	1P/20A/NF	C
EUH-1	AL-32,34	2P/20A	E, H
FCU-1	AL-35,37	2P/20A/NF	E, H
FCU-2	AL-36,38	2P/20A/NF	E, H
MFCU-1	AL-104,106	2P/20A/NF	E, H
MFCU-2	AL-105,107	2P/20A/NF	E, H
MFCU-3	AL-108,110	2P/20A/NF	E, H

MECHANICAL ROOFTOP EQUIPMENT NOTES

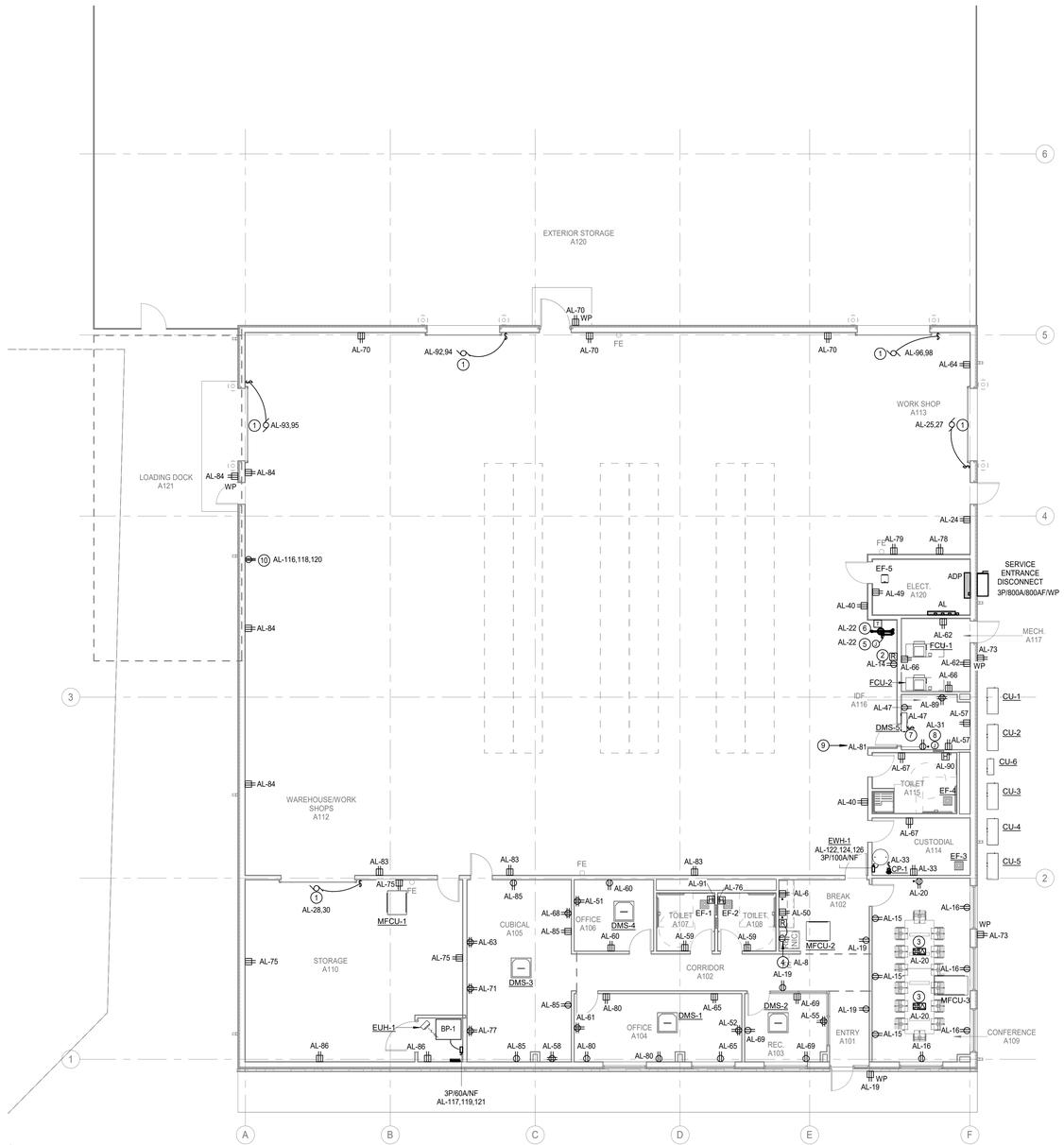
A	DISCONNECT IS FURNISHED WITH UNIT.
B	GFCI RECEPTACLE IS FURNISHED WITH UNIT AND POWERED AS SHOWN ON PLAN.
C	DISCONNECT TO BE MOTOR-RATED SWITCH.
D	OUTDOOR UNIT OF MINI-SPLIT SYSTEM TO POWER INDOOR UNIT. REFER TO INDOOR FLOOR PLANS FOR ADDITIONAL INFORMATION.
E	FURNISH AND INSTALL DISCONNECT ADJACENT TO UNIT.
F	PROVIDE LOCAL MEANS OF DISCONNECT AT EQUIPMENT AS INDICATED IN SCHEDULE. REFER TO FLOOR PLAN FOR LOCATION OF VFD.
G	INDOOR UNIT OF MINI-SPLIT SYSTEM TO BE POWERED BY OUTDOOR UNIT.
H	DISCONNECT TO BE 2-POLE SWITCH.

ELECTRICAL KEYED NOTES

1	PROVIDE POWER AND "OPEN-CLOSE-STOP" KEY OPERATED SWITCH FOR OVERHEAD COIL DOOR. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH DOOR MANUFACTURER AND ARCHITECT PRIOR TO ELECTRICAL ROUGH-IN.
2	PROVIDE FLUSH MOUNTED REMOTE GFCI DEVICE ADJACENT TO DRINKING FOUNTAIN(S). REFER TO DRINKING FOUNTAIN DETAIL FOR ADDITIONAL REQUIREMENTS.
3	CONCEALED SERVICE MULTI-ACCESS FLOOR BOX WITH CAPACITY FOR WIRING DEVICES AND ROUGH-IN.
4	PROVIDE POWER TO REFRIGERATOR. PROVIDE REMOTE GFCI RESET BUTTON.
5	PROVIDE JUNCTION BOX ABOVE CEILING FOR CONNECTION OF EMERGENCY SHOWER WATER FLOW DETECTION EQUIPMENT. PROVIDE LOW VOLTAGE TRANSFORMER AS REQUIRED. COORDINATE INSTALLATION WITH DIVISION 22. COORDINATE WITH OWNER FOR INTERLOCKING WITH SECURITY SYSTEM.
6	PROVIDE WHEELLOCK# RSSR-2475C-NW EMERGENCY SHOWER WATER FLOW INDICATOR LIGHT. COORDINATE CONNECTION TO FLOW SWITCH WITH DIVISION 22. COORDINATE LIGHT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
7	POWER FOR CONDENSATE PUMP. SWITCH TO BE PROVIDED FOR AS MEANS OF DISCONNECT.
8	PROVIDE POWER FOR ACP AT THIS APPROXIMATE LOCATION. COORDINATE POWER REQUIREMENTS AND LOCATION WITH ARCHITECT.
9	PROVIDE POWER FOR INTRUSION DETECTION PANEL AT THIS APPROXIMATE LOCATION. COORDINATE POWER REQUIREMENTS AND LOCATION WITH ARCHITECT.
10	PROVIDE POWER FOR FORKLIFT CHARGER AT THIS APPROXIMATE LOCATION. COORDINATE POWER REQUIREMENTS WITH MANUFACTURER AND LOCATION WITH ARCHITECT PRIOR TO ELECTRICAL ROUGH-IN.

POWER GENERAL NOTES

1	ELECTRICAL CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PROBLEMS PERTAINING TO CIRCUIT AVAILABILITY OR LOAD CAPACITY PRIOR TO INSTALLATION.
2	CONTRACTOR SHALL REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATION OF MECHANICAL AND PLUMBING EQUIPMENT AND SCHEDULES. CONTRACTOR SHALL PROVIDE ALL ELECTRICAL DISCONNECTS, BRANCH CIRCUITRY, STARTERS/CONTROLS, CIRCUIT BREAKERS AND CONNECTIONS REQUIRED TO POWER EQUIPMENT.
3	CONTRACTOR TO COORDINATE EXACT LOCATION OF DISCONNECT SWITCHES, JUNCTION BOXES AND SINGLE POLE TOGGLE SWITCHES FOR MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.
4	ALL RECEPTACLES LOCATED WITHIN 6'-0" OF SINK SHALL BE GFCI TYPE.
5	CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF RECEPTACLES AND SWITCHES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ELECTRICAL ROUGH-IN. ADJUST DEVICES AS REQUIRED SO THAT NO DEVICES ARE INSTALLED BEHIND CABINETS OR SHELVES.
6	ALL BLANK FACE GFCI DEVICES SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION AND NOT BEHIND EQUIPMENT.
7	CONTRACTOR SHALL REFER TO TECHNOLOGY SERIES CONSTRUCTION DOCUMENTS FOR EXACT LOCATION AND REQUIREMENTS OF ALL LOW VOLTAGE BACK BOXES, FITTINGS, AND CONDUITS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
8	ALL EXTERIOR OUTLETS SHALL BE WP GFI IN METAL WHILE-IN -USE LOCKABLE ENCLOSURE WITH EXCEPTION TO INTEGRAL RTU RECEPTACLES.



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1 **POWER PLAN - LEVEL 1 - UNIT A**
Scale: 1/8" = 1'-0"

VLK

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STATE OF TEXAS
KEITH W. GASSMAN
89636
REGISTERED
ENGINEER
05/19/2025

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Approver	Author
Designer	Quality Control
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WAREHOUSE - POWER PLAN - UNIT A

E3.21

SYMBOL SCHEDULE

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
LIGHTING (LETTER DENOTES TYPE - SEE LIGHT FIXTURE SCHEDULE)	
	LIGHT FIXTURE
	FIXTURE ON EMERGENCY CIRCUIT
	DOWNLIGHT FIXTURE
H	LIGHT FIXTURE - WALL MOUNTED
	DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT
H	LIGHT FIXTURE - WALL MOUNTED ON EMERGENCY CIRCUIT
	EXIT LIGHT-CEILING MTD WITH DIRECTIONAL ARROWS AS REQUIRED
H	EXIT LIGHT-WALL MTD WITH DIRECTIONAL ARROWS AS REQUIRED
SWITCHES	
$	LINE VOLTAGE SINGLE POLE SWITCH
$2	LINE VOLTAGE 2-POLE SWITCH
$3	LINE VOLTAGE 3-WAY SWITCH
$4	LINE VOLTAGE 4-WAY SWITCH
$K	LINE VOLTAGE KEYED SWITCH
$3K	LINE VOLTAGE KEYED 3-WAY SWITCH
$D	LINE VOLTAGE WALL DIMMER SWITCH, SIZE AND TYPE AS REQUIRED
$VD	LINE VOLTAGE WALL MOUNTED DIMMER SWITCH WITH VACANCY SENSOR. MANUAL ON / AUTO OFF.
$V	LINE VOLTAGE WALL MOUNTED SWITCH WITH VACANCY SENSOR. MANUAL ON / AUTO OFF.
$OC	LINE VOLTAGE WALL MOUNTED SWITCH WITH VACANCY SENSOR. AUTO ON / AUTO OFF.
$P	LINE VOLTAGE SWITCH WITH PILOT LIGHT
$MC	MOMENTARY CONTACT SWITCH
[B]	PUSH BUTTON
$TH	6-HOUR TIMER SWITCH WITH HOLD
$T	6-HOUR TIMER SWITCH WITH NO HOLD
G	20 AMP GENERATOR TRANSFER DEVICE
LOW VOLTAGE LIGHTING CONTROLS	
$R	LOW VOLTAGE LIGHTING CONTROLLER WALL SWITCH
$B	BMCS TIMER LOCAL OVERRIDE SWITCH
P	CEILING MOUNTED PHOTO SENSOR
V	CEILING MOUNTED VACANCY SENSOR, MANUAL ON / AUTO OFF
S	CEILING MOUNTED OCCUPANCY SENSOR, AUTO ON / AUTO OFF
R	LIGHTING CONTROLLER WITH GTD. ZONES AS REQUIRED.
RECEPTACLES AND OUTLETS	
	SIMPLEX RECEPTACLE
	DUPLEX RECEPTACLE
	POWER POLE
	125/250 VOLT, 1 PHASE, 3-WIRE, 20 AMPS UNLESS NOTED OTHERWISE
	CEILING MOUNTED RECEPTACLE
	DOUBLE DUPLEX IN 2-GANG BOX WITH SINGLE COVER PLATE
	DOUBLE DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE IN 2-GANG BOX WITH SINGLE COVER PLATE
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
	FLUSH FLOOR CONCEALED SERVICE DUPLEX RECEPTACLE OUTLET
	FLUSH FLOOR CONCEALED SERVICE DOUBLE DUPLEX RECEPTACLE OUTLET
	CONCEALED SERVICE MULTI-ACCESS FLOOR BOX WITH WIRING DEVICES AS INDICATED ON DRAWINGS. SIZE TO MATCH DEVICE QUANTITIES.
[R]	REMOTE BLANK FACE GFCI DEVICE.
U	PROVIDE DUPLEX RECEPTACLE WITH (2) USB CHARGING PORTS.
CR	E.C. TO PROVIDE ROUGH-IN FOR CARD READER JUNCTION BOX. REFER TO TECHNOLOGY SHEETS FOR ADDITIONAL INFORMATION.

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
MISCELLANEOUS EQUIPMENT	
FACP	FIRE ALARM CONTROL PANEL
ANNC	FIRE ALARM REMOTE ANNUCIATOR
T	TRANSFORMER FOR DOOR BELL/BUZZER
	CHIME/BUZZER
MOTOR CONTROLLERS AND EQUIPMENT	
	MOTOR, MAKE FINAL MOTOR CONNECTION
	3-PHASE MOTOR, MAKE FINAL MOTOR CONNECTION
	DISCONNECT SWITCH AS REQUIRED
F	FUSED DISCONNECT SWITCH AS REQUIRED
C	COMBINATION MOTOR STARTER/DISCONNECT SWITCH AS REQUIRED
	MOTOR STARTER
$M	MANUAL MOTOR SWITCH AS REQUIRED
	PREWIRED DEVICE, MAKE ELECTRICAL FINAL CONNECTIONS
	VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER FURNISHED BY DIVISION 23 AND INSTALLED BY DIVISION 26
ELECTRICAL EQUIPMENT	
	ELECTRICAL DISTRIBUTION OR PANELBOARD
	DRY TYPE TRANSFORMER
CIRCUITING	
	CONDUIT
	CONDUIT BELOW FLOOR, SLAB, OR GRADE
SUBSCRIPTS AND ABBREVIATIONS	
WP	INDICATES WEATHERPROOF
WG	INDICATES WIREGUARD
H	INDICATES HORIZONTAL
TL	INDICATES TWIST LOCK
NL	LIGHT FIXTURE ON NIGHT LIGHT CIRCUIT
ERMS	ENERGY REDUCTION MAINTENANCE SWITCH
1-L	REFER TO ONE-LINE DIAGRAM
	INDICATES WALL MOUNTED DEVICE
	NEXT TO ANY SYMBOL INDICATES FINAL ROUGH-IN FIELD COORDINATION BY CONTRACTOR WITH ARCHITECTURAL MILLWORK DRAWINGS AND OTHER TRADES

GENERAL NOTES:

-ALL EXTERIOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF NEMA-3R MINIMUM.

CONTRACTOR NOTES:

IT IS THE RESPONSIBILITY OF THE CONTRACTORS TO NOTIFY THE ARCHITECT OF ANY DISCREPANCIES ENCOUNTERED ON THE PLANS OR IN EXISTING SITE CONDITIONS PRIOR TO COMMENCEMENT OF WORK.

CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND SATISFY THEMSELVES AS TO THE NATURE AND SCOPE OF THE WORK. THE BASE PROPOSAL SHALL INCLUDE MODIFICATIONS TO SYSTEMS AND DEVICES AS REQUIRED BY STATE AND LOCAL CODES WHETHER INDICATED OR NOT ON CONTRACT DOCUMENTS. THE SUBMISSIONS OF A PROPOSAL WILL BE EVIDENCE THAT SUCH AN EXAMINATION AND COMPLIANCE WITH GOVERNING CODES/REQUIREMENTS HAS BEEN MADE. LATER CLAIMS FOR LABOR, EQUIPMENT, OR MATERIALS REQUIRED, OR FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORSEEN HAD AN EXAMINATION AND CODE/REQUIREMENTS REVIEW BEEN MADE, WILL NOT BE ACCEPTED.

FIRE DETECTION AND FIRE ALARM NOTE:

A LICENSED FIRE ALARM PLANNING SUPERINTENDENT CERTIFIED TO A MINIMUM LEVEL III, IN THE SUB FIELD OF FIRE ALARM SYSTEMS THROUGH THE NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLIGIES (NICET) SHALL PROVIDE PLANS AND CALCULATIONS FOR A MANUAL AND AUTOMATIC FIRE DETECTION AND ALARM SYSTEM TO COMPLY WITH THE BUILDING SPACE LAYOUT, BUILDING OCCUPANCY, NFPA 72, LOCAL AND STATE CODE REQUIREMENTS. FURNISH AND INSTALL ALL REQUIRED FIRE ALARM DEVICES, AS REQUIRED BY CODE. VERIFY EXACT REQUIREMENTS IN THE FIELD. COORDINATE ALL LOCATIONS WITH DRAWINGS APPROVED BY AUTHORITY HAVING JURISDICTION PRIOR TO INSTALLATION. ALL WORK SHALL BE INCLUDED WITHIN BASE BID.

BUILDING CODE LIST

PROJECT IS DESIGNED TO COMPLY WITH 2018 INTERNATIONAL BUILDING CODE, 2017 NATIONAL ELECTRICAL CODE, 2018 INTERNATIONAL ENERGY CONSERVATION CODE, AND IN ACCORDANCE WITH ALL STATE AND LOCAL AMENDMENTS. ALL INSTALLATIONS TO COMLPY WITH LATEST CODES.

LIGHTING FIXTURE SCHEDULE NOTES

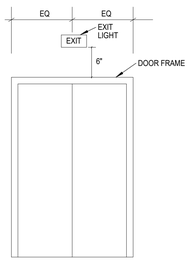
1	FIXTURES SHOWN ON THE FLOORPLAN HAVING A DESIGNATION OF "E" FOLLOWING THE BASE DESIGNATION (I.E. - A FIXTURE TYPE "AE, C2E, FE") AND/OR A HALF SHADED REGION SHALL BE THE BASE FIXTURE TYPE EQUIPPED WITH THE APPROPRIATE BATTERY BACK-UP. BATTERY BACK-UPS SHALL BE INTEGRAL TO THE FIXTURE AND REMOTE SHALL BE SELECTED ONLY IN INSTANCES WHERE IT IS SPECIFIED OR WHEN IT IS THE ONLY AVAILABLE EMERGENCY OPTION. THE LOCATION OF REMOTE BATTERY BACKUPS SHALL BE SELECTED BY THE OWNER/ARCHITECT PRIOR TO INSTALLATION BY THE CONTRACTOR.
2	ALL REQUIRED TEST SWITCHES FOR THE BATTERY BACK-UPS SHALL BE INTEGRAL TO THE FIXTURE.
3	REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS NOT INDICATED IN THE LIGHTING FIXTURE SCHEDULE. WHERE THERE IS AN INCONSISTENCY BETWEEN THE LIGHTING FIXTURE SCHEDULE AND THE SPECIFICATIONS, THE GREATER QUANTITY OR HIGHER QUALITY OF WORK SHALL BE INCLUDED IN THE PROPOSAL.
4	UNLESS OTHERWISE INDICATED ON THE SCHEDULE ABOVE, THE ARCHITECT/OWNER SHALL SELECT ALL FINISHES, COLORS, AND TRIMS.
5	ALL LED FIXTURE BOARDS AND DRIVERS SHALL BE OF THE LATEST GENERATION, BASED UPON THE INDIVIDUAL MANUFACTURER'S STATED LITERATURE. IF A "GEN 5" IS AVAILABLE, "GEN 4" FIXTURES ARE NOT ACCEPTABLE.
6	EXIT SIGNS AND EMERGENCY BATTERY BACK-UPS SHALL BE CONNECTED TO THE NEAREST LIGHTING CIRCUIT AHEAD OF ALL SWITCHING AS REQUIRED TO MAINTAIN THE BATTERIES AT FULL CHARGE. THE CONTRACTOR SHALL PROVIDE ALL ADDITIONAL WIRING AS REQUIRED.
7	LIGHTING FIXTURE MANUFACTURERS OTHER THAN THOSE LISTED IN THE LIGHTING FIXTURE SCHEDULE AND DESIRING TO BID THIS PROJECT SHALL REQUEST PRIOR APPROVAL OF THE FIXTURES THEY WISH TO SUBSTITUTE. PRIOR APPROVAL REQUEST SHALL INCLUDE FIXTURE CUT SHEETS.
8	FOR PRIOR APPROVALS AND SUBMITTALS THAT DEVIATE FROM NOMINAL WATTAGE AND/OR DELIVERED LUMENS, IT SHALL BE UP THE ENGINEER'S SOLE DISCRETION TO APPROVE OR DECLINE THESE FIXTURES BASED ON ANY AND ALL FACTORS INCLUDING BUT NOT LIMITED TO INTENDED LIGHTING LEVELS FOR EACH SPACE AND IMPACT ON THE OVERALL ELECTRICAL POWER SYSTEM.
9	ALL LIGHTING SPECIFIED SHALL BE 4000K INTERIOR UNLESS NOTED OTHERWISE.
10	THE CONTRACTOR SHALL PROVIDE ALL HARDWARE AND ACCESSORIES AS REQUIRED TO INSTALL FIXTURES IN LOCATIONS AS ILLUSTRATED WITH MOUNTING METHODS DESIRED.
11	WHEN A UNIVERSAL (120-277V) VOLTAGE OPTION IS AVAILABLE, IT SHALL BE PROVIDED. OTHERWISE PROVIDE AS INDICATED IN SCHEDULE.
12	FOR ALL SUSPENDED FIXTURES, COORDINATE THE EXACT MOUNTING ELEVATION ABOVE FINISHED FLOOR WITH ARCHITECT PRIOR TO INSTALLATION. PROVIDE SUSPENSION HARDWARE IN LENGTHS AS REQUIRED.
13	ALL EXTERIOR LIGHT FIXTURES RECESSED IN A CANOPY OR SURFACED MOUNTED DIRECTLY TO THE BOTTOM OF A CANOPY SHALL BE UL OR ETL LISTED AS WET LOCATION. WHERE SPECIFICALLY STATED IN THE LIGHTING FIXTURE SCHEDULE AS "DAMP LOCATION" FIXTURES AND PROTECTED BY THE BUILDING STRUCTURE FROM FALLING OR WIND DRIVEN RAIN OR SNOW, THEY MAY BE EITHER DAMP OR WET LOCATION LISTED.
14	ALL EXTERIOR LIGHT FIXTURES NOT RECESSED IN A CANOPY OR SURFACED MOUNTED DIRECTLY TO THE BOTTOM OF A CANOPY SHALL BE UL OR ETL LISTED AS WET FROM ABOVE LOCATION.

