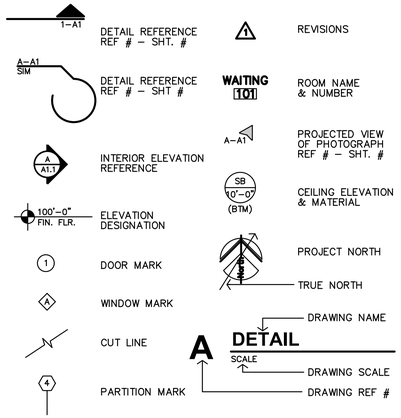
ASTRA BANK

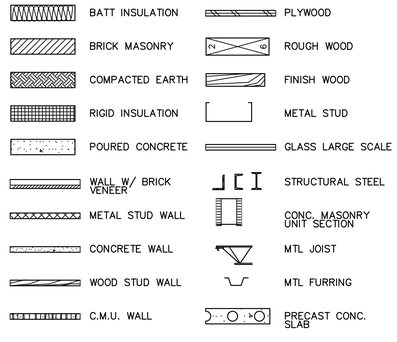
OPERATIONS BUILDING - NEW FACILITY

HAYS, **24-3424** **KANSAS**

REFERENCE LEGEND



MATERIAL LEGEND



ABBREVIATIONS

&	AND
∠	Angle
@	At
℄	Centerline
ø	Diameter or Round
#	Pound or Number
Acous.	Acoustical
Adj.	Adjustable
A.F.F.	Above Finished Floor
Aggr.	Aggregate
Al.	Aluminum
Approx.	Approximate
Arch.	Architect or Architectural
Asb.	Asbestos
Asph.	Asphalt
A.V.	Audio Visual
Bd.	Board
Bitum.	Bituminous
Bldg.	Building
Blk.	Block
Blk g.	Blocking
Bm.	Beam
Bot.	Bottom
BO	BY OWNER
Brg.	Bearing
Brk.	Brick
Cab.	Cabinet
Clg.	Ceiling
Clr.	Clear
Cntr.	Counter
Col.	Column
Conc.	Conc. Concrete
C.T.	Ceramic Tile
CMU	Concrete Masonry Unit
Ctr.	Center
Dbl.	Double
Det.	Detail
D.F.	Drinking Fountain
Dia.	Diameter
Dim.	Dimension
Dn.	Down
Dr.	Door
Ds.	Downspout
Dwg.	Drawing
Dwr.	Drawer
(E)	Existing
E.	East or Existing
Ea.	Each
E.J.	Expansion Joint
El.	Elevation
Elec.	Electrical
Elev.	Elevator
Eq.	Equal
Equip.	Equipment
E.W.	Each Way
E.W.C.	Elec. Water Cooler
Exist.	Existing
Expo.	Exposed
Exp.	Expansion
Ext.	Exterior
F.A.	Fire Alarm
F.D.	Floor Drain
Fdn.	Foundation
F.E.	Fire Extinguisher
F.E.C.	F.E. Cabinet
Fin.	Finish
Fl.	Floor
Flash.	Flashing
fl.	Flow line
Ft.	Foot or feet
Ftg.	Footing
Furr.	Furring
Fut.	Future
Ga.	Gauge
Galv.	Galvanized
G.B.	Grab Bar
Gl.	Glass
Gnd.	Ground
Gr.	Grade
Gyp.	Gypsum
H.B.	Hose Bibb
H.C.	Hollow Core
Hdwd.	Hardwood
Hdwr.	Hardware
H.M.	Hollow Metal
Horiz.	Horizontal
Hr.	Hour
Hgt.	Height
I.D.	Inside Diameter
Insul.	Insulation
Int.	Interior
Jan	Janitor
Jt.	Joint
Kit.	Kitchen
Lab.	Laboratory
Lam.	Laminate
Lav.	Lavatory
Lkr.	Locker
Lt.	Light
Mas.	Masonry
Max.	Maximum
M.C.	Medicine Cabinet
Mech.	Mechanical
Memb.	Membrane
Met.	Metal
Mfr.	Manufacturer
Mh.	Manhole
Min.	Minimum
Mir.	Mirror
Misc.	Miscellaneous
M.O.	Masonry Opening
Mtd.	Mounted
N.	North
N.I.C.	Not In Contract
No. or #	Number
Nom.	Nominal
N.T.S.	Not To Scale
O/	On or Over
Obs.	Obscure
O.C.	On Center
O.D.	Diameter
Off.	Office
Opng.	Opening
Opp.	Opposite
P.	Paint
Pl.	Plate
P.Lam.	Plastic Laminate
Plas.	Plaster
Plywd.	Plywood
Pr.	Pair
Pt.	Point
P.T.D.	Paper Towel Dispenser
Ptn.	Partition
P.T.R.	Paper Towel Receptacle
Q.T.	Quarry Tile
R.	Riser
Rad.	Radius
R.D.	Roof Drain
Ref.	Reference
Reinf.	Reinforced
Req'd	Required
Resil.	Resilient
Rm.	Room
R.O.	Rough Opening
S.	South
S.B.	Splash Block
S.C.	Solid Core
Sched.	Schedule
S.D.	Soap Dispenser
Sect.	Section
Shr.	Shower
Sht.	Sheet
Sim.	Similar
S.N.D.	Sanitary Napkin Disp.
S.N.R.	Sanitary Napkin Recep.
Spec.	Specification
Sq.	Square
SSt.	Stainless Steel
Std.	Standard
Stl.	Steel
Stor.	Storage
Strl.	Structural
Susp.	Suspended
S.V.	Sheet Vinyl
Sym.	Symmetrical
Tex.	Texture
T.B.	Towel Bar
T.Bd.	Tack Board
Temp.	Tempered
T.&G.	Tongue & Groove
Thk.	Thick
T.O.M.	Top Of Masonry
T.O.S.	Top Of Steel
T.P.	Top Of Pavement
T.P.D.	Toilet Paper Dispenser
T.V.	Television
T.W.	Tackwall
Typ.	Typical
Trd.	Tread
U.O.N.	Unless Otherwise Noted
Ur.	Urinal
V.C.T.	Vinyl Composition Tile
V.T.	Vinyl Tile
V.B.	Vapor Barrier
Vert.	Vertical
Vest.	Vestibule
Vyl.	Vinyl
W.	West
w/	With
w/o	Without
W.C.	Wall Covering
Wd.	Wood
Wp.	Waterproof
Wdw.	Window
Wsct.	Wainscot
Wt.	Weight

JonesGillamRenz

730 N. Ninth St.
Salina, KS 67401
785.827.0386

1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

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ADA ADA DIAGRAMS

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CONSULTANTS

Mechanical & Electrical Engineer ;

LST Consulting Engineers, PA
4809 Vue Du Lac Place, Suite 301
MANHATTAN, KS. 66503
ph. (785) 587-8042
fax (785) 587-8039
mail@LSTengineers.com

Structural Engineer ;

Bob D. Campbell & Co., Inc.
4338 Belleview
Kansas City, MO 64111
816.531.4144; FAX 816.531.8572
info@bdc-engrs.com

Civil Engineer ;

KAW VALLEY Engineering
2319 N. Jackson | P.O. BOX 1304
Junction City, Kansas 66441
PH. (785) 762-5040 | FAX (785) 762-7744
jc@kveng.com | www.kveng.com

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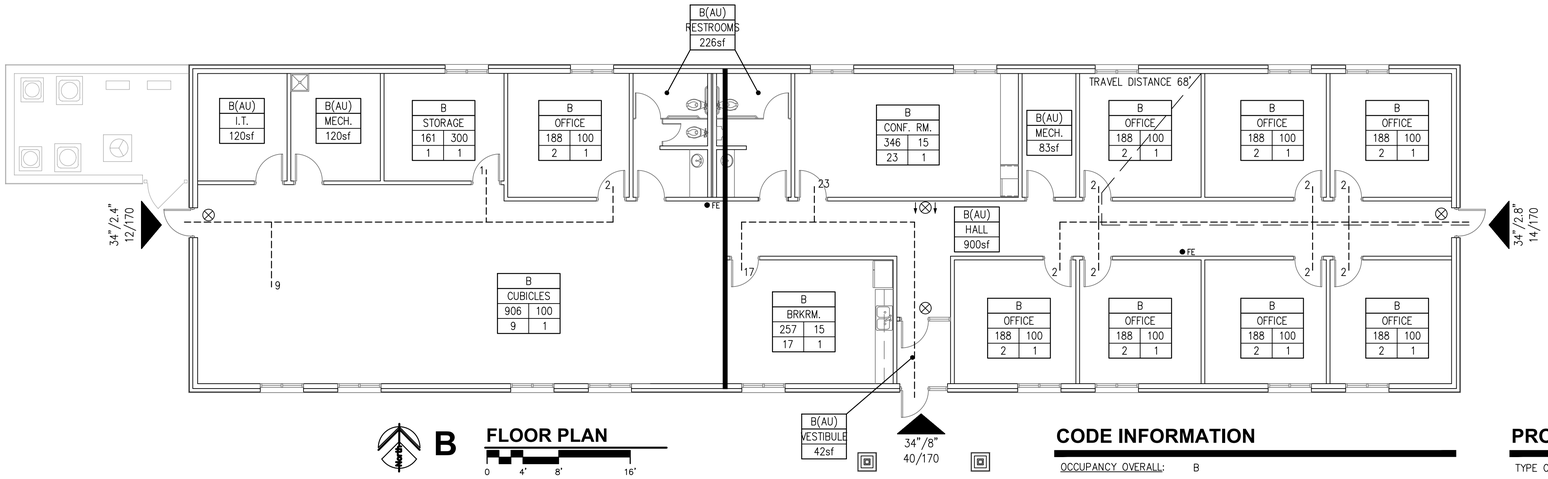
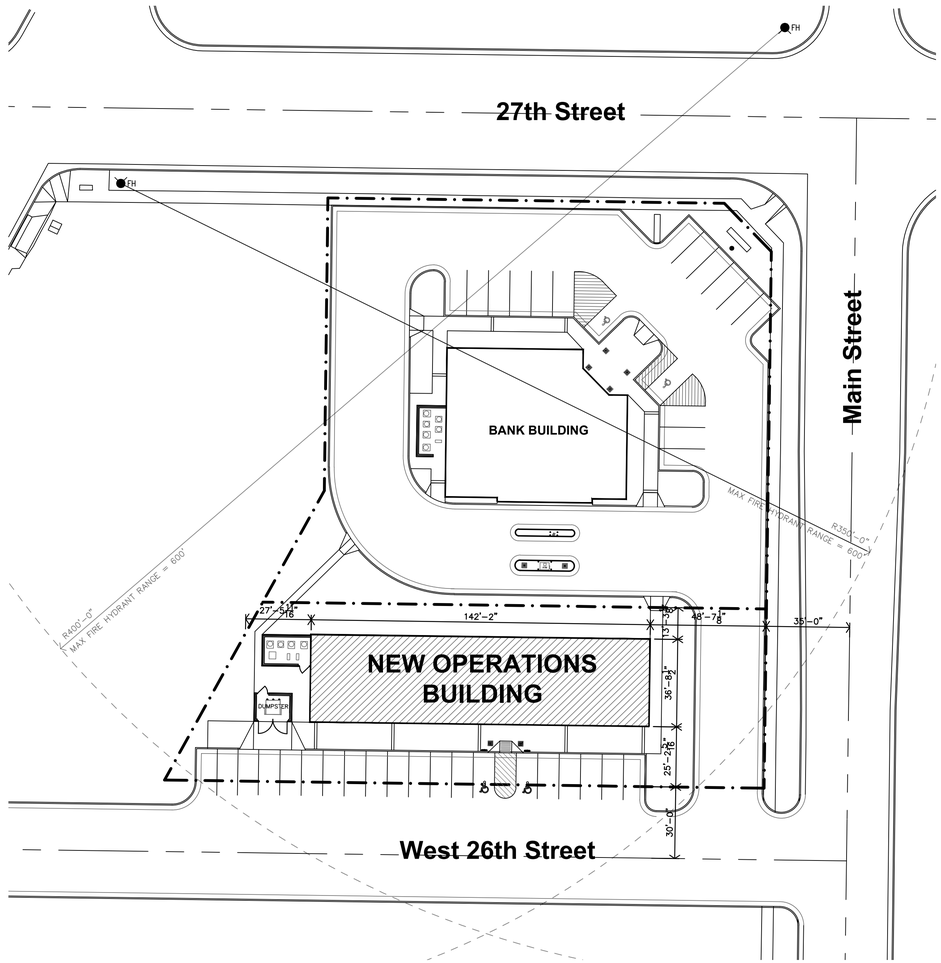


B **FLOOR PLAN**

0 4' 8' 16'



A **SITE PLAN**

0 15' 30' 60'

CODE INFORMATION

OCCUPANCY OVERALL: B

OCCUPANCY GROUPS: B OFFICE

CONSTRUCTION TYPE: V–B

BASIC ALLOWABLE AREA: B 9,000 SF

ALLOWABLE AREA INCREASE:	B	ACTUAL BUILDING AREA:	5,220 SF
BASE ALLOWABLE	9,000 SF		
AREA INCREASE (25%)	2,250 SF		
BASE ALLOWABLE	11,250 SF		
BASIC ALLOWABLE STORIES:	2	ACTUAL STORIES:	1
BASIC ALLOWABLE HEIGHT:	40'	ACTUAL HEIGHT:	18'

TRAVEL DISTANCE: *(PER IBC TABLE 1017.2)*
68' TO EXIT (MAXIMUM PER CODE = 200')
25' TO COMMON PATH (MAXIMUM PER CODE = 75')

FIRE RESISTANCE RATING FOR BUILDING ELEMENTS

	V–B
STRUCTURAL FRAME:	0 HOUR
INTERIOR BEARING WALLS:	0 HOUR
INTERIOR NON–BEARING WALLS:	0 HOUR
EXTERIOR BEARING WALLS:	0 HOUR
EXTERIOR NON–BEARING WALLS:	0 HOUR
FLOOR/CEILING:	0 HOUR
CEILING/ROOF:	0 HOUR
SHAFT ENCLOSURES:	1 HOUR

OCCUPANCY SEPARATIONS:
(NON–SEPARATED USES. PER IBC SEC. 508.2)
ALLOWABLE AREA & HEIGHT CALCULATIONS ARE BASED ON THE MOST RESTRICTIVE USE. DIFFERENT USES ARE NOT SEPARATED BY FIRE BARRIERS.

ROOF COVERINGS: *(PER IBC TABLE 1505.1)*
CLASS C OR BETTER

INCIDENTAL SEPARATIONS: *(PER IBC TABLE 509)*
N/A

SPECIAL CONDITIONS:
EXIT LIGHTING
EMERGENCY LIGHTING
PORTABLE FIRE EXTINGUISHERS

FIRE ALARM REQUIREMENTS:
NOT REQUIRED, NOT PROVIDED

AUTOMATIC FIRE SUPPRESSION SYSTEM:
NOT REQUIRED, NOT PROVIDED

EMERGENCY POWER SOURCE:
EXIT SIGNS, EXIT ILLUMINATION, EMERGENCY LIGHTING IS PER BATTERY BACKUP.
I.T. ROOM & ALL ASSOCIATED COMPONENTS ON GENERATOR

HAZARDOUS MATERIALS: *(PER IBC TABLES 414)*
NONE NOTED

SMOKE PARTITIONS:
NOT REQUIRED

SMOKE CONTROL:
NOT REQUIRED

STANDPIPES:
NOT REQUIRED

DRAFTSTOPPING:
PROVIDED IN TWO LOCATIONS TO CREATE AREAS IN ATTIC UNDER 3,000 SF

TOTAL OCCUPANT LOAD: 66 (REF. PLAN)

EXITING: REFERENCE PLAN

OCCUPANT LOAD FACTORS:

OCCUPANCY	USE	LOAD FACTOR	OCCS=1 EXITS	OCCS=2 EXITS
B	LOBBY	7 sf/OCCUPANT	49	50+
B	OFFICE	100 sf/OCCUPANT	49	50+
B	STORAGE	300 sf/OCCUPANT	29	30+
B	CONFERENCE	15 sf/OCCUPANT	49	50+
B	BREAK ROOM	15 sf/OCCUPANT	49	50+

FIXTURE CALCULATIONS:
OFFICE (B):
MALE – 33 OCCUPANTS
2 WATER CLOSETS REQ'D. (1 WATER CLOSET & 1 URINAL PROVIDED)
1 LAVATORY REQ'D. (1 PROVIDED)
FEMALE – 33 OCCUPANTS
2 WATER CLOSETS REQ'D. (2 PROVIDED)
1 LAVATORY REQ'D. (1 PROVIDED)
DRINKING FOUNTAIN – 66 OCCUPANTS = 1 REQUIRED (NONE PROVIDED. BOTTLED WATER WILL BE AVAILABLE AT BEVERAGE COUNTER)
SERVICE SINK – 1 REQUIRED (1 PROVIDED)

PROJECT INFORMATION

TYPE OF CONSTRUCTION	NEW CONSTRUCTION
OWNER/FACILITY NAME OWNER/FACILITY ADDRESS	ASTRA OPERATIONS BUILDING N.W. CORNER OF MAIN STREET & 26TH HAYS KS 67601
REASON FOR SUBMITTAL	NEW OFFICE
COUNTY	ELLIS
FIRE DEPARTMENT	CITY OF HAYS
WATER SUPPLY	CITY OF HAYS
BUILDING INSPECTION DEPT	CITY OF HAYS
AUTHORITY HAVING JURISDICTION	CITY OF HAYS
ARCHITECT	JONES GILLAM RENZ ARCHITECTS 730 N. NINTH ST. SALINA, KS 67401 ph: 785–827–0386
CODES/REGULATIONS	2015 INTERNATIONAL BUILDING CODE 2009 UNIFORM MECHANICAL CODE 2009 UNIFORM PLUMBING CODE 2014 NATIONAL ELECTRIC CODE 2015 INTERNATIONAL FIRE CODE KANSAS FIRE PREVENTION CODE 2010 ADA STANDARDS for ACCESSIBLE DESIGN 2012 GREEN PLUMBING & MECHANICAL CODE SUPPLEMENT (LOCAL AMENDMENTS)

LEGEND

DESIGNATED EMERGENCY EXIT — 68"/24.4" —— EXIT WIDTH (ACTUAL/REQUIRED); 122/340 —— OCCUPANT LOAD (ACTUAL/ALLOWED)

0 HOUR CONSTRUCTION

DRAFTSTOPPING

EXIT LIGHT

FIRE EXTINGUISHER — FE

EMERGENCY LIGHTS

FIRE HYDRANT — FH

OCCUPANCY GROUP (AU – ACCESSORY USE)	A–1	
OCCUPANCY USE	ASSEMBLY HALL	
ROOM SQUARE FOOTAGE/OCCUPANT LOAD FACTOR	5,550	15
OCCUPANT LOAD/REQUIRED NUMBER OF EXITS	370	2

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

ASTRA BANK
OPERATIONS BUILDING - NEW FACILITY
HAYS, KANSAS

CHARLES A. RENZ
LICENSED
5502
6–27–2024
KANSAS
PROFESSIONAL ARCHITECT

REVISION:

DATE: 6–27–2024
JOB: 24–3424
SHEET NO.:

CFP

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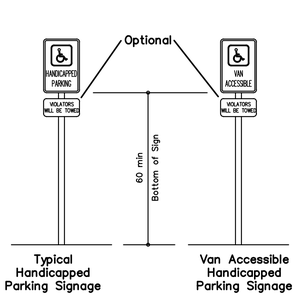
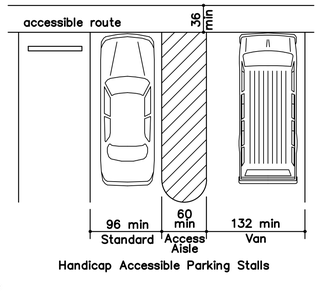
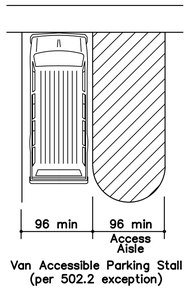


Typical Handicapped Parking Signage

Van Accessible Handicapped Parking Signage



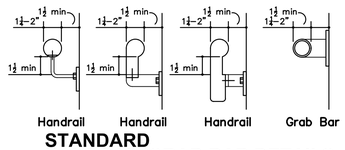
Handicap Accessible Parking Stalls



Van Accessible Parking Stall (per 502.2 exception)

M STANDARD PARKING ADA DIAGRAMS

NO SCALE



L STANDARD HANDRAIL/GRAB BAR DETAILS

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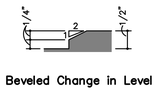
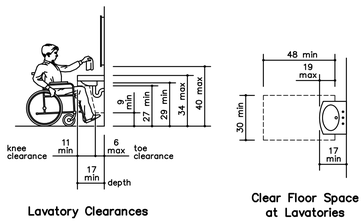


Beveled Change in Level

K THRESHOLD ADA DIAGRAMS

NO SCALE

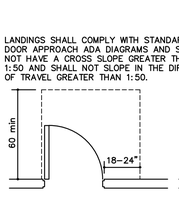


Lavatory Clearances

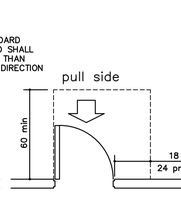
Clear Floor Space at Lavatories

J STANDARD LAVATORY DETAILS

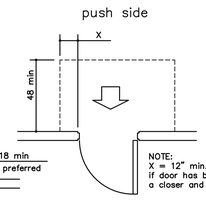
NO SCALE



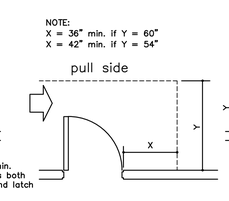
Exterior Landing



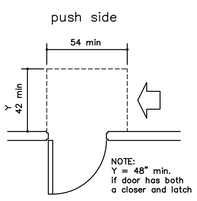
Front Approach – Swinging Door



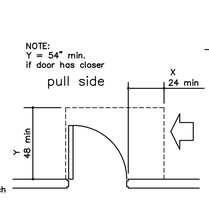
Front Approach – Swinging Door



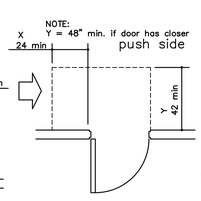
Hinge Side Approach – Swinging Door



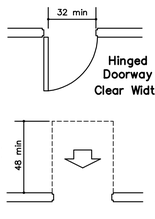
Side Approach – Swinging Door



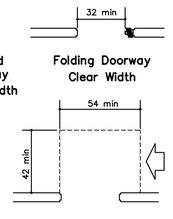
Latch Side Approach Swinging Door



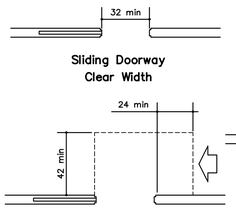
Latch Side Approach Swinging Door



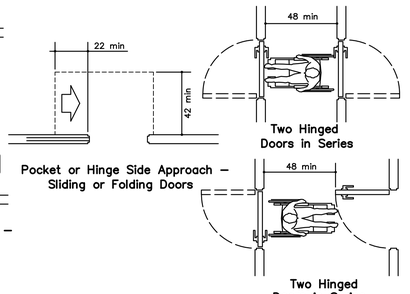
Front Approach – Sliding or Folding Doors



Side Approach – Sliding or Folding Doors

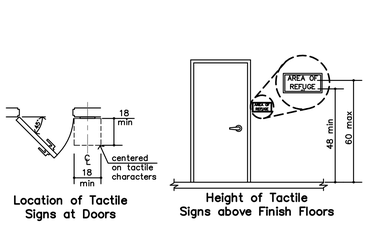


Stop or Latch Side Approach – Sliding or Folding Doors



H STANDARD DOOR APPROACH ADA DIAGRAMS

NO SCALE

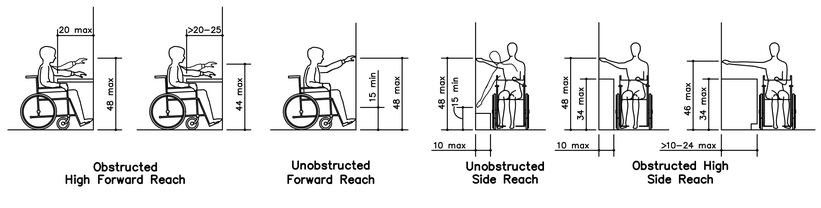


Location of Tactile Signs at Doors

Height of Tactile Signs above Finish Floors

G TACTILE SIGN DIAGRAM

NO SCALE



Obstructed High Forward Reach

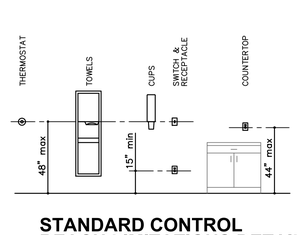
Unobstructed Forward Reach

Unobstructed Side Reach

Obstructed High Side Reach

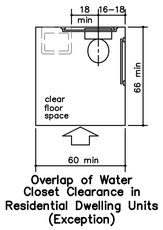
F STANDARD REACH ADA DIAGRAMS

NO SCALE

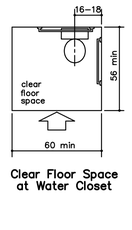


E STANDARD CONTROL REACH LIMITATIONS DETAILS

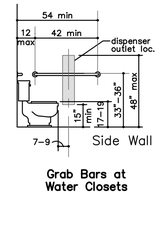
NO SCALE



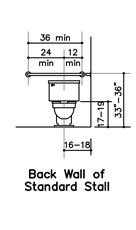
Overlap of Water Closet Clearance in Residential Dwelling Units (Exception)



Clear Floor Space at Water Closet



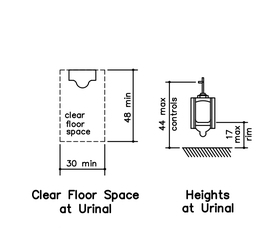
Grab Bars at Water Closets



Back Wall of Standard Stall

D STANDARD TOILET ADA DIAGRAMS

NO SCALE

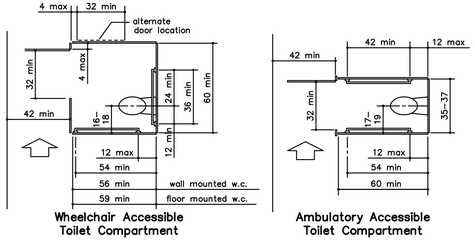


Clear Floor Space at Urinal

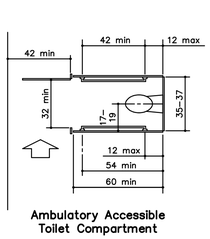
Heights at Urinal

C STANDARD URINAL ADA DIAGRAMS

NO SCALE



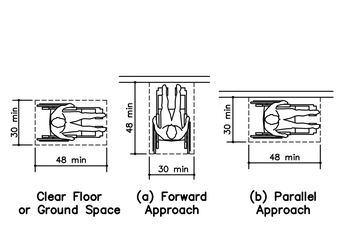
Wheelchair Accessible Toilet Compartment



Ambulatory Accessible Toilet Compartment

B STANDARD TOILET STALL ADA DIAGRAMS

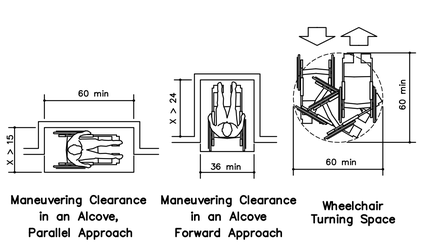
NO SCALE



Clear Floor or Ground Space

(a) Forward Approach

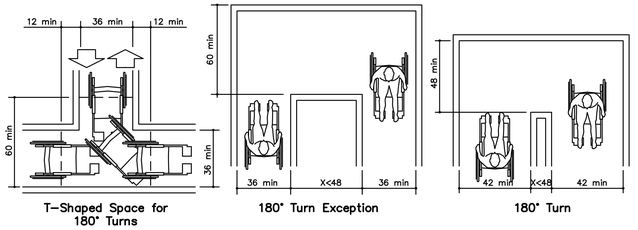
(b) Parallel Approach



Maneuvering Clearance in an Alcove, Parallel Approach

Maneuvering Clearance in an Alcove Forward Approach

Wheelchair Turning Space



T–Shaped Space for 180° Turns

180° Turn Exception

180° Turn

A STANDARD ADA DIAGRAMS

NO SCALE

FOR REFERENCE ONLY

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

ASTRA BANK
OPERATIONS BUILDING - NEW FACILITY
HAYS, KANSAS

CHARLES A. RENZ
2005
CERTIFICATE
5502
6-27-2024
KANSAS
PROFESSIONAL ARCHITECT

REVISION:

DATE: 6-27-2024
JOB: 24-3424
SHEET NO.:

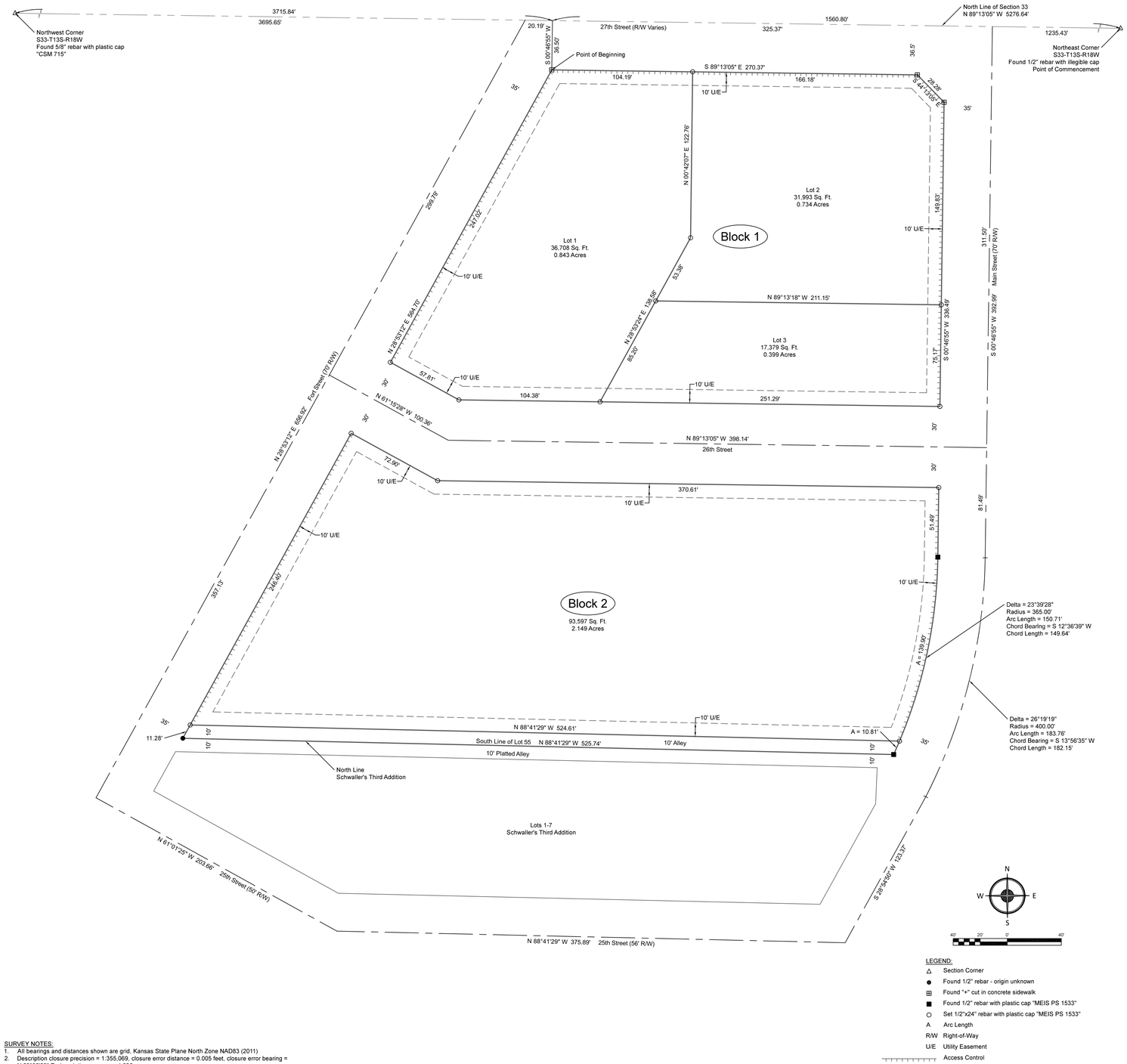
ADA

COPYRIGHTED©

Final Plat of

27th AND MAIN STREET ADDITION

being a replat of a portion of Lots 54 and 55, Lebold Allen and Company's Addition, to the City of Hays, Ellis County, Kansas



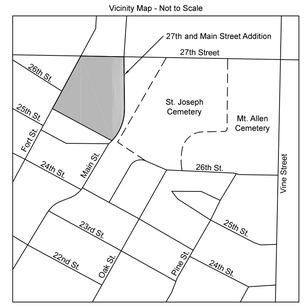
LEGEND:

- △ Section Corner
- ● Found 1/2" rebar - origin unknown
- ⊞ Found "+" cut in concrete sidewalk
- ■ Found 1/2" rebar with plastic cap "MEIS PS 1533"
- ○ Set 1/2"x24" rebar with plastic cap "MEIS PS 1533"
- A Arc Length
- R/W Right-of-Way
- U/E Utility Easement
- Access Control

SURVEY NOTES:

1. All bearings and distances shown are grid, Kansas State Plane North Zone NAD83 (2011)
2. Description closure precision = 1:355,069, closure error distance = 0.005 feet, closure error bearing = N 53°05'53" E, description acreage = 4.836 acres

Vicinity Map - Not to Scale



STREET AND EASEMENTS:

The street and alley as shown on this plat and not heretofore dedicated to and for public use are hereby dedicated.

Easements are hereby dedicated for public use, as utility easement right-of-way, which are shown as lying between the dashed lines in widths indicated and as set forth on this plat, and said utility easements may be employed for the purpose of installing, repairing and maintaining gas lines, electric lines, telephone lines, and all other forms and types of public utilities, now or hereafter used, by the public over, under and along the strips marked "Utility Easement" or "U/E".

LEGAL DESCRIPTION:

A tract of land in the Northeast Quarter (NE/4) of Section Thirty-three (33), Township Thirteen (13) South, Range Eighteen (18) West of the 6th P.M., Ellis County, Kansas, and also being a portion of Lots Fifty-four (54) and Fifty-five (55), LEBOLD ALLEN AND COMPANY'S ADDITION to Hays City, now the City of Hays, Ellis County, Kansas, described as follows by James Meis, PS 1533, on July 6, 2023:

Commencing at the Northeast corner of Section 33, Township 13 South, Range 18 West; Thence North 89 degrees 13 minutes 05 seconds West, along the North line of the Northeast Quarter, a distance of 1560.80 feet; Thence South 00 degrees 46 minutes 55 seconds West, a distance of 36.50 feet to the South line of 27th Street and the Point of Beginning; Thence South 89 degrees 13 minutes 05 seconds East, along the South line of 27th Street, a distance of 270.37 feet; Thence South 44 degrees 13 minutes 05 seconds East, along the South line of 27th Street, a distance of 28.28 feet; Thence South 00 degrees 46 minutes 55 seconds West, along the West line of Main Street, a distance of 336.49 feet; Thence on a curve to the right, along the West line of Main Street, having a radius of 365.00 feet, an arc length of 150.71 feet, a chord bearing of South 12 degrees 36 minutes 39 seconds West and a chord length of 149.64 feet; Thence North 88 degrees 41 minutes 29 seconds West, along the North line of Schwaller's Third Addition, a distance of 525.74 feet; Thence North 28 degrees 53 minutes 12 seconds East, along the East line of Fort Street, a distance of 564.70 feet to the Point of Beginning. Said tract contains 4.836 acres.

OWNER'S CERTIFICATE:

Know all men by these presents, that we, the undersigned property owners of the land above described have caused the same to be surveyed and platted into Street, Alley, Lots, Blocks and Easements, the same to be known as "27th and Main Street Addition", to the City of Hays, Ellis County, Kansas. The street and alley are hereby dedicated to and for the use of the public. The utility easements as indicated on the accompanying plat are hereby granted to the public for the purpose of constructing, operating, maintaining and repairing all public utilities.

City of Hays, Kansas

_____

Shaun Musil, Mayor

_____, Date

NOTARY CERTIFICATE:

State of Kansas, County of Ellis, ss:

Be it remembered that on this _____ day of _____, 2024, before me, a Notary Public in and for said County and State, came Shaun Musil, Mayor of the City of Hays, Kansas, to me personally known to be the same person who executed the foregoing instrument of writing and duly acknowledged the execution of same. In testimony whereof, I have hereunto set my hand and affixed my notarial seal, the day and year above written.

_____, Notary Public

My Commission Expires: _____

APPROVALS:

This plat of 27th and Main Street Addition has been submitted to and approved by the Hays Area Planning Commission this _____ day of _____, 2024

_____, Louis J. Caplan, Chairperson

_____, Jim Schreiber, Secretary

The dedications shown on this plat are accepted by the City Commission of the City of Hays, Kansas, this _____ day of _____, 2024

_____, Shaun Musil, Mayor

ATTEST:

_____, Brenda Kitchen, City Clerk

_____, Donald Hoffman, Attorney for the City of Hays

TRANSFER:

Entered on transfer record this _____ day of _____, 2024

_____, Bobbi Dreiling, County Clerk

RECORDED:

State of Kansas, County of Ellis, ss:

This is to certify that this instrument was filed for record in the Register of Deeds Office on the _____ day of _____, 2024 in Book _____, Page _____

_____, Rebecca Herzog, Register of Deeds

Resolution # _____ filed for record in Book _____, Page _____

Plat & Dedication documents filed for record in Book _____, Page _____

SURVEYOR'S CERTIFICATE:

I, James Meis, Professional Surveyor #1533 in the State of Kansas, certify that the survey shown on this plat was made by me or under my direct supervision. This plat is true and correct to the best of my knowledge and belief.

JAMES MEIS
LICENSED
1533
PROFESSIONAL SURVEYOR
KANSAS

James Meis, PS 1533

REVIEW SURVEYOR'S CERTIFICATE:

State of Kansas, County of Ellis, ss:

I hereby certify that the review of this plat was found to be in compliance with the requirements of K.S.A. 58-2005.

KURT TSCHANZ
LICENSED
1737
PROFESSIONAL SURVEYOR
KANSAS

Kurt Tschanz, PS 1737

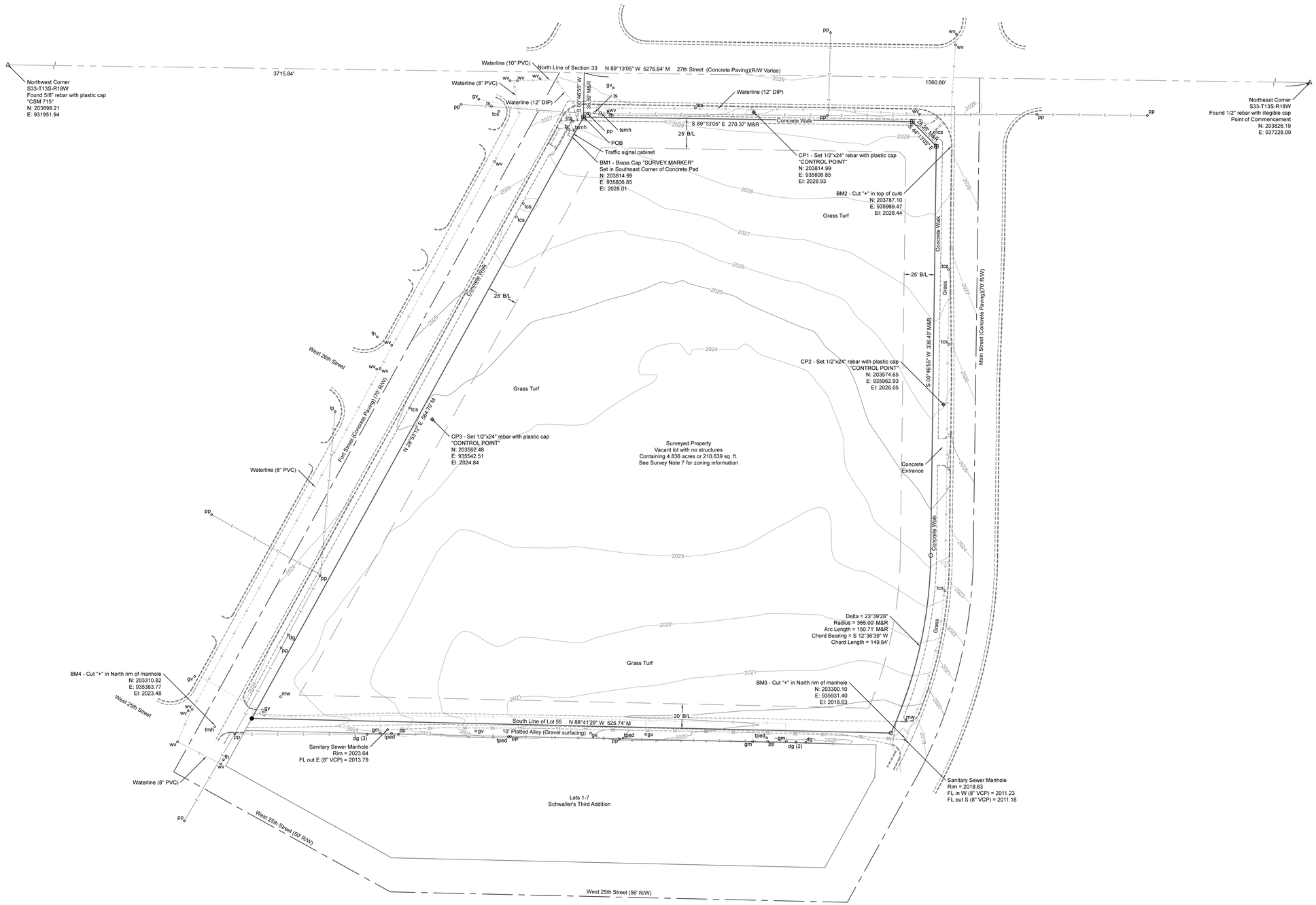
City of Hays
PO Box 490
Hays, KS 67601

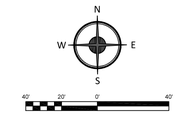
DRIGGS DESIGN GROUP, PA
Surveying Engineering Planning
1017 Downing Avenue, Hays, Kansas 67601
www.driggsdesign.com (785) 621-4280

Project No: 2024-056
Date: 05-16-2024
Scale: 1" = 40'
Sheet No: 1 of 1
Drawn By: DV

TOPOGRAPHIC SURVEY

in Lots 54 and 55, Lebold Allen & Company's Addition to the City of Hays, Ellis County, Kansas





LEGEND:

△	Section Corner
⊕	CP - Control Point
●	Found 1/2" rebar - origin unknown
○	Set 1/2"x24" rebar with plastic cap "MEIS PS 1533"
⊞	Cut "+" in concrete sidewalk
M	Measured
R	Record - from Book 465, Page 291
R/W	Right-of-way
POB	Point of Beginning
B/L	Building Setback
$tped_o$	Telephone pedestal
tmh_o	Telecommunication manhole
pp_o	Power pole
lp_o	Light pole
dg_o	Down guy
gm_o	Gas meter
gv_o	Gas valve
wv_o	Water valve
fh_o	Fire hydrant
mw_o	Monitoring well
$ssmh_o$	Sanitary sewer manhole
b_o	Bollard
tcs_o	Traffic control sign
ts_o	Traffic signal
$tsmh_o$	Traffic signal manhole
	Edge of concrete
	Natural gas (Midwest Energy)
	Electric - overhead (Midwest Energy)
	Sanitary sewer
	Water line
	Fence

LEGAL DESCRIPTION: Surveyed Property

A tract of land in the Northeast Quarter of Section 33, Township 13 South, Range 18 West of the 6th Principal Meridian, Ellis County, Kansas, and also being a portion of Lots 54 and 55, Lebold Allen and Company's Addition to Hays City, now the City of Hays, Ellis County, Kansas, described as follows by James Meis, PS 1533, on July 6, 2023:

Commencing at the Northeast corner of Section 33, Township 13 South, Range 18 West; Thence North 89 degrees 13 minutes 05 seconds West, along the North line of the Northeast Quarter, a distance of 1560.80 feet; Thence South 00 degrees 46 minutes 55 seconds West, a distance of 36.50 feet to the South line of 27th Street and the Point of Beginning; Thence South 89 degrees 13 minutes 05 seconds East, along the South line of 27th Street, a distance of 270.37 feet; Thence South 44 degrees 13 minutes 05 seconds East, along the South line of 27th Street, a distance of 28.28 feet; Thence South 00 degrees 46 minutes 55 seconds West, along the West line of Main Street, a distance of 336.49 feet; Thence on a curve to the right, along the West line of Main Street, having a radius of 365.00 feet, an arc length of 150.71 feet, a chord bearing of South 12 degrees 36 minutes 39 seconds West and a chord length of 149.64 feet; Thence North 88 degrees 41 minutes 29 seconds West, along the North line of Schwaller's Third Addition, a distance of 525.74 feet; Thence North 28 degrees 53 minutes 12 seconds East, along the East line of Fort Street, a distance of 564.70 feet to the Point of Beginning. Said tract contains 4.836 acres, more or less, and is subject to any easements or rights-of-way of record.

SURVEY NOTES:

1. Field work completed July 5, 2023
2. All bearings shown are grid, Kansas State Plane North Zone NAD83 (2011)
3. Elevations based on GPS static observations processed using NGS OPUS. All elevations provided are NAVD88.
4. Kansas One Call Ticket No. 23345020, dated June 26, 2023
5. See Land Survey Reference Reports for more information regarding section corners, method of recovery or establishment and reference ties
6. The surveyed property does not fall within a special flood hazard area as mapped by FEMA based upon FIRM Panel 20051C0314C, effective date June 15, 2022
7. The surveyed property is zoned P-I, Public and Institutional District. The building setbacks shown on this survey are based on my interpretation of the zoning regulations and should be confirmed before construction begins.
8. The surveyed property contains 4.836 acres or 210,639 square feet
9. Based on preliminary title work completed by Field Abstract & Title, there are no record easements affecting the surveyed property

SURVEYOR'S CERTIFICATE:

I, James Meis, Professional Surveyor #1533 in the State of Kansas, certify that the survey shown on this plat was made by me or under my direct supervision on July 7th, 2023. This plat is true and correct to the best of my knowledge and belief.

JAMES MEIS LICENSED PROFESSIONAL KANSAS SURVEYOR
PS-1533
07-07-2023

James Meis
Kansas PS 1533

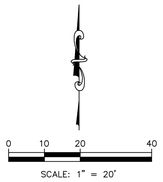
UTILITIES:

All underground utilities may not be shown. Above ground utilities are located and shown. Underground utilities which have been flagged by their respective owners are shown.

KANSAS ONE CALL: 1-800-344-7233 (DIG-SAFE)

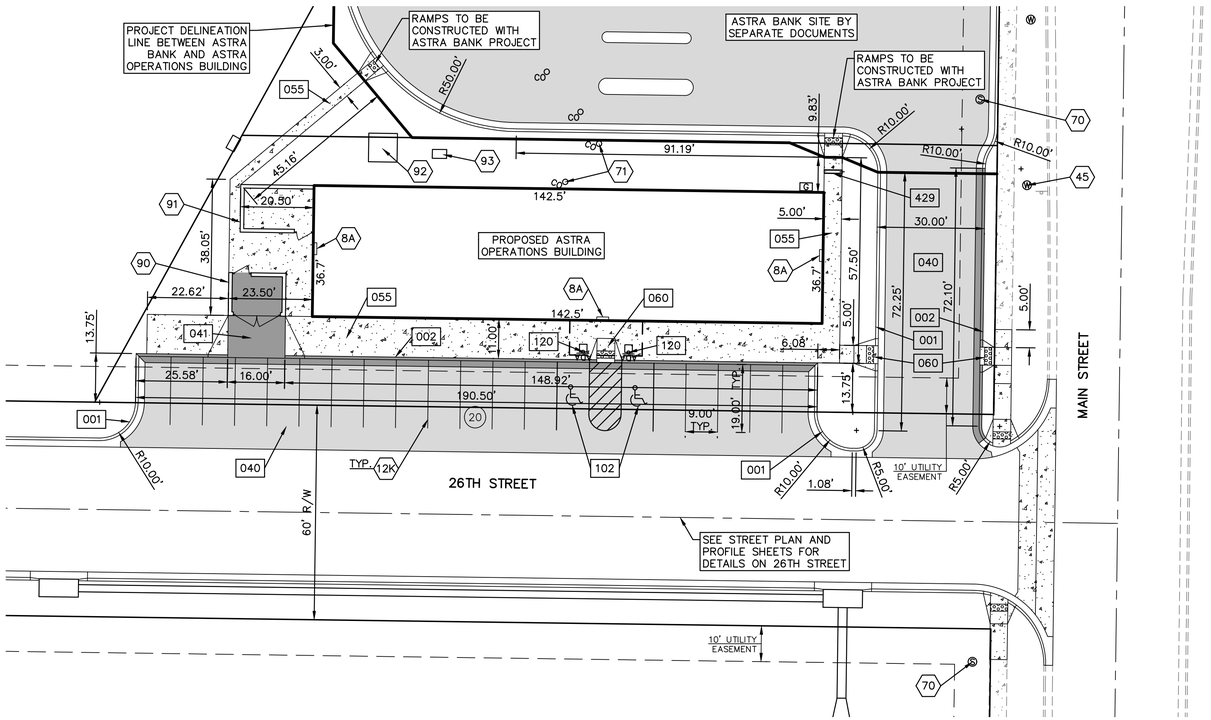
ATT Distribution	(800) 778-9140
Vyve Broadband	(785) 259-1373
City of Hays Department of Water Resources	(785) 623-0738
Midwest Energy	(785) 625-1440
NexTech	(800) 778-9140

Grow Hays 219 W 10th Street Hays, KS 67601	**DRIGGS DESIGN GROUP, PA** Surveying Engineering Planning 1017 Downing Avenue, Hays, Kansas 67601 www.driggsdesign.com (785) 621-4280	Project No: 2023-118 Date: 07-07-2023 Scale: 1" = 40' Sheet No: 1 of 1 Drawn By: DTS



PAVING LEGEND

- REGULAR DUTY PAVING (040)
- HEAVY DUTY PAVING (041)
- CONCRETE SIDEWALK (055)
- CONCRETE CURB AND GUTTER (001)
- CONCRETE CURB AND GUTTER WITH REVERSE FLOW "DRY CURB" (002)



DETAILS – SEE DETAIL SHEET 11 FOR THE FOLLOWING DETAILS

001	CONCRETE CURB AND GUTTER
002	CONCRETE CURB AND GUTTER WITH REVERSE FLOW "DRY CURB"
040	REGULAR DUTY PAVING
041	HEAVY DUTY PAVING
055	CONCRETE SIDEWALK
060	SIDEWALK RAMPS
102	ACCESSIBLE STRIPING
120	ACCESSIBLE PARKING SIGNAGE
429	SIDEWALK DRAIN

NOTES:

8A	ENTRY (SEE ARCH. PLANS)
12K	WHITE PARKING LOT STRIPING (SHERWIN–WILLIAMS TM 2160 LEAD FREE OR APPROVED EQUAL)
45	WATER METER PIT (SEE UTILITY PLAN)
70	SANITARY SEWER MANHOLE (SEE SANITARY SEWER PLAN AND PROFILE SHEETS)
71	SANITARY SEWER STRUCTURE (SEE UTILITY PLAN)
90	TRASH ENCLOSURE (SEE ARCHITECTURAL PLANS)
91	HVAC ENCLOSURE (SEE ARCHITECTURAL PLANS)
92	TRANSFORMER PAD (SEE MEP PLANS)
93	ELECTRICAL APPARATUS (SEE MEP PLANS)

NOTE:
1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.

2. THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACTOR DOCUMENTS.

3. ALL DIMENSIONS ARE TO BACK OF CURB UNLESS NOTED OTHERWISE.

4. ALL DIMENSIONS ARE PERPENDICULAR TO PROPERTY LINE.

5. ACTUAL SIGN LOCATIONS TO BE COORDINATED WITH CONSTRUCTION MANAGER.

CONSTRUCTION NOTES:

1. COORDINATE START–UP AND ALL CONSTRUCTION ACTIVITIES WITH OWNER.

2. CONSTRUCTION METHODS AND MATERIALS NOT SPECIFIED IN THESE PLANS ARE TO MEET OR EXCEED THE CITY OF HAYS STANDARD SPECIFICATIONS.

3. ALL CONSTRUCTION WORK AND UTILITY WORK OUTSIDE OF PROPERTY BOUNDARIES SHALL BE PERFORMED IN COOPERATION WITH AND IN ACCORDANCE WITH REGULATIONS OF THE AUTHORITIES CONCERNED.

4. PUBLIC CONVENIENCE AND SAFETY: THE CONTRACTOR SHALL CONDUCT THE WORK IN A MANNER THAT WILL INSURE, AS FAR AS PRACTICABLE, THE LEAST OBSTRUCTION TO TRAFFIC, AND SHALL PROVIDE FOR THE CONVENIENCE AND SAFETY OF THE GENERAL PUBLIC AND RESIDENTS ALONG AND ADJACENT TO HIGHWAYS IN THE CONSTRUCTION AREA.

5. ONE IN EIGHT ACCESSIBLE PARKING STALLS MUST HAVE A SIGN DESIGNATING "VAN–ACCESSIBLE". SEE DETAIL 102 AND 120.

6. ALL TRAFFIC CONTROL DEVICES, INSTALLATION AND OPERATIONS SHALL CONFORM WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

7. PAINT FOR STRIPING ON PUBLIC STREETS, HIGHWAYS AND ENTRANCES SHALL BE REFLECTORIZED PAINT CONFORMING TO THE SPECIFICATIONS OR REQUIREMENTS OF THE AUTHORITY GOVERNING THE STREET OR HIGHWAY.

8. CONTRACTOR TO REFERENCE ARCHITECTURAL PLANS FOR SIDEWALK DRAIN LOCATIONS AND DETAILS FOR BUILDING DOWNSPOUTS.

9. COORDINATE CONSTRUCTION WITH ASTRA BANK PROJECT.

SURVEY STATEMENT:

ALL EXISTING ELEVATIONS, UNDERGROUND UTILITIES EXISTING STRUCTURES AND ALL OTHER SURVEY INFORMATION HEREON ARE FROM FIELD SURVEY INFORMATION PROVIDED BY DRIGGS DESIGN GROUP, DATED 07–07–2023.

SAFETY NOTICE TO CONTRACTOR

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

WARRANTY / DISCLAIMER

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL, CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

CAUTION – NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	06/27/24	INITIAL ISSUE	MJR	TDA	MJR

MATTHEW J. ROWE LICENSED 29241 6/27/24 KANSAS PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

1627 SUNFLOWER LANE
SALINA, KANSAS 67401
PH. (785) 823–3400
sal@kveng.com | www.kveng.com

KAW VALLEY ENGINEERING

KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN KANSAS BY STATE CERTIFICATE OF AUTHORIZATION # E-1153. EXPIRES 12/31/24

ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

CIVIL PLANS
SITE AND DEMINSION PLAN

PROJ. NO.	E24D3733
DESIGNER	MJR
DRAWN BY	TDA
CFN	3733SP
SHEET	01
REV	0

THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.

0 10 20 40

SCALE: 1" = 20'

DETAILS – SEE DETAIL SHEET 12 FOR THE FOLLOWING DETAILS

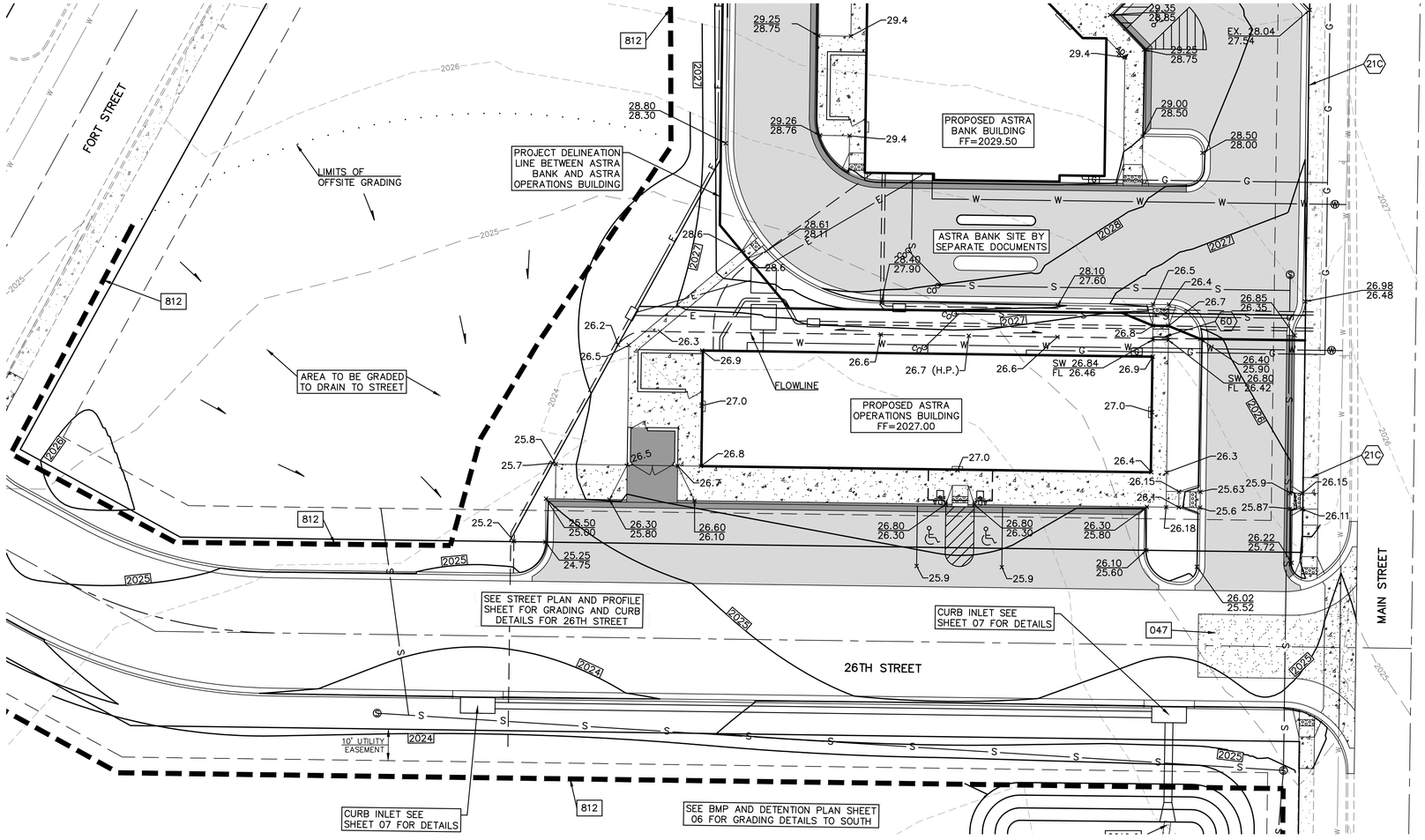
047 CONSTRUCTION ENTRANCE DETAIL
812 SEDIMENTATION FENCE

NOTES:

21C MATCH EXISTING PAVEMENT ELEVATIONS
60 SIDEWALK DRAIN (SEE SITE PLAN)

EROSION & PROPOSED IMPROVEMENTS LEGEND:

82.95 X — SPOT ELEVATION (ADD 2000), TOP OF PAVEMENT
83.65 / 83.15 — TOP OF CURB (ADD 2000) / FLOWLINE OF CURB (ADD 2000)
SW 83.65 / FL 83.15 — SIDEWALK ELEVATION (ADD 2000) / SIDEWALK DRAIN FLOWLINE ELEVATION (ADD 2000)
H.P. — HIGH POINT
FLOW DIRECTION
2028 — EXISTING GROUND CONTOUR (1' INTERVALS)
2028 — PROPOSED FINISHED GROUND CONTOUR (1' INTERVALS)
DRAINAGE DITCH FLOWLINE
SEDIMENTATION FENCE



IF DISCREPANCIES EXIST BETWEEN THE GRADING NOTES BELOW AND THE RECOMMENDATIONS OUTLINED IN THE PROJECT GEOTECHNICAL REPORT, THE RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT SHALL GOVERN.

GRADING NOTES:

1. REFERENCE GEOTECHNICAL PROJECT REPORT COMPLETED BY GSI ENGINEERING. DATED, JUNE 7, 2024.

2. THE CONSTRUCTION AREA SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL AND ORGANIC MATTER FROM ALL AREAS TO BE OCCUPIED BY BUILDING AND PAVING. TOPSOIL FOR REPLACEMENT ON SLOPES MAY BE STOCKPILED ON SITE. EXCESS TOPSOIL MAY BE WASTED IN FILL SLOPES PROVIDED THAT NO TOPSOIL WILL BE WASTED WITHIN 10 FEET OF THE EDGE OF THE BUILDING OR PARKING AREA. BURNING OF TIMBER WILL NOT BE PERMITTED UNLESS APPROVAL IS OBTAINED FROM GOVERNING OFFICIALS. STRIPPING EXISTING TOPSOIL AND ORGANIC MATTER SHALL BE TO A MINIMUM DEPTH OF 6 INCHES.

3. AREAS TO RECEIVE FILL SHALL BE SCARIFIED AND THE TOP 9-INCH DEPTH MOISTURE CONDITIONED AND COMPACTED TO 95% STANDARD PROCTOR DENSITY PER GEOTECHNICAL REPORT. ANY UNSUITABLE AREAS SHALL BE UNDERCUT AND REPLACED WITH SUITABLE MATERIAL BEFORE ANY FILL MATERIAL CAN BE APPLIED.

4. OFF-SITE FILL MATERIAL SHALL HAVE A PLASTICITY INDEX BETWEEN 10 AND 20, A LIQUID LIMIT OF 40 OR LESS AND CONTAIN NO ROCK LARGER THAN THREE INCHES. OFF-SITE FILL MATERIAL SHALL BE APPROVED BY THE OWNER PRIOR TO BRINGING ON SITE. REFER TO GEOTECH REPORT.

5. EARTHWORK UNDER THE BUILDING SHALL COMPLY WITH THE PROJECT ARCHITECTURAL PLANS. OTHER FILL MATERIAL SHALL BE MADE IN LIFTS NOT TO EXCEED EIGHT INCHES DEPTH COMPACTED TO 95% STANDARD PROCTOR DENSITY. FILL MATERIAL MAY INCLUDE ROCK FROM ON-SITE EXCAVATION IF CAREFULLY PLACED SO THAT LARGE STONES ARE WELL DISTRIBUTED AND VOIDS ARE COMPLETELY FILLED WITH SMALLER STONES, EARTH, SAND OR GRAVEL TO FURNISH A SOLID EMBANKMENT. NO ROCK LARGER THAN THREE INCHES IN ANY DIMENSION NOR ANY SHALE SHALL BE PLACED IN THE TOP 12 INCHES OF EMBANKMENT.

6. AREAS THAT ARE TO BE CUT TO SUBGRADE LEVELS SHALL BE PROOF ROLLED WITH A MODERATELY HEAVY LOADED DUMP TRUCK OR SIMILAR APPROVED CONSTRUCTION EQUIPMENT TO DETECT UNSUITABLE SOIL CONDITIONS.

7. IN ALL AREAS OF EXCAVATION, IF UNSUITABLE SOIL CONDITIONS ARE ENCOUNTERED, A QUALIFIED GEOTECHNICAL ENGINEER SHALL RECOMMEND TO THE OWNER THE METHODS OF UNDERCUTTING AND REPLACEMENT OF PROPERLY COMPACTED, APPROVED FILL MATERIAL. ALL PROOFROLLING AND UNDERCUTTING SHOULD BE PERFORMED DURING A PERIOD OF DRY WEATHER.

8. 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.

9. ALL SLOPES ARE TO BE 3:1 OR FLATTER UNLESS OTHERWISE INDICATED.

10. ALL SLOPES EXCEEDING 3:1 SHALL BE PROTECTED BY RIP RAP, CONCRETE PAVING, OR OTHER METHODS INDICATED ON THESE PLANS, THAT WILL PREVENT EROSION AND PLACED SUCH THAT THE SURFACE IS FLUSH WITH SURROUNDING GROUND AND SHAPED TO CHANNEL WATER IN DIRECTIONS INDICATED.

11. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON-SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

12. CONTRACTOR SHALL USE SILT FENCE, BALES OF HAY OR OTHER MEANS OF CONTROLLING EROSION ALONG THE EDGE OF THE PROPERTY OR OTHER BOTTOM OF SLOPE LOCATIONS.

13. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS.

14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

15. IT IS NOT THE DUTY OF THE ENGINEER OR THE OWNER TO REVIEW THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE AT ANY TIME DURING CONSTRUCTION.

16. PIPE LENGTHS ARE CENTER TO CENTER OF STRUCTURE OR TO END OF END SECTIONS.

17. HANDICAP STALLS SHALL MEET ADA REQUIREMENTS AND SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION AT THE BUILDING ENTRY AND ACCESSIBLE PARKING STALLS. SLOPES EXCEEDING 2.0% WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

18. SIDEWALKS SHALL MEET ADA REQUIREMENTS AND NOT EXCEED 2% CROSS SLOPE OR 5% RUNNING SLOPE.

NOTE:
1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.

2. THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACT DOCUMENTS.

SAFETY NOTICE TO CONTRACTOR

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

WARRANTY / DISCLAIMER

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

CAUTION – NOTICE TO CONTRACTOR

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THE COORDINATES PROVIDED ON THIS PLAN ARE FOR INFORMATION AND CHECKING PURPOSES ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE CONSTRUCTION STAKING COORDINATES ACCORDING TO THE DIMENSIONS SHOWN ON THESE PLANS. CONTRACTOR SHALL VERIFY THE ACCURACY OF THE COORDINATES SHOWN HEREON BEFORE CONSTRUCTION.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	06/27/24	INITIAL ISSUE	MJR	TDA	MJR

MATTHEW J. ROWE LICENSED 29241 6/27/24 KANSAS PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

KAW VALLEY ENGINEERING
1627 SUNFLOWER LANE
SALINA, KANSAS 67401
PH. (785) 823-3400
salk@kveng.com | www.kveng.com

KAW VALLEY ENGINEERING, INC.; IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN KANSAS; STATE CERTIFICATE OF AUTHORIZATION # E-11.5. EXPIRES 12/31/24

ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

CIVIL PLANS
GRADING AND EROSION CONTROL PLAN

PROJ. NO. E24D3733
DESIGNER MJR | DRAWN BY TDA
CFN 3733GP
SHEET 02 | REV 0

THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.

DETAILS – SEE DETAIL SHEET 12 FOR THE FOLLOWING DETAILS

047 CONSTRUCTION ENTRANCE DETAIL
407 POND OUTLET STRUCTURE WALL
417 DETENTION POND FLUME
812 SEDIMENTATION FENCE

NOTES:

21C MATCH EXISTING PAVEMENT ELEVATIONS

0 10 20 40
SCALE: 1" = 20'

EROSION & PROPOSED IMPROVEMENTS LEGEND:

82.95 SPOT ELEVATION (ADD 2000),
X TOP OF PAVEMENT

83.65 TOP OF CURB (ADD 2000)
83.15 FLOWLINE OF CURB (ADD 2000)

FLOW DIRECTION

2028 EXISTING GROUND CONTOUR (1' INTERVALS)

2028 PROPOSED FINISHED GROUND CONTOUR (1' INTERVALS)

SEDIMENTATION FENCE

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GRADING NOTES:

1. REFER TO GRADING NOTES ON SHEET 05.
2. CONTRACTOR TO PLANT NATIVE GRASSES IN BOTTOM OF BASIN PER CITY OF HAYS BMP MANUAL. NATIVE VEGETATION TO BE IN ACCORDANCE WITH ROLLING PLAINS AND BREAKS WHICH CONSISTS OF MIXEDGRASS PRAIRIE (BIG BLUESTEM, LITTLE BLUESTEM, BLUE GRAMA, NEEDLE AND THREAD, SIDE OATS GRAMA, AND WESTERN WHEATGRASS).

NOTE:
1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.

2. THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACT DOCUMENTS.

BMP AND DETENTION IMPROVEMENTS TO BE BID AS ALTERNATE #2.

SAFETY NOTICE TO CONTRACTOR

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WARRANTY / DISCLAIMER

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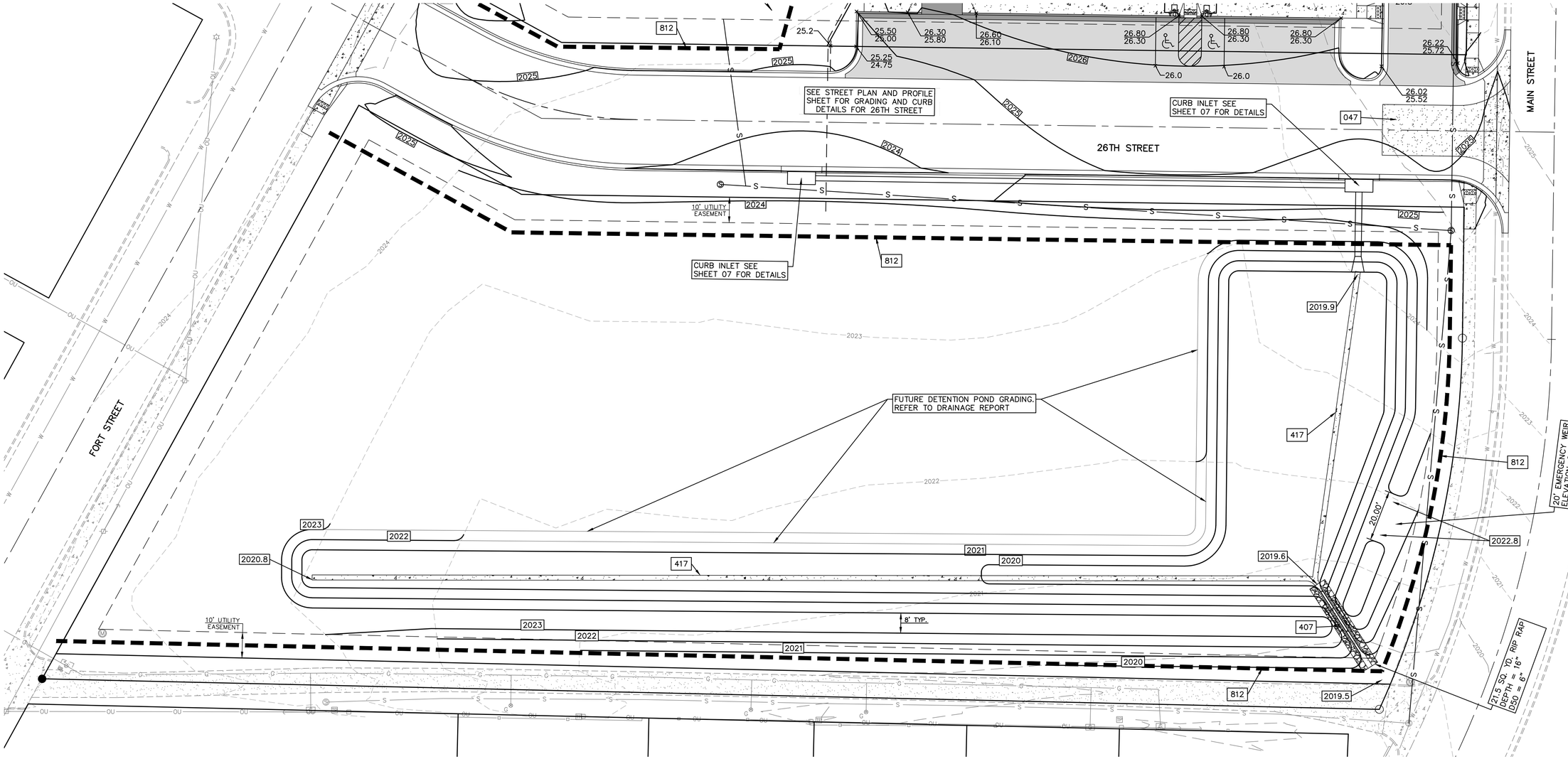

ENTIRE SHEET IS PER ALTERNATE #2

REV	DATE	DESCRIPTION	DSN	DWN	CHK
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MATTHEW J. ROWE LICENSED 29241 6/27/24 KANSAS PROFESSIONAL ENGINEER

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ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

CIVIL PLANS
BMP & DETENTION BASIN PLAN

PROJ. NO.	E24D3733	
DESIGNER	MJR	DRAWN BY TDA
CFN	3733DAM	
SHEET	03	REV 0

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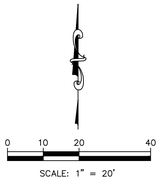

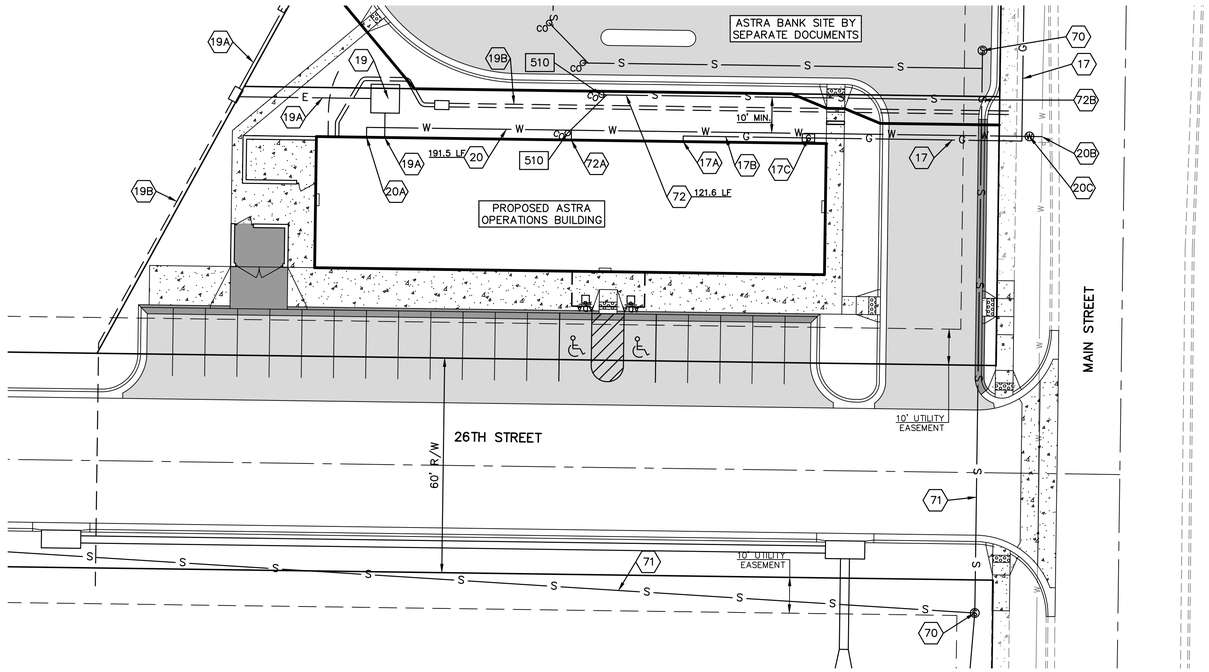

DETAILS – SEE DETAIL SHEET 11 FOR THE FOLLOWING DETAILS

510 CLEAN–OUT

NOTES:

17 GAS LINE INSTALLED BY UTILITY PROVIDER. CONTRACTOR TO COORDINATE WITH MIDWEST ENERGY. SEE CONTACT INFORMATION THIS SHEET. CONTRACTOR IS RESPONSIBLE FOR ALL GAS LINE COSTS AND FEES.
17A POINT OF CONNECTION TO GAS SERVICE. REFER TO MEP PLANS.
17B GAS SERVICE. REFER TO MEP PLANS
17C GAS METER, REGULATOR AND SHUT–OFF VALVE. COORDINATE RESPONSIBILITIES WITH MIDWEST ENERGY AND PAY ALL FEES. REFER TO MEP PLANS.
19 GROUND MOUNT ELECTRICAL PAD. REFER TO MEP PLANS.
19A UNDERGROUND ELECTRIC LINE. REFER TO MEP PLANS FOR LOCATION AND DETAILS
19B UNDERGROUND CONDUIT. REFER TO MEP PLANS FOR LOCATION, SIZE, AND DETAILS
20 PVC WATER SERVICE LINE. REFER TO MEP PLANS FOR SIZE. (MINIMUM BURIAL DEPTH 42")
20A DOMESTIC WATER SERVICE CONNECTION TO BUILDING (SEE MEP PLANS)
20B CONNECT PROPOSED DOMESTIC WATER SERVICE LINE TO EXISTING WATER MAIN USING TAPPING SLEEVE AND VALVE. CONTRACTOR TO COORDINATE TAP WITH THE CITY.
20C WATER METER AND PIT. CONTRACTOR TO COORDINATE TAP AND METER WITH THE CITY. CONTRACTOR IS TO INCUR ANY AND ALL COSTS ASSOCIATED WITH WATER METER AND TAP. VERIFY WITH CITY OF HAYS.
70 SANITARY SEWER MANHOLE (SEE SANITARY SEWER PLAN & PROFILE SHEETS)
71 SANITARY SEWER MAIN LINE (SEE SANITARY SEWER PLAN & PROFILE SHEETS)
72 4" SANITARY SEWER SERVICE LINE, PVC SDR 26 AT MINIMUM 2% SLOPE.
72A SANITARY SEWER SERVICE CONNECTION TO BUILDING (SEE MEP PLANS)
72B POINT OF CONNECTION TO SANITARY SEWER MAIN (SEE SANITARY SEWER PLAN AND PROFILE SHEETS)

NOTE:
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2. THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACTOR DOCUMENTS.

UTILITY NOTES:

1. CONSTRUCTION SHALL NOT START ON ANY PUBLIC WATER OR SANITARY SEWER SYSTEM UNTIL WRITTEN APPROVAL OR PERMITS HAVE BEEN RECEIVED FROM THE OWNER.

2. ALL UTILITY AND STORM SEWER TRENCHES CONSTRUCTED UNDER AREAS THAT RECEIVE PAVING SHALL BE BACKFILLED TO 18 INCHES ABOVE THE TOP OF THE PIPE WITH SELECT GRANULAR MATERIAL PLACED ON EIGHT–INCH LIFTS, AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

3. CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TAP ANY WATER MAIN BELONGING TO THE CITY UNLESS DULY AUTHORIZED TO DO SO BY THE CITY. ANY ADVERSE CONSEQUENCE OF ANY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE TO BE THE LIABILITY OF THE CONTRACTOR. KAW VALLEY ENGINEERING AND OWNER ARE TO BE HELD HARMLESS.

4. DISINFECTION AND PRESSURE TESTING OF WATER LINES SHALL BE PERFORMED AND PAID FOR BY THE CONTRACTOR UNDER SUPERVISION OF A REPRESENTATIVE OF THE CITY WATER DEPARTMENT. CONTRACTOR SHALL NOTIFY THE CITY OF HAYS WATER DEPARTMENT 24 HOURS MINIMUM, PRIOR TO ANY TESTING.

5. ALL WATER AND SANITARY SEWER SYSTEMS THAT ARE TO BE PUBLIC LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATIONS PREVIOUSLY APPROVED BY THE CITY OF HAYS AND THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT AND SHALL BE INSPECTED BY THE CITY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT THIS INSPECTION OCCURS.

6. LOCATIONS SHOWN FOR PROPOSED WATER LINES ARE APPROXIMATE. VARIATIONS MAY BE MADE, WITH APPROVAL OF THE ENGINEER, TO AVOID CONFLICTS.

7. CONTRACTOR TO INSTALL TRACING WIRE ALONG ALL NON–METALLIC WATER MAINS AND SERVICE LINES PER SPECIFICATIONS.

8. CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF NEW UTILITIES.

9. WATER LINES SHALL HAVE A MINIMUM COVER OF 42 INCHES. ALL VALVES ON MAINS AND FIRE HYDRANT LEADS SHALL BE WITH VALVE BOX ASSEMBLIES. THE SIZE OF VALVE BOX ASSEMBLY TO BE INSTALLED IS DETERMINED BY THE TYPE AND SIZE OF VALVE. VALVE BOX CAPS SHALL HAVE THE WORD "WATER".

10. A MINIMUM HORIZONTAL DISTANCE OF 10 FEET SHALL BE MAINTAINED BETWEEN PARALLEL WATER (MAINS AND SERVICE) AND GRAVITY SANITARY SEWER (MAINS AND SERVICE) LINES. WHEN IT IS NECESSARY FOR ANY WATER LINE TO CROSS A GRAVITY SANITARY SEWER LINE, THE SEWER LINE SHALL BE ENCASED IN CONCRETE OR CONSTRUCTED OF DUCTILE IRON PIPE OR PVC PIPE WITH NO JOINTS WITHIN 10 FEET OF THE CROSSING UNLESS THE WATER LINE IS AT LEAST 2 FEET CLEAR DISTANCE ABOVE THE GRAVITY SANITARY SEWER LINE.

11. WHERE A WATER LINE (SERVICE LINE) CROSSES A NEW (EXISTING) FORCE MAIN (FORCE SERVICE LINE), THE WATER LINE (SERVICE LINE) MUST ALWAYS CROSS OVER THE FORCE MAIN (FORCE SERVICE LINE) WITH A MINIMUM VERTICAL SEPARATION DISTANCE OF 2 FEET. FORCE SEWER LINE (FORCE SERVICE LINE) JOINTS ARE TO BE LOCATED AS FAR AS POSSIBLE FROM THE INTERSECTED WATER LINE.

12. CONTRACTOR TO COORDINATE WITH OWNER AND ARCHITECT FOR SITE LIGHTING.

13. CONTRACTOR IS RESPONSIBLE FOR ALL FEES/COSTS ASSOCIATED WITH THE ELECTRIC, GAS, WATER, AND SANITARY SEWER LINES.

SAFETY NOTICE TO CONTRACTOR

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THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

UTILITY CONTACT

GAS SERVICE
MIDWEST ENERGY, INC.
600 EAST 11TH STREET
HAYS, KANSAS 67601
CONTACT: ARLEN FLAX
PHONE: 785–650–2594
EMAIL: aflax@mwenergy.com

UNDERGROUND UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN HEREON ARE DEPICTED FROM FIELD SURVEY INFORMATION OF ONE–CALL LOCATED UTILITIES AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS AND DRAWINGS MADE AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR DOES NOT CERTIFY THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL UNDERGROUND UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT CERTIFY THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION DEPICTED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE DEPICTED AS ACCURATELY AS POSSIBLE FROM INFORMATION MADE AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES SHOWN HEREON BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
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MATTHEW J. ROWE
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ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

CIVIL PLANS
UTILITY PLAN

PROJ. NO.	
E24D3733	
DESIGNER	DRAWN BY
MJR	TDA
CFN	
3733UP	
SHEET	REV
04	0

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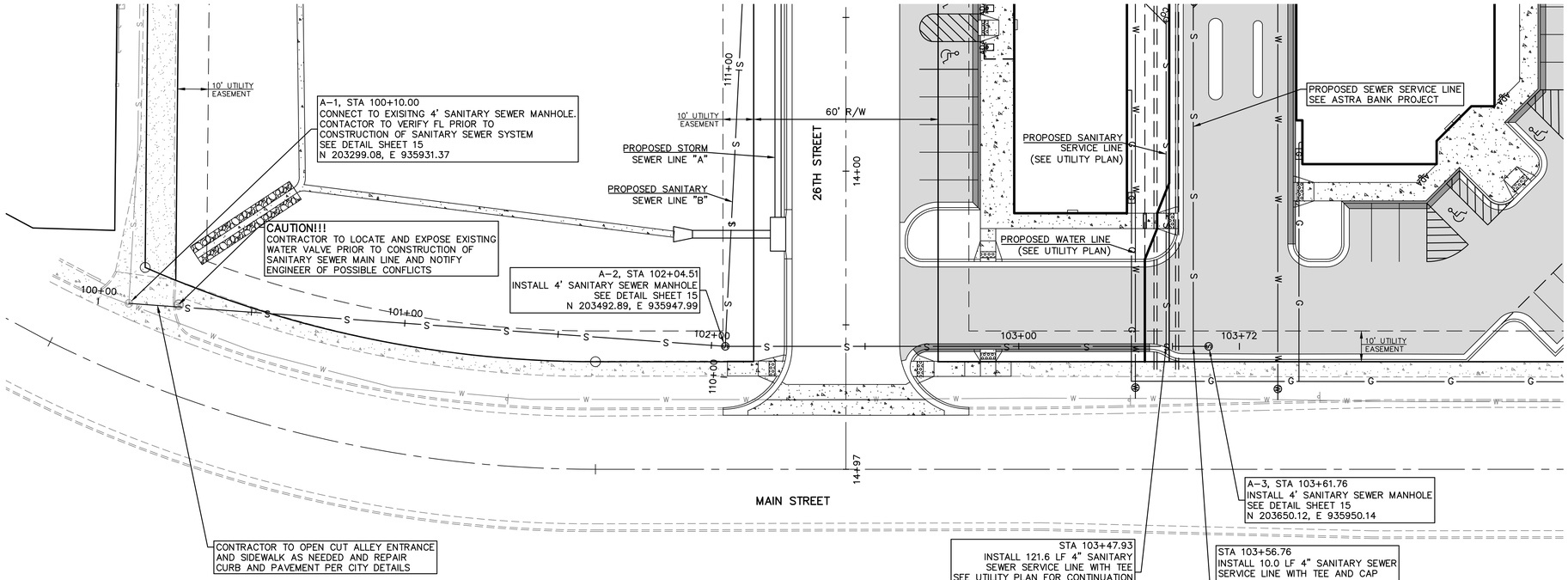


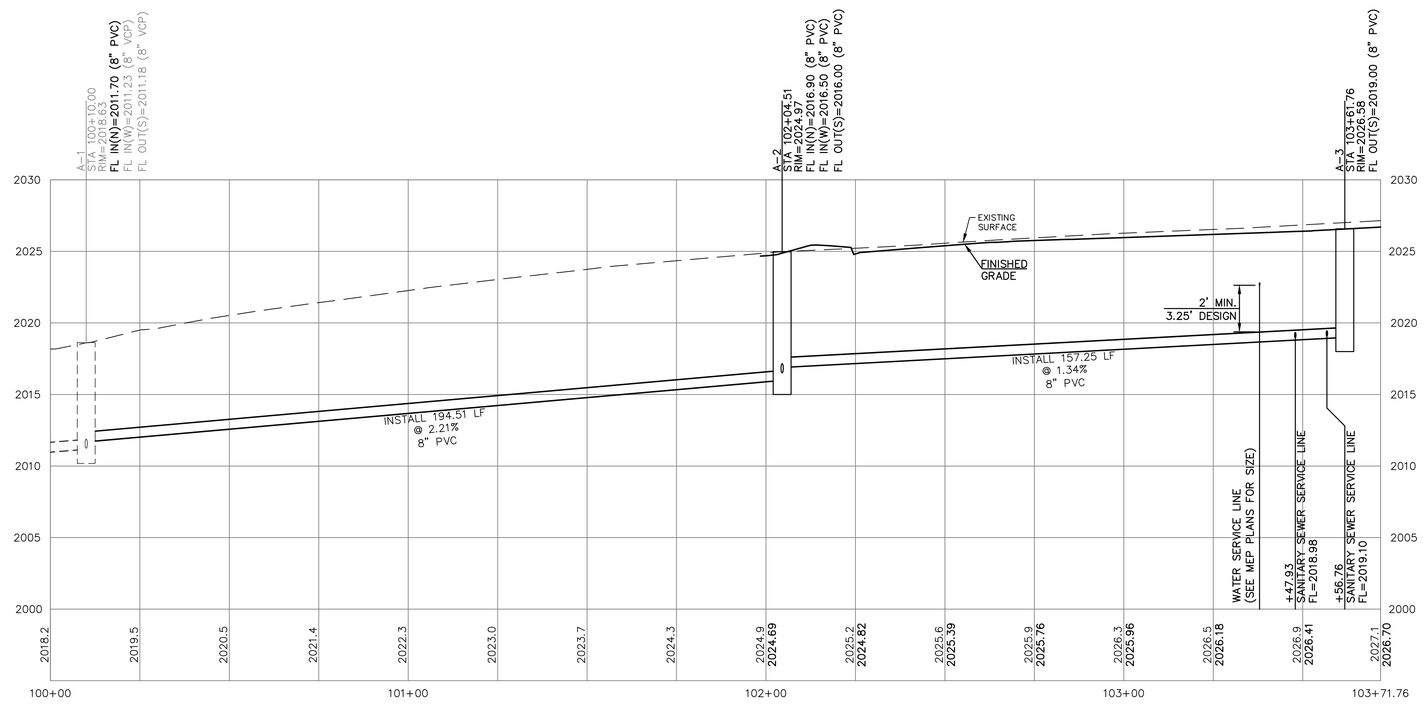
SCALE:
PLAN: 1"=20'
PROFILE: 1"=20' HORIZ.
1"=5' VERT.

SEPARATION OF WATER MAINS AND SANITARY SEWERS:

1. A MINIMUM HORIZONTAL DISTANCE OF 10 FEET SHALL BE MAINTAINED BETWEEN WATER (MAINS AND SERVICE) AND SANITARY SEWER (MAINS AND SERVICE) LINES.
2. WHERE A WATER MAIN MUST CROSS A SEWER LINE, MAINTAIN 2 FEET VERTICAL SEPARATION WITH THE WATER MAIN ABOVE THE SEWER.
3. BUILDERS TO MAINTAIN MINIMUM 10' SEPARATION FROM THE OUTSIDE EDGE OF SANITARY SEWER MANHOLES TO THE OUTSIDE EDGE OF WATER SERVICE LINES WHEN RUNNING SERVICE LINES TO HOUSE.

GENERAL NOTES:

1. ALL SANITARY SEWER SERVICE LINE WILL BE AT A MIN 2% GRADE.
2. ALL NORTHING AND EASTING WAS TAKEN FROM CENTER OF STRUCTURE. REFERENCE DETAIL FOR ACTUAL LID LOCATION.
3. CONSTRUCTION METHODS AND MATERIALS USED IN THE CONSTRUCTION OF THE SANITARY IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE PROJECT STANDARD TECHNICAL SPECIFICATION. ALL OTHER CONSTRUCTION ITEMS SHALL BE IN ACCORDANCE WITH THE STANDARD TECHNICAL SPECIFICATIONS AND ADDENDUM'S TO THE (STS) ON FILE, CITY OF HAYS, KANSAS.
4. CONTRACTOR TO FURNISH ALL REQUIRED TESTING PER SPECIFICATIONS FOR SANITARY SEWER INSTALLATION.
5. ALL TRENCHES SHALL BE BACKFILLED IN UNIFORM LIFTS NOT TO EXCEED 8 INCHES IN LOOSE MEASUREMENT. EACH LIFT SHALL BE COMPACTED TO THE REQUIRED DENSITY PRIOR TO THE NEXT LIFT BEING PLACED. THE BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY WITHIN 2% OF OPTIMUM MOISTURE STANDARD PROCTOR (ASTM-D698) UNDER AREAS TO BE PAVED. THE BACKFILL MATERIAL SHALL BE COMPACTED TO 90% OF THE MAXIMUM DENSITY AT OPTIMUM MOISTURE PLUS OR MINUS 2% IN AREAS NOT TO BE DEVELOPED. COMPACTION TESTS SHALL BE TAKEN AT EACH PAVEMENT CROSSING AND AT LOCATIONS DESIGNATED BY THE ENGINEER. ALL TRENCH BACKFILL WHICH DOES NOT MEET THE REQUIRED DENSITY, SHALL BE RE-EXCAVATED AND RE-COMPACTED UNTIL THE REQUIRED DENSITY IS OBTAINED. COPIES OF ALL COMPACTION TEST REPORTS SHALL BE PROVIDED TO THE ENGINEER AND TO THE CITY OF HAYS PRIOR TO FINAL ACCEPTANCE BY THE CITY OF HAYS.



REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	06/27/24	INITIAL ISSUE	MJR	TDA	MJR

MATTHEW J. ROWE
LICENSED
29241
6/27/24
KANSAS
PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

KAW VALLEY ENGINEERING
1627 SUNFLOWER LANE
SALINA, KANSAS 67401
PH. (785) 823-3400
so@kveng.com | www.kveng.com

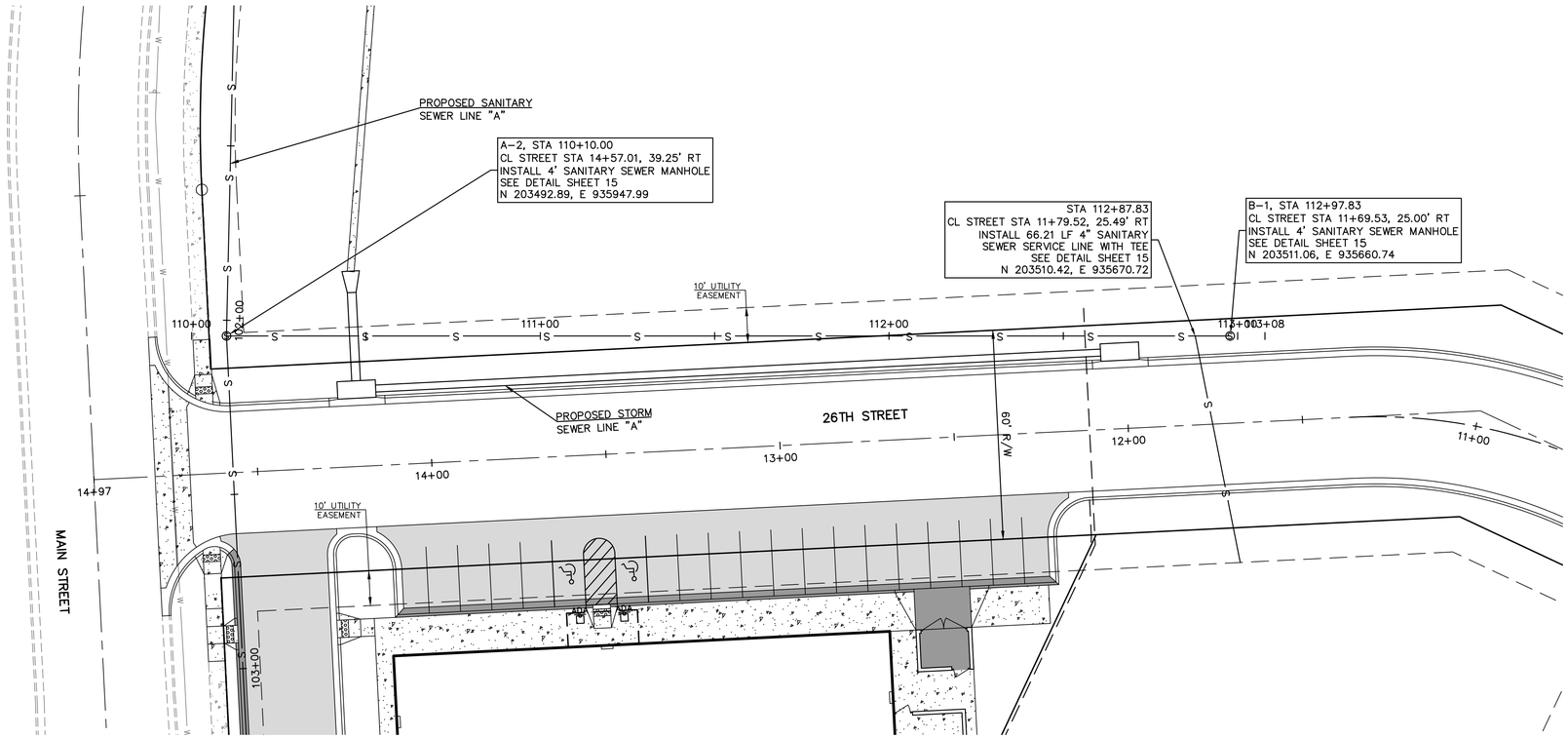
AUTHORIZED TO OFFER ENGINEERING SERVICES IN KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-11,5.
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-11,5. EXPIRES 12/31/24

ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

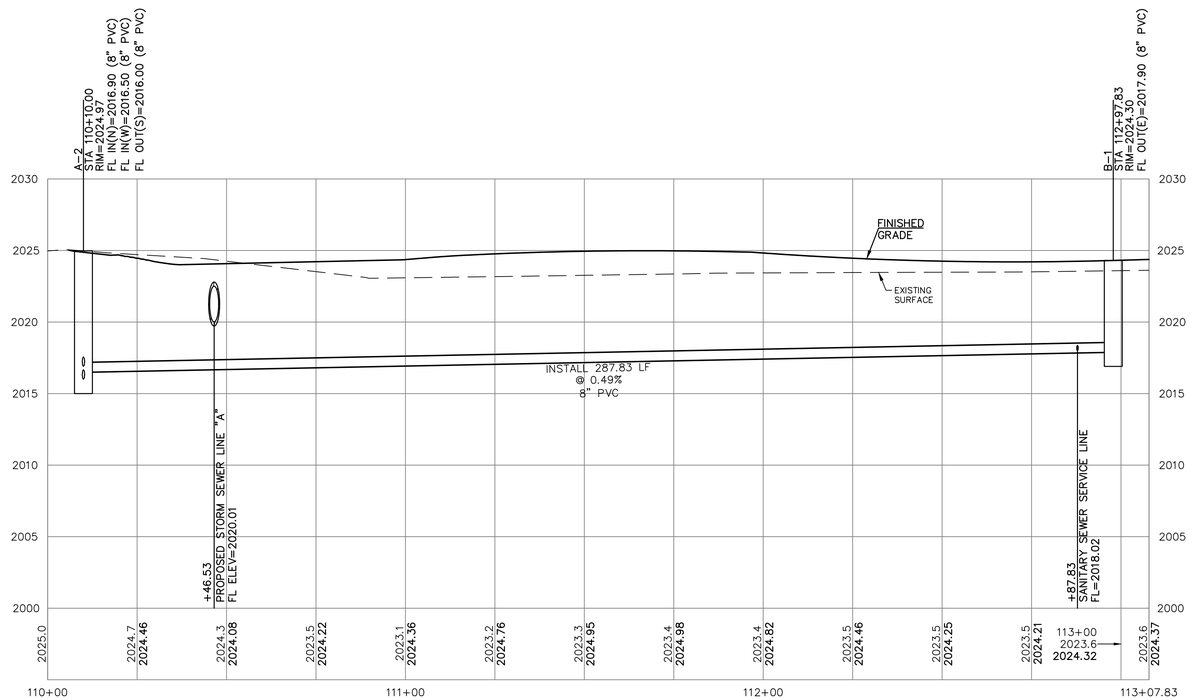
CIVIL PLANS
SANITARY SEWER LINE "A" - PLAN & PROFILE

PROJ. NO.	E24D3733	
DESIGNER	MJR	DRAWN BY TDA
CFN	3733SPP	
SHEET 05		REV 0

THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.



SCALE:
PLAN: 1"=20'
PROFILE: 1"=20' HORIZ.
1"=5' VERT.



SEPARATION OF WATER MAINS AND SANITARY SEWERS:

1. A MINIMUM HORIZONTAL DISTANCE OF 10 FEET SHALL BE MAINTAINED BETWEEN WATER (MAINS AND SERVICE) AND SANITARY SEWER (MAINS AND SERVICE) LINES.
2. WHERE A WATER MAIN MUST CROSS A SEWER LINE, MAINTAIN 2 FEET VERTICAL SEPARATION WITH THE WATER MAIN ABOVE THE SEWER.
3. BUILDERS TO MAINTAIN MINIMUM 10' SEPARATION FROM THE OUTSIDE EDGE OF SANITARY SEWER MANHOLES TO THE OUTSIDE EDGE OF WATER SERVICE LINES WHEN RUNNING SERVICE LINES TO HOUSE.

GENERAL NOTES:

1. ALL SANITARY SEWER SERVICE LINE WILL BE AT A MIN 2% GRADE.
2. ALL NORTHING AND EASTING WAS TAKEN FROM CENTER OF STRUCTURE. REFERENCE DETAIL FOR ACTUAL LID LOCATION.
3. CONSTRUCTION METHODS AND MATERIALS USED IN THE CONSTRUCTION OF THE SANITARY IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE STANDARD TECHNICAL SPECIFICATION ON FILE WITH THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT, REFERENCE NUMBER 23121. ALL OTHER CONSTRUCTION ITEMS SHALL BE IN ACCORDANCE WITH THE STANDARD TECHNICAL SPECIFICATIONS AND ADDENDUM'S TO THE (STS) ON FILE, CITY OF HAYS, KANSAS.
4. CONTRACTOR TO FURNISH ALL REQUIRED TESTING PER SPECIFICATIONS FOR SANITARY SEWER INSTALLATION.
5. ALL TRENCHES SHALL BE BACKFILLED IN UNIFORM LIFTS NOT TO EXCEED 8 INCHES IN LOOSE MEASUREMENT. EACH LIFT SHALL BE COMPACTED TO THE REQUIRED DENSITY PRIOR TO THE NEXT LIFT BEING PLACED. THE BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY WITHIN 2% OF OPTIMUM MOISTURE STANDARD PROCTOR (ASTM-D698) UNDER AREAS TO BE PAVED. THE BACKFILL MATERIAL SHALL BE COMPACTED TO 90% OF THE MAXIMUM DENSITY AT OPTIMUM MOISTURE PLUS OR MINUS 2% IN AREAS NOT TO BE DEVELOPED. COMPACTION TESTS SHALL BE TAKEN AT EACH PAVEMENT CROSSING AND AT LOCATIONS DESIGNATED BY THE ENGINEER. ALL TRENCH BACKFILL WHICH DOES NOT MEET THE REQUIRED DENSITY, SHALL BE RE-EXCAVATED AND RE-COMPACTED UNTIL THE REQUIRED DENSITY IS OBTAINED. COPIES OF ALL COMPACTION TEST REPORTS SHALL BE PROVIDED TO THE ENGINEER AND TO THE CITY OF HAYS PRIOR TO FINAL ACCEPTANCE BY THE CITY OF HAYS.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	06/27/24	INITIAL ISSUE	MJR	TDA	MJR

MATTHEW J. ROWE
LICENSED
29241
6/27/24
KANSAS
PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

KAW VALLEY ENGINEERING
1627 SUNFLOWER LANE
SALINA, KANSAS 67401
PH. (785) 823-3400
sotb@kveng.com | www.kveng.com

KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-1115. EXPIRES 12/31/24.

ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

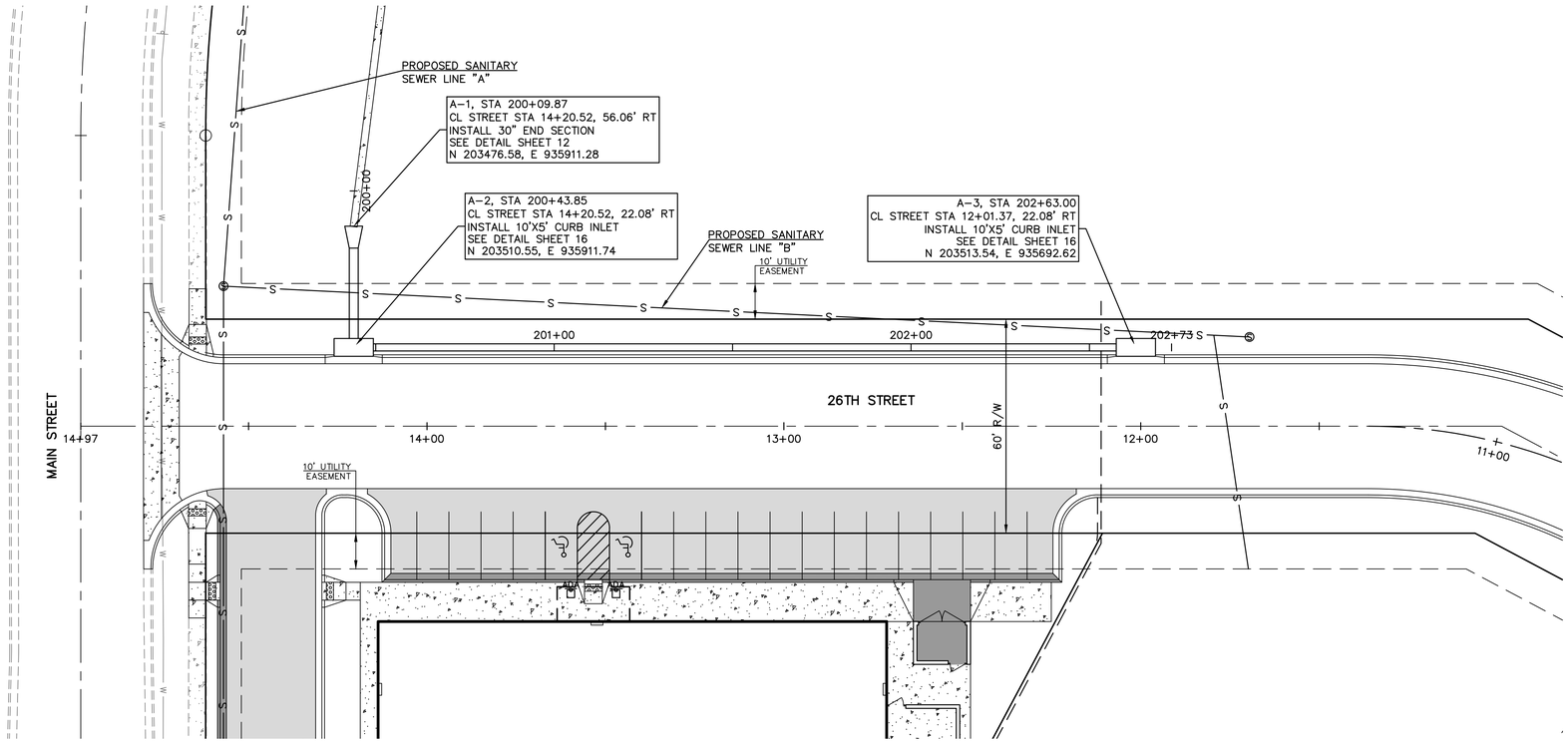
CIVIL PLANS
SANITARY SEWER LINE "B" - PLAN & PROFILE

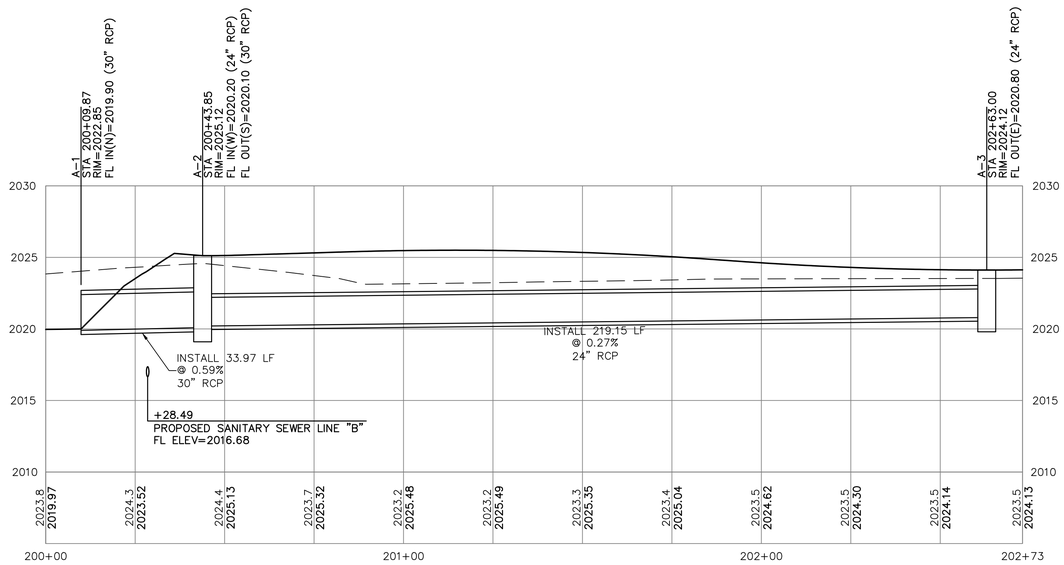
PROJ. NO.	
	E24D3733
DESIGNER	DRAWN BY
MJR	TDA
CFN	
3733SPP	
SHEET	REV
06	0

THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.

SCALE:
PLAN: 1"=20'
PROFILE: 1"=20' HORIZ.
1"=5' VERT.

NOTE:
STREET STATION AND OFFSET ARE REFERENCED TO CENTER OF STRUCTURE.





NOTES:

1. STREET STATION AND OFFSET ARE REFERENCED TO THE CENTER OF STRUCTURE.
2. PIPE LENGTHS ARE CENTER TO CENTER OF STRUCTURE OR TO END OF END SECTION.
3. SETBACK CURB INLET RIM ELEVATION IS 0.2' ABOVE THE THEORETICAL BACK OF CURB ELEVATION

REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	06/27/24	INITIAL ISSUE	MJR	TDA	MJR

MATTHEW J. ROWE LICENSED 29241 6/27/24 KANSAS PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

1627 SUNFLOWER LANE
SALINA, KANSAS 67401
PH. (785) 823-3400
sa@kveng.com | www.kveng.com

KAW VALLEY ENGINEERING

KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-115. EXPIRES 12/31/24.

ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

CIVIL PLANS
STORM SEWER LINE "A" - PLAN & PROFILE

PROJ. NO.	E24D3733
DESIGNER	MJR
DRAWN BY	TDA
CFN	3733DPP
SHEET	07
REV	0

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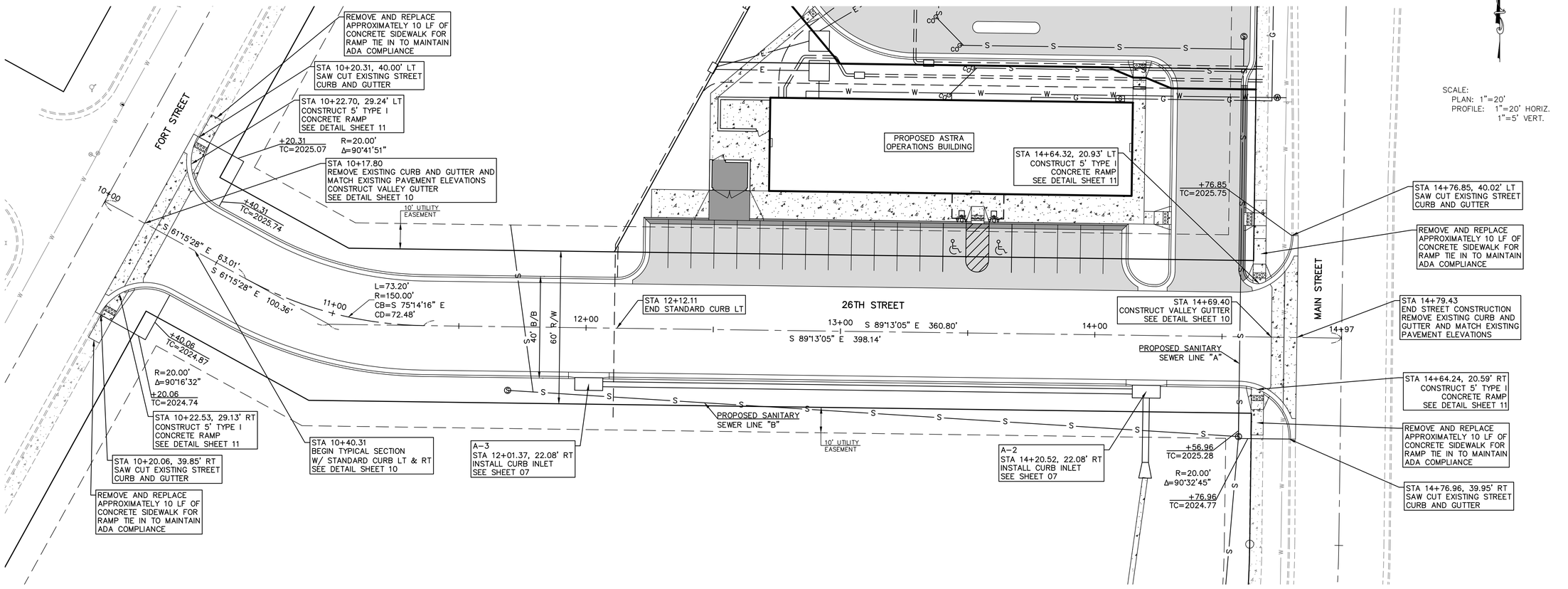
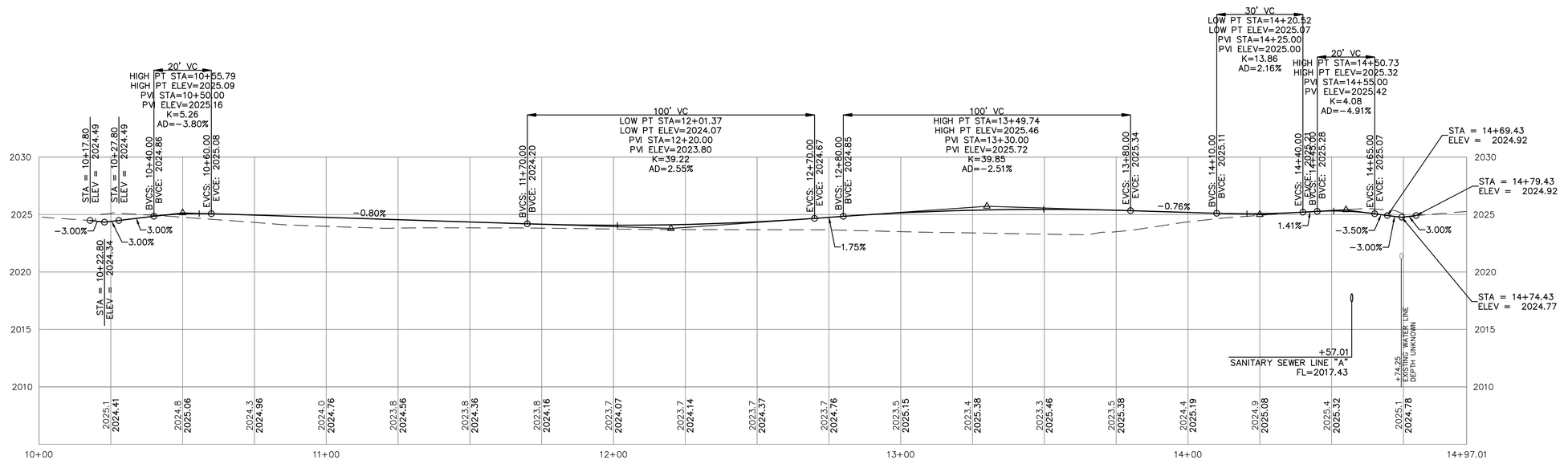


26TH STREET IMPROVEMENTS TO BE BID AS ALTERNATE #1.

NOTES:
1. STREET STATION AND OFFSET ARE REFERENCED TO CENTER OF STRUCTURE.