LIGHTING FIXTURE SCHEDULE

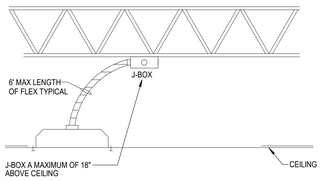
Type Mark	CATALOG NUMBER MANUFACTURER	CATALOG NUMBER MODEL	MOUNTING	LAMP TYPE	CCT	CRI	VOLTAGE	LOAD	REMARKS
A1	METALUX	24CZ2-40VHE-UNV-L840-CD1	RECESSED	4042L LED	4000 K	80	120 V	26 W	IC RATED 2'X4' LED CENTER BASKET TROFFER
A1E	METALUX	24CZ2-40VHE-UNV-L840-CD1-EL14WSD	RECESSED	4042L LED	4000 K	80	120 V	26 W	SAME AS FIXTURE TYPE A EXCEPT WITH 90-MINUTE EMERGENCY BATTERY PACK
C1	HALO	HC6CP20D010	RECESSED	2000L LED	4000 K	80	120 V	21 W	IC RATED 6-INCH MEDIUM BEAM DOWNLIGHT.
DW	METALUX	4ILED-LD55-W-UNV-L840-CD1	SURFACE / PENDANT	5000L LED	4000 K	80	120 V	31 W	4' LENSED LED STRIPLIGHT WITH WIREGUARD AND 0-10V DIMMING DRIVER.
DWE	METALUX	4ILED-LD55-W-UNV-L840-CD1-EL14W	SURFACE / PENDANT	5000L LED	4000 K	80	120 V	31 W	SAME AS FIXTURE TYPE DW EXCEPT WITH 90-MINUTE EMERGENCY BATTERY PACK
G	METALUX	BMK-18-WCL-UNV-L840-CD-FINISH-C10-MS360-U	PENDANT	18000L LED	4000 K	80	120 V	114 W	STEM MOUNTED ROUND LED HIGHBAY WITH INTEGRAL OCCUPANCY SENSOR
GE	METALUX	BMK-18-WCL-UNV-L840-EL20-W-REM-CD-FINISH-C10-MS360-U	PENDANT	18000L LED	4000 K	80	120 V	114 W	SAME AS FIXTURE TYPE G EXCEPT WITH 90-MINUTE EMERGENCY BATTERY PACK
W	MCGRAW-EDISON	IST-SA1C-730-U-T4FT-FINISH	WALL	4559L LED	3000 K	80	120 V	34 W	IDA APPROVED MOUNT FIXTURE AT +15'-0" AFF
X	EVENLITE	AUR-FINISH	WALL / SURFACE	LED	4000 K	80	120 V	2 W	UNIVERSAL LED EXIT SIGN WITH WHITE HOUSING, RED LETTERING AND EMERGENCY BATTERY BACK-UP. OR EQUAL.
X1	EVENLITE	WW-EM-FINISH-PHOTOCELL	WALL	1530L LED	3000 K	80	120 V	17 W	WALL MOUNTED LED LIGHT FIXTURE WITH 90-MINUTE EMERGENCY BATTERY PACK.

CONTACTOR SCHEDULE

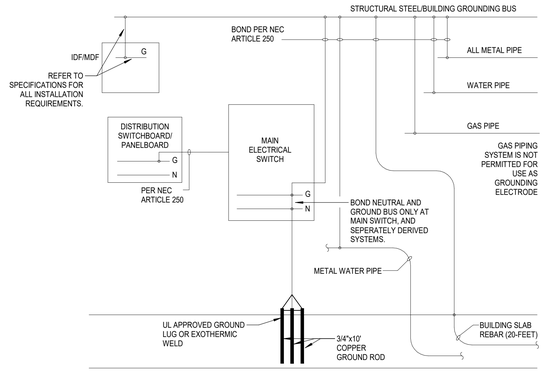
CONTACTOR ID	LOAD DESCRIPTION	CONTACTOR RATINGS VOLTS	AMPS	POLES	CIRCUITS	CONTROL CIRCUIT VOLTS	CIRCUIT	CONTROL TYPE
1	LIGHTING	277	30	4	AL-54, AL-56	120	AL-7	BUILDING MANAGEMENT



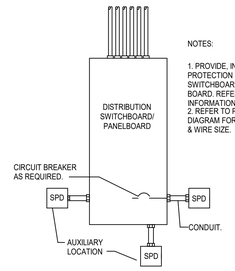
4 **TYPICAL EXIT SIGN LOCATION**
Scale: NOT TO SCALE



3 **TYPICAL LIGHTING FIXTURE WIRING DETAIL**
Scale: NOT TO SCALE



2 SYSTEM GROUNDING DETAIL
NOT TO SCALE



NOTES:

1. PROVIDE, INSTALL, AND LOCATE SURGE PROTECTION DEVICE AS CLOSE AS POSSIBLE TO THE SWITCHBOARD, DISTRIBUTION BOARD, AND PANEL BOARD. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
2. REFER TO PANEL SCHEDULES AND ONE-LINE DIAGRAM FOR QUANTITY, TYPE, BREAKER SIZE, & WIRE SIZE.

1 **SURGE PROTECTION DEVICE DETAIL**
Scale: NOT TO SCALE

VLK

Issued For Permit

STATE OF TEXAS
KEITH W. GASSMAN
89636
LICENSED PROFESSIONAL ENGINEER
05/19/2025

ISSUED: May 19, 2025

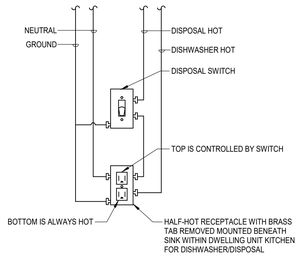
Revision No.	Revision Date

Director	Drawn By
Approver	Author
Designer	Quality Control
Designer	
Proj. Arch.	
Checker	

24-103.00

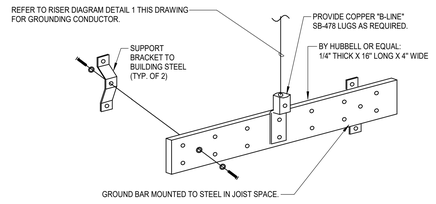
ELECTRICAL DETAILS

E6.00



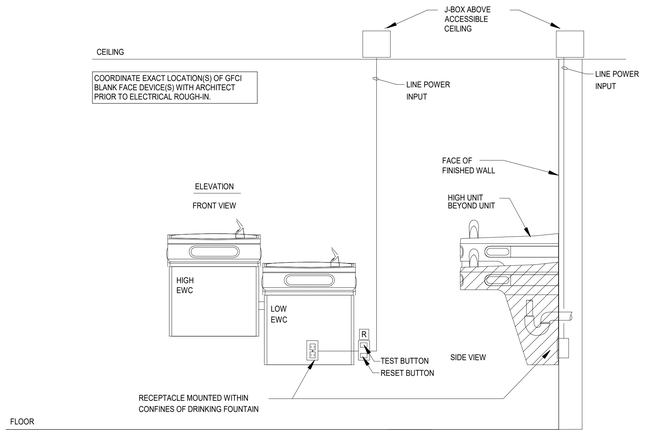
5 ELECTRICAL DISHWASHER DISPOSAL POWER DETAIL

Scale: NOT TO SCALE



2 GROUND BAR DETAIL

Scale: N.T.S.

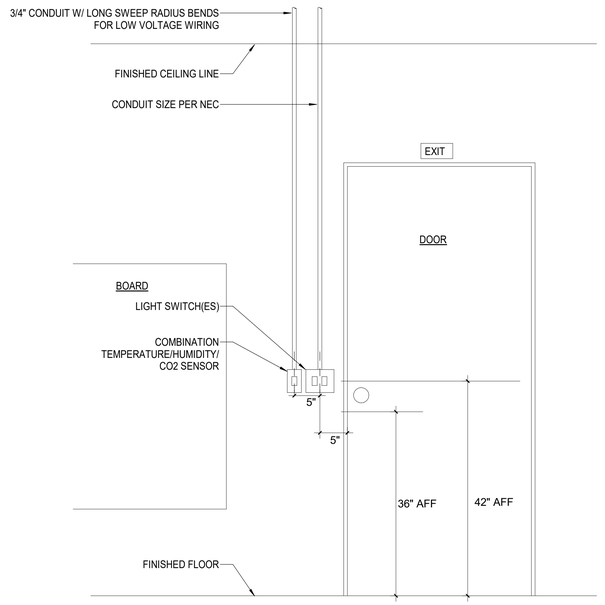


4 ELECTRICAL REQUIREMENTS AT WATER FOUNTAIN

Scale: NOT TO SCALE

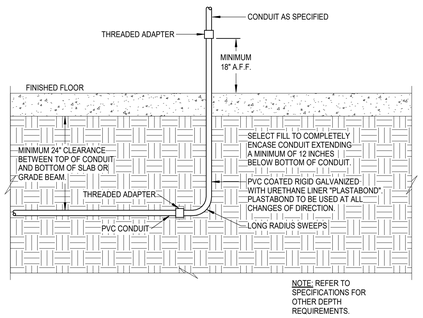
NOTES:

1. ELECTRICAL, MECHANICAL, AND BMCS CONTRACTORS MUST COORDINATE ALL DIVISION 26 REQUIREMENTS.
2. REFER TO MECHANICAL DRAWINGS FOR ALL BMCS SENSOR LOCATIONS.
3. ALL CONDUIT SYSTEMS AND BACK-BOXES SHALL BE PROVIDED BY DIVISION 26.
4. ALL BMCS SENSORS AND ASSOCIATED WIRING SHALL BE PROVIDED BY BMCS CONTRACTOR.



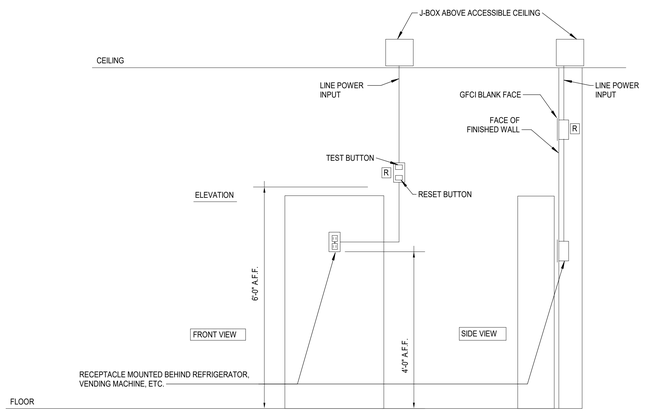
1 TYPICAL DOOR ROUGH-IN DETAIL

Scale: N.T.S.



6 CONDUIT BELOW BUILDING SLAB

Scale: NOT TO SCALE



3 GFCI REQUIRED EQUIPMENT DETAIL

Scale: NOT TO SCALE

VLK

Issued For Permit

STATE OF TEXAS
KEITH W. GASSMAN
89636
REGISTERED
05/19/2025

ISSUED: May 19, 2025

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Checker	

24-103.00

ELECTRICAL DETAILS

E6.01

Branch Panel: AL

Location: MECH. A117 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 42,000
Supply From: ADP | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Recessed | **Wires:** 4 | **Mains:** 400A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	C		Breaker	Wire	Circuit Description	CKT	Note
	1					0.0 / 0.0			1	20	#12	EF-1 TOILET A108	2	
	3	SPD	#6	60	3		0.0 / 0.0		1	20	#12	EF-5 ELECT. A115	4	
	5							0.0 / 0.2	1	20	#12	Receptacles BREAK A101	6	
	7	BMCS	#12	20	1	0.1 / 0.2			1	20	#12	Receptacles BREAK A101	8	
	9	Lighting Room A110, A107, A105, A104, A103,...	#12	20	1		0.3 / 0.4		1	20	#12	Lighting Room A122, A102, A101, A106	10	
	11	Lighting WAREHOUSE/WORK SHOPS A111	#12	20	1			0.4 / 0.5	1	20	#12	Lighting STORAGE A112	12	
	13	Lighting Room A116, A115, A117, A119, A118	#12	20	1	0.3 / 0.5			1	20	#12	Receptacles WAREHOUSE/WORK SHOPS A111	14	
	15	Receptacles CONFERENCE A110	#12	20	1		0.5 / 0.7		1	20	#12	Receptacles CONFERENCE A110	16	
	17	Lighting WAREHOUSE/WORK SHOPS A111	#12	20	1			0.6 / 0.8	1	20	#10	Lighting Room A111, A114	18	
	19	Receptacles BREAK A101	#12	20	1	0.7 / 0.9			1	20	#12	Receptacles CONFERENCE A110	20	
	21	EF-3 CUSTODIAL A119	#12	20	1		0.0 / 0.2		1	20	#12	Receptacles WAREHOUSE/WORK SHOPS A111	22	
	23	Lighting Room A111, A113	#12	20	1			1.1 / 1.0	1	20	#8	Receptacles WORK SHOP A114	24	
	25	OVERHEAD COIL DOOR WORK SHOP A114	#12	20	2	0.3 / 0.0			1	20	#12	EF-2 TOILET A109	26	
	27						0.3 / 0.3						28	
	29	EF-4 TOILET A118	#12	20	1			0.0 / 0.3	2	20	#12	OVERHEAD COIL DOOR STORAGE A112	30	
	31	ACP IDF A116	#12	20	1	0.2 / 1.5							32	
	33	Receptacles CUSTODIAL A119	#12	20	1		0.2 / 1.5		2	20	#12	EUH-1 MECH. A116	34	
	35							0.7 / 0.7					36	
	37	FCU-1 MECH. A116	#12	15	2	0.7 / 0.7			2	15	#12	FCU-2 MECH. A116	38	
	39						0.7 / 0.4						40	
	41	DMS-1 OFFICE A104	#12	15	2			0.7 / 1.3	1	20	#12	Receptacles WORK SHOP A114	42	
	43					2.1 / 1.3			2	15	#12	CU-6 OUTDOOR	44	
	45	CU-4 OUTDOOR	#12	20	2		2.1 / 2.1						46	
	47	Receptacles, COND PUMP IDF A117	#12	20	1			0.2 / 2.1	2	20	#12	CU-5 OUTDOOR	48	
	49	Receptacles ELECT. A115	#12	20	1	0.2 / 0.2			1	20	#12	Receptacles BREAK A101	50	
	51	Receptacles OFFICE A107	#12	20	1		0.4 / 0.4		1	20	#12	Receptacles OFFICE A104	52	
--	53	SPARE	--	20	1			0.0 / 0.3	1	20	#12	South/West Exterior Facade Lighting	54	
	55	Receptacles REC. A103	#12	20	1	0.4 / 0.3			1	20	#12	North/East Exterior Facade Lighting	56	
	57	Receptacles IDF A117	#12	20	1		0.4 / 0.4		1	20	#12	Receptacles CUBICAL A106	58	
	59	Receptacles TOILET A108, 109	#12	20	1			0.4 / 0.4	1	20	#12	Receptacles OFFICE A107	60	
	61	Receptacles OFFICE A105	#12	20	1	0.4 / 0.4			1	20	#12	Receptacles MECH. A116	62	
	63	Receptacles CUBICAL A106	#12	20	1		0.4 / 0.5		1	20	#8	Receptacles WORK SHOP A114	64	
	65	Receptacles OFFICE A104	#12	20	1			0.4 / 0.4	1	20	#12	Receptacles MECH. A116	66	
	67	Receptacles CUSTODIAL A119, A118	#12	20	1	0.4 / 0.4			1	20	#12	Receptacles CUBICAL A106	68	
	69	Receptacles REC. A103	#12	20	1		0.5 / 0.7		1	20	#12	Receptacles WAREHOUSE/WORK SHOPS A111	70	
	71	Receptacles CUBICAL A106	#12	20	1			0.4 / 0.1	1	20	#12	FIRE/SMOKE DAMPERS	72	
	73	Maintenance Receptacles	#12	20	1	0.4 / 0.1			1	20	#12	FIRE ALARM SAFETY DEVICES	74	
	75	Receptacles STORAGE A112	#8	20	1		1.5 / 1.0		1	20	#12	HAND DRYER TOILET A109	76	
	77	Receptacles CUBICAL A106	#12	20	1			0.4 / 0.5	1	20	#10	Receptacles WORK SHOP A114	78	
	79	Receptacles WORK SHOP A114	#8	20	1	0.5 / 0.5			1	20	#12	Receptacles OFFICE A105	80	
	81	INTRUSION DETECTION PANEL IDF A116	#12	20	1		0.2 / 0.0		1	20	--	SPARE	82	--
	83	Receptacles STORAGE A113	#12	20	1			0.5 / 0.7	1	20	#12	Receptacles WAREHOUSE/WORK SHOPS A111	84	
	85	Receptacles CUBICAL A106	#12	20	1	0.7 / 1.5			1	20	#8	Receptacles	86	
--	87	SPARE	--	20	1		0.0 / 0.0		1	20	--	SPARE	88	--
	89	Tech Rack IDF A117	#12	20	1			1.5 / 1.0	1	20	#12	HAND DRYER TOILET A118	90	
	91	HAND DRYER TOILET A108	#12	20	1	1.0 / 0.3							92	
	93						0.3 / 0.3		2	20	#12	OVERHEAD COIL DOOR WAREHOUSE/WORK...	94	
	95	OVERHEAD COIL DOOR WAREHOUSE/WORK...	#12	20	2			0.3 / 0.3					96	
	97					0.7 / 0.3			2	20	#12	OVERHEAD COIL DOOR WORK SHOP A114	98	
	99	DMS-2 REC. A103	#12	15	2		0.7 / 0.7						100	
	101							0.7 / 0.7	2	15	#12	DMS-3 CUBICAL A105	102	
	103	DMS-4 OFFICE A106	#12	15	2	0.7 / 0.9							104	
	105						0.9 / 0.9		2	15	#12	MFCU-1 STORAGE A112	106	
	107	MFCU-2	#12	15	2			0.9 / 0.9					108	
	109					3.1 / 0.9			2	15	#12	MFCU-3	110	
	111						3.1 / 3.1						112	
	113	CU-3 OUTDOOR	#10	30	2			3.1 / 3.1	2	30	#10	CU-2 OUTDOOR	114	
	115					3.1 / 1.0							116	
	117						2.1 / 1.0		3	50	#12	FORKLIFT CHARGER WAREHOUSE/WORK SHOPS A111	118	
	119	BP-1	#8	35	3			2.1 / 1.0					120	
	121					2.1 / 8.0							122	
--	123	SPARE	--	20	1		0.0 / 8.0		3	85	#4	EWH-1 CUSTODIAL A119	124	
--	125	SPARE	--	20	1			0.0 / 8.0					126	
--	127	SPARE	--	20	1	0.0 / 0.0			1	20	--	SPARE	128	--
--	129	SPARE	--	20	1		0.0 / 0.0		1	20	--	SPARE	130	--
--	131	SPARE	--	20	1			0.0 / 0.0	1	20	--	SPARE	132	--
--	133	SPARE	--	20	1	0.0 / 0.0			1	20	--	SPARE	134	--
--	135	SPARE	--	20	1		0.0 / 0.0		1	20	--	SPARE	136	--
--	137	SPARE	--	20	1			0.0 / 0.0	1	20	--	SPARE	138	--
--	139	SPARE	--	20	1	0.0 / 0.0			1	20	--	SPARE	140	--
--	141	SPARE	--	20	1		0.0 / 0.0		1	20	--	SPARE	142	--
--	143	SPARE	--	20	1			0.0 / 0.0	1	20	--	SPARE	144	--
			Total Load:			37.7 kVA	36.9 kVA	38.4 kVA						
			Total Amps:			315 A	307 A	321 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	73.7 kVA	100.00%	73.7 kVA		
Heating	3.0 kVA	100.00%	3.0 kVA	**Total Conn. Load:**	112.9 kVA
Lighting	5.0 kVA	125.00%	6.2 kVA	**Total Est. Demand:**	108.2 kVA
Miscellaneous	9.4 kVA	100.00%	9.4 kVA	**Total Conn. Current:**	314 A
Receptacles	21.9 kVA	72.83%	16.0 kVA	**Total Est. Demand Current:**	300 A

Notes:

Abbrevations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
A - BRANCH CIRCUIT INCLUDED BY ALTERNATE

Switchboard: ADP

Location: ELECT. A120 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 42,000
Supply From: Utility | **Phases:** 3
Mounting: Surface | **Wires:** 4 | **Mains Rating:** 800A MLO
Enclosure: Type 1

CKT	Circuit Description	Trip Rating	# of Poles	Load	Wire	Remarks
1	SPD	100	3	0.1 kVA	1L	
2	AL	400	3	112.9 kVA	1L	
3	PREPARED SPARE	400	3	0.0 kVA		
4	PREPARED SPACE	100	3	0.0 kVA		
5	PREPARED SPACE	100	3	0.0 kVA		
6	PREPARED SPACE	100	3	0.0 kVA		
			Total Conn...	113.0 kVA		
			Total Amps:	314		

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	73.7 kVA	100.00%	73.7 kVA		
Lighting	5.0 kVA	125.00%	6.2 kVA	**Total Conn. Load:**	113.0 kVA
Miscellaneous	9.5 kVA	100.00%	9.5 kVA	**Total Est. Demand:**	108.3 kVA
Receptacles	21.9 kVA	72.83%	16.0 kVA	**Total Conn. Current:**	314
Heating	3.0 kVA	100.00%	3.0 kVA	**Total Est. Demand...**	301

Notes:

MAXIMUM ALLOWABLE VOLTAGE DROP FOR FEEDERS AND BRANCH CIRCUITS (2018 IECC 405.9)

1. Total voltage drop from the point of service to the last outlet or utilization equipment of the same voltage shall not exceed five-percent of rated voltage.
2. Total voltage drop from the point of service to transformers with adjustable taps, buck-boost transformers, uninterruptable power supplies (UPS), or voltage regulators shall not exceed five-percent of rated voltage.
3. Total voltage drop from a separately derived system, transformer with adjustable taps, buck-boost transformer, uninterruptable power supply (UPS), or voltage regulator to the last outlet or utilization equipment of the same voltage shall not exceed five-percent of rated voltage.
4. Total voltage drop from the point of service to distribution equipment of the same voltage shall not exceed two-percent of rated voltage.
5. Branch circuit voltage drop from distribution equipment to the last outlet or utilization equipment shall not exceed three-percent of rated voltage.
6. Provide the same size branch circuit conductors to last outlet on circuit unless specifically noted or indicated otherwise on the drawings. For 20 amp branch circuits operating at 150-Volts or less, provide #10 AWG wire when the first outlet is over 75-feet from the panelboard. For branch circuits operating above 150-Volts to 600-Volts, provide #10 AWG wire when the first outlet is over 150-feet from the panelboard.

CONDUCTOR CONVERSION CHART - 75°C

FUSE	COPPER (THHN)	ALUMINUM (XHHW-2 AL) BRANCH FEEDERS	SERVICE ENT.
100A	4#3, 1#8GND, 1-1/4"C	4#1, 1#6GND, 1-1/2"C	#8 GND (CU)
125A	4#1, 1#6GND, 1-1/2"C	4#2/0, 1#4GND, 2"C	#6 GND (CU)
150A	4#1/0, 1#6GND, 2"C	4#3/0, 1#4GND, 2"C	#6 GND (CU)
175A	4#2/0, 1#6GND, 2"C	4#4/0, 1#4GND, 2-1/2"C	#6 GND (CU)
200A	4#3/0, 1#6GND, 2"C	4#250KCMIL, 1#4GND, 3"C	#6 GND (CU)
225A	4#4/0, 1#4GND, 2-1/2"C	4#300 KCMIL,1#2GND, 3"C	#4 GND (CU)
400A	(2 SETS:) 4#3/0, 1#GND, 2"C	(2 SETS:) 4#250KCMIL, 1#1GND, 3"C	#2 GND (CU)
500A	(2 SETS:) 4#250KCMIL, 1#2GND, 3"C	(2 SETS:) 4#350KCMIL, 1#1/0GND, 3"C	#1/0 GND (CU)
600A	(2 SETS:) 4#350KCMIL, 1#1GND, 3"C	(2 SETS:) 4#500KCMIL, 1#2/0GND, 4"C	#1/0 GND (CU)
800A	(3 SETS:) 4#300KCMIL, 1#1/0GND, 3"C	(3 SETS:) 4#400KCMIL, 1#3/0GND, 4"C	#2/0 GND (CU)
1200A	(4 SETS:) 4#350KCMIL, 1#3/0GND, 4"C	(4 SETS:) 4#500KCMIL, 1#250KCMIL GND, 4"C	#2/0 GND (CU)
2000A	(6 SETS:) 4#400KCMIL, 1#250KCMIL GND, 4"C	(7 SETS:) 4#500KCMIL, 1#400KCMIL GND, 4"C	#3/0 GND (CU)
2500A	(7 SETS:) 4#500KCMIL, 1#350KCMIL GND, 4"C	(8 SETS:) 4#600KCMIL, 1#600KCMIL GND, 4"C	#3/0 GND (CU)
3000A	(8 SETS:) 4#500KCMIL, 1#500KCMIL GND, 4"C	(9 SETS:) 4#600KCMIL, 1#600KCMIL GND, 4"C	#3/0 GND (CU)

CONDUCTOR CONVERSION CHART NOTES

1. ALUMINUM CONDUCTOR TO HAVE COMPRESSION LUGS.
2. THIS CHART IS A REPRESENTATION AND NOT INDICATIVE OF ALL APPROVED CONVERSION POSSIBILITIES.
3. CONTRACTOR SHALL FURNISH AND INSTALL ALL FEEDERS IN ACCORDANCE WITH NEC AND ALUMINUM WIRING MANUFACTURERS REQUIREMENTS.
4. ALL GROUND CONDUCTORS FOR SERVICE ENTRANCE TO BE COPPER.