ENTIRE SHEET IS PER ALTERNATE #1

REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	06/27/24	INITIAL ISSUE	MJR	TDA	MJR

MATTHEW J. ROWE LICENSED 29241 6/27/24 KANSAS PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

KAW VALLEY ENGINEERING
1627 SUNFLOWER LANE
SAUNA, KANSAS 67401
PH. (785) 823-3400
sa@kveng.com | www.kveng.com

KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-115. EXPIRES 12/31/24

ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

CIVIL PLANS
26TH STREET PLAN & PROFILE

PROJ. NO.	
E24D3733	
DESIGNER	DRAWN BY
MJR	TDA
CFN	
3733STPP	
SHEET	REV
08	0

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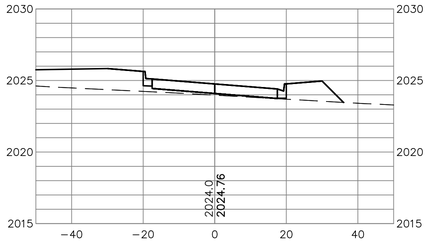
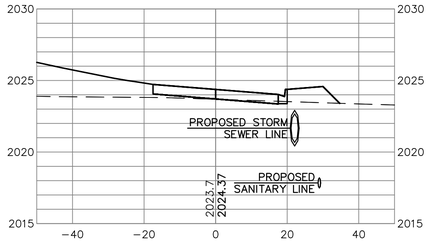
11+00.00



12+50.00



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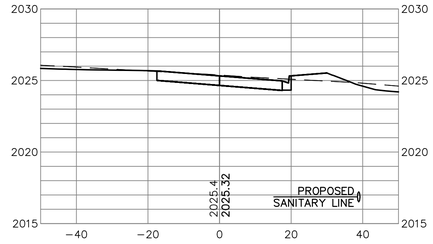

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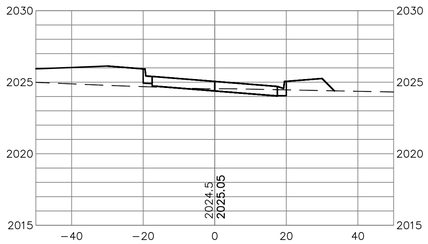

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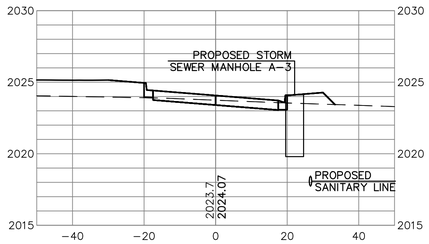
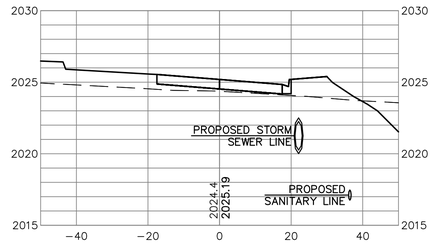
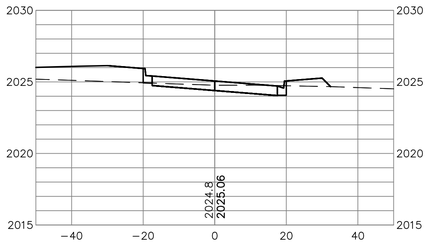


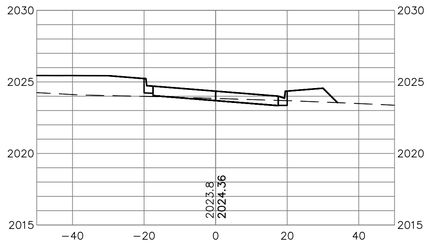
14+00.00



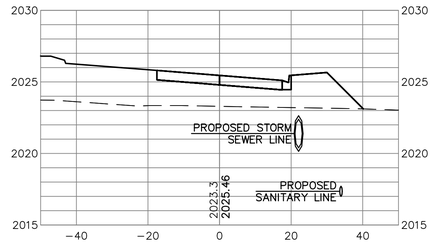
10+50.00



11+50.00



13+50.00



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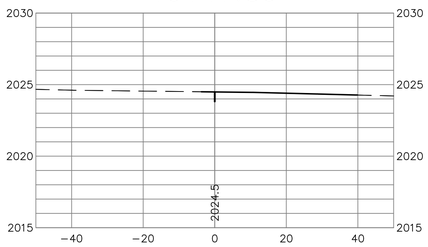
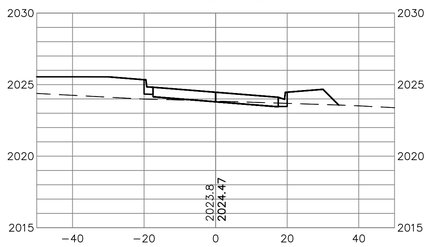


11+36.21



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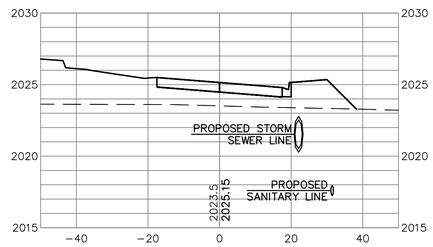

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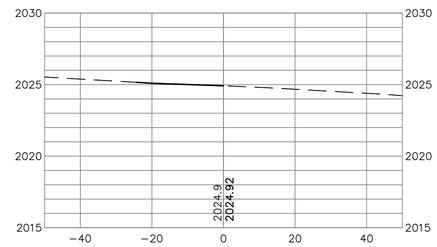

SCALE:
1"=20' HORIZ.
1"=5' VERT.

ENTIRE SHEET IS PER ALTERNATE #1

REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	06/27/24	INITIAL ISSUE	MJR	TDA	MJR

MATTHEW J. ROWE
LICENSED
29241
6/27/24
KANSAS
PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

KAW VALLEY ENGINEERING
1627 SUNFLOWER LANE
SALINA, KANSAS 67401
PH. (785) 823-3400
staff@kveng.com | www.kveng.com

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ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

CIVIL PLANS
26TH STREET - CROSS SECTIONS

PROJ. NO.	
E24D3733	
DESIGNER	DRAWN BY
MJR	TDA
CFN	
3733XSEC	
SHEET	REV
09	0

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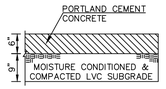
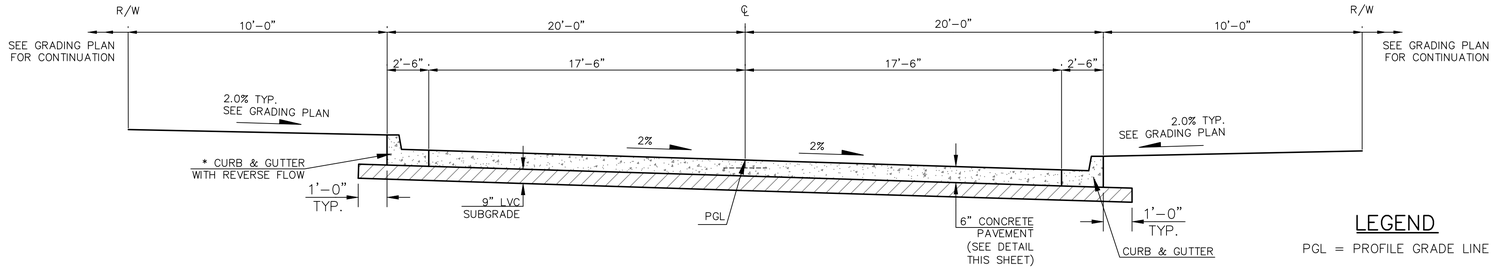


CONCRETE STREET PAVEMENT

N.T.S.

1. PORTLAND CEMENT CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS WITH 6% ENTRAINED AIR ±2% AND SHALL MEET OR EXCEED THE SPECIFICATIONS SET FORTH IN THE LATEST EDITION OF THE KANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION.

2. REFER TO PROJECT GEOTECH REPORT FOR FURTHER DETAILS.



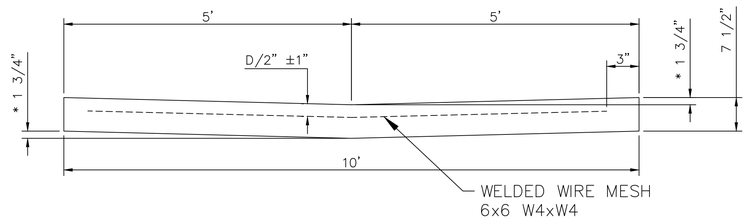
26TH STREET TYPICAL ROADWAY SECTION N.T.S.

* CURB AND GUTTER TO END AT STA. 12+12.11 (LT)
SEE PLANS FOR CONTINUATION

LEGEND

PGL = PROFILE GRADE LINE

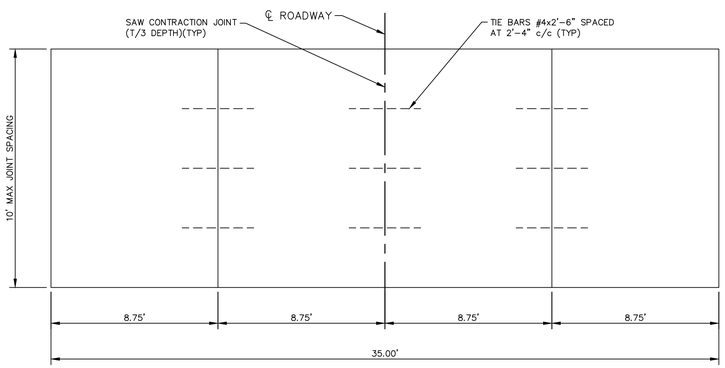
NOTE:
REFER TO SHEET 11 FOR CURB AND GUTTER DETAILS.



VALLEY GUTTER TYPICAL SECTION

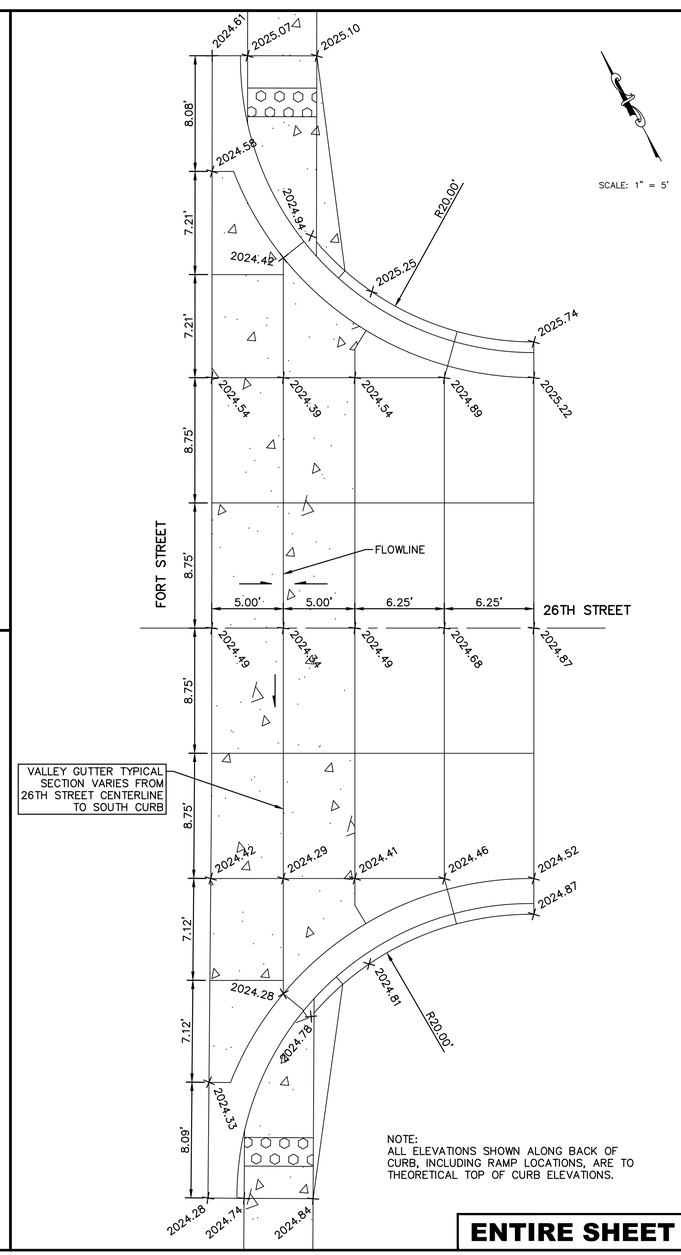
N.T.S.

* 1 3/4" TYPICAL HEIGHT
DIMENSION VARIES ON WEST INTERSECTION.
SEE SPOT ELEVATIONS ON THIS SHEET.



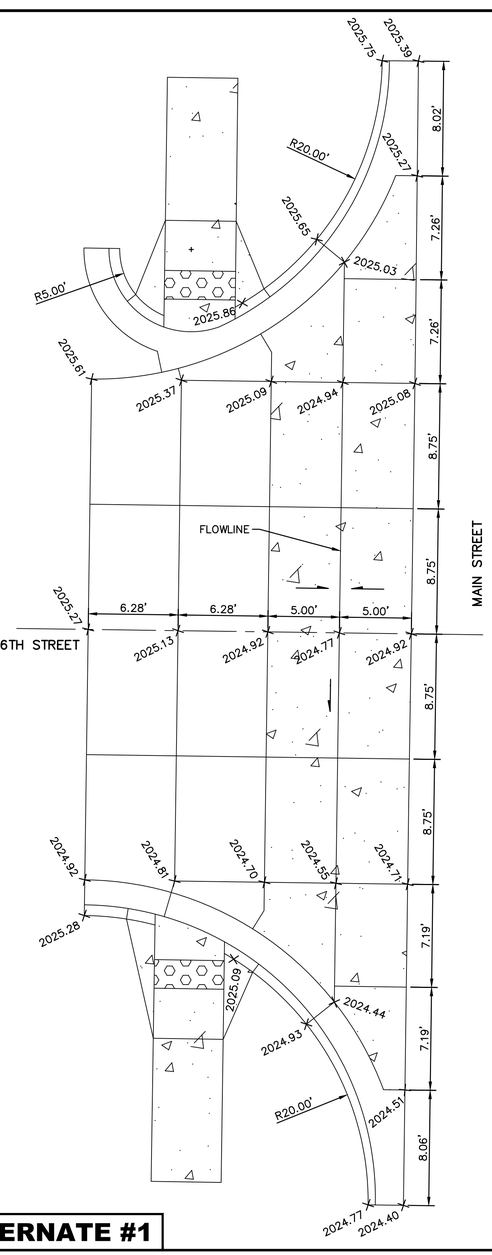
NON–REINFORCED JOINTED PAVEMENT PLAN VIEW

N.T.S.



SCALE: 1" = 5'

NOTE:
ALL ELEVATIONS SHOWN ALONG BACK OF CURB, INCLUDING RAMP LOCATIONS, ARE TO THEORETICAL TOP OF CURB ELEVATIONS.



SCALE: 1" = 5'

ENTIRE SHEET IS PER ALTERNATE #1

REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	06/27/24	INITIAL ISSUE	MJR	TDA	MJR

MATTHEW J. ROWE LICENSED 29241 6/27/24 KANSAS PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

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SALINA, KANSAS 67401
PH. (785) 823-3400
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KAW VALLEY ENGINEERING

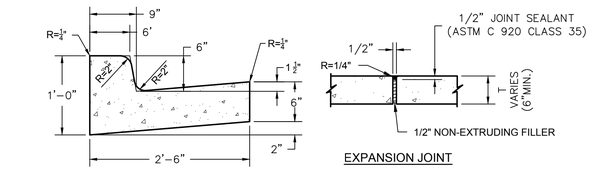
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-11.5.
EXPIRES 12/31/24.

ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

CIVIL PLANS
DETAIL SHEET

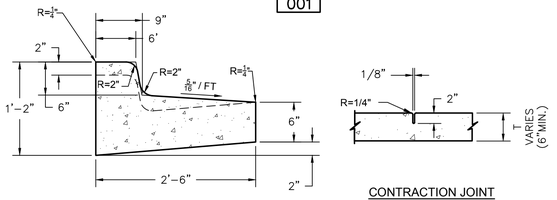
PROJ. NO.	
	E24D3733
DESIGNER	DRAWN BY
MJR	TDA
CFN	
3733TYP	
SHEET	REV
10	0

THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.



STANDARD TYPE "B" CURB 001

EXPANSION JOINT



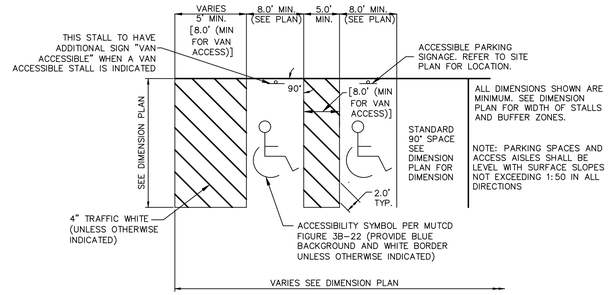
TYPE "B - DRY" CURB 002

CONTRACTION JOINT

NOTES:
1. IN TRANSITIONS, WATER SHALL FLOW FROM THE GUTTER OF TYPE "B" CURB TO THE LIP OF TYPE "B – DRY" CURB AT 0.5% MIN. SLOPE.
2. GUTTER SLOPE IN HANDICAP ACCESSIBLE STALLS AND ACCESS AISLES SHALL NOT EXCEED 2.0%.

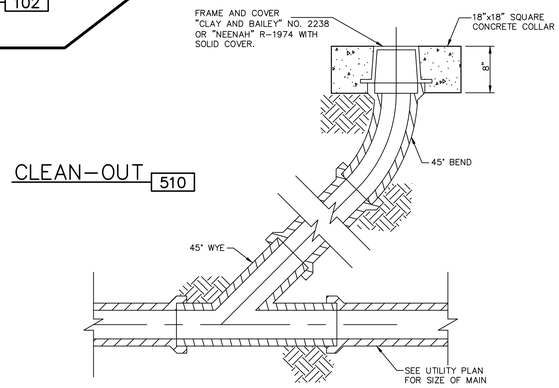
TYPE "B" CURB & GUTTER NOTES:
1. ½" PREMOLDED EXPANSION JOINTS SHALL BE PLACED AT POINTS OF CURVATURE, CURB RETURNS, CURB INLETS AND AT 250' CENTERS. THE EXPANSION JOINTS SHALL BE DOWELED IN ACCORDANCE WITH THE SPECIFICATIONS. CONTRACTION JOINTS SHALL BE 2" DEEP AND PLACED AT 15' INTERVALS EQUALLY SPACED BETWEEN EXPANSION JOINTS.
2. PORTLAND CEMENT CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS WITH 6% ENTRAINED AIR ±2% AND SHALL MEET OR EXCEED THE KANSAS DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
3. SEE SIDEWALK RAMP DETAILS FOR TYPICAL SIDEWALK RAMP CURB & GUTTER SECTIONS.
4. DETAILS AS SHOWN FOR CONCRETE AND ASPHALT PAVING. WHEN USED WITH CONCRETE PAVING POURED MONOLITHICALLY WITH CURB NO MODIFICATIONS ARE REQUIRED. WHEN CURB AND CONCRETE PAVING ARE TO BE POURED SEPARATELY #4 BARS, 24" LONG ARE TO BE PROVIDED TO TIE CURB TOGETHER WITH CONCRETE PAVING.
5. ALL REINFORCING SHALL BE 60 ksi EPOXY COATED DEFORMED BARS.
6. CURBS TO BE CONSTRUCTED ON MINIMUM 6 INCHES OF COMPACTED WELL GRADED BASE ROCK.

CONCRETE CURB

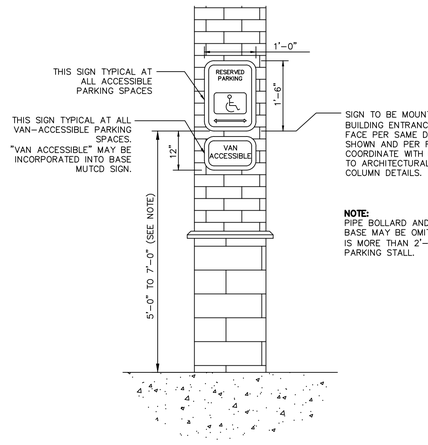


90° SPACE STRIPING

ACCESSIBLE STRIPING 102



CLEAN-OUT 510



ACCESSIBLE PARKING SIGN 120

HEIGHT ABOVE GRADE FOR POLE MOUNTED SIGNS VARIES. TYPICAL INSTALLATION IS 5'–0" ABOVE GRADE. SIGN SHALL BE MOUNTED AT 7'–0" IF IT FALLS WITHIN A WALKING PATH.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	06/27/24	INITIAL ISSUE	MJR	TDA	MJR

MATTHEW J. ROWE LICENSED 29241 6/27/24 KANSAS PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

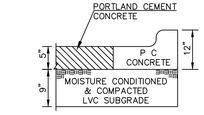
KAW VALLEY ENGINEERING
1627 SUNFLOWER LANE
SALINA, KANSAS 67401
PH. (785) 823-3400
sal@kveng.com | www.kveng.com

KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN KANSAS UNDER CERTIFICATE OF AUTHORIZATION # E-11.5. KANSAS STATE CERTIFICATE EXPIRES 12/31/24.

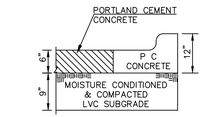
ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

CIVIL PLANS
DETAIL SHEET

PROJ. NO.	E24D3733
DESIGNER	MJR
DRAWN BY	TDA
CFN	3733TYP
SHEET	11
REV	0

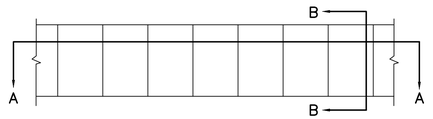


REGULAR DUTY PAVING 040

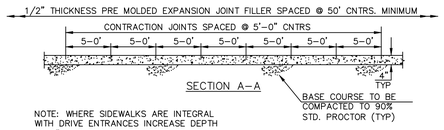


HEAVY DUTY PAVING 041

1. PORTLAND CEMENT CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS WITH 6% ENTRAINED AIR ±2% AND SHALL MEET OR EXCEED THE SPECIFICATIONS SET FORTH IN THE LATEST EDITION OF THE KANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR STATE ROAD & BRIDGE CONSTRUCTION.
2. REFER TO PROJECT GEOTECH REPORT FOR FURTHER DETAILS.

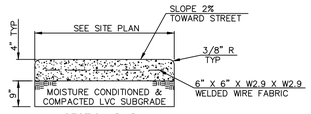


PLAN VIEW



SECTION A–A

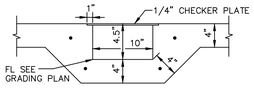
NOTE: WHERE SIDEWALKS ARE INTEGRAL WITH DRIVE ENTRANCES INCREASE DEPTH TO 6" AND PROVIDE REINFORCING USING 6x6 #10 WIRE MINIMUM.



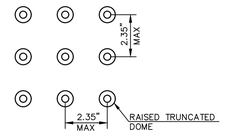
SECTION B–B

CONCRETE SIDEWALK 055

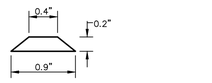
NOTE: CONCRETE SHALL BE CLASS A WITH f'c = 3000 PSI.



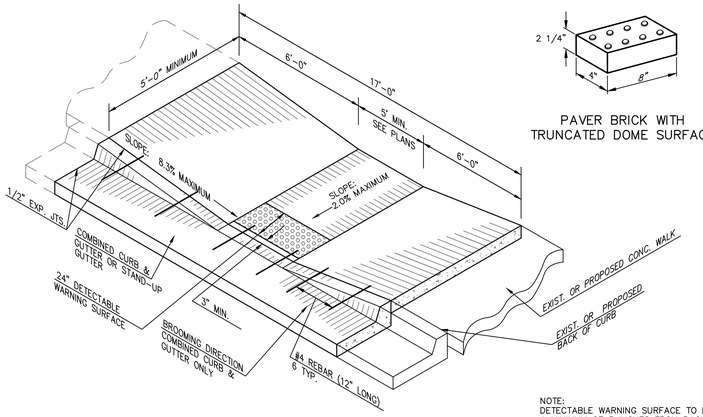
SIDEWALK DRAIN 429



DETECTABLE WARNING SURFACE PATTERN



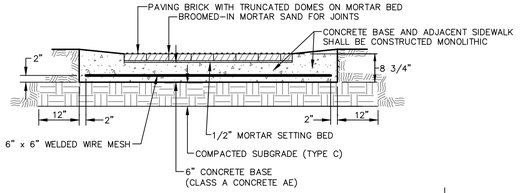
RAISED TRUNCATED DOME DETAIL



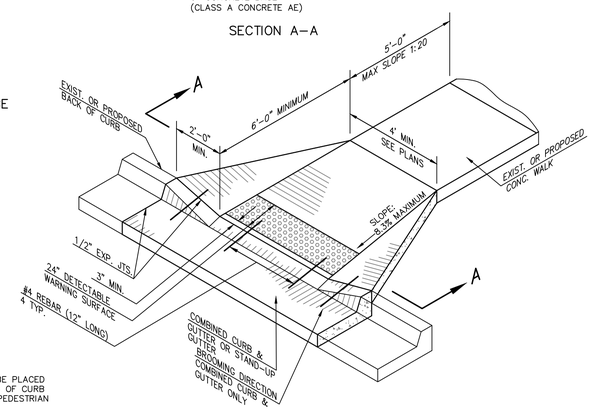
ISOMETRIC OF RAMP WITH LANDING

PAVER BRICK WITH TRUNCATED DOME SURFACE

NOTE:
DETECTABLE WARNING SURFACE TO BE PLACED A MINIMUM OF 3 INCHES FROM BACK OF CURB AND ALIGNED IN THE DIRECTION OF PEDESTRIAN TRAVEL.



SECTION A–A



ISOMETRIC OF RAMP WITH PERPENDICULAR WALK SHOWN

SIDEWALK RAMPS 060

THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.

GENERAL NOTES:

1. PROPERTY LINE IS LIMITS OF CONSTRUCTION EXCEPT AS SHOWN.

2. THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE DRAWINGS PRIOR TO BEGINNING EARTHWORK OPERATIONS.

3. THE CONTRACTOR SHALL MAINTAIN ALL SILT CONTROL MEASURES DURING CONSTRUCTION.

4. ALL SILT SHALL REMAIN ON SITE AND SURROUNDING STREETS SHALL BE KEPT CLEAR OF ALL MUD AND DEBRIS.

5. A SEDIMENTATION BARRIER IS TO BE INSTALLED AS SHOWN.

6. ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE SEDIMENTATION BARRIERS MAINTAINED AS NEEDED TO PREVENT SEDIMENTATION BYPASS OF THE BARRIER.

7. SLOPES ARE TO BE LEFT IN A ROUGH CONDITION DURING GRADING.

8. CURB INLET SEDIMENTATION BARRIERS ARE TO BE INSTALLED AROUND INLETS AND WEIRS WHERE SEDIMENTATION IS A CONCERN. INLET BARRIERS SHALL BE EITHER BLOCK AND GRAVEL, OR SECURED STRAW BALES, OR SILT FENCE.

9. SEDIMENT IS TO BE REMOVED FROM STORM WATER DRAINAGE SYSTEMS.

10. RIPRAP IS TO BE INSTALLED AT AREAS OF CONCENTRATED FLOW (I.E. CULVERT OUTLETS).

11. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ANY ADDITIONAL EROSION CONTROL AS HE/SHE DEEMS NECESSARY.

12. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, TOOLS, EQUIPMENT AND LABOR AS NECESSARY TO INSTALL AND MAINTAIN ADEQUATE EROSION AND SILTATION CONTROLS REQUIRED TO PREVENT SOIL EROSION FROM LEAVING THE PROJECT SITE. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THAT METHODS UTILIZED ARE ADEQUATE AND COMPLY WITH REQUIREMENTS OF THE SPECIFICATIONS AND GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.

13. TEMPORARY SEDIMENT FENCE/STRAW BALES TO REMAIN UNTIL ADEQUATE VEGETATION IS ESTABLISHED.

14. MUD AND DEBRIS SHALL BE CLEANED UP AT THE CONCLUSION OF EACH WORKING DAY, OR AFTER EACH RAINFALL IF SILT IS PRESENT.

15. INSPECTION, MAINTENANCE AND REPAIR OF EROSION CONTROL DEVICES SHALL BE ON GOING THROUGHOUT THE LIFE OF BUILDING CONSTRUCTION TO KEEP THE DEVICES IN OPERABLE CONDITION AT ALL TIMES. ADDITIONAL MEASURES SHALL BE INSTALLED AS REQUIRED BY ACTUAL FIELD CONDITIONS AND/OR GOVERNING INSPECTION AGENCIES.

16. INSTALL CONSTRUCTION ENTRANCE AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING THE SITE AND AS SHOWN ON PLANS.

17. AT COMPLETION OF SITE GRADING AND OTHER RELATED CONSTRUCTION ACTIVITIES, ALL DISTURBED AREAS WITHIN THE PROJECT SITE SHALL BE SEEDED USING MULCH OR EQUIVALENT STABILIZING BMP, SODDED, OR LANDSCAPED WITHIN 14 DAYS.

18. TOPSOIL IS TO BE PLACED IN AREAS UNSUITABLE FOR VEGETATIVE GROWTH.

19. STRIP TOPSOIL PRIOR TO EXCAVATION, STOCKPILE AND SPREAD ONTO DISKED SUBGRADE (6" MIN) A THICKNESS OF 6 INCHES. REFER TO GEOTECH REPORT.

20. ROCK LINING (RIPRAP) SHALL BE DURABLE STONE CONTAINING A COMBINED TOTAL OF NOT MORE THAN 10 PERCENT OF EARTH, SAND, SHALE AND NON-DURABLE ROCK. AT LEAST 60 PERCENT OF THE MASS SHALL BE OF PIECES HAVING A MINIMUM WEIGHT OF 150 POUNDS OR MORE PER CUBIC FOOT.

21. THE CONTRACTOR SHALL HAVE THE RESPONSIBILITY FOR RESOLVING COMPLAINTS IN THE EVENT THAT COMPLAINTS OR DAMAGE CLAIMS ARE FILED DUE TO DAMAGES OCCURRING ADJACENT TO OR DOWNSTREAM FROM PROPERTY BY SEDIMENT RESULTING FROM EROSION ON THE PROJECT SITE.

22. GOOD HOUSEKEEPING PRACTICES SHALL BE MAINTAINED ON SITE TO KEEP SOLID WASTE FROM ENTRY INTO WATERS.

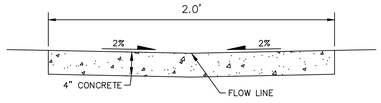
23. ALL FUELING FACILITIES PRESENT ON SITE SHALL ADHERE TO APPLICABLE FEDERAL AND STATE REQUIREMENTS CONCERNING UNDERGROUND STORAGE, ABOVE GROUND STORAGE AND DISPENSERS, INCLUDING SPILL PREVENTION, CONTROL AND COUNTER MEASURES.

24. RIGHT OF WAY TO BE STABILIZED AS REQUIRED BY APWA SECTION 2400.

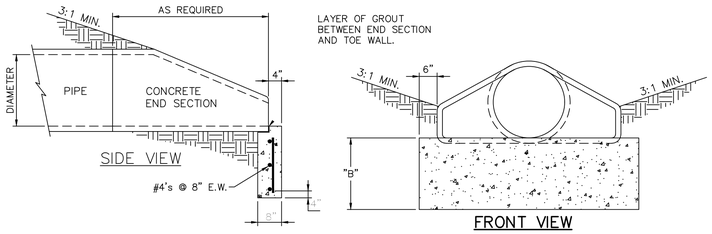
25. EROSION CONTROL IS TO BE PLACED IN PHASING AS CONSTRUCTION PROGRESSES.

26. MINIMAL WASHING OF CONCRETE EQUIPMENT ALLOWED, CHUTE ETC. CONCRETE WASHOUT OF THE DRUM IS NOT ALLOWED. ANY PIT/WASHOUT AREA NEEDS TO BE MAINTAINED IN A NON-DISCHARGING MANNER AND ANY WASTE RESIDUE WILL NEED TO BE CLEANED OUT AND REMOVED AT THE END OF PROJECT.

27. EROSION CONTROL SEDIMENT FENCE TO BE INSTALLED 1'-0" BEHIND CURB & GUTTER UPON COMPLETION OF BACKFILL OF CURB IN ALL AREAS WHERE SLOPES FROM LOT DRAIN TOWARDS CURB. UPON COMPLETION OF FINAL GRADING THE TOES OF ALL EMBANKMENTS IN EXCESS OF TWO FEET IN HEIGHT WILL HAVE EROSION CONTROL SEDIMENT FENCE INSTALLED.



N.T.S. DETENTION POND FLUME TYPICAL SECTION 417



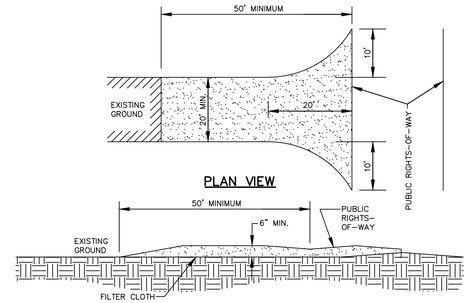
TABLE

TOE WALL DEPTH	
PIPE DIAMETER	"B"
12" – 21"	24"
24" – 48"	30"
54" – 66"	36"

NOTES:

1. THE DEPTH OF THE TOE WALL SHALL BE PER TABLE. IF BEDROCK IS ENCOUNTERED A MINIMUM OF 12" INTO BEDROCK IS REQUIRED.
2. ALL CONCRETE SHALL MEET APWA 2600 SPECIFICATIONS.

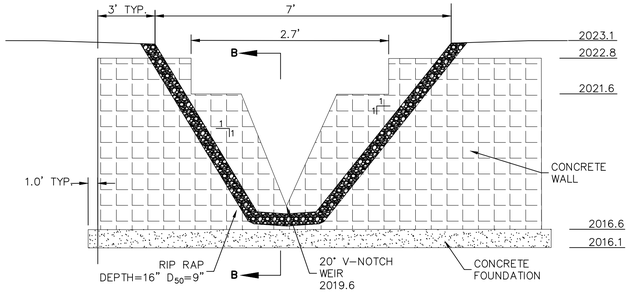
CONCRETE FLARED END SECTION W/ TOE WALL 442



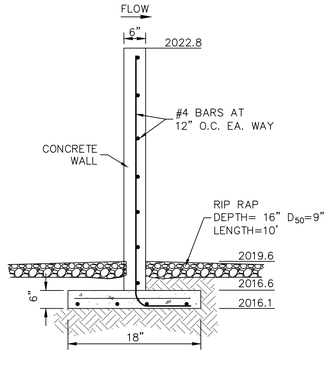
CONSTRUCTION ENTRANCE NOTES:

1. STONE SIZE – USE 2" STONE OR RECLAIMED OR RECYCLED EQUIVALENT.
2. LENGTH – AS REQUIRED, BUT NOT LESS THAN 50 FEET.
3. THICKNESS – NOT LESS THAN (6) INCHES.
4. WIDTH – TWENTY (20) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 3:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED AFTER EACH RAIN.

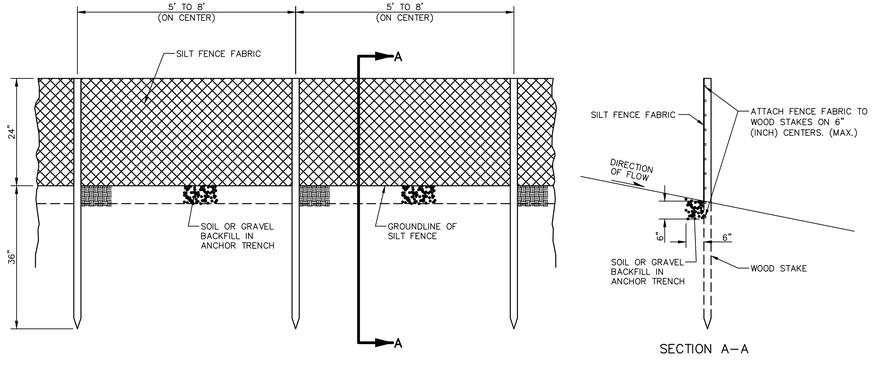
CONSTRUCTION ENTRANCE DETAIL 047



POND OUTLET STRUCTURE WALL 407



SECTION B–B



SECTION A–A

SEDIMENTATION FENCE 812

REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	06/27/24	INITIAL ISSUE	MJR	TDA	MJR

MATTHEW J. ROWE LICENSED 29241 6/27/24 KANSAS PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

KAW VALLEY ENGINEERING
1627 SUNFLOWER LANE
SALINA, KANSAS 67401
PH. (785) 823-3400
so@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-113. EXPIRES 12/31/24

ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

CIVIL PLANS
DETAIL SHEET

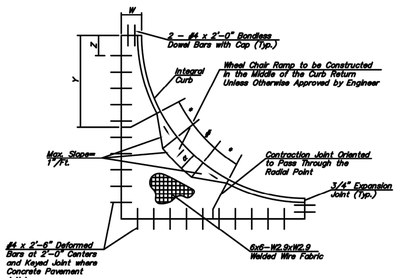
PROJ. NO.	E24D3733	
DESIGNER	MJR	DRAWN BY TDA
CFN	3733TYP	
SHEET	12	REV 0

CITY OF HAYS
PUBLIC WORKS DEPARTMENT
DECEMBER 4, 2007

DESIGNED BY: CW
DRAWN BY: SB
CHECKED BY: JRB
PROJECT NO.: 2007-19

SHEET NO.	TOTAL SHEETS
03	03

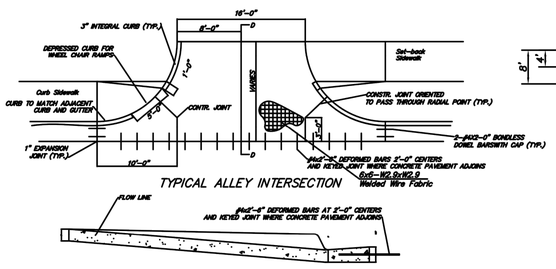
2008 STREET MAINTENANCE
Details



DIMENSIONS FOR WHEEL CHAIR RAMPS		
	6" Curb	4" Curb
#	4'–6"	2'–6"
*	5'–0"	5'–0"
**	2'–3"	1'–6"

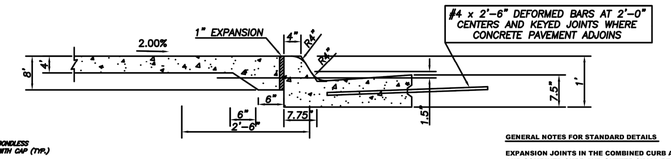
Back of Curb Radius = 15'			
	W	Y	Z
Laybock Curb & Gutter	2'–6"	5'–6"	2'–6"

CURB RETURN

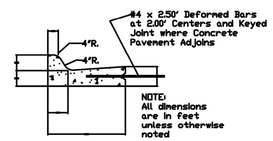


TYPICAL ALLEY INTERSECTION

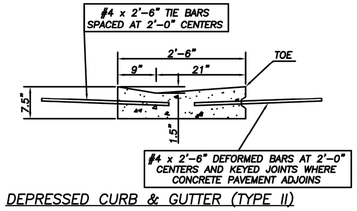
TYPICAL ALLEY INTERSECTION SECTION D–D



6" COMBINED CURB & GUTTER AND SIDEWALK DETAIL



6' COMBINED CURB AND GUTTER



DEPRESSED CURB & GUTTER (TYPE II)

CURB & GUTTER DETAILS

GENERAL NOTES FOR STANDARD DETAILS

EXPANSION JOINTS IN THE COMBINED CURB AND GUTTER ARE TO BE PLACED OPPOSITE EXPANSION JOINTS IN THE PAVEMENT. EXPANSION JOINT IN SIDEWALK AND COMBINED CURB AND GUTTER SHALL BE PLACED EVERY 120' (MIN.) OR AS SHOWN ON PLANS.

WHERE THE CURB AND GUTTER OR GUTTER DOES NOT ABUT CONCRETE PAVEMENT OR CONCRETE BASE COURSE, OMIT TIE BARS AND KEYWAY. PLACE A 1" PRE-MOLDED EXPANSION JOINT FILLER (NONEXTRUDING TYPE B) CUT TO THE DIMENSIONS OF THE COMBINED CURB AND GUTTER OR GUTTER AT THE ENDS OF CURB RETURNS. ALL EXPANSION JOINTS IN THE CURB AND GUTTER SHALL BE SEALED WITH A RUBBERIZED HOT TAR OR SILICONE JOINT SEALANT. ALL EXPOSED EDGE INCLUDEING JOINTS, SHALL BE ROUNDED WITH AN EDGING TOOL.

EXCAVATION FOR SIDEWALKS, CURB AND GUTTER, AND PAVEMENT SHALL BE SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.

REMOVAL OF SIDEWALK, CURB AND GUTTER, AND PAVEMENT SHALL BE INCLUDED IN THE BID ITEM "CONCRETE REMOVAL".

CURB CUT RAMPS ARE TO BE LOCATED AS SHOWN OR APPROVED BY THE ENGINEER.

THE NORMAL GUTTER LINE PROFILE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.

CARE SHALL BE TAKEN TO ASSURE UNIFORM GRADE ON THE RAMP, FREE OF SAGS AND/OR SHORT GRADE CHANGES.

THE SURFACE TEXTURE OF ALL SIDEWALKS SHALL BE THAT OBTAINED BY A COARSE BROOMING. THE RAMP SHALL HAVE A TRUNCATED DOME DETECTABLE SURFACE AND SHALL HAVE SUFFICIENT COLOR CONTRAST WITH ADJACENT SURFACES TO MEET ADA REQUIREMENTS.

NEW CURB AND GUTTER SECTIONS SHALL BE DOWELED TO THE EXISTING ADJACENT CURB SECTIONS WITH 2-#4 X 2'-0" DEFORMED BARS. DOWEL BARS AT ALL CONSTRUCTION JOINTS TO EXISTING CONCRETE SHALL HAVE ONE END DRILLED AND EPOXY GROUTED INTO CENTER OF THE EXISTING PAVEMENT OR POURED INTO PLACE WITH NEW PAVEMENT. ALL DOWEL BAR CONSTRUCTION WORK SHALL BE SUBSIDIARY TO OTHER BID ITEMS IN THE CONTRACT.

ALL CURB AND GUTTER AND/OR GUTTERS OF ANY TYPE SHALL HAVE A STEEL TROWEL FINISH. SIDEWALKS SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK.

ALLOWABLE MAXIMUM COMPACTED THICKNESS OF FINE GRADING MATERIAL SHALL BE 1-1/4".

ALL SIDEWALKS AND RAMPS WITHIN PUBLIC RIGHTS-OF-WAY SHALL MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG).

WHEELCHAIR RAMPS IN THE CURB RETURN SHALL BE CONSTRUCTED USING 6" THICK PAVEMENT CLASS CONCRETE (4000 PSI)

IF THE ENGINEER DETERMINES THAT THE EXISTING ASPHALT PAVEMENT IS IN GOOD CONDITION, WITHOUT PITTING AND RAVELING, ALONG THE SAWCUT AFTER REMOVAL OF THE CURB AND GUTTER OR PAVEMENT, THE ASPHALT PATCHING MAY BE ELIMINATED.

IF CURB AND GUTTER, PAVEMENT AND/OR SIDEWALK TO BE REMOVED IS WITHIN 3' OF AN EXISTING JOINT, REMOVE CURB AND GUTTER, PAVEMENT AND/OR SIDEWALK BACK TO EXISTING JOINT.

CURB AND GUTTER SECTION TO BE PAID FOR AS INTEGRAL CURB AND GUTTER FOR SECTIONS POURED MONOLITHICALLY WITH PAVEMENT, AND AS COMBINED CURB AND GUTTER FOR ALL OTHER TYPES OF CURB AND GUTTER SECTIONS.

MAXIMUM RAMP SLOPES SHALL BE 1:12. MAXIMUM RISE IN ELEVATION WITHOUT A 5' LEVEL LANDING (2.00%) SHALL BE 2.5'. AT THE DIRECTION OF THE ENGINEER AND WHERE SPACE LIMITATIONS PROHIBIT CONSTRUCTION OF 1:12 SLOPES AT EXISTING SITES, MAXIMUM SLOPES MAY BE AS FOLLOWS: 1:8 FOR MAXIMUM RISE OF 3 INCHES, 1:10 FOR A MAXIMUM RISE OF 6 INCHES.

AFTER CONSTRUCTION OF CURB RAMPS, RECONSTRUCTION OF SIDEWALKS, CONSTRUCTION OF RETAINING WALL, AND FINAL GRADING; AREAS DISTURBED BY CONSTRUCTION MUST BE TILLED, FERTILIZED, SEEDED AND MULCHED TO MATCH EXISTING GRASS LAWN. FERTILIZER, GRASS SEED AND MULCH MUST BE SUTMITTED TO ENGINEER FOR APPROVAL.

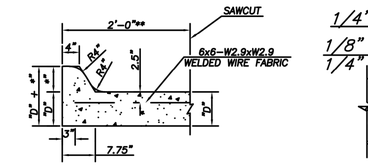
8" WIDE RETAINING WALL SHALL BE CONSTRUCTED WITH THE "ANCHOR WINDSOR STONE RETAINING WALL SYSTEM" OR AN APPROVED EQUAL. PAYMENT SHALL BE PER SQUARE FOOT OF THE OUTSIDE VERTICLE FACE. THE COLOR SHALL BE SELECTED BY THE CITY OF HAYS.

THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE EXISTING SURFACE ON STREETS, DRIVEWAYS OR SIDEWAKS WITH EQUIPMENT DURING CONSTRUCTION, AND IF DAMAGED, SHALL REPAIR OR REPLACE THE SURFACE TO ITS ORIGINAL CONDITION, AT NO ADDITIONAL COST TO THE OWNER.

EXCAVATION THAT NEEDS TO BE WASTED SHALL BE WASTED BY THE CONTRACTOR OFF THE PROJECT SITE. THESE SITES SHALL BE APPROVED BY THE CITY ENGINEER AS TO SUITABILITY, APPERANCE, AND SITE LOCATION. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIORMENT.

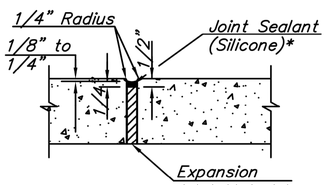
THE CONTRACTOR SHALL BE REQUIRED TO PROTECT ALL EXISTING STRUCTURES AND FOUNDATIONS DURING EXCAVATION & BACKFILL AND INSURE THAT THERE IS NO LATERAL MOVEMENT OF THE SOIL. THIS INCLUDES, BUT IS NOT LIMITED TO COMPACTION EQUIPMENT THAT WILL NOT DAMAGE THE STRUCTURES AND ANY SHORING, BRACING, & DEWATERING OF THE TRENCH.

CONSTRUCTION STAKING SHALL BE SUBSIDAIRY TO OTHER BID ITEMS.

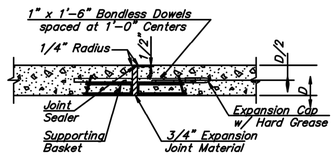


NOTE: "D"=PAVEMENT THICKNESS
* VARIES TO MATCH EXISTING CURB
** FOR SIDEWALK RAMP CURB CUTS IN EXISTING CURB & GUTTERS

INTEGRAL CURB

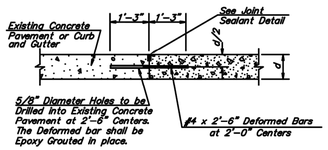


EXPANSION JOINT SEALANT



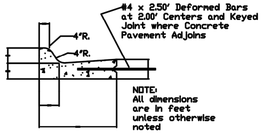
NOTE: The 1/4" Radius on the joint shall be hand formed with a trowel. No saw cutting will be allowed.

EXPANSION JOINT DETAIL

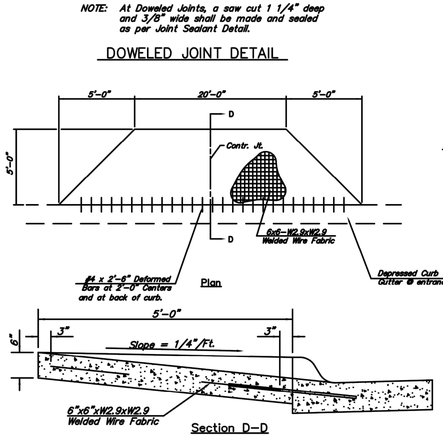


NOTE: At Doweled Joints, a saw cut 1 1/4" deep and 3/8" wide shall be made and sealed as per Joint Sealant Detail.

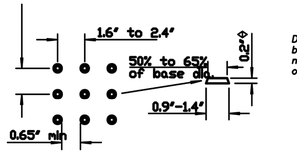
DOWELED JOINT DETAIL



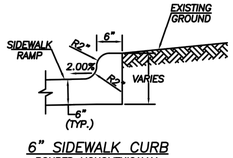
6' COMBINED CURB AND GUTTER



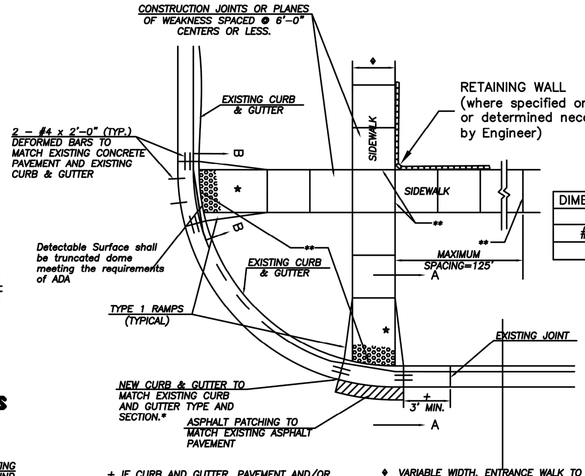
TYPICAL CONCRETE ENTRANCE



TRUNCATED DOME DIMENSIONS for SQUARE PATTERN (Parallel Alignment)



6" SIDEWALK CURB
POURED MONOLITHICALLY WITH SIDEWALK.



\+ IF CURB AND GUTTER, PAVEMENT AND/OR SIDEWALK TO BE REMOVED IS WITHIN 3' OF AN EXISTING JOINT, REMOVE CURB AND GUTTER, PAVEMENT AND/OR SIDEWALK BACK TO EXISTING JOINT.

* CURB & GUTTER SECTION TO BE PAID FOR AS INTEGRAL CURB & GUTTER FOR SECTIONS POURED MONOLITHICALLY WITH PAVEMENT, AND AS COMBINED CURB & GUTTER FOR ALL OTHER TYPES OF CURB & GUTTER SECTIONS.

** EXPANSION JOINT LOCATED AS SHOWN

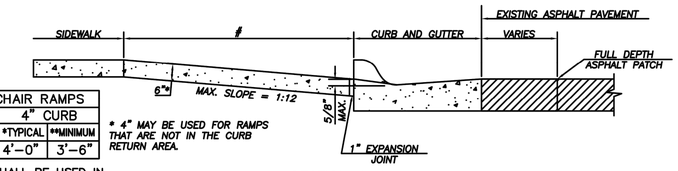
♦ VARIABLE WIDTH. ENTRANCE WALK TO BE SAME WIDTH AS APPROACH WALK. SIDEWALK WIDTH OF 4'–0" MAY BE USED WHERE EXISTING CONDITIONS PROHIBIT USE OF 5'–0". MAXIMUM CROSS SLOPE ON SIDEWALK IS 2.00%.

★ MAXIMUM RAMP SLOPES SHALL BE 1:12. MAXIMUM RISE IN ELEVATION WITHOUT A 5' LEVEL LANDING (2.00%) SHALL BE 2.5'. AT THE DIRECTION OF THE ENGINEER AND WHERE SPACE LIMITATIONS PROHIBIT CONSTRUCTION OF 1:12 SLOPES AT EXISTING SITES, MAXIMUM SLOPES MAY BE AS FOLLOWS:
1:8 FOR MAXIMUM RISE OF 3 INCHES
1:10 FOR A MAXIMUM RISE OF 6 INCHES

SIDEWALK RAMP TYPE I

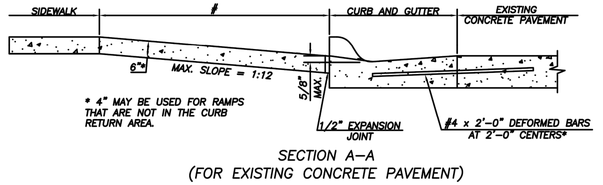
DIMENSIONS FOR WHEEL CHAIR RAMPS				
	6" CURB		4" CURB	
#	*TYPICAL	**MINIMUM	*TYPICAL	**MINIMUM
	6'–0"	5'–6"	4'–0"	3'–6"

*TYPICAL DIMENSIONS SHALL BE USED IN AREAS OF NEW CONSTRUCTION.
**MAY BE USED IN EXISTING CURB CUTOUTS WITH 1/2"(MIN.) RISE FROM GUTTER FLOW LINE TO BACK OF CURB.



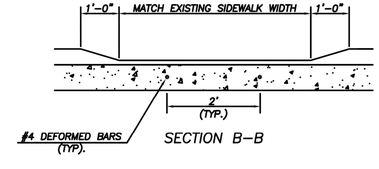
* 4" MAY BE USED FOR RAMPS THAT ARE NOT IN THE CURB RETURN AREA.

SECTION A–A
(FOR EXISTING ASPHALT PAVEMENT)



* 4" MAY BE USED FOR RAMPS THAT ARE NOT IN THE CURB RETURN AREA.

SECTION A–A
(FOR EXISTING CONCRETE PAVEMENT)



SECTION B–B

REV	DATE	DESCRIPTION
0	06/27/24	INITIAL ISSUE

DSN: M.JR
DWN: TDA
CHK: M.JR

MATTHEW J. ROWE LICENSED 29241 6/27/24 KANSAS PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

KAW VALLEY ENGINEERING
1627 SUNFLOWER LANE
SALINA, KANSAS 67401
PH: (785) 823-3400
sa@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-1153
EXPIRES 12/31/24

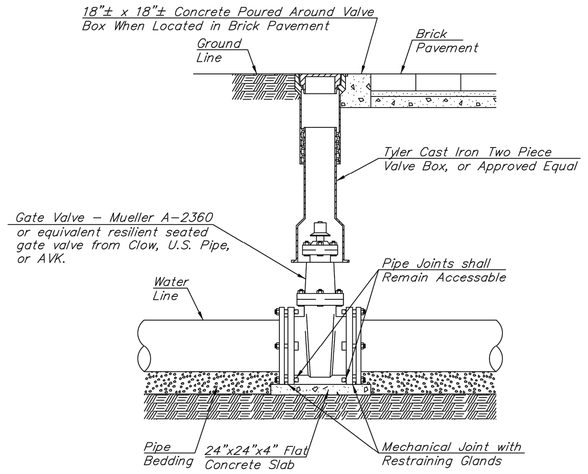
ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

CIVIL PLANS
DETAIL SHEET

PROJ. NO. E24D3733
DESIGNER MJR | DRAWN BY TDA
CFN 3733TYP
SHEET 13 | REV 0

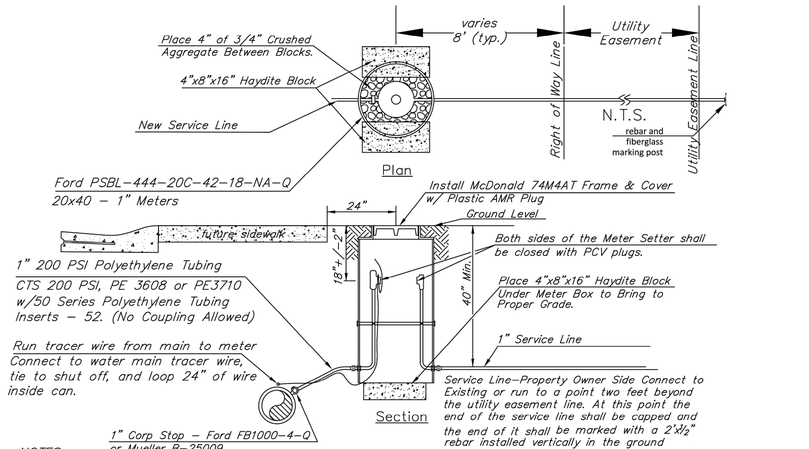
Details 02

THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.



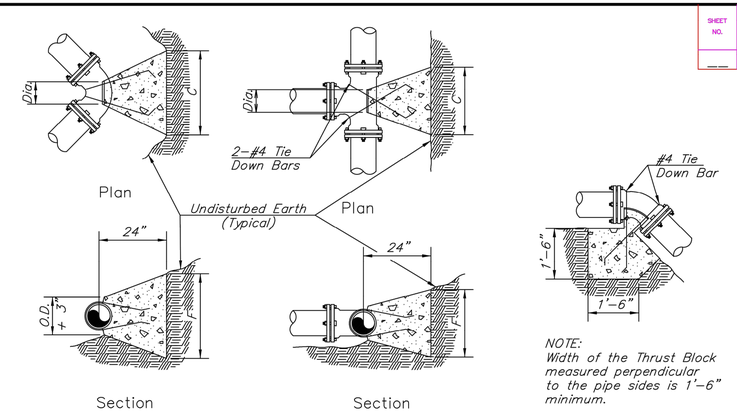
VALVE BOX DETAIL

All valves and fittings shall be Mechanical Joint with Restraining Glands for PVC Pipe conforming to ANSI/AWWA C111/A21.11 (MEGALUG 2000PV or equal)



NOTES:
1. All taps to be made with APWA tapered threads.
2. Service saddles for PVC Pipe shall be Ford S90 series or Mueller H or S 13000 Series CC Tapered Thread.
3. Meter Adapters shall be Mueller H–10879 or Ford A–24.
4. Pack Joint connectors shall be C44–44Q.
5. Set meter can so that cover is within ¼" of final grade.

METER SET DETAIL



Horizontal Bend

Vertical Bend

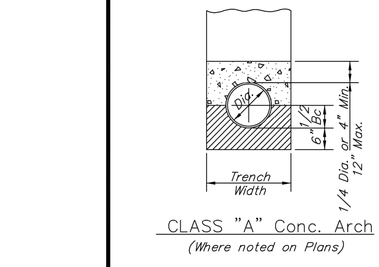
NOTE: Width of the Thrust Block measured perpendicular to the pipe sides is 1'–6" minimum.

THRUST BLOCK DIMENSIONS								
TEES					BENDS			
RUN	BRANCH	C	F	V	SIZE	C	F	V
6" – 16"	6"	24"	18"	4.1	6"–45°	18"	18"	2.4
6" – 16"	8"	24"	24"	4.9	6"–90°	24"	24"	3.7
6" – 16"	10"	30"	30"	6.6	8"–45°	24"	21"	3.6
6" – 16"	12"	36"	36"	8.8	8"–90°	30"	30"	5.4
					10"–45°	36"	24"	5.7
					10"–90°	42"	36"	8.5
					12"–45°	33"	33"	6.8
					12"–90°	48"	42"	11.1

V = Minimum cubic feet of concrete required.

NOTE:
1. Concrete shall have compressive strength at twenty–eight (28) days not less than 3,000 p.s.i..
2. Pipe Joints shall remain accessible.
3. Thrust Blocks shall be at all tees, bends, plugs, caps, fire hydrants and valves, or as required by the Engineer.
4. No separate payment shall be made for thrust blocking, but the cost shall be subsidiary to the line pay items.
5. 4" fittings to be considered as 6" fittings for thrust block requirements.
6. 11 1/4° bends and 22 1/2° bends to be considered as 45° bends for thrust block purposes.
7. All mechanical joint fittings shall be restrained using restraining glands for PVC pipe conforming to AWWA C111 and be MEGALUG 2000PV or equal. All bends still require thrust blocks.
8. Plugs or other dead ends shall be considered as a tee for thrust block purposes.

THRUST BLOCK DETAILS



CLASS "A" Conc. Arch
(Where noted on Plans)

CLASS "B"
(For PVC & VCP)

CLASS "C"
(For DIP)

LEGEND

Bc	Outside Diameter of Pipe
Dia.	Nominal Pipe Size
	Final Backfill
	Initial Backfill
	Sand–Gravel Fill
	Granular Fill
	Concrete *

* For use only where directed by the Engineer.

1/8 of total trench backfill cover depth, or 12" minimum depth.

BEDDING NOTES

Granular Fill to be Crushed Stone with not less than 95% passing the 3/4" sieve and not less than 95% to be retained on the #4 sieve, with not more than 2% passing the #200 sieve. The material shall be well graded with the majority of the largest particle size not exceeding 1/2 inch.

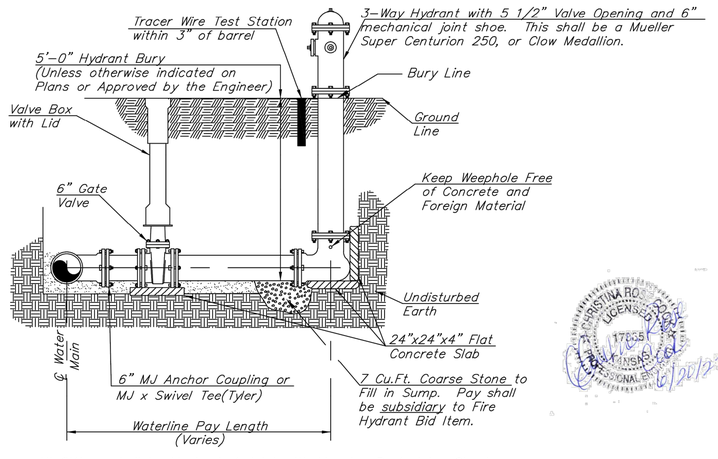
Sand–Gravel Fill shall be from an approved sand source and shall be free from debris, organic material, and stones. Granular fill may be substituted for sand–gravel fill.

Initial backfill shall be finely divided job excavated material free from debris, organic material and stones, compacted to 90% maximum density as determined by by A.S.T.M. designation: D698. Granular Fill may be substituted for all or part of the Initial Backfill.

Final Backfill may be job excavated material and shall have no rock or stones having a dimension larger than 6" within 3' of the top of the pipe. Final backfill shall be compacted as noted on the Plans.

Flowable fill may be used as a substitute for Compacted Backfill.

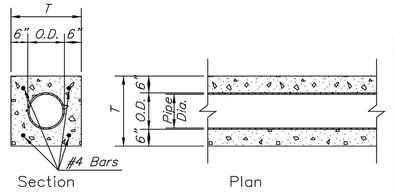
STANDARD PIPE EMBEDMENTS



All fittings shall be Mechanical Joint with Megalug Restraining Glands

See Specifications for additional information.

TYPICAL FIRE HYDRANT ASSEMBLY DETAIL



For use where indicated on detailed Plans or as directed by the Engineer.

** PLACED WHERE WATERLINE GOES UNDER SANITARY SEWER*

Scale: 1" = 2'

CONCRETE ENCASEMENT DETAIL

NOTE: See Sheet ____ for Tracer Wire Detail, required if PVC pipe is used.

NO.	DATE	REVISIONS	BY	CHECKED
1	4/25/2022	Meter Set Detail Update	OPM	JRB

CITY OF HAYS, KANSAS

WATER LINE DETAILS

CITY OF HAYS

DESIGNED BY	DATE	PROJECT NO.	
DRAWN BY	DATE	JOB NO. _____	
CHECKED BY	DATE	SCALE AS NOTED	SHEET ___ OF ___

SHEET NO.	TOTAL SHEETS
____	____

REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	06/27/24	INITIAL ISSUE	M.JR	TDA	M.JR

MATTHEW J. ROWE LICENSED 29241 6/27/24 KANSAS PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

KAW VALLEY ENGINEERING
1627 SUNFLOWER LANE
SALINA, KANSAS 67401
PH: (785) 823-3400
sal@kveng.com | www.kveng.com
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ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

CIVIL PLANS
DETAIL SHEET

PROJ. NO.	E24D3733
DESIGNER	MJR
DRAWN BY	TDA
CFN	3733TYP
SHEET	14
REV	0

THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.

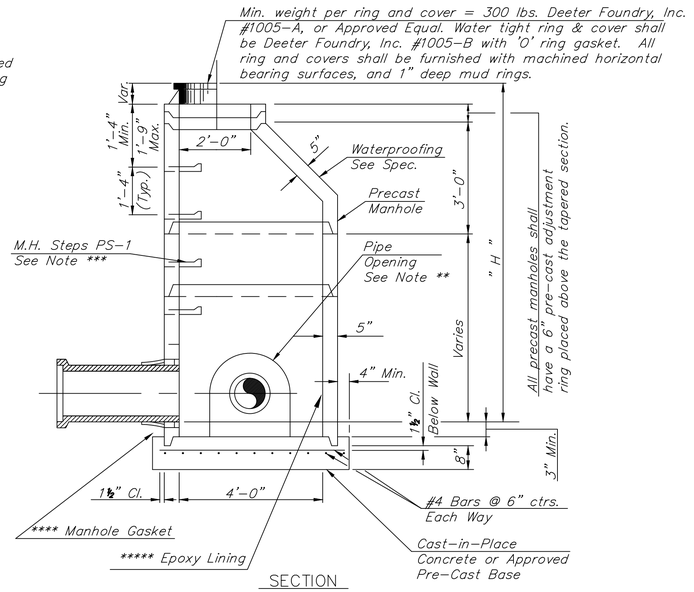
The connection to the existing manhole shall be gasketed and grouted with a non-shrink grout and the connecting joint of the pipe shall be concrete encased with six inches of concrete. The sewer shall be encased to the first joint or a minimum of 3' beyond the manhole.

Note** Openings for sewer pipes to be as follows:
Formed Openings: A one inch keyway shall be formed around the pipe opening.
Roughed Openings: Reinforcing shall be left in place around the sewer pipe to reinforce the grout. Concrete shall be left rough to provide bond for grout.

Note*** All manhole steps shall be cast iron steps having a minimum weight of 14 pounds per step, or plastic covered reinforcing bar steps such as M.A. Industries, Inc. Model PS-1 or approved equal. Steps shall be a minimum of 10 inches wide and have a minimum depth of 10 inches. All steps shall extend 5 inches from manhole walls.

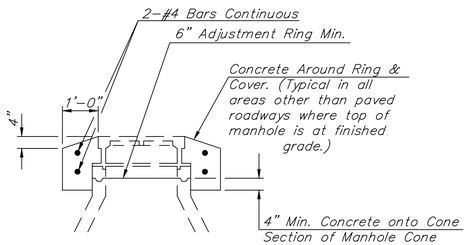
Note**** All manhole openings in new manholes shall be gasketed openings unless otherwise approved. The gasket shall be an A-LOK type X-Cel or approved equal.

Note***** All manholes shall be lined with a two part epoxy polyamide coating such as No. 332.98 Wilkopon HB Gray or approved equal that has good moisture, chemical and abrasion resistance, good hardness and excellent adhesion to steel and concrete.

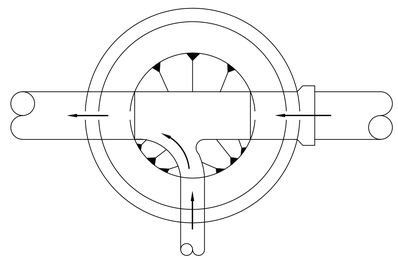


SECTION

TYPE I MANHOLE

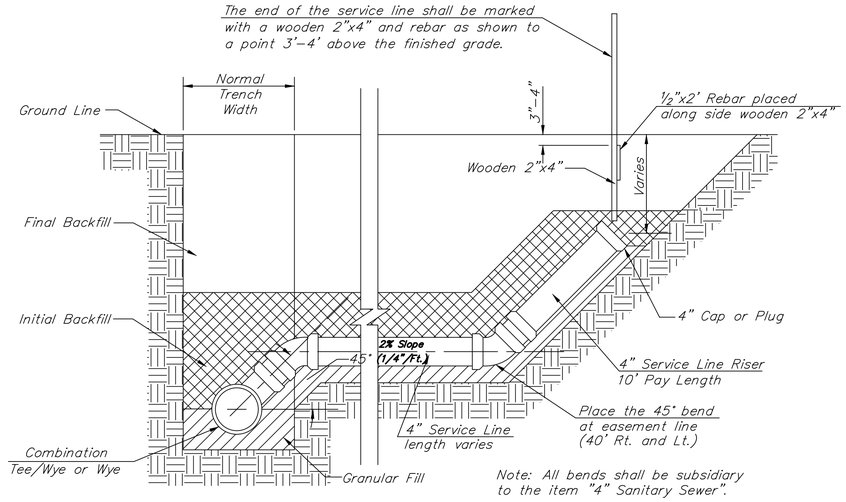


CONCRETE PROTECTION COLLAR



Shape invert and "U" channel for smooth transitions conforming to lower half cross section of sewer line with a smooth troweled finish and provide a slope not less than two (2) or more than four (4) inches from wall to "U" channel.

INVERT DETAIL



SERVICE CONNECTION BRANCH AND LINE

GENERAL NOTES

Precast risers, cones, flat top slabs, reducing flat slabs, floors and grade rings shall be manufactured according to the most recent ASTM C-478 Specifications. Cone section shall be the eccentric type.

All manhole construction shall be watertight. All joints shall be filled with mortar or plastic joint compound as approved by the Engineer.

Any erection holes, step holes, or other holes through the wall of the manhole shall be covered with a 3" concrete grout and cover an area 6" in all directions from said hole, and then waterproofed as per specs.

When so ordered by the Engineer the top of the manhole shall be sloped slightly to approximately fit the ground line or other conditions.

Grade rings shall be formed with tongue and groove or lugs and notches. Grade rings shall be set in mortar or plastic joint compound as approved by the Engineer.

When field conditions require "H" to be adjusted, additional grade rings may be used as directed by the Engineer.

All dimensions relative to the reinforcing steel are to the center of the bar unless otherwise noted.

Steps shall be installed in all manholes when specified on the plans. The 16 inch step spacing is typical and may be adjusted to clear joints in manholes. (18 inch Max. spacing)

All concrete bases for precast manholes shall be 3,000 psi concrete. Concrete bases shall be a minimum of 8" thick below the wall of the manhole.

All drop pipe for drop manholes shall be the same diameter as the inlet sewer pipe.

Whenever the subgrade for any manhole or drop manhole is of an unsatisfactory material, same shall be removed and replaced with a crushed rock bedding and compacted to the satisfaction of the Engineer.

Form or steel trowel all inverts in manholes or drop manholes.

All standard manhole or drop manhole bases shall be placed directly on or against rock or hard shale where same is encountered. No fill material of any kind will be permitted in overbreakage.

All concrete encasement in rock shall be poured against the face of the rock. No payment shall be made for extra concrete used in overbreakage of the dimensions as shown on the typical section of concrete encasement.

Manhole rings and covers to be machined.

All precast manhole details shall be subject to the approval of the Engineer.

All castings shall be gray iron and shall comply with ASTM A-48 Class 30.

Minimum spacing between sewer lines entering a manhole must be 4" clear.

Note: Detail proved by City of Hays, Kansas.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	06/27/24	INITIAL ISSUE	MJR	TDA	MJR

MATTHEW J. ROWE LICENSED 29241 6/27/24 KANSAS PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

KAW VALLEY ENGINEERING
1627 SUNFLOWER LANE
SALINA, KANSAS 67401
PH. (785) 823-3400
sa@kveng.com | www.kveng.com

KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-117.5. EXPIRES 12/31/24

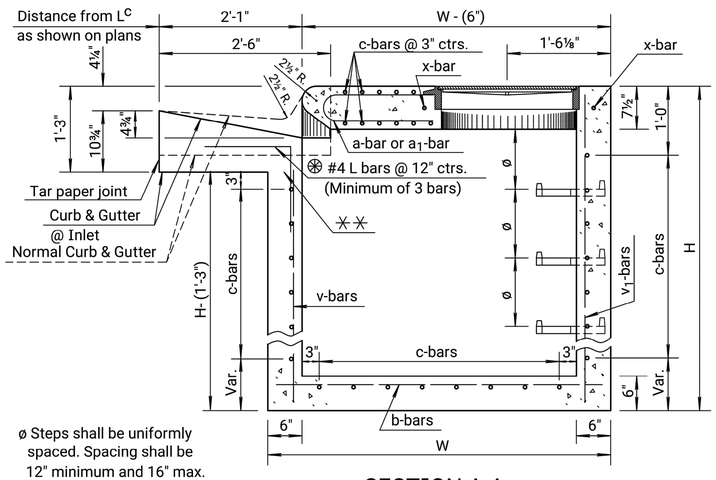
ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

CIVIL PLANS
DETAIL SHEET

PROJ. NO.	E24D3733	
DESIGNER	MJR	DRAWN BY TDA
CFN	3733TYP	
SHEET	15	REV 0

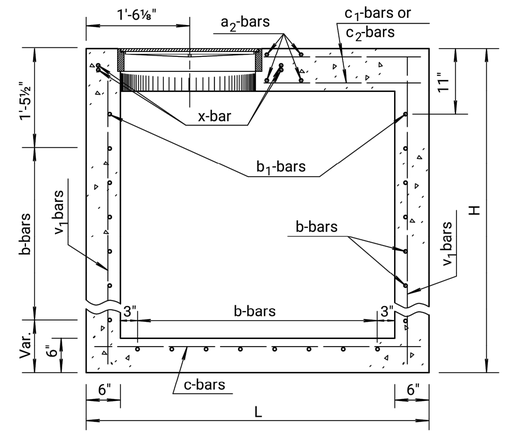
THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	056-KA-6154-01	2022	17	93

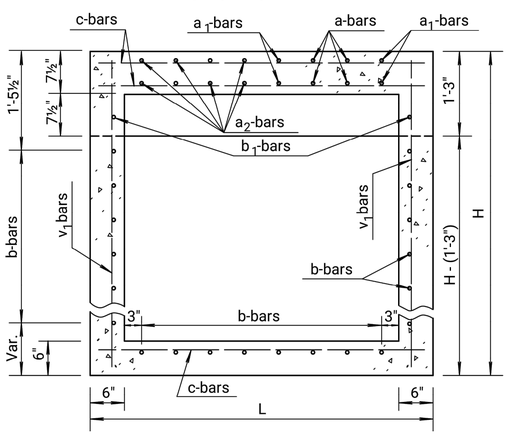


ø Steps shall be uniformly spaced. Spacing shall be 12" minimum and 16" max.

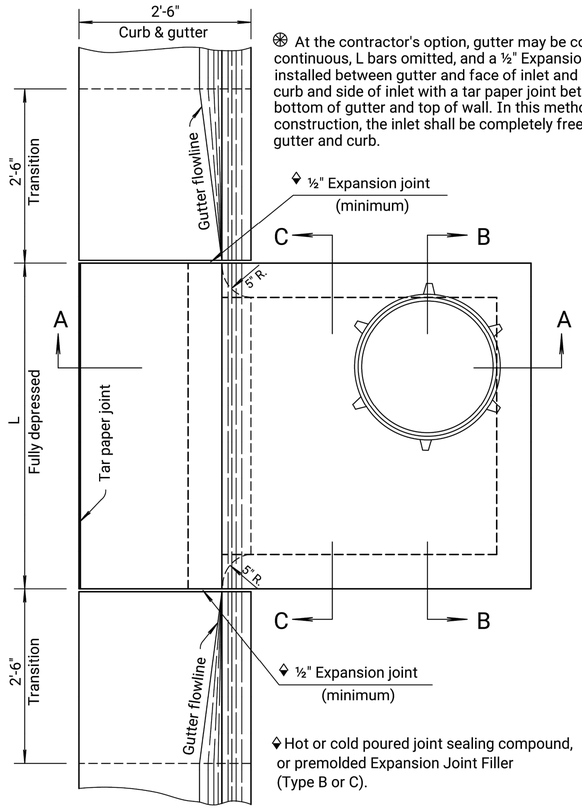
SECTION A-A



SECTION B-B



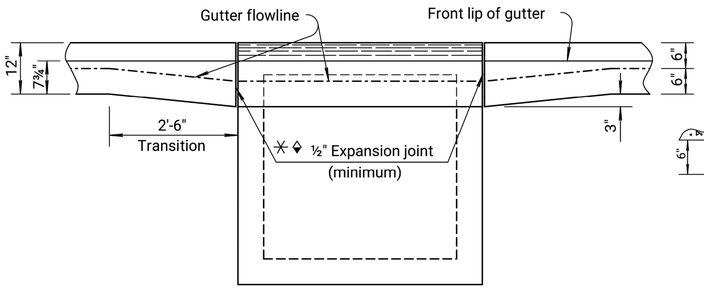
SECTION C-C



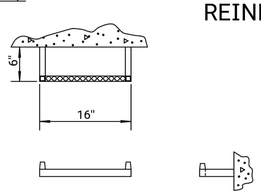
At the contractor's option, gutter may be constructed continuous, L bars omitted, and a ½" Expansion joint installed between gutter and face of inlet and between curb and side of inlet with a tar paper joint between bottom of gutter and top of wall. In this method of construction, the inlet shall be completely free of the gutter and curb.

Hot or cold poured joint sealing compound, or premolded Expansion Joint Filler (Type B or C).

PLAN

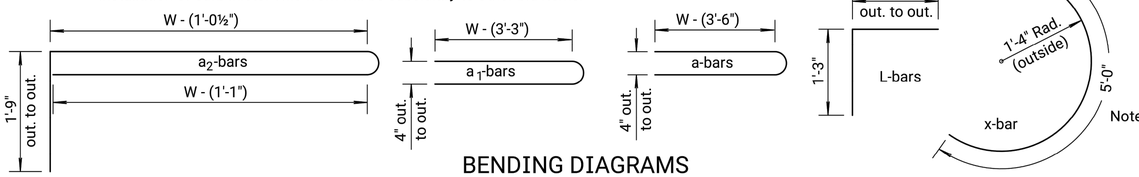


ELEVATION



STEP DETAILS

Note: Transition gutter from normal depth of 6" to 9" at inlet in 2'-6". Curb and Gutter sections shall be shaped as shown where required by the installation of curb inlets. This work will be subsidiary to other bid items.

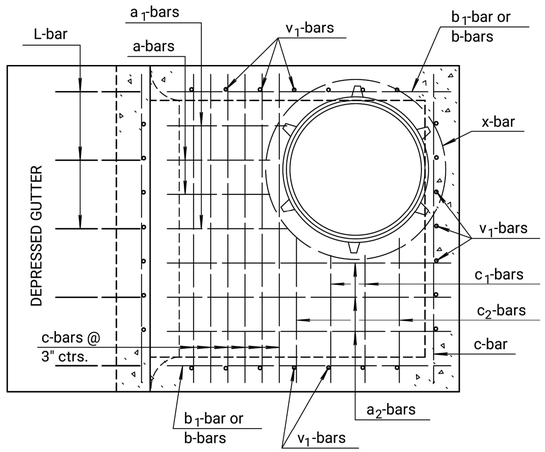


BENDING DIAGRAMS

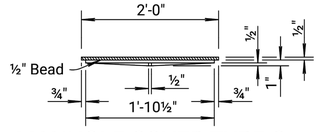
Note: Reinforcing steel for L bars is not included in the steel quantity and is subsidiary to the other inlet items.

GENERAL NOTES

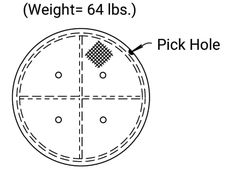
Use Concrete Grade 3.0 throughout. All exposed edges shall be finished with an edging tool.
At the contractors option Concrete Grade 3.0 (AE) or mix used in concrete pavement may be used throughout.
In general, pipes will enter and leave manhole at various positions. Where possible bend bars around pipes.
Floor of manhole to be shaped as shown in various "EXAMPLES" with unreinforced Concrete Grade 3.0.
Manhole opening and steps, where used, shall be placed to afford easy access to top of shaped invert. Top reinforcing bars to be adjusted accordingly.
All castings shall be gray iron and shall comply with the KDOT Standard Specifications.
When so ordered by the Engineer, the top of the manhole shall be sloped slightly to approximately fit the ground line or other conditions.
Dimensions and weights of cast iron as shown on this sheet are minimum. Larger dimensions and/or heavier weights of cast iron may be used.
Steps shall be installed in all storm sewer inlets when specified in the plans or when "H" is equal to or greater than six feet. Steps shall comply with the KDOT Standard Specification.
No reduction in concrete quantities shall be made for pipe openings.
When directed by the Engineer, a small opening in the back of the inlet shall be provided in order to drain a low area. Reinforcing bars shall extend through the opening. No reduction in concrete quantities will be made for this opening.
No addition in concrete quantities shall be made for shaping floor of inlet.
No reduction in pay length of curb, gutter, or curb & gutter will be made through the inlet area.
The weight of castings includes no allowance for fillets and overruns.
Curb and Gutter sections shall be shaped as shown where required by the installation of curb inlets. This work shall be subsidiary to other bid items.
See sheet entitled "Reinforcing Steel for Inlets and Manholes" for details and quantities.
For additional notes and details on Light Type Cast Iron Manhole Cover and Ring Type C and Cast Iron Steps, see Standard Drawing RD633 "Reinforced Concrete Manhole".
All reinforcing steel shall be #4 at 6" centers except where noted. Minimum clear distance to reinforcement shall be 1½".

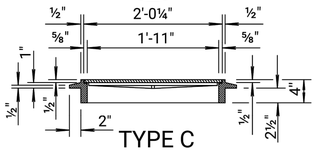


REINFORCING STEEL TOP VIEW

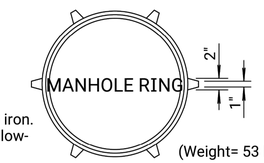


MANHOLE COVER TYPE C
(Weight= 64 lbs.)





TYPE C



(Weight= 53 lbs.)

NOTE: All manhole castings are cast iron. Weight of castings includes no allowance for fillets and overruns.

✳ LIGHT TYPE
MANHOLE COVER & RING

✳ Rings with four equally spaced lugs will be permitted.

NO.	DATE	REVISIONS	BY	APP'D
7	10-31-17	Joint Filler Type C Added	A.L.R.	S.W.K.
6	1-28-05	Changed Class to Grade concrete	S.W.K.	J.O.B.
5	12-1 1-97	Revised step spacing	R.J.S.	J.O.B.
4	3-20-96		R.J.S.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

TYPE 22
CURB INLET

RD646

FHWA APPROVAL	3-5-18	APP'D. Scott W. King	
DESIGNED	DETAILED	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK.

REV	DATE	DESCRIPTION	DSN	DWN	CHK
0	06/27/24	INITIAL ISSUE	MJR	TDA	MJR

MATTHEW J. ROWE LICENSED 29241 6/27/24 KANSAS PROFESSIONAL ENGINEER

MATTHEW J. ROWE
ENGINEER
KS # 29241

KAW VALLEY ENGINEERING
1627 SUNFLOWER LANE
SALINA, KANSAS 67401
PH. (785) 823-3400
sa@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN KANSAS. KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-11.5. EXPIRES 12/31/24

ASTRA OPERATIONS BUILDING
27TH, FORT, AND MAIN STREET
HAYS, KANSAS 67601

CIVIL PLANS
DETAIL SHEET

PROJ. NO.	E24D3733	
DESIGNER	MJR	DRAWN BY TDA
CFN	3733TYP	
SHEET	16	REV 0

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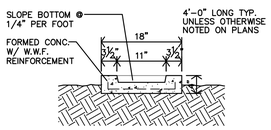
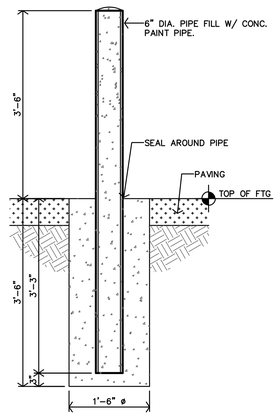
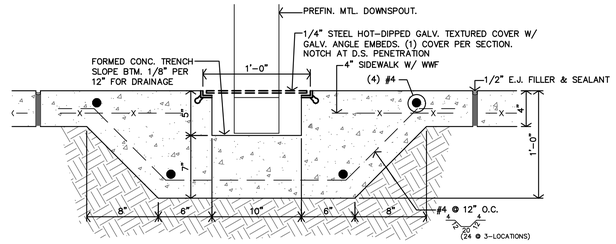


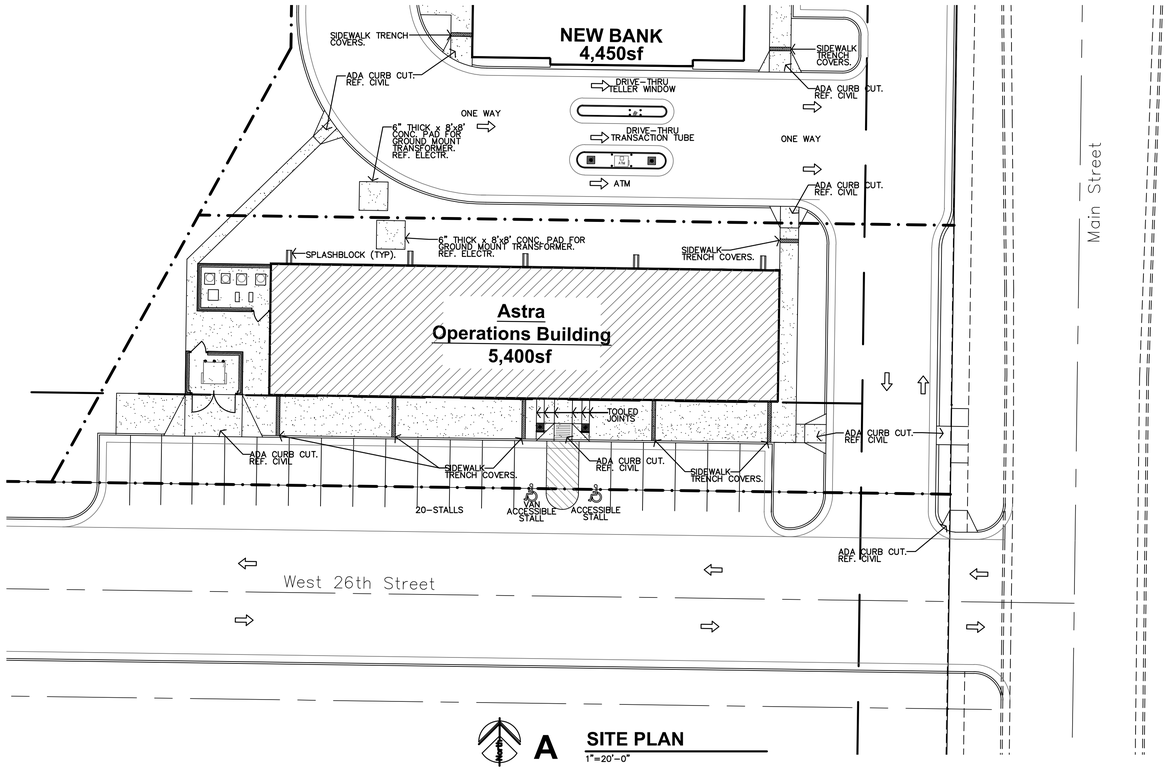
D **SPLASHBLOCK**
3/4"=1'-0" QUANTITY: 5



C **PIPE BOLLARDS @ TRASH ENCLOSURE**
3/4"=1'-0"



B **SIDEWALK TRENCH DETAIL**
1 1/2"=1'-0"



A **SITE PLAN**
1"=20'-0"

GENERAL SITE PLAN NOTES

1. GENERAL CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS & DIMENSIONS.
2. INSTALL MATERIALS AND FINISHES AS INDICATED, IMPLIED OR AS REQUIRED FOR FINISH INSTALLATION.
3. WHERE NEW CONCRETE ABUTS THE BUILDING, PROVIDE ¾" EXPANSION JOINT & SEAL TOP WITH EPOXY SEALER.
4. INSTALL EXPANSION JOINTS IN CONCRETE SIDEWALK PAVING AT ±60" O.C. PROVIDE FILLER MATERIAL AND SEALANT. COORDINATE WITH ARCHITECT FOR FINAL LOCATIONS OF EXPANSION JOINTS.
5. INSTALL CONTROL JOINTS IN CONCRETE ROUGHLY SQUARE AND AREAS NOT TO EXCEED 100 S.F.
6. EXTERIOR DOOR LANDINGS SHALL BE WITHIN ½" OF INTERIOR FINISH FLOOR ELEVATION. MAXIMUM SLOPE IN ANY DIRECTION SHALL BE 1:50
7. FINISH FLOOR ELEVATION SHALL BE VERIFIED BY GENERAL CONTRACTOR AND CONFIRMED W/ PROPOSED GRADING TO PROVIDE DRAINAGE AWAY FROM THE BUILDING
8. NEW PEDESTRIAN SIDEWALKS SHALL NOT HAVE A CROSS SLOPE GREATER THAN 1:50 AND SHALL NOT SLOPE IN THE DIRECTION OF TRAVEL GREATER THAN 1:20.
9. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE REQUIREMENTS OF THE UTILITY COMPANIES AND THE CITY OF HAYS.
10. ALL DAMAGED EXISTING SIDEWALKS CAUSED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED OR REPLACED AT CONTRACTOR'S EXPENSE.

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

ASTRA BANK
OPERATIONS BUILDING - NEW FACILITY
HAYS, KANSAS

CHARLES A. RENZ LICENSED 5502 6-27-2024 KANSAS PROFESSIONAL ARCHITECT

REVISION:

DATE: 6-27-2024
JOB: 24-3424
SHEET NO.:

A1.1

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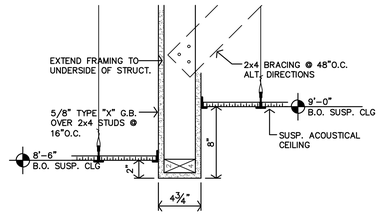
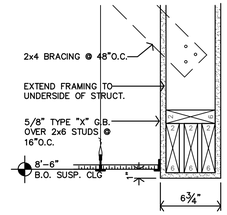
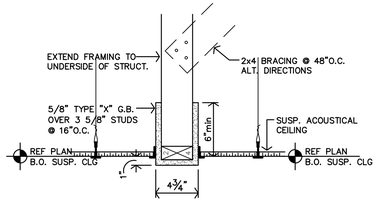


E **BULKHEAD DETAIL**
1 1/2"=1'-0"



D **BULKHEAD DETAIL**
1 1/2"=1'-0"



C **BULKHEAD DETAIL**
1 1/2"=1'-0"

CEILING TYPES REFER SPECIFICATIONS	
1	2x2 NON-RATED
MP	METAL SOFFIT PANEL
ST	EXPOSED STRUCTURE,
GB	GYP BD (PAINTED)

1 / 8'-8" — CLG. TYPE / CLG. HEIGHT

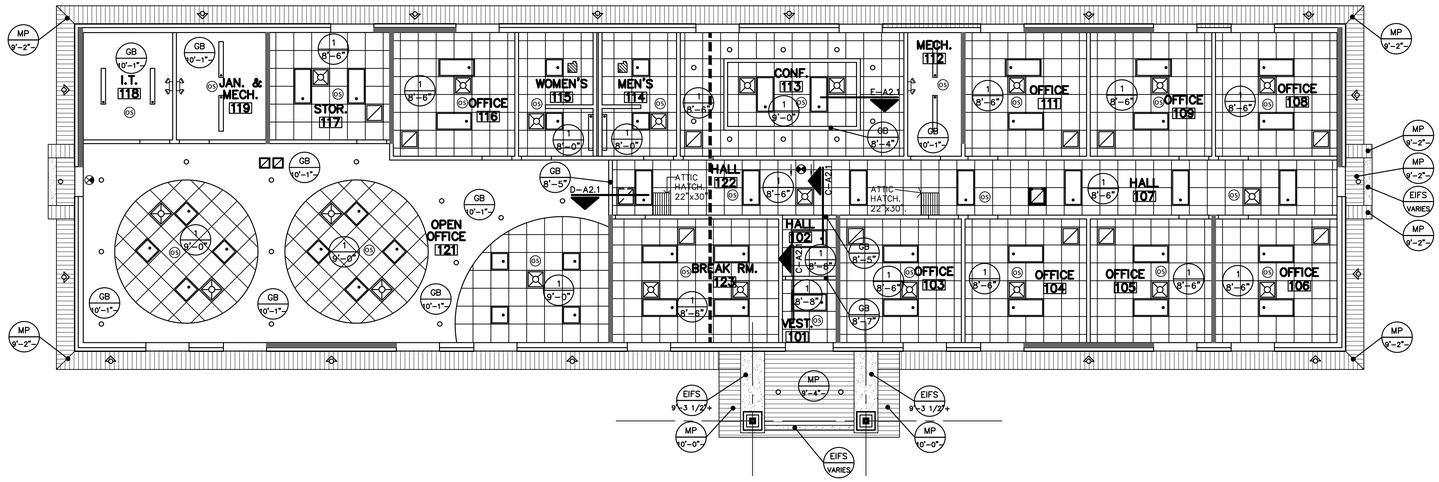
REFLECTED CEILING PLAN NOTES

1. CONTRACTOR SHALL COORDINATE CEILING LAYOUT WITH MECHANICAL AND ELECTRICAL FIXTURE LOCATIONS. NOTIFY ARCHITECT IMMEDIATELY OF ANY CONFLICT OR DISCREPANCY.
2. MECHANICAL/ELECTRICAL FIXTURES @ RATED CEILINGS SHALL BE HUNG IN CONFORMANCE TO U.L. SYSTEM REQUIREMENTS.
3. CEILING MOUNTED MECHANICAL EQUIPMENT AND SUSPENDED MECHANICAL EQUIPMENT MUST BE SUSPENDED DIRECTLY FROM THE STRUCTURE.
4. AREAS ABOVE THE FINISHED CEILING ARE PART OF A RETURN AIR PLENUM ALL MATERIALS INCLUDING THE INSULATION SHALL HAVE FLAME SPREAD LESS THAN 25 AND SMOKE DEVELOPED LESS THAN 50
5. SPECIAL CEILING GRID FRAMING IS REQUIRED AT SOME CEILING MOUNTED MECHANICAL EQUIPMENT. CONTRACTOR SHALL COORDINATE WITH MECHANICAL UNITS AND PROVIDED ALL SUSPENSION, TRIM, CLIPS, ETC. AS REQUIRED FOR A NEAT, FINISHED, AND SECURE CEILING SYSTEM.
6. WHERE SUSPENSION DEVICES, WIRES, RODS, ETC. PENETRATE CEILING GRID AND/OR TILE OR G.B. PENETRATIONS SHALL BE NEAT AND CLEANLY CUT. PENETRATION OPENING SHALL BE AS SMALL AS POSSIBLE. SEAL AT G.B.

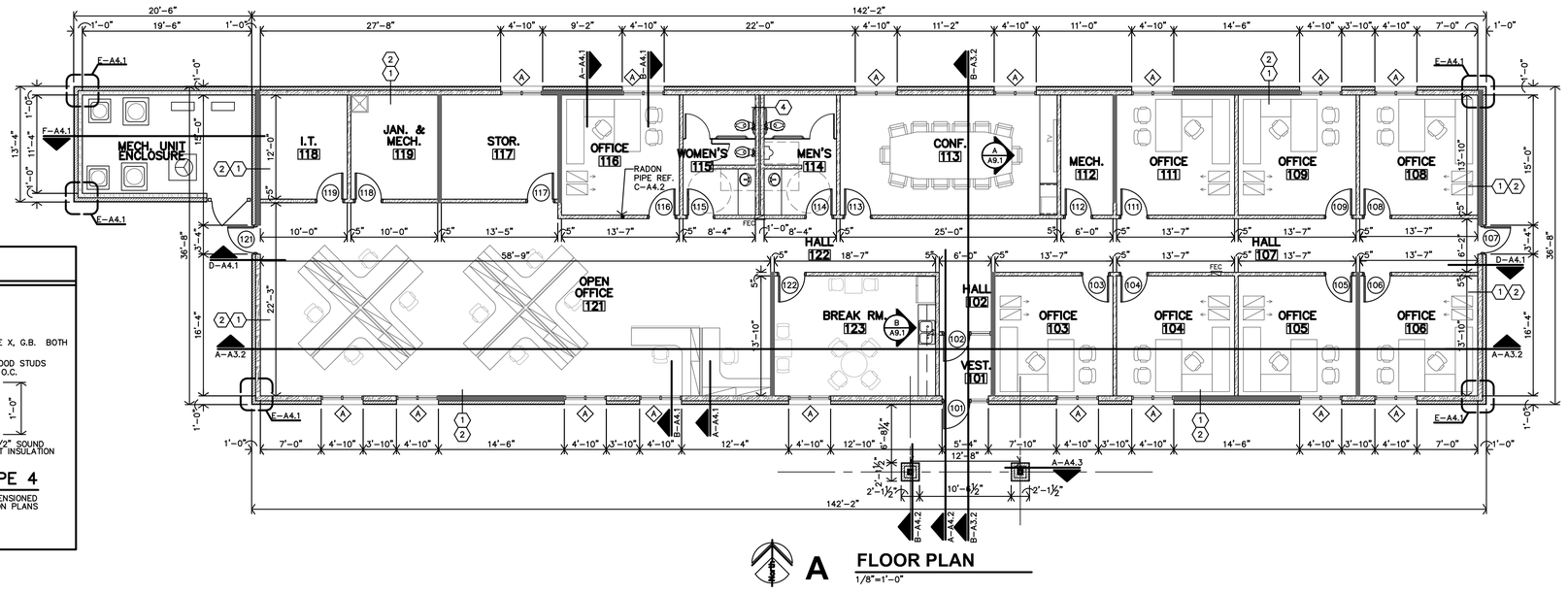
NON-RATED WALLS – EXTEND TO BTM. CHORD OF ROOF TRUSS INCLUDING ALL FINISHES

SHEAR WALL. REFERENCE STRUCTURAL.

ATTIC DRAFTSTOPPING (1/2" M.R. G.B. OVER 1 SIDE OF TRUSS). COORD. W/ MECH. EQUIP. & TRUSS LAYOUT.



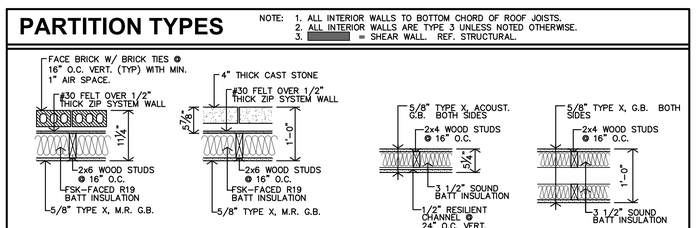
B **REFLECTED CEILING FLOOR PLAN**
1/8"=1'-0"



A **FLOOR PLAN**
1/8"=1'-0"

PARTITION TYPES

NOTE: 1. ALL INTERIOR WALLS TO BOTTOM CHORD OF ROOF JOISTS.
2. ALL INTERIOR WALLS ARE TYPE 3 UNLESS NOTED OTHERWISE.
3. ▬ = SHEAR WALL. REF. STRUCTURAL.



1 **TYPE 1**

2 **TYPE 2**

3 **TYPE 3** TYP. DIMENSIONED AS 5" ON PLANS

4 **TYPE 4** TYP. DIMENSIONED AS 12" ON PLANS

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

ASTRA BANK
OPERATIONS BUILDING - NEW FACILITY
HAYS, KANSAS

CHARLES A. RENZ LICENSED 5502 6-27-2024 KANSAS PROFESSIONAL ARCHITECT

REVISION:

DATE: 6-27-2024
JOB: 24-3424
SHEET NO.:

A2.1

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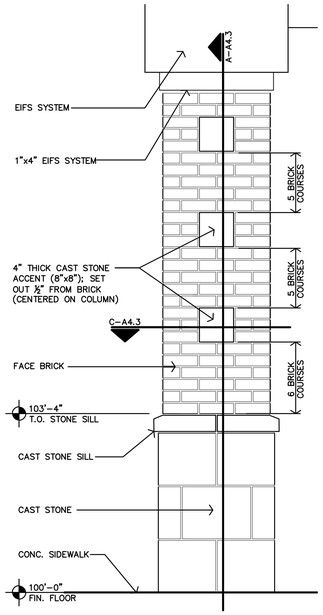
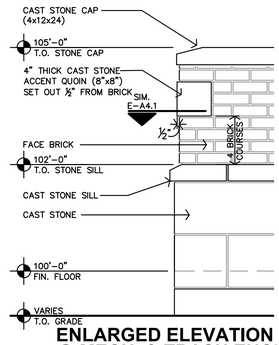


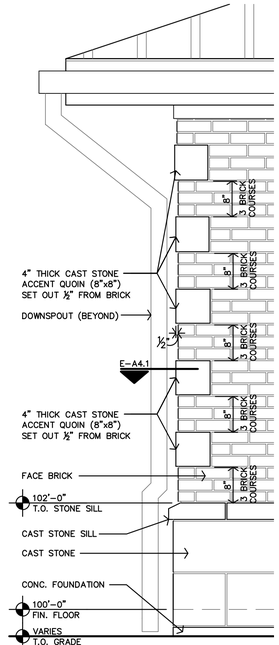
H ENLARGED ELEVATION @ ENTRY COLUMNS

3/4"=1'-0"



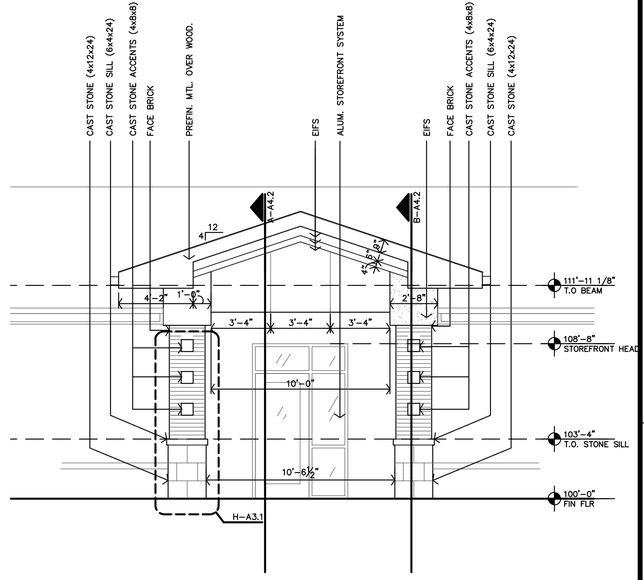
G ENLARGED ELEVATION @ MECH. & TRASH ENCLOSURE CORNER ACCENTS

3/4"=1'-0"



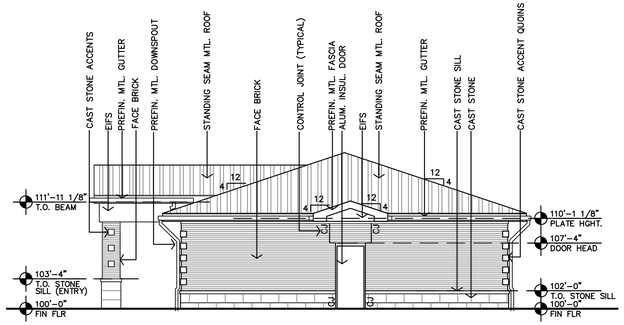
F ENLARGED ELEVATION @ EXT. CORNER ACCENTS

3/4"=1'-0"



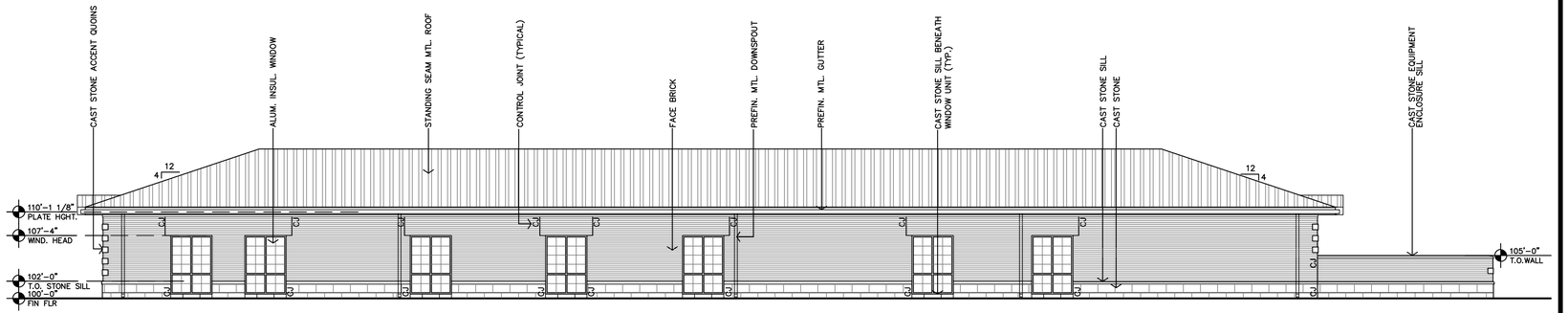
E ELEVATION @ ENTRY CANOPY

1/4"=1'-0"



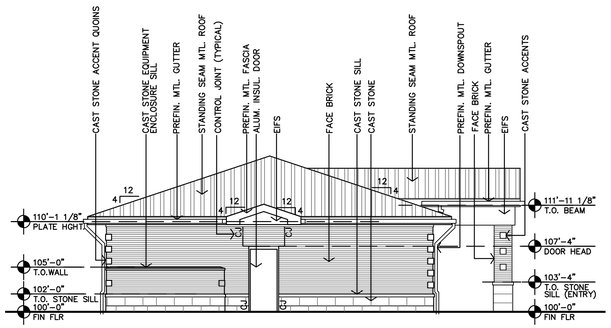
D EAST ELEVATION

1/8"=1'-0"



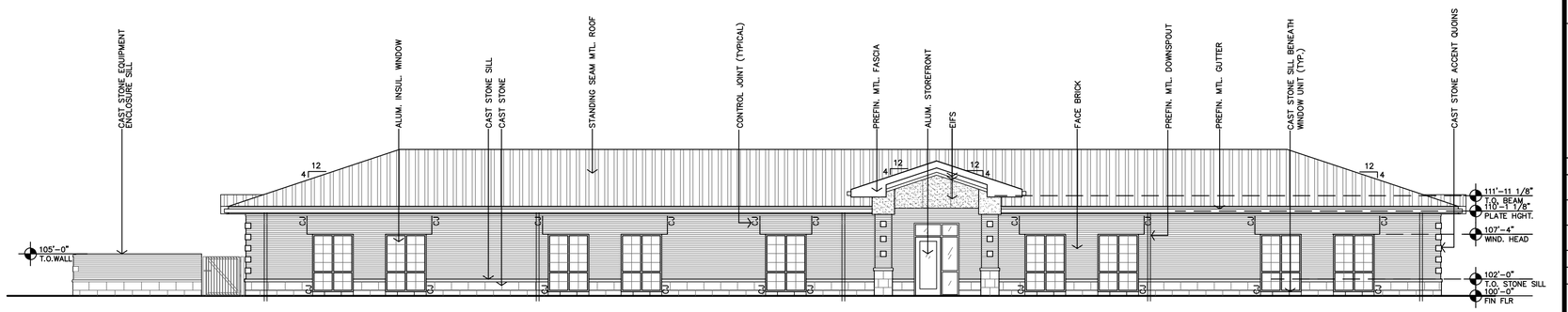
C NORTH ELEVATION

1/8"=1'-0"



B WEST ELEVATION

1/8"=1'-0"



A SOUTH ELEVATION

1/8"=1'-0"

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

ASTRA BANK

OPERATIONS BUILDING - NEW FACILITY

HAYS, KANSAS

CHARLES A. RENZ
LICENSED
5502
6-27-2024
KANSAS
PROFESSIONAL ARCHITECT

REVISION:

DATE: 6-27-2024
JOB: 24-3424
SHEET NO.:

A3.1

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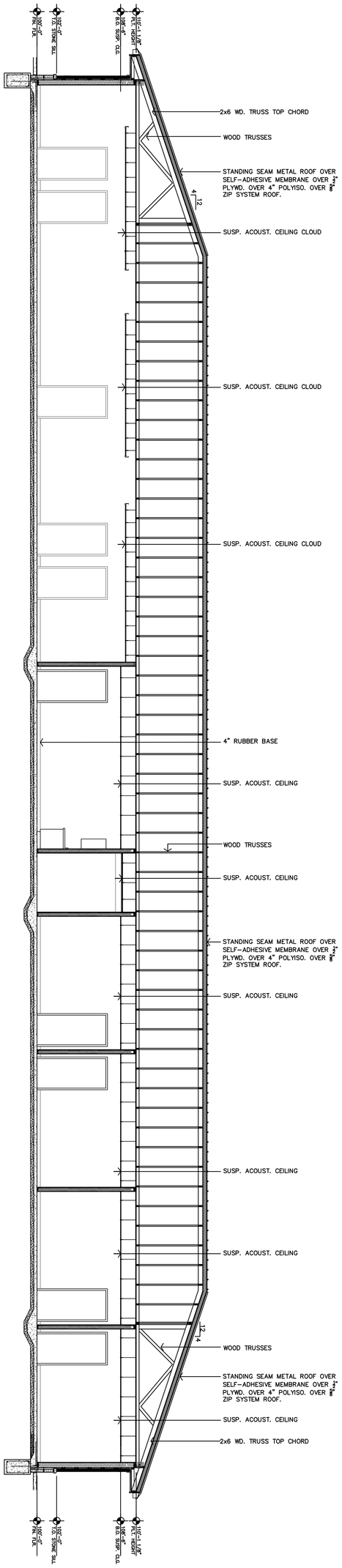
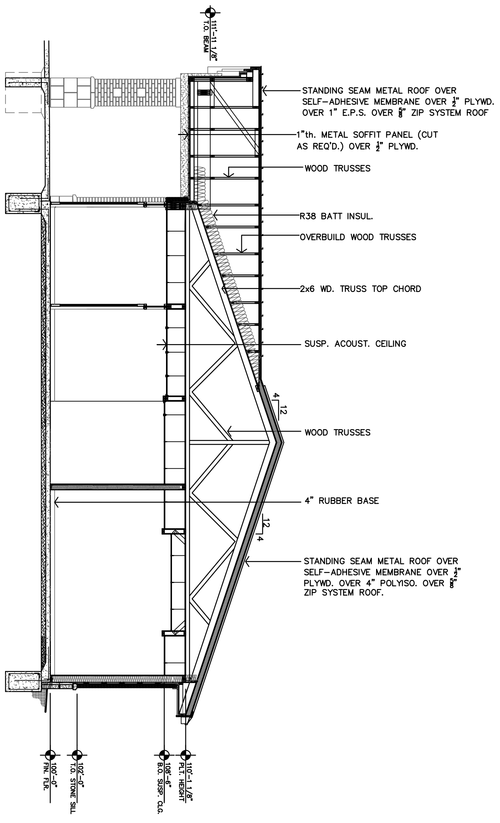


A BUILDING SECTION
3/16"=1'-0"



B BUILDING SECTION
3/16"=1'-0"

CHARLES A. RENZ
LICENSED
5502
6-27-2024
KANSAS
PROFESSIONAL ARCHITECT

REVISION:

DATE: 6-27-2024
JOB: 24-3411
SHEET NO.: A3.2

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BANK - NEW FACILITY

HAYS, KANSAS

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

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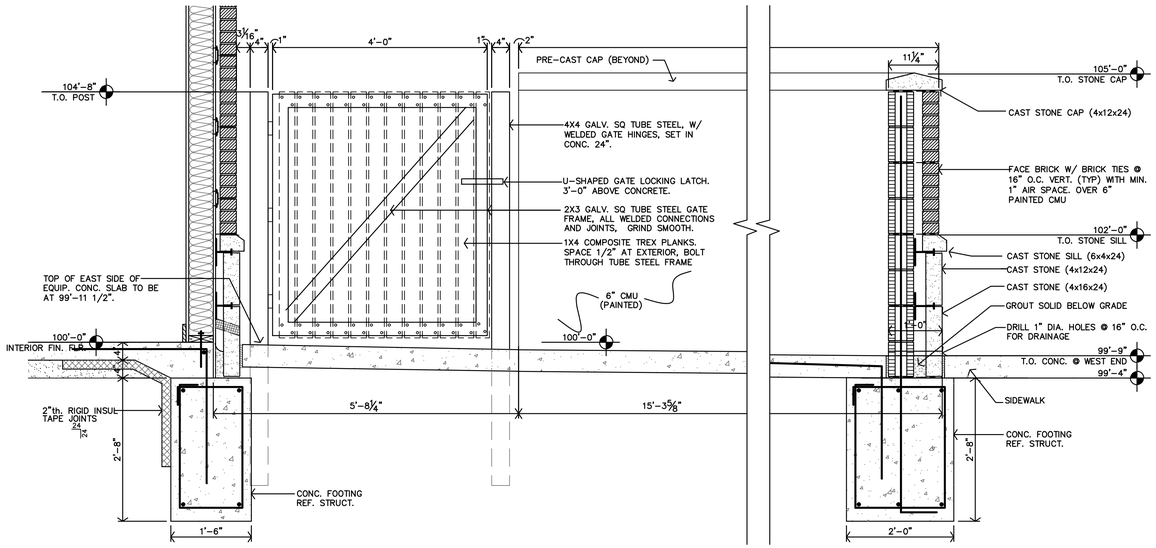
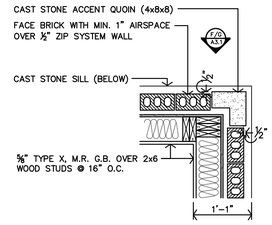


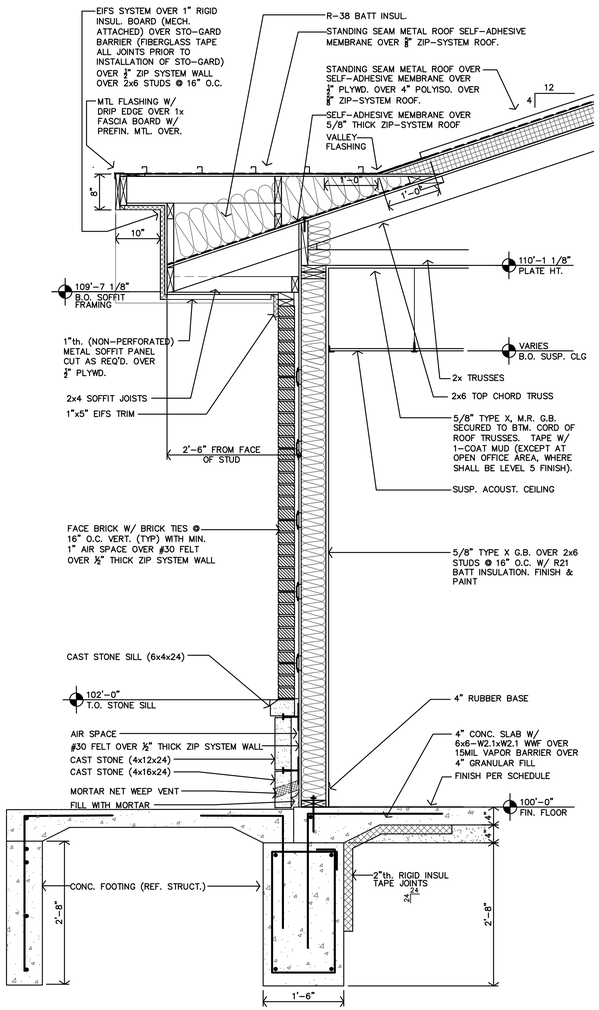
G EQUIPMENT ENCLOSURE SECTION

3/4"=1'-0"



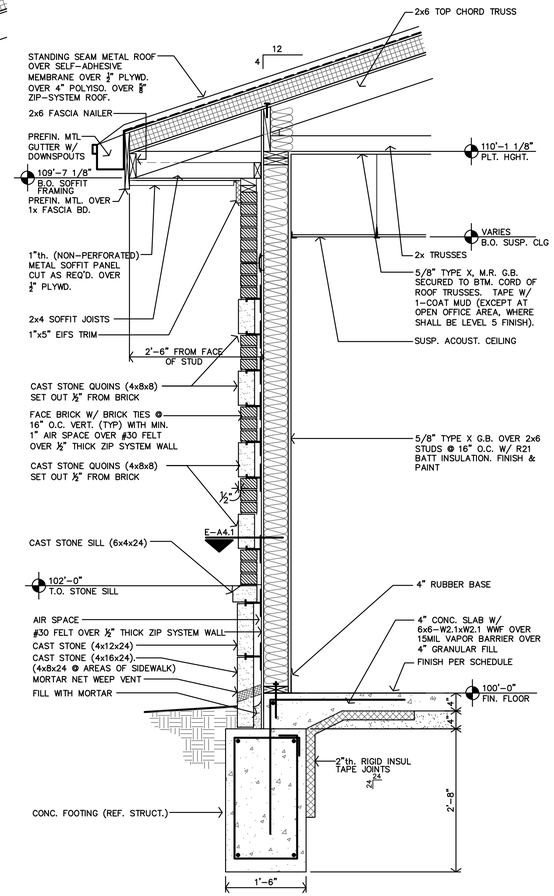
E PLAN SECTION @ CAST STONE QUOIN

3/4"=1'-0"



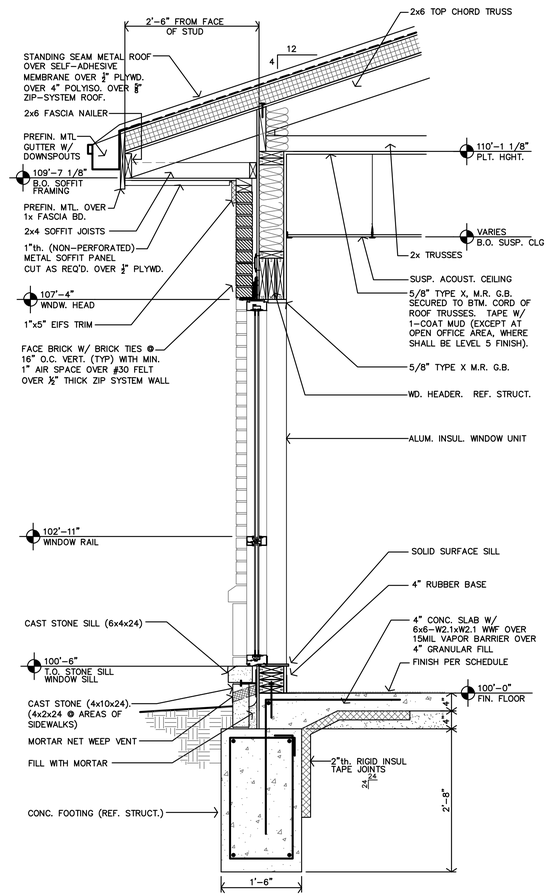
D WALL SECTION

3/4"=1'-0"