FEEDER SCHEDULE - GENERAL NOTES

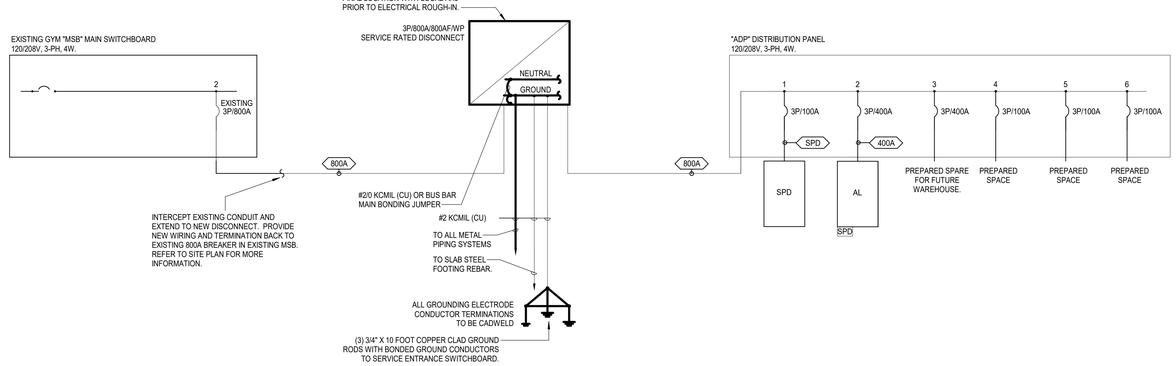
1	CONDUIT SIZE AND QUANTITIES ARE BASED ON 3-PHASE 4-WIRE SYSTEMS. CONDUIT SIZE IS PERMITTED TO BE REDUCED BY THE CONTRACTOR AS PREMITTED BY THE NEC FOR THE REDUCED NUMBER OF CONDUCTORS THAT ARE TYPICAL FOR EQUPMENT THAT IS SINGLE PHASE OR EQUIPMENT THAT DOES NOT REQUIRE A NEUTRAL CONDUCTOR.
2	CONDUCTOR SIZES BASED ON NEC TABLE 310.16 - COPPER 75°.
3	GROUND SIZES BASED ON NEC TABLE 250.122 – COPPER, UNLESS NOTED OTHERWISE. FEEDER TAGS WITH 'SE' REFERS TO SERVICE ENTRANCE CONDUCTORS AND GROUND SIZES BASED ON NEC TABLE 250.66 – COPPER
4	CONDUIT FILL BASED ON NEC ANNEX C.

FEEDER SCHEDULE

AMPERAGE	# SETS	CONDUCTOR (QTY.)/SIZE	GROUND (QTY.)/SIZE	CONDUIT
400A	2	(4) #3/0	#1	2"C
800A	3	(3) #300KCMIL	#1/0	3"C
SPD	1	(5)#3	N/A	1-1/2"C

REFER TO SITE PLAN AND FLOOR PLANS FOR APPROXIMATE INFORMATION. COORDINATE FINAL LOCATION WITH LOCAL AHJ PRIOR TO ELECTRICAL ROUGH-IN.

REFER TO SPECIFICATIONS FOR THE REQUIRED SETTING AND PROTECTIONS OF THE OVERCURRENT PROTECTIVE DEVICES.



1 **ONE LINE DIAGRAM**
Scale: N.T.S.

VLK

Issued For Permit

STATE OF TEXAS
KEITH W. GASSMAN
89636
LICENSED
PROFESSIONAL
ENGINEER
05/19/2025

ISSUED: May 19, 2025

Revision No.	Revision Date

Director | Drawn By
Approver | Author
Designer | Quality Control
Designer
Proj. Arch.
Checker

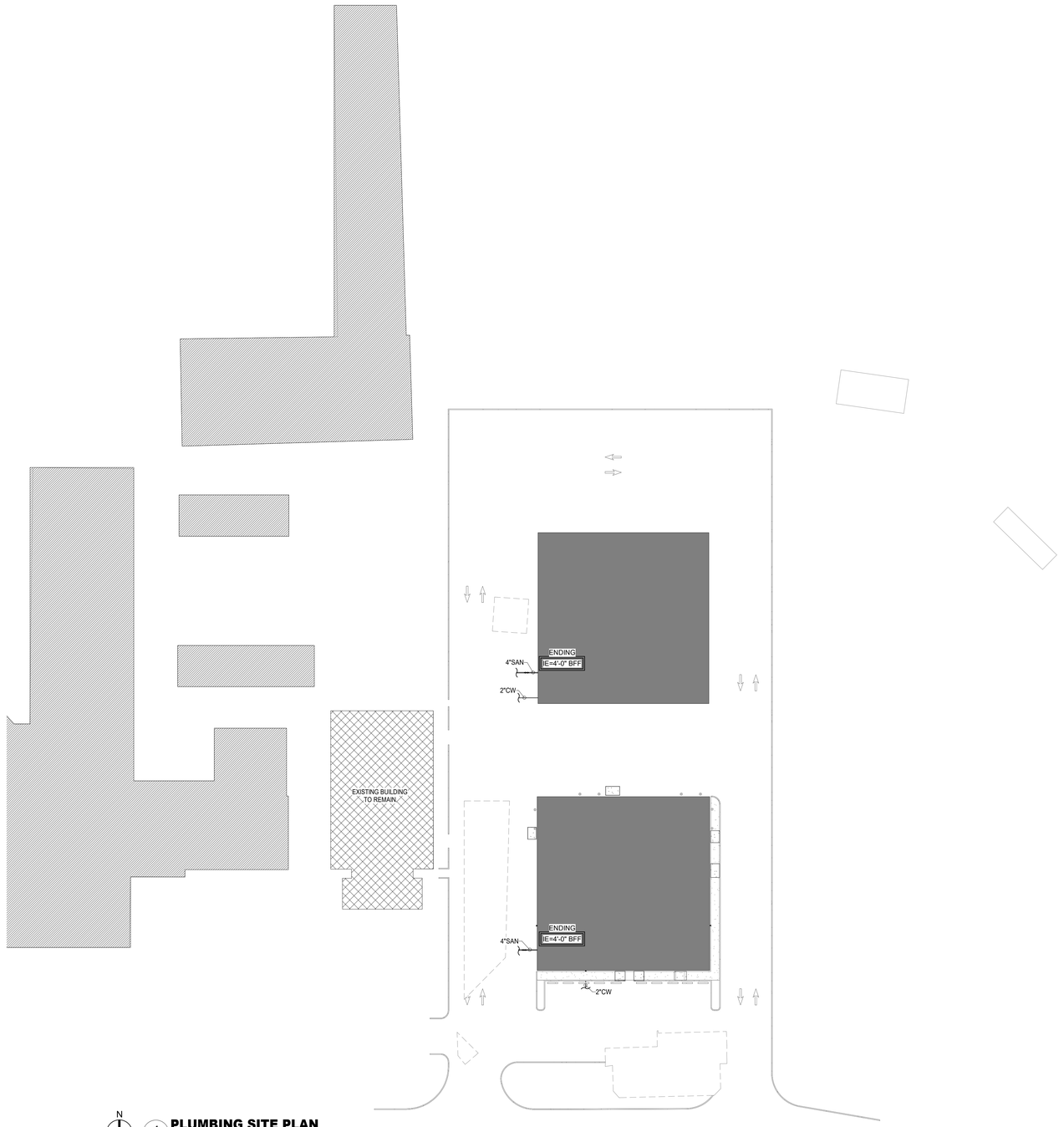
24-103.00

ONE LINE DIAGRAM

E7.00

PLUMBING GENERAL NOTES:

1. ALL WORK, METHODS, AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE CITY BUILDING CODE AND INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION.
2. THIS CONTRACTOR SHALL COORDINATE ROUTING OF PIPING BELOW SLAB WITH PLUMBING AND ELECTRICAL CONDUIT. SHOULD A CONFLICT OCCUR THIS CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN.
3. ALL SANITARY PIPING 3" AND LARGER SHALL BE ROUTED AT 1/8" SLOPE PER FOOT UNLESS OTHERWISE NOTES. ALL PIPE LESS THAN 3" SHALL BE ROUTED AT 1/4" SLOPE PER FOOT.
4. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING IN CEILING SPACES WITH MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK, AND CONDUIT. SHOULD A CONFLICT OCCUR THIS CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO INSTALLING AN ALTERNATIVE PIPING PLAN.
5. CONTRACTOR TO FIELD VERIFY AS NECESSARY THE EXACT ROUTING AND SIZES OF ALL PIPING.
6. SANITARY VENT TERMINALS THROUGH ROOF SHALL BE NO LESS THAN 10'-0" FROM ANY FRESH AIR INTAKES.
7. CONTRACTOR SHALL COORDINATE ALL WORK IN OPEN CEILINGS AND AROUND CLOUDS TO NEATLY RUN CONDUITS, DUCTWORK, AND PIPING.



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1 **PLUMBING SITE PLAN**
Scale: 1" = 30'-0"

VLK

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89636
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PLUMBING SITE PLAN

P1.00

PLUMBING GENERAL NOTES:

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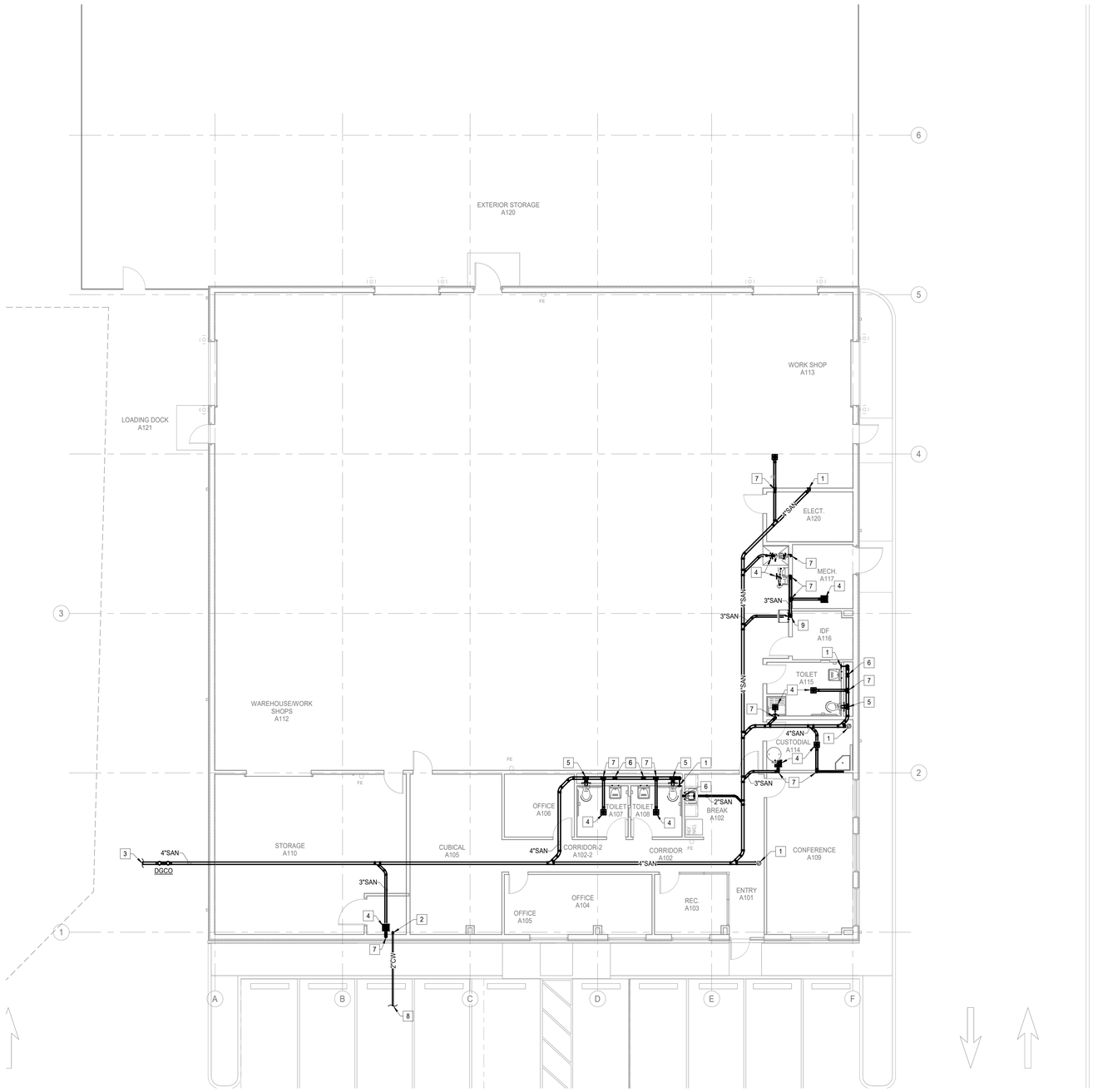
7. CONTRACTOR SHALL COORDINATE ALL WORK IN OPEN CEILINGS AND AROUND CLOUDS TO NEATLY RUN CONDUITS, DUCTWORK, AND PIPING.

PLUMBING KEYED NOTES

1	FULL SIZE LINE DOWN FROM CLEANOUT (MAXIMUM OF 4")
2	DOMESTIC WATER ENTRY.
3	SANITARY PIPING OUT TO SITE. REFER TO CIVIL FOR CONTINUTAION.
4	3" SANITARY PIPING DOWN FROM ABOVE.
5	4" SANITARY PIPING DOWN FROM ABOVE. 3" VENT PIPING ROUTED UP.
6	2" SANITARY PIPING DOWN FROM ABOVE.
7	3" SANITARY PIPING DOWN FROM ABOVE. 2" VENT PIPING ROUTED UP.
8	2" COLD WATER ENTRY, SIZED FOR 49 WFU'S = 51 GPM.
9	2" SANITARY PIPING DOWN FROM ABOVE.



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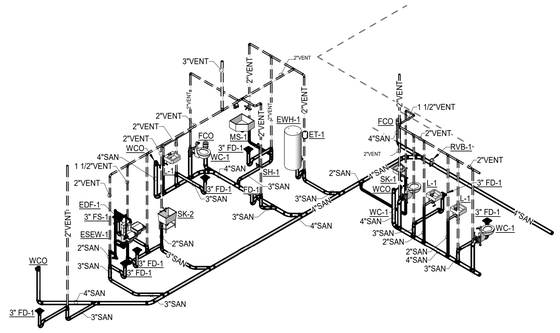
1 **PLUMBING UNDERFLOOR PLAN - LEVEL 0 - UNIT A**
Scale: 1/8" = 1'-0"



2 **WASTE AND VENT RISER - TOILET A107/A108/A115**
Scale: N.T.S.

VLK

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STATE OF TEXAS
KEITH W. GASSMAN
89636
REGISTERED
ARCHITECT
05/19/2025

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Designer Designer	Quality Control
Proj. Arch. Checker	

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WAREHOUSE -
UNDERFLOOR PLUMBING
PLAN - UNIT A

P3.01

PLUMBING GENERAL NOTES:

1. ALL WORK, METHODS, AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE CITY BUILDING CODE AND INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION.
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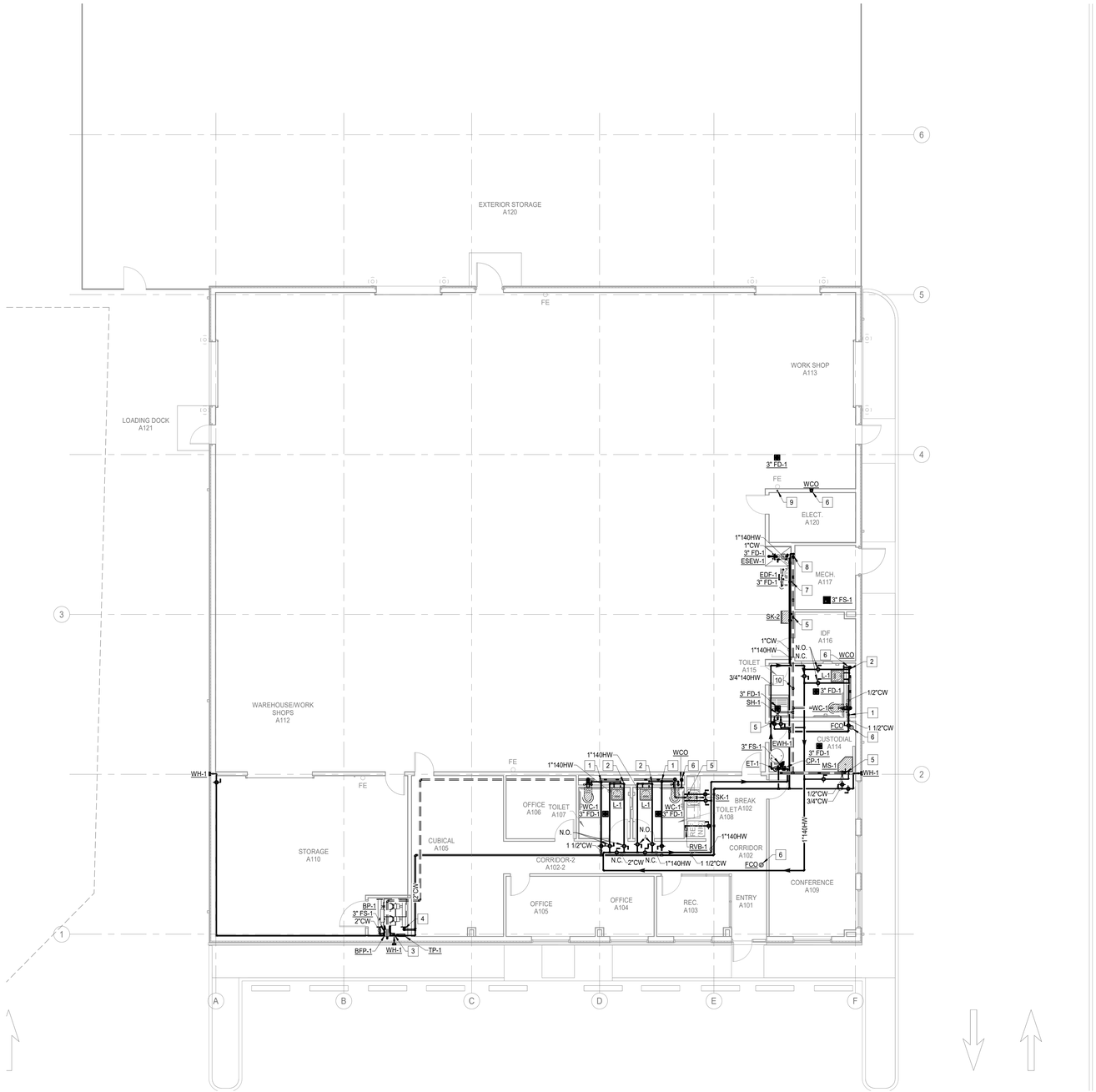
7. CONTRACTOR SHALL COORDINATE ALL WORK IN OPEN CEILINGS AND AROUND CLOUDS TO NEATLY RUN CONDUITS, DUCTWORK, AND PIPING.

PLUMBING KEYED NOTES

1	ROUTE 1 1/2" COLD WATER LINE DOWN WALL AND ACROSS TO SERVE PLUMBING FIXTURES.
2	ROUTE HOT WATER BRANCH SUPPLY LINE DOWN WALL TO SERVE LAVATORY. ROUTE HOT WATER BRANCH RETURN LINE UP AND RECONNECT INTO HOT WATER CIRCULATION TRUNK LINE IN CEILING SPACE.
3	2" COLD WATER ENTRY. SIZED FOR 49 WFU'S = 51 GPM.
4	ROUTE COLD WATER LINE UP.
5	1/2" HOT AND COLD WATER ROUTED DOWN TO SERVE PLUMBING FIXTURE(S). 2" VENT PIPING ROUTED UP.
6	FULL SIZE LINE DOWN FROM CLEANOUT (MAXIMUM OF 4").
7	ROUTE 1/2" COLD WATER LINE DOWN WALL TO SERVE PLUMBING FIXTURE.
8	1" HOT AND COLD WATER ROUTED DOWN TO SERVE PLUMBING FIXTURE(S). 2" VENT PIPING ROUTED UP.
9	2" VENT THROUGH ROOF.
10	3" VENT THROUGH ROOF.



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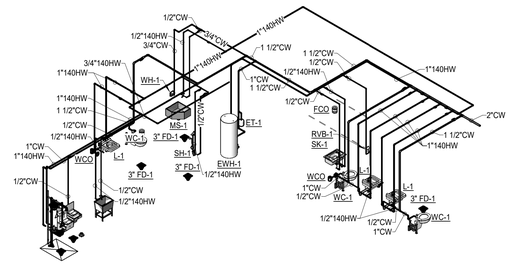
1 PLUMBING PLAN - LEVEL 1 - UNIT A
Scale: 1/8" = 1'-0"



2 DOMESTIC WATER RISER - TOILET A107/A108/A115
Scale: N.T.S.

VLK

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STATE OF TEXAS
KEITH W. GASSMAN
89636
REGISTERED
05/19/2025

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WAREHOUSE - PLUMBING PLAN - UNIT A

P3.11

PLUMBING PIPING LEGEND

SYMBOLS	DESCRIPTION
SAN	SANITARY OR WASTE PIPING ABOVE GRADE (SAN)
SAN	SANITARY OR WASTE PIPING BELOW GRADE (SAN)
GW	GREASE WASTE PIPING (GW)
GW	GREASE WASTE PIPING BELOW GRADE (GW)
SD	STORM DRAIN PIPING (SD)
SD	STORM DRAIN PIPING BELOW GRADE (GW)
SSD	SUB-SOIL DRAIN OR FOOTING DRAIN (SSD)
AW	ACID WASTE PIPING (AW)
AW	ACID WASTE PIPING BELOW GRADE (AW)
PD	PUMPED DISCHARGE (PD)
CD	CONDENSATE DRAIN PIPING (CD)
D	CONDENSATE - INDIRECT DRAIN PIPING (D)
	VENT PIPING (V)
CW	COLD WATER PIPING (CW)
HW	HOT WATER PIPING (HW)
HWR	HOT WATER RETURN PIPING (HWR)
SCW	SOFT COLD WATER PIPING (SCW)
CDW	CHILLED DRINKING WATER PIPING (CDW)
TP	TRAP PRIMER LINE (TP)
F	FIRE PROTECTION PIPING (F)
AS	AUTOMATIC SPRINKLER PIPING (AS)
GAS	NATURAL GAS PIPING (G)
GV	GAS VENT PIPING (GV)
AIR	COMPRESSED AIR PIPING (A)
	FLOW DIRECTIONAL ARROW
	SHUT-OFF VALVE
BV	BALANCING VALVE (BV)
SV	SOLENOID VALVE (SV)
	BALL VALVE (BV)
	BUTTERFLY VALVE
PC	LUBRICATED PACKED PLUG STOP STOP COCK (PC)
	HORIZONTAL SWING CHECK
	UNION
	HORIZONTAL SWING CHECK
	REDUCER OR INCREASER
	ECCENTRIC REDUCER
RPBFP	REDUCED PRESSURE BACKFLOW PREVENTER (RPBFP)
	PIPING DOWN
	RISE OR DROP PIPING
	PIPING UP -OR- PIPING UP & DOWN
	CAP ON END OF PIPE
CO	CLEANOUT (WALL OR CEILING) (CO)
FCO	FLOOR CLEANOUT (FCO)
ECO	EXTERIOR CLEANOUT WITH 18"x18"x4" CONCRETE PAD (ECO)
	TWO-WAY CLEANOUT (PROVIDE 18"x24"x4" CONCRETE PAD OUTSIDE)
	FIRE DEPARTMENT VALVE AT RISER
	FIRE HYDRANT
	FIRE DEPARTMENT CONNECTION
PRV	PRESSURE REDUCING VALVE (PRV)
	BRANCH CONNECTION OUT OF TOP
	BRANCH CONNECTION OUT OF BOTTOM
	BRANCH CONNECTION OUT OF SIDE
	WYE & 1/8TH BEND BRANCH CONNECTION
	WYE BRANCH CONNECTION
	HOSE BIBB
	PRESSURE GAUGE WITH COCK
	THERMOMETER
	GAS PRESSURE REGULATOR
	TEST COCK
	GAS METER
	WALL HYDRANT
	VALVE IN RISE
	ASME TEMPERATURE & PRESSURE RELIEF VALVE
	VACUUM RELIEF VALVE
	ANGLE VALVE
	OS&Y VALVE
	ROOF DRAIN
1	REFER TO KEYED NOTE
FS	FLOW SWITCH
	FLOOR SINK (FS)
	FLOOR DRAIN (FD)
	FLOOR DRAIN WITH P-TRAP (FD)
	FLOOR DRAIN WITH P-TRAP AT 45° ANGLE (FD)
	HUB DRAIN (HD)
	ACCESS PANEL FOR TRAP PRIMER OR SHOCK ABSORBER
AP	ACCESS PANEL LOCATION SYMBOL
A	SHOCK ABSORBER
	AIR CHAMBER
(E)	EXISTING
(N)	NEW
VTR	VENT THRU ROOF
B.F.F.	BELOW FINISHED FLOOR
A.F.F.	ABOVE FINISHED FLOOR
	NEW CONNECTION
IE=100.00'	INVERT ELEVATION
1	DELTA CHANGE SYMBOL
P 1 4" VTR	RISER FLAG

ELECTRIC WATER HEATER SCHEDULE

MARK	BASIS OF DESIGN MANUFACTURER	MODEL	STORAGE CAPACITY	KW	WH GALS. PER HR RECOVERY RATE 100'F RISE	STORED WATER TEMP	ELECTRICAL CHAR. V	P	MCA	MOCP	REMARKS
EWH-1	AO SMITH	DVE-120	100 GAL	24.0	0	140	208	3	66	85	
1	IF THE MAXIMUM FUSE SIZE OF THE EQUIPMENT PROVIDED EXCEEDS THE SPECIFIED AMOUNT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADDITIONAL COSTS RELATED TO INCREASED FUSE SIZE / WIRE SIZE.										
2	PROVIDE HOUSEKEEPING PAD AS RECOMMENDED BY MANUFACTURER.										