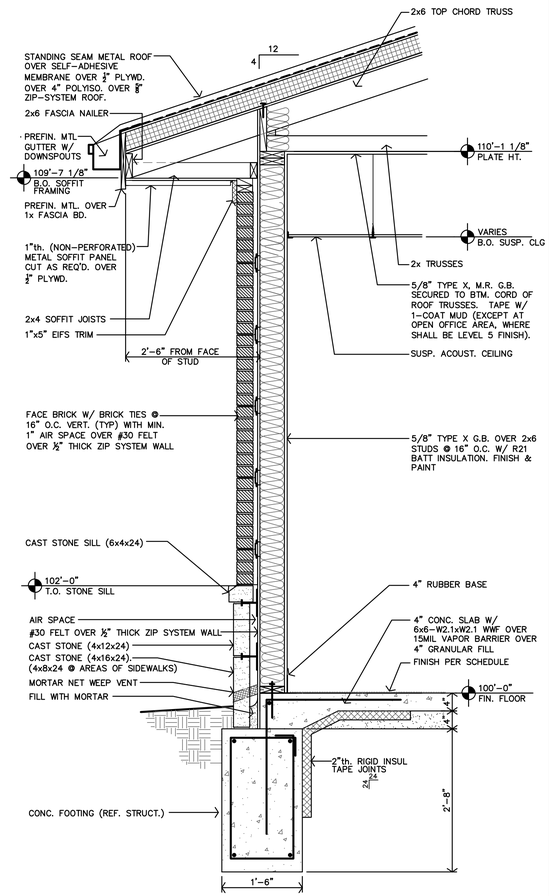
C TYP. WALL SECTION @ CORNER QUOINS

3/4"=1'-0"



B TYP. WALL SECTION @ WINDOW

3/4"=1'-0"



A TYP. WALL SECTION

3/4"=1'-0"

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

ASTRA BANK

OPERATIONS BUILDING - NEW FACILITY

HAYS, KANSAS

CHARLES A. RENZ
REGISTERED
5502
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KANSAS
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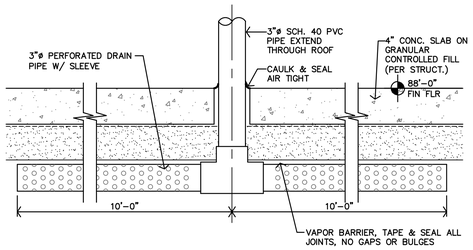
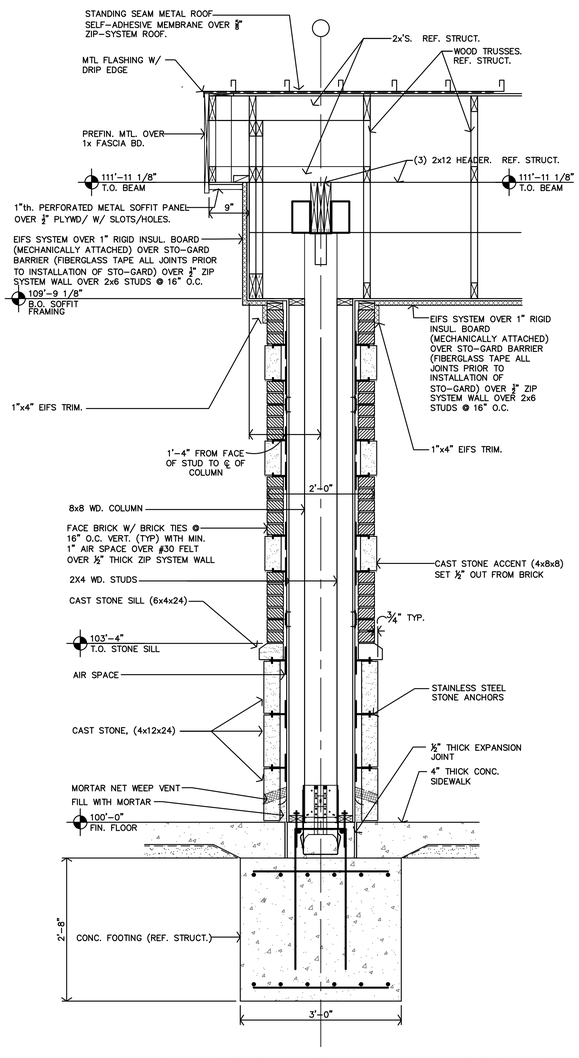


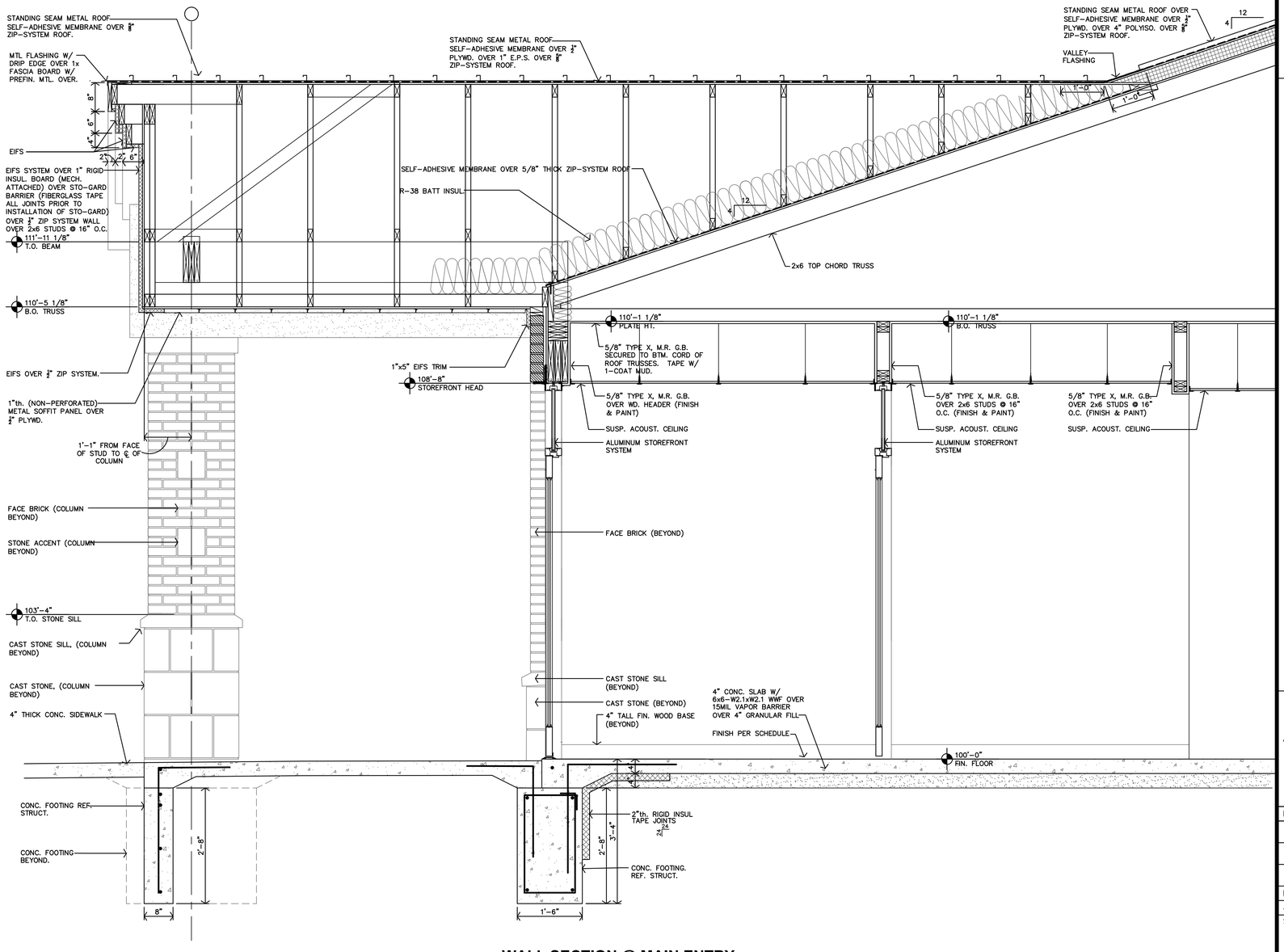
C RADON PIPE DETAIL

1 1/2"=1'-0" NOTE: OCCURS AT 1-LOCATION. REF. FLOOR PLAN



B TYP. WALL SECTION @ MAIN ENTRY COLUMN

3/4"=1'-0"



A WALL SECTION @ MAIN ENTRY

3/4"=1'-0"

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
1881 Main Street, Suite 301
Kansas City, MO 64108
785.827.0386
jgr@jgrarchitects.com

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LICENSED
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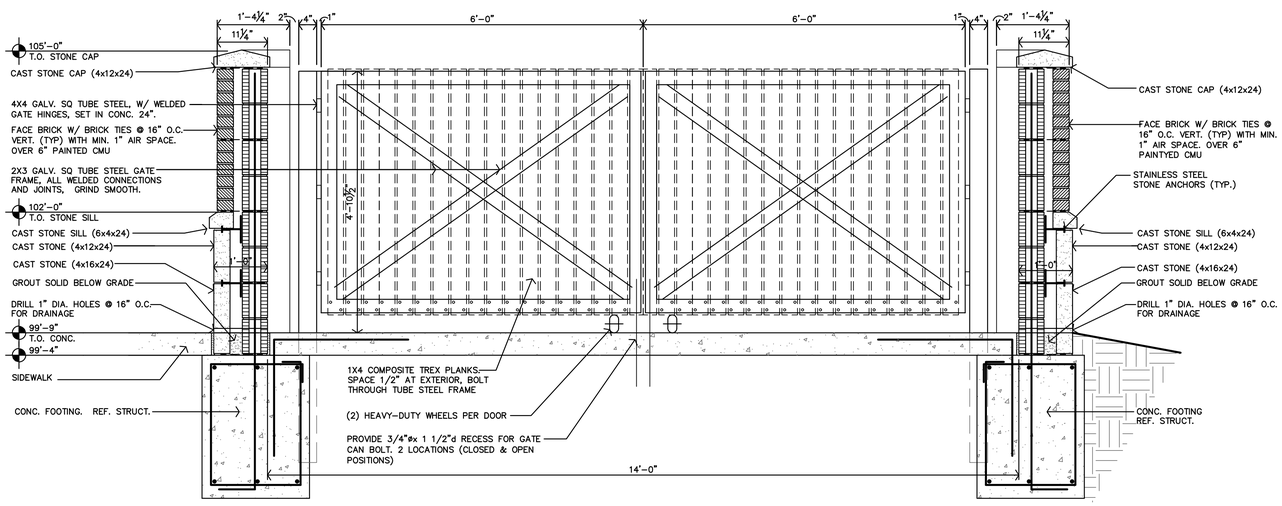
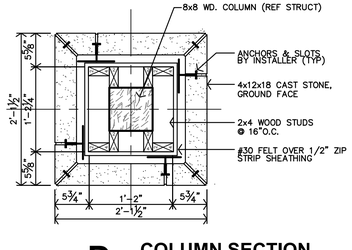
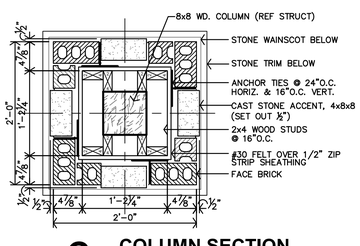


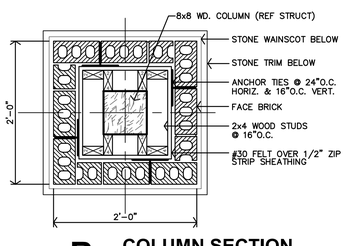
E **WALL SECTION @ TRASH ENCLOSURE**
3/4"=1'-0"



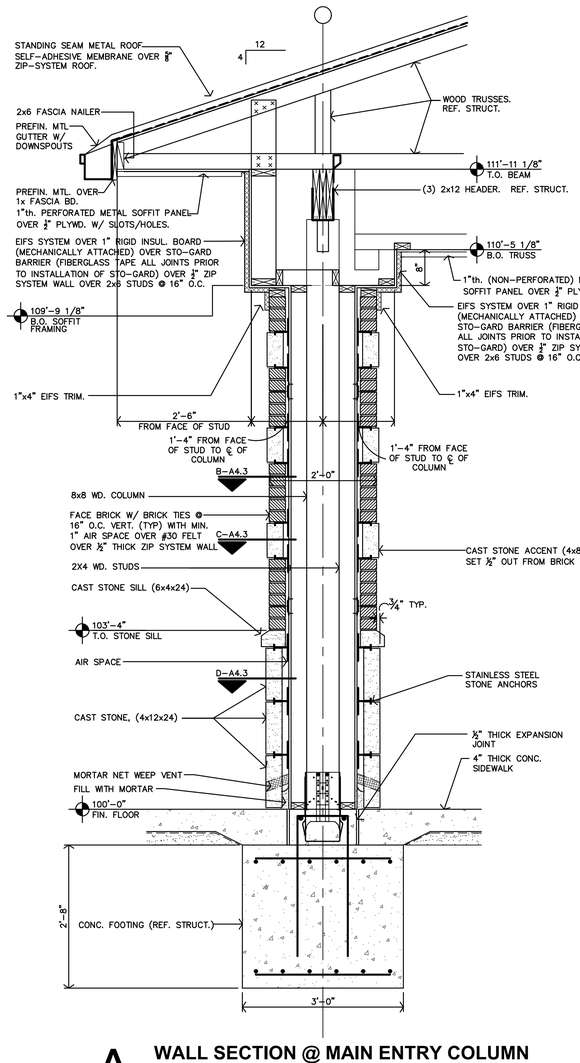
D **COLUMN SECTION**
1"=1'-0"



C **COLUMN SECTION**
1"=1'-0"



B **COLUMN SECTION**
1"=1'-0"



A **WALL SECTION @ MAIN ENTRY COLUMN**
3/4"=1'-0"

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

ASTRA BANK
OPERATIONS BUILDING - NEW FACILITY
HAYS, KANSAS

CHARLES A. RENZ
REGISTERED
5502
6-27-2024
KANSAS
PROFESSIONAL ARCHITECT

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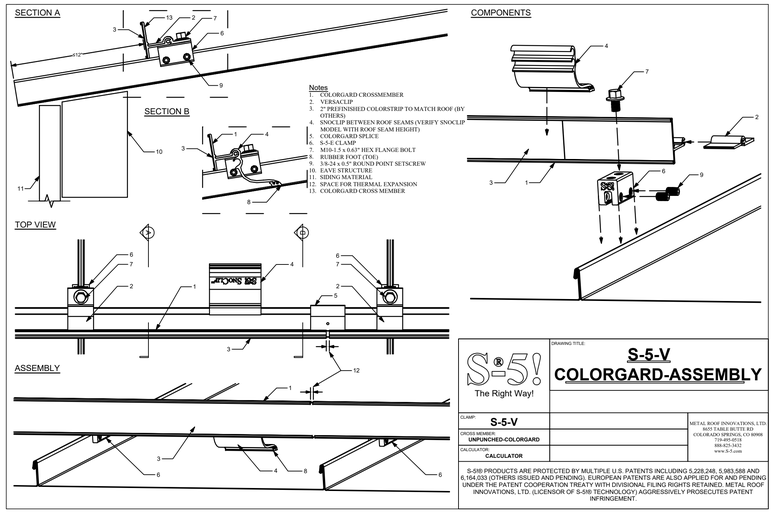
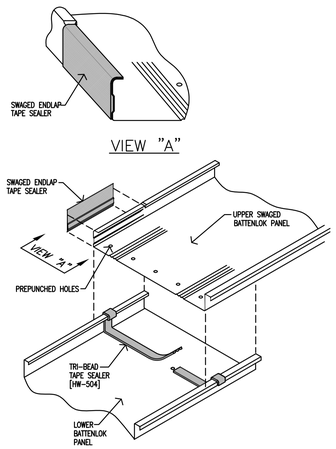
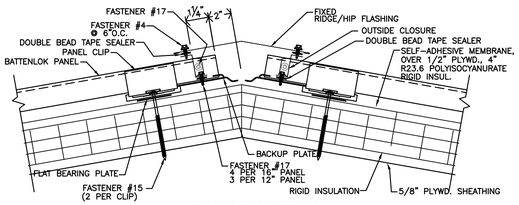


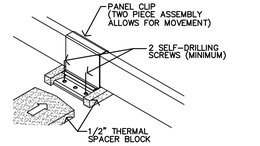
O **SNOW PROTECTION DETAILS**
NO SCALE NOTE: LOCATE 12" FROM EDGE OF BLDG.



N **LAP PANEL DETAIL**
NO SCALE



M **RIDGE DETAIL**
NO SCALE



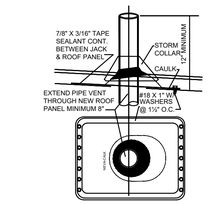
L **PANEL CLIP DETAIL @ STANDING SEAM ROOF**
NO SCALE

ROOFING GENERAL NOTES

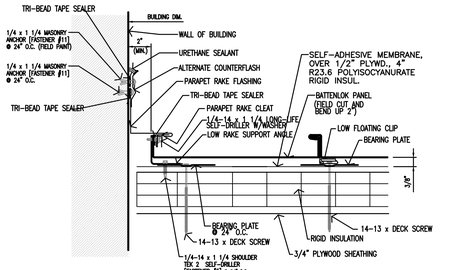
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS & CONDITIONS.
2. MANUFACTURER & INSTALLER SHALL BE RESPONSIBLE FOR TOTAL ROOF SYSTEM INCLUDING TRANSITIONS, FLASHINGS, ETC. TO MAINTAIN WATER TIGHT ROOF SYSTEM. SUBMIT MANUFACTURERS AND ROOFING SYSTEMS PER THE GENERAL CONDITIONS.
3. CONTRACTOR SHALL BE RESPONSIBLE TO CONNECT ALL EQUIPMENT BY LICENSED MECHANICAL/ELECTRICAL CONTRACTOR.
4. MANUFACTURER SHALL WARRANT TOTAL ROOF SYSTEM.
5. SOME DETAILS ARE MANUFACTURER'S STANDARD, ACTUAL DECK & CONSTRUCTION VARIES. FIELD VERIFY.
6. COORDINATE WITH THE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS OF ANY THRU-ROOF PENETRATIONS. ALL PENETRATIONS SHALL BE SEALED PER THE PEMB MANUFACTURER'S RECOMMENDATIONS. ALL PENETRATIONS AND FLASHING ASSEMBLIES SHALL BE INCLUDED IN THE MANUFACTURER'S 20 YEAR WARRANTY.
7. EXPOSED BREAK METAL TRIM AND CLOSURES SHALL HAVE CRIMPED EDGES, TYP.
8. SNOW PROTECTION SYSTEM SHALL BE INSTALLED WHERE INDICATED ON ROOF PLAN. SYSTEM SHALL NOT BE FASTENED/SCREWED THROUGH THE MTL ROOF COMPONENTS.
9. GENERAL CONTRACTOR SHALL PAINT ALL EXPOSED ROOF VENTS "BLACK" IF MATERIAL/EQUIPMENT IS NOT "BLACK".

ROOFING DETAIL NOTES

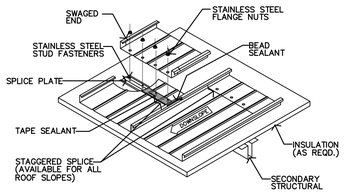
1. TYPICAL MANUFACTURER'S DETAILS ACTUAL CONDITIONS MAY VARY, REFER AND COORDINATE W/ BUILDING DETAILS PROVIDING THE MANUFACTURER'S MOST STRINGENT REQUIREMENTS, RECOMMENDATIONS, NECESSARY TO ACHIEVE COMPLETE WATERTIGHT WARRANTY.
2. A WOOD NAILER IS REQUIRED WHEN INSULATION IS GREATER THAN 1" COORDINATE WITH MANUFACTURER'S REQUIREMENTS TOP OF WOOD ATTACH WOOD NAILERS SHALL BE SPACED NO GREATER THAN 18"O.C.



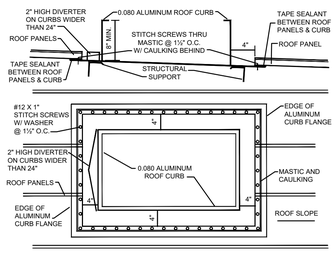
K **ROOF VENT DETAIL**
NO SCALE NOTE: PAINT "BLACK"



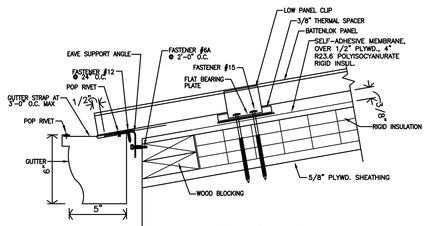
J **RAKE WALL**
NO SCALE



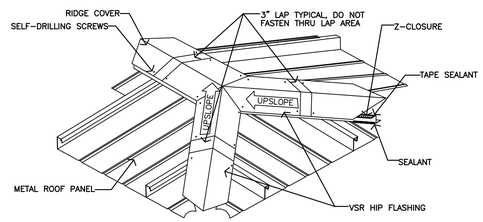
H **ROOF DETAIL @ STANDING SEAM ROOF**
NO SCALE



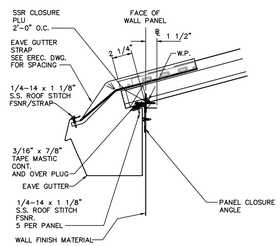
G **ROOF CURB DETAIL**
NO SCALE



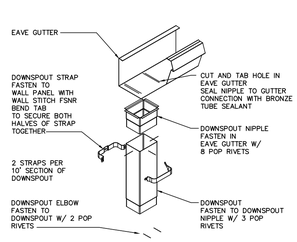
F **GUTTER DETAIL**
NO SCALE



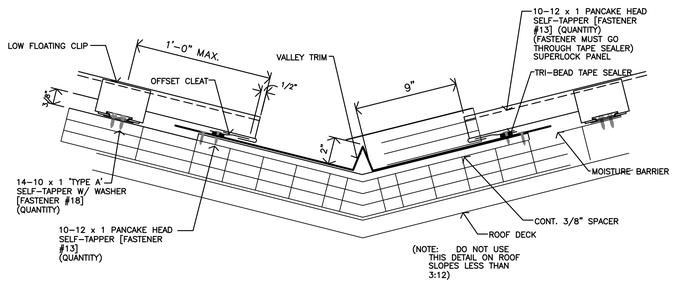
E **HIP/RIDGE DETAIL**
NO SCALE



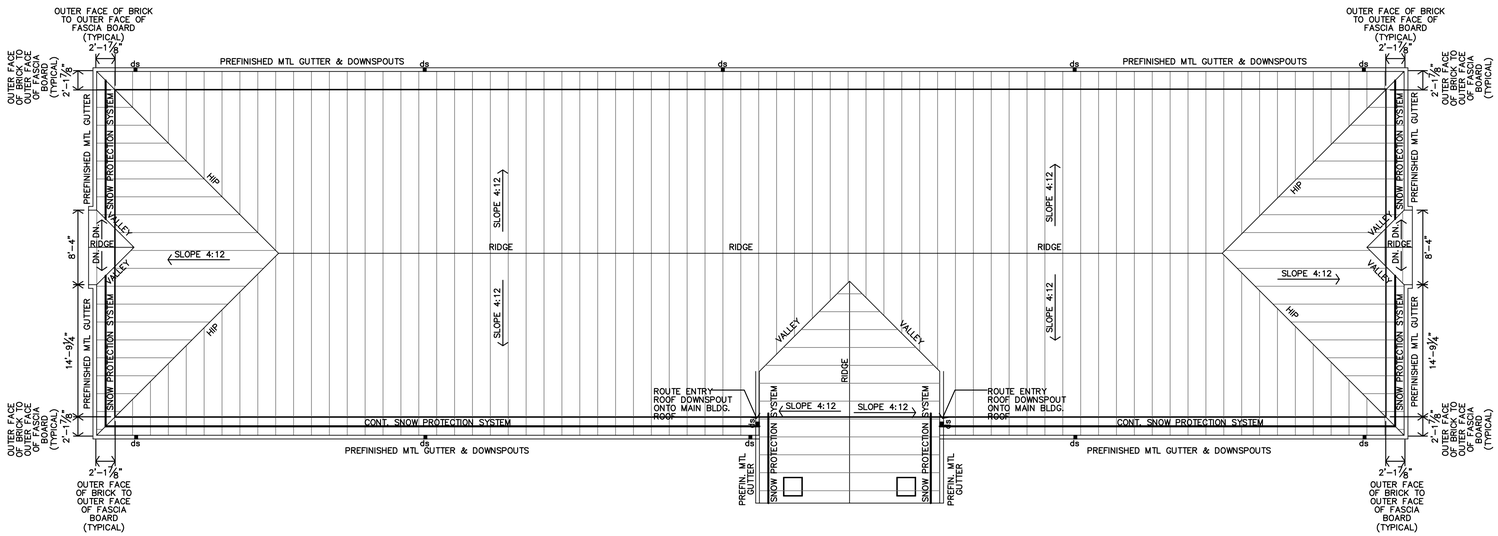
D **GUTTER DETAIL**
NO SCALE



C **GUTTER & DOWNSPOUT**
NO SCALE



B **VALLEY DETAIL**
NO SCALE



A **ROOF PLAN**
1/8"=1'-0"

MANUFACTURER'S-ROOFING DETAILS - CONDITIONS VARY

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

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CHARLES A. RENZ
LICENSED
ARCHITECT
5502
6-27-2024
KANSAS
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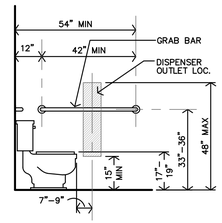
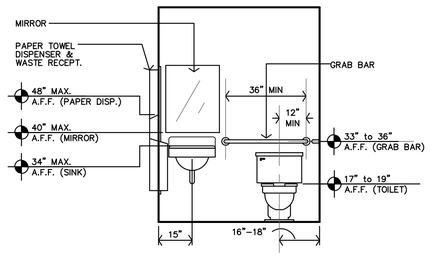


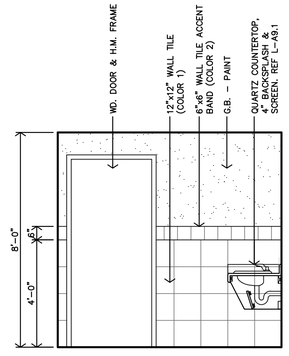
H TYP. HEIGHTS @ H.C. TOILET SIDE WALL

3/8"=1'–0" FOR HC HEIGHTS & LOCATIONS ONLY



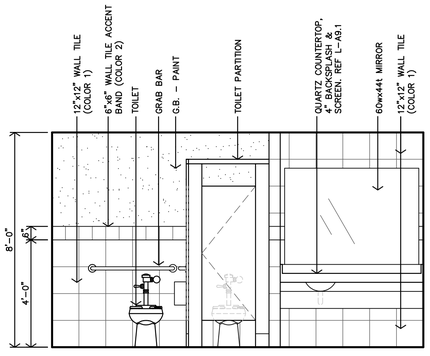
G TYP. HEIGHTS @ H.C. TOILET BACK WALL

3/8"=1'–0" FOR HC HEIGHTS & LOCATIONS ONLY



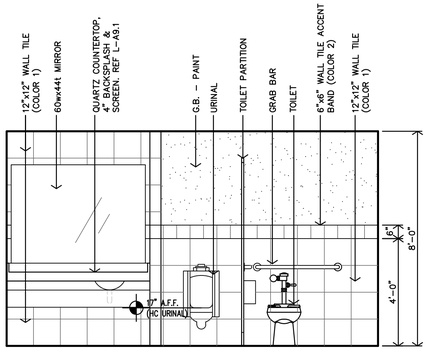
F MEN'S RESTROOM #114 INTERIOR ELEVATION

3/8"=1'–0" NOTE: WOMEN'S #115 MIRRORED



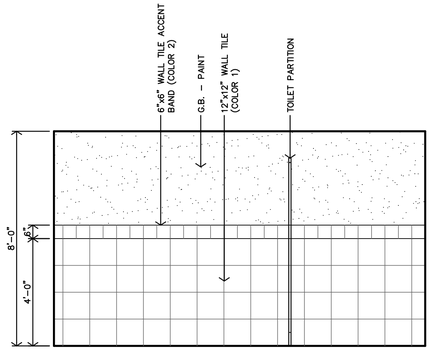
E WOMEN'S RESTROOM #115 INTERIOR ELEVATION

3/8"=1'–0"



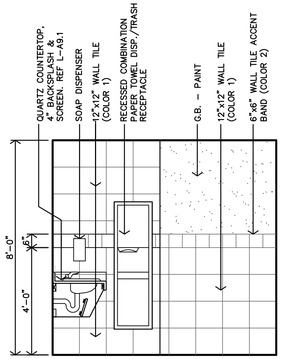
D MEN'S RESTROOM #114 INTERIOR ELEVATION

3/8"=1'–0"



C MEN'S RESTROOM #114 INTERIOR ELEVATION

3/8"=1'–0" NOTE: WOMEN'S #115 MIRRORED

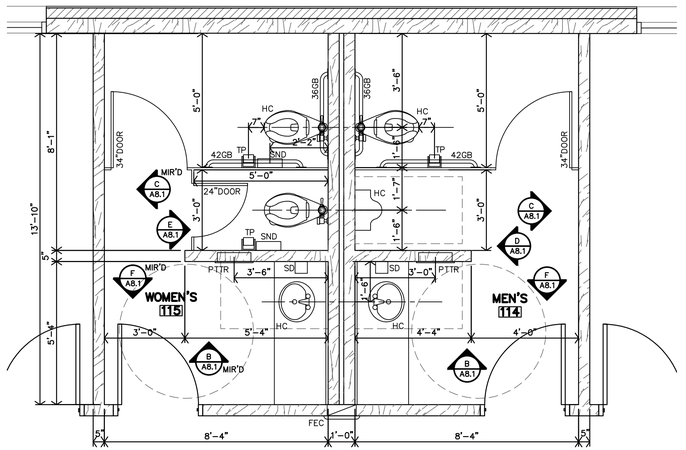


B MEN'S RESTROOOM #114 INTERIOR ELEVATION

3/8"=1'–0" NOTE: WOMEN'S #115 MIRRORED & SIMILAR

TOILET ACCESSORY LEGEND

M	MIRROR
SD	SOAP DISPENSER
TP	TOILET PAPER DISPENSER
GB	GRAB BAR
PTTR	COMBINATION PAPER TOWEL DISPENSER/TRASH RECEPTOR
HC	HANDICAPPED
SND	SANITARY NAPKIN DISPOSAL



A ENLARGED RESTROOM PLANS

3/8"=1'–0"

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

ASTRA BANK
OPERATIONS BUILDING - NEW FACILITY
HAYS, KANSAS

CHARLES A. RENZ
LICENSED
5502
6-27-2024
KANSAS
PROFESSIONAL ARCHITECT

REVISION:

DATE: 6-27-2024
JOB: 24-3424
SHEET NO.:

A8.1

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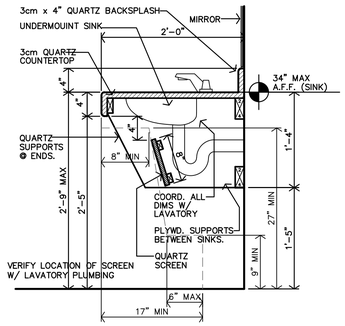
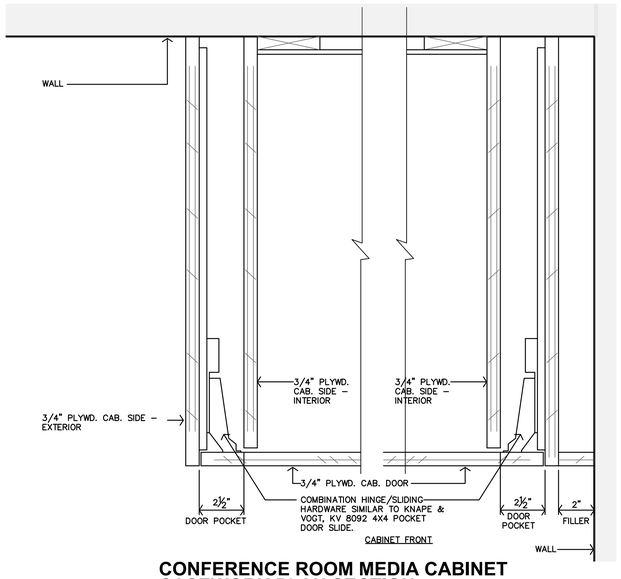
CASEWORK NOTES

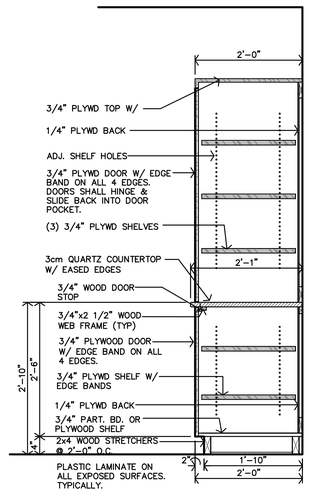
1. PLASTIC LAMINATE ON ALL EXPOSED SURFACES UNLESS NOTED OTHERWISE.
2. PLASTIC LAMINATE AT ALL EXPOSED EDGES UNLESS NOTED OTHERWISE.
3. ENTIRE CABINET DOOR (INTERIOR & EXTERIOR) TO BE PLASTIC LAMINATE.
4. INTERIOR UNEXPOSED SURFACES TO BE "BLACK" MELAMINE UNLESS NOTED OTHERWISE.
5. 3cm QUARTZ COUNTERTOPS ARE TO HAVE EASED EDGES U.N.O..
6. PROVIDE ALL NECESSARY FILLERS OF MATCHING MATERIALS. INSTALL CONTINUOUS FINISH FLOORING BASE @ CASEWORK TOEKICK.
7. ALL ADJUSTABLE SHELVING SHALL BE 3/4" THICK MATERIAL.
8. ALL ADJUSTABLE UNEXPOSED MELAMINE SHELVING SHALL HAVE ALL FOUR EDGES TAPED.
9. EXPOSED ADJUSTABLE SHELVING SHALL HAVE FULL THICKNESS PLASTIC LAMINATE ALL ALL EXPOSED SURFACES AND ALL FOUR EDGES. TAPE IS NOT ACCEPTABLE.
10. PROVIDE BLOCKING BEHIND WALL FOR SUPPORT OF CABINETRY.
11. UPPER CABINETS SHALL HAVE (2) ADJUSTABLE SHELVES PER EACH, UNLESS NOTED OTHERWISE.
12. REFERENCE ELEVATIONS FOR NUMBER OF ADJUSTABLE SHELVES AT LOWER CABINET UNITS.
13. STAINING AND PAINTING OF ALL HARDWOOD TRIM SHALL BE PER THE PAINTER.
14. MULTIPLE LAMINATES (PREMIUM FINISHES AS WELL) MAY BE SELECTED BY ARCHITECT.
15. CABINETS TO BE FLUSH OVERLAY UNLESS NOTED OTHERWISE.
16. PROVIDE & INSTALL ANGLE SUPPORT BRACKETS WHERE COUNTERTOP SPAN EXCEEDS 48" IN WIDTH.
17. BACKSPLASHES TO MATCH COUNTERTOP MATERIALS W/ EASED OUTER EDGES.



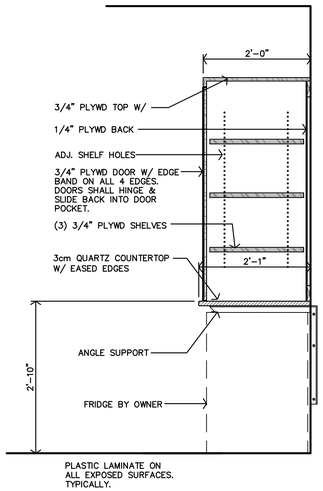
L TOILET VANITY SECTION
1"=1'-0"



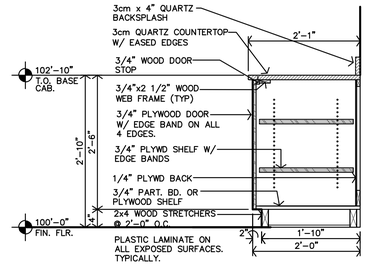
K CONFERENCE ROOM MEDIA CABINET CASEWORK PLAN SECTION
3"=1'-0"



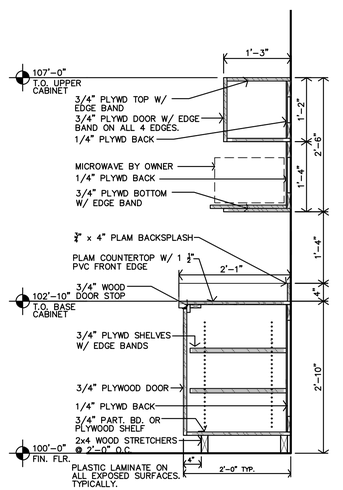
J CONFERENCE ROOM CASEWORK SECTION
3/4"=1'-0"



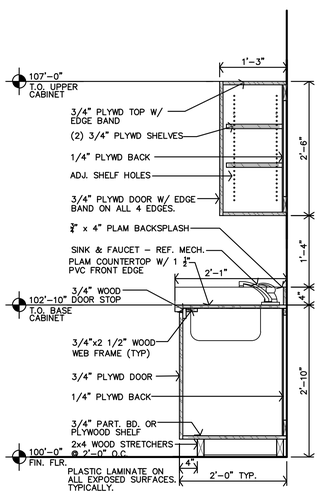
H CONFERENCE ROOM CASEWORK SECTION
3/4"=1'-0"



G CONFERENCE ROOM CASEWORK SECTION
3/4"=1'-0"



F BREAK ROOM CASEWORK SECTION
3/4"=1'-0"



E BREAK ROOM CASEWORK SECTION
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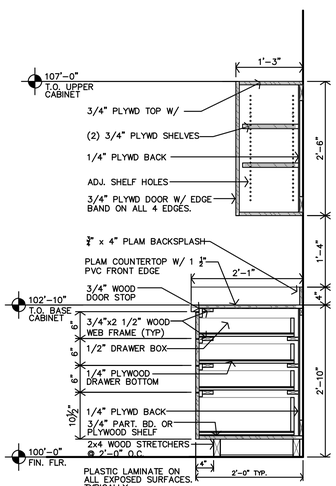

D BREAK ROOM CASEWORK SECTION
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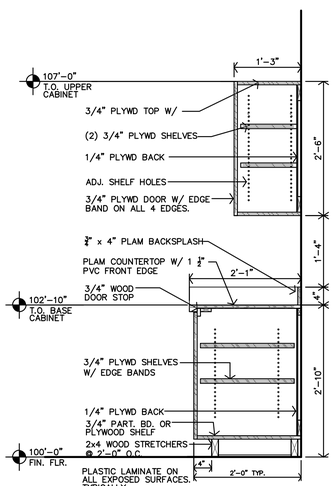
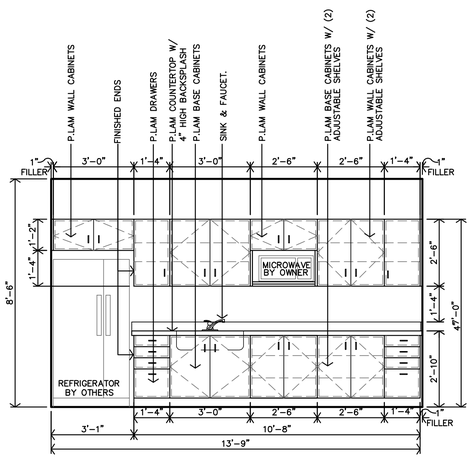
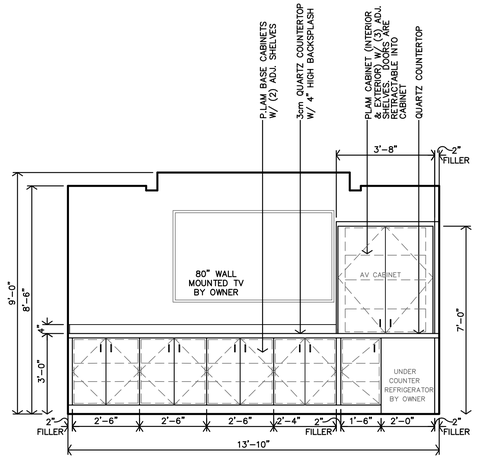


C BREAK ROOM CASEWORK SECTION
3/4"=1'-0"



B BREAK ROOM CASEWORK ELEVATION
3/8"=1'-0"



A CONFERENCE ROOM CASEWORK ELEVATION
3/8"=1'-0"

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730 N. Ninth
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1881 Main Street, Suite 301
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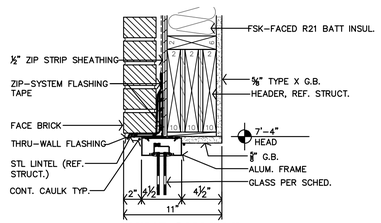
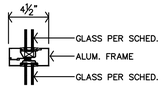
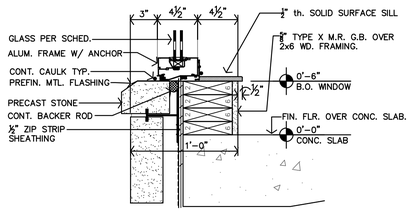


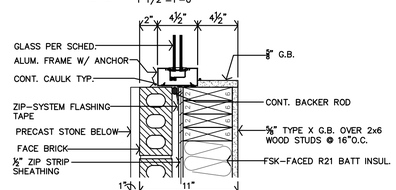
Y **WINDOW "A" HEAD DETAIL**
1 1/2"=1'-0"



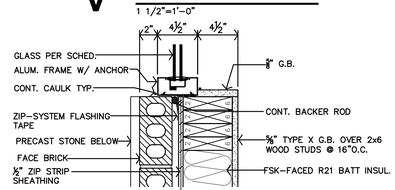
X **WINDOW "A" MULLION DETAIL**
1 1/2"=1'-0" RAIL DTL. SIM.



W **WINDOW "A" SILL DETAIL**
1 1/2"=1'-0"



V **WINDOW "A" JAMB DETAIL**
1 1/2"=1'-0"



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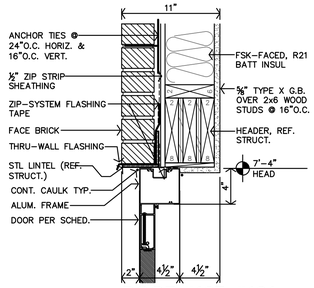
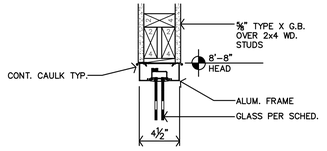
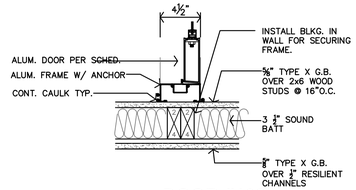


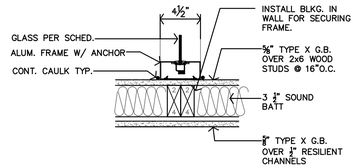
T **DOOR #107, #121 HEAD DETAIL**
1 1/2"=1'-0"



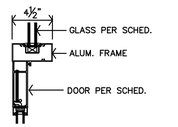
S **DOOR #102 HEAD DETAIL**
1 1/2"=1'-0"



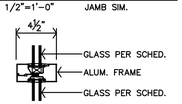
R **DOOR #102 JAMB DETAIL**
1 1/2"=1'-0"



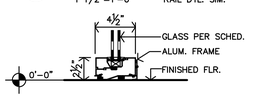
Q **DOOR #102 JAMB DETAIL**
1 1/2"=1'-0"



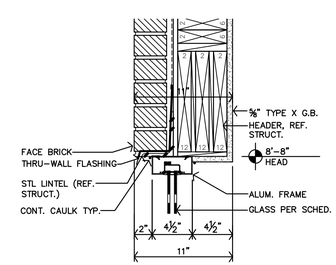
P **DOOR #101, #102 HEAD DETAIL**
1 1/2"=1'-0" JAMB SIM.



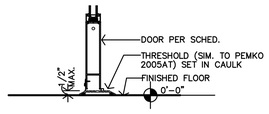
O **DOOR #101, #102 MULLION DETAIL**
1 1/2"=1'-0" RAIL DTL. SIM.



N **DOOR #101, #102 SILL DETAIL**
1 1/2"=1'-0"



M **DOOR #101 HEAD DETAIL**
1 1/2"=1'-0"



L **DOOR #101, #107, #121 THRESHOLD DETAIL**
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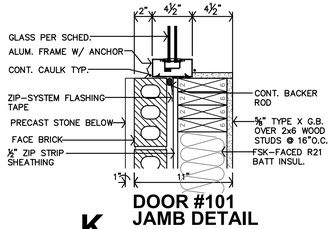
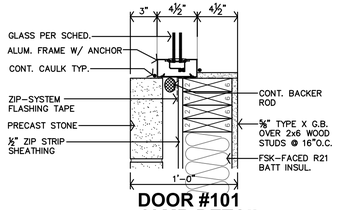


K **DOOR #101 JAMB DETAIL**
1 1/2"=1'-0"



J **DOOR #101 JAMB DETAIL**
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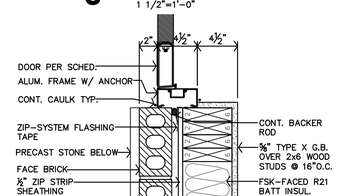
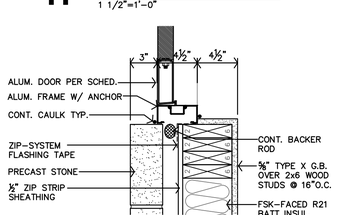


H **DOOR #101, #107, #121 JAMB DETAIL**
1 1/2"=1'-0"



G **DOOR #101, #107, #121 JAMB DETAIL**
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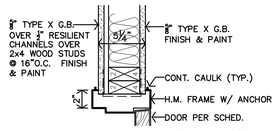

F **TYP. INTERIOR DOOR JAMB DETAIL**
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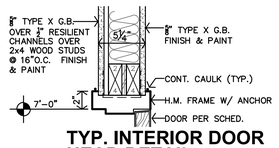
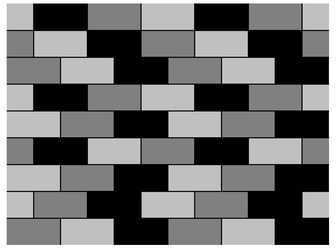


E **TYP. INTERIOR DOOR HEAD DETAIL**
1 1/2"=1'-0"



D **LVT FLOOR PATTERN**
1/4"=1'-0" NOTE: 18"x36" TILES

INTERIOR FINISH SCHEDULE

FINISHES & INSTRUCTIONS

P1 LATEX ENAMEL PAINT — C1 CARPET TILE — RB RUBBER COVE BASE — FP FIBERGLAS REINF. PANEL
P2 LATEX ENAMEL PAINT — LVT LUXURY VINYL TILE, CLEAN & WAX — CT CERAMIC TILE — SC SEALED CONCRETE

NO.	DESCRIPTION	FLOOR			BASE		N.WALL		E.WALL		S.WALL		W.WALL		CEILING			HGT.	NOTES
		CARPET TILE	LUXURY VINYL TILE	SEALED CONC.	CERAMIC TILE	4" RUBBER	5/8" G.B.	CERAMIC TILE WAINSCOT	5/8" G.B.	CERAMIC TILE WAINSCOT	5/8" G.B.	CERAMIC TILE WAINSCOT	5/8" G.B.	CERAMIC TILE WAINSCOT	2x2 SUSPENDED	STRUCTURE EXPOSED	5/8" G.B.		
101	VESTIBULE		LVT			RB	P1		P1		P1		P1		●			8'-8"	2
102	HALL		LVT			RB	P1		P1		P1		P1		●			8'-8"	2
103	OFFICE	C1				RB	P1		P1		P2		P1		●			8'-6"	
104	OFFICE	C1				RB	P1		P1		P2		P1		●			8'-6"	
105	OFFICE	C1				RB	P1		P1		P2		P1		●			8'-6"	
106	OFFICE	C1				RB	P1		P1		P2		P1		●			8'-6"	
107	HALL		LVT			RB	P1		P1		P1		P1		●			8'-6"	2
108	OFFICE	C1				RB	P2		P1		P1		P1		●			8'-6"	
109	OFFICE	C1				RB	P2		P1		P1		P1		●			8'-6"	
111	OFFICE	C1				RB	P2		P1		P1		P1		●			8'-6"	
112	MECHANICAL			SC		RB	P1		P1		P1		P1				P1	10'-1"–	
113	CONFERENCE ROOM	C1				RB	P2		P1		P1		P1		●			8'-6"/9'-0"	
114	MEN'S TOILET		LVT		CT		P1	CT	P1	CT	P1	CT	P1	CT	●			8'-0"	1,3
115	WOMEN'S TOILET		LVT		CT		P1	CT	P1	CT	P1	CT	P1	CT	●			8'-0"	1,3
116	OFFICE	C1				RB	P2		P1		P1		P1		●			8'-6"	
117	STORAGE	C1				RB	P2		P1		P1		P1		●			8'-6"	
118	I.T.			SC		RB	P1		P1		P1		P1				P1	10'-1"–	
119	JANITOR/MECHANICAL			SC		RB	FP		P1		P1		FP				P1	10'-1"–	4
121	OPEN OFFICE		LVT			RB	P1		P1		P2		P1		●		P1	9'-0"/10'-1"–	2
122	HALL		LVT			RB	P1		P1		P1		P1		●			8'-6"	2
123	BREAKROOM		LVT			RB	P1		P1		P2		P1		●			8'-6"	3

GENERAL NOTES:
A. ALL GYPSUM BOARD AREAS WHICH ARE ACCESSORIES TO THE ROOM INCLUDING BUT NOT LIMITED TO SOFFITS, BULKHEADS, TRIM, ETC. SHALL BE PAINTED REGARDLESS OF WHETHER IT IS SPECIFICALLY INDICATED PER SCHEDULE.
B. INSTALL METAL SCHLUTER TRANSITION TRIM AT FLOOR & WALL MATERIAL TRANSITIONS, UNLESS BULLNOSE OR WOOD IS INDICATED.
C. INSTALL MOISTURE RESISTANT G.B. AT ALL PLUMBING WALLS SCHEDULED FOR G.B.
D. INSTALL TRANSITION STRIP BETWEEN FLOOR MATERIAL OF DIFFERING HEIGHTS.
E. ALL H.M. DOORS & FRAMES TO BE SPRAY PAINTED (NOT BRUSHED) W/ INDUSTRIAL ENAMEL
F. FLOORING CONTRACTOR SHALL VERIFY THAT SUBFLOOR IS LEVEL AND PROPERLY PREPPED PRIOR TO INSTALLATION OF ANY FLOORING MATERIALS.
G. ALL CONTROL JOINTS AT EXPOSED CONCRETE FLOORS SHALL RECEIVE SEALANT COMPATIBLE W/ FLOOR SEALER.
H. CONTRACTOR SHALL COORDINATE WITH INTERIOR ELEVATIONS, FLOOR PLANS AND MISCELLANEOUS DETAILS TO VERIFY ALL AESTHETIC ACCENTS AND DETAILS.
I. ALL EXPOSED GYPSUM BOARD SHALL RECEIVE A LEVEL 5 FINISH.

SPECIAL NOTES:
1. REFERENCE SHEET A8.1 FOR CERAMIC WALL TILE ELEVATIONS.
2. LVT FLOOR PATTERN PER D-A10.1. RUN LONG EDGE OF TILE EAST-WEST.
3. RUN LONG EDGE OF LVT FLOORING EAST-WEST.
4. INSTALL FIBERGLASS REINFORCED PANEL (FRP) FULL HEIGHT AT ENTIRE NORTH & WEST WALLS.

DOOR SCHEDULE

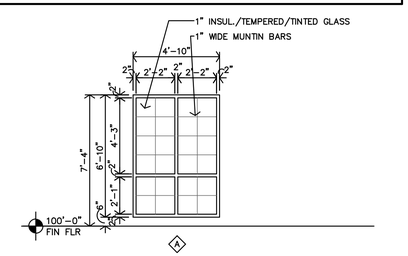
MARK	DOOR SIZE W	DOOR SIZE H	DOOR SIZE T	DOOR MATERIAL ALUMINUM	DOOR MATERIAL S.C. WOOD	DOOR TYPE	FRAME MATERIAL ALUMINUM	FRAME MATERIAL HOLLOW METAL	FRAME TYPE	DETAILS	REMARKS
101	3'-0"	7'-0"	1 3/4"	●		A	●		5	A-A4.2 & G,H,J,K,L,M,N,O,P-A10.1	1,3
102	3'-0"	7'-0"	1 3/4"	●		A	●		6	A-A4.2 & N,O,P,Q,R,S-A10.1	1,3
103	3'-0"	7'-0"	1 3/4"		●	A		●	3	E,F-A10.1	
104	3'-0"	7'-0"	1 3/4"		●	A		●	4	E,F-A10.1	
105	3'-0"	7'-0"	1 3/4"		●	A		●	2	E,F-A10.1	
106	3'-0"	7'-0"	1 3/4"		●	A		●	2	E,F-A10.1	
107	3'-0"	7'-0"	1 3/4"	●		A	●		2	G,H,L,T-A10.1	1,2,3
108	3'-0"	7'-0"	1 3/4"		●	C		●	2	E,F-A10.1	
109	3'-0"	7'-0"	1 3/4"		●	C		●	2	E,F-A10.1	
111	3'-0"	7'-0"	1 3/4"		●	C		●	1	E,F-A10.1	
112	3'-0"	7'-0"	1 3/4"		●	C		●	2	E,F-A10.1	
113	3'-0"	7'-0"	1 3/4"		●	C		●	2	E,F-A10.1	
114	3'-0"	7'-0"	1 3/4"		●	C		●	2	E,F-A10.1	
115	3'-0"	7'-0"	1 3/4"		●	C		●	2	E,F-A10.1	
116	3'-0"	7'-0"	1 3/4"		●	C		●	2	E,F-A10.1	
117	3'-0"	7'-0"	1 3/4"		●	A		●	2	E,F-A10.1	
118	3'-0"	7'-0"	1 3/4"		●	C		●	2	E,F-A10.1	3
119	3'-0"	7'-0"	1 3/4"		●	A		●	3	E,F-A10.1	
121	3'-0"	7'-0"	1 3/4"	●		A	●		4	G,H,L,T-A10.1	1,2,3
122	3'-0"	7'-0"	1 3/4"		●	A		●	4	E,F-A10.1	

NOTES:
1. CONTRACTOR MUST INSTALL MTL. FLASHINGS & CAULK FOR A WEATHER & WATERTIGHT CONDITION @ ALL EXTERIOR DOORS & DOOR FRAMES/UNITS.
2. PROVIDE & INSTALL TWO PEEPHOLES. VERIFY HEIGHTS WITH ARCHITECT.
3. DOORS & FRAMES SHALL BE PREPARED FOR ELECTRIC STRIKE. DOOR IS ON ACCESS CONTROL SYSTEM.

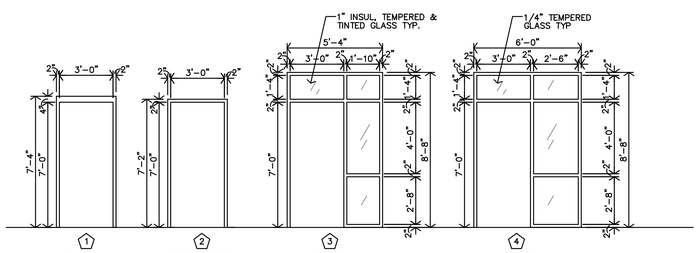
WINDOW SCHEDULE

MARK	SIZE W	SIZE H	STYLE	QUANTITY	DETAILS	NOTES
A	4'-10"	6'-10"	ALUM. STOREFRONT, FIXED	16	B-A4.1 & U,V,W,X,Y-A10.1	1,2,3,4

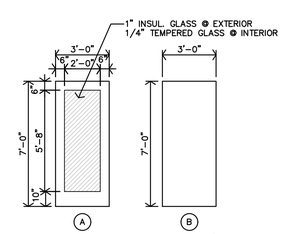
NOTES:
1. CONTRACTOR MUST INSTALL MTL. FLASHINGS & CAULK FOR A WEATHER & WATERTIGHT CONDITIONS @ ALL EXTERIOR WINDOW UNITS.
2. CONTRACTOR MUST INSTALL 1/4" INSUL. OR THERMAL BREAK. CONTINUOUS AROUND WINDOW.
3. CONTRACTOR TO PROVIDE & INSTALL MANUFACTURER'S COORDINATING SUBFRAME, PANNING & END DAM SYSTEM FOR ALL EXTERIOR WINDOWS.
4. 1" WIDE EXTRUDED ALUM. MUNTIN BARS BY WINDOW MANUF. & ADHERED TO EXTERIOR OF WINDOW UNITS.



C **WINDOW TYPES**
1/4"=1'-0"



B **DOOR FRAME TYPES**
1/4"=1'-0"



A **DOOR TYPES**
1/4"=1'-0"

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

JGR

ASTRA BANK
OPERATIONS BUILDING - NEW FACILITY
HAYS, KANSAS

CHARLES A. RENZ
5502
6-27-2024
KANSAS PROFESSIONAL ARCHITECT

REVISION:

DATE: 6-27-2024
JOB: 24-3424
SHEET NO.:

A10.1

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GENERAL NOTES - STRUCTURAL

1. General Information:

   A. The contractor shall verify dimensions and conditions before construction and notify the engineer of any discrepancies, inconsistencies, or difficulties affecting the work before proceeding.
   B. The contractor shall coordinate all disciplines, verifying size and location of all openings, whether shown on structural drawings or not, as called for on architectural, mechanical, or electrical drawings. In the case of work in an existing building the contractor shall scan existing structure to locate all rebar in the area of the new core/opening using ground penetrating radar and notify the engineer of record for review prior to coring/cutting. Conflicts, inconsistencies, or other difficulties affecting structural work shall be called to the architect or engineer's attention for direction before proceeding
   C. All design and construction work for this project shall conform to the requirements of the 2015 International Building Code, as amended by the City of Hays, Kansas.
   D. These drawings are for this specific project and no other use is authorized.