BOOSTER PUMP SCHEDULE

MARK	BASIS OF DESIGN MANUFACTURER	MODEL	DESCRIPTION	TYPE	GPM HP	HEAD PSI	HP MIN	ELECTRICAL CHAR. V	P	F	MAX RPM
BP-1	BELL & GOSSETT	5SVX11	BOOSTER PUMP	DUPLEX	52	70	4	208	3	60	3600
1	PROVIDE ALL REQUIRED APPURTENANCES FOR A COMPLETE OPERATING SYSTEM.										
2	ALL INSTALLATIONS TO BE AS PER THE MANUFACTURERS INSTALLATION INSTRUCTIONS.										
3	PROVIDE HOUSEKEEPING PAD AS RECOMMENDED BY MANUFACTURER.										

CIRCULATION PUMP SCHEDULE

MARK	BASIS OF DESIGN MANUFACTURER	MODEL	DESCRIPTION	TYPE	GPM	HEAD FEET	HP MIN	ELECTRICAL CHAR. V	P	F	MAX RPM
CP-1	GRUNDFOS	UP 1542F	CIRCULATION PUMP	INLINE BRONZE	25	12'-0"	1/25	120	1	60	1750

DOMESTIC HW EXPANSION TANK SCHEDULE

MARK	BASIS OF DESIGN MANUFACTURER	MODEL	DESCRIPTION	MAX WORK PRESSURE (PSI)	TANK VOLUME GALLONS	MAX. ACCEPT. GALLONS	DIAMETER (INCHES)
ET-1	WATTS	PLT-5	HOT WATER EXPANSION TANK	150	2.1	1.48	8"

DOMESTIC HW EXPANSIONTANK SCHEDULE NOTES

ET SCHEDULE NOTES
PROVIDE ASME POTABLE WATER EXPANSION TANK ON THE COLD WATER SUPPLY LINE, DOWNSTREAM OF THE CHECK VALVE.
PROVIDE HOUSEKEEPING PAD.
PROVIDE UNION CONNECTION.

PLUMBING FIXTURE SCHEDULE

TYPE	FIXTURE DESCRIPTION
DRAINAGE FIXTURE (CO, FD, FS, HD, TD)	
DGCO	DESCRIPTION: TWO (2) EXTERIOR CLEANOUTS INSTALLED AT CIVIL'S POINT OF CONNECTION. REFER TO ECO FOR FIXTURE INFORMATION. REFER TO DETAIL FOR INSTALLATION INFORMATION.
FCO	DESCRIPTION: FLOOR CLEANOUT, CAST IRON BODY AND ADJUSTABLE TOP ASSEMBLY WITH GASKET SEAL, AND ROUND SCORIATED STAINLESS STEEL COVER. MIFAB C1100-R.
FD-1	SERVICE: TOILET ROOMS AND GENERAL USE DESCRIPTION: FLOOR DRAIN, DURA-COATED CAST IRON BODY, ADJUSTABLE 6" DIAMETER STAINLESS STEEL STRAINER WITH VANDAL PROOF SCREWS, INTEGRAL CLAMPING DEVICE, BOTTOM OUTLET. ZURN Z415B. TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR DRAIN BY SIZE, MODEL, AND MANUFACTURER. ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL DRAWINGS / FLOOR CONSTRUCTION.
FS-1	SERVICE: MECHANICAL ROOM DESCRIPTION: A.R.E. COATED CAST IRON BODY 12" SQUARE FLOOR SINK WITH 8" DEEP SUMP, BOTTOM OUTLET, LOOSE SET CAST IRON SECONDARY STRAINER, CLAMPING DEVICE, TRAP PRIMER TAP, AND HALF TOP GRATE. ZURN Z1901. ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH EQUIPMENT PLACEMENT.
WCO	DESCRIPTION: WALL CLEANOUT. CAST IRON CLEANOUT FERRULE WITH DUCTILE IRON COMBINED COVER/PLUG AND ROUND STAINLESS COVER PLATE WITH CENTER SECURING SCREW. MIFAB C1450 WITH C1400-RD6. PROVIDE MIFAB C1460 CAST IRON CLEANOUT TEE IN LIEU OF FERRULE AS REQUIRED FOR WALL CONSTRUCTION.
DRINKING FOUNTAIN (EDF)	
EDF-1	DESCRIPTION: WALL HUNG, BARRIER FREE, BI-LEVEL ELECTRIC DRINK FOUNTAIN WITH ELECTRONIC BOTTLE FILLER SENSOR AND SHIELDED VANDEL-RESISTANT BUBBLER (BOTTLE FILLER ON THE LOW AND RIGHT-HAND SIDE). 8 GPH OF 50 DEGREE WATER AT 90 DEGREE AMBIENT AND 80 DEGREE INLET WATER. ELKAY EZSTL8WSSK. PROVDE CANE TOUCH SKIRT TO COMPLY WITH ADA GUIDELINES. P-TRAP: 1-1/4" CHROME PLATED CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON. MCGUIRE 8872. SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISER. MCGUIRE 2165. CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE SLAB WITH (4) 1/2" BOLTS. ADJUSTABLE SLEEVE FOR CONNECTION TO HANGER PLATE PROVIDED BY FIXTURE MANUFACTURER. MIFAB MC-33. ROUGH-IN: 2" WASTE, 2" VENT, 1/2" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.
FIXTURES	
RVB-1	DESCRIPTION: REFRIGERATOR VALVE BOX, 4-3/8" X 4-1/8", 20 GAUGE STEEL WITH COATED FINISH AND QUARTER TURN VALVE. PROVIDE FILTER WHEN MAKING FINAL CONNECTION. GUY GRAY MIB1AB WITH AQUA-PURE AP717 FILTER. ROUGH-IN: 1/2" COLD WATER. COORDINATE ROUGH-IN LOCATION/HEIGHT/FINAL CONNECTION WITH EQUIPMENT BEING INSTALLED AND WITH ARCHITECT/CASEWORK DRAWINGS.
HYDRANTS (HB, RH, WH)	
WH-1	SERVICE: EXTERIOR USE DESCRIPTION: WALL HYDRANT (FREEZELESS), CHROME PLATED BRASS FINISH WITH ANTI-SIPHON VACUUM BREAKER, SELF-DRAINING. INSTALL WITH BOTTOM OF HYDRANT 24" A.F.F. WOODFORD MODEL B65. ROUGH-IN: 3/4" COLD WATER.
LAVATORY (L)	
L-1	DESCRIPTION: LAVATORY (A.D.A. COMPLIANT), WALL HUNG, VITREOUS CHINA, 26-1/4" X 20-5/8" X 6-1/2" DEEP BOWL WITH FRONT OVERFLOW, SINGLE FAUCET HOLE. BRADLEY TLX-1. FAUCET: CHROME PLATED BRASS LAVATORY, SINGLE METAL LEVER HANDLE OPERATION ON 4" CENTERS, VANDAL RESISTANT 0.5 GPM AERATOR. ZURN Z81104-XL. STRAINER: 1-1/4" 17 GAUGE OFFSET WHEELCHAIR STRAINER, CHROME PLATED BRASS GRID DRAIN WITH ELBOW AND 17 GAUGE OFFSET TAILPIECE. MCGUIRE 155WC. GRAVITY FED TRAP PRIMER TAILPIECE, 1/2" NOMINAL BRANCH CONNECTION. SIOUX CHIEF 213-092. P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON PLATE. MCGUIRE 8872. SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE 2165LK. TMV: THERMOSTATIC MIXING VALVE, 140 DEGREES IN, 110 DEGREES OUT, BRONZE FINISH, UNION CONNECTION, 5PSI PRESSURE DIFFERNTIAL, 0.5GPM MIN FLOW/4GPM MAX FLOW. SYMMONS "MAXLINE" 7-225-CK-W. INSTALL PER EVERY TWO FIXTURES. CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 4" SQUARE BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS. WADE W520-M36. ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.
MOP SINK (MS)	
MS-1	DESCRIPTION: MOP SINK, 28" X 28" X 12" PRE-CAST TERRAZZO, 12" SHOULDERS / 6" THRESHOLD, STAINLESS STEEL CAPS, WALL GUARD, HOSE & BRACKET, TILING FLANGE. FIAT TSBCR1000. FAUCET: CHROME PLATED BRASS FAUCET WITH INTEGRAL STOPS AND VACUUM BREAKER, 3/4" HOSE THREAD OUTLET, PAIL HOOK, LEVER HANDLES. CHICAGO 897-CCP. ROUGH-IN: 3" WASTE, 2" VENT, 3/4" HOT AND COLD WATER. PROVIDE CHECK VALVES IN BOTH SUPPLIES.
SHOWER (SH)	

PLUMBING FIXTURE SCHEDULE

TYPE	FIXTURE DESCRIPTION
ESEW-1	DESCRIPTION: EMERGENCY DRENCH SHOWER/FACE AND EYEWASH (A.D.A. COMPLIANT), FLOOR-MOUNTED WITH STAINLESS CONSTRUCTION, YELLOW ABS PLASTIC SHOWER HEAD, ACTIVATED BY STAINLESS STEEL HANDLE, 20 GPM FLOW CONTROL. ABS PLASTIC DUAL STREAM EYE-FACE WASH HEADS ACTIVATED BY PUSH PLATE ACTUATOR, INTEGRAL 3.2 GPM FLOW CONTROL. ENCON SAFETY MODEL 01050251. ROUGH-IN: 2" WASTE, 2" VENT, 1" HOT WATER, 1" COLD WATER. PROVIDE WITH FLOOR DRAIN BELOW STATION AS DETAILED ON FLOOR PLANS. REFER TI ARCHITECTURAL/CASEWORK DRAWINGS FOR HEIGHT REQUIREMENTS.
SH-1	DESCRIPTION: SHOWER (A.D.A. COMPLIANT), JOB BUILT BASE INSTALLED PER ARCHITECTURAL DRAWINGS. CONTROLS: PRESSURE BALANCING SHOWER CONTROL VALVE WITH LEVER HANDLE AND INTEGRAL CHECK STOPS, STAINLESS STEEL ESCUTCHEON, MAX 2.5 GPM WITH HAND-HELD SHOWER HEAD AND 60" FLEXIBLE STAINLESS STEEL HOSE, VACUUM BREAKER, MOUNTING BRACKET, 24" SLIDE BAR, MIXING VALVE ACORN 538ADA-LVR. DRAIN: FLOOR DRAIN FD-1 AS SCHEDULED. ROUGH-INS: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.
SINK (HS, SK)	
SK-1	SERVICE: LARGE BREAK ROOM SINK (A.D.A. COMPLIANT) DESCRIPTION: SINK, COUNTER MOUNTED, SELF-RIMMING, 18 GAUGE TYPE 304 STAINLESS STEEL, 31" X 22" X 5-1/2" DEEP, SINGLE COMPARTMENT WITH FAUCET DECK. FOUR FAUCET HOLES ON 8" CENTERS. ELKAY "LUSTERTONE" LRAD312255. FAUCET: CHROME PLATED FAUCET WITH 8" SPOUT, TWO WRISTBLADE HANDLES ON 6" CENTERS, VANDAL RESISTANT AERATOR WITH MAX FLOW 1.5 GPM. ZURN Z831CA-XL-ICT. STRAINER: HEAVY DUTY STEEL BASKET STRAINER WITH 1-1/2 TAILPIECE AND LOCK NUTS. MCGUIRE 151A. P-TRAP: 1-1/2" 17 GAUGE CHROME PLATED CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON PLATE. MCGUIRE 8912. SUPPLIES: 1/2" I.P.S. X 3/8" O.D. WITH ESCUTCHEONS AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE 2165. TMV: THERMOSTATIC MIXING VALVE, 140 DEGREES IN, 110 DEGREES OUT, BRONZE FINISH, UNION CONNECTION, 5PSI PRESSURE DIFFERENTIAL, 0.5GPM MIN FLOW/4GPM MAX FLOW. SYMMONS "MAXLINE" 7-225-CK-W. INSTALL PER EVERY TWO FIXTURES. ROUGH-INS: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED HEIGHT.
SK-2	DESCRIPTION: UTILITY TUB WITH STEEL LEGS, 34" X 18" X 24" ONE PIECE MOLDED CONSTRUCTION. MUSTEE "UTILATUB" 21F. FAUCET: CHROME FINISH, 4" CENTER SET BRASS FAUCET. 7" SWING SPOUT WITH AERATOR, LEVEL HANDLES, REPLACEABLE SEATS AND STEMS. MUSTEE 93.600. ROUGH-IN: 3" WASTE, 2" VENT, 1/2" HOT AND COLD WATER.
TRAP PRIMER (TP-2)	
TP-1	SERVICE: SERVES UP TO 1-4 FLOOR DRAIN TRAPS. REFER TO PLANS. DESCRIPTION: ELECTRONIC TRAP PRIMER WITH DISTRIBUTION UNIT. AND NEMA 1 BOX. SURFACE MOUNT IN MECHANICAL ROOM OR MOUNT ABOVE ACCESSIBLE CEILING. PRECISION PLUMBING PRODUCTS MINI-PRIME MPB-500-115V WITH DISTRIBUTION UNIT. ROUGH-IN: 3/4" COLD WATER.
WATER CLOSET (WC)	
WC-1	DESCRIPTION: WATER CLOSET (A.D.A. COMPLIANT), WALL HUNG, 1.6 GALLON PER FLUSH SIPHON JET ACTION, VITREOUS CHINA, ELONGATED BOWL WITH 1-1/2" TOP SPUD INLET AND BOLT COVERS. AMERICAN STANDARD "AFWALL" 3351.101. SEAT: ELONGATED OPEN FRONT WHITE PLASTIC SEAT WITH SELF-SUSTAINING CHECK HINGES. BEMIS 1955SSCT. FLUSH VALVE: 1.28 GALLON FLUSH CYCLE, EXPOSED, MANUAL FLUSH, CHROME PLATED CLOSET FLUSHOMETER, VACUUM BREAKER, SPUD COUPLING FOR 1-1/2" TOP SPUD. ZURN Z6200-HET. CARRIER: MIFAB MC-10 HORIZONTAL OR MC-12,13 VERTICAL. SUPPLIES: 1/2" I.P.S. X 3/8" O.D. WITH ESCUTCHEONS AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE 2165LK. ROUGH-INS: 4" WASTE, 3" VENT, 1" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED HEIGHT.

PLUMBING GENERAL NOTES

1. WITHIN THE EXISTING BUILDING, EXISTING WATER, WASTE AND VENT SERVICES ARE TO BE MODIFIED AS REQUIRED AND REUSED FOR THE INSTALLATION OF NEW AND/OR RELOCATED PLUMBING FIXTURES. REFER TO PLUMBING FLOOR PLANS FOR POINTS OF CONNECTION.
2. WITHIN THE EXISTING BUILDING, SAWCUT AND REMOVE EXISTING FLOOR SLAB AS REQUIRED TO PROVIDE NEW AND/OR RELOCATED PLUMBING FIXTURES, CLEANOUTS, AND UNDERSLAB WASTE AND VENT PIPING. PATCH AND REFINISH FLOOR TO MATCH EXISTING.
3. IN AREAS WHERE THE FLOOR SLAB IS REMOVED, CONTRACTOR SHALL ALSO REMOVE UNDERSLAB WASTE AND VENT PIPING WHICH SERVES FIXTURES DESIGNATED FOR REMOVAL. PRIOR TO ANY REMOVAL, FIELD VERIFY THAT LINES TO BE REMOVED DO NOT SERVE ANY EXISTING FIXTURES TO REMAIN OR NEW FIXTURES TO BE INSTALLED.
4. IN AREAS WHERE THE FLOOR SLAB IS NOT REMOVED, CONTRACTOR SHALL ABANDON IN PLACE ANY UNDERSLAB WASTE AND VENT PIPING NO LONGER NEEDED, UNLESS THE PIPING MUST BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION. IF NEW WORK DOES NOT NECESSITATE THEIR REMOVAL, CUT AND PLUG SUCH LINES BELOW SLAB, AND PATCH FLOOR TO MATCH EXISTING.
5. FIELD VERIFY EXACT LOCATION, SIZE, DEPTH, DIRECTION OF FLOW, CAPACITY, PIPE MATERIAL AND CONDITION OF EXISTING WASTE PIPING PRIOR TO BEGINNING CONSTRUCTION. ENSURE THAT PROPER CONNECTIONS TO AND EXTENSION OF SUCH UTILITIES CAN BE MADE.
6. WASTE LINES TO BE RE-USED OR RECONNECTED TO SHALL BE THOROUGHLY RODDED OUT AND FLUSHED TO ENSURE THEY ARE FREE FROM BLOCKAGES.
7. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING BELOW SLAB WITH COLUMN FOOTINGS, GRADE BEAMS, UNDERGROUND PLUMBING AND ELECTRICAL UTILITIES, AND OTHER SUB-SURFACE BUILDING ELEMENTS.
8. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING IN CEILING SPACES WITH MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK AND CONDUIT. SHOULD A CONFLICT OCCUR THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN.
9. CONTRACTOR TO COORDINATE ALL REMODEL WORK WITH THE WORK OF OTHER TRADES TO AVOID CONFLICTS AND TO MINIMIZE INTERRUPTION OF SERVICES.
10. COORDINATE ALL FIXTURE AND EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS WITH LATEST ARCHITECTURAL DRAWINGS AND SPECIFICATIONS PRIOR TO ANY ROUGH-INS.
11. DO NOT ROUGH-IN FROM THESE DRAWINGS. REFER TO LATEST ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS.
12. CONTRACTOR TO FIELD VERIFY AS NECESSARY THE EXACT ROUTING AND SIZES OF ALL PIPING.
13. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE CITY BUILDING CODE, INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION.
14. THE PROPER INSTALLATION OF NEW FIXTURES AND THE PROPER CONTINUED OPERATION OF EXISTING FIXTURES TO REMAIN SHALL DETERMINE THE EXTENT AND NATURE OF PLUMBING REMODEL WORK.
15. EACH VENT SHALL TERMINATE VERTICALLY NOT LESS THAN 6" ABOVE ROOF. MAINTAIN MINIMUM 10'-0" DISTANCE BETWEEN VENT TERMINALS THROUGH ROOF AND ALL FRESH AIR INTAKES, AND A MINIMUM 5'-0" FROM ANY EXTERIOR WALL.
16. PRIOR TO BEGINNING CONSTRUCTION, COORDINATE BUILDING BACKFLOW PREVENTION REQUIREMENTS WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PROVIDE AS DIRECTED.