2. Structural Design Load Criteria:

   A. Floor Live= 100psf
   B. Roof Live= 25psf; Roof Dead= 20psf
   C. Snow= P_g = 25psf, P_f=21.75psf, P_m=22psf, C_e=1.0, C_t=1.1, I_s = 1.0
      Ce=1.0, Ct=1.0, Drift per ASCE/SEI 7-10
   D. Lateral Loads:
      1.) Wind V=115 mph, Exposure C
          Occupancy [Risk] Category II, Iw=1.0
          GCpi=+/-0.18
          Design wind pressures to be used for the design of exterior component and cladding materials on the designated zones of wall and roof surfaces shall be per section 30.7 and Table 30.7-2 of ASCE/SEI 7-10. Tabulated pressures shall be multiplied by effective area reduction factors, exposure adjustment factors, and topographic factors where applicable.
      2.) Seismic: S_s = 0.118, S_1 = 0.046
          Occupancy [Risk] Category II, Ie=1.0,
          Site Classification D; Sds=0.126; Sd1=0.073
          Seismic Design Category B
          Basic Seismic Force-resisting System:
          A.17 - Light-framed walls with shear panels of all other materials
          Equivalent Lateral Force Procedure
          (R=2; V=0.063W; Omega=2 1/2; Cd=2)
   E. This project is designed to resist the most critical effects resulting from the load combinations of section 1605.3 of the 2015 International Building Code.

3. Concrete:

   A. All concrete for foundations (walls, grade beams, footings and piers) shall develop minimum ultimate compressive design strength of 3500 psi in 28 days, but not less than 500 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 6 gallons of water per 100 pounds of cement and not over 4 inches of slump.
   B. All concrete for interior flat work shall develop minimum ultimate compressive design strength of 4000 psi in 28 days, but not less than 540 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 5.40 gallons of water per 100 pounds of cement and not over 4 inches of slump. Concrete mix shop drawing shall contain testing data proving concrete design mix shrinkage is less than 0.034% at 28 days when tested according to ASTM C157 (air drying method only).
   C. All concrete for exterior flatwork shall have a minimum design compressive strength of 4500 psi in 28 days, with not less than 560 pounds of cement per cubic yard of concrete, not over 5 gallons of water per 100 pounds of cement, with 6% +/- 1% air entrainment, and a maximum of 4 inches of slump.
   D. The preceding minimum mix requirements may have water-reducing admixtures conforming to ASTM C494 added to the mix at manufacturer's dosage rates for improved workability.
   E. The preceding minimum mix requirements may have up to 15% maximum of the cement content replaced with an approved ASTM C618 Class C fly ash, provided the total minimum cementitious content is not reduced.
   F. All interior concrete slabs on grade shall be placed over 15 mil, Class A Vapor Barrier per ASTM E1745 with less than 0.01 perms, tested after mandatory conditioning. All joints shall be lapped and sealed per manufacturer's recommendations. All penetrations, as well as damaged vapor barrier material shall also be sealed per manufacturer's recommendation prior to concrete placement. Install barrier per manufacturer recommended details at all discontinuous edges (at interior columns, exterior edge of slab, etc.) to ensure terms of warranty are followed. The vapor barrier shall be placed over free-draining granular material as prescribed by the project soils report.
   G. All concrete is reinforced concrete unless specifically called out as unreinforced. Reinforce all concrete not otherwise shown with same steel as in similar sections or areas. Any details not shown shall be detailed per ACI 315 and meet requirements of ACI 318, current editions.
   H. Control joints in dirt formed slab to be as shown on plans. Where not shown, limit controlled areas to not more than 144 square feet, or 12 feet on any side. Slab panel side ratio shall not exceed 1 1/2 to 1.
   I. Contractor shall verify that all concrete inserts, reinforcing and embedded items are correctly located and rigidly secured prior to concrete placement.
   J. Construction joints in beams, slabs, and grade beams shall occur at midspan (middle third) unless noted otherwise. Provide 2 x 4 horizontal keys at construction joints for shear transfer.
   K. No aluminum items shall be embedded in any concrete.

4. Reinforcing Steel:

   A. All reinforcing steel shall conform to the requirements of ASTM A615 or A706 grade 60 steel. Welded plain wire fabric shall be supplied in sheets and conform to the requirements of ASTM A1064.
   B. Clear coverage of concrete over reinforcing steel shall be as follows:

Concrete placed against earth	3"
Formed concrete against earth	2"
Slabs	1"
Beams or Columns	1-1/2"
Other	2"

   All coverage shall be nominal bar diameter minimum.
   C. All dowels shall be the same size and spacing as adjoining main bars (splice lap 48 bar diameters or 24" minimum unless noted otherwise).
   D. At corners of all walls, beams, and grade beams supply corner bars (minimum 2'-0" in each direction or 48 bar diameters) in outside face of wall, matching size and spacing of horizontal bars. Where there are no vertical bars in outside face of wall, supply 3 - #4 vertical support bars for corner bars.
   E. Bars marked continuous and all vertical steel shall be lapped 48 bar diameters (2'-0" minimum) at splices and embedments, unless shown otherwise. Splice top bars near midspan and splice bottom bars over supports, unless noted otherwise.
   F. At all holes in concrete walls and slabs, add 2 - #5 bars (opening dimension plus 96 diameters long) at each of four sides and add 2 - #5 x 5'-0" diagonally at each of four corners of hole. Openings in 8" thick walls are reinforced similar, but with 1 - #5 instead of 2 - #5, respectively.
   G. Unless otherwise covered on architectural plans or specifications, vertical control joints in concrete wall shall be spaced at a maximum of 20'-0" on center and coordinated with the architect. Every other horizontal wall reinforcing bar shall be discontinuous at control joints except heavy top and bottom bars unless noted otherwise. Provide base seal waterstop style number 772 (by Greenstreak Inc. or approved equal) on dirt face side of wall at all walls below grade.
   H. Accessories shall be as specified in latest edition of the ACI Detailing Handbook and the concrete Reinforcing Steel Institute Design Handbook. Maximum accessory spacing shall be 4'-0" on center, and all accessories on exposed surfaces are to have plastic coated feet.
   I. All slabs and stairs not shown otherwise shall be 6" thick with #4 bars at 12" on center each way. All exterior porches and stoops not otherwise detailed may be constructed in any standard manner, solid or hollow, but must be reinforced with #4 bars at 12" on center each way minimum. Porches shall be doweled to adjacent walls or grade beams with #4 bars at 12" on center, hooked or embedded 48 diameters into both members. Slope porches 1/8" per foot for drainage unless noted otherwise.
   J. Allow 1/2 ton of reinforcing bars #4 or larger to be used as directed in the field for special conditions by the engineer of record (labor for placing same to be included).

5. Structural Steel:

   A. All structural steel beams and columns shall be ASTM A992, grade 50 steel and all miscellaneous steel shall be ASTM A36 grade steel (except at moment connections where plates shall be ASTM A572, grade 50). Hollow Structural Sections (HSS) shall be ASTM A500, grade C. Fabrication and erection shall be in accordance with AISC 303-05 "Code of Standard Practice for Steel Buildings and Bridges" in the 13th Edition of the AISC Steel Construction Manual.
   B. All welding shall conform to the recommendations of the AWS.
   C. All exterior steel and connections, and brick relief angles shall be hot-dip galvanized.
   D. All bolts not otherwise specified shall be 3/4" diameter high strength (ASTM A325-N). All bolts shall be fully pretensioned. All beam connections shall be designed per the AISC Steel Construction Manual "Framed Beam Connections" for the indicated reactions or at least 0.4 x beam total shear capacity, Vn/Omega, shown in the maximum total uniform load tables, whichever is greater; and, shall account for eccentricity when the bolt line is more than 2Δ from the center of the support. All connections must be two bolt minimum. Additional connection elements may not be specifically shown in the conceptual details in this set but may be required by the final connection design, such as stiffener plates, doubler plates, supplement/reinforcing plates or other connection material. Connection design and shop drawing preparation shall be completed under the direct supervision of a professional engineer licensed in the state the project is located and shop drawings and connection calculations shall bear his seal. The above loading information is given at the service-load level. Allowable Stress Design is to be used in the selection and completion of the connection design and details.
   E. All anchor bolts shall be 3/4" diameter, ASTM F1554, Grade 36 unless noted otherwise. Washers of minimum size and thickness for the given anchor diameter in Table 14-2 of the AISC Steel Construction Manual shall be provided at every column anchor bolt. Washers shall have a standard size hole for the anchor bolt. At building perimeter columns and columns at braced frames washers shall be welded all around to the column base plate with 3/16" fillet weld.
   F. Allow 0.5 tons structural steel to be used as directed in field for special conditions by the engineer of record. Cost for shop drawings, fabrication, delivery, detailing, and erection to be included. 50% of structural steel allowance shall be bid as miscellaneous galvanized angle and plate.

6. Post-Installed Anchors:

   A. Post-installed anchors shall be used only where specified on the drawings unless approved in writing by the engineer of record. See drawings for anchor diameter, spacing and embedment. Performance values of the anchors shall be obtained for specified products using appropriate design procedures and/or standards as required by the governing building code. Anchors installed in concrete shall have an ICC-ES Evaluation Service Report. Special inspection is required for all post-installed anchors. The general contractor shall coordinate an on-site meeting with the post-installed anchor manufacturer field representative and subcontractor performing the anchor installation to educate the construction team on the anchor installation guidelines and requirements. The contractor shall send a record copy of the meeting meetings to the design team.
   B. Mechanical anchors used in cracked and uncracked concrete shall have been tested and qualified for use in accordance with ACI 355.2 and ICC-ES AC193. All anchors shall be installed per the anchor manufacturer's written instructions.
   C. Adhesive anchors used in cracked and uncracked concrete shall have been tested and qualified for use in accordance with ICC-ES AC308. All anchors shall be installed per the anchor manufacturer's written instructions.
   D. Mechanical anchors used in solid grouted masonry shall have been tested and qualified for use in accordance with ICC-ES AC01. All anchors shall be installed per the anchor manufacturer's written instructions.
   E. Adhesive anchors used in solid grouted masonry shall have been tested and qualified for use in accordance with ICC-ES AC58. All anchors shall be installed per the anchor manufacturer's written instructions.

7. Foundations:

   A. The soil investigation was prepared by GSI Engineering, LLC. A UES Company (UES), the report number is A241525.00420.000 and their telephone number is 316-554-0725.
   B. Spread footings, grade beams, and retaining walls are designed to bear on engineered fill or undisturbed soil capable of safely sustaining 3,000psf.
   C. Contractor shall provide for dewatering at excavations from either surface water or seepage.
   D. All foundation excavations shall be inspected by a qualified soil engineer, approved by the architect and/or structural engineer, prior to placement of steel or concrete. This inspection shall be at the owner's expense.
   E. Moisture content in soils beneath building locations should not be allowed to change after footing excavations and after grading for slabs on grade are completed. If subgrade materials become desiccated or softened by water or other conditions, recompact materials to the density and water content specified for engineered fill. Do not place concrete on frozen ground.

8. Concrete Block Masonry:

   A. Concrete block used in exterior walls or load bearing walls shall meet the requirements of ASTM C90 and have a minimum net compressive strength of 2650 psi and laid up using type N mortar such that f'm equals 2000 psi. Mortar shall be volume proportion based cement lime mortar. Proportioning shall be completed by box measure. Any block in contact with earth shall be normal weight units, laid using type "S" mortar and grouted solid.
   B. The contractor shall provide adequate temporary bracing for all masonry walls during construction.
   C. All concrete block shall have 9 gage (or larger) horizontal joint reinforcing (ladder or truss) per architectural drawings and specifications (16" maximum vertical spacing).
   D. Cavity wall construction shall be reinforced as designed for specific concrete block used. The horizontal joint reinforcing shall be of the ladder or truss style per specification and continuous between brick and block, as prescribed by architectural drawings.
   E. Concrete block shall be reinforced as follows in 6", 8", 10", and 12" walls unless noted otherwise:
      1.) Vertical reinforcing shall be a minimum of 1 - #4 bar in 6" and 8" walls and 2 - #4 bars in 10" and 12" walls at 4'-0" on center, at each corner, at each door and window jamb, each side of control joints and in the end void of each length of wall. Lap splices for masonry vertical reinforcing shall be 48 bar diameters or 24" minimum.
      2.) Horizontal reinforcing:
          A.) Horizontal joint reinforcing as noted above.
          B.) Continuous horizontal bars shall be included per section or detail in bond beam or optional running bond beam where noted. Where bond beams are continuous at corners of walls, supply corner bars matching size of horizontal bars (minimum 2'-0" or 40 bar diameters in each direction).
   F. Grout, where noted above, shall have a minimum design ultimate compressive strength of 2500 psi at 28 day test and 3/8" maximum aggregate size.
   G. Non-load bearing concrete block walls shall be isolated from adjacent structural elements with vertical 3/8" control joints and at the top of the wall with 1" air space or compressible material and support per architectural detail.
   H. Unless otherwise covered on architectural plans or specifications, vertical control joints in masonry construction shall be 3/8" wide, full height of wall. Joints shall be spaced at a maximum of 24'-0" on center and coordinated with the architect. All horizontal joint reinforcing shall be discontinuous at control joints in masonry. All bond beam horizontal reinforcing shall be continuous through control joints.
   I. Lintels over all openings shall be per 3/S0.3. All exterior lintels to be galvanized.

9. Timber and Wood Framing:

   A. Quality and construction of wood framing members and their fasteners for load supporting purposes not otherwise indicated on the drawings shall be in accordance with the 2015 International Building Code.
   B. All studs and top and bottom plates shall be Spruce-Pine-Fir No. 2 grade or Southern yellow pine No. 2 grade, visually graded lumber, with an allowable fiber stress in bending of 850 psi minimum and an elastic modulus of 1,400,000 psi unless noted otherwise. All joist, truss members and headers to be No. 2 grade DF (unless noted otherwise).
   C. Blocking of stud bearing walls and shear walls shall be solid, matching sheathing joints.
   D. Joist blocking and bridging shall be solid wood or cross bridging of either wood or metal straps. Spacing, in any case, shall not exceed 8'-0".
   E. Wood members and sheathing shall be fastened with number and size of fasteners not less than that set forth in Table 2304.9.1 of the International Building Code. Roof diaphragms shall be edge nailed with 8d ring shank nails at 6" and at 12" field unless noted otherwise.
   F. Sill plates shall be bolted to concrete slabs with 1/2" diameter bolts at 32" on center unless noted otherwise (refer to shearwall sched). Provide plate washers at sill plate anchors for shearwalls per shearwall sched. Plates in direct contact with concrete or masonry shall be treated lumber.
   G. Service condition - dry with moisture content at or below 19% in service.
   H. Laminated veneer lumber (LVL) shall have an allowable flexural stress (Fb) of 2,600 psi (reduced by size factor) and an elastic modulus (E) of 1,900,000 psi. Parallel Strand Lumber (PSL) shall have an allowable flexural stress (Fb) of 2,900 psi (reduced by size factor) and an elastic modulus (E) of 2,000,000 psi.
   J. Pre-engineered wood trusses shall be designed in accordance with the Truss Plate Institute's national design standard for metal-plate connected wood truss construction (ANSI/TPI-1 latest edition). Trusses shall be designed and manufactured by an authorized member of the Wood Truss Council of America (WTCA). Truss design shall conform to specified codes, allowable stress increases, deflection limitations and other applicable criteria of the governing code.
   K. Shop drawings showing complete erection and fabrication details and calculations (including connections) shall be submitted to the project architect/engineer for review prior to fabrication and/or erection. Such drawings shall bear the seal of a professional engineer, registered in the state of the project location. Shop drawings shall also be submitted to the local government controlling agency when requested by that agency.
   L. All trusses shall be securely braced both during erection and permanently, as indicated on the approved truss design drawings and in accordance with TPI's commentary and recommendations for handling, installing and bracing metal-plate connected wood trusses (HIB-91, booklet) and the latest edition of ANSI/TPI-1.
   M. The truss manufacturer shall supply all hardware and fasteners for joining truss members together and fastening truss members to their supports. Metal connector plates shall be manufactured by a member of the Wood Truss Council of America (WTCA) and shall be 20 gauge minimum. Connector plates shall meet or exceed ASTM A653, grade 33, with ASTM A924 galvanized coating designation G60.
   N. Shipment, handling, and erection of trusses shall be by experienced, qualified persons and shall be performed in a manner so as not to endanger life or property. Apparent truss damage shall be reported to the truss manufacturer for evaluation prior to erection.Cutting or alteration of trusses is not permitted.
   O. Contractor shall coordinate truss layout for openings and penetrations required by other trades including for plumbing, HVAC, electrical, roof access hatches, chases, etc.
   P. Roof Truss Design criteria:

Top Chord Dead Load	= 15 psf
Top Chord Live Load	= 25 psf
Top Chord Snow Load	= 25 psf
Bottom Chord Dead Load	= 10 psf
Bottom Chord Live Load	= 10 psf
Allowable Total Load Deflection	= L/360
Allowable Live Load Deflection	= L/480, 1/2" maximum

   Q. Construction bracing shall be provided by the contractor as required to keep the building and studs plumb.
   R. Structural members shall not be cut for pipes, etc., unless specifically detailed. Notching and boring of studs and top of plates shall conform to the provisions of section 2308.5.9 and 2308.5.10 of the IBC. Where top plates or sole plates are cut for pipes, ametal tie with minimum 0.058 inches thick and 1 1/2" inches wide shall be fastened to each plate across and to each side of the opening with not less than (6) 16d nails, in accordance section 2308.5.8 of the IBC.
   S. All fasteners for wood to wood connections and wood connectors shall be as indicated in structural drawings or manufacturer literature to achieve full capacity of connector. Submittal must show that alternative will not reduce the capacity of the connection.
   T. Wood hangers and miscellaneous hardware shall have International Building Code approval. Specified hardware in these drawings are manufactured by Simpson Strong-Tie.

10. Shop Drawing Review:

   A. Bob D. Campbell and Company, Inc. will review the General Contractor's (GC) shop drawings and related submittals (as indicated below) with respect to the ability of the detailed work, when complete, to be a properly functioning integral element of the overall structural system designed by Bob D. Campbell and Company, Inc. Deferred submittals shall be submitted to the architect of record for review who shall forward to the building official for review and approval. Design calculations for deferred submittals shall be submitted at the same time as the shop drawings for review. Design calculations shall be prepared and sealed by a Professional Engineer licensed in the state of the project. The deferred submittal items shall not be installed until the deferred submittal documents have been approved by the building official.
   B. Prior to submittal of a shop drawing or any related material to Bob D. Campbell and Company, Inc., the GC shall:
      1) Review each submission for conformance with the means, methods, techniques, sequences and operations of construction and safety precautions and programs incidental thereto, all of which are the sole responsibility of the GC.
      2) Review and approve each submission.
      3) Stamp each submission as approved.
   C. Bob D. Campbell and Company, Inc. shall assume that no submission comprises a variation unless the GC advises Bob D. Campbell and Company, Inc. with written documentation.
   D. Shop drawings and related material (if any) required are indicated below. Should Bob D. Campbell and Company, Inc. require more than ten (10) working days to perform the review, Bob D. Campbell and Company, Inc. shall so notify the GC.
      1) Concrete mix designs and material certificates including admixtures and compounds applied to the concrete after placement.
      2) Reinforcing steel shop drawings including erection drawings and bending details. Bar list will not be reviewed for correct quantities.
      3) Elevations of all reinforced concrete masonry walls at a scale no smaller than 3/8" = 1'-0" showing all required reinforcing.
      4) Grout mix designs (for CMU).
      5) Construction and control joint plans and/or elevations.
      6) Structural steel shop drawings including erection drawings and piece details. Include miscellaneous framing specified on the structural drawings, but do not submit framing specified on non-structural drawings for Bob D. Campbell and Company, Inc. review.
      7) Deferred Submittal: Structural steel connection design calculations submitted concurrently with structural steel shop drawings.
      8) Miscellaneous anchors shown on the structural drawings.
      9) Deferred Submittal: Wood truss design calculations and detailed erection and fabrication drawings. Standard stick framing shop drawings need not be submitted.
      10) Deferred Submittal: Railings and guardrails.
   E. Bob D. Campbell and Company, Inc. shall review shop drawings and related materials with comments provided that each submission has met the above requirements. Bob D. Campbell and Company, Inc. shall return without comment unrequired material or submissions without GC approval stamp.

11. Statement of Structural Special Inspection:

   A. The structural design for this project is based on completion of special inspections during construction in accordance with section 1704 of the 2015 International Building Code. The owner shall employ one or more qualified special inspectors to provide the required special inspections.
   B. The following inspections and tests are required with the frequency (continuous or periodic) as defined within the referenced section or standard listed below. The General Contractor shall provide notification to the inspector when items requiring inspection are ready to be inspected and provide access for those inspections.
      1) Shop Fabrication - structural steel per Section 1704.2.5 unless AISC certified shop
      2) Shop Fabrication - pre-engineered wood trusses per Section 1704.2.5 unless TPI certified shop
      3) Steel Construction per Section 1705.2 and the quality assurance requirements of AISC 341 Chapter J (as referenced by AISC 360)
      4) Concrete Construction per Section 1705.3 and Table 1705.3
         a. Reinforcing Steel Placement
         b. Reinforcing Steel Welding
         c. Cast in Place Anchors
         d. Post Installed Anchors
         e. Design Mix Verification
         f. Concrete Sampling and Testing
         g. Concrete Placement
         h. Concrete Curing
         i. Formwork Shape, Location and Dimensions
      5) Masonry Construction per Section 1705.4 and the quality assurance requirements of TMS 402/ACI530/ASCE5 and TMS602/A530.1/ASCE6 Level B
      6) Verification of Soils per Table 1705.6
      7) Wood Lateral System (periodic)
         a. Wood shearwalls (include sheathing, rim board and bottom plate attachments)
         b. Portal frames
         c. Shear wall and portal frame holdowns
         d. Shear wall tension rod system
      22) Wood Gravity Framing and Placement (adjust frequency of random sampling where indicated as required)
         a. Heavy timber/SCL/glulam beams and supports (periodic)
         b. Headers and jambs (random sampling)
         c. Bearing walls (random sampling)
         d. Connector/hardware installation (random sampling)
         e. Roof trusses (random sampling)
   C. The special inspector shall furnish inspection reports to the building official, owner, architect and structural engineer, and any other designated person.
   D. All discrepancies shall be brought to the immediate attention of the contractor for correction, then, if uncorrected, to the proper design authority, building official and structural engineer.
   E. The special inspector shall submit a final signed report stating that the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans and specifications and the applicable workmanship provisions of the building code.

12. Copyright and Disclaimer:

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   B. I, Christopher A. Beverlin, P.E., registered engineer and a representative of Bob D. Campbell and Company, Inc., do hereby accept professional responsibility as required by the professional registration laws of this state for the structural design drawings consisting of S-series drawings. I hereby disclaim responsibility for all other drawings in the construction document package, they being the responsibility of other design professionals whose seals and signed statements may appear elsewhere in the construction document package.

STRUCTURAL ABBREVIATIONS

@	AT	FS	FAR SIDE	PERP	PERPENDICULAR
&	AND	FTG	FOOTING	PL	PLATE
Φ	ROUND, DIAMETER	FS	FIELD VERIFY	PLF	POUNDS PER LINEAR FOOT
ADTL	ADDITIONAL	FV	FAR SIDE	PJP	PARTIAL JOINT PENETRATION
AFF	ABOVE FINISHED FLOOR	FTG	FOOTING	PSF	POUNDS PER SQUARE FOOT
ALT	ALTERNATE	FV	FIELD VERIFY	PSI	POUNDS PER SQUARE INCH
ARCH	ARCHITECTURAL	GA	GAGE	QTY	QUANTITY
BLDG	BUILDING	GALV	GALVANIZE(D)	RAD	RADIUS
B/	BOTTOM OF	GEN	GENERAL	RD-#	ROOF DECK TYPE
BM	BEAM	GR	GRADE	REF	REFERENCE
BOTT	BOTTOM	HORIZ	HORIZONTAL	REINF	REINFORCEMENT
BRG	BEARING	HSS	HOLLOW STRUCTURAL SECTION	REQD	REQUIRED
C	CAMBER		INSIDE FACE	REV	REVISION
CD-#	CONCRETE DECK TYPE	INFO	INFORMATION	RLL	ROOF LIVE LOAD
CJ	CONSTRUCTION/CONTROL JOINT	INT	INTERIOR	RTU	ROOF TOP UNIT
CJP	COMPLETE JOINT PENETRATION	JST	JOIST	SC	SLIP CRITICAL
CL	CENTERLINE	JT	JOINT	SCHED	SCHEDULE(D)
CMU	CONCRETE MASONRY UNIT		KIPS (1000 LBS)	SECT	SECTION
COL	COLUMN	KSF	KIPS PER SQUARE FOOT	SHT	SHEET
CONC	CONCRETE	KSI	KIPS PER SQUARE INCH	SIM	SIMILAR
CONN	CONNECTION	LBS, #	POUNDS	SJ	SAW JOINT
CONT	CONTINUOUS	Ld	DEVELOPMENT LENGTH	SL	SNOW LOAD
COORD	COORDINATE	LL	LIVE LOAD	SOG	SLAB-ON-GRADE
COV, CVR	COVER	LLH	LONG LEG HORIZONTAL	SOG-#	SLAB-ON-GRADE TYPE
DBL	DOUBLE	LLV	LONG LEG VERTICAL	SPCG	SPACING
DET	DETAIL	LONG	LONGITUDINAL	SPEC	SPECIFICATION
DIA	DIAMETER	LSLT	LONG-SLOTTED HOLE TRANSVERSE	SPRT	SUPPORT
DIM	DIMENSION	LTWT	LIGHTWEIGHT	SQ	SQUARE
DL	DEAD LOAD		MOMENT FORCE	SS	STAINLESS STEEL
DWG	DRAWING	MAX	MAXIMUM	SSLT	SHORT-SLOTTED HOLE TRANSVERSE
EA	EACH	MECH	MECHANICAL	STD	STANDARD
EF	EACH FACE	MFGR	MANUFACTURER	STIFF	STIFFENER
EJ	EXPANSION JOINT	MIN	MINIMUM	STIR	STIRRUP
EL, ELEV	ELEVATION	MISC	MISCELLANEOUS	STL	STEEL
EMBED	EMBEDMENT, EMBEDDED	MSRY	MASONRY	STRUCT	STRUCTURE, STRUCTURAL
ENGR	ENGINEER	MTL	METAL	T/	TOP OF
EOD	EDGE OF DECK	NF	NEAR FACE	THRU	THROUGH
EOR	ENGINEER OF RECORD	NS	NEAR SIDE	TOS	TOP OF STEEL, TOP OF SLAB
EOS	EDGE OF SLAB	NTS	NOT TO SCALE	TRANS	TRANSVERSE
EQ	EQUAL	NW	NORMAL WEIGHT	TRS	TRUSSES
EQUIP	EQUIPMENT	OC	ON CENTER	TYP	TYPICAL
EW	EACH WAY	OF	OUTSIDE FACE	UNO	UNLESS NOTED OTHERWISE
EXP	EXPANSION	OPNG	OPENING	V	SHEAR FORCE
EXT	EXTERIOR	OPP	OPPOSITE	VERT	VERTICAL
EXTG, EXIST	EXISTING	OVS	OVERSIZED HOLE	W/	WITH
FD-#	FLOOR DECK TYPE		AXIAL FORCE	W/O	WITHOUT
FDN	FOUNDATION	PAF	POWDER ACTUATED FASTENER	WF	WIDE FLANGE
FF	FAR FACE	PC	PRECAST	WL	WIND LOAD
FIN	FINISH	PCF	POUNDS PER CUBIC FOOT	WP	WORK POINT
FLR	FLOOR	PEMB	PRE-ENGINEERED METAL BUILDING	WWF	WELDED WIRE FABRIC

NAILING SCHEDULE (REFER TO NOTES #1 and #2)

	CONNECTION	ATTACHMENTS (REF NOTE #3 and #4)	
1	JOIST TO SILL OR GIRDER	3- 3" x 0.131" NAILS-TOENAIL	3-8d NAILS-TOENAIL
2	BRIDGING TO JOIST	2- 3" x 0.131" NAILS-TOENAIL EACH END	2-8d NAILS-TOENAIL EACH END
3	SOLE PLATE TO JOIST OR BLOCKING & TRUSS TO TOP PL	3" x 0.131" NAILS AT 8"o.c.-TYPICAL FACE NAIL 4-3" x 0.131" NAILS AT 16"o.c.-BRACED WALL PANELS	16d BOX NAILS AT 16"o.c. MAX. FACE NAILING 3-16d BOX NAILS AT 16"o.c. BRACED WALL PANEL
4	TOP PLATE TO STUD	3- 3" x 0.131" NAILS-END NAIL	2-16d NAILS-END NAIL
5	STUD TO SOLE PLATE	4- 3" x 0.131" NAILS-TOENAIL OR 3- 3" x 0.131" NAILS-END NAIL	4-8d NAILS-TOENAIL OR 2-16d NAILS-END NAIL
6	DOUBLE STUDS	3" x 0.131" NAILS AT 8"o.c.-FACE NAIL	16d BOX NAILS AT 24"o.c. MAX. FACE NAIL
7	DOUBLED TOP PLATES	3" x 0.131" NAILS AT 12"o.c.-FACE NAIL	16d BOX NAILS AT 16"o.c. MAX. FACE NAIL
8	DOUBLE TOP PLATE LAPS AND INTERSECTIONS	12-3" x 0.131" NAILS	8-16d NAILS
9	BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	3-3" x 0.131" NAILS -TOENAIL	3-8d NAILS-TOENAIL
10	RIM JOIST TO TOP PLATE	3" x 0.131" NAILS AT 6"o.c.-TOENAIL	10d NAILS AT 6"o.c. MAX.-TOENAIL
11	TOP PLATE LAPS AND INTERSECTIONS	3- 3" x 0.131" NAILS-FACE NAIL	2-16d NAILS-FACE NAIL
12	CONTINUOUS HEADER, TWO PIECES	3" x 0.131" NAILS AT 10"o.c. ALONG EACH EDGE	16d NAILS AT 16"o.c. MAX. ALONG EACH EDGE-TOENAIL
13	CEILING JOISTS TO PLATE	5- 3" x 0.131" NAILS-TOENAIL	3-8d NAILS-TOENAIL
14	CONTINUOUS HEADER TO STUD	4- 3" x 0.131" NAILS-TOENAIL	4-8d NAILS-TOENAIL
15	CEILING JOISTS, LAPS OVER PARTITIONS	4- 3" x 0.131" NAILS-FACE NAIL	3-16d NAILS-FACE NAIL
16	CEILING JOISTS TO PARALLEL RAFTERS	4- 3" x 0.131" NAILS-FACE NAIL	3-16d NAILS-FACE NAIL
17	RAFTER TO PLATE	3- 3" x 0.131" NAILS-TOENAIL	3-8d NAILS-TOENAIL
18	1" BRACE TO EACH STUD AND PLATE	2- 3" x 0.131" NAILS-FACE NAIL	2-8d NAILS-FACE NAIL
19	BUILT-UP CORNER AND MULTIPLE STUDS	3" x 0.131" NAILS AT 16"o.c.	16d NAILS AT 24"o.c. MAX.
20	BUILT-UP GIRDER AND BEAMS	3" x 0.131" NAILS AT 24"o.c. FACE NAILED TOP AND BOTTOM STAGGERED ON OPPISOTE SIDES 3- 3" x 0.131" NAILS AT ENDS AND EACH SPLICE	20d NAILS AT 32"o.c. MAX. TOP AND BOTTOM, STAGGERED ON OPPSITE SIDES. 2-20d NAILS AT ENDS AND EACH SPLICE
21	BUILT-UP LAMINATED VENEER LUMBER BEAMS	3" x 0.131" NAILS AT 6"o.c. TOP AND BOTTOM ALONG EDGE	16d NAILS AT 12"o.c. TOP AND BOTTOM ALONG EDGE
22	2" PLANKING	4- 3" x 0.131" NAILS AT EACH SUPPORT	16d NAILS AT EACH SUPPORT
23	RIM BOARD TO TRUSS	2 - 3" x 0.131" FACE NAILS (1T/1B @ EA TRUSS)	2-10d NAILS - FACE NAILS (1T/1B @ EA TRUSS)
24	BUILT-UP STUD PACK COLUMNS	REFER TO DETAIL 4/S0.2	REFER TO DETAIL 4/S0.2

NOTES:
1.) ALL NAILS SHALL BE AS NOTED UNLESS OTHERWISE SPECIFIED ON STRUCTURAL DRAWINGS OR ALTERNATE PROVIDED BY ENGINEER IN WRITING.
2.) CONDITIONS NOT SPECIFIED SHALL BE IN ACCORDANCE WITH CURRENT INTERNATIONAL BUILDING CODE.
3.) NAILING DESIGNATION:
    4- 3" x 0.131" NAILS
    - DIAMETER IN INCHES
    - NAIL LENGTH
    - QUANTITY
4.) ALL NAILS NOTED AS 8d, 10d, 16d, ETC. SHALL BE COMMON NAILS UNLESS NOTED BOX.

STRUCTURAL DECK & SLAB SCHEDULE

MARK	DESCRIPTION
SOG-1	4" CONC. SLAB (4000 psi) ATOP 15 MIL VAPOR BARRIER, ATOP 4" GRANULAR LEVELING, ATOP LOW VOLUME CHANGE (LVC) COMPACTED MATERIAL PER GEOTECH SPECIFICATIONS. REINF. SLAB w/ 6x6-W2.1xW2.1 WWF. T/SLAB ELEV = PER PLAN.
SOG-2	4" CONC. SLAB (4500 psi, AIR ENTRAINED) ATOP 4" GRANULAR LEVELING, ATOP LOW VOLUME CHANGE (LVC) COMPACTED MATERIAL PER GEOTECH SPECIFICATIONS. REINF. SLAB w/ 6x6-W2.1xW2.1 WWF. T/SLAB ELEV= PER PLAN.
RD-1	19/32" APA-RATED SHEATHING ATTACH w/ 8d NAILS @ 6"oc AT EDGES AND 12"oc AT FIELD.

NOTES:
1. SOG = SLAB-ON-GRADE TYPE
2. RD = ROOF DECK TYPE

LEGEND:

- (arrow) ...... SPAN DIRECTION OF DECK - DECK TYPE PER SCHEULE ON S0.1
- A# ...... BEAM OR HEADER PER SCHED ON PLAN SHEETS
- A#-U ...... UPSET BEAM OR HEADER PER SCHED ON PLAN SHEETS
- # ...... BEARING WALL TYPE PER SCHED ON S0.2
- A ...... SHEARWALL HOLDDOWN TYPE PER SCHED ON S0.3
- #/# ...... NUMBER OF RESPECTIVE JACK/KING STUDS IN A STUD PACK. REFER TO DETAIL 1 OR 2 ON S0.7
- # ...... NUMBER OF WALL STUDS IN STUD PACK EQUAL TO KING & JAMB STUDS FROM HEADER ABOVE - TYP @ ALL LOCATIONS WITHIN A PILASTER
- A ...... INDICATED PLAN NOTE PER SCHEDULE ON PLAN SHEET WHERE INDICATED
- SW# ...... SHEARWALL TYPE PER SCHED ON S0.3

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JonesGillamRenz
730 N. Ninth 1881 Main Street, Suite 301
Salina, KS 67401 Kansas City, MO 64108
785.827.0386 jgr@jgrarchitects.com

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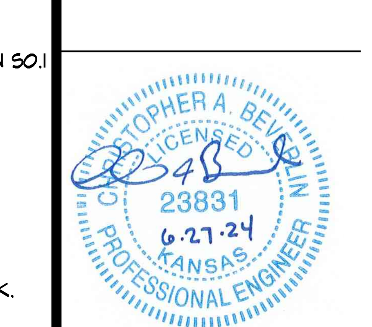

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JOB: 24-3424
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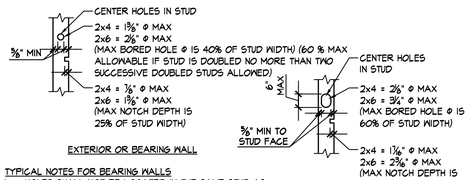
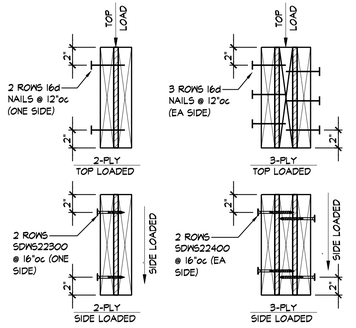


TYPICAL NOTES FOR BEARING WALLS

1. HOLES SHALL NOT BE LOCATED IN THE SAME STUD AS A CUT OR NOTCH
2. CONTACT ARCHITECT PRIOR TO CUTTING OR NOTCHING TO VERIFY SIZE AND LOCATION IF HOLES GREATER THAN 20% STUD WIDTH OR NOTCHES GREATER THAN 10% STUD WIDTH ARE REQUIRED IN TWO OR MORE CONSECUTIVE STUDS
3. NOTCHES OR HOLES NOT PERMITTED IN JAMBS, STUD PACKS AND AT ENDS OF SHEARWALLS
4. STUD SHOES ARE NOT AN ACCEPTABLE REMEDIATION OF OVER-NOTCHED OR OVER-CUT STUDS WITHOUT PRIOR APPROVAL BY EOR
5. SLOT HOLES VERTICALLY FOR SHRINKAGE ALLOWANCE

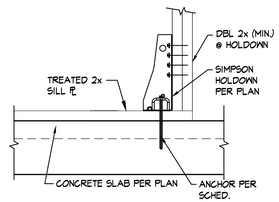
ALLOWABLE HOLES/NOTCHES IN WALL STUDS

DETAIL 1 / S0.2
¾" = 1'-0"



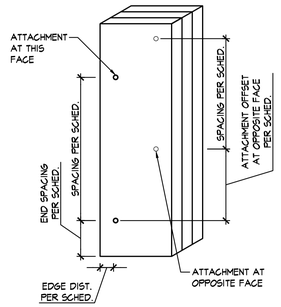
TYPICAL MULTI-PLY HEADER CONNECTION

DETAIL 2 / S0.2
1½" = 1'-0"



TYPICAL HDU HOLDOWN DETAIL

SECTION 3 / S0.2
¾" = 1'-0"



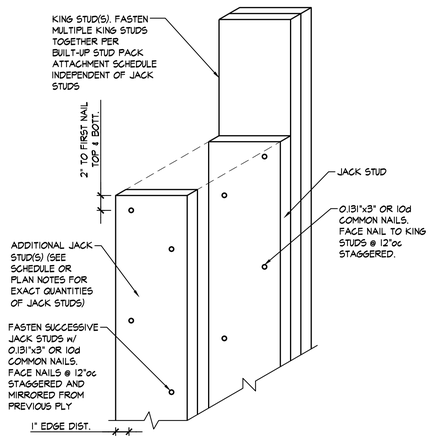
TYPICAL MULTI-PLY STUD CONNECTION

DETAIL 4 / S0.2
1½" = 1'-0"

BUILT-UP STUD PACK ATTACHMENT SCHEDULE

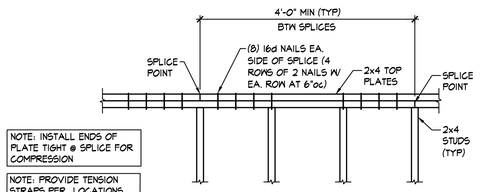
NUMBER OF PLIES	ATTACHMENT AT JAMB STUD PACKS SUPPORTING BEAMS[4]	ATTACHMENT AT WALL STUD PACKS SUPPORTING TRUSSES (IN LOAD BEARING WALLS)[5]
2-PLY MEMBERS	8d NAILS AT 12"oc, 1" FROM EDGE, W/ OPPOSITE EDGE NAILED FROM OPPOSITE SIDE OFFSET 6", @ 12"oc W/ FIRST NAIL 2" FROM EA. END	8d NAILS AT 12"oc, 1" FROM EDGE, W/ OPPOSITE EDGE NAILED FROM OPPOSITE SIDE OFFSET 6", @ 12"oc W/ FIRST NAIL 2" FROM EA. END
3-PLY MEMBERS	20d NAILS AT 16"oc, 1 1/2" FROM EDGE W/ OPPOSITE EDGE NAILED FROM OPPOSITE SIDE OFFSET 8", @ 16"oc W/ FIRST NAIL 3" FROM EA. END	8d NAILS AT 12"oc, 1" FROM EDGE, W/ OPPOSITE EDGE NAILED FROM OPPOSITE SIDE OFFSET 6", @ 12"oc W/ FIRST NAIL 2" FROM EA. END
4-PLY MEMBERS	1/4"Øx5" SIMPSON SDS SCREWS AT 16"oc, 1 1/2" FROM EDGE W/ OPPOSITE EDGE SCREWED FROM OPPOSITE SIDE OFFSET 8", @ 16"oc W/ FIRST SCREW 4" FROM EA. END	3 PLIES ATTACHED PER 3-PLY ATTACHMENT WITH 4TH PLY ATTACHED WITH 8d NAILS AT 12"oc IN 2 ROWS, 1 1/2" FROM EDGE, OFFSET ROWS 6"
5-PLY MEMBERS	1/4"Øx6" SIMPSON SDS SCREWS AT 12"oc, 1 1/2" FROM EDGE W/ OPPOSITE EDGE SCREWED FROM OPPOSITE SIDE OFFSET 6", @ 12"oc W/ FIRST SCREW 4" FROM EA. END	3 PLIES ATTACHED PER 3-PLY ATTACHMENT WITH 4TH & 5TH PLY ATTACHED AT OPPOSITE SIDES WITH 8d NAILS AT 12"oc IN 2 ROWS, 1 1/2" FROM EDGE, OFFSET ROWS 6"
6-PLY MEMBERS	1/4"Øx8" SIMPSON SDS SCREWS AT 12"oc, 1 1/2" FROM EDGE W/ OPPOSITE EDGE SCREWED FROM OPPOSITE SIDE OFFSET 6", @ 12"oc W/ FIRST SCREW 4" FROM EA. END	3-PLIES ATTACHED PER 3-PLY ATTACHMENT WITH 4TH PLY ATTACHED WITH 8d NAILS AT 12"oc IN 2 ROWS, 1 1/2" FROM EDGE, OFFSET ROWS 6" AND 5TH AND 6TH PLIES ATTACHED WITH 1/4"Øx5" SIMPSON SDS SCREWS AT 12"oc IN 2 ROWS, 1 1/2" FROM EDGE, OFFSET ROWS 6"oc W/ FIRST SCREW 4" FROM EA. END

NOTES:
1. ALL BUILT-UP STUD PACKS MUST ALIGN FLOOR-TO-FLOOR WITH SOLID BLOCKING (SQUASH BLOCKS) AT FLOOR CAVITIES.
2. EXTEND ALL STUD PACKS TO LOWEST LEVEL UNLESS NOTED OTHERWISE.
3. ALL NAILS ARE COMMON NAILS UNLESS NOTED OTHERWISE.
4. JAMB STUD PACKS ARE STUDS SUPPORTING STRUCTURAL MEMBERS SUCH AS BEAMS, HEADERS, GIRDER TRUSSES, ETC.
5. WALL STUD PACKS ARE REPETITIVE STUDS BETWEEN WALL PLATES AS SCHEDULED IN THE "STUD BEARING WALL SCHEDULE".



TYPICAL JACK STUD ATTACHMENT

DETAIL 5 / S0.2
1½" = 1'-0"



NOTE: INSTALL ENDS OF PLATE TIGHT @ SPLICE FOR COMPRESSION

NOTE: PROVIDE TENSION STRAPS PER LOCATIONS WHERE TOP PLATE SPLICE IS NOT STAGGERED 4'-0" MIN.

TYPICAL TOP PLATE SPLICE

SECTION 6 / S0.2
¾" = 1'-0"

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4338 Belleview Ave. 816.531.4144
Kansas City, MO 64111 www.bdc-engrs.com

JonesGillamRenz
730 N. Ninth 1881 Main Street, Suite 301
Salina, KS 67401 Kansas City, MO 64108
jgr@jgrarchitects.com
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REVISION:

DATE: 6-27-2024
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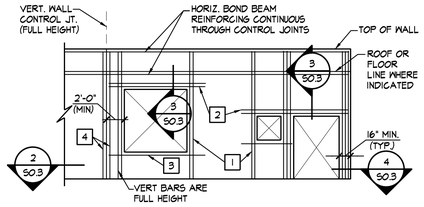


TYPICAL WALL REINFORCING AT OPENINGS

CMU WALL ELEVATION 1 S0.3

NO SCALE

I/S0.02 LEGEND:

1. FULL HEIGHT VERTICAL BARS AS JAMB REINFORCING IN FIRST 2 CELLS ADJACENT TO OPENING. REINFORCE EACH CELL WITH SIZE & QUANTITY OF BAR TO MATCH WALL REINFORCING (1 BAR TYPICAL IN 8" WALLS AND 2 BARS TYPICAL IN 12" WALLS).
2. LINTEL REINFORCING PER SECTION 3/S0.02 EXTEND 2'-0" PAST EDGE OF OPENING ON EACH SIDE (TYPICAL).
3. 2-#5 CONTINUOUS HORIZONTAL BARS AS SILL REINFORCING IN 8" COURSE BELOW OPENING (U.N.O.). EXTEND 2'-0" PAST EDGE OF OPENING ON EACH SIDE (TYPICAL).
4. FULL HEIGHT VERTICAL BARS PER MASONRY VERTICAL REINFORCING SCHEDULE LOCATED IN END CELL AT EACH SIDE OF VERTICAL WALL CONTROL JOINTS.

GENERAL CRITERIA: (SECTION 1/S0.3 CONT.)

1.) VERTICAL REINF. BARS SHALL BE DOWELED TO FOUNDATION WITH A DOWEL OF MATCHING SIZE AND SPACING.

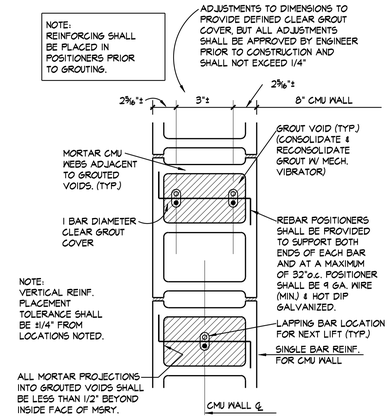
2.) CONTRACTOR SHALL COORDINATE AND VERIFY OPENINGS IN MASONRY WALLS. OPENINGS SHALL BE DETAILED ON REINFORCING STEEL SHOP DRAWING ELEVATIONS.

3.) VERTICAL CONTROL JOINTS IN MASONRY WALLS SHALL BE 3/8" WIDE, FULL HEIGHT OF WALL. JOINTS SHALL BE SPACED AT A MAXIMUM OF 24'-0" o.c. AND NOT LESS THAN 2'-0" FROM THE EDGE OF ANY OPENING. ALL HORIZONTAL JOINT REINFORCING SHALL BE DISCONTINUOUS AT CONTROL JOINTS. ALL BOND BEAM HORIZONTAL REINFORCING SHALL BE CONTINUOUS THROUGH CONTROL JOINTS. CONTRACTOR SHALL COORDINATE AND VERIFY ALL CONTROL JOINT LOCATIONS.

MASONRY VERTICAL REINFORCING SCHEDULE
FOR LOAD BEARING MASONRY (CMU) WALLS

WALL THICKNESS	LOCATION	VERTICAL REINF. (IN GROUTED CELLS)	SPACING
8"	MEP YARD	1- #5	24"oc

NOTES:
1. IN ADDITION TO SPACING SHOWN IN SCHEDULE, VERTICAL REINFORCING SHALL BE PROVIDED IN GROUTED CELLS AT THE FOLLOWING LOCATIONS
   - A.) IN THE FIRST 2 CELLS ADJACENT TO EACH OPENING
   - B.) IN THE END CELLS ON EACH SIDE OF VERTICAL CONTROL JOINTS
   - C.) IN THE END CELLS OF EACH LENGTH OF WALL
   - D.) AT EACH CORNER OF WALLS
2. ALL MASONRY VOIDS AND BOND BEAMS TO BE GROUTED SHALL BE FREE OF DEBRIS AND MORTAR DROPPINGS PRIOR TO GROUTING. ANY MASONRY W/ DROPPINGS OR DEBRIS OBSERVED IN VOIDS SHALL BE REJECTED.

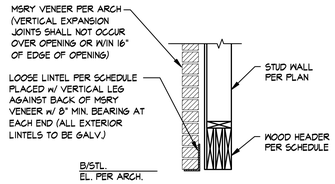


NOTE:
ALL MASONRY VOIDS AND BOND BEAMS TO BE GROUTED SHALL BE FREE OF DEBRIS AND MORTAR DROPPINGS PRIOR TO GROUTING. ANY MASONRY W/ DROPPINGS OR DEBRIS OBSERVED IN VOIDS SHALL BE REJECTED.

TYPICAL REBAR POSITIONING DETAIL

SECTION 2 S0.3

1½" = 1'-0"



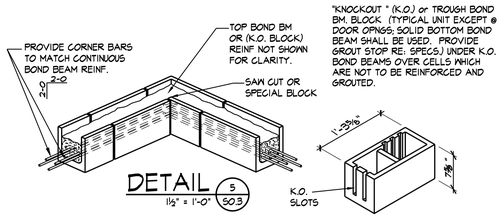
TYPICAL LOOSE LINTEL DETAIL @ WOOD FRAMED WALL

SECTION 3 S0.3

⅜" = 1'-0"

LOOSE LINTEL SCHEDULE

FOR OPENINGS:	GALV. ANGLE
LESS THAN 6'-0"	5"x3½"x⅜" (LLV)
6'-0" < OPENING < 9'-0"	6"x3½"x⅜" (LLV)



DETAIL 5 S0.3

1½" = 1'-0"

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Salina, KS 67401 Kansas City, MO 64108
785.827.0386 jgr@jgrarchitects.com

ASTRA BANK
OPERATIONS BUILDING - NEW FACILITY
HAYS, KANSAS

CHRISTOPHER A. BELL LICENSED 23831 6-27-24 KANSAS PROFESSIONAL ENGINEER

REVISION:

DATE: 6-27-2024
JOB: 24-3424
SHEET NO.:

S0.3

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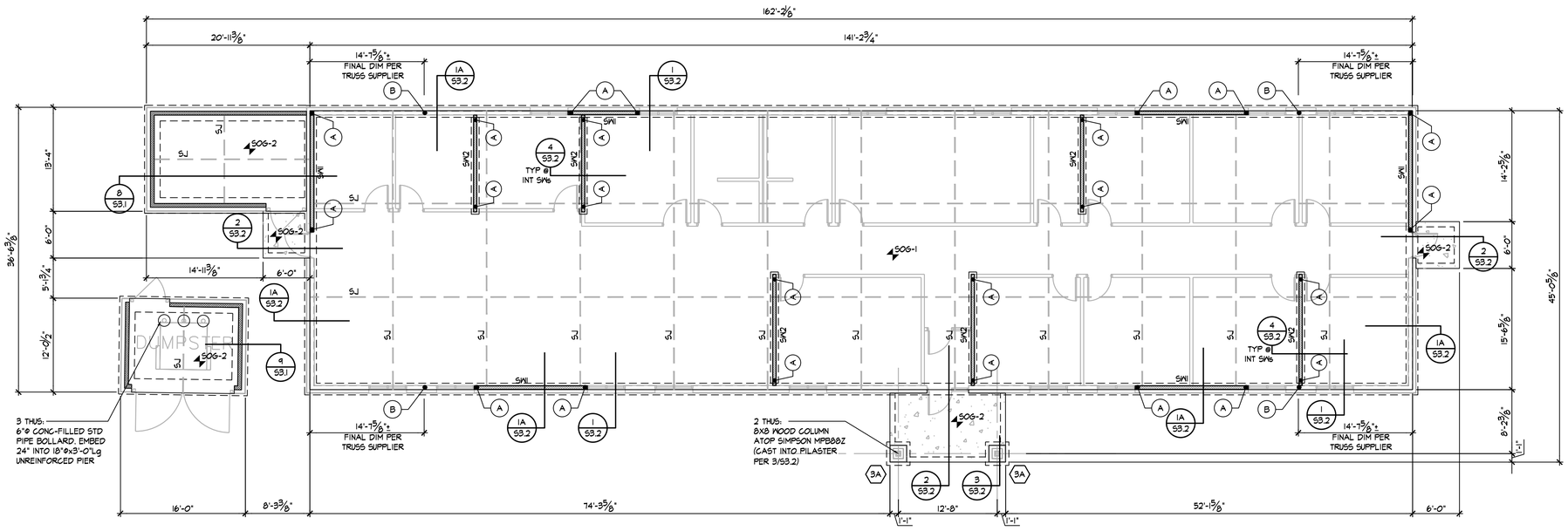
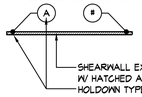


OPERATIONS BUILDING FOUNDATION PLAN

⅛" = 1'-0"

NOTES:

1) REFER TO GENERAL NOTES ON SHEET S0.1
2) REFER TO STUD BEARING WALL SCHEDULE ON THIS SHEET
3) REFER TO SHEARWALL HOLDOWN LOCATIONS ON THIS SHEET.
4) ELEVATION 100'-0" EQUALS CIVIL DATUM ELEVATION
5) TOP OF FOOTING ELEVATION EQUALS 99'-4"
6) REFER TO S4.1 FOR TYPICAL FOUNDATION DETAILS NOT CUT ON PLAN
7) ALL EXTERIOR WALLS SHALL BE SHEATHED WITH 7/16" OSB AND ATTACHED WITH 8d NAILS AT 6"oc AT EDGES AND AT 12"oc AT FIELD
8) SHEARWALLS/HOLDOWNS DESIGNATED AS FOLLOWS:



SHEARWALL EXTENTS INDICATED W/ HATCHED AREA
HOLDOWN TYPE MARK: (1) HOLDOWN TYPICAL EACH END OF SHEARWALL (OF TYPE INDICATED) U.N.O. PER SHEARWALL SCHED. RE: SCHED. FOR ADDITIONAL SPECIFIC REQUIREMENTS.

CONCRETE FOOTING SCHEDULE

SOIL PRESSURE : 3,000 psf		CONCRETE F'c : 3,500 psi	REBAR Fy : 60,000 psi
TYPE	FOOTING SIZE (FT) x THICKNESS (IN)	REBAR SIZE & SPACING EA. WAY[3]	
3A	3'-0" x 3'-0" x 32"	#4 @ 6"oc, EA. WAY, T&B	

NOTE:
1. EXTERIOR FOOTINGS OR FOOTING AT GRADE BEAM SHALL MATCH GRADE BEAM DEPTH AND BE PLACE WITH GRADE BEAM. PROVIDE SPECIFIED REBAR TOP AND BOTTOM WITH 4 STANDEES TO SUPPORT MATS.
2. CENTER FOOTINGS ON COLUMNS AND/OR WALL CENTER LINES PER PLAN, UNLESS OTHERWISE NOTED.
3. FOOTING REINFORCEMENT TO BE PLACED @ BOTTOM OF FOOTING U.N.O. IN SCHEDULE.