VLK

Issued For Permit

STATE OF TEXAS
KEITH W. GASSMAN
89636
LICENSED
PROFESSIONAL
ENGINEER
05/19/2025

ISSUED: May 19, 2025

Revision No.	Revision Date

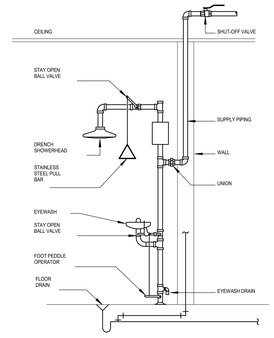
Director
Approver
Designer
Designer
Proj. Arch.
Checker

Drawn By
Author
Quality Control

24-103.00

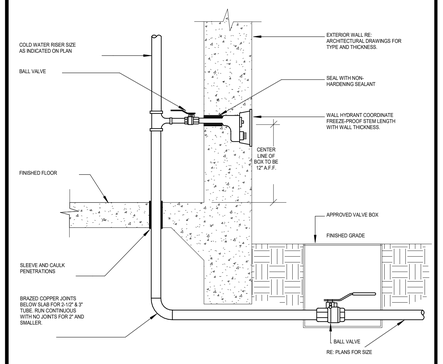
PLUMBING LEGEND & SCHEDULES

P6.11



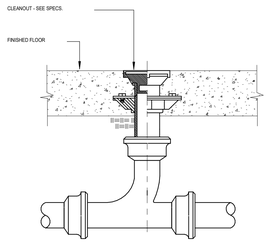
EMERGENCY SHOWER / EYEWASH CONNECTION

12 SCALE: NONE



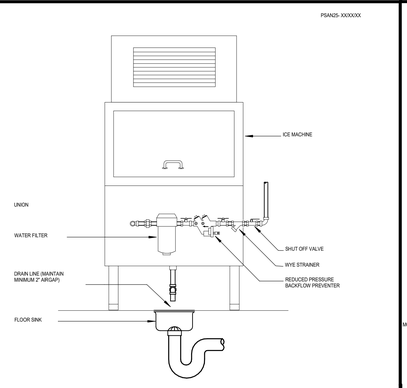
DOMESTIC WATER ENTRY

8 SCALE: NONE



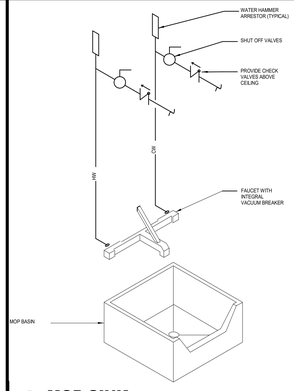
FLOOR CLEANOUT

4 SCALE: NONE



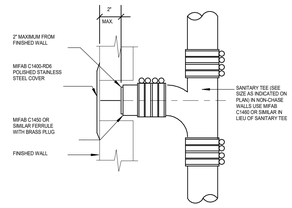
ICE MACHINE CONNECTION

15 SCALE: NONE



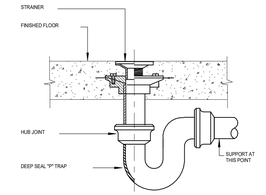
MOP SINK

11 SCALE: NONE



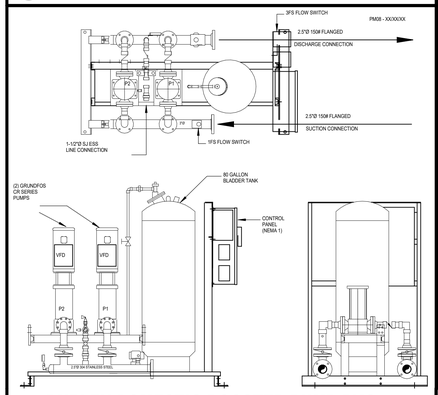
WALL CLEANOUT

7 SCALE: NONE



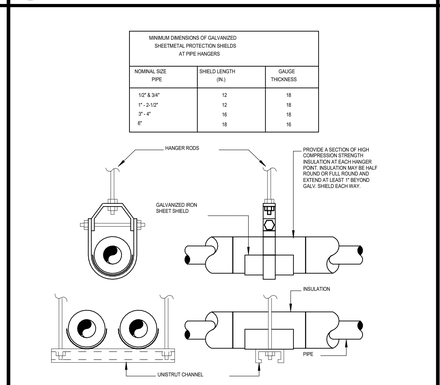
FLOOR DRAIN

3 SCALE: NONE



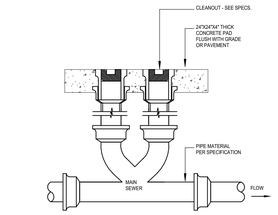
DUPLEX DOMESTIC BOOSTER PUMP PKG

14 SCALE: NONE



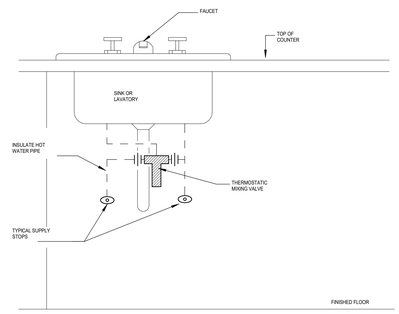
PIPE SHIELDS FOR INSULATED PIPING

10 SCALE: NONE



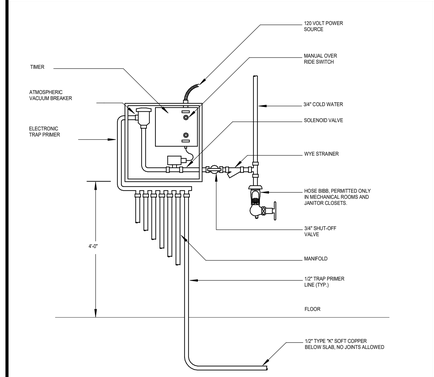
TWO-WAY EXTERIOR CLEANOUT

6 SCALE: NONE



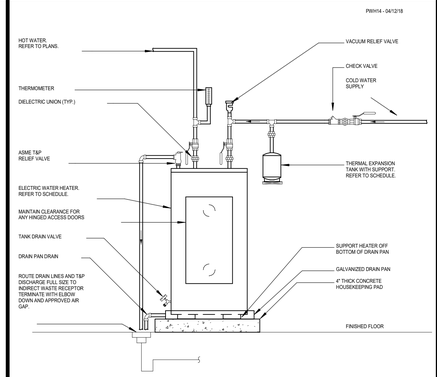
THERMOSTATIC MIXING VALVE AT SINK/LAVATORY DUAL TEMPERATURE

2 SCALE: NONE



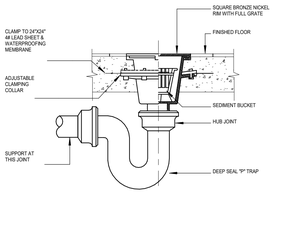
ELECTRONIC TRAP PRIMER

13 SCALE: NONE



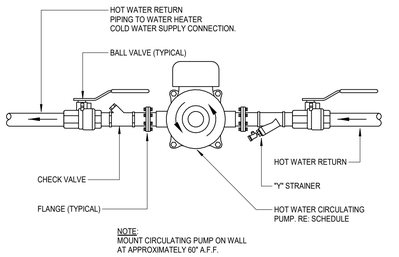
ELECTRIC WATER HEATER PIPING

9 SCALE: NONE



FLOOR SINK

5 SCALE: NONE



HOT WATER CIRCULATING PUMP PIPING

1 SCALE: NONE

VLK

Issued For Permit

STATE OF TEXAS
KEITH W. GASSMAN
89636
REGISTERED
ENGINEER
05/19/2025

ISSUED: May 19, 2025

Revision No.	Revision Date

Director	Drawn By
Approver	Author
Designer	Quality Control
Designer	
Proj. Arch.	
Checker	

24-103.00

PLUMBING DETAILS

P6.21

TELECOMMUNICATIONS

1.0 GENERAL NOTES

1. THE GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS AND OTHER REQUIREMENTS OF DIVISION 0 & 1 SHALL APPLY TO ALL WORK WITHIN THESE DOCUMENTS. THE AUDIOVISUAL, ELECTRICAL, COMMUNICATION, MECHANICAL, AND SECURITY PLANS AND SPECIFICATIONS MAY APPLY TO THE WORK SPECIFIED. ANY CONTRADICTING INFORMATION SHALL BE SUBMITTED VIA AN RFI.
2. THE SPECIFICATIONS AND DRAWINGS ARE TO BE EXECUTED AS A PART OF THE CONTRACT BETWEEN THE OWNER AND THE PRIME CONTRACTOR. ALL SCOPE EXECUTION AND DELINEATION SHALL BE MANAGED BY THE PRIME CONTRACTOR; ALL ATLAS CONSULTING DOCUMENTS ARE TO INDICATE REQUIRED SCOPE AND NOT EXECUTION RESPONSIBILITY.
3. THE CONTRACTOR SHALL CAREFULLY EXAMINE EXISTING SITE CONDITIONS ON AN ON-GOING BASIS TO DETERMINE THE EXTENT OF WORK AND CONDITION UNDER WHICH IT WILL BE DONE. IF SITE CONDITIONS PRESENT A CONFLICT WITH THE CONTRACT DOCUMENTS THE OWNER, OR CONSULTANT, SHOULD BE CONSULTED AS NEEDED FOR CLARIFICATION OR DIRECTION REGARDING ANY PROJECT RELATED QUESTIONS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE OWNER, OR CONSULTANT, VIA AN RFI.
4. ALL SUBCONTRACTORS HIRED BY THE PRIME CONTRACTOR SHALL REVIEW THE PROVIDED TECHNOLOGY SPECIFICATIONS AND DRAWINGS FOR ALL REQUIRED EXECUTION. THESE DOCUMENTS CONTAIN COORDINATION REQUIREMENTS FOR DIVISION 0, 1, 10, 11, 14, 23, 26, & 32. IF ANY OF THE WORK PRESENTED WITHIN THE DOCUMENTS REQUIRES CLARIFICATION OR COORDINATION, THE PRIME CONTRACTOR SHALL SUBMIT AN RFI BEFORE PROCEEDING WITH THE WORK.
5. ANY WORK THAT HINDERS OR INHIBITS THE EXECUTION OF THESE DOCUMENTS BY COORDINATING SUBCONTRACTORS SHALL BE BROUGHT TO THE ATTENTION OF THE PRIME CONTRACTOR.
6. ALL INSTALLED EQUIPMENT, CABLING, AND LABOR REQUIRED TO COMPLETE THE DEFINED SCOPE IS THE RESPONSIBILITY OF THE PRIME CONTRACTOR AND THEIR SUBCONTRACTORS. DURING THE COURSE OF CONSTRUCTION ALL OF THESE ITEMS SHALL BE PROTECTED AND KEPT FROM HARM. SHALL ANY DAMAGE OCCUR BEFORE THE PUNCH LIST, IT WILL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER.

2.0 STRUCTURED CABLING PATHWAYS

1. THE MINIMUM SIZED CONDUIT FOR ALL WALL MOUNTED DATA OUTLETS SHALL BE 1-IN. IN DIAMETER. ANY OUTLET THAT REQUIRES MORE THAN (4) FOUR CABLES SHALL HAVE AN ADDITIONAL 1-IN. CONDUIT ROUTED TO THE BOX.
2. REFER TO DIVISION 27 05 33 FOR ALL IN-WALL BOX SIZING. MINIMUM SIZED DATA OUTLET BOX IS DEFINED AS "COMMUNICATION BACKBOX". IN ORDER TO SUPPORT COORDINATING ELECTRICAL RECEPTACLES, ALL WALL MOUNTED DATA OUTLETS SHALL TERMINATE WITHIN A BOX MOUNTING BRACKET.
3. ALL BACKBOXES SUPPORTING A WALL MOUNTED DATA OUTLET WITH (4) FOUR OF LESS CABLES REQUIRE A SINGLE GANG REDUCING RING TO BE INSTALLED FOR MOUNTING OF THE OUTLET FACEPLATE.
4. A MINIMUM SIZED CONDUIT PATHWAY ASSEMBLY IS DEFINED AS A MINIMUM SIZED CONDUIT, BACKBOX, REDUCING RING, AND PULL-STRING AS SPECIFIED.
5. ANY ROOM WITH CABLING TRANSITIONING FROM ANOTHER SPACE SHALL HAVE A CONDUIT SLEEVE INSTALLED FOR CABLE PROTECTION. THESE SLEEVES SHALL BE DEDICATED FOR STRUCTURED CABLING AND NOT SHARED.
6. WITHIN A 100 FOOT LENGTH, THERE SHOULD BE NO GREATER THAN 180 DEGRESS WORTH OF BENDS WITHIN THE MINIMUM ALLOWED TO BE A 90 DEGREE BEND. IF THESE CONDITIONS CANNOT BE MET, A J-BOX MUST BE PLACED IN THE RUN WITH THE ABILITY TO ACCESS THE BOX THROUGH THE CEILING.
7. ALL REFLECTED CEILING PLANS INDICATE THE TYPE OF FINISHED CEILING WITHIN THE SPACE FOR DIRECTION ON HOW TO MOUNT INFRASTRUCTURE AND EQUIPMENT. ALL SPECIFIC TYPES AND HEIGHTS SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS FOR REQUIRED LABOR, LIFTS, ETC.
8. FOR ALL TERMINATIONS SUPPORTING AN EXTERNAL DEVICE WITHIN A HARDLID OR EXPOSED CEILING, PROVIDE A MINIMUM SIZED CONDUIT ASSEMBLY FROM THE INTERIOR SURFACE TO THE NEAREST ACCESSBILE CEILING.
9. ALL LOCATIONS OF DATA OUTLETS THAT SHOW A COUNT OF "0" SHOULD BE TREATED AS A TYPICAL PATHWAY TO BE USED FOR FUTURE DEVICE(S). BLANK PLATE SHALL BE PROVIDED.

3.0 ELECTRICAL

1. ALL RECEPTACLES SUPPORTING TELECOMMUNICATION RACKS, WALL MOUNTED CABINET, OR ENCLOSURES SHALL BE ON A DEDICATED CIRCUIT WITH AN ISOLATED GROUND.
2. ALL ELECTRICAL INFORMATION SHOWN WITHIN THESE DOCUMENTS ARE FOR REFERENCE OR INSTALLATION LOCATION ONLY. ALL SPECIFICS SHALL BE COORDINATED WITH THE ELECTRICAL DRAWINGS AND SPECIFICATIONS.
3. 3 . ALL WALL MOUNTED DATA OUTLETS SHALL HAVE CORRESPONDING RECEPTACLE INSTALLED WITHIN 6", UTILIZING BOX MOUNTING BRACKET AS SPECIFIED IN DIVISION 27 05 33.

4.0 COMMUNICATIONS CABLE

1. COMMUNICATIONS CABLE SHALL NOT BE PAINTED.
2. LABEL CABLES PER OWNER STANDARD. COORDINATE FINAL NOMENCLATURE WITH OWNER PRIOR TO INSTALLATION.
3. ALL CABLING INSTALLED UNDERGROUND IN CONCRETE SLABS, IN DIRECT CONTACT WITH THE EARTH. IN LOCATIONS SUBJECT TO SATURATION WITH LIQUIDS AND UNPROTECTED LOCATIONS EXPOSED TO WEATHER SHALL BE CONSTRUCTED WITH APPROPRIATE WEATHER PROOFING COMPOUNDS AND SHEATHING.
4. AT NO TIME SHALL ZIP TIES BE USED TO SECURE CABLE IN BUNDLES OR TO PATHWAY/SUPPORTS. ANY CABLES FOUND TO BE SECURED BY ZIP TIE WILL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

5.0 COMMUNICATIONS ROOMS

1. CONTRACTOR TO PROVIDE AUTOCAD FLOOR PLAN AS-BUILT ON "D" SIZE PAPER, LAMINATED WITH PLASTIC AND MOUNTED BEHIND CUT PLEXI-GLASS ON THE WALL IN THE TELECOMMUNICATIONS ROOM.
2. ALL VERTICAL TRANSITIONS, FROM WALL OR UNDERGROUND, SHALL HAVE A VERTICAL LADDER TRAY INSTALLED TO THE NEAREST CEILING SUPPORTED TRAY. PROVIDE A MINIMUM OF 12" TRAY WITH WALL MOUNT KITS.
3. ALL QUANTITIES OF PATCH PANELS SHOWN ARE GRAPHICAL IN NATURE AND DO NOT ACCOUNT FOR ACCURATE CABLE COUNT. PROVIDE NECESSARY PATCH PANELS TO MATCH DROP COUNT PLUS 10% GROWTH.

6.0 ABBREVIATIONS

OF	OWNER FURNISHED
OI	OWNER INSTALLED
CF	CONTRACTOR FURNISHED
CI	CONTRACTOR INSTALLED .
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
MDF	MAIN DISTRIBUTION FRAME
IDF	INTERMEDIATE DISTRIBUTION FRAME
LAN	LOCAL AREA NETWORK
N/A	NOT APPLICABLE
NIC	NOT INCLUDED IN CONTRACT
REF	REFERENCE
TYP	TYPICAL

TELECOMMUNICATIONS RESPONSIBILITY MATRIX

TELECOMMUNICATIONS RESPONSIBILITY MATRIX	SPECIFICATION SECTION	INSTALLATION TYPE
HORIZONTAL CABLING	27 10 00	
BACKBONE CABLING	27 10 00	CFCI
TELECOMMUNICATIONS ROOM BUILDOUT	27 10 00	CFCI
UPS DEVICES	27 10 00	CFCI
COPPER PATCH CORDS	27 10 00	CFCI
FIBER PATCH CORDS	27 10 00	CFCI
NETWORK SWITCHES	-	OFOI
WIRELESS ACCESS POINTS	-	OFCI
PHONES	-	OFOI
PATHWAYS	27 05 33	CFCI
FLOOR BOXES	DIVISION 26	CFCI

AUDIOVISUAL RESPONSIBILITY MATRIX

AUDIOVISUAL RESPONSIBILITY MATRIX	SPECIFICATION SECTION	INSTALLATION TYPE
BUILDING NETWORK CABLING	27 10 00	CFCI
AUDIOVISUAL CABLING	27 41 00	CFCI
AUDIOVISUAL SPECIALTY BACKBOXES	27 41 00	CFCI
DISPLAY MOUNTS	-	OFCI
FLAT PANEL DISPLAYS	-	OFCI
PATHWAYS	27 05 33	CFCI
FLOOR BOXES	DIVISION 26	CFCI

AUDIOVISUAL AND BUILDING COMMUNICATIONS

1.0 GENERAL NOTES

1. THE GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS AND OTHER REQUIREMENTS OF DIVISION 0 & 1 SHALL APPLY TO ALL WORK WITHIN THESE DOCUMENTS. THE AUDIOVISUAL, ELECTRICAL, COMMUNICATION, MECHANICAL, AND SECURITY PLANS AND SPECIFICATIONS MAY APPLY TO THE WORK SPECIFIED. ANY CONTRADICTING INFORMATION SHALL BE SUBMITTED VIA AN RFI.
2. THE SPECIFICATIONS AND DRAWINGS ARE TO BE EXECUTED AS A PART OF THE CONTRACT BETWEEN THE OWNER AND THE PRIME CONTRACTOR. ALL SCOPE EXECUTION AND DELINEATION SHALL BE MANAGED BY THE PRIME CONTRACTOR; ALL ATLAS CONSULTING DOCUMENTS ARE TO INDICATE REQUIRED SCOPE AND NOT EXECUTION RESPONSIBILITY.
3. ANY AUDIOVISUAL WORK REQUIRING CUTTING, PATCHING, OR MODIFYING ANY BUILDING STRUCTURE SHALL HAVE THE METHOD OF IMPLEMENTATION SUBMITTED TO THE OWNER VIA AN RFI.
4. 4. ALL SUBCONTRACTORS HIRED BY THE PRIME CONTRACTOR SHALL REVIEW THE PROVIDED TECHNOLOGY SPECIFICATIONS AND DRAWINGS FOR ALL REQUIRED EXECUTION. THESE DOCUMENTS CONTAIN COORDINATION REQUIREMENTS FOR DIVISION 0, 1, 10, 11, 23, & 26. IF ANY OF THE WORK PRESENTED WITHIN THE DOCUMENTS REQUIRES CLARIFICATION OR COORDINATION, THE PRIME CONTRACTOR SHALL SUBMIT AND RFI BEFORE PROCEEDING WITH THE WORK.
5. 5. ALL INSTALLED EQUIPMENT, CABLING, AND LABOR REQUIRED TO COMPLETE THE DEFINED SCOPE IS THE RESPONSIBILITY OF THE PRIME CONTRACTOR AND THEIR SUBCONTRACTORS. DURING THE COURSE OF CONSTRUCTION ALL OF THESE ITEMS SHALL BE PROTECTED AND KEPT FROM HARM. SHALL ANY DAMAGE OCCUR BEFORE THE PUNCH LIST, IT WILL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER.
6. 6. ALL MOUNTED DEVICES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE; ANY SYSTEM THAT WEIGHS MORE THAN 200LBS SHALL HAVE A SET OF ENGINEERED DRAWINGS SUBMITTED VIA AN RFI FOR APPROVAL BY OWNER AND DESIGN TEAM. CONTRACTOR TO PROVIDE IN WALL 5/8" FRT PLYWOOD BLOCKING FOR ALL WALL MOUNTED AUDIOVISUAL DEVICES OVER 25LBS.

2.0 AUDIOVISUAL PATHWAYS

1. ALL AUDIOVISUAL CABLING IS SUBJECT TO FOLLOW THE PATHWAY REQUIREMENTS OF DIVISION 27 05 33.
2. ANY SPECIALTY BACKBOXES REQUIRED FOR INSTALLATION SHALL BE COORDINATED BY THE PRIME CONTRACTOR. ALL PATHWAYS TERMINATING WITHIN BACK BOX SHALL BE COORDINATED FOR REQUIRED CABLE ROUTING.
3. THE MINIMUM SIZED CONDUIT FOR ALL AUDIOVISUAL PATHWAYS SHALL BE 1.25 IN. IN DIAMETER.
4. REFER TO DIVISION 27 05 33 FOR ALL IN-WALL BOX SIZING. MINIMUM SIZED AUDIOVISUAL OUTLET BOX IS DEFINED AS "COMMUNICATION BACKBOX".
5. A MINIMUM SIZED CONDUIT PATHWAY ASSEMBLY IS DEFINED AS A MINIMUM SIZED CONDUIT, BACKBOX, AND PULL-STRING AS SPECIFIED.
6. ANY ROOM WITH CABLING TRANSITIONING FROM ANOTHER SPACE SHALL HAVE A CONDUIT SLEEVE INSTALLED FOR CABLE PROTECTION. THESE SLEEVES SHALL BE DEDICATED FOR AUDIOVISUAL AND NOT SHARED.

3.0 ELECTRICAL

1. ALL SPECIALTY BACKBOXES AND FLOOR BOXES SHALL BE COORDINATED BY THE PRIME CONTRACTOR. RECEPTACLES SUPPORTING AUDIOVISUAL EQUIPMENT AND RACKS SHALL BE INSTALLED WITHIN PROVIDED INFRASTRUCTURE.
2. ALL RECEPTACLES SUPPORTING AUDIOVISUAL EQUIPMENT AND RACKS SHALL BE ON A DEDICATED CIRCUIT WITH AN ISOLATED GROUND.

TECHNOLOGY SHEET INDEX

VLK

ARCHITECT

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

TECHNOLOGY CONSULTANT

Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

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TECHNOLOGY INDEX

SHEET NO.
T1.01

TECHNOLOGY SYMBOL LEGEND

SYMBOL	DESCRIPTION	ELECTRICAL/POWER REQUIREMENTS	DATA/CABLE REQUIREMENTS	PATHWAY REQUIREMENTS	NOTES
xD ▽	WALL MOUNTED DATA OUTLET	RECEPTACLE SHALL BE INSTALLED WITHIN 6 IN. OF DATA OUTLET.	CABLE TYPE AS SPECIFIED. (x) = NUMBER OF CABLE RUNS PER LOCATION AS INDICATED.	MINIMUM SIZED CONDUIT PATHWAY ASSEMBLY TO BE PROVIDED. STUB INTO NEAREST ACCESSIBLE CEILING.	MOUNTED AT 18 IN. AFF UNLESS NOTED OTHERWISE.
xD ▽	ABOVE COUNTER MOUNTED DATA OUTLET	RECEPTACLE SHALL BE INSTALLED WITHIN 6 IN. OF DATA OUTLET.	CABLE TYPE AS SPECIFIED. (x) = NUMBER OF CABLE RUNS PER LOCATION AS INDICATED.	MINIMUM SIZED CONDUIT PATHWAY ASSEMBLY TO BE PROVIDED. STUB INTO NEAREST ACCESSIBLE CEILING.	MOUNTED AT 6 IN. ABOVE COUNTER UNLESS NOTED OTHERWISE.
xM ▽	WALL MOUNTED DATA OUTLET - MONITOR	RECEPTACLE SHALL BE INSTALLED WITHIN 6 IN. OF DATA OUTLET.	CABLE TYPE AS SPECIFIED. (x) = NUMBER OF CABLE RUNS PER LOCATION AS INDICATED.	MINIMUM SIZED CONDUIT PATHWAY ASSEMBLY TO BE PROVIDED. STUB INTO NEAREST ACCESSIBLE CEILING.	DATA OUTLET AND ELECTRICAL RECEPTACLE SHALL BE MOUNTED WITHIN AUDIOVISUAL SPECIALTY BOX, IF PROVIDED.
CAM ▽	WALL MOUNTED DATA OUTLET - CAMERA	POWER-OVER-ETHERNET (PoE)	CABLE TYPE AS SPECIFIED. (1) CABLE RUN PER LOCATION AS INDICATED.	COMMUNICATIONS CABLE TO TERMINATE WITHIN SURFACE MOUNTED BISCUIT BOX WITHIN NEAREST ACCESSIBLE CEILING. PROVIDE STANDARD COMMUNICATIONS JUNCTION BOX AND PATHWAY FOR ROUTING OF PROVIDED PATCH CABLE TO WALL MOUNTED DEVICE.	REFER TO AUDIOVISUAL DRAWINGS AND SPECIFICATIONS FOR MOUNTING HEIGHT.
WAP ▽	WALL MOUNTED DATA OUTLET - WIRELESS ACCESS POINT	POWER-OVER-ETHERNET (PoE)	CABLE TYPE AS SPECIFIED. (1) CABLE RUN PER LOCATION AS INDICATED.	COMMUNICATIONS CABLE TO TERMINATE WITHIN SURFACE MOUNTED BISCUIT BOX WITHIN NEAREST ACCESSIBLE CEILING. PROVIDE STANDARD COMMUNICATIONS JUNCTION BOX AND PATHWAY TO NEAREST ACCESSIBLE CEILING, FOR ROUTING OF PROVIDED PATCH CABLE TO WALL MOUNTED DEVICE.	MOUNTED AT 120 IN. AFF. MINIMUM OF A 15' SERVICE LOOP.
xD ▽	FLOOR MOUNTED MOUNTED DATA OUTLET	FLOOR BOX/POKE TO BE COORDINATED WITH ELECTRICAL AND AUDIOVISUAL. RECEPTACLE AND PLATES SHALL BE WITHIN DEDICATED GANGABLE KNOCKOUTS.	CABLE TYPE AS SPECIFIED. (x) = NUMBER OF CABLE RUNS PER LOCATION AS INDICATED.	ROUTE (1) 1.25" CONDUIT PATHWAY ASSEMBLY FROM FLOOR BOX/POKE TO THE NEAREST ACCESSIBLE CEILING. IF OUTLET IS SHOWN TO BE SHARED WITH AUDIOVISUAL FLOOR BOX, PATHWAYS TO BE ROUTED IN PARALLEL WITH THAT DEDICATED PATHWAY.	TERMINATE IN 106-STYLE FRAME.
xD ▽	CEILING MOUNTED DATA OUTLET	N/A	CABLE TYPE AS SPECIFIED. (x) = NUMBER OF CABLE RUNS PER LOCATION AS INDICATED.	TERMINATION TO BE MADE WITHIN CEILING SUPPORTED SURFACE MOUNTED BOX. IF LOCATED WITHIN EXPOSED OR HARD-LID CEILING, MINIMUM SIZED CONDUIT PATHWAY ASSEMBLY TO BE PROVIDED. STUB INTO NEAREST ACCESSIBLE CEILING.	MINIMUM OF A 15' SERVICE LOOP.
CAM ▽	CEILING MOUNTED DATA OUTLET - CAMERA	POWER-OVER-ETHERNET (PoE)	CABLE TYPE AS SPECIFIED. (1) CABLE RUN PER LOCATION AS INDICATED.	TERMINATION TO BE MADE WITHIN CEILING SUPPORTED SURFACE MOUNTED BOX. IF LOCATED WITHIN EXPOSED OR HARD-LID CEILING, MINIMUM SIZED CONDUIT PATHWAY ASSEMBLY TO BE PROVIDED. STUB INTO NEAREST ACCESSIBLE CEILING.	MINIMUM OF A 15' SERVICE LOOP.
CAM-E ▽	CEILING MOUNTED DATA OUTLET - EXTERIOR CAMERA	POWER-OVER-ETHERNET (PoE)	CABLE TYPE AS SPECIFIED. (1) CABLE RUN PER LOCATION AS INDICATED.	TERMINATION TO BE MADE WITHIN CEILING SUPPORTED SURFACE MOUNTED BOX. MINIMUM SIZED CONDUIT PATHWAY ASSEMBLY TO BE MOUNTED WITHIN MASONRY ON EXTERIOR OF BUILDING. PROVIDE ALL NECESSARY SEALANTS.	ROUTE EXTERIOR RATED PATCH CORD AND SURGE PROTECTION TO DEVICE. REFER TO SECURITY DRAWINGS AND SPECIFICATIONS FOR MOUNTING HEIGHT. MINIMUM OF A (#)' SERVICE LOOP.
WAP ▽	CEILING MOUNTED DATA OUTLET - WIRELESS ACCESS POINT	POWER-OVER-ETHERNET (PoE)	CABLE TYPE AS SPECIFIED. (1) CABLE RUN PER LOCATION AS INDICATED.	TERMINATION TO BE MADE WITHIN CEILING SUPPORTED SURFACE MOUNTED BOX. IF LOCATED WITHIN EXPOSED OR HARD-LID CEILING, MINIMUM SIZED CONDUIT PATHWAY ASSEMBLY TO BE PROVIDED. STUB INTO NEAREST ACCESSIBLE CEILING.	MINIMUM OF A 15' SERVICE LOOP.
WAP-E ▽	CEILING MOUNTED DATA OUTLET - EXTERIOR WIRELESS ACCESS POINT	POWER-OVER-ETHERNET (PoE)	CABLE TYPE AS SPECIFIED. (1) CABLE RUN PER LOCATION AS INDICATED.	TERMINATION TO BE MADE WITHIN CEILING SUPPORTED SURFACE MOUNTED BOX. MINIMUM SIZED CONDUIT PATHWAY TO BE MOUNTED WITHIN MASONRY ON EXTERIOR OF BUILDING. PROVIDE ALL NECESSARY SEALANTS.	MOUNTED AT 144 IN. AFF UNLESS NOTED OTHERWISE. ROUTE EXTERIOR RATED PATCH CORD AND SURGE PROTECTION TO DEVICE. MINIMUM OF A 15' SERVICE LOOP.
V#	WALL MOUNTED AUDIOVISUAL PLATE, (#) INDICATES THE AUDIOVISUAL EQUIPMENT LIST DICTATED TYPE	RECEPTACLE SHALL BE INSTALLED WITHIN 6 IN. OF INPUT/OUTPUT PLATE.	CATEGORY CABLING AS REQUIRED FOR POINT-TO-POINT AUDIOVISUAL CONNECTION.	MINIMUM SIZED AUDIOVISUAL CONDUIT PATHWAY ASSEMBLY TO BE PROVIDED. STUB INTO NEAREST ACCESSIBLE CEILING.	ALL INPUTS TO BE MOUNTED AT 18 IN. AFF. OUTPUTS TO BE MOUNTED AT 66 IN. AFF. REFER TO AUDIOVISUAL INPUT SCHEDULE IN 27 41 00 FOR ALL AUDIOVISUAL PLATE TYPES.
WB	FLAT PANEL DISPLAY IN-WALL BOX AND WALL MOUNTED DATA OUTLET	20A DUPLEX RECEPTACLE TO BE INSTALLED WITHIN GANGABLE KNOCKOUT OF IN-WALL BOX.	CABLE TYPE AS SPECIFIED. (2) CABLE RUNS, PER LOCATION AS INDICATED. OUTLET TO MOUNT WITHIN GANGABLE KNOCKOUT OF IN-WALL BOX.	(1) ONE MINIMUM SIZED AUDIOVISUAL CONDUIT PATHWAY ASSEMBLY TO BE PROVIDED, STUB INTO NEAREST ACCESSIBLE CEILING. (1) ONE MINIMUM SIZED COMMUNICATIONS CONDUIT PATHWAY ASSEMBLY TO BE PROVIDED. STUB INTO NEAREST ACCESSIBLE CEILING.	MOUNTED AT 66 IN. AFF UNLESS NOTED OTHERWISE.

VLK

ARCHITECT

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

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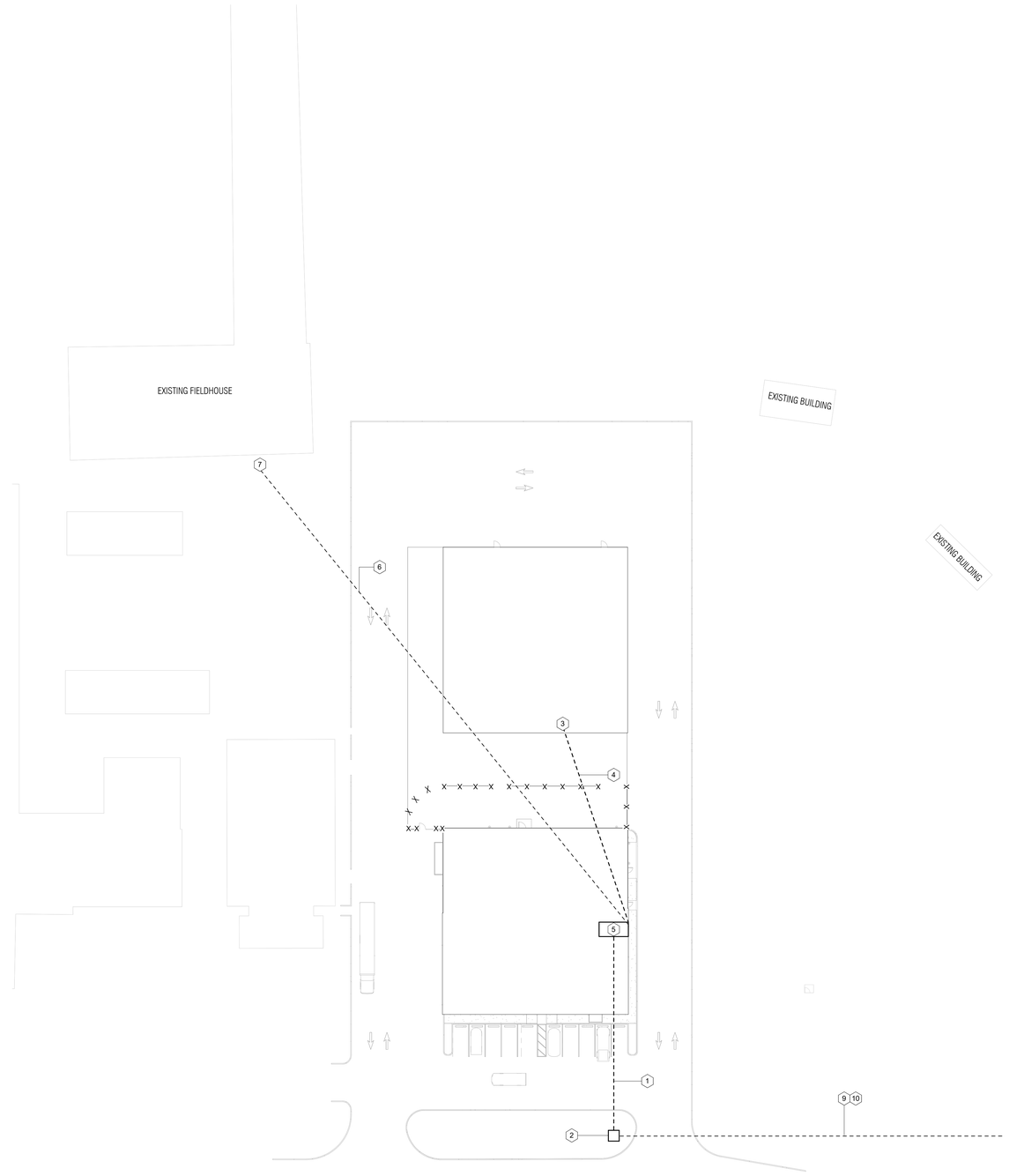
TECHNOLOGY INDEX

SHEET NO.

T1.02



KEYNOTE LEGEND

1	(2) 4 IN. EACH WITH A 3-CELL FABRIC INNERDUCT, FROM SITE RIGHT-OF-WAY TO BUILDING MDF. (1) 3 IN. CONDUIT FROM BUILDING MDF TO TRANSPORTATION BUILDING. EACH CONDUIT SHALL BE SCHEDULE 40 PVC, EXTENDING A MAXIMUM OF 4 IN. ABOVE SLAB IN TELECOMMUNICATION ROOM. PROVIDE WITH NON-SPLIT BUSHINGS AND NYLON PULL-STRING.
2	LOCATION OF 11 IN. X 20 IN. X 12 IN. HANDHOLE FOR ROUTING OF UNDERGROUND CABLING.
3	LOCATION OF 11 IN. X 21 IN. X 12 IN. HANDHOLE FOR SERVICE OF FUTURE PEM BUILDING. COORDINATE FINAL LOCATION WITH THE FUTURE SLAB AND ENSURE IT IS LOCATED WITHIN THE INTERIOR OF THE BUILDING.
4	(1) 3 IN. CONDUIT WITH A 3-CELL FABRIC INNERDUCT, FROM BUILDING MDF TO NEW HANDHOLE SERVING FUTURE PEM BUILDING. CONDUIT SHALL BE SCHEDULE 40 PVC, EXTENDING A MAXIMUM OF 4 IN. ABOVE SLAB IN TELECOMMUNICATION ROOM.PROVIDE WITH NON-SPLIT BUSHINGS AND NYLON PULL-STRING
5	LOCATION OF IDF A 116.
6	(1) 3 IN. CONDUIT FROM BUILDING MDF TO EXISTING PULLBOX SERVING FIELDHOUSE. CONDUIT SHALL BE SCHEDULE 40 PVC, EXTENDING A MAXIMUM OF 4 IN. ABOVE SLAB IN TELECOMMUNICATION ROOM.PROVIDE WITH NON-SPLIT BUSHINGS AND NYLON PULL-STRING.
7	LOCATION OF EXISTING PULLBOX SERVING FIELDOUSE.
9	TRANSPORTATION BUILDING IS APPROXIMATELY 550-FEET FROM NEW HANDHOLE, ROUTE CONDUIT ON FACE OF TRANSPORTATION BUILDING AND ROUTE TO SURFACE MOUNTED PULLBOX.
10	(1) 3 IN. CONDUIT FROM BUILDING MDF TO TRANSPORTATION BUILDING. CONDUIT SHALL BE SCHEDULE 40 PVC, EXTENDING A MAXIMUM OF 4 IN. ABOVE SLAB IN TELECOMMUNICATION ROOM.

N

PLAN NORTH TRUE NORTH

1 TECHNOLOGY OVERALL SITE PLAN
SCALE: 1" = 30'-0"

VLK

ARCHITECT

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

TECHNOLOGY CONSULTANT

Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

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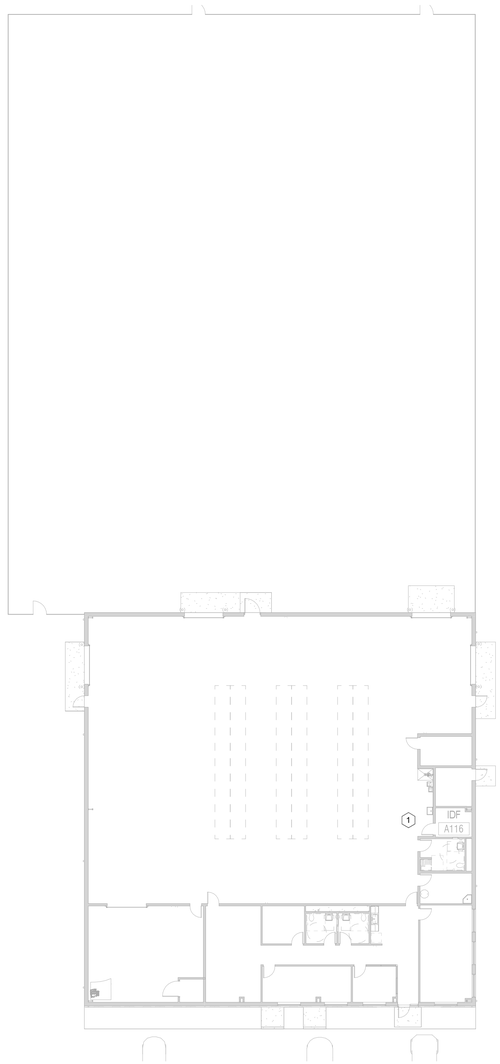
SHEET TITLE

TECHNOLOGY OVERALL SITE PLAN

SHEET NO.

T1.11

KEYNOTE LEGEND	
1	ALL CABLING SHALL BE ROUTED TO IDF A116.



N

PLAN NORTH

TRUE NORTH

1 TECHNOLOGY OVERALL FLOOR PLAN - LEVEL 1

SCALE: 1/16" = 1'-0"

B

A

KEY PLAN

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ARCHITECT

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

TECHNOLOGY CONSULTANT

Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

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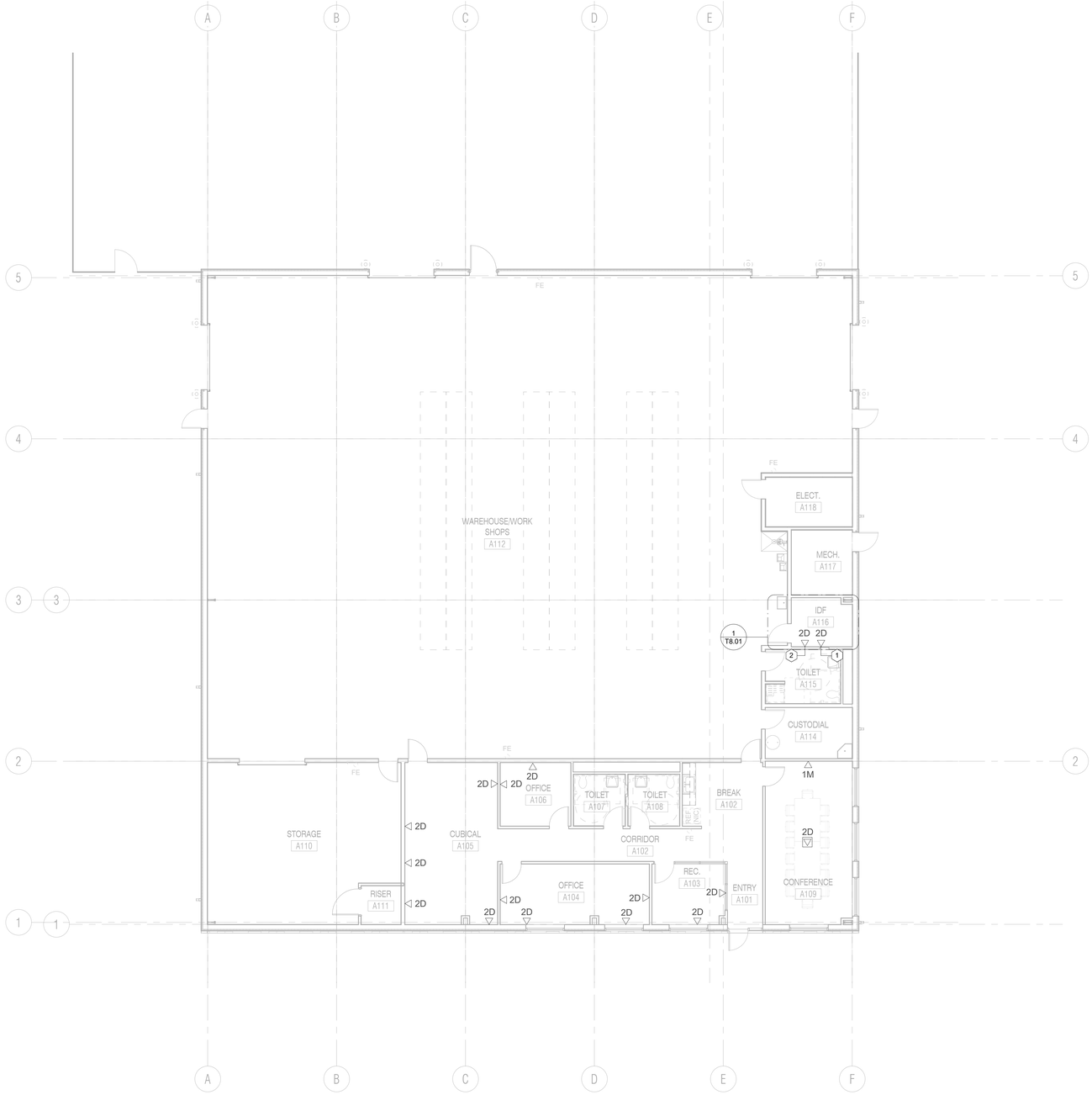
SHEET TITLE

TECHNOLOGY OVERALL PLAN - LEVEL 1

SHEET NO.

T2.11

KEYNOTE LEGEND	
1	LOCATION OF DATA DROPS TO BE CONTAINED WITHIN PROVIDED ACCESS CONTROL ENCLOSURE. TERMINATE ON SURFACE MOUNTED BLOCK WITHIN ENCLOSURE. COORDINATE FINAL TERMINATION LOCATION WITH TY-SERIES SHEETS.
2	LOCATION OF DATA DROPS TO BE CONTAINED WITHIN PROVIDED INTRUSION DETECTION ENCLOSURE. TERMINATE ON SURFACE MOUNTED BLOCK WITHIN ENCLOSURE. COORDINATE FINAL TERMINATION LOCATION WITH TY-SERIES SHEETS.



N
PLAN NORTH
TRUE NORTH

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

B

A

KEY PLAN

VLK

ARCHITECT

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

TECHNOLOGY CONSULTANT

Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

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24-103.00

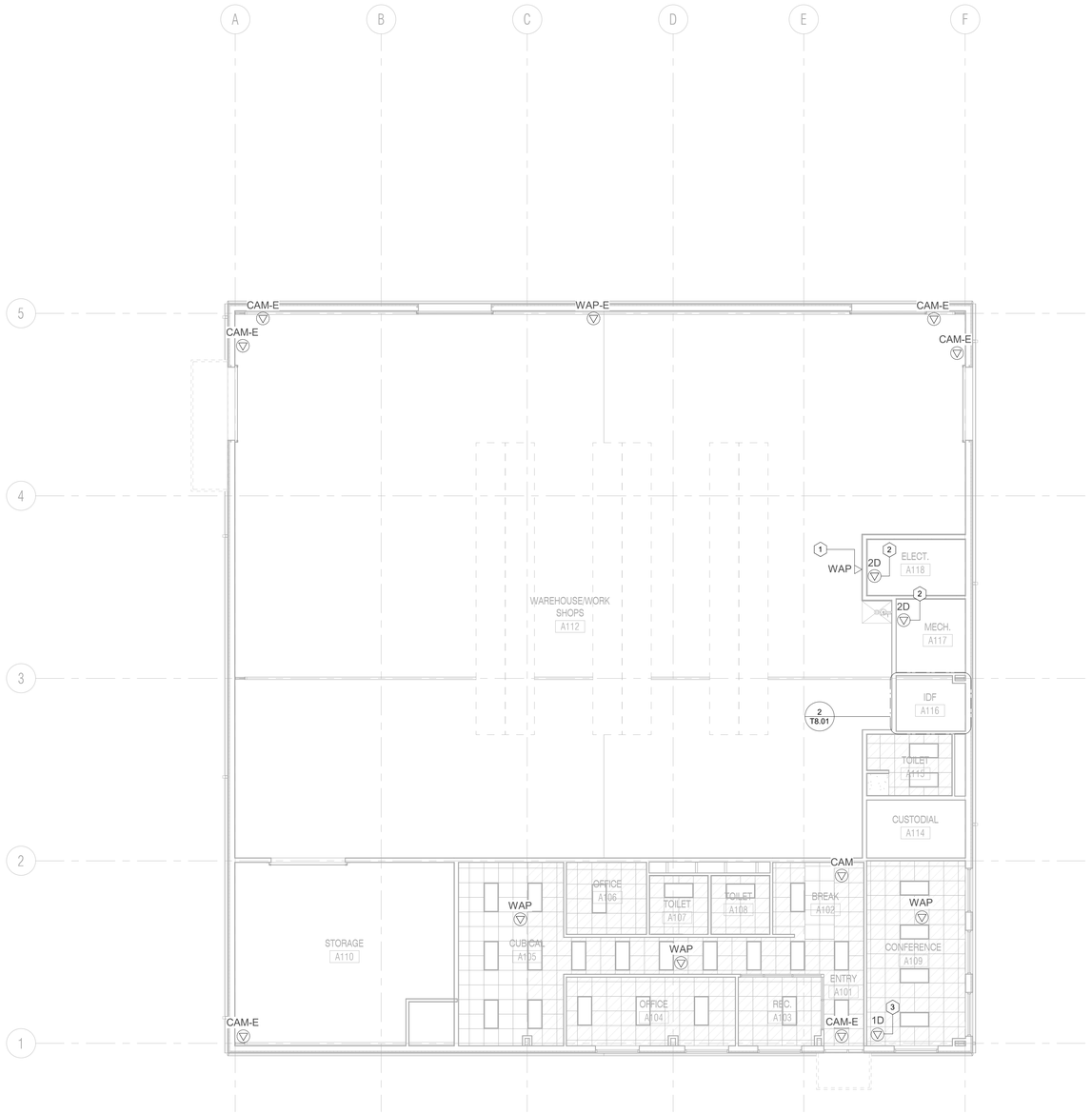
SHEET TITLE

TECHNOLOGY UNIT PLAN - LEVEL 1 - UNIT A

SHEET NO.

T2.11A

KEYNOTE LEGEND	
1	WIRELESS ACCESS POINT AT THIS LOCATION TO BE MOUNTED AT 15-FEET AFG.
2	DATA OUTLET LOCATION TO BE USED FOR BUILDING CONTROL SYSTEM. LOCATION TO TERMINATE WITHIN A SURFACE MOUNTED BOX ON THE CORRIDOR WALL, PROVIDE WITH 30' SERVICE LOOP. COORDINATE PATHWAY AND TERMINATION WITH PROVIDING CONTRACTOR, PRIOR TO TESTING.
3	DATA OUTLET LOCATION TO BE DEDICATED FOR VIDEO INTERCOM DEVICE. DATA DROP TO TERMINATE ABOVE ROUGH-IN ON SURFACE MOUNTED BOX. ROUTE PATCH CORD WITHIN PROVIDED PATHWAY. PROVIDE A MINIMUM OF A 15' PATCH CORD, AT THIS LOCATION.