HOLDOWN SCHEDULE

A	SIMPSON HDU2-SDS2.5 ATTACHED TO 3 KING STUDS - PROVIDE ⅝"ø x 10"Lg SIMPSON TITEN HD SCREW ANCHOR
B	SIMPSON DTT2Z-SDS2.5 ATTACHED TO 2 KING STUDS SUPPORTING ROOF GIRDER TRUSS. ANCHOR TO SLAB WITH ⅝"ø x 6"Lg SIMPSON TITEN HD SCREW ANCHOR

NOTE:
1. REFER TO 3/S0.2 FOR TYPICAL HOLDOWN DETAIL

SHEARWALL SCHEDULE

SW1	7/16 OSB (ZIP SHEATHING) ONE SIDE ATTACHED w/ 8d NAILS @ 6"oc AT EDGES & @ 12"oc AT INTERMEDIATE FRAMING w/ EDGES BLOCKED
SW2	5/8" GYP SHEATHING ONE SIDE ATTACHED w/ 6d NAILS @ 4"oc AT EDGES & @ 4"oc AT INTERMEDIATE FRAMING w/ EDGES BLOCKED

NOTE:
1. PROVIDE SILL PLATE ANCHORS @ 32"oc PER 3/S3.1 FOR EXTENTS OF SHEAR WALLS WITH SIMPSON BPS 1/2-3 PLATE WASHER AT 2x4 WALLS & SIMPSON BPS 1/2-6 PLATE WASHER AT 2x6 WALLS

STUD WALL SCHEDULE

2x6 @ 16"oc AT EXTERIOR WALLS
2x4 @ 16"oc AT INTERIOR WALLS

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Salina, KS 67401 Kansas City, MO 64108
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HAYS, KANSAS

CHRISTOPHER A. BEVERLY LICENSED 23831 6-27-24 KANSAS PROFESSIONAL ENGINEER

REVISION:

DATE: 6-27-2024
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S2.1

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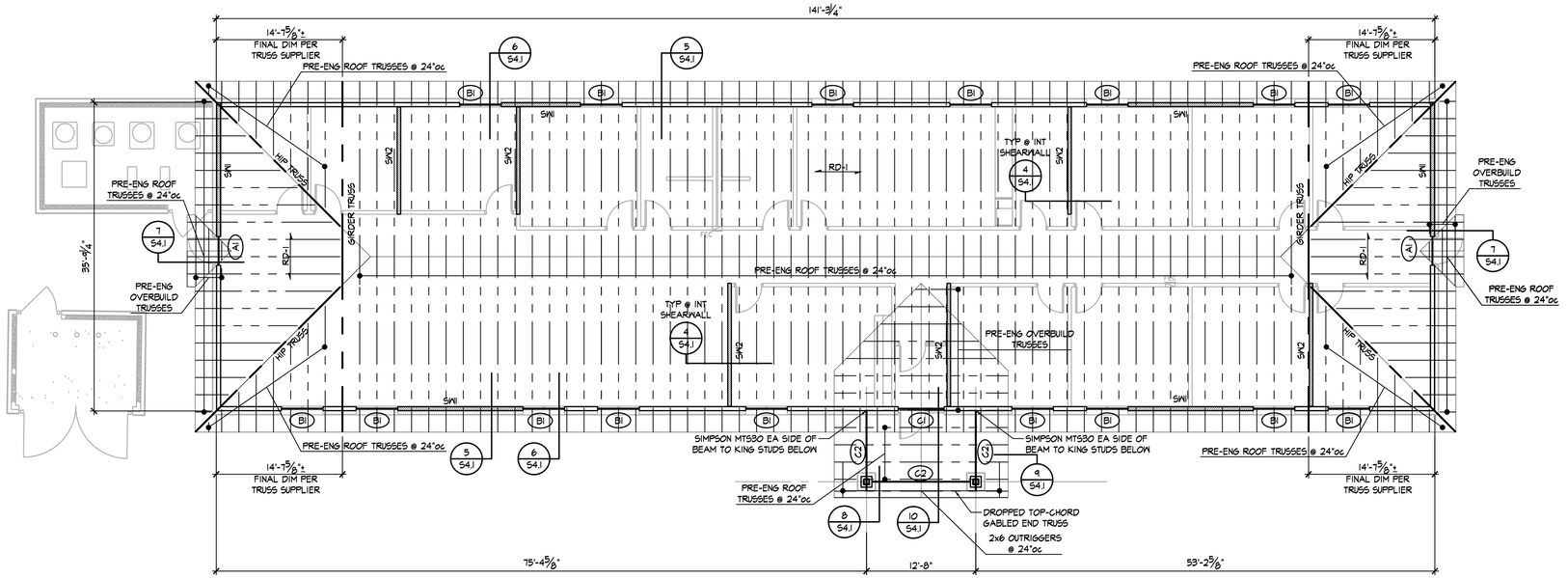

OPERATIONS BUILDING FRAMING PLAN

⅛" = 1'-0"

NOTES:

1) REFER TO GENERAL NOTES ON SHEET S0.1
2) REFER TO STUD BEARING WALL SCHEDULE ON SHEET S2.1.
3) REFER TO HEADER/BEAM SCHEDULE ON THIS SHEET
4) REFER TO SHEARWALL HOLDOWN LOCATIONS ON S2.1
5) GIRDER TRUSS SHALL BE 2-PLY MINIMUM. PROVIDE (3) KING STUDS ALIGNED UNDER EACH END OF GIRDER TRUSS WITH A SIMPSON LGT-STYLE HOLDOWN FROM THE GIRDER TRUSS TO THE KING STUDS.
6) PROVIDE SIMPSON MTS16 STRAP AT EACH HIP TRUSS TO EXTERIOR WALL.
7) ALL EXTERIOR WALLS SHALL BE SHEATHED WITH 7/16" OSB AND ATTACHED WITH 8d NAILS AT 6"oc AT EDGES AND AT 12"oc AT FIELD

HEADER SCHEDULE		
MARK	HEADER	JAMB
A1	(3) 2x8	2 JACK / 2 KING
B1	(3) 2x10	2 JACK / 2 KING
C1	(3) 2x12	2 JACK / 2 KING
C2	(3) 2x12	5 KING AT WALL 8x8 COLUMN OTHERWISE

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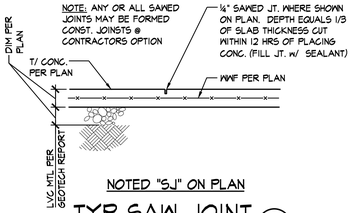
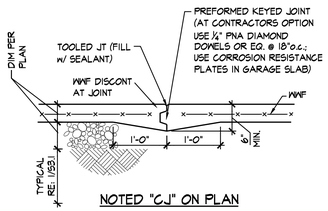


NOTED "SJ" ON PLAN

TYP SAW JOINT (1 / S3.1)

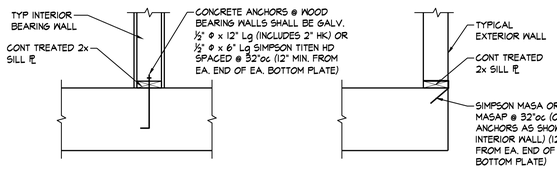
¾" = 1'-0"



NOTED "CJ" ON PLAN

TYP CONST JOINT (2 / S3.1)

¾" = 1'-0"

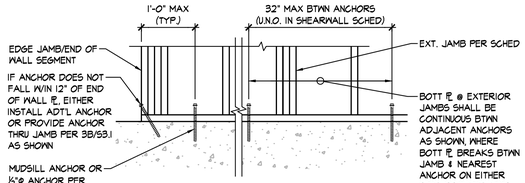


NOTES:
1. ALL BOTT PL'S TO HAVE TWO ANCHORS MIN.
2. RE: SHEARWALL SCHED ON S2.1 FOR ANCHORS @ SHEARWALLS
3. RE: 3A/S3.1 FOR DETAIL AT JAMB
4. RE: 3B/S3.1 FOR DETAIL AT SHORT BOTT PL SEGMENTS/JAMBS (WHERE OCCURS)

TYPICAL BOTT. PL CONNECTION TO CONCRETE

SECTION (3 / S3.1)

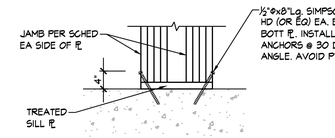
¾" = 1'-0"



TYPICAL BOTT. PL CONNECTION TO CONCRETE @ EXTERIOR JAMBS & ENDS OF WALL

SECTION (3A / S3.1)

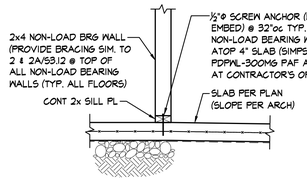
¾" = 1'-0"



TYPICAL BOTT. PL CONNECTION TO CONCRETE @ SHORT PL SEGMENTS & JAMBS

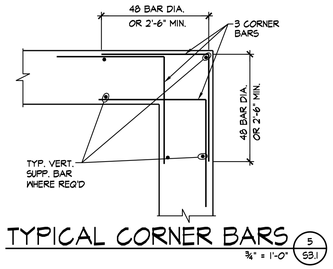
SECTION (3B / S3.1)

¾" = 1'-0"



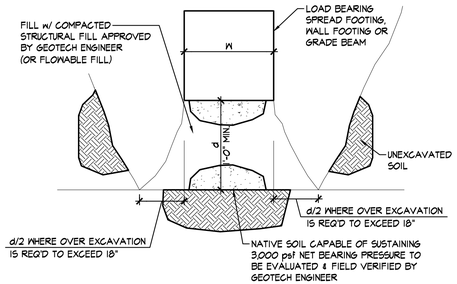
SECTION (4 / S3.1)

¾" = 1'-0"



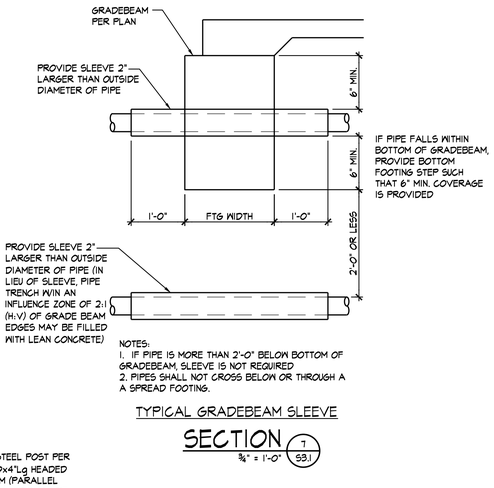
TYPICAL CORNER BARS (5 / S3.1)

¾" = 1'-0"



OVEREXCAVATION DETAIL (6 / S3.1)

¾" = 1'-0"

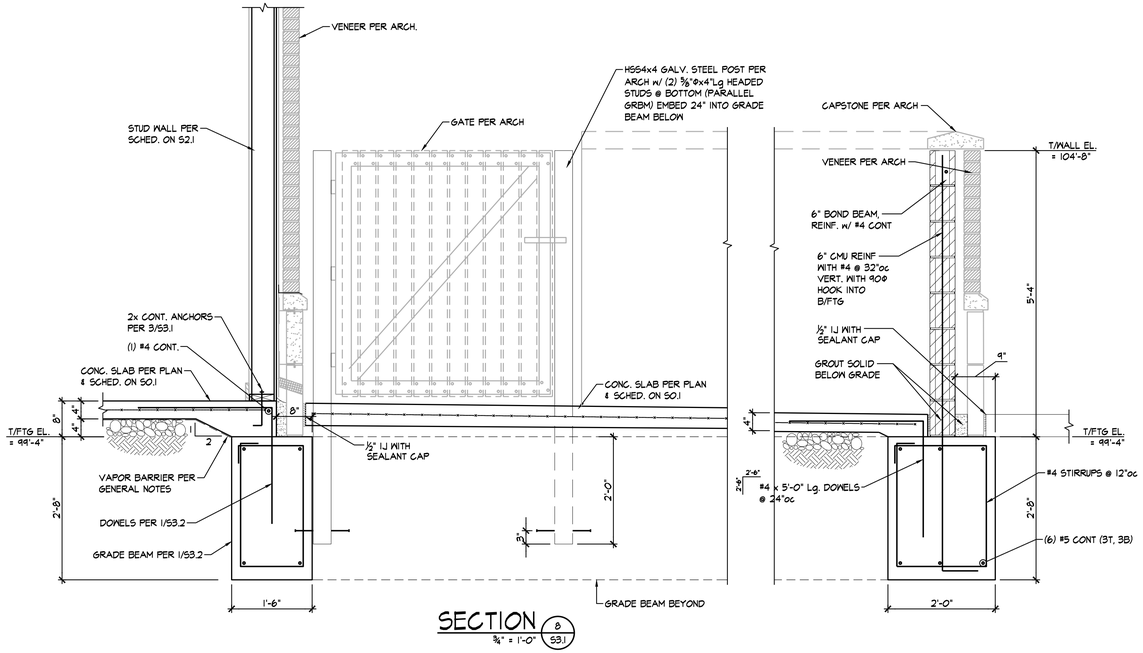


NOTES:
1. IF PIPE IS MORE THAN 2'-0" BELOW BOTTOM OF GRADEBEAM, SLEEVE IS NOT REQUIRED
2. PIPES SHALL NOT CROSS BELOW OR THROUGH A A SPREAD FOOTING.

TYPICAL GRADEBEAM SLEEVE

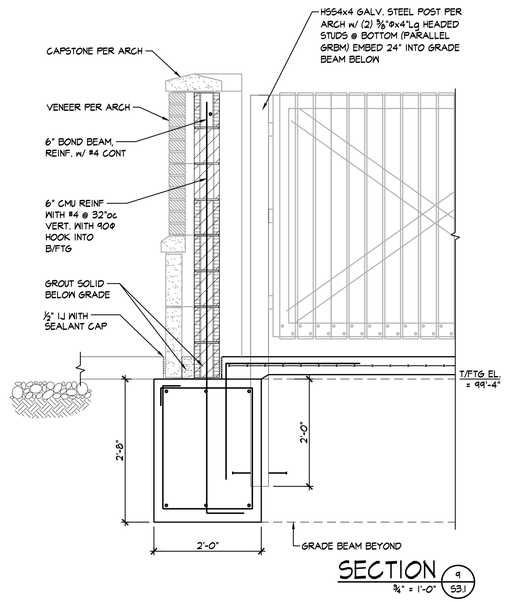
SECTION (7 / S3.1)

¾" = 1'-0"



SECTION (8 / S3.1)

¾" = 1'-0"



SECTION (9 / S3.1)

¾" = 1'-0"

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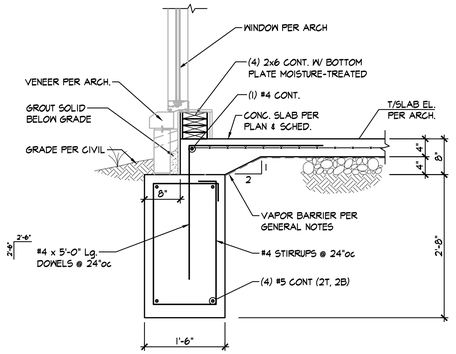
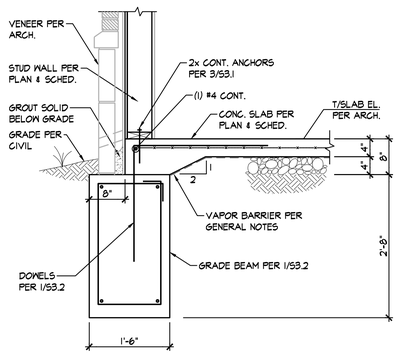
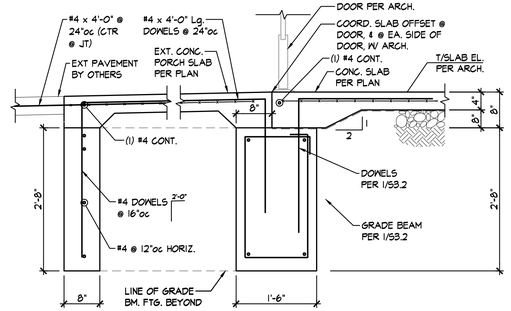


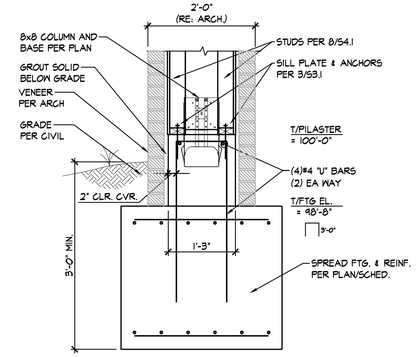
SECTION 1 / S3.2
3/4" = 1'-0"



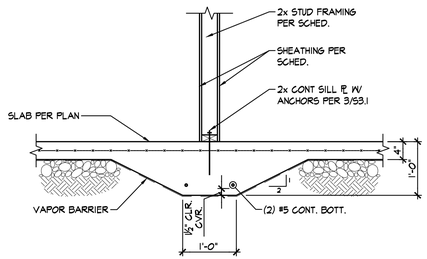
SECTION 1A / S3.2
3/4" = 1'-0"



SECTION 2 / S3.2
3/4" = 1'-0"



SECTION 3 / S3.2
3/4" = 1'-0"



SECTION 4 / S3.2
3/4" = 1'-0"

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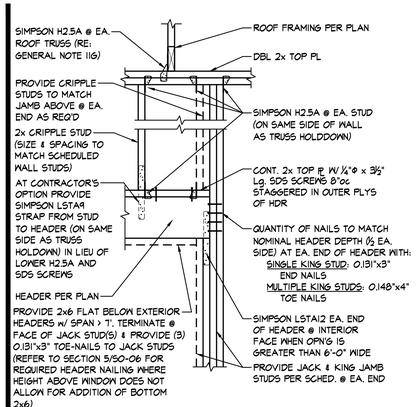
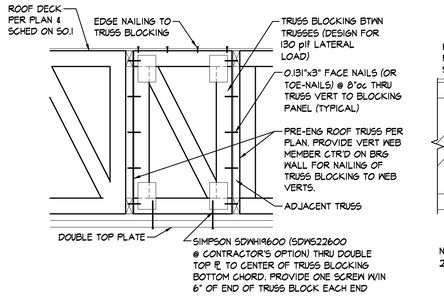


TYPICAL HEADER DETAIL @ ROOF TRUSS BRG LOCATIONS

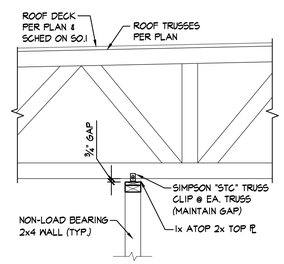
SECTION 1 S4.1 — ¾"=1'-0"



NOTES:
1. PROVIDE TRUSS BLOCKING @ ROOF LEVEL ATOP ALL SHEARWALLS WHEN A CONTINUOUS SHEAR/GIRDER TRUSS IS NOT USED.
2. TRUSS BLOCK MAY CONSIST OF A FRAMED WOOD STRUCTURAL PANEL OR PREFAB TRUSS BLOCK.
3. TRUSS MANUFACTURER TO DESIGN PREFAB TRUSS BLOCK.

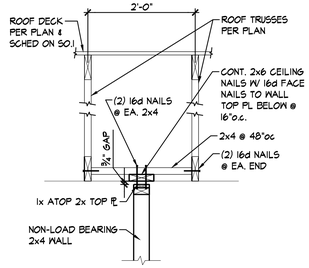
TYPICAL ROOF TRUSS BLOCKING AT SHEARWALLS

SECTION 2 S4.1 — ¾" = 1'-0"



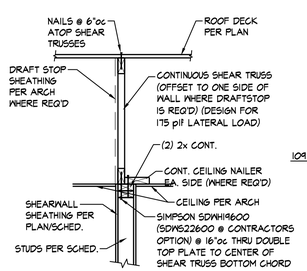
TYPICAL NON-LOAD BEARING WALL/TRUSS @ ROOF

SECTION 3 S4.1 — ¾"=1'-0"



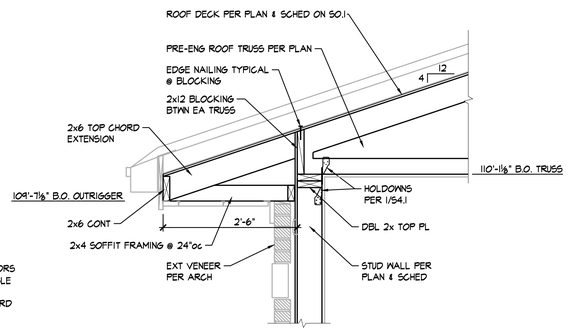
TYPICAL NON-LOAD BEARING WALL/TRUSS @ ROOF

SECTION 3A S4.1 — ¾"=1'-0"

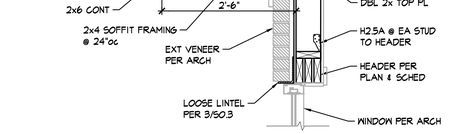


TYPICAL LATERAL TRUSS ATOP PARALLEL SHEARWALL

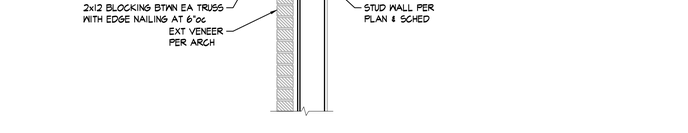
SECTION 4 S4.1 — ¾" = 1'-0"



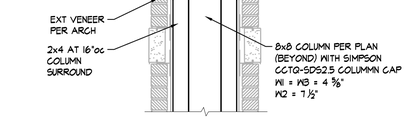
SECTION 5 S4.1 — ¾"=1'-0"



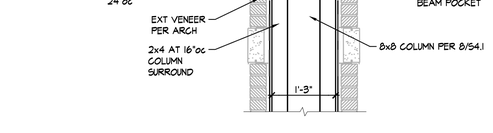
SECTION 6 S4.1 — ¾"=1'-0"



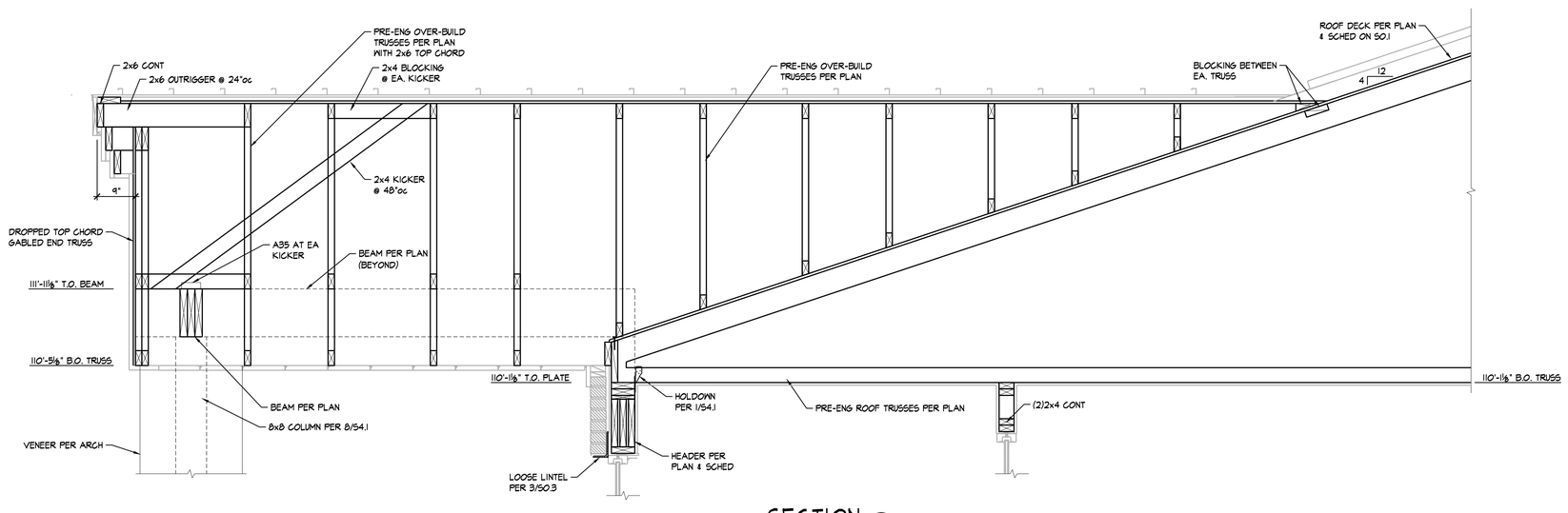
SECTION 7 S4.1 — ¾"=1'-0"



SECTION 8 S4.1 — ¾"=1'-0"



SECTION 9 S4.1 — ¾"=1'-0"



SECTION 10 S4.1 — ¾"=1'-0"

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MECHANICAL SYMBOLS

- CONDENSATE DRAIN
- REFRIGERANT LIQUID
- REFRIGERANT SUCTION
- RECTANGULAR SUPPLY DUCT UP
- RECTANGULAR SUPPLY DUCT DOWN
- ROUND DUCT UP
- ROUND DUCT DOWN
- RECTANGULAR RETURN DUCT UP
- RECTANGULAR RETURN DUCT DOWN
- SQUARE SUPPLY DIFFUSER
- SQUARE RETURN DIFFUSER
- FLEXIBLE DUCTWORK - MAX 5'
- RIGID DUCTWORK
- MANUAL BALANCING DAMPER
- THERMOSTAT (DASHED LINE=GUARD)
- CONTROL CABLE, VERIFY TYPE WITH EQUIP. MFG.
- 90˚ ELBOW WITH TURNING VANES
- GRILLE/DIFFUSER TAG
  - TOP: DEVICE TAG (SEE SCHEDULE)
  - MIDDLE: NECK SIZE
  - BOTTOM: AIRFLOW
- SANITARY DRAIN BELOW GRADE
- SANITARY DRAIN ABOVE GRADE
- SANITARY VENT
- DOMESTIC COLD WATER
- DOMESTIC HOT WATER
- DOMESTIC HOT WATER RECIRC
- WATER SERVICE
- NATURAL GAS
- SHORT RADIUS 90˚ ELBOW
- LONG RADIUS 90˚ ELBOW
- PIPE TURNED UP
- PIPE TURNED DOWN
- TEE UP
- TEE DOWN
- SHORT RADIUS 45˚ ELBOW
- TEE
- CLEANOUT
- PIPE REDUCER
- BALL VALVE
- STRAINER
- PRESSURE REDUCING VALVE
- CHECK VALVE
- TEMPERATURE AND PRESSURE RELIEF VALVE
- WALL HYDRANT
- BACK FLOW PREVENTER

ELECTRICAL SYMBOLS

- CIRCUIT DESIGNATION:
  - TOP INDICATES PANEL OF CIRCUIT ORIGIN
  - BOTTOM INDICATES CIRCUIT NUMBER
- HOMERUN - WIRING TO PANEL OF CIRCUIT ORIGIN
- PARTIAL HOMERUN - WIRING TO PANEL OF CIRCUIT ORIGIN
- CONDUIT CONCEALED IN WALL OR ABOVE CEILING
- CONDUIT BELOW GRADE OR EMBEDDED IN CONCRETE
- CONDUIT EXPOSED OVERHEAD
- LINE VOLTAGE CIRCUIT CONDUCTORS
  - SHORT = HOT/TRACER/SWITCH LEG CONDUCTOR
  - LONG = NEUTRAL (GROUNDED) CONDUCTOR
  - CURVED = GROUNDING (BONDING) CONDUCTOR
- CONDUIT STUB OUT WITH NYLON END BUSHING
- CONDUIT TURNED UP
- CONDUIT TURNED DOWN
- EMT CONDUIT SLEEVE WITH NYLON END BUSHINGS
- GROUNDING CONNECTION
- 2x4 LAY-IN FIXTURE
- 1X4 LAY-IN FIXTURE
- SURFACE MOUNTED LINEAR LUMINAIRE
- STRIP LIGHT
- RECESSED DOWNLIGHT
- WALL MOUNTED LUMINAIRE
- SINGLE FACE EXIT SIGN - WALL AND CEILING MOUNTED WITH DIRECTIONAL ARROWS AS INDICATED ON PLANS
- DOUBLE FACE EXIT SIGN - WALL AND CEILING MOUNTED WITH DIRECTIONAL ARROWS AS INDICATED ON PLANS
- EMERGENCY LIGHTING UNIT
- COMBO EXIT/EMERGENCY LIGHTING UNIT
- COMBO EXIT/EMERGENCY LIGHTING UNIT WITH REMOTE LIGHT HEAD
- DUPLEX RECEPTACLE
- DOUBLE DUPLEX RECEPTACLE
- SPECIAL RECEPTACLE
  - # = NEMA CONFIGURATION
- FLUSH FLOOR DUPLEX RECEPTACLE
- FLUSH FLOOR MULTI-SERVICE OUTLET
- SINGLE POLE WALL SWITCH
- TWO POLE WALL SWITCH
- THREE WAY WALL SWITCH
- MOTOR HP RATED SWITCH WITHOUT OVERLOAD PROTECTION
- 0-10V LED DIMMER SWITCH
- LOW VOLTAGE OCCUPANCY SENSOR
- POWER PACK FOR LOW VOLTAGE OCCUPANCY SENSORS
- TIMECLOCK
- EXTERIOR PHOTOCELL
- CONTACTOR
- POWER RELAY
- PUSH BUTTON OPERATOR
- JUNCTION BOX
- MOTOR
- DISCONNECT SWITCH
- BRANCH CIRCUIT PANELBOARD
- DATA OUTLET ROUGH-IN ONLY
- PHONE/DATA OUTLET ROUGH-IN ONLY
- FLUSH FLOOR DATA OUTLET ROUGH-IN ONLY
- FLUSH FLOOR DUPLEX PHONE/DATA ROUGH-IN ONLY
- SINGLE HEAD POLE MOUNTED AREA LIGHT
- NEW PAD MOUNTED TRANSFORMER
- NEW POLE MOUNTED TRANSFORMER, NUMBER INDICATES KVA RATING.
- NEW ARIAL PRIMARY
- NEW UNDERGROUND PRIMARY
- NEW UNDERGROUND SECONDARY

SYMBOL MODIFYING DESIGNATORS

CLG	CEILING MOUNTED • FLUSH MOUNTED IN SUSPENDED CEILINGS • SURFACE MOUNTED TO STRUCTURE ABOVE IN OPEN CEILINGS
CT	MOUNT BOTTOM OF DEVICE AT 6" ABOVE COUNTERTOP
T	TAMPER RESISTANT RECEPTACLE
GFI	GROUND FAULT CIRCUIT INTERRUPTING DEVICE
NL	NIGHTLIGHT WIRED TO UNSWITCHED HOT CONDUCTOR
WP	PROVIDE WEATHERPROOF ENCLOSURE FOR DEVICE
XX"	MOUNTING HEIGHT OF DEVICE ABOVE FINISHED FLOOR

MECHANICAL AND ELECTRICAL ABBREVIATIONS

A	
ABOVE FINISH FLOOR	AFF
ABOVE FINISH GRADE	AFG
ACRYLONITRILE BUTADIENE STYRENE PIPE	ABS
AIR CONDITIONING	A/C
AIR HANDLING UNIT	AHU
ALTERNATING CURRENT	AC
ALUMINUM	AL
AMERICAN NATIONAL STANDARDS INSTITUTE	ANSI
AMERICAN SOCIETY OF MECHANICAL ENGINEERS	ASME
AMERICAN WIRE GAUGE	AWG
AMERICANS WITH DISABILITIES ACT	ADA
AMPERE	AMP or A
AMPERE INTERRUPTING CAPACITY	AIC
ANALOG INPUT	AI
ANALOG OUTPUT	AO
ARC FAULT CIRCUIT INTERRUPTER	AFCI
ARCHITECT or ARCHITECTURAL	ARCH
AUDIO/VIDEO	AV
AUTHORITY HAVING JURISDICTION	AHJ
AUTOMATIC TRANSFER SWITCH	ATS
AVAILABLE FAULT CURRENT	AFC
B	
BELOW CEILING	BC
BELOW GRADE	BG
BINARY INPUT	BI
BINARY OUTPUT	BO
BOOT WASH	BW
BRITISH THERMAL UNIT	BTU
BTUs PER HOUR	BTUH
BUILDING	BLDG
C	
CABLE TELEVISION	CATV
CANDELA	CD
CAPACITY	CAP
CATEGORY	CAT
CEILING MOUNT	CLG
CELSIUS	C
CHILLED WATER	CHW
CHILLED WATER RETURN	CHWR
CHILLED WATER SUPPLY	CHWS
CIRCUIT	CCT
CIRCUIT BREAKER	CB
CLEANOUT	CO
CLOSED CIRCUIT TELEVISION	CCTV
CLOTHES WASHER CONNECTION BOX	CCB
COLD WATER (DOMESTIC)	CW
COMMON	C
COMMUNITY ANTENNAE TELEVISION	CATV
CONCRETE	CONC
CONDENSING UNIT	CU
CONDUIT	C
CONDUIT ONLY (WITH PULL STRING)	CO
COPPER	CU
COUNTER TOP	CT
CROSS-LINKED POLYETHYLENE PIPE	PEX
CUBIC FEET PER MINUTE	CFM
CUBIC YARD	CU YD
CURRENT TRANSFORMER	CT
D	
DECIBEL (AUDIO)	dBA
DEPTH or DEEP	D
DIAMETER	DIA
DIRECT CURRENT	DC
DIRECT DIGITAL CONTROL	DDC
DIRECT EXPANSION	DX
DISCONNECT SWITCH	DS
DISH WASHER	DW
DRINKING FOUNTAIN	DF
DRY BULB	DB
E	
ELECTRIC or ELECTRICAL	E or ELEC
ELECTRIC WATER COOLER	EWC
ELECTRIC HEATER	EH
ELECTRICAL CONTRACTOR	EC
ELECTRICAL METALLIC TUBING	EMT
EMERGENCY	EM
EMERGENCY POWER OFF	EPO
ENTERING AIR TEMPERATURE	EAT
ENTERING WATER TEMPERATURE	EWT
EQUIPMENT	EQUIP
EXHAUST	EXH
EXHAUST AIR	EA
EXHAUST FAN	EF
EXHAUST GRILLE	EG
EXISTING	EXIST
EXISTING TO REMAIN	ETR
EXTERNAL STATIC PRESSURE	ESP
F	
FAHRENHEIT	F
FAN COIL UNIT	FCU
FEET	FT
FEET PER MINUTE	FPM
FIBER OPTIC CABEL	FOC
FINISH FLOOR CLEAN OUT	FFCO
FINISH GRADE	FG
FINISH GRADE CLEAN OUT	FGCO
FIRE ALARM	FA
FLEXIBLE METALLIC CONDUIT	FMC
FLOOR DRAIN	FD
FLOOR SINK	FS
FULL LOAD AMPERES	FLA
G	
GALLON	GAL
GALLONS PER FLUSH	GPF
GALLONS PER HOUR	GPH
GALLONS PER MINUTE	GPM
GALVANIZED RIGID METAL CONDUIT	GRMC
GAS	G
GAUGE	GA
GENERAL CONTRACTOR	GC
GENERATOR REMOTE ANNUNCIATOR	GRA
GLOBAL POSITIONING SYSTEM	GPS
GOVERNMENT FURNISHED/CONTRACTOR INSTALLED	GFCI
GOVERNMENT FURNISHED/GOVERNMENT INSTALLED	GFGI
GROUND FAULT CIRCUIT INTERRUPTER	GFI
GROUND FAULT PROTECTION FOR EQUIPMENT	GFPE
GROUNDING ELECTRODE CONDUCTOR	GEC
GROUNDING (BONDING) CONDUCTOR	G
H	
HANDHOLE	HH
HAND-OFF-AUTOMATIC SWITCH	HOA
HEATING	HTG
HEATING WATER RETURN	HR
HEATING WATER SUPPLY	HS
HIGH DENSITY POLYETHYLENE CONDUIT	HDPE
HORSEPOWER	HP
HOT GAS RE-HEAT	HGRH
HOT WATER (DOMESTIC)	HW
HOT WATER HEATER	HWH
HOT WATER PUMP	HWP
HOT WATER RECIRC. (DOMESTIC)	HWR
HOUR	HR
I	
ISOLATED (INSULATED) GROUND	IG
K	
KELVIN	K
KILOVOLT	KV
KILOVOLT-AMPERES	KVA
KILOVOLT-AMPERES REACTIVE	KVAR
KILOWATT	KW
L	
LAUNDRY TUB	LT
LAVATORY	LAV
LEAVING AIR TEMPERATURE	LAT
LEAVING WATER TEMPERATURE	LWT
LIGHTING	LTG
LIQUIDTIGHT FLEXIBLE METAL CONDUIT	LFMC
LOCKED ROTOR AMPERES	LRA
M	
MAIN CIRCUIT BREAKER	MCB
MAIN LUG ONLY	MLO
MANHOLE	MH
MANUFACTURER	MANUF
MAXIMUM	MAX
MAXIMUM OVERCURRENT PROTECTION	MOCP
MECHANICAL CONTRACTOR	MC
MINIMUM	MIN
MINIMUM CIRCUIT AMPACITY	MCA
MOTOR CONTROL CENTER	MCC
MOTOR STARTER (NEMA RATED)	MS
MOUNTED	MTD
MULTIMODE	MM
N	
NATIONAL ELECTRICAL CODE (NFPA 70)	NEC
NATIONAL ELECTRICAL MANUFACTURER'S ASSOC.	NEMA
NATIONAL FIRE PROTECTION ASSOCIATION	NFPA
NATIONALLY RECOGNIZED TESTING LABORATORY	NRTL
NATURAL GAS	G or NAT GAS
NEUTRAL (GROUNDED) CONDUCTOR	N
NIGHT LIGHT	NL
NOMINAL	NOM
NON FUSED	NF
NORMALLY CLOSED	NC
NORMALLY OPEN	NO
NORTH	N
NOT APPLICABLE	N/A
NOT TO SCALE	NTS
O	
ON CENTER	O.C.
OUTDOOR AIR	OA
OUTSIDE DIAMETER	OD
OUTSIDE PLANT CABLE	OSP
OVERHEAD	OH
P	
PASSIVE INFRARED	PIR
PHASE	PH OR Ø
POLE	P
POLYVINYL CHLORIDE	PVC
POLYVINYL CHLORIDE CONDUIT	PVC
POTENTIAL TRANSFORMER	PT
POUNDS	LBS
POUNDS PER SQUARE INCH	PSI
PRESSURE REDUCING VALVE	PRV
PULL BOX	PB
Q	
QUANTITY	QTY
R	
RECEPTACLE	RCPT
REMOTE TEST STATION	RTS
REQUIRED	REQ'D
RETURN AIR	RA
RETURN GRILLE	RG
REVOLUTIONS PER MINUTE	RPM
RIGID METAL CONDUIT	RMC
ROOF TOP UNIT	RTU
S	
SENSIBLE	SENS
SERVICE ENTRANCE SWITCHBOARD	SES
SERVICE SINK	SS
SHORT CIRCUIT CURRENT	SCC
SHORT CIRCUIT CURRENT RATING	SCCR
SHOWER	SH
SHUNT TRIP	ST
SINGLE MODE	SM
SINGLE POLE, DOUBLE THROW	SPDT
SPECIFICATIONS	SPEC
SQUARE FEET	SQ FT or SF
STRAND	ST
SUPPLY AIR	SA
SUPPLY DIFFUSER	SD
SURGE PROTECTION DEVICE	SPD
SWITCH	SW
SYMMETRICAL	SYM
T	
TAMPERPROOF ENCLOSURE	TP
TELECOMMUNICATIONS GROUNDING BUSBAR	TGB
TELECOMMUNICATIONS ROOM	TR
TELEPHONE	T
TELEVISION	TV
TEMPERATURE (CHANGE IN)	TEMP (ΔT)
TEMPERATURE/PRESSURE	T/P
TEMPERATURE CONTROL CONTRACTOR	TC
THOUSAND BTUs PER HOUR	MBH
THOUSAND CIRCULAR MILLS	kcmil
TOTAL	TOT
TRANSFORMER	XFMR
TRANSIENT VOLTAGE SURGE SUPPRESSION	TVSS
TYPICAL	TYP
U	
UNDERGROUND	UG
UNDERWRITERS LABRATORIES	UL
UNINTERRUPTIBLE POWER SUPPLY	UPS
UNLESS NOTED OTHERWISE	UNO
UNSHIELDED TWISTED PAIR	UTP
V	
VARIABLE FREQUENCY DRIVE	VFD
VENT BELOW SLAB	VBS
VENT THROUGH ROOF	VTR
VENTILATION FAN	VF
VOLT(S)	V
VOLT-AMPERES	VA
VOLTS ALTERNATING CURRENT	VAC
VOLTS DIRECT CURRENT	VDC
W	
WALL HYDRANT	WH
WASH TUB	WT
WATER CLOSET	WC
WATER COLUMN (in inches)	"WC
WATER SERVICE	W
WATT(S)	W
WEATHERPROOF ENCLOSURE	WP
WET BULB	WB
WIRE WAY	WW
WITH	W/

GENERAL SYMBOLS

- DETAIL REFERENCE
  - DETAIL NUMBER
  - SHEET NUMBER
- ELEVATION REFERENCE
  - DETAIL NUMBER
  - SHEET NUMBER
- SECTION CUT
  - DETAIL NUMBER
  - SHEET NUMBER
- KEYED PLAN NOTE
- REVISION NOTE
- ELEVATION
- CONNECT TO EXISTING. FIELD VERIFY LOCATION & MATERIAL OF EXISTING

LST Consulting Engineers, PA
MANHATTAN
4809 Vue Du Lac Place, Suite 201
Manhattan, KS 66503
785.587.8042
WICHITA
125 S. Washington, Suite 150
Wichita, Kansas 67202
316.285.0696
www.LSTengineers.com
mail@LSTengineers.com

Project 24036 June 2024

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

ASTRA BANK
OPERATIONS BUILDING - NEW FACILITY
HAYS, KANSAS

REVISION:

DATE: 6–28–2024
JOB: 24–3424
SHEET NO.:

ME0.1

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LST Consulting Engineers, PA
MANHATTAN
4809 Vue Du Lac Place, Suite 201
Manhattan, KS 66503
785.587.8042
WICHITA
125 S. Washington, Suite 150
Wichita, Kansas 67202
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mail@LSTengineers.com

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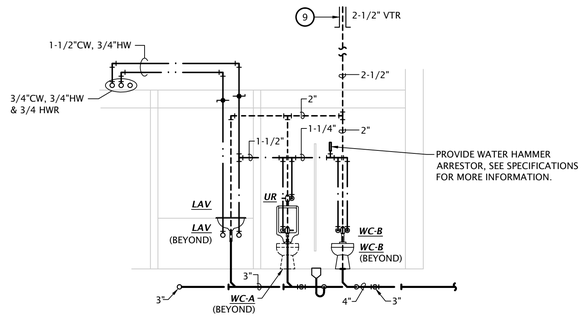
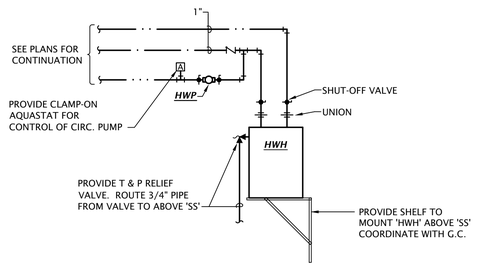
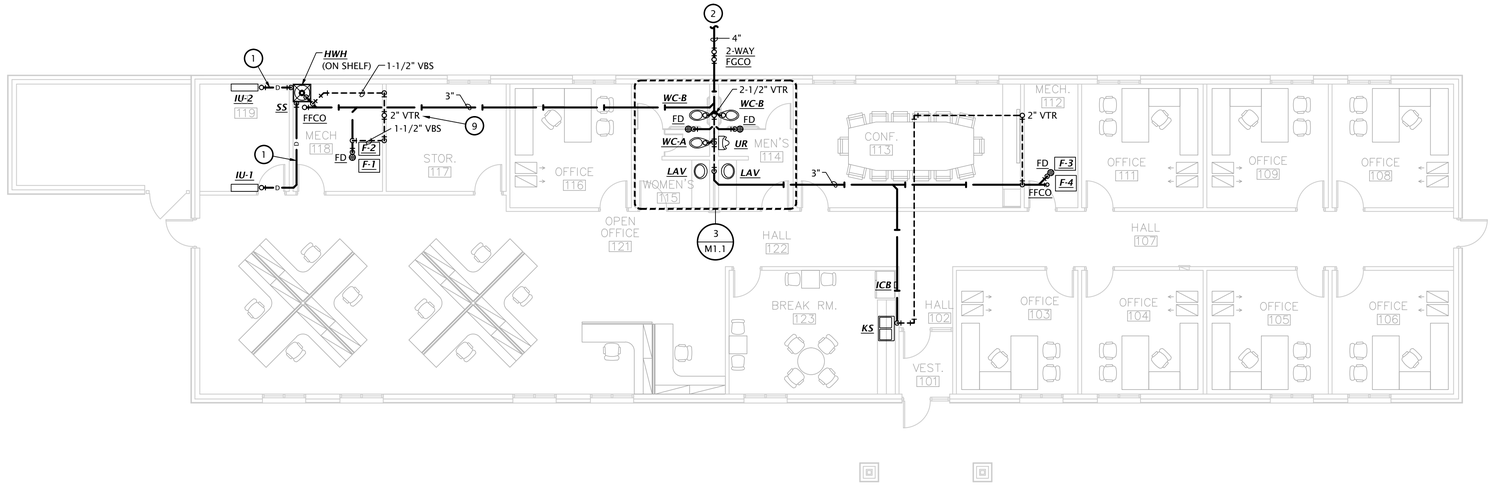


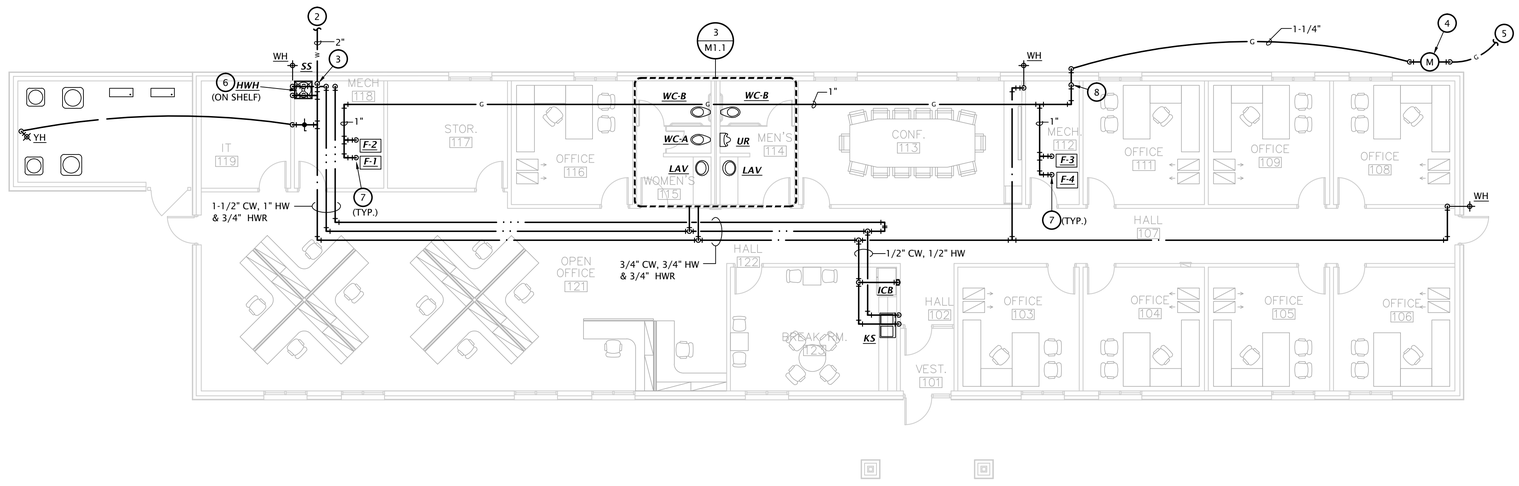
3 PLUMBING ELEVATION
NO SCALE



4 WATER HEATER PIPING DIAGRAM
NO SCALE



1 WASTE AND VENT PLAN
1/8" = 1'-0"



2 DOMESTIC WATER AND GAS PLAN
1/8" = 1'-0"

NOTE:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL UTILITY CONNECTIONS AND PAY ALL ASSOCIATED FEES AND PROVIDE ALL REQUIRED MATERIALS, LABOR, ETC. COORDINATE EXACT REQUIREMENTS WITH UTILITY PROVIDERS. SEE CIVIL DRAWINGS FOR SITE ADDITIONAL SITE UTILITY WORK.

SEWER AND WATER UTILITY:
CITY OF HAYS

GAS UTILITY:
MIDWEST ENERGY
CONTACT: ARLEN FLAX
EMAIL: aflax@mwenergy.com

SHEET NOTES BY SYMBOL

1. 3/4" CONDENSATE DRAIN FROM 'IU' TO SERVICE SINK
2. SEE CIVIL DRAWINGS FOR CONTINUATION
3. PROVIDE SHUT-OFF VALVE AND PRESSURE REDUCING VALVE SET TO 80 PSI IF REQUIRED IN WATER SERVICE RISER. COORDINATE EXACT REQUIREMENTS WITH CITY OF HAYS.
4. GAS METER, REGULATOR AND SHUT-OFF VALVE. COORDINATE RESPONSIBILITIES WITH SERVICE PROVIDER AND PAY ALL FEES. MAXIMUM BUILDING LOAD = 260CFH @ 7"W.C.
5. GAS SERVICE LINE BY UTILITY PROVIDER. G.C. TO COORDINATE INSTALLATION.
6. SEE DETAIL 4 THIS SHEET FOR INSTALLATION DETAIL
7. PROVIDE 6" DIRT LEG, UNION AND SHUT-OFF VALVE AT EACH FUEL BURNING APPLIANCE.
8. PROVIDE SHUT-OFF VALVE IN PIPE RISER
9. VTR AND ALL ROOF PENETRATIONS AND EQUIPMENT TO BE BLACK. COORDINATE WITH G.C.

JGR JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

ASTRA BANK
OPERATIONS BUILDING - NEW FACILITY
HAYS, KANSAS

CRAIG TRUMBAUER
13396
2024-06-28
KANSAS
PROFESSIONAL ENGINEER

REVISION:

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LST Consulting Engineers, PA
MANHATTAN
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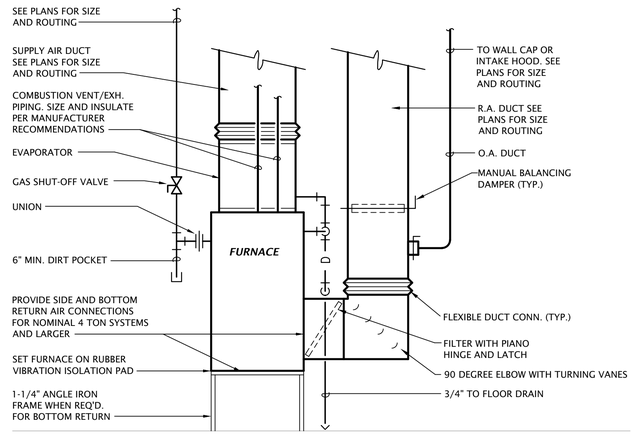
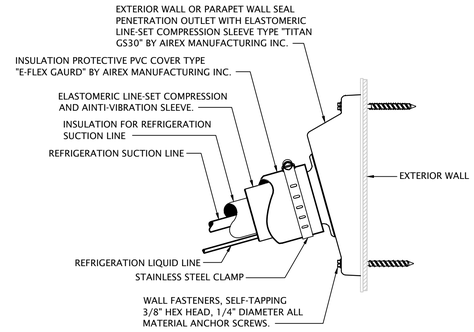
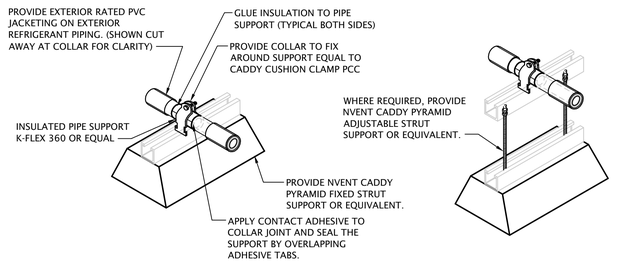


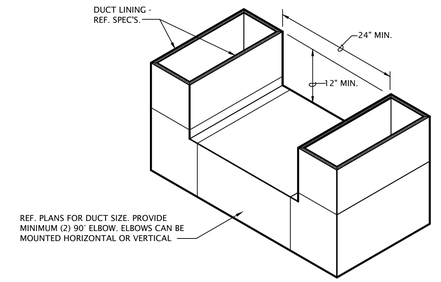
2 UPFLOW FURNACE DETAIL
NO SCALE



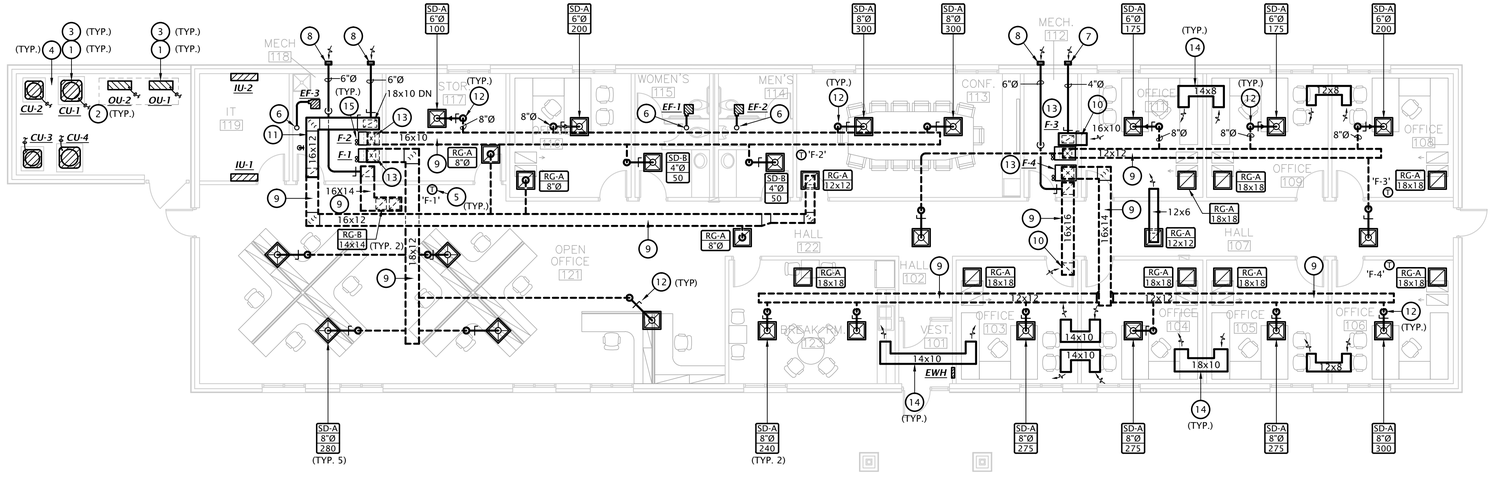
3 HVAC PIPING WALL PENETRATION SEAL
NO SCALE



4 REFRIGERANT PIPING SUPPORT DETAIL
NO SCALE



5 TRANSFER DUCT DETAIL
NO SCALE



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

NOTE: DUCTWORK INDICATED WITH DASHED LINE OCCURS IN ATTIC.

SHEET NOTES BY SYMBOL

1. PROVIDE REFRIGERANT LINE-SET TO MATCHING INDOOR EVAPORATOR. SIZE PER MANUFACTURER'S RECOMMENDATIONS BASED ON FIELD INSTALLED LENGTH. PENETRATE EXTERIOR WALL AT 18" A.F.G. PROVIDE PIPING WALL PENETRATION ASSEMBLY EQUAL TO AIREX TITAN OUTLET.
2. PROVIDE CONTROL CABLE TO MATCHING FURNACE.
3. SET CONDENSING UNIT/HEAT PUMP ON MIN. 3-1/2" HIGH LEVEL CONCRETE HOUSE KEEPING PAD
4. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES BETWEEN UNITS AND WALLS.
5. COORDINATE EXACT LOCATION OF THERMOSTAT WITH OWNER PRIOR TO ROUGHING IN.
6. ROUTE 6"Ø EXHAUST DUCT FROM EXHAUST FAN TO PITCHED ROOF CAP EQUAL TO GREENHECK MODEL RJ 6X9 AND TRANSITION TO CONNECTION AT ROOF CAP.
7. 4"Ø INTAKE WALL CAP WITH BIRD SCREEN
8. 6"Ø INTAKE WALL CAP WITH BIRD SCREEN
9. DUCT ROUTED IN ATTIC SPACE. FIELD LOCATE THRU ROOF STRUCTURE
10. PROVIDE OPEN END DUCT BETEEN LAY-IN CEILING AND GYPSUM BOARD CEILING AT BOTTOM OF ROOF STRUCTURE
11. INSTALL DUCT TIGHT TO BOTTOM OF GYPSUM BOARD CEILING IN MECH ROOM
12. FIELD LOCATE MANUAL BALANCING DAMPER IN DUCT RUNOUT BELOW GYPSUM BOARD CEILING AND AS FAR FROM DIFFUSER AS POSSIBLE.
13. SEE FURNACE DETAIL 2 THIS SHEET
14. SEE TRANSFER DUCT DETAIL 5 THIS SHEET
15. ROUTE PVC INTAKE AND VENT PIPING UP TO MANUFACTURER'S CONCENTRIC VENT ROOF TERMINATION. PROVIDE TERMINATION IN BLACK COLOR, OR PAINT BLACK, COORDINATE WITH ARCH.

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

ASTRA BANK
OPERATIONS BUILDING - NEW FACILITY
HAYS, KANSAS

TIMOTHY CRAIG THEIS
13396
2024-06-28
KANSAS
PROFESSIONAL ENGINEER

REVISION:

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SPLIT SYSTEM SCHEDULE

FURNACE

MARK	F-1	F-2	F-3	F-4
MANUFACTURER	LENNOX	LENNOX	LENNOX	LENNOX
MODEL	ML196UH070XE48B	ML196UH045XE36B	ML196UH045XE36B	ML196UH090XE48B
AFUE (MIN)	96%	96%	96%	96%
REQ'D. SUPPLY AIRFLOW (CFM)	1400	1000	800	1600
O.A. AIRFLOW (CFM)	130	100	45	120
ESP ("WG)	0.6	0.6	0.6	0.6
SPEED	MED-HIGH	MED-HIGH	MED	MED-HIGH
MOTOR HP	3/4	1/2	1/2	3/4
NAT. GAS INPUT (MBH)	66.0	44.0	44.0	88.0
NAT. GAS OUTPUT (MBH)	63.9	42.8	42.8	85.6
AIR TEMP RISE (˚F)	42.1	39.4	49.3	49.3
FLA	8.4	6.8	6.8	8.4
MOCP	15	15	15	15
VOLTAGE	120	120	120	120
APPROX. DIMENSIONS (LxWxH)	17.5"x28"x33"	17.5"x28"x33"	17.5"x28"x33"	21"x28"x33"
APPROX. WEIGHT (LBS)	132	124	124	152

EVAPORATOR

REFRIGERANT LIQ---GAS	3/8"---3/4"	3/8"---3/4"	3/8"---3/4"	3/8"---7/8"
ENT. AIR DB	80	80	80	80
ENT. AIR WB	67	67	67	67
MIN. SENSIBLE CAPACITY (MBH)	30.3	19.1	16.6	32.9
MIN. TOTAL CAPACITY (MBH)	34.0	24.0	18.4	37.3
APPROX. DIMENSIONS (LxWxH)	17.5"x21"x27"	17.5"x21"x24"	17.5"x21"x16.5"	21"x21"x27"
APPROX. WEIGHT (LBS)	55	50	43	55

CONDENSING UNIT

MARK	CU-1	CU-2	CU-3	CU-4
NOMINAL TONNAGE	3.5	2.5	2	4
MANUFACTURER	LENNOX	LENNOX	LENNOX	LENNOX
REFRIGERANT	410a	410a	410a	410a
MODEL	13ACXN-42-230-17	13ACXN-30-230-17	13ACXN-24-230-17	13ACXN-48-230-17
O.A. DB	95˚F	95˚F	95˚F	95˚F
REFRIGERANT	R410-A	R410-A	R410-A	R410-A
VOLTAGE/PHASE	240/1	240/1	240/1	240/1
MCA	28.1	17.1	14.7	31.9
MOCP	45/2	25/2	25/2	50/2
APPROX. DIMENSIONS (LxWxH)	28"x28"x29"	24"x24"x29"	24"x24"x25"	28"x28"x33"
APPROX. WEIGHT (LBS)	188	144	138	195
NOTES	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4,5

NOTES:

1. Provide refrigerant piping sized in accordance with manufacturer's recommendations for acutal field installed length and routing.
2. Provide PVC intake and exhaust piping sized and installed in accordance with manufacturer's written installation instructions.
3. Provide 24hr/7 day programmable thermostat
4. Direct vent concentric roof termination kit
5. Side and bottom return air connection

PLUMBING FIXTURE SCHEDULE

MARK	MANUFACTURER	DESCRIPTION	TRIM		ROUGH-IN SIZES				NOTES
			MANUFACTURER	DESCRIPTION	WASTE	VENT	CW	HW	
WC-A	KOHLER	Model 96053-0 "Wellcomme" floor mounted flush valve water closet, white vitreous china, top spud 1.28 GPF, 12" rough-in, elongated bowl 15" high bowl.	KOHLER	Model K-13517 piston type manual chrome plated flush valve, 1.28 GPF.Model 4731-C-0 white open front plastic seat.	4"	2"	1"	---	3
WC-B	KOHLER	Model 96057-0 "Highcliff" floor mounted flush valve water closet, white vitreous china, top spud 1.28 GPF, 12" rough-in, elongated 17-1/2" high bowl.	KOHLER	Model K-13517 piston type manual chrome plated flush valve, 1.28 GPF. Model 4731-C-0 white open front plastic seat.	4"	2"	1"	---	1,3
UR	KOHLER	Model K-4991-ET "Bardon" urinal, white vitreous china, flush valve wall-hung, 3/4" top spud, elongated flushing rim, washout flushing action, 0.125 GPF. Mount with rim at 17" AFF.	KOHLER	Model K-80UM00D20 manual chrome plated flush valve, 0.125 GPF.	2"	2"	3/4"	---	1,3
LAV	KOHLER	Model 2196-4 self-rimming lavatory, white vitreous china, 20"W x 17", faucet holes on 4" centers.	KOHLER	Model 15198-4RA single handle faucet. Provide grid drain. Provide point of use tempering valve.	2"	1-1/2"	1/2"	1/2"	2,3
KS	JUST	Model DLX2233-A-J two compartment 18 GA stainless steel sink, self rimming, 14"x16"x10"D inside, fully undercoated, faucet holes as req.	DELTA	Model 400LF-HDF single handle kitchen sink faucet with hose spray attachment. Chrome finish. Provide basket strainer.	2"	1-1/2"	1/2"	1/2"	2,3
BS	JUST	Model lr1316 single compartment 18 GA. Stainless steel sink, self rimming, 10"x10"x7-1/2"D inside, fully undercoated, faucet holes as required.	DELTA	Model 27C4944 two handle bar sink faucet, 6" gooseneck spout, 1.5 GPM aerator, 4" blade handles, chrome finish. Provide basket strainer.	2"	1-1/2"	1/2"	1/2"	2,3
SS	FIAT	Model MSB-2424 one piece molded stone mop basin, 24" square, stainless steel integral drain body with caulk connection, stainless steel wall guards.	CHICAGO FAUCETS	Model 540-LD897SGXKCCP faucet with hose thread outlet, vacuum breaker spout, pail hook, wall brace, integral check valves, metal lever handles.	3"	1-1/2"	3/4"	3/4"	3
WH	WOODFORD	Model B67 automatic draining freezeless wall hydrant with ASSE 1052 double check backflow preventor, loose tee key handle, with recessed box with door. Provide with chrome plated exterior finish.			---	---	3/4"	---	
YH	WOODFORD	Model Y2 frost proof yard hydrant with anti-siphon vacuum breaker, lockable handle.			---	---	3/4"	---	
ICB	WATER TITE	Model W9700 ice maker connection box with 1/4 turn ball valve and 1/2" sweat copper connection.			---	---	1/2"	---	
FD	WADE	1100 series floor drain with 6" round satin nickel bronze strainer. Provide trap protection device equal to ProSet Trapguard.			2"	1-1/2"	---	---	
HWH	A.O. SMITH	Model DEL-20, 20 gallon electric water heater, 4500 watts, 240 volts / 1 phase heating elements, 16 GPH recovery @ 100˚F temp rise. Supplied with temperature & pressure relief valve and brass drain valve.							4
HWP	BELL & GOSSETT	Model NBF-36, three speed circulation pump, bronze body, 10 GPM @ 10' head, 120 VAC. Provide clamp-on aquastat for pump control.							