N
PLAN NORTH
TRUE NORTH

1 TECHNOLOGY RCP - LEVEL 1 - UNIT A
SCALE: 1/8" = 1'-0"

VLK

ARCHITECT

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

TECHNOLOGY CONSULTANT

Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
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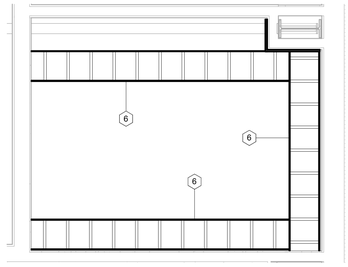
SHEET TITLE

TECHNOLOGY UNIT RCP - LEVEL 1 - UNIT A

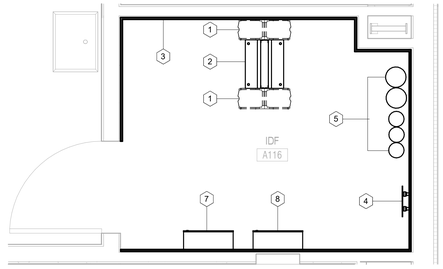
SHEET NO.

T6.11A

KEYNOTE LEGEND	
1	6 INCH VERTICAL WIRE MANAGER
2	2-POST RACK
3	3/4 INCH FIRE RATED PLYWOOD, MINIMUM GRADE AC
4	TELECOMMUNICATIONS BONDING BUS BAR
5	LOCATION OF INCOMING SITE CONDUITS.
6	12 INCH HORIZONTAL CABLE TRAY
7	ACCESS CONTROL PANEL
8	INTRUSION DETECTION PANEL



2 TECHNOLOGY ENLARGED RCP - IDF A116
SCALE: 1/2" = 1'-0"



1 TECHNOLOGY ENLARGED PLAN - IDF A116
SCALE: 1/2" = 1'-0"

VLK

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

TECHNOLOGY CONSULTANT
Atlas Consulting
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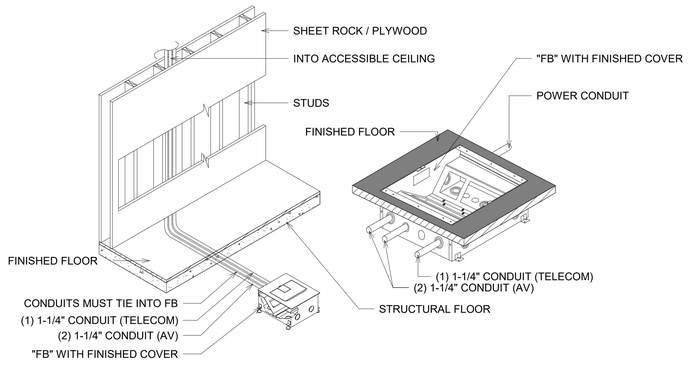
SHEET TITLE
TECHNOLOGY ENLARGED PLANS

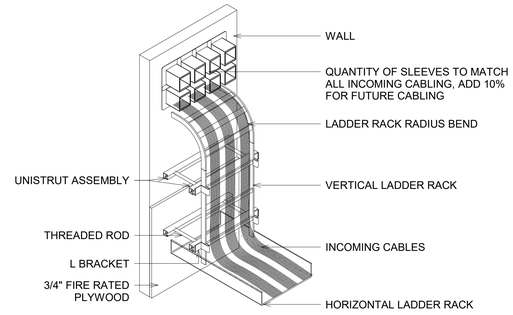
SHEET NO.
T8.01

GENERAL NOTES:

1. FLOOR PLAN SHOWS INTENDED CONDUIT PATH WITH LINE TO NEAREST WALL.
2. "FB" ALSO REQUIRE AC POWER BY OTHERS (PATHWAY NOT SHOWN).
3. ROUTE TELECOM CONDUIT ABOVE CEILING TO ACCESIBLE CEILING. (TYPICAL).
4. MOUNT AV CONDUITS ABOVE FINISHED CEILING AND SWEEP 90 DEGREES INTO RECESSED BACKBOX.
5. SEE AV SCHEMATICS FOR REQUIRED FLOOR CONNECTIONS.
6. ALL IN-SLAB CABLING TO BE RATED.
7. PROVIDE PRE-POUR FLOOR PAN FOR ANY ON-GRADE LOCATIONS.
8. COORDINATE COVER AND FINISH WITH ARCHITECT.



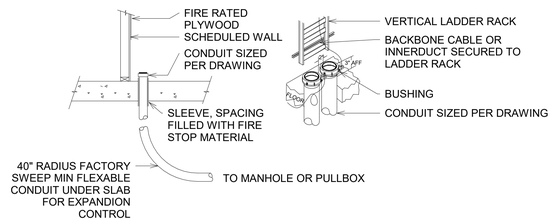
5 "FB" FLOOR BOX ROUGH-IN DETAIL
NTS



4 INCOMING CABLE PATHWAY DETAIL
NTS

GENERAL NOTES

1. CONDUIT SLEEVES (BY ELECTRICAL CONTRACTOR OR BY G.C. DIRECTION).
2. FIRE STOP ALL FLOOR PENETRATIONS WITH APPROVED FIRE STOP SYSTEM RATED FOR SPECIFIES ARCH. SPECIFICATION FOR APPROVED RATED MATERIAL AND METHODS.
3. CONDUIT SHALL BE CAPPED OR PLUGGED WITH REMOVABLE COVER AT ALL TIMES DURING CONSTRUCTION.
4. CONDUITS SHALL BE CUT DOWN MAX 1'-0" FROM AFF.
5. ALL CONDUITS SHALL BE WATERPROOF SEALED AS SOON AS THEY ARE INSTALLED.



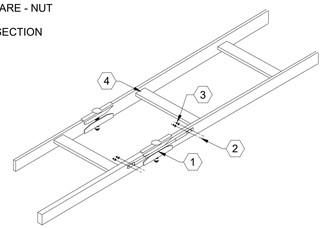
3 CONDUIT SLEEVE DETAIL
NTS

KEYED NOTES:

1. BONDING STRAP
2. BONDING HARDWARE - BOLT
3. BONDING HARDWARE - NUT
4. CABLE RUNWAY SECTION

NOTES:

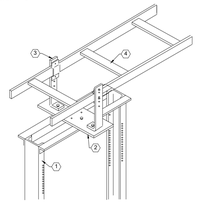
1. RUNWAY ABOVE RACKS SHALL BE ADJUSTABLE RUNWAY.



2 CABLE TRAY - BUTT SPLICE W - GROUND STRAP DETAIL
NTS

KEYED NOTES:

1. OPEN FRAME RELAY RACK
2. RACK-TO-RUNAWAY TOP PLATE
3. CABLE RUNWAY ELEVATION BRACKET
4. CABLE RUNWAY



NOTES:

1. RUNWAY ABOVE RACKS SHALL BE ADJUSTABLE RUNWAY.

1 LADDER RACK - RACK RUNWAY KIT ASSEMBLY DETAIL
NTS

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

TECHNOLOGY CONSULTANT

Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
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www..atlas-consulting.co

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Bicsi
William P Scabora
BICSI ID #364078
Expires 02-01-26
RCDD

ISSUED: May 19,2025

REVISIONS

Revision No.	Revision Date

Director	Drawn By
LVB	WPS
Designer	Quality Control
EM	EM
Proj. Arch.	
LH	

PROJECT NO.

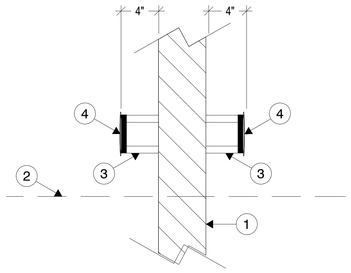
24-103.00

SHEET TITLE

TECHNOLOGY DETAILS

SHEET NO.

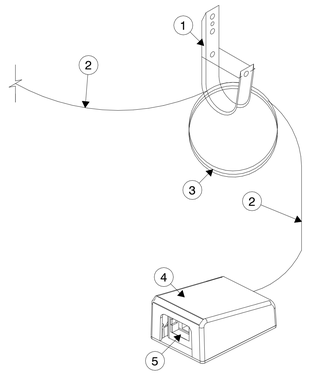
T9.01



4 CONDUIT SLEEVE GOING THROUGH WALL
NTS

KEYED NOTES:

1. SCHEDULED WALL
2. SCHEDULED CEILING
3. CONDUIT SLEEVE (BY DIV. 26).
4. NON-SPLIT BUSHING (BY DIV. 26).



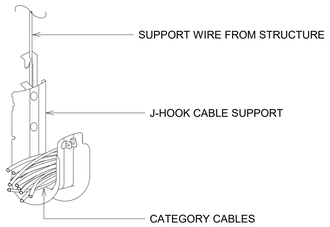
3 ABOVE CEILING SINGLE DATA OUTLET
NTS

KEYED NOTES:

1. J-HOOK WITH RETAINER CLIP ABOVE ACCESSIBLE CEILING (BY DIV. 27).
2. DATA CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
3. 20 FOOT SERVICE LOOP ABOVE ACCESSIBLE CEILING NEATLY COILED AND SECURED TO J-HOOK (BY DIV 27).
4. SURFACE MOUNT BOX ABOVE ACCESSIBLE CEILING SECURED TO BUILDING STRUCTURE (BY DIV 27).
5. DATA INSERT (BY DIV 27).

NOTE:

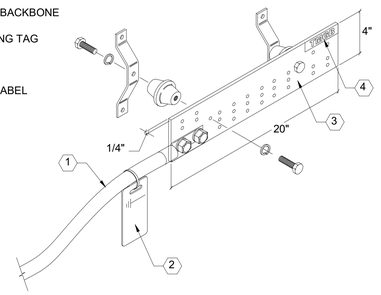
- J-HOOKS MAY BE USED IN ABOVE LAY-IN TILE CEILINGS. SPACE J-HOOK'S EVERY 3FT - 5FT.



2 J-HOOK DETAIL
NTS

KEYED NOTES:

1. BONDING BACKBONE
2. GROUNDING TAG
3. BUSBAR
4. BUSBAR LABEL



1 TELECOM MAIN GROUND BONDING DETAIL
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VLK
1320 Hemphill Street, Suite 400
Fort Worth, Texas 76104
Main Phone: 817.633.1600
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TECHNOLOGY DETAILS

SHEET NO.

T9.02

1.0 GENERAL NOTES

1. THE ENTIRE SET OF CONTRACT DOCUMENTS (DRAWINGS, SPECIFICATIONS/ETC.) SHALL APPLY TO ALL WORK WITHIN THESE DOCUMENTS. ANY CONFLICTING INFORMATION SHALL BE SUBMITTED VIA A REQUEST FOR INFORMATION (RFI).
2. SECURITY CONTRACTOR, HEREINAFTER REFERRED TO AS "CONTRACTOR", SHALL PROVIDE ALL MATERIALS, COMPONENTS, TOOLS, AND LABOR TO COMPLETE A VIDEO SURVEILLANCE AND ACCESS CONTROL SYSTEM AS SET FORTH IN THE SECURITY SYSTEM DOCUMENTS, CONTRACTS, AND DRAWINGS.
3. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE TO DETERMINE THE EXTENT OF WORK AND CONDITION UNDER WHICH IT WILL BE DONE. REVIEW AND VERIFY CONTRACT DOCUMENTS IN RELATION TO FIELD CONDITIONS TO VERIFY ACCURACY. CONFIRMING WITH OWNER, OR THEIR DESIGNATED REPRESENTATIVE, THAT THE REQUIRED WORK HAS BEEN COMPLETED PRIOR TO PROCEEDING WITH INSTALLATION. REGARDING ANY PROJECT RELATED QUESTIONS, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE OWNER, OR CONSULTANT, PRIOR TO PROCEEDING WITH THE RELATED WORK IN QUESTION.
4. ALL WORK BEING PERFORMED IN THE SUPPORT OF THESE DOCUMENTS BY OTHERS SHALL BE EXAMINED AND VALIDATED BY SECURITY CONTRACTOR PRIOR TO WORK BEING COMPLETED. IF ANY OF THIS WORK IS FOUND TO BE INCORRECT OR IN-CONFLICT WITH THESE REQUIREMENTS, THE SECURITY CONTRACTOR SHALL IMMEDIATELY MAKE THE OWNER, OR CONSULTANT, AWARE.

2.0 CABLING, PATHWAYS AND COORDINATION NOTES

1. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL CONDUITS, PULL STRINGS, CORES, AND JUNCTION BOXES AS REQUIRED ON THE "TY" DRAWINGS.
2. MATERIALS AND SYSTEMS SHALL BE COMPLETE UPON INSTALLATION. WITHIN A 100 FOOT LENGTH, THERE SHOULD BE NO GREATER THAN 180 DEGREES WORTH OF BENDS, WITH THE MINIMUM ALLOWED TO BE A 90 DEGREE BEND.
3. PRIOR TO SUBSTANTIAL COMPLETION. ALL SECURITY PATHWAY CONDUITS AND UNUSED "SECURITY INTENDED USE CONDUITS" SHALL BE PROPERLY RATED FOR THE PENETRATION LOCATION. REFER TO SPECIFICATIONS FOR DETAILS.
4. BACK BOXES INSTALLED FOR SECURITY DEVICES AND CABLE TERMINATIONS SHALL BE 4 11/16" X 4 11/16" X 3" DEEP BOXES TO ALLOW FOR THE REQUIRED WORKING CLEARANCE OF THE CABLING. CONDUITS SHALL HAVE CONNECTORS, PROTECTIVE BUSHINGS, PULL STRINGS, AND SHALL BE GROUNDED.
5. FURNISH AND INSTALL CABLE MANAGEMENT DEVICES (VELCRO WRAPS, ETC.), CEILING MOUNTING HARDWARE, AND CABLE SUPPORT AS REQUIRED.
6. CONDUITS TO SECURITY JUNCTION BOXES SHALL BE MINIMUM OF ONE IN. (1") IN DIAMETER AND SHALL BE COMPLETE WITH NYLON PULL STRING UNLESS OTHERWISE NOTED.
7. ALL REFLECTED CEILING PLANS INDICATE THE TYPE OF FINISHED CEILING WITHIN THE SPACE FOR DIRECTION ON HOW TO MOUNT INFRASTRUCTURE AND EQUIPMENT. ALL SPECIFIC TYPES AND HEIGHTS SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS FOR REQUIRED LABOR, LIFTS, ETC.

3.0 GROUNDING AND BONDING

1. CONTRACTOR SHALL ADHERE TO ALL GROUNDING AND BONDING REQUIREMENTS SET FOURTH IN THE ANSI-J-STD-607-B COMMERCIAL GROUNDING AND BONDING STANDARDS.

4.0 ELECTRICAL

1. FOR SPECIFIC POWER AND RECEPTACLE REQUIREMENTS IN THE PROJECT, REFERENCE ELECTRICAL SPECIFICATIONS AND DRAWINGS AND VERIFY WITH COMMUNICATIONS SPECIFICATIONS AND DRAWINGS. REPORT DISCREPENCIES TO GC PRIOR TO PURCHASE OR INSTALLATION.
2. ELECTRICAL CONTRACTOR SHALL READ, IN THEIR ENTIRETY, ALL OF THE SECURITY CONTRACT DOCUMENTS AND APPLY THEM AS APPROPRIATE FOR WORK IN THIS SECTION. REFERENCE DIVISION 28 SPECIFICATIONS AND "TY" DRAWINGS.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE MATERIALS, COMPONENTS, TOOLS, AND LABOR TO COMPLETE THE SECURITY CABLING PATHWAY, ELECTRICAL POWER DISTRIBUTION, AND GROUNDING SYSTEM AS SET FORTH IN THE SECURITY CONTRACT DOCUMENTS AND THE ELECTRICAL SPECIFICATIONS AND DRAWINGS.

5.0 ACCESS CONTROL

1. DIVISION 8 CONTRACTOR SHALL PROVIDE AND INSTALL ALL ELECTRIC LOCKS AS SHOWN ON "TY" DRAWINGS AND COMPLY WITH DIVISION 8 SPECIFICATIONS.
2. DIVISION 8 CONTRACTOR SHALL PROVIDE AND INSTALL ALL POWER TRANSFER DEVICES AS SHOWN ON "TY" DRAWINGS AND COMPLY WITH DIVISION 8 SPECIFICATIONS.
3. FIRE ALARM CONTRACTOR SHALL PROVIDE FIRE ALARM SIGNAL INTERFACES AS REQUIRED AND COORDINAT WITH THE SECURITY CONTRACTOR. THE RELEASE OF SECURITY CONTROLLED DOORS PER CURRENT LIFE SAFETY CODES AND ADDITIONAL AHJ REQUIREMENTS.
4. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL DOOR PREP TO INCLUDE CONDUIT, PULL STRINGS, AND JUNCTION BOXES AS SHOWN ON THE "TY" DRAWINGS.
5. ELECTRICAL CONTRACTOR SHALL REFER TO "TY" DRAWINGS TO VERIFY LOCATIONS OF SECURITY GANG BOXES AND CONDUIT AND PROVIDE THOSE COMPONENTS PRIOR TO THE SECURITY INSTALLATION.
6. SECURITY CONTRACTOR TO LEAVE 24" SERVICE LOOPS OF COMPOSITE CABLING WITHIN THE SECURITY JUNCTION BOX AND ABOVE THE DESIGNATED SECURITY PANEL.
7. ALL DOORS ARE SET TO FAIL SECURE WITH PUSH-BAR OR HANDLE ACTIVATED REQUEST TO EXIT AND EGRESS AND KEY LOCK INGRESS.
8. SECURITY CONTRACTOR TO SIZE DOOR CONTROLLERS, ENCLOSURES, BOARDS, AND POWER SUPPLIES TO PREPARE FOR FUTURE ACCESS CONTROL DOORS. PROVIDE A MINIMUM OF 10% GROWTH IN ALL PATHWAYS.

6.0 SECURITY RESPONSIBILITY MATRIX

SECURITY RESPONSBILITY MATRIX	SPEC SECTION	PROVIDED BY
BUILDING NETWORK CABLING	27 10 00	CFCI
ACCESS CONTROL SYSTEM	28 10 00	CFCI
INTRUSION DETECTION SYSTEM	28 16 00	CFCI
VIDEO SURVEILLANCE SYSTEM	28 20 00	CFCI
VIDEO INTERCOM	28 10 00	CFCI
PATHWAYS	28 05 33	CFCI
ETHERNET SURGE SUPPRESSION	27 10 00	CFCI
DOOR POSITION SWITCHES	28 10 00	CFCI
EXTERNAL REX	28 10 00	CFCI
INTEGRAL REX	DIVISION 8	CFCI

SECURITY SYMBOL LEGEND

SYMBOL	DESCRIPTION	POWER REQUIREMENTS	CABLING REQUIREMENTS	CONDUIT REQUIREMENTS	NOTES
	SINGLE VIEW VIDEO-SURVEILLANCE CAMERA	POWER-OVER-ETHERNET (PoE)	REFER TO "T" SERIES SHEETS FOR ALL CABLING REQUIREMENTS.	REFER TO "T" SERIES SHEETS FOR ALL PATHWAY REQUIREMENTS.	REFER TO VIDEO SURVEILLANCE SCHEDULE FOR ALL REQUIRED CAMERA AND MOUNTING TYPES.
	MULTI-VIEW VIDEO-SURVEILLANCE CAMERA	POWER-OVER-ETHERNET (PoE)	REFER TO "T" SERIES SHEETS FOR ALL CABLING REQUIREMENTS.	REFER TO "T" SERIES SHEETS FOR ALL PATHWAY REQUIREMENTS.	REFER TO VIDEO SURVEILLANCE SCHEDULE FOR ALL REQUIRED CAMERA AND MOUNTING TYPES.
	SPLIT-VIEW VIDEO-SURVEILLANCE CAMERA	POWER-OVER-ETHERNET (PoE)	REFER TO "T" SERIES SHEETS FOR ALL CABLING REQUIREMENTS.	REFER TO "T" SERIES SHEETS FOR ALL PATHWAY REQUIREMENTS.	REFER TO VIDEO SURVEILLANCE SCHEDULE FOR ALL REQUIRED CAMERA AND MOUNTING TYPES.
CR	DOOR MOUNTED CARD READER	12V DC	COMPOSITE CABLE TO BE ROUTED FROM NEAREST HEAD-END TO ABOVE DOOR SECURITY JUNCTION BOX. ROUTE CARD READER CABLING FROM MOUNTED LOCATION TO THE TERMINAL STRIP LOCATED WITHIN THE J-BOX.	MINIMUM SIZED CONDUIT PATHWAY ASSEMBLY TO BE PROVIDED. STUB INTO NEAREST ABOVE DOOR JUNCTION BOX.	TO BE MOUNTED AT +44" AFF/AFG, CARD READER INTEGRAL TO HARDWARE IS TO BE SWAPPED OUT WITH CFCI CARD READER, PER SPECIFICATIONS.
CR1	MULLION MOUNTED CARD READER	12V DC	COMPOSITE CABLE TO BE ROUTED FROM NEAREST HEAD-END TO ABOVE DOOR SECURITY JUNCTION BOX. ROUTE CARD READER CABLING FROM MOUNTED LOCATION TO THE TERMINAL STRIP LOCATED WITHIN THE J-BOX.	MINIMUM SIZED CONDUIT PATHWAY ASSEMBLY TO BE PROVIDED. STUB INTO NEAREST ABOVE DOOR JUNCTION BOX.	TO BE MOUNTED AT +44-IN. AFF/AFG, UNLESS NOTED OTHERWISE.
DP	DOOR POSITION SWITCH	N/A	TWO-WIRE CONNECTION TO BE RAN TO NEAREST ACCESS CONTROL PANEL FOR POSITION MONITORING.	MINIMUM SIZED CONDUIT PATHWAY ASSEMBLY TO BE PROVIDED. STUB INTO NEAREST ACCESSIBLE CEILING.	N/A
VI	WALL MOUNTED VIDEO INTERCOM	POWER-OVER-ETHERNET (PoE)	REFER TO "T" SERIES SHEETS FOR ALL CABLING REQUIREMENTS.	REFER TO "T" SERIES SHEETS FOR ALL PATHWAY REQUIREMENTS.	IF REQUIRED, COORDINATE SPECIALTY ROUGH-IN BOX WITH ELECTRICAL PRIOR TO PATHWAY INSTALLATION.
MD	WALL MOUNTED MOTION DETECTOR	12V DC	FOUR-WIRE CONNECTION TO BE RAN TO NEAREST INTRUSION PANEL FOR COMMUNICATION	MINIMUM SIZED CONDUIT PATHWAY ASSEMBLY TO BE PROVIDED. STUB INTO NEAREST ACCESSIBLE CEILING.	MOUNT AT +120-IN. AFF. IF REQUIRED, COORDINATE SPECIALTY ROUGH-IN BOX WITH ELECTRICAL PRIOR TO PATHWAY INSTALLATION.
MD	CEILING MOUNT MOTION DETECTOR	12V DC	FOUR-WIRE CONNECTION TO BE RAN TO NEAREST INTRUSION PANEL FOR COMMUNICATION.	MINIMUM SIZED CONDUIT PATHWAY ASSEMBLY TO BE PROVIDED. STUB INTO NEAREST ACCESSIBLE CEILING WHEN IN OPEN-AIR OR HARD-LID CEILINGS.	N/A
DP1	OVERHEAD/ROOF HATCH DOOR POSITION SWITCH	N/A	TWO-WIRE CONNECTION TO BE RAN TO NEAREST ACCESS CONTROL PANEL/INTRUSION PANEL FOR POSITION MONITORING.	3/4" ARMORED FLEX TO BE PROVIDED FROM NEAREST ABOVE CEILING PATHWAY TO TERMINATION LOCATION AT OVERHEAD DOOR OR ROOF HATCH.	FOR ALL DOORS REQUIRING INTEGRATION TO BOTH ACCESS CONTROL SYSTEM AND INTRUSION DETECTION SYSTEM, CABLING TO BE RAN BACK TO BOTH ACCESS CONTROL AND INTRUSION DETECTION CONTROL PANEL.
KP	WALL MOUNTED KEYPAD	12V DC	FOUR-WIRE CONNECTION TO BE RAN TO NEAREST INTRUSION PANEL FOR COMMUNICATION	MINIMUM SIZED CONDUIT PATHWAY ASSEMBLY TO BE PROVIDED. STUB INTO NEAREST ACCESSIBLE CEILING.	MOUNT AT +48-IN. AFF. IF REQUIRED, COORDINATE SPECIALTY ROUGH-IN BOX WITH ELECTRICAL PRIOR TO PATHWAY INSTALLATION.

7.0 VIDEO SURVEILLANCE

1. CONTRACTOR SHALL PROVIDE AND INSTALL MOUNTS AND HARDWARE AS SHOWN ON "TY" DRAWINGS AND AS SPECIFIED.
2. CONTRACTOR SHALL PROVIDE AND INSTALL CAMERAS AT THE HEIGHT ABOVE GRADE OR ABOVE FINISHED FLOOR AS INDICATED ON THE "TY" DRAWINGS.
3. COORDINATE LOCATION OF CAMERAS WITH ALL CEILING MOUNTED ARCHITECTURAL AND MECHANICAL AND ELECTRICAL EQUIPMENT. IF ANY FIELD CONDITIONS CAUSE AN INABILITY TO INSTALL, CONTRACTOR TO PROVIDE AN RFI.
4. CONTRACTOR SHALL PROVIDE AND INSTALL ALL COMPONENTS AS DETAILED IN THE "TY" DRAWINGS.
5. CONTRACTOR SHALL PROVIDE AND INSTALL ALL MISCELLANEOUS EQUIPMENT AND ACCESSORIES REQUIRED FOR A FULL TURN KEY INSTALLATION.
6. COORDINATE WITH TELECOMMUNICATIONS CONTRACTOR FOR INSTALLATION OF ALL DATA OULETS SUPPORTING CAMERAS.
7. THE CAMERA INSTALLER SHALL VERIFY THERE ARE NO PHYSICAL OBSTRUCTIONS TO THE INTENDED CAMERA VIEW PRIOR TO INSTALLATION. SHOULD ANY OBSTRUCTION BE PRESENT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CONSULTANT AND OWNER AND ADJUST THE CAMERA POSITION AS NEEDED.

8.0 INTRUSION DETECTION

1. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL DOOR PREP TO INCLUDE CONDUIT, PULL STRINGS, AND JUNCTION BOXES AS SHOWN ON THE "TY" DRAWINGS.
2. ELECTRICAL CONTRACTOR SHALL REFER TO "TY" DRAWINGS TO VERIFY LOCATIONS OF SECURITY GANG BOXES AND CONDUIT AND PROVIDE THOSE COMPONENTS PRIOR TO THE SECURITY INSTALLATION.
3. SECURITY CONTRACTOR TO LEAVE 36" SERVICE LOOPS OF CABLING AT BOTH THE DEVICE AND HEAD-END LOCATIONS.
4. SECURITY CONTRACTOR TO SIZE CONTROL PANELS, ENCLOSURES, BOARDS AND POWER SUPPLIES TO PREPARE FOR FUTURE INTRUSION DEVICES. PROVIDE A MINIMUM OF 10% GROWTH IN ALL PATHWAYS AND POWER.

9.0 SECURITY SHEET INDEX

VLK

ARCHITECT

VLK
1320 Hemphill Street, Suite 400
Fort Worth, Texas 76104
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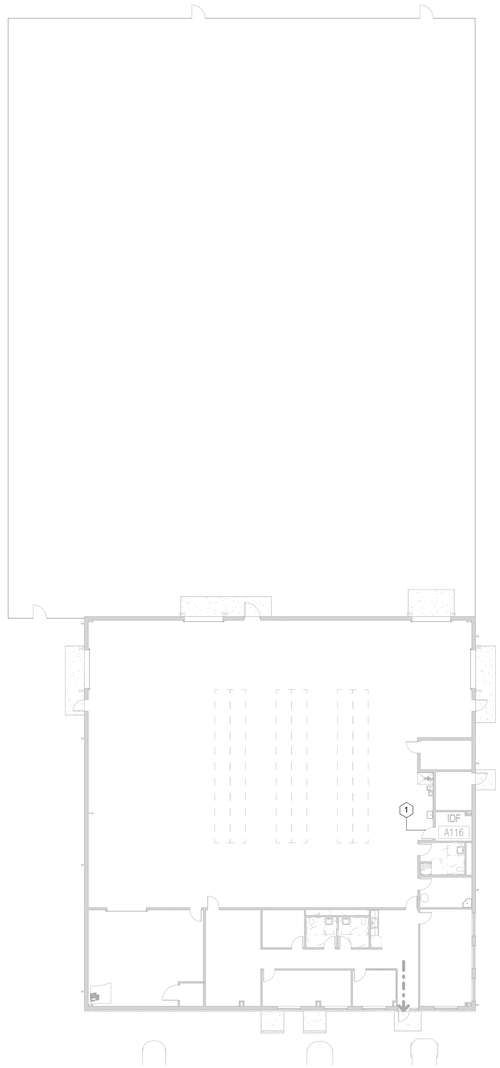
SECURITY INDEX

SHEET NO.

TY0.00

KEYNOTE LEGEND	
1	ALL CABLING SHALL BE ROUTED TO IDF A116.



N

PLAN NORTH

TRUE NORTH

1 SECURITY OVERALL FLOOR PLAN - LEVEL 1

SCALE: 1/16" = 1'-0"

B

A

KEY PLAN

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VLK
1320 Hemphill Street, Suite 400
Fort Worth, Texas 76104
Main Phone: 817.633.1600
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SHEET TITLE

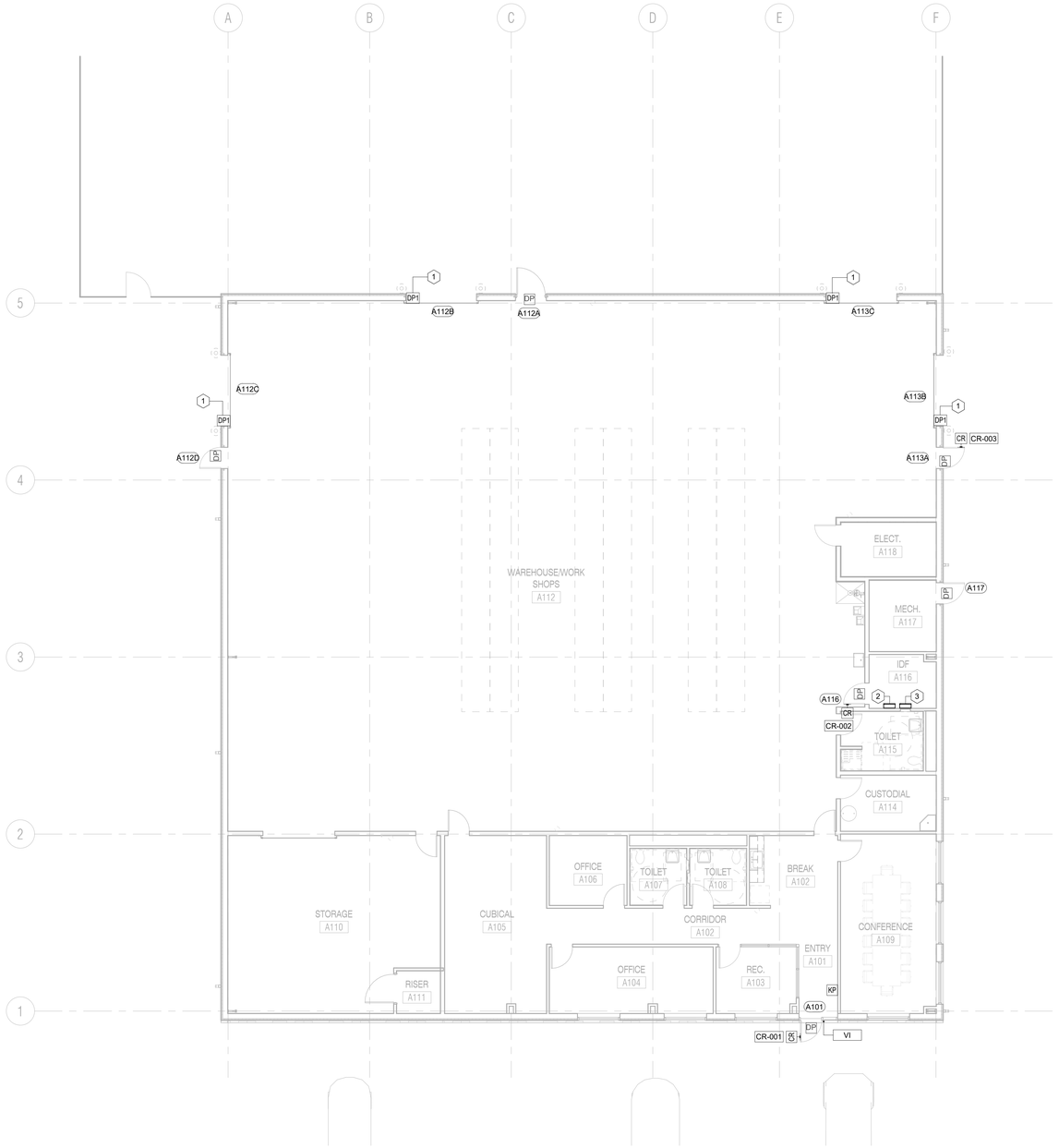
SECURITY OVERALL PLAN - LEVEL 1

SHEET NO.

TY2.11

KEYNOTE LEGEND	
1	MINIMUM SIZED CONDUIT PATHWAY FOR DOOR POSITION SWITCH SERVING OVERHEAD DOOR. ROUTE TO NEAREST ACCESSIBLE CEILING OR DIRECTLY INTO NEAREST ACCESS CONTROL/INTRUSION DETECTION PANEL.
2	ACCESS CONTROL PANEL
3	INTRUSION DETECTION PANEL

ACCESS CONTROL SCHEDULE		
ACCESS CONTROL NUMBER	DOOR NUMBER	ACCESS CONTROL DETAIL
CR-001	A101	TY9.01/1
CR-002	A117	TY9.01/1
CR-003	A111F	TY9.01/1



N
PLAN NORTH
TRUE NORTH

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

B

A

KEY PLAN

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ARCHITECT

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SHEET TITLE

SECURITY UNIT PLAN - LEVEL 1 - UNIT A

SHEET NO.

TY2.11A

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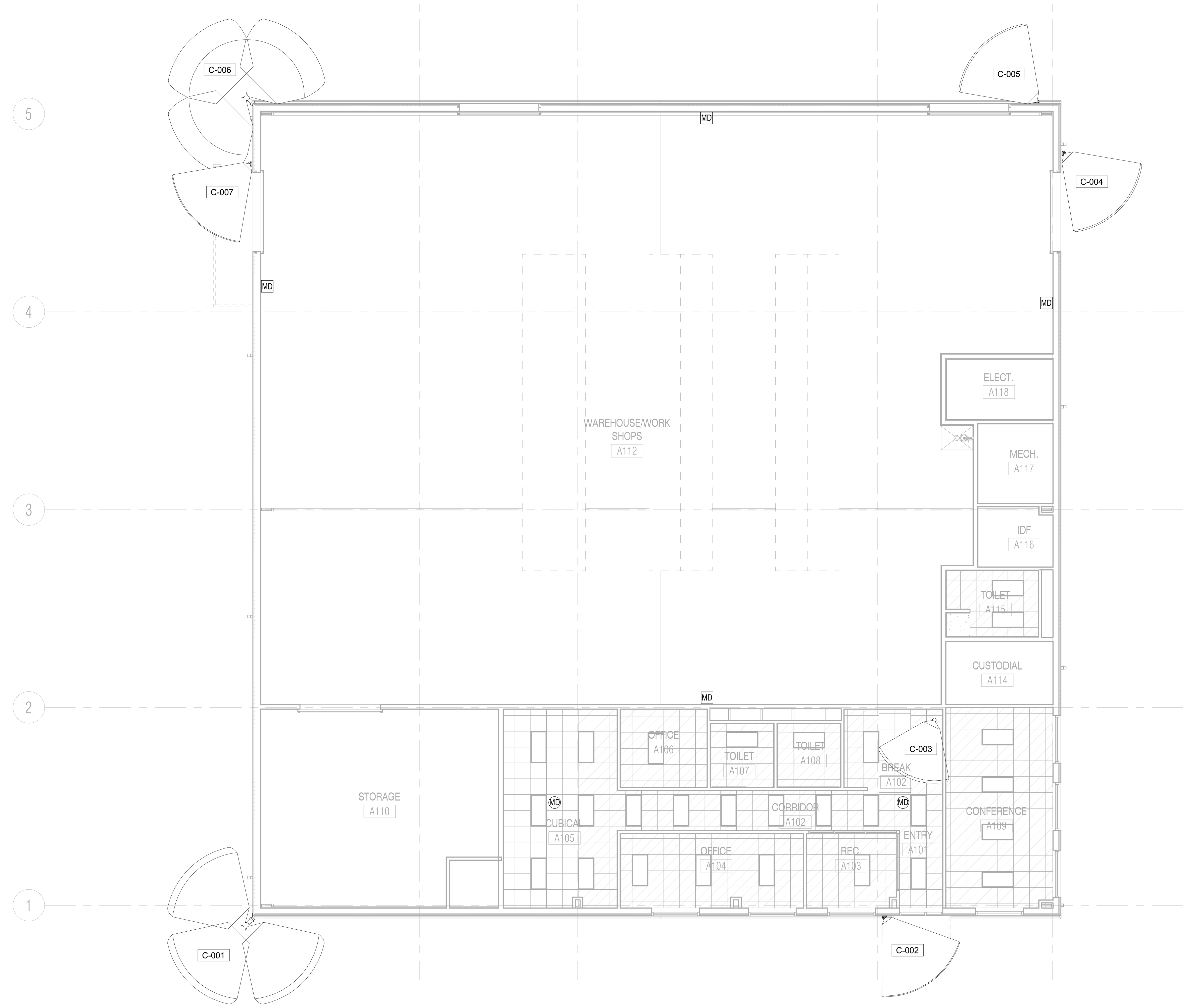
VIDEO SURVEILLANCE SCHEDULE				
CAMERA NUMBER	CAMERA TYPE	MOUNT TYPE	MOUNTING HEIGHT	CAMERA DETAIL
C-001	MULTI-SENSOR	CORNER	12-FT AFG	TY9.02/2
C-002	SINGLE LENS	WALL	9-FT AFG	TY9.02/1
C-003	SINGLE LENS	CEILING	CEILING	N/A
C-004	SINGLE LENS	WALL	9-FT AFG	TY9.02/1
C-005	SINGLE LENS	WALL	9-FT AFG	TY9.02/1
C-006	MULTI-SENSOR	CORNER	15-FT AFG	TY9.02/2
C-007	SINGLE LENS	WALL	9-FT AFG	TY9.02/1



1 SECURITY RCP - LEVEL 1 - UNIT A

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

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Bicsi — Registered Communications Distribution Designer — William P Szabora — BICSI ID #264078 — Expires 12.31.26 — RCDD

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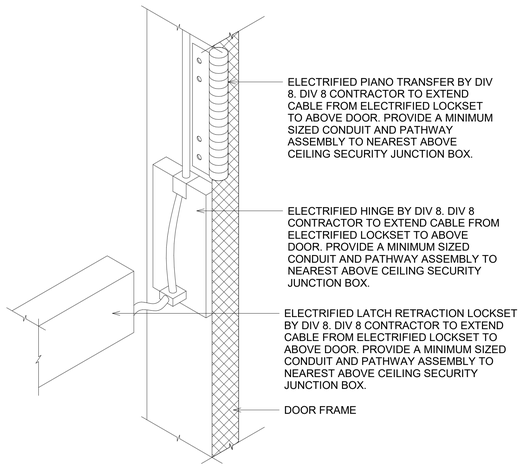
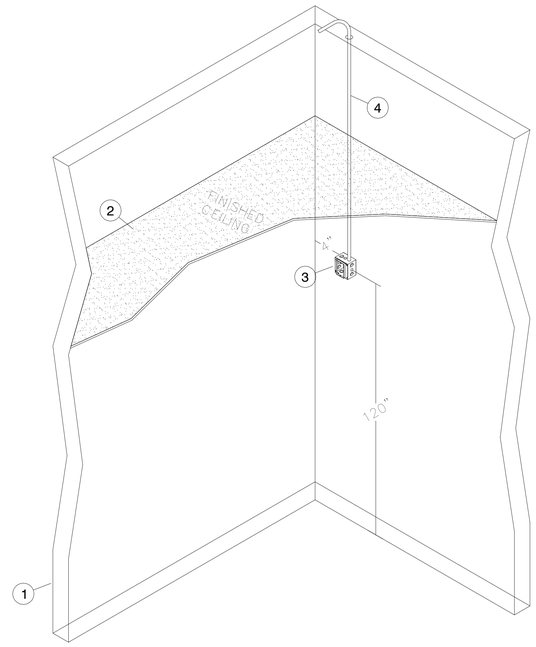
SECURITY UNIT RCP - LEVEL 1 - UNIT A

SHEET NO.

TY6.11A



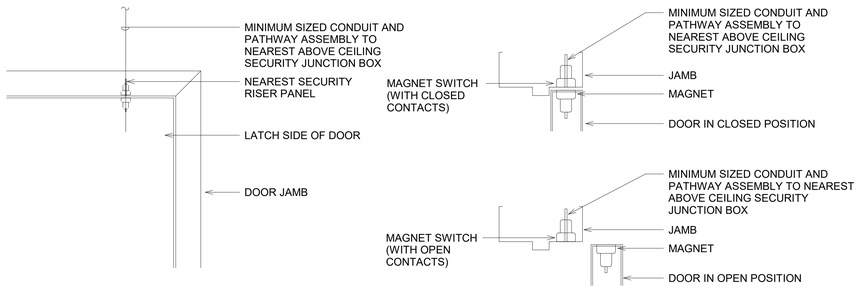
4 WIRE TRANSFER HINGE DETAIL
NTS



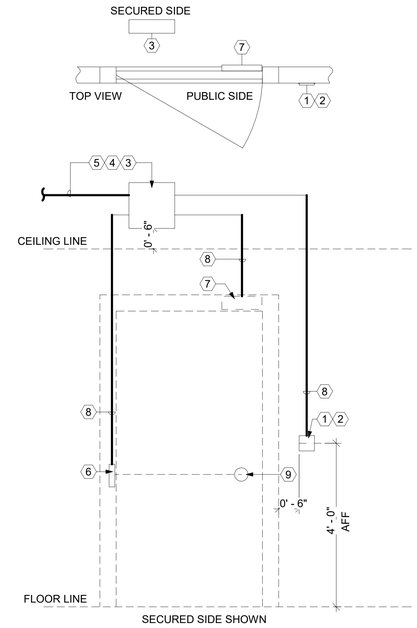
3 INTERIOR WALL MOUNTED MOTION DETECTOR
NTS

KEYED NOTES:

1. SCHEDULED WALL
2. SCHEDULED CEILING
3. 4 11/16" x 4 11/16" x 3" RECESSED DOUBLE GANG BOX WITH SINGLE GANG REDUCING RING (BY DIV. 26).
4. MINIMUM SIZED CONDUIT TO THE NEAREST ACCESSIBLE CEILING. (BY DIV 26).



2 DOOR POSITION SWITCH - INSTALLATION
NTS



EQUIPMENT LIST	
1	WALL MOUNTED CARD READER TO BE MOUNTED ON UNSECURED SIDE OF THE DOOR.
2	MINIMUM SIZED SECURITY JUNCTION BOX, MOUNTED AT 48" AFF, ON-CENTER.
3	ABOVE DOOR SECURITY JUNCTION BOX MOUNTED ON SECURED SIDE OF DOOR.
4	BOTTOM OF J-BOX TO BE AT +6" ABOVE CEILING LINE, OR WHERE NO CEILING EXISTS MOUNT AT +9'-6" AFF.
5	COMPOSITE CABLE BACK TO NEAREST ACCESS CONTROL PANEL
6	MORTAR BOX IN DOOR FRAME FOR ELECTRIC HINGE. VERIFY LOCATION OF ALL MORTAR BOXES WITH DOOR FRAME SUPPLIER.
7	MORTAR BOX IN DOOR FRAME FOR DOOR POSITION SWITCH. VERIFY LOCATION OF ALL MORTAR BOXES WITH DOOR FRAME SUPPLIER.
8	MINIMUM SIZED CONDUIT AND PATHWAY ASSEMBLY TO NEAREST ABOVE CEILING SECURITY JUNCTION BOX.
9	ELECTRIFIED LOCKSET. REFER TO DIVISION 8 SPECS.

1 ACCESS CONTROL ROUGH-IN DETAIL - WALL MOUNTED CARD READER W/ SINGLE DOOR, NO LATCH RETRACTION
NTS

VLK

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

TECHNOLOGY CONSULTANT
Atlas Consulting
180 State Street, Suite 225,
Southlake, Texas 76092
Main Phone: 512.468.8300
www..atlas-consulting.co

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ISSUED: May 19,2025

REVISIONS

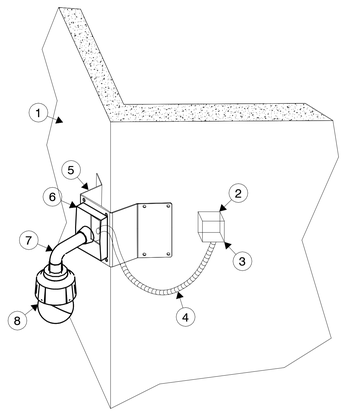
Revision No.	Revision Date

Director LVB	Drawn By WPS
Designer EM	Quality Control EM
Proj. Arch. LH	

PROJECT NO.
24-103.00

SHEET TITLE
SECURITY DETAILS

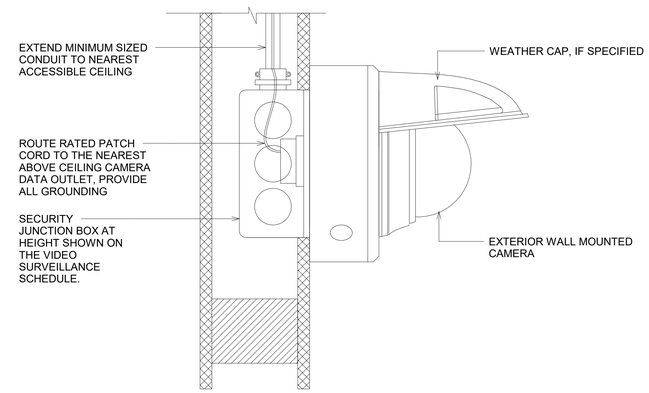
SHEET NO.
TY9.01



KEYED NOTES:

1. SCHEDULED EXTERIOR WALL
2. 4 11/16" X 4 11/16" X 3" DOUBLE GANG WATERPROOF BACKBOX INSTALLED FLUSH WITH THE BUILDING CONTRACTOR SHALL INSTALL BACKBOX NO FURTHER THAN 18-INCHES FROM THE CORNER OF THE BUILDING (BY DIV. 26).
3. ADJUSTABLE LIQUID-TIGHT BACKBOX WATER PROOF COVER PLATE (BY DIV.26).
4. 3/4-INCH SEAL TIGHT FROM BACKBOX COVER PLATE TO WALL MOUNTED CORNER BRACKET (BY DIV. 26). ROUTE RATED PATCH CORD TO THE NEAREST ABOVE CEILING CAMERA DATA OUTLET, PROVIDE ALL GROUNDING.
5. CORNER MOUNT BRACKET
6. WALL MOUNT BRACKET
7. PENDANT KIT
8. EXTERIOR CAMERA

2 EXTERIOR CORNER MOUNTED SURVEILLANCE CAMERA
1 1/2" = 1'-0"



1 WALL MOUNTED CAMERA - EXTERIOR
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VLK

ARCHITECT

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1320 Hemphill Street, Suite 400
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