GENERAL:

- Provide fixtures with all trim necessary for complete installation

NOTES:

1. Fixture and installation to meet requirements of Americans with Disabilities Act.
2. Provide 1/4 turn angle stops with escutcheon plates, and chrome plated or braided stainless steel supplies, and 1-1/4" cast brass p-trap.
3. Trim shall be provided with polished chrome finish.
4. Provide wall hung platform for water heater equal to Holdrite #50-SWHP-W-C. Coordinate exact location and mounting height with architect.

MINI-SPLIT SYSTEM SCHEDULE

AREA SERVED	I.T. ROOM
INDOOR UNIT	
MARK	IU-1, IU-2
MANUFACTURER	MITSUBISHI
MODEL	PUY-A12NKA7
CONFIGURATION	WALL MOUNTED
SUPPLY AIRFLOW	320
VOLTAGE/PHASE	208/1
MCA/MOCP	NOTE #1
WEIGHT	28 LBS.
COOLING PERFORMANCE	
ENT. AIR DB	80˚F
ENT. AIR WB	67˚F
NOMINAL CAPACITY	12,000 BTU/HR
OUTDOOR AIR DB	95˚F
COOLING RANGE	
ENT. AIR DB	115˚F / -40˚F
CONDENSING UNIT	
MARK	OU-1, OU-2
MANUFACTURER	MITSUBISHI
MODEL	PKA-A12LA
VOLTAGE/PHASE	240/1Ø
MIN. CKT. AMPS	11
MAX C/B SIZE	15/2
WEIGHT	92 LBS.

NOTES:

1. Indoor unit receives power from outdoor door unit in a feed-thru design
2. Provide refrigerant lineset sized in accordance with Manufacturer's recommendations
3. Provide wired remote thermostat.
4. Provide with crank case heater, wind baffle and all accessories required to allow unit to operate down to -10˚F O.A.T. cooling mode.

AIR DEVICE SCHEDULE

MARK	MANUFATURER	MODEL	APPLICATION				FINISH	MOUNTING	DAMPER	DESCRIPTION	NOTES
			SUPPLY	RETURN	EXHAUST	TRANSFER					
SD-A	PRICE	SCD	●				WHITE	LAY-IN	NO	24x24 Steel, louvered face 360˚ diffuser	1
SD-B	PRICE	SCD	●				WHITE	LAY-IN	NO	12x12 Steel, louvered face in 24x24 back panel, 360˚ diffuser	1
RG-A	PRICE	PDDR		●		●	WHITE	LAY-IN	NO	24x24 Steel, perforated face	1, 2
RG-B	PRICE	530		●			WHITE	SURFACE	NO	Steel, single deflection grille with fixed bars 3/4"O.C. @ 35˚, blade parallel to long dimension	1

GENERAL NOTES

- Maximum noise criteria shall be 25.
- Runouts to diffusers shall be same size as neck, U.N.O.
- Paint objects visible through grilles with flat black paint.
- Provide mounting frame as required for ceiling type. Coordinate with Architect.

NOTES:

1. See plans for neck/grille sizes
2. Provide Price Model RAC return air canopy for all none ducted return grilles

ELECTRIC HEATER SCHEDULE

MARK	MANUF.	MODEL	MOUNTING	WATTS	VOLTAGE/PHASE	DESCRIPTION	NOTES
EWH	TRANE	UHAA	WALL	1,500	120/1	Architectural fan forced wall heater	1,2,3

NOTES:

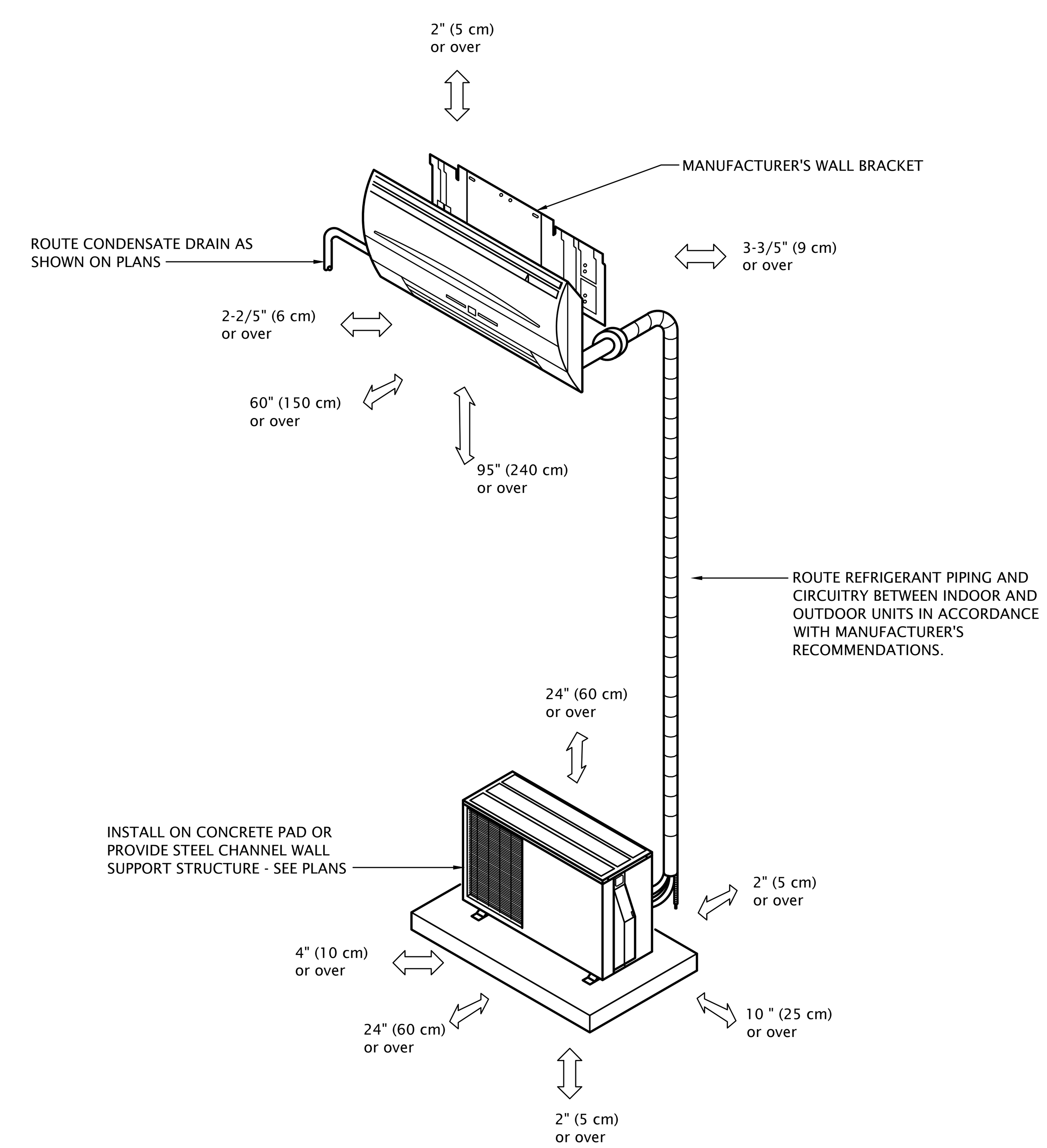
1. Provide with integral thermostat, high temp. thermal cutout and fan delay.
2. Provide with unit mounted disconnect switch.
3. Provide with semi recessed mounting frame.

EXHAUST FAN SCHEDULE

MARK	MFG.	MODEL	TYPE	FAN PERFORMANCE		ELECTRICAL CONNECTION	WEIGHT (LBS)	NOTES
				AIRFLOW (CFM)	E.S.P. ("W.C.)			
EF-1 EF-2 EF-3	GREENHECK	SP-A200	DIRECT DRIVE CABINET FAN	150	0.38	.47A @ 120V	24	1,2

NOTES:

1. Provide wall cap with bird screen and backdraft damper
2. Provide rubber-in-sheer vibration isolation kit



DUCTLESS SPLIT SYSTEM DETAIL

NO SCALE

LST Consulting Engineers, PA
MANHATTAN
4809 Vue Du Lac Place, Suite 201
Manhattan, KS 66503
785.587.8042
WICHITA
125 S. Washington, Suite 150
Wichita, Kansas 67202
316.285.0696
www.LSTengineers.com
mail@LSTengineers.com
Project 24036
June 2024

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

ASTRA BANK

OPERATIONS BUILDING - NEW FACILITY

HAYS, KANSAS

TIMOTHY CRAIG TREAT
LICENSE
13396
2024-06-28
KANSAS
PROFESSIONAL ENGINEER

REVISION:

DATE: 6–28–2024
JOB: 24–3424
SHEET NO.:

M6.1

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LST Consulting Engineers, PA
MANHATTAN
4809 Vue Du Lac Place, Suite 201
Manhattan, KS 66503
785.587.8042
WICHITA
125 S. Washington, Suite 150
Wichita, Kansas 67202
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www.LSTengineers.com
mail@LSTengineers.com

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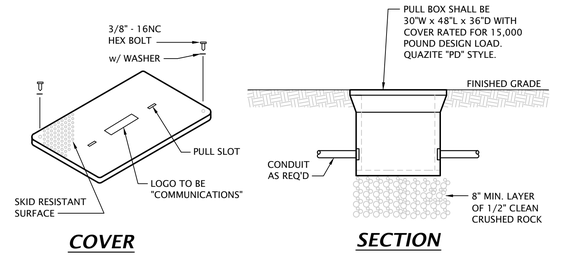

3 IN-GRADE HAND HOLE PULL BOX
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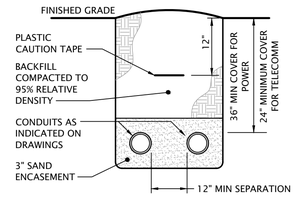

4 CONDUIT TRENCH DETAILS
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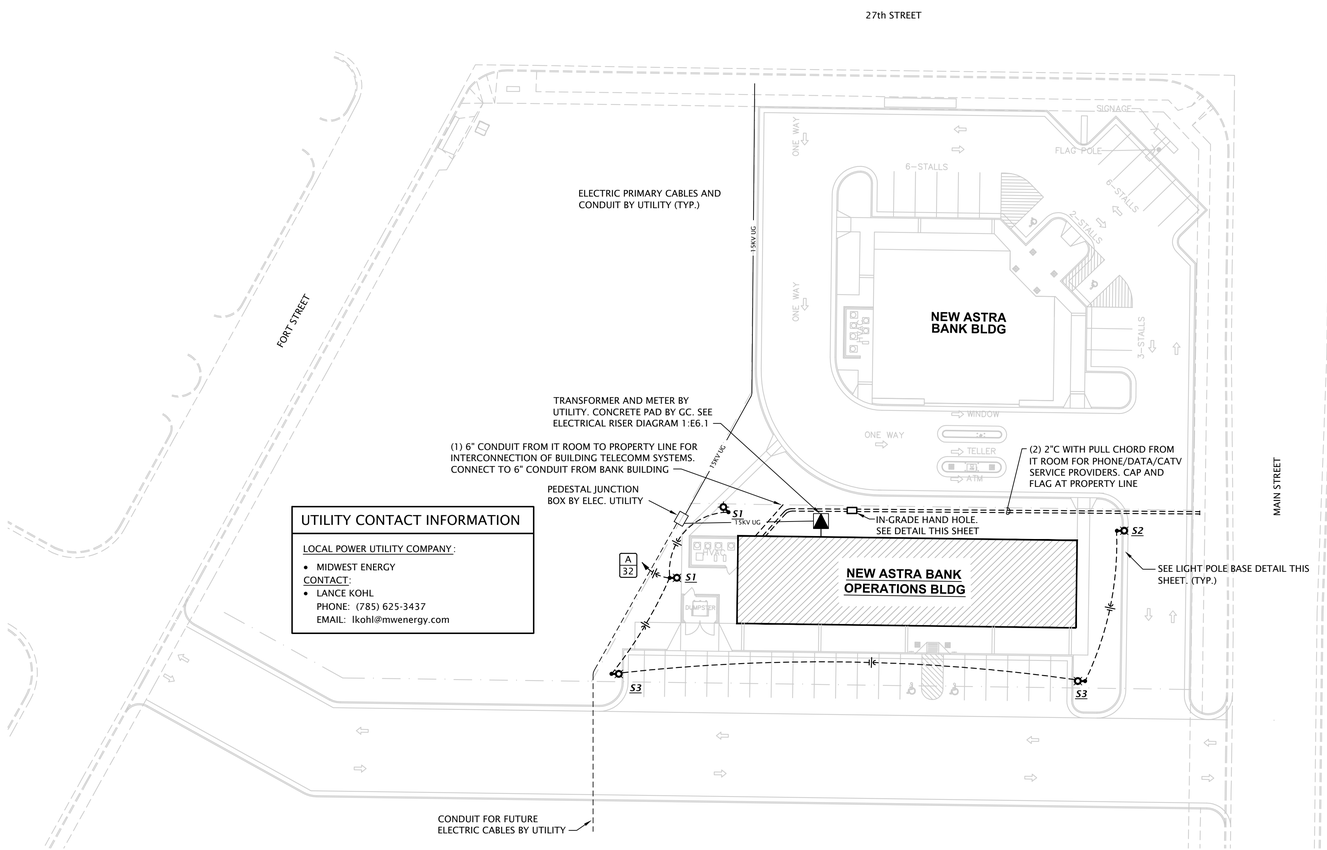
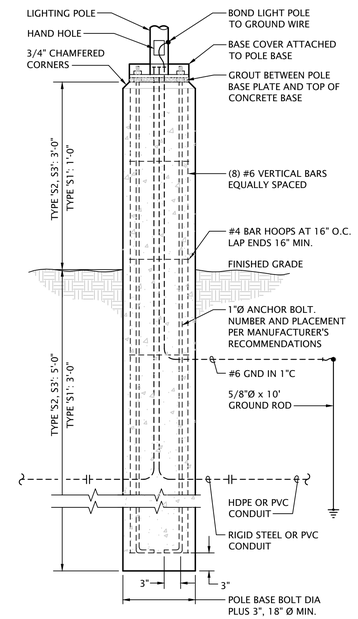


1 SITE ELECTRICAL PLAN
1" = 30'-0"



2 CONCRETE POLE BASE DETAIL
No Scale

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

ASTRA BANK
OPERATIONS BUILDING - NEW FACILITY
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4809 Vue Du Lac Place, Suite 201
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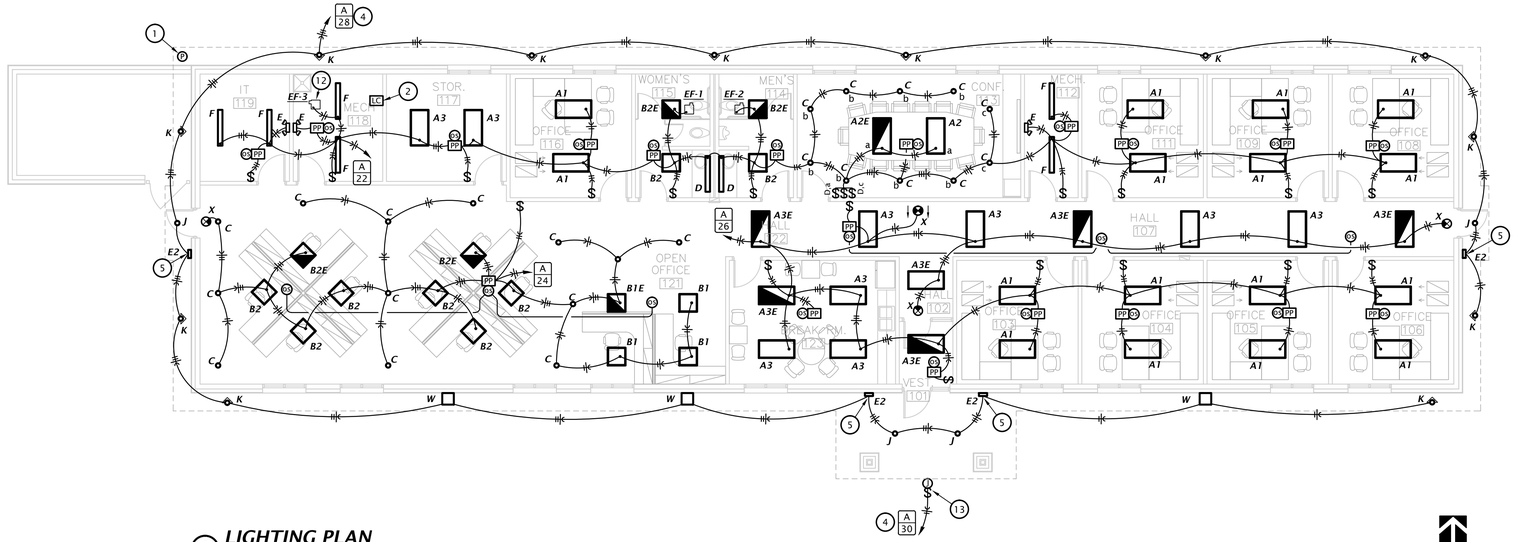
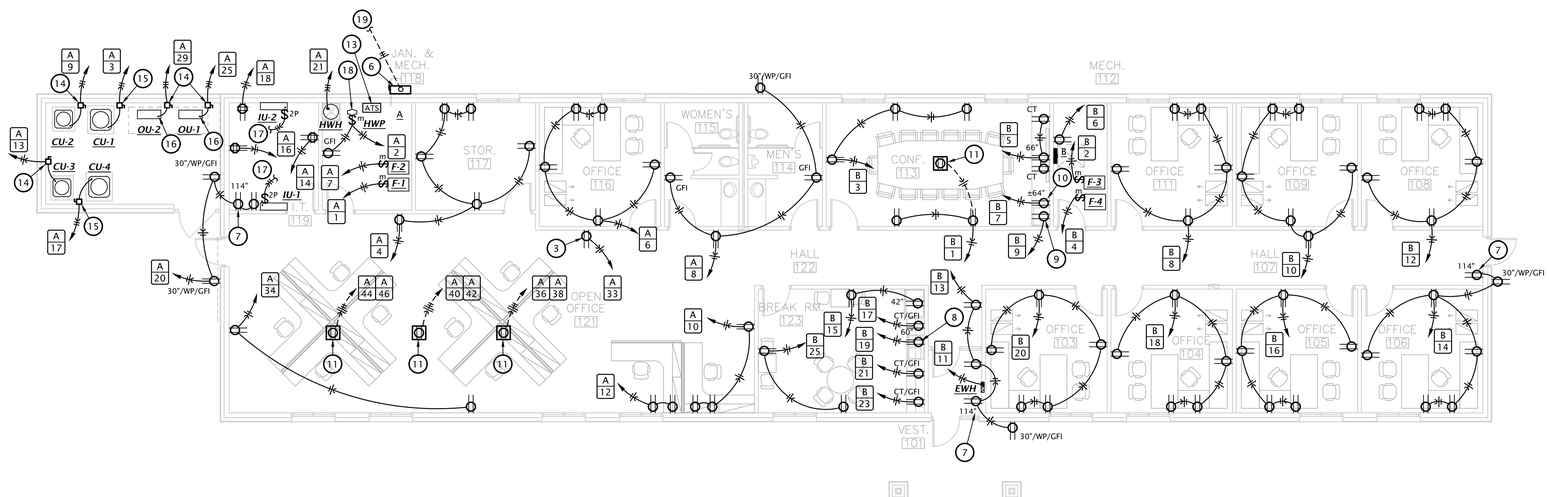


1 LIGHTING PLAN
1/8" = 1'-0"



2 POWER PLAN
1/8" = 1'-0"

LIGHTING PLAN GENERAL NOTES

A. CIRCUIT ALL EMERGENCY LIGHTS, NIGHT LIGHTS AND EXIT LIGHTS TO AN UNSWITCHED HOT CONDUCTOR, UPSTREAM OF ALL CONTROLS.

B. IN AREAS WHERE CEILING MOUNTED OCCUPANCY SENSORS ARE USED FOR LIGHTING CONTROL IN CONJUNCTION WITH WALL SWITCHES, OCCUPANCY SENSOR SHALL PROVIDE OVERRIDE "OFF" CONTROL FOR ALL LIGHTS IN ROOM.

C. WALL BOX DIMMER SWITCHES SHALL BE 120/277VAC, PRESET TYPE WITH SLIDER, 1500 WATT RATED, AND SHALL PROVIDE DIRECT DIMMING AND SWITCHING CONTROL OF 0-10 VDC DIMMING DRIVERS WITHOUT THE USE OF AN EXTERNAL POWER PACK. SYNERGY #SD-BC-120/277 OR EQUAL. COORDINATE COLOR OF DEVICES WITH ARCHITECT.

D. CONTROL CABLING FOR 0-10 VDC DIMMING SIGNAL CIRCUITS SHALL BE NEC TYPE 'TC', 18AWG/2C STRANDED COPPER, TWISTED, WITH FOIL SHIELD AND DRAIN WIRE, IN OVERALL PVC JACKET, RATED FOR 600V. CONTROL CIRCUITS SHALL BE NEC CLASS 1, ROUTED IN SAME RACEWAY WITH LIGHTING CIRCUIT POWER CONDUCTORS. WHERE MC-CABLE IS USED AS FINAL POWER CONNECTION TO LUMINAIRE, FINAL 0-10 VDC DIMMING CIRCUIT CONNECTION SHALL BE INSTALLED IN SEPARATE 1/2" FMC

E. LIGHT SWITCHES, POWER AND TELECOMM OUTLETS SHARING A COMMON WALL WITH ANOTHER ROOM SHALL NOT BE PLACED IN THE SAME STUD CAVITY AS THE OTHER ROOM. PLACE WALL OUTLETS SO THERE IS AT LEAST ONE STUD BETWEEN WALL BOXES BETWEEN ROOMS FOR SOUND ATTENUATION PURPOSES. .

GENERAL ELECTRICAL NOTES

A. THE CIRCUITING OF ALL DEVICES HAS BEEN SHOWN ON THE PLANS, AND THE CONTRACTOR SHALL FOLLOW THIS CIRCUITING LAYOUT .

B. VERIFY EXACT LOCATIONS OF HVAC AND PLUMBING EQUIPMENT WITH THE GENERAL CONTRACTOR AND ASSOCIATED SUB CONTRACTORS. COORDINATE CONDUIT STUB-UP AND POWER CONNECTIONS PRIOR TO COMMENCING ROUGH-IN WORK. ELECTRICAL DEVICES (DISCONNECTS, RECEPTACLES, ETC.) INSTALLED ON EQUIPMENT SHALL BE MOUNTED ON A NON-REMOVABLE PANEL OF THE EQUIPMENT. FIELD COORDINATE EXACT DEVICE MOUNTING LOCATIONS PRIOR TO INSTALLATION.

C. WALL MOUNTED HVAC CONTROL DEVICES (THERMOSTATS, TEMPERATURE SENSORS, HUMIDISTATS, CO_2 SENSORS, ETC) SHALL BE PROVIDED BY MECHANICAL CONTRACTOR. UNLESS NOTED OTHERWISE, ELECTRICAL CONTRACTOR SHALL PROVIDE SINGLE GANG WALL BOX AT 46" AFF AND 1/2" CONDUIT STUBBED OUT TO ABOVE ACCESSIBLE CEILING WITH NYLON BUSHINGS AND PULLSTRING IN RACEWAY. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF DEVICES.

D. ELECTRICAL EQUIPMENT AND DEVICES SHALL BE "LISTED" AND "IDENTIFIED" AS RATED FOR A MINIMUM OF 75˚C CONDUCTOR TERMINATION.

E. BRANCH CIRCUIT SIZES SHOWN ON PANEL SCHEDULES ARE MINIMUM, AND ALLOWANCES SHALL BE MADE TO LIMIT VOLTAGE DROP. ALL 15 AMP AND 20 AMP, 120V CIRCUITS OVER 75' LONG SHALL BE INCREASED BY ONE WIRE SIZE, AND OVER 150' LONG SHALL BE INCREASED BY TWO WIRE SIZES .

F. COORDINATE INSTALLATION OF ELECTRICAL WORK ABOVE THE CEILING TO PROVIDE THE GREATEST POSSIBLE CLEARANCE FOR INSTALLATION OF PLUMBING AND MECHANICAL INSTALLATION. CONDUITS SHALL BE ROUTED THROUGH JOIST WEBS WHERE POSSIBLE.

G. VERIFY EXACT PLACEMENT OF ALL LUMINAIRES, DEVICES, AND EQUIPMENT SHOWN ON THE ELECTRICAL CONSTRUCTION DOCUMENTS WITH ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS PRIOR TO FINAL PLACEMENT.

H. DEFINITION OF TERMS
- * SHALL - ACTION THAT IS REQUIRED WITHOUT OPTION OR QUALIFICATION.
- * FURNISH - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING.
- * INSTALL - CONTRACTOR SHALL BE RESPONSIBLE FOR LABOR AND CONSTRUCTION EQUIPMENT NECESSARY TO SET IN PLACE, CONNECT, CALIBRATE AND TEST EQUIPMENT FURNISHED BY HIM OR OTHERS.
- * PROVIDE - CONTRACTOR SHALL FURNISH AND INSTALL

(#) SHEET NOTES BY SYMBOL

1. PHOTOCELL FOR EXTERIOR LIGHTING CONTROL. SEE DETAIL 3:E6.1
2. LIGHTING CONTACTOR AND 3-POSITION SELECTOR SWITCH FOR CONTROL OF EXTERIOR LIGHTING. SEE DETAIL 3:E6.1
3. PROVIDE OUTLET IN ATTIC FOR FUTURE RADON FAN
4. HOME-RUN VIA LIGHTING CONTACTOR. PROVIDE UN-SWITCHED LINE CONDUCTOR FOR EMERGENCY LIGHTING UNITS WHERE INDICATED.
5. MOUNT EMERGENCY LIGHT FIXTURE AS HIGH AS POSSIBLE
6. 400A/240V/2P NEMA 3R NON-FUSED DISCONNECT AND SERVICE LATERAL. SEE ELECTRICAL RISER DIAGRAM DETAIL 1:E6.1
7. LOCATE OUTLET FOR DOOR ACCESS CONTROLS ABOVE LAY-IN CEILING.
8. LOCATE OUTLET FOR MICROWAVE IN UPPER CABINETRY. COORDINATE EXACT LOCATION WITH ARCHITECT.
9. LOCATE OUTLET FOR UNDER COUNTER REFRIGERATOR 18" AFF.
10. LOCATE OUTLET OUTLET FOR A/V EQUIPMENT IN CASEWORK. COORDINATE EXACT LOCATION WITH ARCHITECT.
11. SEE SPECIAL SYSTEMS PLAN SHEET E1.2 FOR FLOOR BOX SPECIFICATION
12. WIRE EXHAUST FAN HOT FOR CONTINUOUS OPERATION
13. J-BOX AND WEATHERPROOF TOGGLE SWITCH FOR BUILDING SIGN. VERIFY EXACT SIGN LOCATION AND CONNECTION REQUIREMENTS WITH GC AND SIGN INSTALLER PRIOR TO COMMENCING WORK.
14. 30A/240V/2P NF NEMA 3R DISCONNECT SWITCH
15. 60A/240V/2P NF NEAM 3R DISCONNECT SWITCH
16. EXTEND 20A, 208V-1PH CIRCUITRY TO MATCHING INDOOR UNIT
17. INDOOR UNIT (FAN COIL) RECEIVES POWER FROM MATCHING OUTDOOR UNIT (HEAT PUMP)
18. PROVIDE 120V POWER CONNECTION TO HOT WATER RECIRC PUMP. EXTEND POWER TO CLAMP-ON AQUASTAT.
19. SEE E1.0 FOR CONTINUATION

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

ASTRA BANK
OPERATIONS BUILDING - NEW FACILITY
HAYS, KANSAS

TIMOTHY A. TRUMBLY 13396 2024-06-28 KANSAS PROFESSIONAL ENGINEER

REVISION:

DATE: 6-28-2024
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SHEET NO.:

E1.1

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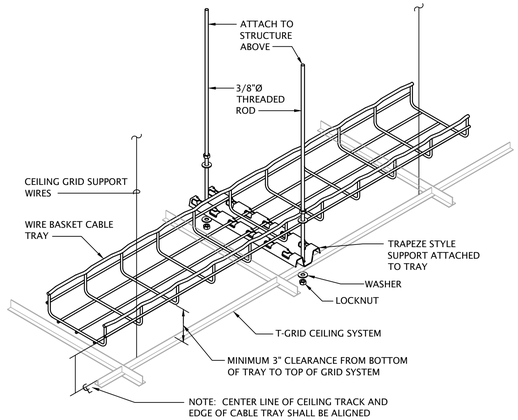
LST Consulting Engineers, PA
MANHATTAN
4809 Vue Du Lac Place, Suite 201
Manhattan, KS 66503
785.587.8042
WICHITA
125 S. Washington, Suite 150
Wichita, Kansas 67202
316.285.0696
www.LSTengineers.com
mail@LSTengineers.com

Project 24036 June 2024

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com



2 WIRE BASKET TRAY ABOVE CEILING
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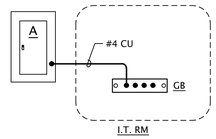

NOTES:
1. BOND ALL METAL RACEWAYS & EQUIPMENT IN I.T. ROOMS TO GROUND BAR.
2. ALL CONNECTIONS TO GROUND BARS SHALL BE MADE USING COMPRESSION TYPE LUGS (MECHANICAL LUGS ARE NOT ACCEPTABLE).

3 TELECOM GROUNDING & BONDING DIAGRAM
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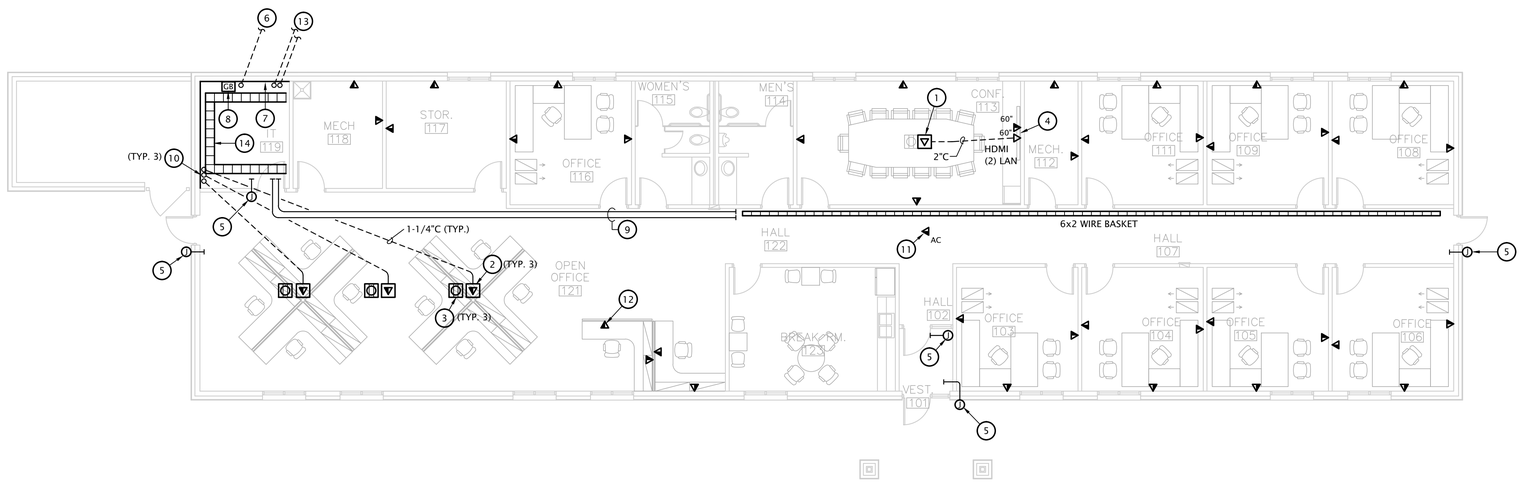

1 SPECIAL SYSTEMS PLAN
1/8" = 1'-0"

SPECIAL SYSTEMS GENERAL NOTES

A. POWER AND TELECOMM OUTLETS SHARING A COMMON WALL WITH ANOTHER ROOM SHALL NOT BE PLACED IN THE SAME STUD CAVITY AS THE OTHER ROOM. PLACE WALL OUTLETS SO THERE IS AT LEAST ONE STUD BETWEEN WALL BOXES BETWEEN ROOMS FOR SOUND ATTENUATION PURPOSES.

B. PROVIDE 4" SQ WALL BOX WITH SINGLE GANG EXTENSION RING FOR ALL TELECOMM OUTLET LOCATIONS UNLESS NOTES OTHERWISE. PROVIDE 1" CONDUIT FROM WALL BOX TO WIRE BASKET OR DIRECTLY TO IT ROOM WHERE CABLING IS NOT ACCESSIBLE. MINIMUM CONDUIT SIZES SHALL BE AS FOLLOWS:
   (1 BOX SERVICED - 1"C
   (2) BOXES SERVED - 1"C
   (3) BOXES SERVED - 1-1/4"C
   DO NOT COMBINE MORE THAN (3) WALL BOXES IN A SINGLE CONDUIT RUN TO THE WIRE BASKET OR IT ROOM

C. PROVIDE A JUNCTION BOX FOR CONDUITS WITH MORE THAN (3)90 DEGREE ELBOWS. JUNCTION BOXES MUST BE ACCESSIBLE.

D. VERIFY ALL POWER AND CONDUIT REQUIREMENTS FOR BANK EQUIPMENT WITH GC AND EQUIPMENT SUPPLIER/INSTALLER PRIOR TO ROUGH-IN

E. VERIFY ALL FLOOR AND WALL BOX LOCATIONS WITH OWNER PRIOR TO ROUGH-IN

(#) SHEET NOTES BY SYMBOL

1. HUBBELL SYSTEM-ONE (OR EQUAL) RECESSED 8 GANG FLOOR BOX WITH ROUND COVER WITH CONDUIT HUBS FOR CONDUIT SIZES SHOWN. PROVIDE SURFACE, BRASS PLATED ROUND COVER WITH TWO ACCESS DOORS. PROVIDE PLATES AND DIVIDERS FOR (2) DECORATOR STYLE PLATES FOR (2) HDMI CABLES AND (2) DUPLEX PLATES FOR (2) DUPLEX RECEPTACLES. PROVIDE BLANK PLATES ON ALL UN-USED GANGS
2. HUBBELL SYSTEM-ONE (OR EQUAL) RECESSED 8 GANG FLOOR BOX WITH ROUND COVER WITH CONDUIT HUBS FOR CONDUIT SIZES SHOWN. PROVIDE SURFACE, BRASS PLATED ROUND COVER WITH TWO ACCESS DOORS. PROVIDE (8) DECORATOR STYLE PLATES FOR OWNER INSTALLED DATA JACKS
3. HUBBELL SYSTEM-ONE (OR EQUAL) RECESSED 8 GANG FLOOR BOX WITH ROUND COVER WITH CONDUIT HUBS FOR CONDUIT SIZES SHOWN. PROVIDE SURFACE, BRASS PLATED " ROUND COVER WITH TWO ACCESS DOORS. PROVIDE (8) DUPLEX RECEPTACLE PRE-WIRED STYLE PLATES.
4. PROVIDE 3-GANG A/V WALL BOX CAPABLE OF ACCEPTING A 2" BOTTOM ENTRY CONDUIT. PROVIDE (1) 1-1/4" CONDUIT FROM TOP OF BOX TO ABOVE CEILING TO WIRE BASKET. HUBBELL HBL986 OR EQUAL. PROVIDE EXTENSION RING FOR OWNER INSTALLED TELECOMMUNICATIONS OUTLETS. COORDINATE REQUIREMENTS WITH OWNER.
5. 1-GANG WALL BOX AT 46" AFF WITH 3/4" CONDUIT TO ABOVE ACCESSIBLE CEILING FOR OWNER PROVIDED ACCESS CONTROL CARD READER.
6. PROVIDE (1) 6"PVC CONDUIT WITH PULL CHORD FROM OPERATIONS BUILDING TO NEW BANK BUILDING IT ROOM. COORDINATE INSTALLATION WITH BANK BUILDING GC. SEE ELECTRICAL SITE PLAN FOR CONTINUATION.
7. COVER TWO WALLS WITH 4'x8'x3/4" ACX FIRE RETARDANT PLYWOOD SHEETS INSTALLED VERTICALLY WITH BOTTOM AT 6" AFF. PLYWOOD SHALL BE PERMANENTLY FASTENED TO THE WALL BY MEANS OF WALL ANCHORS UTILIZING GALVANIZED, ZINC PLATED, OR STAINLESS STEEL HARDWARE WITH A FLAT HEAD. FINISHED INSTALLATION SHALL HAVE FLUSH APPEARANCE WITH COUNTERSUNK SCREW HEADS TO PREVENT SPLITTING OF THE PLYWOOD. DRYWALL SCREWS ARE NOT ACCEPTABLE. PAINT WITH TWO COATS OF LIGHT GRAY FIRE RETARDANT SEALER PRIOR TO INSTALLATION OF ANY EQUIPMENT.
8. TELECOM GROUND BAR, 13"x2"x1/4" COPPER GROUND BAR ATTACHED TO WALL AT 18" AFF WITH STAINLESS STEEL BRACKETS, INSULATING STAND OFFS, SIX PAIR OF 5/16"Ø HOLES AND THREE PAIR OF 7/16"Ø HOLES. ERICO #TGBA14L06PT OR EQUAL. REFER TO DETAIL THIS SHEET FOR GROUDING/BONDING REQUIREMENTS
9. (2) 3" EMT CONDUITS WITH NYLON BUSHINGS FROM WIRE BASKET TO IT ROOM.
10. PROVIDE 1-1/4" CONDUIT BELOW SLAB FROM FLOOR BOX TO MINIMUM 6" ABOVE FLOOR IN IT ROOM. PROVIDE NYLON BUSHING ON UN-TERMINATED CONDUIT END
11. PROVIDE 1-GANG BOX ABOVE CEILING WITH 1" CONDUIT STUBBED TO WIRE BASKET FOR OWNER PROVIDED WIRELESS ACCESS POINT
12. INSTALL DATA OUTLET ROUGH-IN ON SYSTEM FURNITURE. COMBINE TWO DATA LOCATIONS IN A SINGLE 1" CONDUIT ROUTED TO THE CABLE TRAY OR IT ROOM
13. PROVIDE (2) 2" PVC CONDUITS WITH PULL CHORD FROM IT TO PROPERTY LINE. SEE ELECTRICAL SITE PLAN FOR CONTINUATION
14. PROVIDE 12x4 WIRE BASKET ON THREE WALLS @ 8'0" AFF. COORDINATE EXACT LAYOUT WITH OWNER.

ASTRA BANK
OPERATIONS BUILDING - NEW FACILITY
HAYS, KANSAS

TIMOTHY ALAN TRUE
13396
2024-06-28
KANSAS
PROFESSIONAL ENGINEER

REVISION:

DATE: 6-28-2024
JOB: 24-3424
SHEET NO.:

E1.2

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LIGHT FIXTURE SCHEDULE

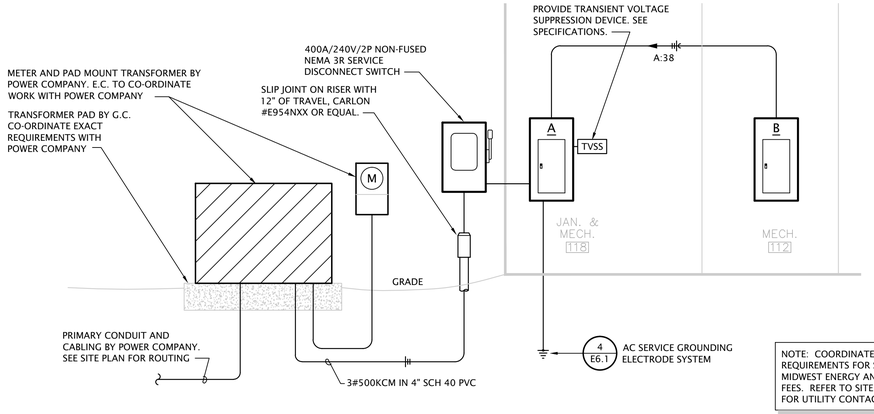
MARK	MANUFACTURER	MODEL NUMBER	LAMP DATA	DRIVER	MOUNTING	FINISH	DESCRIPTION	NOTES
A1	DAY-BRITE CFI	2SBP3550L8CS-4-UN3-DIM	47W LED 5,847 LUMEN	0-10V DIMMING	LAY-IN	WHITE	2'x4' BACKLIT FLAT PANEL, LUMEN SWITCH SET TO HIGH	2
A2	DAY-BRITE CFI	2SBP3550L8CS-4-UN3-DIM	37W LED 4,718 LUMEN	0-10V DIMMING	LAY-IN	WHITE	2'x4' BACKLIT FLAT PANEL, LUMEN SWITCH SET TO MEDIUM	2
A2E	DAY BRITE CFI	2SBP3550L8CS-4-UN3-DIM-BSL310RM	37W LED 4,718 LUMEN	0-10V DIMMING	LAY-IN	WHITE	2'x4' BACKLIT FLAT PANEL, LUMEN SWITCH SET TO MEDIUM WITH 10W EMERGENCY DRIVER INSTALLED	2
A3	DAY-BRITE CFI	2SBP3550L8CS-4-UN3-DIM	33W LED 4,260 LUMEN	0-10V DIMMING	LAY-IN	WHITE	2'x4' BACKLIT FLAT PANEL, LUMEN SWITCH SET TO LOW	2
A3E	DAY-BRITE	2SBP3550L8CS-4-UN3-DIM-BSL310RM	33W LED 4,260 LUMEN	0-10V DIMMING	LAY-IN	WHITE	2'x4' BACKLIT FLAT PANEL, LUMEN SWITCH SET TO LOW WITH 10W EMERGENCY DRIVER INSTALLED	2
B1	DAY-BRITE CFI	2SBP3040L8CS-2-UN3-DIM	32W LED 3,819 LUMEN	0-10V DIMMING	LAY-IN	WHITE	2'x2' BACKLIT FLAT PANEL, LUMEN SWITCH SET TO MEDIUM	2
B1E	DAY-BRITE CFI	2SBP3040L8CS-2-UN3-DIM-BSL310RM	32W LED 3,819 LUMEN	0-10V DIMMING	LAY-IN	WHITE	2'x2' BACKLIT FLAT PANEL, LUMEN SWITCH SET TO MEDIUM WITH 10W EMERGENCY DRIVER INSTALLED	2
B2	DAY-BRITE CFI	2SBP3040L8CS-2-UN3-DIM	28W LED 3,434 LUMEN	0-10V DIMMING	LAY-IN	WHITE	2'x2' BACKLIT FLAT PANEL, LUMEN SWITCH SET TO LOW	2
B2E	DAY-BRITE CFI	2SBP3040L8CS-2-UN3-DIM-BSL310RM	28W LED 3,434 LUMEN	0-10V DIMMING	LAY-IN	WHITE	2'x2' BACKLIT FLAT PANEL, LUMEN SWITCH SET TO LOW WITH 10W EMERGENCY DRIVER INSTALLED	2
C	LIGHTOLIER	6RN-C6L10940MZ10U-C6RDLCC	9W LED 1,000 LUMEN	0-10V DIMMING	RECESSED	WHITE TRIM	6"Ø DOWNLIGHT, COMFORT CLEAR REFLECTOR	
D	LUX	EOS 2.0-W-D ASY 375 4 40K 8 UNV S1 W	14W LED 1500 LUMEN	0-10V DIMMING	SURFACE ON WALL	WHITE	4' LINEAR SURFACE MOUNT, ASYMMETRIC OPTICS	
E	HUBBELL	LZ2	(2) 5W	N/A	WALL	WHITE	INDOOR EMERGENCY LIGHTING UNIT	
E2	DUAL LITE	PGZ-HTR	3W LED 405 LUMENS	FIXED OUTPUT	WALL	DARK BRONZE	DIE-CAST EXTERIOR EMERGENCY LIGHTING UNIT WITH INTEGRAL HEATER	3
F	DAY-BRITE CFI	SDS42448L8CST-UNV-DIM	41W LED 5,074 LUMEN	0-10V DIMMING	SURFACE	WHITE	4' STRIP LIGHT, LUMEN SWITCH SET TO HIGH	
J	LIGHTOLIER	6RN-P6RDL20940WCL-Z10U	25W LED 2,200 LUMEN	0-10V DIMMING	RECESSED	WHITE TRIM	6"Ø OUTDOOR DOWNLIGHT, SPECULAR CLEAR REFLECTOR	3
K	LIGHTOLIER	6RN-P6RLW10940WCL-Z10U	11W LED 1,000 LUMEN	0-10V DIMMING	RECESSED	WHITE TRIM	6"Ø OUTDOOR WALL WASH DOWNLIGHT, SPECULAR CLEAR LENSE	3
S1	GARDCO	OPF-S-P02-840-T2M-AR1-120	23W LED 4000 LUMEN	STANDARD	POLE	BLACK	LED AREA LIGHT, SINGLE HEAD WITH IES TYPE III DISTRIBUTION	3,4,5
S2	GARDCO	OPF-S-P03-840-T2M-AR1-120	23W LED 6500 LUMEN	STANDARD	POLE	BLACK	LED AREA LIGHT, SINGLE HEAD WITH IES TYPE II DISTRIBUTION	3,4,6
S3	GARDCO	OPF-S-P03-840-T4M-AR1-120	23W LED 6500 LUMEN	STANDARD	POLE	BLACK	LED AREA LIGHT, SINGLE HEAD WITH IES TYPE IV DISTRIBUTION	3,4,6
W	GARDCO	PWS-48L/300-NW-G2-3-	47W LED 6298 LUMEN	STANDARD	WALL	BLACK	LED WALL PACK, WITH IES TYPE III DISTRIBUTION	3,4

GENERAL:

- All LED's shall be 4000 K correlated color temperature, minimum 80 CRI. Unless otherwise noted
- All light fixtures shall be provided with universal drivers capable of operating at 120V or 277V UNO.
- Fixtures shown half-shaded or noted with 'EM' shall be provided with an emergency battery to operate fixtures for a minimum of 90 minutes upon loss of normal power
- Coordinate mounting height of all wall mounted fixtures with Architect prior to roughing in.

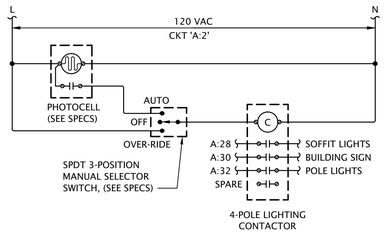
NOTES:

1. Provide with emergency battery integral charger and self-diagnostic/self-testing electronics.
2. Install fixture per detail 2 this sheet
3. U.L. listed for 'wet location'
4. Fixture shall be rated for use down to -40˚F.
5. Provide fixture/pole assembly with mounting arm and 10' round straight steel pole, black to match fixture.
6. Provide fixture/pole assembly with mounting arm and 20' round straight steel pole, black to match fixture.

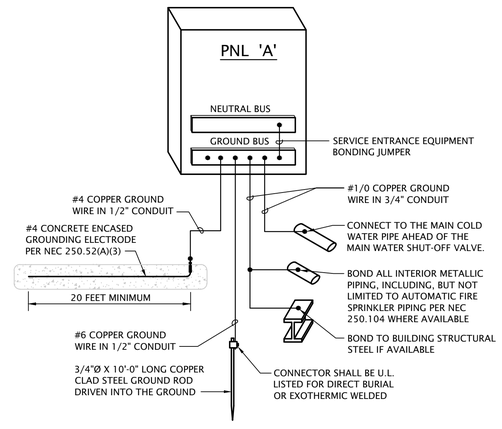


NOTE: COORDINATE RESPONSIBILITIES AND REQUIREMENTS FOR SERVICE WITH MIDWEST ENERGY AND PAY ASSOCIATED FEES. REFER TO SITE PLAN, SHEET E1.0, FOR UTILITY CONTACT INFORMATION.

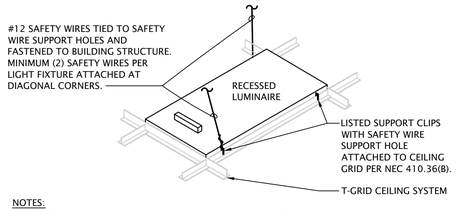
1 ELECTRICAL RISER DIAGRAM
No Scale



3 EXTERIOR LIGHTING CONTROL DIAGRAM
No Scale



4 SERVICE GROUNDING ELECTRODE SYSTEM DIAGRAM
No Scale



NOTES:
1. SAFETY WIRES MAY BE SLACK BUT SHALL BE SECURED WITH A MINIMUM OF THREE TIGHT TURNS AROUND SELF.
2. FIXTURE INSTALLATION TO COMPLY WITH ASTM C636 AND CISCA STANDARDS.

2 RECESSED LUMINAIRE SUPPORT
NO SCALE

Designation: A — **Manufacturer:** Square D 'NQ'
Location: Mech Room 118 — **Bus Amps:** 400
Voltage: 240/120V-1Ph-3W — **MCB Amps:** 400/2
Enclosure: NEMA 1 — **AIC Rating:** 22 kAIC Series Rated
Mounting: Surface — **Other:** Service Entrance Rated

Circuit #	Load Description	Conductors	C/B Size	C/B Size	Conductors	Load Description	Circuit #
1	Furnace 'F-1'	2#12,#12G	15 / 1	20 / 1	2#12,#12G	RCPT: Mech Rm 118	2
3	Condensing Unit	2#6,#10G	45 / 2	20 / 1	2#12,#12G	RCPT: Storage 117	4
5	'CU-1'			20 / 1	2#12,#12G	RCPT: Office 116	6
7	Furnace 'F-2'	2#12,#12G	15 / 1	20 / 1	2#12,#12G	RCPT: Men 115, Women 114	8
9	Condensing Unit	2#10,#10G	25 / 2	20 / 1	2#12,#12G	RCPT: Open Office SE	10
11	CU-2'			20 / 1	2#12,#12G	RCPT: Open Office SE	12
13	Condensing Unit	2#10,#10G	25 / 2	20 / 1	2#12,#12G	RCPT: IT East Quad	14
15	'CU-3'			20 / 1	2#12,#12G	RCPT: IT West Quad	16
17	Condensing Unit	2#6,#10G	50 / 2	20 / 1	2#12,#12G	RCPT: IT North Quad	18
19	'CU-4'			20 / 1	2#12,#12G	RCPT: West Exterior	20
21	Water Heater	2#10, #10G	30 / 2	20 / 1	2#12,#12G	LTS: N. Offices, Conference Rm, Toilets	22
23	'HWH'			20 / 1	2#12,#12G	LTS: Open Office	24
25	Heat Pump	2#12,#12G	15 / 2	20 / 1	2#12,#12G	LTS: S. Offices, Hall	26
27	'OU-1'			20 / 1	2#12,#12G	LTS: Building Soffit	28
29	Heat Pump	2#12,#12G	15 / 2	20 / 1	2#12,#12G	Building Sign	30
31	'OU-2'			20 / 1	2#12,#12G	Pole Lights	32
33	RCPT: Radon Fan	2#12,#12G	20 / 1	20 / 1	2#12,#12G	RCPT: SW Open Office	34
35	SPARE	---	20 / 1	20 / 1	2#12,#12G	RCPT: East Floor Box	36
37	SPARE	---	20 / 1	20 / 1	2#12,#12G	RCPT: East Floor Box	38
39	SPARE	---	20 / 1	20 / 1	2#12,#12G	RCPT: Center Floor Box	40
41	SPARE	---	20 / 1	20 / 1	2#12,#12G	RCPT: Center Floor Box	42
43	SPARE	---	20 / 1	20 / 1	2#12,#12G	RCPT: West Floor Box	44
45	SPARE	---	20 / 1	20 / 1	2#12,#12G	RCPT: West Floor Box	46
47	SPARE	---	20 / 1				48
49	SPARE	---	20 / 1				50
51	TVSS	2#12,#10G	30 / 2	150 / 2	3#1/0,#6G; 2"EMT	Panel 'B'	52
53							54

Designation: B — **Manufacturer:** Square D 'NQ'
Location: Mech Room 112 — **Bus Amps:** 225
Voltage: 240/120V-1Ph-3W — **MCB Amps:** MLO
Enclosure: NEMA 1 — **AIC Rating:** 10kAIC
Mounting: Surface — **Other:**

Circuit #	Load Description	Conductors	C/B Size	C/B Size	Conductors	Load Description	Circuit #
1	RCPT: Conference Rm Floor Box, South	2#12,#12G	20 / 1	20 / 1	2#12,#12G	Furnace 'F-3'	2
3	RCPT: Conference Rm N&W	2#12,#12G	20 / 1	20 / 1	2#12,#12G	Furnace 'F-4'	4
5	RCPT: Conference Rm Counter	2#12,#12G	20 / 1	20 / 1	2#12,#12G	RCPT: Mech Rm 112	6
7	RCPT: Conference Rm AV Cabinet	2#12,#12G	20 / 1	20 / 1	2#12,#12G	RCPT: Office 111	8
9	RCPT: Conference Rm Fridge	2#12,#12G	20 / 1	20 / 1	2#12,#12G	RCPT: Office 109	10
11	Vestibule Wall Heater	2#12,#12G	20 / 1	20 / 1	2#12,#12G	RCPT: Office 108	12
13	RCPT: Vest. Hall	2#12,#12G	20 / 1	20 / 1	2#12,#12G	RCPT: Office 106	14
15	RCPT: Break Rm Fridge	2#12,#12G	20 / 1	20 / 1	2#12,#12G	RCPT: Office 105	16
17	RCPT: Break Rm Counter	2#12,#12G	20 / 1	20 / 1	2#12,#12G	RCPT: Office 104	18
19	RCPT: Break Rm Microwave	2#12,#12G	20 / 1	20 / 1	2#12,#12G	RCPT: Office 103	20
21	RCPT: Break Rm Counter	2#12,#12G	20 / 1	20 / 1	---	SPARE	22
23	RCPT: Break Rm Counter	2#12,#12G	20 / 1	20 / 1	---	SPARE	24
25	RCPT: Break Rm SW	2#12,#12G	20 / 1	20 / 1	---	SPARE	26
27	SPARE	---	20 / 1	20 / 1	---	SPARE	28
29	SPARE	---	20 / 1	20 / 1	---	SPARE	30
31	SPARE	---	20 / 1	20 / 1	---	SPARE	32
33	SPARE	---	20 / 1	20 / 1	---	SPARE	34
35	BLANK	---	---	---	---	BLANK	36
37	BLANK	---	---	---	---	BLANK	38
39	BLANK	---	---	---	---	BLANK	40
41	BLANK	---	---	---	---	BLANK	42

LST Consulting Engineers, PA
MANHATTAN
4809 Vue Du Lac Place, Suite 201
Manhattan, KS 66503
785.587.8042
WICHITA
125 S. Washington, Suite 150
Wichita, Kansas 67202
316.285.0696
www.LSTengineers.com
mail@LSTengineers.com

Project 24036 — June 2024

JonesGillamRenz
730 N. Ninth
Salina, KS 67401
785.827.0386
1881 Main Street, Suite 301
Kansas City, MO 64108
jgr@jgrarchitects.com

ASTRA BANK
OPERATIONS BUILDING - NEW FACILITY
HAYS, KANSAS

CRAIG THEIS — 13396 — 2024-06-28 — KANSAS — PROFESSIONAL ENGINEER

REVISION:

DATE: 6–28–2024
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